



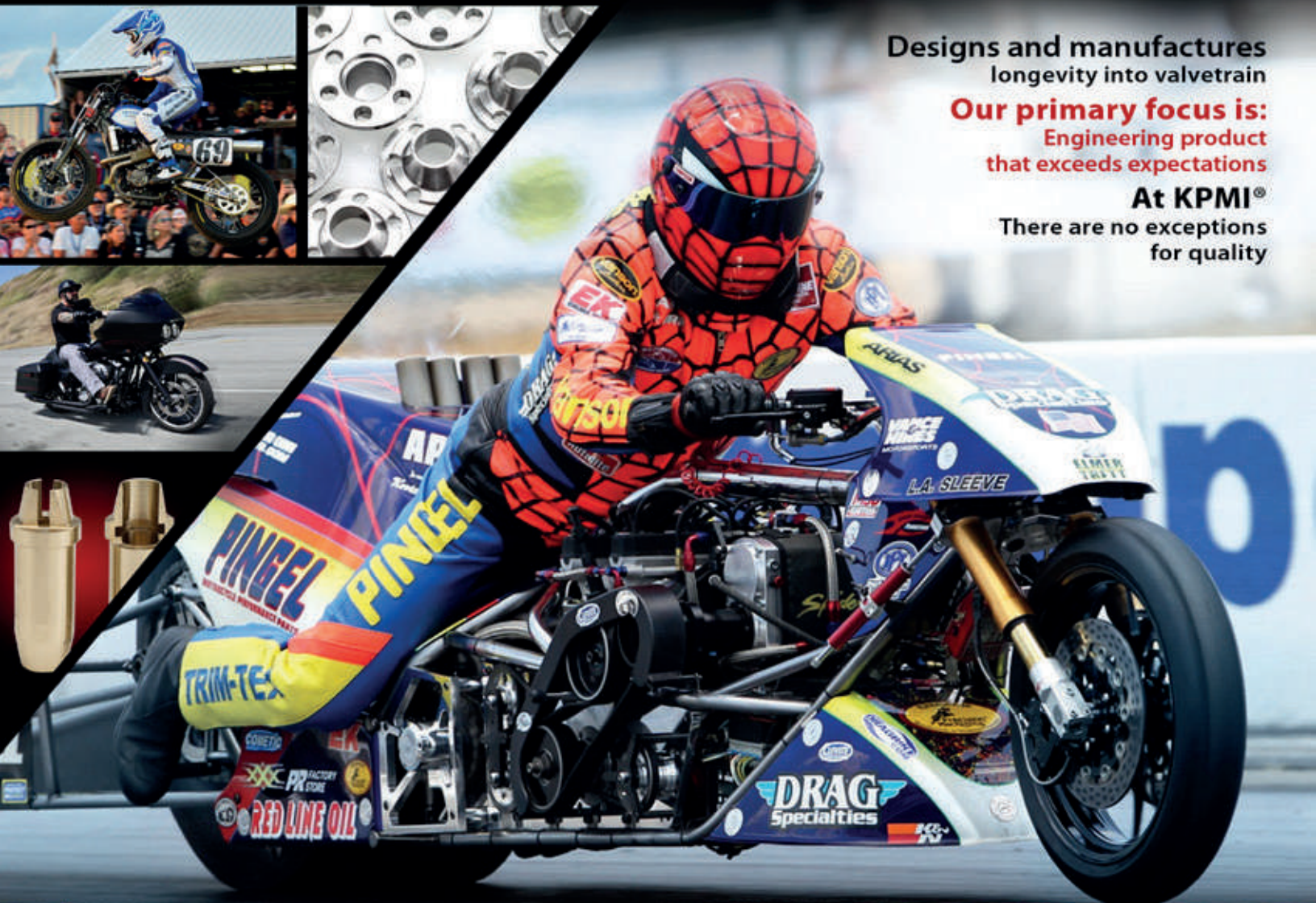
# KPMI®

## HIGH PERFORMANCE VALVETRAIN 2020 CATALOG

Designs and manufactures  
longevity into valvetrain

**Our primary focus is:**  
Engineering product  
that exceeds expectations

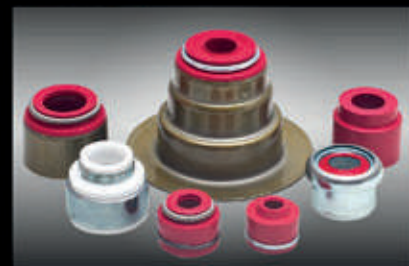
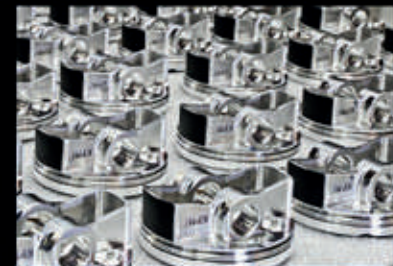
**At KPMI®**  
There are no exceptions  
for quality



VALVETRAIN SPECIALIST KPMI® SPONSORS

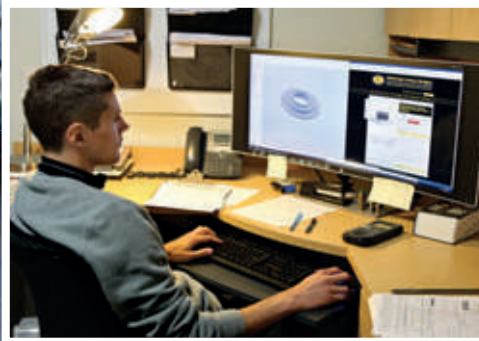
20 TIME TOP FUEL WORLD CHAMPION

LARRY "SPIDERMAN" McBRIDE





# KPMI® ENGINEERING & MANUFACTURING VALVETRAIN FOR 80-YEARS & 2-GENERATIONS



**KPMI®**  
Designs and manufactures longevity into valvetrain

**Our Primary**  
Engineering product that

## Company

Kibblewhite Precision Machining, Inc. (KPMI®) is a 80 year old valvetrain manufacturing company supplying the Motorsport Industry and select OEM's. We stock and distribute over 3,000 items to customers around the world. No other company in the world has our product coverage for the motorsport industry. You will not find any other company with such an extensive product line solely dedicated to the motorsport industry.

KPMI® not only manufactures ready-made parts, we also provide contract manufacturing for OEM and other parties. Our expert services include engineering, prototyping, and limited or full production runs.

## Legacy

Kibblewhite Precision Machining, Inc. was founded by James L. Kibblewhite in 1939. In 1989 the operation was taken over by William F. Kibblewhite, Jim's son. William Kibblewhite took the solid foundation created by his father and dramatically expanded the product line to provide the vast coverage that it offers today.

KPMI® is known by its trademark and registered marks: Black Diamond™, White Diamond®, Tensilite®, KPMI® Kibblewhite®, and Spin True®. Know that when you purchase products under these brands you are purchasing product that has been engineered by a company that's been doing so for 80 years and 2 generations. This wealth of knowledge can be seen in the product detail, fitment, material choices, processes and the uniqueness in which all systems and components are expected to achieve the mechanical work they will be asked to do.

## Employees

Kibblewhite valvetrain and custom engineered components are second to none. KPMI® employs twenty six employees and fosters a work smart culture. The dedication of top notch employees (A-players) in Engineering and Customer Service is the reason why we are the industry leader in valvetrain development. Putting our customers first can be found in every element of product development and you will see that precision level of detail in every single package that is shipped out of our warehouses. This type of commitment is found in the class of employee, equipment, and investment in emerging technologies.

# MADE IN USA



Our Focus is :  
Quality that exceeds expectations

At KPMI®  
There are no exceptions for quality

## Facility

Kibblewhite encompasses five locations and over 20,000 square feet of Machine Shop, Office, Engineering, and Warehouse space. KPMI® has spent the past five years aggressively updating our operations. Our complete facility has eleven of the latest model CNC lathes (2010 & later), CAD, CAM, and custom machining equipment. Our Engineering Department and machinists are ready and waiting to assist you with your custom requirements and drive our ongoing production of high performance valvetrain systems for 4-stroke engines.

## Quality Control

It is our sole intent to provide our customers with product that works right the first time and gives maximum value for the dollar in terms of reliability and performance. None of our product achieves final approval without first traveling through a grueling development flow process. Final reviews require three engineering signatures and a signature from production. What this means is that there are three independent reviews following each and every product through all phases of development before the final review and production signature can be granted. I am very proud of what we do and of every single employee that has been hand selected to contribute to the success of KPMI®.

We measure our success by our satisfied customers and for this we are truly grateful. Without our loyal customers and their continued demand for consistent, high quality valvetrain and engineering services, we would not be the company that we are today. Because of this we thank each and every one of our customers and future customers.



Sincerely,  
William Kibblewhite

# KPMI<sup>®</sup> ENGINEERING & MANUFACTURING VALVETRAIN FOR 80-YEARS & 2-GENERATIONS

KPMI<sup>®</sup>

Designs and manufactures longevity into valvetrain

Our Primary focus is:  
Engineering product that exceeds expectation

At KPMI<sup>®</sup>  
There are no exceptions for quality



World  
Top Fuel Champion  
*Larry "Spiderman" McBride*

European  
SuperTwin Champion  
*Ton Pels*

European  
Top Fuel Champion  
*Ian King*

**Valvetrain That The Top Champions of The World Rely On**

# VALVES LIGHTWEIGHT HIGH FLOW

TRADEMARKS: BLACK DIAMOND™ WHITE DIAMOND® & TENSILITE® TITANIUM



- 220 Different Applications
- F.E.A Designed
- Titanium, Inconel, Ev8 SS, Bi-Metallic
- Crn Coated (Tensilite® Titanium)
- Black Nitride Coated (Black Diamond™)
- Hard Chrome stems (White Diamond®)
- Hollow stem and custom



# VALVE GUIDES

G2 CAST IRON • C630 BRONZE • MANGANESE BRONZE



- *Over 200 Different Applications*
- *Undersized Bores*
- *Superior Surface Finish*
- *Excellent Heat Transfer*
- *100% Quality Controlled*



# SPRING KITS **LARGEST SELECTION** IN THE WORLD



- Over 200 Different Applications
- Race & Direct O. E. M. Replacement
- Super Clean CrSi Wire
- Complete F. E. A. Design
- 100% Quality Controlled
- Manufactured in the USA



# PISTON & VALVETRAIN SERVICE KITS

**KPMI® INTRODUCES ALL IN ONE SYSTEM**



## Top End Service Kit Includes:

- Forged 2618-Alloy Piston
- Plus Total Seal® Rings, Pin and Clips
- Complete Top End Gasket Kit & Seals
- Full Set of KPMI® Std. Valves
- KPMI® High Performance Ti. Spring Kit

## Cylinder Head Service Kit Includes:

- Complete Top End Gasket Kit
- Full Set of KPMI® Std. Valves
- KPMI® High Performance Ti. Spring Kit
- Complete Set of KPMI® Std. Bronze V/Guides
- Set of KPMI® Viton® Valve Stem Seals



# BUSHINGS

CAM • CRANKSHAFT • FORK • ROCKER ARM • WRIST PIN



- Direct O.E.M. Replacement
- Superior Surface Finishes
- Improved Durability
- 100% Quality Controlled
- Manufactured in USA



# CYLINDER STUD KITS

USED BY THE TOP RACERS IN THE WORLD



- 180,000 psi H.T. Steel
- Rolled Threads
- Interference Fit Case End
- OD Ground, Maximizing Strength
- Treated 100% with Black Oxide



# VALVE SEATS UNIVERSAL

USED IN ALL OUT RACING APPLICATIONS AND STOCK REPLACEMENT



- 24mm to 57mm
- 80 - Different part numbers
- Small I.D.
- Extra tall
- Call for Custom Seat Sizes



# TAPPETS H.T. STEEL DLC COATED



Shim in Tappet (SIT)



Shim on Bottom (SOB)

- Billet Aircraft Alloy Steel
- F.E.A Designed
- H.T. Steel Coated
- H.T. Steel Plus DLC Coated





# VALVE STEM SEALS

**INSIST ON THE RED ONES!**



- Contact surfaces designed for improved sealing
- High temperature Viton® and Teflon® materials
- Improved tolerances over OEM
- 100% Quality Controlled
- Available in a variety of sizes



# CLUTCH SPRINGS

**FOR OVER 40-YEARS THESE HAVE BEEN THE SPRINGS OF CHOICE**



# TOOLS & COMPONENTS

**KPMI® CAPABILITIES ARE NOT LIMITED TO VALVETRAIN**

- Seal Installation Tools
- Exhaust Spigots
- Head Nuts
- Tappets
- Push Rods
- Tappet Blocks



- Lash Caps
- Ball Hones
- Reamers
- Shims
- Keepers
- Washers



# COMPRESSION RELEASE VALVES

**VARIOUS HARLEY-DAVIDSON® APPLICATIONS**



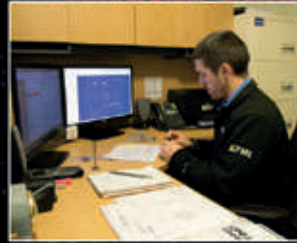
**NEW PRODUCTS**

- Three models available - all with M10x1 threads and priced competitively
- Designed to reduce "hot start" issues and starter / battery loads
- 5-7 Newton's of closing force resistance, for high demand applications
- Custom molded knobs ensure a cool touch and easy operation
- Embossed with the KPMI® brand so you know you have purchased a quality product

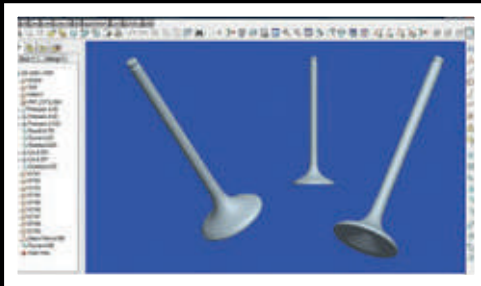


# ENGINEERING

FULL SERVICE. DESIGN-BUILD. MANUFACTURING CAPABILITIES



For 80 years KPMI® has continued to be at the forefront of innovation, manufacturing, and development of high performance valve train. KPMI® is constantly investing in new technologies in order to maintain our position as one of the foremost authorities in valve train development.



## Software

Utilizing the advances in power, speed, and user interface of modern software, KPMI® employs an arsenal of software programs to plan, design, simulate, fabricate and test all aspects of development and production.

- **3D Modeling/FEA:** Every KPMI® component is designed using the latest in 3D modeling technologies, allowing KPMI® engineers to assemble entire valve train systems virtually to verify fitment and clearances. Once assembled, each system is subject to a rigorous Finite Element Analysis (FEA) that allows KPMI® engineers to validate designs and isolate areas of stress concentration. This FEA analysis ensures that KPMI® parts are both light and strong enough to stand up to the rigorous environment inside a modern racing engine.
- **Valve train Simulation:** Once a KPMI design has been modeled and refined the entire system is simulated using valve train simulation software. This allows KPMI® engineers to “tune” each system to ensure that it will work harmoniously in the engine.
- **Spring Design:** Each of KPMI's valve springs are designed using advanced spring design software that allow KPMI® engineers to balance designs for the perfect blend of performance and longevity.

## Prototyping

KPMI® has integrated the use of 3D rapid prototyping technologies into the many aspects of design process. This technology allows KPMI® engineers to almost instantaneously create working plastic prototypes of designs that can be used to check fitment, clearances and design validity.



## Flow Testing

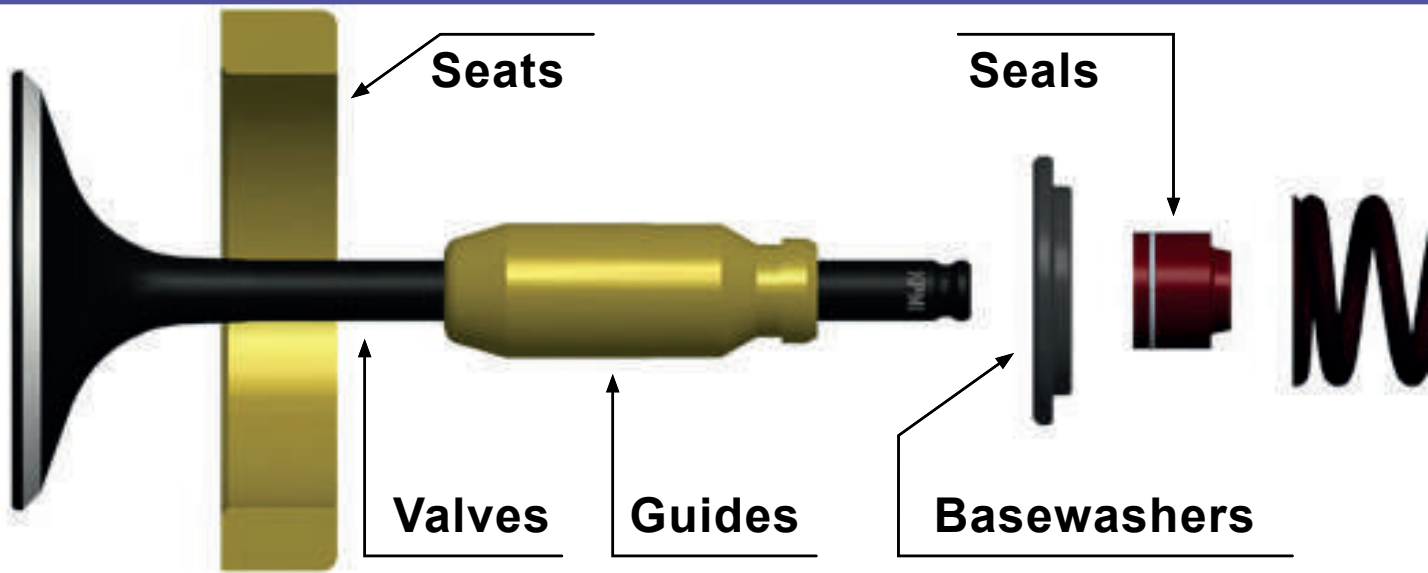
Before a design is complete, test valves are made with different tulip profiles and each design is flow tested on our FlowData 700 computerized flow bench to optimize airflow characteristics for that application. This often leads to improvements not only in flow characteristics, but in weight reduction as well.

## Testing

When it comes to testing our product, KPMI® does not hold back. We pride ourselves in supplying the consumer with a product that works right the first time, keeping this in mind when it comes time to test, KPMI® looks at every aspect of the design under several different criterion. The springs are brought to failure under fatigue testing and shake table dynamics, whereas the heat-treated materials are destructively tested to insure that they did not become brittle during the manufacturing process; we do not, however, stop there. When we are sure that our product lives up to the name, we go one step further and supply the product to our test riders to see how it performs under real world riding conditions. Only once all of this information has been compiled and we are sure that the product is ready for sale, is it released to our vast network of world-wide dealers and distributors.



# THE KPMI® SYSTEM



THE KPMI SYSTEM

## Valves

**Light and strong with optimum airflow**  
A combination of FEA stress analysis and flow bench testing of prototype valves allows KPMI® engineers to optimally balance valve mass, strength, and airflow characteristics. A unique tulip and dish are designed for each application.

### Stellite tips for rocker applications

Stellite is welded to the valve tips in rocker actuated applications for resistance to the impact and abrasive wear common in rocker arm systems. This welded stellite can never come loose.

### Black Diamond™ Valves

KPMI® Black Diamond™ one piece forged stainless steel valves are impregnated by a special German process to improve wear properties and reduce friction. This process provides resistance to corrosion and wear that is superior to that of hard chromium and electrolysis nickel plating.

### White Diamond® Valves

We fully CNC machine our White Diamond® valves from a one-piece forging of either EV8 Stainless Steel or Inconel-751. These materials have proven heat and corrosion resistance properties and are hard chromed with a 360 degree anode to produce the highest possible grade of hard chrome finish.

### Tensilite® Valves

KPMI® Tensilite® titanium valves are one piece forgings made from 6AL4V or 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

## Seats

### Repair /Modify

Seats are tall, offered in several sizes, and have ample material on the ID for shaping, making them universal in application. They allow the builder to repair damaged seat bores, or to increase the seat size for larger racing valves.

### Ease of installation

Seat ODs are ground for a smooth uniform surface finish to insure good contact with the cylinder head for optimal heat transfer and smooth installation. Seats also have a generous radius on the leading edge to prevent galling during installation.

### Powdered metal seats

With the latest in powdered metal technology, KPMI's R&D team was able to create a high density seat with exceptional wear resistance, resistance to micro welding, and good thermal qualities. This material is compatible with all types of fuel blends, resists corrosion and burning, and is machinable with standard tooling.

### Nickel aluminum bronze seats

The product of a two year KPMI® R&D effort, this proprietary high copper, beryllium free bronze alloy is designed specifically for use with titanium valves in high performance applications.

## Guides

### Superior airflow

Guide profiles are designed to have as little effect on the airstream as possible, while maintaining critical cross sectional thickness in high temperature areas. Promoting both high performance and endurance.

### Oversize ODs

Multiple oversizes are available.

## Guides cont.

### Tight tolerances

High concentricity tolerances are held to insure the best possible geometry between the seat and guide is maintained when the guides are replaced. This means minimal material removal from the seat, time savings, and consistent chamber volumes, when valve jobs are performed.

### C630 bronze guides

C630 is a blend of copper, nickel, and aluminum. The high copper content gives excellent thermal qualities, the nickel makes the guide tough and wear resistant, and the aluminum brings work hardening characteristics. This bronze alloy allows for tighter clearances than other materials, creating better valve and seat sealing, as well as superior oil control. The expansion qualities of C630 bronze make it especially compatible with aluminum cylinder heads.

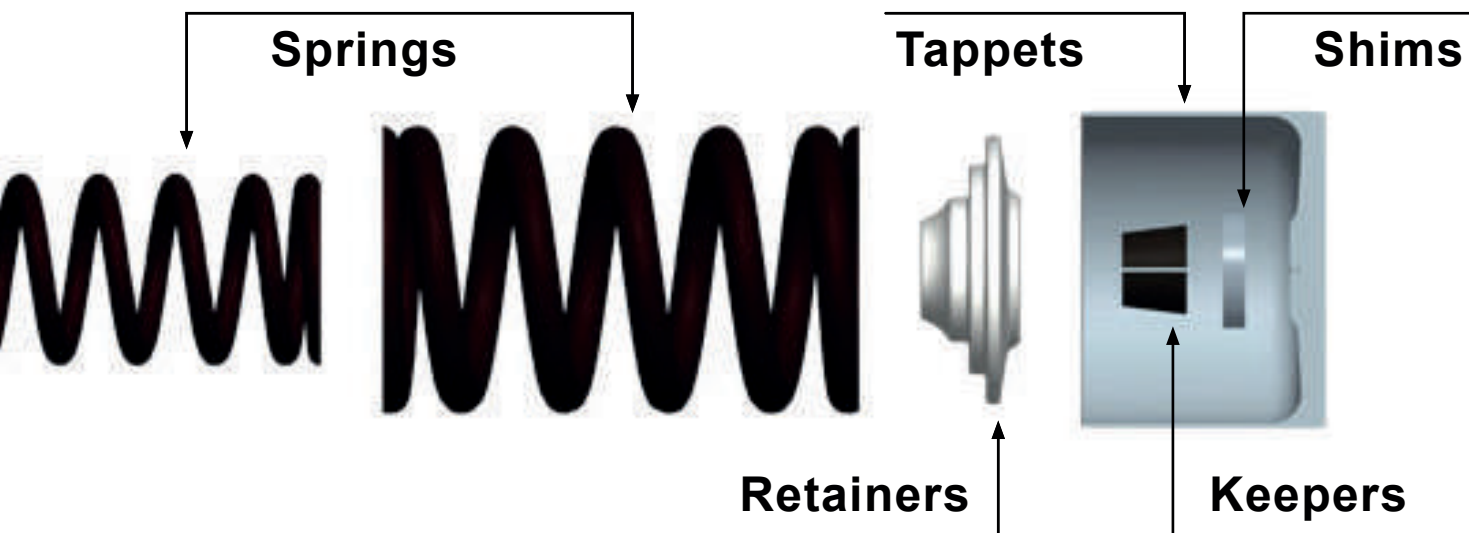
### Cast iron guides

KPMI® R&D has produced a proprietary cast iron blend that thrives in the tough operating conditions of today's engine. KPMI's certified cast iron provides excellent wear resistance and a superior guide bore finish that is easy on valve stems.

### Manganese guides

These Engine Builder valve guides have been designed with the price conscious builder in mind. Expect the same exacting KPMI® tolerances, but with a reduced toughness / wear-ability when compared to premium "C630" Nickel Aluminum Bronze valve guides. The softer Manganese guides are easily reamed, and then can be delicately finished with our high quality ball hones. Now, with any battery operated or electric drill you can ream and hone manganese valve guides in less time and in the absence of expensive honing equipment required to properly size "tough" Nickel Bronze guides.

# THE KPMI® SYSTEM



THE KPMI SYSTEM

## Seals

### High operating temperature

KPMI® Red Viton® seals operate at a higher temperature than other seal materials.

### Chemical resistance

Viton® seals are resistant to petroleum products, and by-products of combustion. Retaining pliability in situations where other materials would become hard and lose their sealing capability.

## Springs

### Advanced spring design

Springs are engineered for each specific application using proprietary advanced spring design, simulation, and analysis software. Engineers pay special attention to cam and spring harmonics, stress, mass, and operating rpm.

### Premium grade, super clean ground chrome silicon wire

X-Rayed at regular intervals to check for inclusions, heat treated, and shot peened. Insuring maximum spring life.

## Basewashers

### Proprietary heat treatment process

Creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

### Tight tolerance for precise fit

Manufactured to tolerances that allow no excessive lateral movement. Correct fitment promotes longer component life and optimizes performance of the entire valve train.

## Retainers

### Engineered with advanced computer software

FEA stress analysis allows engineers to lighten retainer without sacrificing strength.

### Tight tolerance for precise fit

KPMI® Engineers specify tight tolerances that allow no excessive lateral movement. Correct fitment promotes longer component life and optimizes performance of the entire valve train.

### Heat treated steel retainers

KPMI's proprietary heat treatment process creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

### Titanium retainers

To further reduce reciprocating mass, KPMI® offers titanium retainers as an alternative to steel.

### Custom retainers available

KPMI® is ready to design a custom retainer to your specifications.

## Keepers

### Wide variety of styles

KPMI® offers radius bead, triple radius bead, and square bead steel keepers. See keeper section in back of catalog for full selection.

### High tensile heat treated steel

Forged or single point machined.

## Tappets

### Machined from billet aircraft quality steel

### Proprietary heat treatment process

Creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

### Engineered with advanced computer software

FEA stress analysis allows engineers to lighten tappet without sacrificing strength.

### Racing performance

KPMI® tappets are run in high performance automotive and motorcycle racing applications including Motocross, Flat track racing, Road racing, Drag racing, and land speed racing

### Many stock sizes available

See KPMI® Tappet Section in back of catalog for full selection.

### Custom tappets available

Send KPMI® your requirements so we can develop your next tappet.

## Shims

### Ground to a precise height

KPMI® offers valve adjustment shims in 7.5mm, 9.5mm, and 13mm diameters, with heights increasing in increments of 0.05 mm. See KPMI® Shim Section in back of catalog for full selection.



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## AUTOMOTIVE

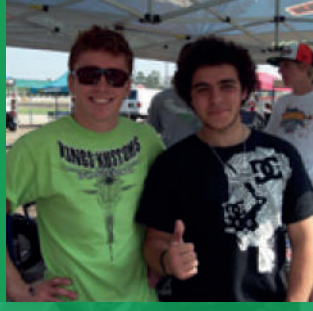
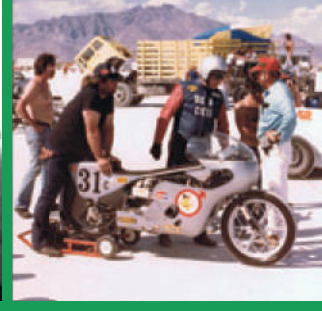
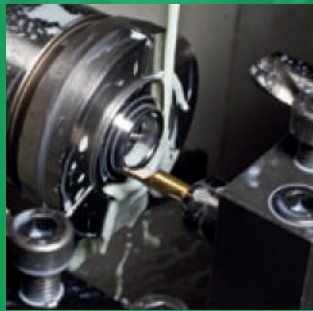
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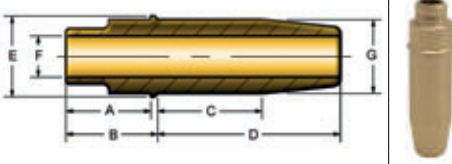
# ARCTIC CAT® H2™ V-TWIN 2008-'18



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	88-88000	Intake	.450"	1.200"	49#	159#	.450"	
		Exhaust						
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers

## Valve Guides • C630 Bronze For H2 V-Twin 2008-2013



	A	B	C	D	E	F	G	Intake	Exhaust	
	0.420"	0.445"	0.730"	1.110"	0.455"	0.1955"	0.4163" / Std		88-88020	
								+0.001"	88-88021	
								+0.002"	88-88022	
	Use O.E.M. Seal							+0.010"	88-88029	

# ARCTIC CAT® VARIOUS 998cc TRIPLES 2017-'19

- M 9000 KING CAT 2017-2019
- XF 9000 CROSS COUNTRY LTD 2017-2019
- XF 9000 CROSSTREK 2017-2018
- XF 9000 HIGH COUNTRY LTD 2017-2019
- ZR 9000 LTD 2017-2019
- ZR 9000 LXR 2017
- ZR 9000 RR 2017-2019
- ZR 9000 SNO PRO 2017-2019
- ZR 9000 THUNDERCAT 2017-2019
- XF 9000 CROSSTOUR 2018

## Valve Spring Kit • Lightweight Racing



**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	88-88200	Intake	.445"	1.300"	53#	167#	.445"	
		Exhaust						
Kit Includes			12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	88-88300	Intake	.445"	1.300"	53#	167#	.445"	
		Exhaust						
Kit Includes			12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

It may be necessary to use KPMI® Shortened Valve Guides # 88-88220, to achieve higher than stock lift.

## Valve Spring Kit • "Shim in Tappet" Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	88-88250	Intake	.445"	1.300"	53#	167#	.445"	
		Exhaust						
Kit Includes			12	Titanium Retainers	12	CrSi Valve Springs		
			12	H. T. Steel Basewashers	12	H. T. Steel Tappets		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	88-88350	Intake	.445"	1.300"	53#	167#	.445"	
		Exhaust						
Kit Includes			12	H.T. Steel Retainers	12	CrSi Valve Springs		
			12	H. T. Steel Basewashers	12	H. T. Steel Tappets		



Shim In Tappet (SIT)

KPMI® shim in tappet systems locate the adjustment shim in the hardened steel of the tappet body, where it is impervious to wearing (ovalling) and kicking the shim out. By designing the tappet and retainer together as a system, the shim counterbore depth in the tappet has been maximized. This allows for increased insurance against losing the shim even in the event of valvetrain separation during severe operating conditions, over-revs, or extreme boost pressures.




# ARCTIC CAT® VARIOUS 998cc TRIPLES 2017-'19

- M 9000 KING CAT 2017-2019
- XF 9000 CROSS COUNTRY LTD 2017-2019
- XF 9000 CROSSTREK 2017-2018
- XF 9000 HIGH COUNTRY LTD 2017-2019
- ZR 9000 LTD 2017-2019
- ZR 9000 LXR 2017
- ZR 9000 RR 2017-2019
- ZR 9000 SNO PRO 2017-2019
- ZR 9000 THUNDERCAT 2017-2019
- XF 9000 CROSSTOUR 2018


## Valves • Black Diamond™ • Black Nitroreg Stems

NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>88-88212</b>	Intake	31.00mm	1.220"	0.1765"	15°	3.495"	Standard
	<b>88-88213</b>	Intake	32.00mm	1.260"	0.1765"	15°	3.495"	Oversize
	<b>88-88216</b>	Exhaust	26.00mm	1.024"	0.1760"	25°	3.470"	Standard
	<b>88-88217</b>	Exhaust	27.00mm	1.063"	0.1760"	25°	3.470"	Oversize

## Valve • White Diamond® • Inconel® • Exhaust

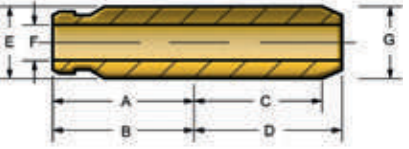
NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>88-88216K</b>	Exhaust	26.00mm	1.024"	0.1760"	25°	3.465"	Standard

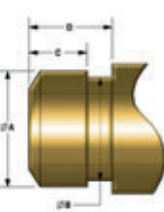
\*\* Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • C630 Bronze

NEW PRODUCTS

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.530"	0.530"	0.585"	0.750"	0.354"	0.1760"	0.3564" / Std.		<b>88-88220</b>	
								+0.001"	<b>88-88221</b>	
								+0.002"	<b>88-88222</b>	
								+0.010"	<b>88-88229</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake
								Exhaust
					Part Number		Quantity	Quantity Discount
					<b>71014-4</b>		Pkg. of 4	0%
					<b>71014-8</b>		Pkg. of 8	0%
					<b>71014-12</b>		Pkg. of 12	0%
					<b>71014-16</b>		Pkg. of 16	Less- 10%
					<b>71014-50</b>		Pkg. of 50	Less- 15%
<b>71014-100</b>		Pkg. of 100	Less- 20%					

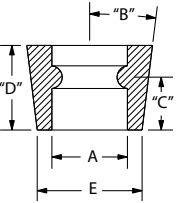

ARCTIC CAT

# ARCTIC CAT® VARIOUS 998cc TRIPLES 2017-'19



## Keeper Set • O.E.M. Replacement

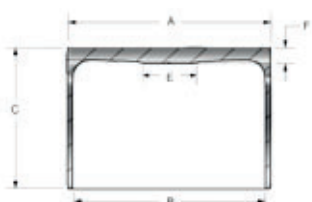
**NEW PRODUCTS**

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
		<b>88-88240</b>	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	12 Pr.	1WG-12118-00-00 3SO-E2118-00-00
			Exhaust								

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Tappets • O.E.M. Replacement • H.T. Steel

**NEW PRODUCTS**


	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>88-88245</b>	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"
	Exhaust								

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting other size tappets.

# ARCTIC CAT® VARIOUS 1056cc TWINS 2008-'16



- All 2014 5000 & 9000 C-TEC4 Engines
- Bearcat™ Z1 XT (Incl. Limited)
- TZ1™ (All Models Incl. Turbo)
- Z1™ (All Models Incl. Turbo)
- ProCross™ F & XF 1100 (All Models Incl. Turbo)
- ProClimb™ M 1100 (All Models Incl. Turbo)
- Jaguar™ Z1
- M / XF / ZR 9000's 2014-2015
- M 9000 2016

## Valve Spring Kit • Turbo Racing • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>88-88050</b>	Intake	Exhaust	.380"	1.440"	70#	184#
	Kit Includes	8					

Both our Turbo spring kit and "Shim in Tappet" Turbo spring kits are designed for applications with up to 35psi of boost.

## Valve Spring Kit • Turbo Racing • "Shim in Tappet" High Performance

		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
		<b>88-88100</b>	Intake	Exhaust	.380"	1.440"	70#	184#
	Kit Includes	8	CrSi Valve Springs					
				8	H. T. Steel Basewashers	8	H. T. Steel Tappets	

"Shim in Tappet" valve spring kits provide a solution to the common ovaling of retainers and shim spitting in higher performance applications. By locating the shim in the heat treated steel tappet instead of the titanium retainer, wear is greatly reduced, and reliability is increased. These tappets were designed and analyzed using the same Finite Element Analysis software used in the development of our valves in order to maintain the same strength and mass as our high performance traditional tappet/retainer system.



# ARCTIC CAT® VARIOUS 1056cc TWINS 2008-'16

ARCTIC CAT

- All 2014 5000 & 9000 C-TEC4 Engines
- Bearcat™ Z1 XT (Incl. Limited)
- TZ1™ (All Models Incl. Turbo)
- Z1™ (All Models Incl. Turbo)
- ProCross™ F & XF 1100 (All Models Incl. Turbo)
- ProClimb™ M 1100 (All Models Incl. Turbo)
- Jaguar™ Z1
- M / XF / ZR 9000's 2014-2015
- M 9000 2016

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>88-88062</b>	Intake	36.00mm	1.417"	0.2160"	10°	3.880"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.620"	0.655"	0.645"	0.825"	0.460"	0.2155"	0.4167" / Std.	<b>88-88070</b>	
							+0.001"	<b>88-88071</b>	
							+0.002"	<b>88-88072</b>	
							+0.010"	<b>88-88079</b>	

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>88-88057</b>	Intake Exhaust	H. T. Steel	28.00mm	1.1017"	1.038"	0.763"	--	0.098"

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

# BMW® R60™ / 2 1960-1969



BMW

## Valve Spring Kit • O. E. M. Replacement • High Performance

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers		H. T. Steel Keepers		CrSi Valve Springs		H. T. Steel Basewashers	
	90-9082	Intake	4	90-9084	4	90-9085	4	90-9086	4	90-9087
		Exhaust								
Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift				
.450"	1.355"	58#		152#		@ .450"				

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance. Parts in this kit can be purchased individually as OEM replacements.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	90-9060	Intake	34.00mm	1.339"	0.2730"	23°	3.425"	Standard
	90-9062	Exhaust	32.00mm	1.260"	0.2720"	29°	3.415"	Standard

Our valves are the quality you expect from Kibblewhite®, manufactured to exact O.E.M. specifications.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.600"	0.650"	1.000"	1.200"	0.620"	0.2730"	0.5140" / Std.		90-9070
								+0.001"	90-9071
								+0.002"	90-9072
								+0.004"	90-9074
								+0.010"	90-9080

No seal required



# BMW® 5 / 6 / 7 / R80™ / R90™ / R100™ 1970-1995

## Valve Spring Kit • Lightweight • Performance Upgrade

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	90-9034	Intake	.500"	1.445"	104#	196#	.367"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	H.T. Steel Retainers	4	H. T. Steel Basewashers

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	90-9035	Intake	42.00mm	1.654"	0.3130"	23°	3.885"	Standard
	90-9054	Intake	44.00mm	1.732"	0.3130"	23°	3.885"	Standard
	90-9037	Exhaust	34.00mm	1.339"	0.3125"	29°	3.885"	Standard
	90-9036	Exhaust	38.00mm	1.496"	0.3125"	29°	3.885"	Standard
	90-9045	Exhaust	40.00mm	1.575"	0.3125"	29°	3.885"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.600"	0.650"	0.980"	1.400"	0.620"	0.3125"	0.554" / Std.	90-9000		
							+0.001"	90-9001		
							+0.002"	90-9002		
							+0.003"	90-9003		
							+0.004"	90-9004		
							+0.010"	90-9009		
		0.600"	0.650"	0.980"	1.300"	0.620"	0.3125"	0.554" / Std.		90-9020
								+0.001"		90-9021
								+0.002"		90-9022
							+0.003"		90-9023	
							+0.004"		90-9024	
						+0.010"			90-9029	

## Wrist Pin Bushings • Nickel Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	90-9030	Bronze	0.9515"	0.8555"	0.9325"	Standard	Pkg. of 1

These wrist pin bushings have been machined from solid nickel bronze bar stock with a superior surface finish and are designed to be direct OEM replacements. The nickel content gives these bushings improved wearability when compared to the OEM bushing. All of these bushings are 100% quality controlled.



# BRP® • CAN AM® DS 450™ 2008-2015



• 450X™

• 450XXC™

• 450XXM™

• 450 EFi™

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	91-91100	Intake	.450"	1.385"	75#	235#	.450"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers
			4	H. T. Steel Basewashers	4	H. T. Shims	

## Valves • Black Diamond™ • Black Nitroleg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	91-91112	Intake	38.00mm	1.496"	0.2350"	20°	3.550"	Standard
	91-91116	Exhaust	31.00mm	1.220"	0.2347"	29°	3.565"	Standard
	91-91117	Exhaust	32.00mm	1.260"	0.2347"	29°	3.565"	Oversize

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.315"	0.520"	5	A	B	C	D	Intake
				0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust
			Part Number		Quantity		Quantity Discount	
			71029-4		Pkg. of 4		0%	
			71029-8		Pkg. of 8		0%	
			71029-16		Pkg. of 16		Less- 10%	
			71029-50		Pkg. of 50		Less- 15%	
			71029-100		Pkg. of 100		Less- 20%	

# BRP® • CAN AM® 400 / 500 / 650 / 800 / 1000 2006-'14

• Renegade™

• Outlander™

• Commander™

## Valve Spring Kit • Lightweight Racing

For Outlander 500 2007-2014 / Outlander 650 2006-'14 / Outlander 800 2007-'14 / Outlander 1000 2014 / Renegade 500 2008-'14 / Renegade 500 2008-'14 / Renegade 800 2007-'14 / Renegade 1000 2012-'14 / Commander 800 2012-2014 / Commander 1000 2012-'14

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91150	Intake	.445"	1.275"	58#	171#	.445"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8

It may be necessary to use KPMI® Shortened Valve Guides (KPMI® # 91-91170 & # 91-91180) to achieve higher than stock lift.



# BRP® • CAN AM® 400 / 500 / 650 / 800 / 1000 2006-'14

• Renegade™

• Outlander™

• Commander™

## Valve Spring Kit • Lightweight Racing For Outlander 400 2006-'13

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91156	Intake	.445"	1.275"	58#	171#	.445"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

It may be necessary to use KPMI® Shortened Valve Guides (KPMI® # 91-91170 & # 91-91180) to achieve higher than stock lift.

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	91-91162	Intake	31.12mm	1.225"	0.1958"	22°	3.585"	Standard
	91-91166	Exhaust	27.00mm	1.063"	0.1953"	16°	3.520"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.470"	0.780"	0.895"	0.433"	0.1958"	0.4362" / Std.		91-91170	
								+0.001"	91-91171	
								+0.002"	91-91172	
								+0.010"	91-91179	
	---	0.470"	0.680"	0.895"	0.433"	0.1953"	0.4362" / Std.			91-91180
								+0.001"		91-91181
								+0.002"		91-91182
							+0.010"		91-91189	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.320"	0.435"	5	A	B	C	D	Intake
				0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust
				Part Number		Quantity		Quantity Discount
				71041-4		Pkg. of 4		0%
				71041-8		Pkg. of 8		0%
				71041-16		Pkg. of 16		Less- 10%
				71041-50		Pkg. of 50		Less- 15%
				71041-100		Pkg. of 100		Less- 20%

# BRP® • CAN AM® MAVERICK™ 2013-2018



BRP

## ALL MODELS EXCEPT MAVERICK™ X3 and TRAIL MODELS

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91200	Intake	.470"	1.370"	57#	177#	.470"	
		Exhaust						
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers

### Cylinder Head Service Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	90-91400	Intake	.470"	1.370"	57#	177#	.470"	
		Exhaust						
Kit Includes			8	In / Ex Titanium Retainers	8	In / Ex CrSi Valve Springs	8	In / Ex H. T. Steel Basewashers
			4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves		
			8	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

### Components • Replacement • Cylinder Head Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
91-91200	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
91-91212	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
91-91216	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
91-91220	Intake/ Exhaust Standard Valve Guide	Valve Guide • C630 Bronze
90-91401	Top End Gasket Kit	<b>Includes:</b> Head Gasket 92mm (2), Valve Stem Seal (8), Cam Chain Tensioner O-ring (1), Cam Adjuster O-ring Header Gasket (2)

### Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	91-91212	Intake	36.50mm	1.437"	0.2160"	14°	3.620"	Standard
	91-91216	Exhaust	31.00mm	1.220"	0.2155"	25°	3.515"	Standard

### Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.515"	0.745"	0.935"	0.433"	0.2155"	0.4361"/ Std.	91-91220		
								+0.001"	91-91221	
								+0.002"	91-91222	
								+0.010"	91-91229	

### Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.315"	0.455"	5	A	B	C	D	Intake
				0.325"±0.002"	0.310"	0.110"	0.220"	Exhaust
				Part Number			Quantity	Quantity Discount
				71042-4			Pkg. of 4	0%
				71042-8			Pkg. of 8	0%
				71042-16			Pkg. of 16	Less- 10%
				71042-50			Pkg. of 50	Less- 15%
				71042-100			Pkg. of 100	Less- 20%



# BRP® • CAN AM® DS™ 650 2000-2007

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91010	Intake	.500"	1.405"	69#	196#	.500"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valve Spring Kit • Lightweight Racing with Shim Under Conversion

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91000	Intake	.500"	1.390"	74#	216#	.400"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers
			4	H. T. Steel Tappets		4	H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	91-91015	Intake	36.00mm	1.417"	0.2350"	23°	3.565"	Standard
	91-91016	Intake	37.00mm	1.457"	0.2350"	23°	3.565"	Oversize
	*91-91017	Exhaust	31.00mm	1.220"	0.2347"	29°	3.565"	Standard
	*91-91018	Exhaust	32.00mm	1.260"	0.2347"	29°	3.565"	Oversize

\*Note: The factory supplied the exhaust valves for this application with 30° valve face angles. KPMI® designed their lightweight, one piece stainless steel valves for this application with standard 45° face angles. Any concerns of flow loss at low lift numbers can be overcome by maximizing the port throat area, an advantage provided by the 45° face.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.400"	0.560"	5	A	B	C	D	Intake
				0.435"±0.002"	0.400"	0.120"	0.280"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71025-4		Pkg. of 4		0%		
		71025-8		Pkg. of 8		0%		
		71025-16		Pkg. of 16		Less- 10%		
		71025-50		Pkg. of 50		Less- 15%		
71025-100		Pkg. of 100		Less- 20%				

# BRP® • ROTAX® ACE 900cc TRIPLE ENGINES 2014-'20

- Maverick X3™ (Max/ Turbo's) 2017-'18
- MAVERICK™ (Max / Turbo's) 2019-'20
- Spark™ (ACE / 900 / HO / TRIXX) 2014-'19
- GTI-GTR-GTS™ 2017
- GTI™ 90 2018-2019
- GTS™ 90 2018

## Valve Spring Kit • Beehive

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-91300	Intake	.350"	1.180"	51#	161#	.350"	
		Exhaust						
Kit Includes			12	CrSi Valve Springs	12	Titanium Retainers	12	Viton® Seals

Note: KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.


# BRP® • ROTAX® ACE 900cc TRIPLE ENGINES 2014-'20



- Maverick X3™ (Max/ Turbo's) 2017-'18
- MAVERICK™ (Max / Turbo's) 2019-'20
- Spark™ (ACE / 900 / HO / TRIXX) 2014-'19
- GTI-GTR-GTS™ 2017
- GTI™ 90 2018-2019
- GTS™ 90 2018


## Valve Spring Kit • Beehive • Solid Tappet Conversion

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	91-91700	Intake	.385"	1.165"	56#	177#	.385"
		Exhaust					
Kit Includes			12	CrSi Valve Springs	12	Titanium Retainers	
			12	Viton® Seals	12	H.T. Steel Tappets	


1) Note: This kit is NOT compatible with OEM hydraulic tappet system. For lash adjustment, this kit is designed to use standard Ø7.5mm adjustment shims (not included). Shims are to be located in the retainer counterbore contacting the valve tip.  
 2) Note: KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.

## Valves • White Diamond® • Hard Chrome Stems • Inconel®


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Remarks
	91-91312H	Intake	29.01mm	1.142"	0.1960"	15°	3.305"	Stainless	Standard
	91-91313H	Intake	30.00mm	1.181"	0.1960"	15°	3.295"	Stainless	Oversize
	*91-91316K	Exhaust	25.00mm	0.984"	0.1955"	15°	3.345"	Inconel®	Standard
	*91-91317K	Exhaust	26.00mm	1.024"	0.1955"	15°	3.335"	Inconel®	Oversize

\*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous. Also, It's recommended for Turbos.

## Valve Guides • Manganese Bronze for Maverick Models ONLY

	A	B	C	D	E	F	G	Intake	Exhaust
	0.290"	0.340"	0.850"	1.010"	0.490"	0.1955"	0.3565" / Std.		91-91320M
							+0.001"		91-91321M
							+0.002"		91-91322M
							+0.010"		91-91329M

## Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.460"	0.975"	3	A	B	C	Spring shoulder Ø	Intake
				0.355 ± 0.005	---	0.290"	0.674"	Exhaust
	Part Number			Quantity			Quantity Discount	
	71047-4			Pkg. of 4			0%	
	71047-8			Pkg. of 8			0%	
	71047-12			Pkg. of 12			0%	
	71047-16			Pkg. of 16			Less- 10%	
	71047-50			Pkg. of 50			Less- 15%	
71047-100			Pkg. of 100			Less- 20%		



# BRP® • ROTAX® AIR COOLED SINGLES 500/600 1982-'06

BRP

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	91-9400	Intake	.450"	1.305"	106#	266#	.450"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
		0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	91-0478
							+0.002"	91-0479	
							+0.004"	91-0480	
							+0.006"	91-0481	
							+0.015"	91-4036	
	0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		91-0482
							+0.002"		91-0483
							+0.004"		91-0484
							+0.006"		91-0485
							+0.015"		91-4037

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71019-4		Pkg. of 4	0%	
				71019-8		Pkg. of 8	0%	
				71019-16		Pkg. of 16	Less- 10%	
				71019-50		Pkg. of 50	Less- 15%	
			71019-100		Pkg. of 100	Less- 20%		

## Tappets • O.E.M. Replacement • H.T. Steel


	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	91-9411	Intake	H. T. Steel	33.00mm	1.298"	1.235"	1.025"	0.340"	0.115"
	Exhaust								

# BRP® • SEADOO® "1503" 4-TEC ENGINES 2006-'16




BRP

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	91-91051	Intake	.390"	1.360"	75#	185#	.390"
		Exhaust					
Kit Includes			12	CrSi Valve Springs			


This spring kit is designed specifically for this supercharged application. This spring kit drops into the cylinder head, working with the O.E.M. components to provide the correct pressure and harmonic range for this high performance supercharged power plant

## Retainer Set • O.E.M. Replacement • H. T. Steel NEW PRODUCTS


	KPMI P/N	Type	Material	Quantity
	91-91052	Intake	H. T. Steel	Pkg. of 12
		Exhaust		

By utilizing FEA software and a special blend of heat treated alloy steel, it was possible to reduce mass while maintaining strength and wear resistance. These retainers are intended as an OEM replacement and are completely compatible with the OEM springs, keepers, and basewashers. The spring shoulder diameter has been designed to match the OEM retainer and spring as well as KPMI's high performance spring (P/N 91-91051), making this retainer your high performance OEM alternative.

## Valves • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS

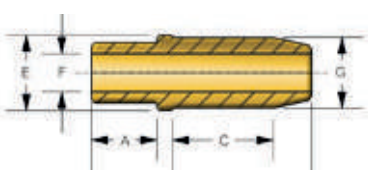

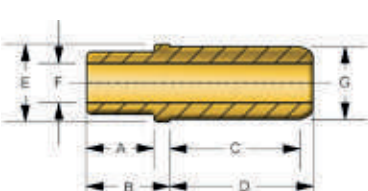

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	91-91062	Intake	38.00mm	1.496"	0.2350"	20°	3.555"	Standard
	91-91066	Exhaust	31.00mm	1.220"	0.2345"	25°	3.565"	Standard

## Valves • White Diamond® • Inconel® NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	91-91096K	Exhaust	31.00mm	1.220"	0.2345"	28°	3.555"	Standard

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • C630 Bronze NEW PRODUCTS

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.405"	0.500"	0.625"	0.860"	0.465"	0.2350"	0.4360" / Std.	91-91070		
									+0.001"	91-91071	
									+0.002"	91-91072	
									+0.004"	91-91074	
								+0.010"	91-91079		
		0.405"	0.500"	0.785"	0.860"	0.465"	0.2345"	0.4360" / Std.		91-91080	
									+0.001"		91-91081
									+0.002"		91-91082
									+0.004"		91-91084
							+0.010"		91-91089		



# BSA® A10™ 1950-1962

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.585"	0.765"	0.675"	1.335"	0.620"	0.3105"	0.5632" / Std.		<b>10-4132</b>	
								+0.002"		<b>10-4133</b>
	No seal required.							+0.004"		<b>10-4134</b>

## Wrist Pin Bushings • Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>10-10350</b>	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
	<b>10-10352</b>	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002"	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

## Crankshaft Bushings • Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>10-5020</b>	SAE660 Bronze	1.690"	1.372"	1.075"	Standard	Pkg. of 1
	<b>10-5021</b>	SAE660 Bronze	1.690"	1.362"	1.075"	-0.010"	Pkg. of 1
	<b>10-5022</b>	SAE660 Bronze	1.690"	1.352"	1.075"	-0.020"	Pkg. of 1
	<b>10-5023</b>	SAE660 Bronze	1.690"	1.342"	1.075"	-0.030"	Pkg. of 1
	<b>10-5024</b>	SAE660 Bronze	1.690"	1.332"	1.075"	-0.040"	Pkg. of 1
<b>10-5025</b>	SAE660 Bronze	1.690"	1.322"	1.075"	-0.050"	Pkg. of 1	

Machined from high quality mill certified SAE660 Bearing Bronze (custom sizes available).

# BSA® B25™ 1968-1971

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>10-10300</b>	Intake	.500"	1.375"	80#	258#	.500"	
		Exhaust						
<b>Kit Includes</b>			2	CrSi Valve Springs	2	H. T. Steel Retainers	2	H. T. Steel Basewashers

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

## Valves • Black Diamond™ • Black Nitro Neg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>10-10312</b>	Intake	36.91mm	1.453"	0.3105"	27°	3.660"	Standard
	<b>10-10313</b>	Intake	37.92mm	1.493"	0.3105"	27°	3.660"	Oversize
	<b>10-10316</b>	Exhaust	33.40mm	1.315"	0.3100"	24°	3.645"	Standard
<b>10-10317</b>	Exhaust	34.39mm	1.354"	0.3100"	24°	3.645"	Oversize	



# BSA® B25™ 1968-1971



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.330"	0.570"	0.630"	1.030"	0.560"	0.3095"	0.5010" / Std.		<b>10-10320</b>
							+0.001"		<b>10-10321</b>
							+0.010"		<b>10-10329</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71012-2</b>			Pkg. of 2		0%		
	<b>71012-4</b>			Pkg. of 4		0%		
	<b>71012-8</b>			Pkg. of 8		0%		
	<b>71012-16</b>			Pkg. of 16		Less- 10%		
	<b>71012-50</b>			Pkg. of 50		Less- 15%		
<b>71012-100</b>			Pkg. of 100		Less- 20%			

## Keeper Set • H. T. Steel • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. BSA® OEM P/N
	<b>51023-2</b>	Single Radius Bead	0.310"	10.0°	0.235"	0.285"	0.417"	2 Pr.	71-1166

## Pushrods • Steel • Chrome Moly Tube NEW PRODUCTS

	KPMI P/N	Type	Material	A	B	Quantity
	<b>10-10410</b>	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.915"	6.775"	Pkg. of 2
		Exhaust		6.873"	6.733"	
Custom length push rods available upon request.						

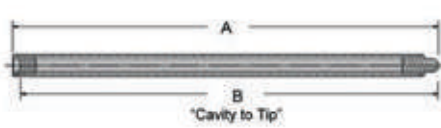
## Blank Pushrods • Steel • Chrome Moly Tube NEW PRODUCTS

	A	Ø.371" OD		
	B	9.120" Overall Length		
	C	Ø.305" ID Before Machining		
	D	E	F	G
	R.124	0.675"	0.375"	0.310"
KPMI P/N	Model	Material	Kit Includes	
<b>90502-2</b>	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces	
<b>90502-4</b>	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Male Endpieces	



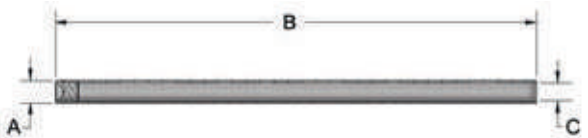
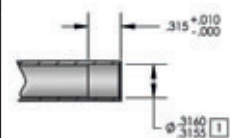
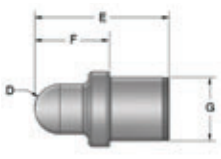
# BSA® VARIOUS B44™ 1967-1970

## Push Rod • Steel • Chrome Moly Tube NEW PRODUCTS

	KPMI P/N	Model	Type	Material	A	B	Quantity
	<b>10-10415</b>	Round Barrel 1967- Earlier		Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.205"	8.065"
Exhaust							
<b>10-10420</b>	Square Barrel 1968-1970		Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.355"	8.215"	Pkg. of 2
			Exhaust				

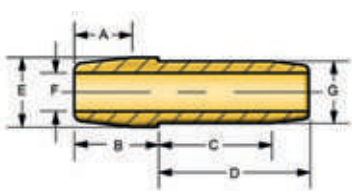

Custom length pushrods available upon request.

## Blank Pushrods • Steel • Chrome Moly Tube NEW PRODUCTS

	A	Ø.371" OD			
	B	9.120" Overall Length			
	C	Ø.305" ID Before Machining			
	D	E	F	G	1. Break ID edge only at .015 x 45°
	R.124	0.675"	0.375"	0.310"	
KPMI P/N	Model	Material		Kit Includes	
<b>90502-2</b>	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		2 Female Ended Pushrods / 2 Male Endpieces	
<b>90502-4</b>	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		4 Female Ended Pushrods / 4 Male Endpieces	

# BSA® 650™ TWIN

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
		0.465"	0.675"	0.910"	1.215"	0.560"	0.3100"	0.5010" / Std		<b>10-0347</b>
							+0.002"		<b>10-0348</b>	
							+0.004"		<b>10-0349</b>	
							+0.006"		<b>10-0350</b>	
							+0.050"		<b>10-4055</b>	

No seal required.

# BSA® A50™ 1966-1970



## Wrist Pin Bushings • Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	10-10350	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
	10-10352	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002"	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

## Crankshaft Bushings • Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	10-5010	SAE660 Bronze	1.815"	1.501"	1.005"	Standard	Pkg. of 1
	10-5011	SAE660 Bronze	1.815"	1.491"	1.005"	-0.010"	Pkg. of 1
	10-5012	SAE660 Bronze	1.815"	1.481"	1.005"	-0.020"	Pkg. of 1
	10-5013	SAE660 Bronze	1.815"	1.471"	1.005"	-0.030"	Pkg. of 1
	10-5014	SAE660 Bronze	1.815"	1.461"	1.005"	-0.040"	Pkg. of 1
	10-5015	SAE660 Bronze	1.815"	1.451"	1.005"	-0.050"	Pkg. of 1
10-10000	SAE660 Bronze	1.835"	1.451"	1.005"	+0.020" OD	Pkg. of 1	

Machined from high quality mill certified SAE660 Bearing Bronze (Custom sizes available).

## Crankshaft Thrust Washer • Bearing Bronze

	KPMI P/N	Outside Diameter A	Inside Diameter B	Thickness C	Locating Flats D
	10-1000	2.115"	1.690"	0.065"	1.900"

• Designed and manufactured by KPMI® specifically for use with various BSA® applications  
 • Improved from OEM parts to include KPMI® design standards and precision machining  
 • Manufactured from bearing bronze for increased wear resistance compared to OEM

## Pushrods • Steel • Chrome Moly Tube

	KPMI P/N	Type	Material	A	B	Quantity
	10-10400	Intake Exhaust	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.148" 7.421"	5.868" 7.141"	Pkg. of 4

Custom length pushrods available upon request.

## Blank Pushrods • Steel • Chrome Moly Tube

	A	Ø.371" OD	Machining Information: 					
	B	9.120" Overall Length						
	C	Ø.305" ID Before Machining						
	D	R.156	E	0.420"	F	0.120"	G	0.310"
	1. Break ID edge only at .015 x 45°							
KPMI P/N	Model	Material		Kit Includes				
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		2 Female Ended Pushrods / 2 Female Endpieces				
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		4 Female Ended Pushrods / 4 Female Endpieces				



# BSA® B50 GOLDSTAR™ 1971-1973

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	10-10050	Intake	.500"	1.375"	80#	258#	.500"
		Exhaust					
Kit Includes	2	CrSi Valve Springs	2	H. T. Steel Retainers	2	H. T. Steel Basewashers	

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	10-10062	Intake	44.45mm	1.750"	0.3105"	20°	4.080"	Standard
	10-10063	Intake	45.97mm	1.810"	0.3105"	20°	4.060"	Oversize
	10-10066	Exhaust	38.86mm	1.530"	0.3100"	24°	4.025"	Standard
	10-10067	Exhaust	40.39mm	1.590"	0.3100"	24°	4.005"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.465"	0.675"	0.910"	1.215"	0.560"	0.3100"	0.5010" / Std.		10-10070
							+0.002"		10-10072
							+0.004"		10-10074
							+0.006"		10-10076
						+0.050"			10-10079
No seal required.									

## Push Rod • Steel • Chrome Moly Tube

**NEW PRODUCTS**

	KPMI P/N	Type	Material	A	B	Quantity
	10-10425	Intake Exhaust	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.642"	8.502"	Pkg. of 2

Custom length pushrods available upon request.

## Blank Pushrods • Steel • Chrome Moly Tube

**NEW PRODUCTS**

	A	Ø.371" OD			
	B	9.120" Overall Length			
	C	Ø.305" ID Before Machining			
	D	E	F	G	1. Break ID edge only at .015 x 45°
	R.124	0.675"	0.375"	0.310"	
KPMI P/N	Model	Material	Kit Includes		
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces		
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Male Endpieces		

# BSA® B50 GOLDSTAR™ 1971-1973



## Keeper Set • H. T. Steel • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. BSA® OEM P/N
		51023-2	Single Radius Bead	0.310"	10.0°	0.235"	0.285"	0.417"	2 Pr.	71-1166

# BSA® A65™ 1971-1972

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	10-4148	Intake	40.64mm	1.600"	0.3110"	R 1.500"	3.600"	Standard
	10-4150	Exhaust	35.81mm	1.410"	0.3105"	25°	3.555"	Standard

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.760"	0.840"	0.685"	1.135"	0.680"	0.3105"	0.5010" / Std.		10-4135	
									+0.002"		10-4136
									+0.004"		10-4137

No seal required.

## Wrist Pin Bushings • Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	10-10350	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
	10-10352	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002"	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

## Crankshaft Bushings • Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	10-5010	SAE660 Bronze	1.815"	1.501"	1.005"	Standard	Pkg. of 1
	10-5011	SAE660 Bronze	1.815"	1.491"	1.005"	-0.010"	Pkg. of 1
	10-5012	SAE660 Bronze	1.815"	1.481"	1.005"	-0.020"	Pkg. of 1
	10-5013	SAE660 Bronze	1.815"	1.471"	1.005"	-0.030"	Pkg. of 1
	10-5014	SAE660 Bronze	1.815"	1.461"	1.005"	-0.040"	Pkg. of 1
	10-5015	SAE660 Bronze	1.815"	1.451"	1.005"	-0.050"	Pkg. of 1
10-10000	SAE660 Bronze	1.835"	1.451"	1.005"	+0.020" OD	Pkg. of 1	

Machined from high quality mill certified SAE660 Bearing Bronze (Custom sizes available).



# BSA® A65™ 1971-1972

## Crankshaft Thrust Washer • Bearing Bronze

	KPMI P/N	Outside Diameter A	Inside Diameter B	Thickness C	Locating Flats D
	10-1000	2.115"	1.690"	0.065"	1.900"

- Designed and manufactured by KPMI® specifically for use with various BSA® applications
- Improved from OEM parts to include KPMI® design standards and precision machining
- Manufactured from bearing bronze for increased wear resistance compared to OEM

## Push Rod • Steel • Chrome MolyTube **NEW PRODUCTS**

	KPMI P/N	Type	Material	A	B	Quantity
	10-10405	Intake Exhaust	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.391" 7.667"	6.111" 7.387"	Pkg. of 4

Custom length pushrods available upon request.

## Blank Pushrods • Steel • Chrome Moly Tube **NEW PRODUCTS**

	A	Ø.371" OD		
	B	9.120" Overall Length		
	C	Ø.305" ID Before Machining		
	D	E	F	G
	R.156	0.420"	0.120"	0.310"
KPMI P/N	Model	Material	Kit Includes	
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces	
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces	

Machining Information:

1. Break ID edge only at .015 x 45°

## Keeper Set • H. T. Steel • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. BSA® OEM P/N
		51023-4	Single Radius Bead	0.310"	10.0°	0.235"	0.285"	0.417"	2 Pr.	71-1166

# BSA® ROCKET III™ 1968-1973



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	10-10200	Intake	.400"	1.350"	94#	240#	.400"	
		Exhaust						
Kit Includes			6	CrSi Valve Springs	6	Titanium Retainers	6	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	10-10212	Intake	38.86mm	1.530"	0.3097"	R 1.500"	3.975"	Standard
	10-10213	Intake	40.39mm	1.590"	0.3097"	R 1.500"	3.950"	Oversize
	10-10216	Exhaust	33.40mm	1.315"	0.3100"	25°	3.915"	Standard
	10-10217	Exhaust	35.56mm	1.400"	0.3092"	25°	3.890"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.460"	0.560"	0.760"	1.310"	0.560"	0.3100"	0.5010" / Std.		10-10220	
		No seal required							+0.002"		10-10222
		No seal required							+0.015"		10-10230
		A	B	C	D	E	F	G	Intake	Exhaust	
		0.330"	0.430"	0.765"	1.315"	0.560"	0.3100"	0.5010" / Std.		10-10240	
		Machined for seal. One seal supplied with each guide.							+0.002"		10-10242
		Machined for seal. One seal supplied with each guide.							+0.004"		10-10244
		Machined for seal. One seal supplied with each guide.							+0.006"		10-10246
Machined for seal. One seal supplied with each guide.							+0.015"		10-10250		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71012-4			Pkg. of 4		0%	
		71012-6			Pkg. of 6		0%	
		71012-8			Pkg. of 8		0%	
		71012-16			Pkg. of 16		Less- 10%	
		71012-50			Pkg. of 50		Less- 15%	
71012-100			Pkg. of 100		Less- 20%			



# DUCATI® VARIOUS 750-916 1971-'98

## Valve Guides • C630 Bronze For 750 GT 1971-1974

	A	B	C	D	E	F	G	Intake	Exhaust
	0.345"	0.415"	0.810"	1.110"	0.644"	0.3140"	0.5152" / Std.		92-9600
							+0.001"		92-9601
							+0.002"		92-9602
							+0.004"		92-9604
						+0.010"			92-9610

## Valve Guides • C630 Bronze For 750 FI Special / Paso 1986-1988 / 906 Paso 1988-1990

	A	B	C	D	E	F	G	Intake	Exhaust
	0.115"	0.160"	1.050"	1.300"	0.560"	0.3140"	0.5152" / Std.		92-9640
							+0.001"		92-9641
							+0.002"		92-9642
							+0.004"		92-9644
						+0.010"			92-9650

## Valve Guide Seals • Viton® For 750 GT 1971-'74 / 750 FI Special / Paso 1986-'88 / 906 Paso 1988-'90

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
8.0mm	0.285"	0.555"	1	A	B	C	D	Intake
				0.466"-0.475"	0.411"-0.430"	0.040"	0.135"	Exhaust
	Part Number		Quantity		Quantity Discount			
	71043-4		Pkg. of 4		0%			
	71043-8		Pkg. of 8		0%			
	71043-16		Pkg. of 16		Less- 10%			
	71043-50		Pkg. of 50		Less- 15%			
71043-100		Pkg. of 100		Less- 20%				

## Valve Guides • C630 Bronze For 851 SBK 1987-1992 / 888 SBK 1991-1993 / 916 SBK 1994-1998

	A	B	C	D	E	F	G	Intake	Exhaust
	0.245"	0.300"	0.900"	1.400"	---	0.2745	0.4745" / Std.		92-9620
							+0.001"		92-9621
							+0.002"		92-9622
							+0.004"		92-9624
						+0.010"			92-9630

## Valve Guide Seals • Viton® For 851 SBK 1987-1992 / 888 SBK 1991-1993 / 916 SBK 1994-1998

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.360"	0.520"	5	A	B	C	D	Intake
				0.383"-0.389"	---	---	0.255"	Exhaust
	Part Number		Quantity		Quantity Discount			
	71044-4		Pkg. of 4		0%			
	71044-8		Pkg. of 8		0%			
	71044-16		Pkg. of 16		Less- 10%			
	71044-50		Pkg. of 50		Less- 15%			
71044-100		Pkg. of 100		Less- 20%				



# DUCATI® 800 / 900 2000-2007



## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	92-92012	Intake	43.00mm	1.693"	0.3140"	22°	3.825"	Standard
	92-92013	Intake	44.00mm	1.732"	0.3140"	22°	3.825"	Oversize
	92-92016	Exhaust	38.00mm	1.496"	0.3135"	22°	3.730"	Standard
	92-92017	Exhaust	39.00mm	1.535"	0.3135"	22°	3.730"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.165"	0.205"	0.855	1.290"	0.560"	0.3145"	0.5147" / Std.	92-92020		
									+0.001"	92-92021	
									+0.002"	92-92022	
								+0.010"	92-92029		
		0.125"	0.165"	0.855	1.250"	0.560"	0.3140"	0.5147" / Std.		92-92030	
									+0.001"		92-92031
									+0.002"		92-92032
									+0.010"		92-92039

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
8.0mm	0.285"	0.555"	1	A	B	C	D	Intake
				0.466"-0.475"	0.411"-0.430"	0.040"	0.135"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71043-4		Pkg. of 4		0%		
		71043-8		Pkg. of 8		0%		
		71043-16		Pkg. of 16		Less- 10%		
		71043-50		Pkg. of 50		Less- 15%		
		71043-100		Pkg. of 100		Less- 20%		

# DUCATI® 696 / 796 / 1000 / 1100 2003-'10

## Valve Guides • C630 Bronze For Monster™ 1100 2010 / 1100S & Sport Classic GT™ 1000 Only

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.235"	---	1.010"	1.270"	---	0.2745"	0.4744" / Std.	92-92070		
									+0.001"	92-92071	
									+0.002"	92-92072	
								+0.010"	92-92079		
		0.235"	---	---	1.280"	---	0.2740"	0.4744" / Std.		92-92080	
									+0.001"		92-92081
									+0.002"		92-92082
									+0.010"		92-92089

## Valve Guide Seals • Viton® For Monster™ 1100 2010 / 1100S & Sport Classic GT™ 1000 Only

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.360"	0.520"	5	A	B	C	D	Intake
				0.383"-0.389"	---	---	0.255"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71044-4		Pkg. of 4		0%		
		71044-8		Pkg. of 8		0%		
		71044-16		Pkg. of 16		Less- 10%		
		71044-50		Pkg. of 50		Less- 15%		
		71044-100		Pkg. of 100		Less- 20%		



# HD® FLATHEAD™ 1930-1973

HARLEY-DAVIDSON

## Valve Spring Kit • O. E. M. Replacement for 74" - 80" Flathead 1930-1948

	KPMI P/N	Type	Kit Includes				
			H. T. Steel Retainers		H. T. Steel Keepers Pr.		
	20-20480	Intake	4	20-20481	4	20-20489	
		Exhaust	4	20-20483	4	20-20485	4
	Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift
.375"	2.125"	65#		130#		.375"	

Some models may require shim# 20-20487 to achieve recommended installed height. All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacement parts may be purchased separately using the above part numbers.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks	
					Radius	Angle			
	20-20740	Intake	1.625"	41.28mm	0.3395"	R0.540	R 0.540	5.585"	45" Standard 1941-1973
		Exhaust							
	20-20742	Intake	1.930"	49.02mm	0.3715"	R0.325	7°	6.280"	UL 74"-80"
		Exhaust							
	20-20743	Intake	2.050"	52.07mm	0.3715"	R0.325	7°	6.280"	UL 74"-80"
		Exhaust							
20-20744	Intake	1.930"	49.02mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"	
	Exhaust								
20-20745	Intake	2.050"	52.07mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"	
	Exhaust								

## Valve Guides • Cast Iron For 45" Flathead 1941-1973

	A	B	C	D	E	F	G	Intake	Exhaust
		1.200"	1.330"	1.310"	1.470"	0.855"	0.3395"	0.5647" / Std.	20-20750
							+0.001"	20-20751	
							+0.002"	20-20752	
							+0.010"	20-20759	

## Valve Guides • Cast Iron For 74"- 80" Flathead 1930-1948

	A	B	C	D	E	F	G	Intake	Exhaust
		1.120"	1.275"	1.630"	1.860"	0.935"	0.3715"	0.5952" / Std.	20-20760
							+0.001"	20-20761	
							+0.002"	20-20762	
							+0.010"	20-20769	

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

# HD® KNUCKLEHEAD™ 1936-1947

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20170	Intake	.480"	1.310"	158#	340#	.480"
		Exhaust					
	Kit Includes			4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.
			4	CrSi Valve Springs	4	H. T. Steel Shims	

Spring kit must be used with Kibblewhite® guides, or the tops of your guides must be machined to use this kit. Retainers manufactured from heat treated, aircraft quality, steel billet. FEA stress analysis used to incorporate unique concave radius, and design equidistant holes to lighten retainer without sacrificing strength. Black Oxide treatment applied to resist corrosion.

# HD® KNUCKLEHEAD™ 1936-1947



## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
	20-20425	Intake	4	20-20426	4	20-20429	4	20-20427	4	20-20428
		Exhaust								
Max Valve Lift		Installed Height		Seat Pressure		Open Pressure		@ Lift		
.415"		1.375"		127#		270#		.415"		

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacement parts may be purchased separately using the above part numbers.

## Engine Kit with O. E. M. Replacement Spring Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-22050	Intake	.415"	1.375"	127#	270#	.415"
		Exhaust					
	Kit Includes			4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keepers Pr.
			4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves	

## Components • Replacement • Engine Kit NEW PRODUCTS

KPMI P/N	Description	Specification
20-20425	Spring Kit, OEM Replacement	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers
20-4101	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-4102	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
			Radius	Angle					
	20-22000	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.590"	Standard
		Exhaust	1.750"	44.45mm	0.3760"	R0.236	27°	3.670"	Standard
Kit Includes			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks	
	20-4101	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.590"	Standard
	20-4102	Exhaust	1.750"	44.45mm	0.3760"	R0.236	27°	3.670"	Standard

## Valve Guides • Cast Iron

	A	B	C	D	E	F	G	Intake	Exhaust
	0.600"	0.700"	0.700"	1.200"	1.050"	0.3755"	0.6440" / Std.		20-4095C
								+0.002"	20-4096C
								+0.004"	20-4097C
								+0.006"	20-4098C
								+0.008"	20-4099C
							+0.025"	20-4100C	

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).



# HD® KNUCKLEHEAD™ 1936-1947

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>20-20570</b>	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	<b>20-20572</b>	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	<b>20-20580</b>	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	<b>20-20582</b>	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>20-0645</b>	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	<b>20-0788</b>	Replace 38075-41	0.468"	0.685"	1.488"	Pkg. of 10

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.

# HD® PANHEAD™ 1948-1965

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-20445</b>	Intake	.600"	1.500"	154#	389#	.600"
		Exhaust					
	<b>Kit Includes</b>		4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

This lightweight Panhead® spring kit is designed to work with factory covers without interference. Further, the basewasher in this kit has been counter bored to allow the seal to fit inside the basewasher which increases the retainer to seal clearance for higher lift cams. The retainers in this kit are designed using the latest CAD software available. The retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
	<b>20-20430</b>	Intake	4	<b>20-20431</b>	4	<b>20-20434</b>	4	<b>20-20432</b>	4	<b>20-20433</b>
		Exhaust								
	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>			<b>Open Pressure</b>			<b>@ Lift</b>	
	.415"	1.375"	129#			272#			.415"	

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

# HD® PANHEAD™ 1948-1965



## Engine Kit with O. E. M. Replacement Spring Kit

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-22150	Intake	.415"	1.375"	129#	272#	.415"
		Exhaust					
	Kit Includes	4	In / Ex H. T. Steel Retainers		4	In / Ex H.T. Steel Keepers Pr.	
		4	In / Ex CrSi Valve Springs		4	In / Ex H. T. Steel Basewashers	
4		In/ Ex Red Viton® Seals					
2		In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves		

## Components • Replacement • Engine Kit

NEW PRODUCTS

KPMI P/N	Description	Specification
20-20430	Spring Kit, OEM Replacement	Includes: H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers
71011-4	Intake / Exhaust Seal	Seal • Red Viton®
20-4257	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-4195	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems

NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-22100	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.800"	Standard
		Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.820"	Standard
Kit Includes		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-4257	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.800"	OEM18071-48
20-4195	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.820"	OEM18082-57	

## Valve Guides • C630 Bronze • Cast Iron

	A	B	C	D	E	F	G	Intake		
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	C630 Bronze	Cast Iron	
								+0.001"	20-2020	20-2020C
								+0.002"	20-2021	20-2021C
								+0.003"	20-2022	20-2022C
								+0.004"	20-2023	20-2023C
								+0.006"	20-2024	20-2024C
								+0.008"	20-2026	20-2026C
								+0.010"	20-2028	20-2028C
								+0.025"	20-2029	20-2029C
	A	B	C	D	E	F	G	Exhaust		
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	20-2030	20-2030C	
								+0.001"	20-2031	20-2031C
								+0.002"	20-2032	20-2032C
								+0.003"	20-2033	20-2033C
								+0.004"	20-2034	20-2034C
								+0.006"	20-2036	20-2036C
								+0.008"	20-2038	20-2038C
								+0.010"	20-2039	20-2039C
								+0.025"	20-30HS	20-30HSC
	A	B	C	D	E	F	G	Exhaust		
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	20-2030	20-2030C	
								+0.001"	20-2031	20-2031C
								+0.002"	20-2032	20-2032C
								+0.003"	20-2033	20-2033C
								+0.004"	20-2034	20-2034C
								+0.006"	20-2036	20-2036C
								+0.008"	20-2038	20-2038C
								+0.010"	20-2039	20-2039C
								+0.025"	20-30HS	20-30HSC

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).



# HD® PANHEAD™ 1948-1965

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## Valve Guides • Manganese Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>	
	0.375"	0.465"	0.885"	1.435"	0.745"	0.3760"	0.5650" / Std.	20-2020M	20-2030M	
								+0.001"	20-2021M	20-2031M
								+0.002"	20-2022M	20-2032M
								+0.003"	20-2023M	20-2033M
								+0.004"	20-2024M	20-2034M
								+0.006"	20-2026M	20-2036M
								+0.008"	20-2028M	20-2038M
								+0.010"	20-2029M	20-2039M
								+0.025"	20-20HSM	20-30HSM

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
3/8"	0.516"	0.661"	5	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
				<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>
				71011-4		Pkg. of 4		0%
				71011-8		Pkg. of 8		0%
				71011-16		Pkg. of 16		Less- 10%
				71011-50		Pkg. of 50		Less- 15%
				71011-100		Pkg. of 100		Less- 20%

## Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
3/8"	0.518"	0.650"	6	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
				<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>
				71002-4		Pkg. of 4		0%
				71002-8		Pkg. of 8		0%
				71002-16		Pkg. of 16		Less- 10%
				71002-50		Pkg. of 50		Less- 15%
				71002-100		Pkg. of 100		Less- 20%

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
3/8"	0.375"	0.660"	7	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	Intake
				0.562"±0.002"	---	---	0.315"	Exhaust
				<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>
				71035-4		Pkg. of 4		0%
				71035-8		Pkg. of 8		0%
				71035-16		Pkg. of 16		Less- 10%
				71035-50		Pkg. of 50		Less- 15%
				71035-100		Pkg. of 100		Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20570	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	20-20572	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	20-20580	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	20-20582	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

# HD® PANHEAD™ 1948-1965



## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	<b>20-0645</b>	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	<b>20-0788</b>	Replace 38075-41	0.468"	0.685"	1.488"	Pkg. of 10
<p>Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.</p>						

## Spigot • Exhaust • 6061-T6 Aluminum

	KPMI P/N	Type	Material	O. D.	I. D.	O. L.	Quantity
	<b>20-2104</b>	Exhaust	6061-T6 aluminum	2.060"	1.765"	0.970"	Pkg. of 1
<p>Kibblewhite®'s replacement exhaust spigot has been designed and machined from 6061-T6 aluminum extruded tubing. This spigot allows you to rebuild the exhaust attachment point on your classic Panhead engine.</p>							

## Recommended Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	<b>10-SC510</b>	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
<p>KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.</p>									

## Dowel • Cone • Oversize

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	<b>83240-4</b>	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
<p>Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)</p>								

# HD® SPORTSTER™ 1957-1969

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>20-2210</b>	Intake	.480"	1.310"	158#	340#	.480"
		Exhaust					
<b>Kit Includes</b>			4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	


Longer KPMI 'R' model valves, 20-4167 (int.) and 20-4168(ex.) may be required to achieve correct installed height for this spring kit. Rockers should clear covers when kit is installed correctly.



# HD<sup>®</sup> SPORTSTER™ 1957-1969

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## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers	H. T. Steel Keepers Pr.	CrSi Valve Springs		H. T. Steel Basewashers			
	20-20440	Intake	4	20-20441	4	20-4275	4	20-2215	4	20-20085
		Exhaust								
Max Valve Lift	Installed Height		Seat Pressure		Open Pressure		@ Lift			
.400"	1.245"		95#		330#		.400"			

All KPMI<sup>®</sup> retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI<sup>®</sup> is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI<sup>®</sup>, manufactured to exact O.E.M. dimensions. These O.E.M. replacement parts may be purchased separately using the above part numbers.

## Engine Kit with O. E. M. Replacement Spring Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-22250	Intake	.400"	1.245"	95#	330#	.400"
		Exhaust					
	Kit Includes			4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keepers Pr.
			4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves	


## Components • Replacement • Engine Kit

**NEW PRODUCTS**


KPMI P/N	Description	Specification
20-20440	Spring Kit, OEM Replacement	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers
20-4258	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-4197	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems


**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-22200	Intake	1.825"	46.36mm	0.3090"	R0.375	23°	3.562"	Standard
		Exhaust	1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	Standard
Kit Includes			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-4258	Intake	1.825"	46.36mm	0.3090"	R0.375	23°	3.562"	OEM18071-58
	20-4197	Exhaust	1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	OEM18080-58R
20-4197-1	Exhaust	1.630"	41.40mm	0.3384"	R0.236	29°	3.512"	Oversize	

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

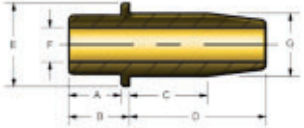

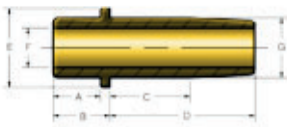



# HD® SPORTSTER™ 1957-1966



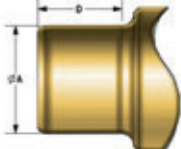

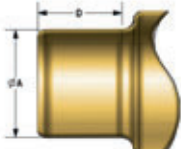

HARLEY-DAVIDSON

## Valve Guides • C630 Bronze • Cast Iron

		A	B	C	D	E	F	G	Intake	
		0.470"	0.545"	0.700"	1.225"	0.745"	0.3085"	0.5650" / Std.	C630 Bronze	Cast Iron
								+0.001"	20-2320	20-2320C
								+0.002"	20-2321	20-2321C
								+0.010"	20-2322	20-2322C
									20-2329	20-2329C
		A	B	C	D	E	F	G	Exhaust	
		0.470"	0.545"	0.600"	1.225"	0.745"	0.3375"	0.5650" / Std.	20-2330	20-2330C
								+0.001"	20-2331	20-2331C
								+0.002"	20-2332	20-2332C
								+0.010"	20-2339	20-2339C

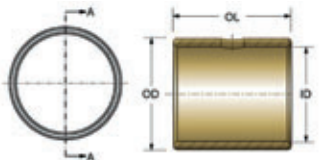
For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.375"	0.630"	7	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.295"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71033-4			Pkg. of 4		0%	
		71033-8			Pkg. of 8		0%	
		71033-16			Pkg. of 16		Less- 10%	
		71033-50			Pkg. of 50		Less- 15%	
71033-100			Pkg. of 100		Less- 20%			
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
11/32"	0.375"	0.630"	7	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.295"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71034-4			Pkg. of 4		0%	
		71034-8			Pkg. of 8		0%	
		71034-16			Pkg. of 16		Less- 10%	
		71034-50			Pkg. of 50		Less- 15%	
71034-100			Pkg. of 100		Less- 20%			

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).

## Rocker Arm Bushings • 660 Bearing Bronze

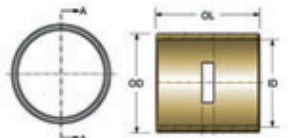
	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.



# HD® SPORTSTER™ 1970-1983

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-2210	Intake	.480"	1.310"	158#	340#	.480"
		Exhaust					
Kit Includes			4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Longer KPMI 'R' model valves, 20-4167 (int.) and 20-4168(ex.) may be required to achieve correct installed height for this spring kit. Rockers should clear covers when kit is installed correctly. Retainers manufactured from heat treated, aircraft quality, steel billet. FEA stress analysis used to incorporate unique concave radius, and design equidistant holes to lighten retainer without sacrificing strength. Black Oxide treatment applied to resist corrosion.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers	H. T. Steel Keepers Pr.	CrSi Valve Springs	H. T. Steel Basewashers				
	20-20440	Intake	4	20-20441	4	20-4275	4	20-2215	4	20-20085
		Exhaust								
Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift						
.400"	1.245"	95#	330#	.400"						

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

## Engine Kit with O. E. M. Replacement Spring Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-22350	Intake	.400"	1.245"	95#	330#	.400"
		Exhaust					
	Kit Includes			4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keepers Pr.
			4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves	

## Components • Replacement • Engine Kit NEW PRODUCTS

KPMI P/N	Description	Specification
20-20440	Spring Kit, OEM Replacement	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers
20-4196	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-4197	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
			Radius	Angle					
	20-22300	Intake	1.935"	49.15mm	0.3090"	R0.256	23°	3.620"	Standard
Exhaust		1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	Standard	
Kit Includes			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			

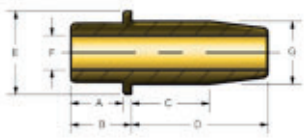

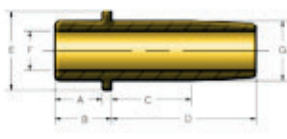

## Valves • Black Diamond™ • Black Nitroreg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
		Radius	Angle					
20-4196	Intake	1.935"	49.15mm	0.3090"	R0.256	23°	3.620"	OEM18070-70
20-4167	Intake	1.950"	49.53mm	0.3090"	R0.256	23°	3.690"	OEM18069-65R
20-4196-1	Intake	2.000"	50.80mm	0.3090"	R0.256	23°	3.620"	Oversize
20-4197	Exhaust	1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	OEM18080-58R
20-4197-1	Exhaust	1.630"	41.40mm	0.3384"	R0.236	29°	3.512"	Oversize
20-4168	Exhaust	1.750"	44.45mm	0.3384"	R0.236	29°	3.620"	OEM18080-70R

# HD® SPORTSTER™ 1970-1983




## Valve Guides • C630 Bronze • Cast Iron

		A	B	C	D	E	F	G	Intake	
		0.470"	0.545"	0.700"	1.225"	0.745"	0.3085"	0.5650" / Std.	C630 Bronze	Cast Iron
								+0.001"	20-2320	20-2320C
								+0.002"	20-2321	20-2321C
								+0.010"	20-2322	20-2322C
									20-2329	20-2329C
		A	B	C	D	E	F	G	Exhaust	
		0.470"	0.545"	0.600"	1.225"	0.745"	0.3375"	0.5650" / Std.	C630 Bronze	Cast Iron
								+0.001"	20-2330	20-2330C
								+0.002"	20-2331	20-2331C
								+0.010"	20-2332	20-2332C
									20-2339	20-2339C

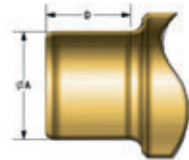

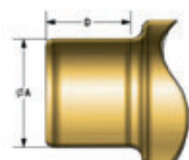

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

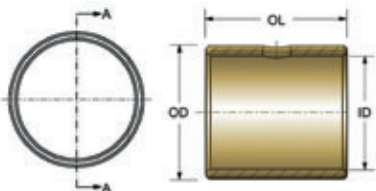
KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.375"	0.630"	7	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.295"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71033-4		Pkg. of 4		0%		
		71033-8		Pkg. of 8		0%		
		71033-16		Pkg. of 16		Less- 10%		
		71033-50		Pkg. of 50		Less- 15%		
		71033-100		Pkg. of 100		Less- 20%		
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
11/32"	0.375"	0.630"	7	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.295"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71034-4		Pkg. of 4		0%		
		71034-8		Pkg. of 8		0%		
		71034-16		Pkg. of 16		Less- 10%		
		71034-50		Pkg. of 50		Less- 15%		
		71034-100		Pkg. of 100		Less- 20%		

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
		20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"



# HD® SPORTSTER™ 1970-1983

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze For Sportster 1957-1983

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze For Ironhead Sportster 1957-1983

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Clutch Springs

	KPMI P/N	Description	O. D.	I. D.	Free Length	Quantity
	20-0787	Replaces 38075-68 Dual Spring	2.520"	3.090"	2.630"	Pkg. of 1

Manufactured from high quality chrome silicon wire, spring is designed to supply 20% more plate load than stock.

# HD® SHOVELHEAD™ 74" 1966-1977

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-2110	Intake	.600"	1.510"	152#	387#	.600"
		Exhaust					
	Kit Includes		4	H.A. 7075-T6 Retainers	4	H. T. Steel Keepers Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Retainer offset 0.070" for taller installed height. Basewashers counter-bored to accept a 0.665" OD seal

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20450	Intake	.600"	1.510"	152#	387#	.600"
		Exhaust					
	Kit Includes		4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

# HD® SHOVELHEAD™ 74" 1966-1977



## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
	20-20435	Intake	4	20-20436	4	20-20439	4	20-20437	4	20-20438
		Exhaust								
Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift				
.415"	1.375"	129#		272#		.415"				

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacement parts may be purchased separately using the above part numbers.

## Engine Kit with O. E. M. Replacement Spring Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-22450	Intake	.415"	1.375"	129#	272#	.415"
		Exhaust					
	Kit Includes		4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keepers Pr.	
			4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
		4	In/ Ex Red Viton® Seals				
		2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		

## Components • Replacement • Engine Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
20-20435	Spring Kit, OEM Replacement	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers
71011-4	Intake / Exhaust Seal	Seal • Red Viton®
20-4194	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-4195	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
			Radius	Angle					
	20-22400	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	Standard
		Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	Standard
Kit Includes		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
			Radius	Angle					
	20-4194	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	OEM18078-80
	20-4256	Intake	2.000"	50.80mm	0.3765"	R0.234	23°	3.885"	Oversize
	20-4195	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	OEM18082-57
	20-4195S	Exhaust	1.780"	45.21mm	0.3760"	R0.234	29°	3.820"	Oversize
20-4195-1	Exhaust	1.8120"	46.02mm	0.3760"	R0.234	29°	3.820"	Oversize	

## Black Diamond™ Valves • Fat Stem • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
			Radius	Angle					
	20-4294	Intake	1.950"	49.53mm	0.3780"	R0.234	23°	3.885"	OEM18075-8
20-4295	Exhaust	1.750"	44.45mm	0.3775"	R0.234	29°	3.810"	Standard	



# HD® SHOVELHEAD™ 74" 1966-1977

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	Same as Sifton P/N
	20-2000	Intake	.600"	1.510"	152#	387#	.600"	3030
		Exhaust						
	Outer Spring ID			Inner Spring ID			Solid Height	
	1.249"			0.975"			0.850"	
Kit Includes		4	CrSi Valve Springs					

Achieving the recommended installation height may require **KPMI® retainer 20-4248**, which is offset 0.070" compared to OEM.

## Retainer Set • O.E.M. Replacement • H. A. Aluminium

	KPMI P/N	Type	Material	I/ Spring Retainer Ø	O/ Spring Retainer Ø	Taper Angle	Quantity
	20-4248	Intake	H. A. Aluminium	0.975"	1.255"	15°	Pkg. of 4
Exhaust							

This retainer is offset 0.070" when compared to OEM.

## Valve Guides • C630 Bronze • Cast Iron

	A	B	C	D	E	F	G	Intake		
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	C630 Bronze	Cast Iron	
								+0.001"	20-2020	20-2020C
								+0.002"	20-2021	20-2021C
								+0.003"	20-2022	20-2022C
								+0.004"	20-2023	20-2023C
								+0.006"	20-2024	20-2024C
								+0.008"	20-2026	20-2026C
								+0.010"	20-2028	20-2028C
								+0.025"	20-2029	20-2029C
								+0.025"	20-20HS	20-20HSC
	A	B	C	D	E	F	G	Exhaust		
	0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	20-2030	20-2030C	
								+0.001"	20-2031	20-2031C
								+0.002"	20-2032	20-2032C
								+0.003"	20-2033	20-2033C
								+0.004"	20-2034	20-2034C
								+0.006"	20-2036	20-2036C
								+0.008"	20-2038	20-2038C
								+0.010"	20-2039	20-2039C
								+0.025"	20-30HS	20-30HSC

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guides • Manganese Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.375"	0.465"	0.885"	1.435"	0.745"	0.3760"	0.5650" / Std.	20-2020M	20-2030M	
								+0.001"	20-2021M	20-2031M
								+0.002"	20-2022M	20-2032M
								+0.003"	20-2023M	20-2033M
								+0.004"	20-2024M	20-2034M
								+0.006"	20-2026M	20-2036M
								+0.008"	20-2028M	20-2038M
								+0.010"	20-2029M	20-2039M
								+0.025"	20-20HSM	20-30HSM

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

# HD® SHOVELHEAD™ 74" 1966-1977



HARLEY-DAVIDSON

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.516"	0.661"	5	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
				Part Number		Quantity		Quantity Discount
				71011-4		Pkg. of 4		0%
				71011-8		Pkg. of 8		0%
				71011-16		Pkg. of 16		Less- 10%
				71011-50		Pkg. of 50		Less- 15%
				71011-100		Pkg. of 100		Less- 20%

## Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.518"	0.650"	6	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
				Part Number		Quantity		Quantity Discount
				71002-4		Pkg. of 4		0%
				71002-8		Pkg. of 8		0%
				71002-16		Pkg. of 16		Less- 10%
				71002-50		Pkg. of 50		Less- 15%
				71002-100		Pkg. of 100		Less- 20%

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.375"	0.660"	7	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity		Quantity Discount
				71035-4		Pkg. of 4		0%
				71035-8		Pkg. of 8		0%
				71035-16		Pkg. of 16		Less- 10%
				71035-50		Pkg. of 50		Less- 15%
				71035-100		Pkg. of 100		Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).

## Kicker Shaft Bushings & Seal

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-2107	Bronze	0.9355"	0.741"	1.105"	Standard	2 Bushings & 1 O-Ring
	20-2108	Bronze	0.9405"	0.741"	1.105"	+0.005"	2 Bushings & 1 O-Ring

## Rocker Arm Bushings • 660 Bearing Bronze

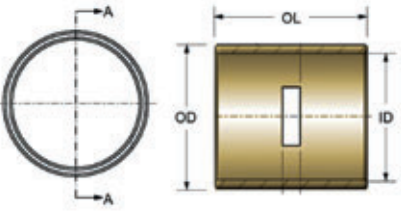
	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8



# HD® SHOVELHEAD™ 74" 1966-1977

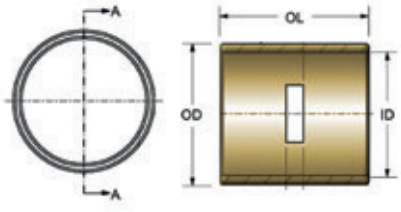
HARLEY-DAVIDSON

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20570	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	20-20572	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	20-20580	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	20-20582	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1


Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • Nickel Bronze Alloy

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

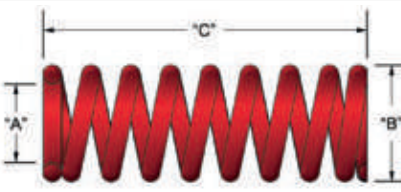
KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC550	Intake	54.97mm	2.164"	44.45mm	1.750"	11.43mm	0.450"	Pkg. of 1
	10-SC523	Exhaust	52.32mm	2.060"	39.67mm	1.562"	11.43mm	0.450"	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.


## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	20-0789	Replace 38075-68	0.439"	0.629"	1.718"	Pkg. of 10

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.

## Dowel • Cone • Oversize

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)




# HD® SHOVELHEAD™ 80" 1978-1983




HARLEY-DAVIDSON

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21100	Intake	.600"	1.510"	152#	387#	.600"	
		Exhaust						
	Kit Includes			4	H.A. 7075-T6 Retainers	4	H. T. Steel Keepers Pr.	
				4	CrSi Valve Springs	4	H. T. Steel Basewashers	
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
*20-21150	Intake	.600"	1.510"	152#	387#	.600"		
	Exhaust							
Kit Includes			4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.		
			4	CrSi Valve Springs	4	H. T. Steel Basewashers		


\*All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. Retainer offset 0.070" for taller installed height. Basewashers counter-bored to accept a 0.720" OD seal. Basewasher fits over 0.625" guide top.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes							
			H. T. Steel Retainers	H. T. Steel Keepers Pr.	CrSi Valve Springs	H. T. Steel Basewashers				
	20-20850	Intake	4	20-20851	4	20-20857	4	20-20853	4	20-20855
		Exhaust								
	Max Valve Lift		Installed Height		Seat Pressure		Open Pressure		@ Lift	
.415"		1.375"		129#		272#		.415"		

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.


## Engine Kit with O. E. M. Replacement Spring Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-22550	Intake	.415"	1.375"	129#	272#	.415"	
		Exhaust						
	Kit Includes			4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeps Pr.	
				4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
			4	In/ Ex OEM Replacement Seals				
			2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves	

## Components • Replacement • Engine Kit NEW PRODUCTS

KPMI P/N	Description	Specification
20-20850	Spring Kit, OEM Replacement	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeps
71036-4	Intake / Exhaust Seal	Seal • OEM Replacement
20-4194	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-4195	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-22500	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	Standard
		Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	Standard
Kit Includes			2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves		




# HD® SHOVELHEAD™ 80" 1978-1983

HARLEY-DAVIDSON


## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	<a href="#">20-4194</a>	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	OEM18078-80
	<a href="#">20-4256</a>	Intake	2.000"	50.80mm	0.3765"	R0.234	23°	3.885"	Oversize
	<a href="#">20-4195</a>	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	OEM18082-57
	<a href="#">20-4195S</a>	Exhaust	1.780"	45.21mm	0.3760"	R0.234	29°	3.820"	Oversize
	<a href="#">20-4195-1</a>	Exhaust	1.8120"	46.02mm	0.3760"	R0.234	29°	3.820"	Oversize

## Valves • Black Diamond™ Valves • Fat Stem • Black Nitroreg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	<a href="#">20-4294</a>	Intake	1.950"	49.53mm	0.3780"	R0.234	23°	3.885"	OEM18075-81
	<a href="#">20-4295</a>	Exhaust	1.750"	44.45mm	0.3775"	R0.234	29°	3.810"	Standard

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	Same as Sifton P/N
		Exhaust						
	Outer Spring ID			Inner Spring ID			Solid Height	
	1.249"			0.975"			0.850"	
	Kit Includes		4	CrSi Valve Springs				

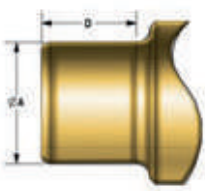
Achieving the recommended installation height may require **KPMI® retainer 20-4248**, which is offset 0.070" compared to OEM.

## Retainer Set • O.E.M. Replacement • H. A. Aluminium

	KPMI P/N	Type	Material	I/ Spring Retainer Ø	O/ Spring Retainer Ø	Taper Angle	Quantity
		Exhaust					

This retainer is offset 0.070" when compared to OEM.

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.518"	0.650"	6	0.562"±0.002"	---	---	0.375"	Intake
								Exhaust
				Part Number		Quantity		Quantity Discount
				<a href="#">*71002-4</a>		Pkg. of 4		0%
				<a href="#">*71002-8</a>		Pkg. of 8		0%
				<a href="#">*71002-16</a>		Pkg. of 16		Less- 10%
				<a href="#">*71002-50</a>		Pkg. of 50		Less- 15%
<a href="#">*71002-100</a>		Pkg. of 100		Less- 20%				

# HD® SHOVELHEAD™ 80" 1978-1983



## Valve Guides • C630 Bronze • Cast Iron • Manganese Bronze

	A	B	C	D	E	F	G	Intake		
								C630 Bronze	Cast Iron	Manganese
	0.450"	0.540"	0.755"	1.370"	0.745"	0.3745"	0.625" / Std.	20-2050	20-2050C	20-2050M
							+0.001"	20-2051	20-2051C	20-2051M
							+0.002"	20-2052	20-2052C	20-2052M
							+0.003"	---	20-2053C	---
							+0.004"	20-2054	20-2054C	20-2054M
							+0.005"	---	20-2055C	---
							+0.006"	20-2056	20-2056C	20-2056M
							+0.008"	---	20-2058C	---
							+0.010"	---	20-2059C	---
							+0.025"	20-50HS	20-50HSC	20-50HSM
	A	B	C	D	E	F	G	Exhaust		
								20-2060	20-2060C	20-2060M
	0.450"	0.540"	0.755"	1.370"	0.745"	0.3745"	0.625" / Std.	20-2060	20-2060C	20-2060M
							+0.001"	20-2061	20-2061C	20-2061M
							+0.002"	20-2062	20-2062C	20-2062M
							+0.003"	---	20-2063C	---
							+0.004"	20-2064	20-2064C	20-2064M
							+0.005"	---	20-2065C	---
							+0.006"	20-2066	20-2066C	20-2066M
							+0.008"	---	20-2068C	---
							+0.010"	---	20-2069C	---
							+0.025"	20-60HS	20-60HSC	20-60HSM

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.400"	0.720"	7	A	B	C	D	Intake
				0.625"±0.002"	---	---	0.310"	Exhaust
			<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>	
			71036-4		Pkg. of 4		0%	
			71036-8		Pkg. of 8		0%	
			71036-16		Pkg. of 16		Less- 10%	
			71036-50		Pkg. of 50		Less- 15%	
			71036-100		Pkg. of 100		Less- 20%	

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).

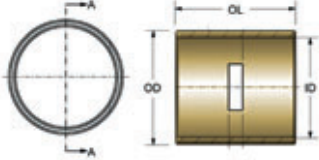
## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.516"	0.661"	5	A	B	C	D	Intake
				0.562"±0.002"	---	---	0.375"	Exhaust
			<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>	
			*71011-4		Pkg. of 4		0%	
			*71011-8		Pkg. of 8		0%	
			*71011-16		Pkg. of 16		Less- 10%	
			*71011-50		Pkg. of 50		Less- 15%	
			*71011-100		Pkg. of 100		Less- 20%	



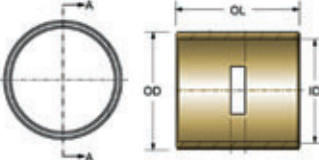
# HD® SHOVELHEAD™ 80" 1978-1983

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20570	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	20-20572	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	20-20580	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	20-20582	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

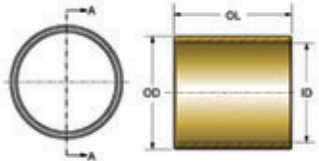
Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

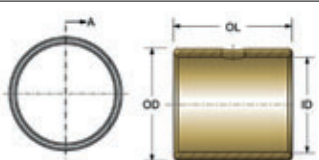
	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

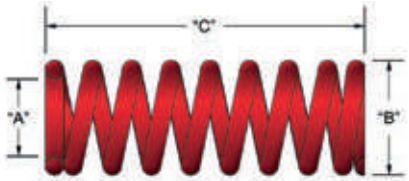
## Kicker Shaft Bushings & Seal

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-2107	Bronze	0.9355"	0.741"	1.105"	Standard	2 Bushings & 1 O-Ring
	20-2108	Bronze	0.9405"	0.741"	1.105"	+0.005"	2 Bushings & 1 O-Ring

## Rocker Arm Bushings • 660 Bearing Bronze


	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	20-0789	Replace 38075-68	0.439"	0.629"	1.718"	Pkg. of 10

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.


## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC550	Intake	2.164"	54.97mm	1.750"	44.45mm	0.450"	11.43mm	Pkg. of 1
	10-SC523	Exhaust	2.060"	52.32mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Dowel • Cone • Oversize

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)

# HD® EVOLUTION™ 1984-1999



## Valve Spring Kit • "High Performance" Ovate Wire Beehive

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21300	Intake	.610"	1.860"	175#	400#	.610"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers
Kit Includes			4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21500	Intake	.660"	1.860"	178#	371#	.660"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers
Kit Includes			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers	

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20122	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	
Kit Includes			4	Titanium Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20132	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	
Kit Includes			4	H. T. Steel Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20060	Intake	.655"	1.865"	190#	465#	.655"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	
Kit Includes			4	Titanium Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20081	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	
Kit Includes			4	H. T. Steel Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
Kit Includes			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
Kit Includes			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21750	Intake	.650"	1.860"	185#	440#	.650"	VSK650T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
Kit Includes			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21700	Intake	.675"	1.860"	185#	450#	.675"	VSK675T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
Kit Includes			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.



# HD® EVOLUTION™ 1984-1999

HARLEY-DAVIDSON

## Engine Kit with Lightweight Racing Valve Spring Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-22650	Intake	.600"	1.810"	163#	361#	.600"
		Exhaust					
	Kit Includes	4	In / Ex H. T. Steel Retainers		4	In / Ex H.T. Steel Keeps Pr.	
4		In / Ex CrSi Valve Springs		4	In / Ex H. T. Steel Basewashers		
4		In / Ex Red Viton® Seals					
2		In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves		

## Components • Replacement • Engine Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
20-20132	Spring Kit	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeps
71010-4	Intake / Exhaust Seal	Seal • Red Viton®
20-4171	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-4170	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-22600	Intake	1.840"	46.74mm	0.3100"	R0.236	23°	4.445"	Standard
Exhaust		1.615"	41.02mm	0.3096"	R0.236	29°	4.525"	Standard	
Kit Includes		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves			

## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-4171	Intake	1.840"	46.74mm	0.3100"	R0.236	23°	4.445"	OEM18074-83B
	20-20900	Intake	2.150"	54.61mm	0.3108"	R0.550	24°	4.480"	AV&V# AV2150
	20-20905	Intake	1.990"	50.55mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1990
	20-20910	Intake	1.940"	49.28mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1940
	20-20915	Intake	1.900"	48.26mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1900
	20-20955	Intake	2.100"	53.34mm	0.3108"	R0.560	24°	4.475"	AV&V# AV2100
	20-20990	Intake	2.020"	51.31mm	0.3108"	R0.670	25°	4.440"	AV&V# AV2020A
	20-20965	Intake	2.020"	51.31mm	0.3108"	R0.645	25°	4.510"	AV&V# AV2020S
	20-4170	Exhaust	1.615"	41.02mm	0.3096"	R0.236	29°	4.525"	OEM18082-83
	20-20920	Exhaust	1.650"	41.91mm	0.3106"	R0.750	25°	4.515"	AV&V# AV1650
	20-20925	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.510"	AV&V# AV1610D
	20-20930	Exhaust	1.585"	40.26mm	0.3106"	R0.750	25°	4.505"	AV&V# AV1585
	20-20960	Exhaust	1.700"	43.18mm	0.3106"	R0.600	25°	4.535"	AV&V# AV1700A
20-20970	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.565"	AV&V# AV1610S	

## Valves • Black Diamond™ • Specially Designed for HD Racing Applications

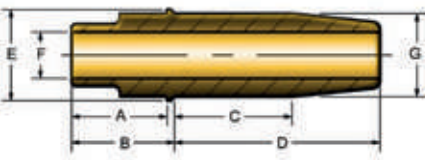

	KPMI P/N	Type		Head Diameter		Stem Diameter	Tulip		O. L.	Remarks	
							Radius	Angle			
	20-4169	In	Black Diamond™		1.940"	49.28mm	0.3100"	R0.234	23°	4.400"	Branch Heads
	20-20108	In	Black Diamond™		2.000"	50.80mm	0.3100"	R0.234	23°	4.445"	STD Heads
	20-4171R	In	Black Diamond™		1.900"	48.26mm	0.3100"	R0.344	28°	4.420"	Racing Profile
	20-B101	Ex	Black Diamond™		1.615"	41.02mm	0.3096"	R0.325	RO1.625	4.460"	Branch Heads
	20-4170R	Ex	Black Diamond™		1.630"	41.40mm	0.3096"	R0.500	40°	4.525"	Racing Profile
20-4170S	Ex	Black Diamond™		1.750"	44.45mm	0.3095"	R0.236	24°	4.480"	STD Heads	

\* Custom sizes available, see **custom KPMI® Valve Order Form** at back of catalog. **Inconel®** is a high nickel content stainless steel classified as a "super alloy". It retains its mechanical properties at higher temps than other stainless materials. It also resists valve face pitting and recession in performance applications with unleaded and exotic fuels to a greater degree than other stainless materials. It is an excellent choice for turbocharged and nitrous applications.

# HD® EVOLUTION™ 1984-1999

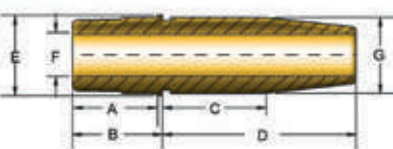



## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

	A	B	C	D	E	F	G	Intake			
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese	
								+0.001"	20-2120	20-2120C	20-2120M
								+0.002"	20-2121	20-2121C	20-2121M
								+0.003"	20-2122	20-2122C	20-2122M
								+0.004"	20-2123	20-2123C	20-2123M
								+0.010"	20-2124	20-2124C	20-2124M
									20-2129	20-2129C	20-2129M
	A	B	C	D	E	F	G	Exhaust			
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M	
								+0.001"	20-2131	20-2131C	20-2131M
								+0.002"	20-2132	20-2132C	20-2132M
								+0.003"	20-2133	20-2133C	20-2133M
								+0.004"	20-2134	20-2134C	20-2134M
							+0.010"	20-2139	20-2139C	20-2139M	

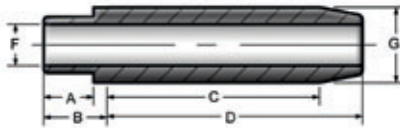
For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift NEW PRODUCTS


	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.	20-20860M		VG5600
							+0.001"	20-20861M		VG5601
							+0.002"	20-20862M		VG5602
							+0.003"	20-20863M		VG5603
							+0.010"	20-20869M		VG5610
							+0.025"	20-2086HSM		VG5625
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20870M	VG5700
								+0.001"	20-20871M	VG5701
								+0.002"	20-20872M	VG5702
								+0.003"	20-20873M	VG5703
								+0.010"	20-20879M	VG5710
								+0.025"	20-2087HSM	VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guides • O.E.M. Replacement • .420" Seal Ø

	A	B	C	D	E	F	G	Intake / Exhaust		
	0.375"	0.375"	1.700"	2.025"	---	0.3095"	0.5620" / Std.	C630 Bronze	Cast Iron	
								+0.001"	20-4320	20-4320C
								+0.002"	20-4321	20-4321C
								+0.003"	20-4322	20-4322C
								+0.004"	20-4323	20-4323C
								+0.010"	20-4324	20-4324C
									20-4329	20-4329C

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71032-4			Pkg. of 4		0%		
	71032-8			Pkg. of 8		0%		
	71032-16			Pkg. of 16		Less- 10%		
	71032-50			Pkg. of 50		Less- 15%		
71032-100			Pkg. of 100		Less- 20%			

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).



# HD® EVOLUTION™ 1984-1999

HARLEY-DAVIDSON

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71010-4		Pkg. of 4	0%	
				71010-8		Pkg. of 8	0%	
				71010-16		Pkg. of 16	Less- 10%	
				71010-50		Pkg. of 50	Less- 15%	
				71010-100		Pkg. of 100	Less- 20%	
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71045-4		Pkg. of 4	0%	
				71045-8		Pkg. of 8	0%	
				71045-16		Pkg. of 16	Less- 10%	
				71045-50		Pkg. of 50	Less- 15%	
				71045-100		Pkg. of 100	Less- 20%	

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71008-4		Pkg. of 4	0%	
				71008-8		Pkg. of 8	0%	
				71008-16		Pkg. of 16	Less- 10%	
				71008-50		Pkg. of 50	Less- 15%	
				71008-100		Pkg. of 100	Less- 20%	

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
	10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
	20-2098	H. T. Steel	6.725"	0.370"	1.050"	1.100"	Pkg. of 8	16832-86C

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!



# HD® EVOLUTION™ 1984-1999



HARLEY-DAVIDSON

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20570	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
	20-20572	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
	20-20580	660 Bearing Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
	20-20582	660 Bearing Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
	51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Cylinder Dowel • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)

## Dowel • Cone • Oversize

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)



# HD® EVO SPORTSTER™ 883cc 1986-'03

HARLEY-DAVIDSON

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
		20-21300	Intake	.610"	1.860"	175#	400#	.610"
	Exhaust							
	Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Retainers	
			4	H. T. Steel Keeper (OEM Style)		4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
20-21500		Intake	.660"	1.860"	178#	371#	.660"	
Exhaust								
Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Retainers		
		4	H. T. Steel Keepers (9° Degree Taper)		4	H. T. Steel Basewashers		

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
		20-20122	Intake	.600"	1.810"	163#	361#	.600"
	Exhaust							
	Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Keepers	
			4	Titanium Retainers		4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
*20-20132		Intake	.600"	1.810"	163#	361#	.600"	
Exhaust								
Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Keepers		
		4	H. T. Steel Retainers		4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
		20-20060	Intake	.655"	1.865"	190#	465#	.655"
	Exhaust							
	Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Keepers	
			4	Titanium Retainers		4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
*20-20081		Intake	.655"	1.860"	185#	450#	.655"	
Exhaust								
Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Keepers		
		4	H. T. Steel Retainers		4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
		20-21650	Intake	.650"	1.860"	185#	440#	.650"
	Exhaust							
	Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Retainers	
			4	H. T. Steel Keepers Pr.		4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21600		Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
Exhaust								
Kit Includes		4	CrSi Valve Springs		4	H. T. Steel Retainers		
		4	H. T. Steel Keepers		4	H. T. Steel Basewashers		
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N	
	20-21750	Intake	.650"	1.860"	185#	440#	.650"	VSK650T
Exhaust								
Kit Includes		4	CrSi Valve Springs		4	Titanium Retainers		
		4	H. T. Steel Keepers		4	H. T. Steel Basewashers		
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N	
	20-21700	Intake	.675"	1.860"	185#	450#	.675"	VSK675T
Exhaust								
Kit Includes		4	CrSi Valve Springs		4	Titanium Retainers		
		4	H. T. Steel Keepers		4	H. T. Steel Basewashers		

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

# HD® EVO SPORTSTER™ 883cc 1986-'03



## Engine Kit with Lightweight Racing Valve Spring Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-22750	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	Kit Includes	4	In / Ex H. T. Steel Retainers		4	In / Ex H.T. Steel Keeps Pr.		
		4	In / Ex CrSi Valve Springs		4	In / Ex H. T. Steel Basewashers		
4		In/ Ex Red Viton® Seals						
2		In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves			

## Components • Replacement • Engine Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
20-20132	Spring Kit	Includes: H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeps
71010-4	Intake / Exhaust Seal	Seal • Red Viton®
20-20090	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-20092	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-22700	Intake	1.585"	40.26mm	0.3100"	Radius	Angle	4.550"	Standard
		Exhaust	1.350"	34.29mm	0.3095"	R0.250	17°		
	Kit Includes		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves		

## Valves • Black Diamond™ • Black Nitroreg Stems For 883cc 1986-2003 Model

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-20090	Intake	1.585"	40.26mm	0.3100"	Radius	Angle	4.550"	OEM18031-86
		Exhaust	1.350"	34.29mm	0.3095"	R0.250	17°		
20-20092	Exhaust	1.350"	34.29mm	0.3095"	R0.250	17°	4.640	OEM18030-86	

## Valves • Black Diamond™ • Black Nitroreg Stems • Special Conversion Valves For 883cc / 1200cc 1986-'03 Model

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-2010	Intake	1.715"	43.56mm	0.3100"	Radius	Angle	4.550"	Conversion Valve
	20-2012	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.625"	Conversion Valve

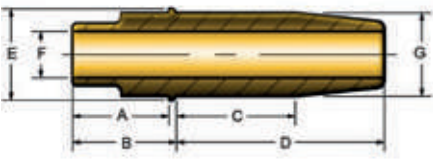

## Valve Guides • O.E.M. Replacement • .420" Seal Ø

	A	B	C	D	E	F	G	Intake / Exhaust	
	0.375"	0.375"	1.700"	2.025"	---	0.3095"	0.5620" / Std.	C630 Bronze	Cast Iron
							+0.001"	20-4320	20-4320C
							+0.002"	20-4321	20-4321C
							+0.003"	20-4322	20-4322C
							+0.004"	20-4323	20-4323C
							+0.010"	20-4324	20-4324C
								20-4329	20-4329C



# HD® EVO SPORTSTER™ 883cc 1986-'03

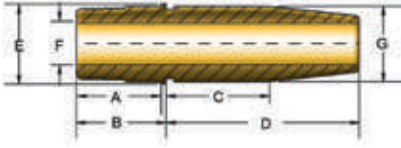

## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

	A	B	C	D	E	F	G	Intake		
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-2120	20-2120C	20-2120M
							+0.002"	20-2121	20-2121C	20-2121M
							+0.003"	20-2122	20-2122C	20-2122M
							+0.004"	20-2123	20-2123C	20-2123M
							+0.010"	20-2124	20-2124C	20-2124M
								20-2129	20-2129C	20-2129M
	A	B	C	D	E	F	G	Exhaust		
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M
							+0.001"	20-2131	20-2131C	20-2131M
							+0.002"	20-2132	20-2132C	20-2132M
							+0.003"	20-2133	20-2133C	20-2133M
							+0.004"	20-2134	20-2134C	20-2134M
							+0.010"	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

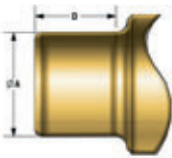

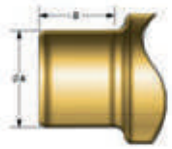

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift



	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
		0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.	20-20860M	
							+0.001"	20-20861M		VG5601
							+0.002"	20-20862M		VG5602
							+0.003"	20-20863M		VG5603
							+0.010"	20-20869M		VG5610
							+0.025"	20-2086HSM		VG5625
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20870M	VG5700
							+0.001"		20-20871M	VG5701
							+0.002"		20-20872M	VG5702
							+0.003"		20-20873M	VG5703
							+0.010"		20-20879M	VG5710
							+0.025"		20-2087HSM	VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71010-4		Pkg. of 4		0%		
		71010-8		Pkg. of 8		0%		
		71010-16		Pkg. of 16		Less- 10%		
		71010-50		Pkg. of 50		Less- 15%		
		71010-100		Pkg. of 100		Less- 20%		
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71045-4		Pkg. of 4		0%		
		71045-8		Pkg. of 8		0%		
		71045-16		Pkg. of 16		Less- 10%		
		71045-50		Pkg. of 50		Less- 15%		
		71045-100		Pkg. of 100		Less- 20%		



# HD® EVO SPORTSTER™ 883cc 1986-'03



## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity		Quantity Discount
				71032-4		Pkg. of 4		0%
				71032-8		Pkg. of 8		0%
				71032-16		Pkg. of 16		Less- 10%
				71032-50		Pkg. of 50		Less- 15%
				71032-100		Pkg. of 100		Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
				Part Number		Quantity		Quantity Discount
				71008-4		Pkg. of 4		0%
				71008-8		Pkg. of 8		0%
				71008-16		Pkg. of 16		Less- 10%
				71008-50		Pkg. of 50		Less- 15%
				71008-100		Pkg. of 100		Less- 20%

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
			51014-4	Single Square Bead	0.310	7.0°	0.190"		

The bead height is referenced from the minor diameter of the keeper to the center of the bead.



# HD® EVO SPORTSTER™ 883cc 1986-'03

## Cylinder Dowel • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	<b>83070-4</b>	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)							

## Dowel • Cone • Oversize

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	<b>83240-4</b>	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)								

# HD® EVO SPORTSTER™ 883cc 2004-'19

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>20-21400</b>	Intake	.610"	1.860"	175#	400#	.610"	
		Exhaust						
	<b>Kit Includes</b>			4	H. T. Steel Retainers	4	CrSi Valve Springs	4
			4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>20-21550</b>	Intake	.660"	1.860"	178#	371#	.660"	
		Exhaust						
	<b>Kit Includes</b>			4	H. T. Steel Retainers	4	CrSi Valve Springs	4
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers		

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>20-20360</b>	Intake	.600"	1.860"	160#	365#	.600"	
		Exhaust						
	<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>*20-20364</b>	Intake	.600"	1.860"	160#	365#	.600"	
		Exhaust						
	<b>Kit Includes</b>			4	H.T. Steel Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>20-20350</b>	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>*20-20355</b>	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	<b>Kit Includes</b>			4	H.T. Steel Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		


Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

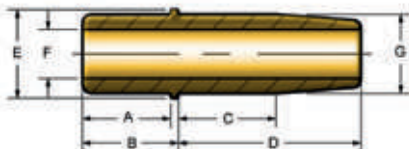
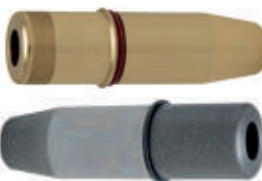


# HD® EVO SPORTSTER™ 883cc 2004-'19



## Valves • Black Diamond™ • Black Nitroreg Stems • Special Conversion Valves for 883cc to 1200cc 2004-'19

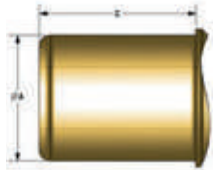

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-20550	Intake	1.715"	43.56mm	0.2760"	R0.236	23°	4.580"	Conversion Valve
	20-20555	Exhaust	1.480"	37.59mm	0.2755"	R0.500	40°	4.660"	Conversion Valve

## Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift

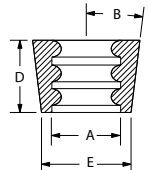

	A	B	C	D	E	F	G	Intake	
								C630 Bronze	Cast Iron
	0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20690	20-20690C
							+0.001"	20-20691	20-20691C
							+0.002"	20-20692	20-20692C
							+0.010"	20-20699	20-20699C
	A	B	C	D	E	F	G	Exhaust	
	0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20700	20-20700C
							+0.001"	20-20701	20-20701C
							+0.002"	20-20702	20-20702C
							+0.010"	20-20709	20-20709C
	A	B	C	D	E	F	G	Intake	
								Manganese	Ref. AV&V
	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.	20-20690M	VG6600
							+0.001"	20-20691M	VG6601
							+0.002"	20-20692M	VG6602
							+0.010"	20-20699M	VG6610
	A	B	C	D	E	F	G	Exhaust	
	0.685"	0.735"	0.920"	1.305"	0.615"	0.2760"	0.5625" / Std.	20-20700M	VG6700
							+0.001"	20-20701M	VG6701
							+0.002"	20-20702M	VG6702
							+0.010"	20-20709M	VG6710

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.974"	1.457"	3	A	B	C	D	Intake
				0.560"±0.005"	---	---	0.970"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71030-4		Pkg. of 4		0%		
		71030-8		Pkg. of 8		0%		
		71030-16		Pkg. of 16		Less- 10%		
		71030-50		Pkg. of 50		Less- 15%		
		71030-100		Pkg. of 100		Less- 20%		

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
		51016-4	Triple Radius Bead	0.275	7.0°	---	0.345"	0.290"	4Pr.	18260-02

The bead height is referenced from the minor diameter of the keeper to the center of the bead.



# HD® EVO SPORTSTER™ 883cc 2004-'19

HARLEY-DAVIDSON

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.510"	0.665"	5	A	B	C	D	Intake
				0.560"±0.002"	---	---	0.375"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71028-4		Pkg. of 4	0%	
				71028-8		Pkg. of 8	0%	
				71028-16		Pkg. of 16	Less- 10%	
				71028-50		Pkg. of 50	Less- 15%	
				71028-100		Pkg. of 100	Less- 20%	

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

## Wrist Pin Bushings • High Performance • Nickel Bronze Alloy

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	Nickel Bronze Alloy	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
	20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Cylinder Dowel • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)



# HD® EVO SPORTSTER™ 883cc 2004-'19



## Dowel • Cone • Oversize

**NEW PRODUCTS**



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)

# HD® XL™ 1100cc 1986-1987

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20122	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers		
		4	Titanium Retainers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20132	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers		
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20060	Intake	.655"	1.865"	190#	465#	.655"	
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers		
		4	Titanium Retainers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20081	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers		
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers Pr.	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21750	Intake	.650"	1.860"	185#	440#	.650"	VSK650T
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21700	Intake	.675"	1.860"	185#	450#	.675"	VSK675T
		Exhaust						
	Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers			

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.



# HD® XL™ 1100cc 1986-1987

HARLEY-DAVIDSON

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21300	Intake	.610"	1.860"	175#	400#	.610"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
				4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
20-21500	Intake	.660"	1.860"	178#	371#	.660"		
	Exhaust							
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers		
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems for 1100cc 1986 Model

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-4249	Intake	1.850"	47.00mm	0.3105"	Radius	Angle	4.490"	OEM18023-86
			R0.236	23°					
	20-4250	Intake	1.940"	49.28mm	0.3105"	R0.375	23°	4.440"	Oversize
20-4251	Exhaust	1.615"	41.02mm	0.3096"	R0.500	40°	4.575	OEM18024-86	

## Valves • Black Diamond™ • Black Nitroreg Stems for 1100cc 1987 Model

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-2013	Intake	1.715"	43.56mm	0.3100"	Radius	Angle	4.480"	OEM180823-87
			R0.236	23°					
20-2014	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.560"	OEM18024-87	

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift

	A	B	C	D	E	F	G	NEW PRODUCTS	Intake	Exhaust	AV&V#
	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20860M		VG5600
								+0.001"	20-20861M		VG5601
								+0.002"	20-20862M		VG5602
								+0.003"	20-20863M		VG5603
								+0.010"	20-20869M		VG5610
								+0.025"	20-2086HSM		VG5625
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20870M		VG5700
								+0.001"	20-20871M		VG5701
								+0.002"	20-20872M		VG5702
								+0.003"	20-20873M		VG5703
								+0.010"	20-20879M		VG5710
							+0.025"	20-2087HSM		VG5725	

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

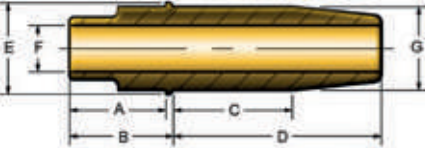

## Valve Guides • O.E.M. Replacement • .420" Seal Ø

	A	B	C	D	E	F	G	Intake / Exhaust		
	0.375"	0.375"	1.700"	2.025"	---	0.3095"	0.5620" / Std.	C630 Bronze	Cast Iron	
20-4320								20-4320C		
								+0.001"	20-4321	20-4321C
								+0.002"	20-4322	20-4322C
								+0.003"	20-4323	20-4323C
								+0.004"	20-4324	20-4324C
								+0.010"	20-4329	20-4329C

# HD® XL™ 1100cc 1986-1987

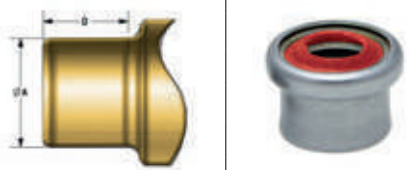


## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

	A	B	C	D	E	F	G	Intake			
								C630 Bronze	Cast Iron	Manganese	
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	20-2120	20-2120C	20-2120M	
							+0.001"	20-2121	20-2121C	20-2121M	
							+0.002"	20-2122	20-2122C	20-2122M	
							+0.003"	20-2123	20-2123C	20-2123M	
							+0.004"	20-2124	20-2124C	20-2124M	
							+0.010"	20-2129	20-2129C	20-2129M	
	A	B	C	D	E	F	G	Exhaust			
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M	
								+0.001"	20-2131	20-2131C	20-2131M
								+0.002"	20-2132	20-2132C	20-2132M
								+0.003"	20-2133	20-2133C	20-2133M
								+0.004"	20-2134	20-2134C	20-2134M
							+0.010"	20-2139	20-2139C	20-2139M	



For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

### Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity		Quantity Discount
				71032-4		Pkg. of 4		0%
				71032-8		Pkg. of 8		0%
				71032-16		Pkg. of 16		Less- 10%
				71032-50		Pkg. of 50		Less- 15%
				71032-100		Pkg. of 100		Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).

### Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
				Part Number		Quantity		Quantity Discount
				71010-4		Pkg. of 4		0%
				71010-8		Pkg. of 8		0%
				71010-16		Pkg. of 16		Less- 10%
				71010-50		Pkg. of 50		Less- 15%
				71010-100		Pkg. of 100		Less- 20%
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
				Part Number		Quantity		Quantity Discount
				71045-4		Pkg. of 4		0%
				71045-8		Pkg. of 8		0%
				71045-16		Pkg. of 16		Less- 10%
				71045-50		Pkg. of 50		Less- 15%
				71045-100		Pkg. of 100		Less- 20%

**NEW PRODUCTS**



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## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71008-4				Pkg. of 4		0%
		71008-8				Pkg. of 8		0%
		71008-16				Pkg. of 16		Less- 10%
		71008-50				Pkg. of 50		Less- 15%
		71008-100				Pkg. of 100		Less- 20%

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
	10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
	20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

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## Cylinder Dowel • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)							

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
		51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83
The bead height is referenced from the minor diameter of the keeper to the center of the bead.										

# HD® EVO SPORTSTER™ 1200cc 1988-'03

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21300	Intake	.610"	1.860"	175#	400#	.610"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers
			4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21500	Intake	.660"	1.860"	178#	371#	.660"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers	

## Dual Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21750	Intake	.650"	1.860"	185#	440#	.650"	VSK650T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21700	Intake	.675"	1.860"	185#	450#	.675"	VSK675T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		



# HD® EVO SPORTSTER™ 1200cc 1988-'03

## Valve Spring Kit • Lightweight Racing

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>20-20122</b>	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
				4	Titanium Retainers	4	H. T. Steel Basewashers	
<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>		
<b>*20-20132</b>	Intake	.600"	1.810"	163#	361#	.600"		
	Exhaust							
<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.		
			4	H. T. Steel Retainers	4	H. T. Steel Basewashers		
	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>20-20060</b>	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
				4	Titanium Retainers	4	H. T. Steel Basewashers	
<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>		
<b>*20-20081</b>	Intake	.655"	1.860"	185#	450#	.655"		
	Exhaust							
<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.		
			4	H. T. Steel Retainers	4	H. T. Steel Basewashers		

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Engine Kit with Lightweight Racing Valve Spring Kit

**NEW PRODUCTS**

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>20-22850</b>	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	<b>Kit Includes</b>			4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeps Pr.	
				4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
			4	In/ Ex Red Viton® Seals				
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		

## Components • Replacement • Engine Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>20-20132</b>	Spring Kit	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeps
<b>71010-4</b>	Intake / Exhaust Seal	Seal • Red Viton®
<b>20-2013</b>	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
<b>20-2014</b>	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

## Valve Kit • Black Diamond™ • Black Nitroneg Stems

**NEW PRODUCTS**

	<b>KPMI P/N</b>	<b>Type</b>	<b>Head Diameter</b>		<b>Stem Diameter</b>	<b>Tulip</b>		<b>O. L.</b>	<b>Remarks</b>
	<b>20-22800</b>	Intake	1.715"	43.56mm	0.3100"	Radius	Angle	4.480"	Standard
		Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°		
	<b>Kit Includes</b>			2	In Std. Black Diamond™ Valves			2	Ex Std. Black Diamond™ Valves

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HARLEY-DAVIDSON

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
			Radius	Angle					
	20-2013	Intake	1.715"	43.56mm	0.3100"	R0.236	23°	4.480"	OEM180823-87
20-2014	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.560"	OEM18024-87	

## Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

	A	B	C	D	E	F	G	Intake		
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	*Manganese
							+0.001"	20-2120	20-2120C	20-2120M
							+0.002"	20-2121	20-2121C	20-2121M
							+0.003"	20-2122	20-2122C	20-2122M
							+0.004"	20-2123	20-2123C	20-2123M
							+0.010"	20-2124	20-2124C	20-2124M
							+0.010"	20-2129	20-2129C	20-2129M

	A	B	C	D	E	F	G	Exhaust		
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M
							+0.001"	20-2131	20-2131C	20-2131M
							+0.002"	20-2132	20-2132C	20-2132M
							+0.003"	20-2133	20-2133C	20-2133M
							+0.004"	20-2134	20-2134C	20-2134M
							+0.010"	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift

NEW PRODUCTS

	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20860M	
							+0.001"	20-20861M		VG5601
							+0.002"	20-20862M		VG5602
							+0.003"	20-20863M		VG5603
							+0.010"	20-20869M		VG5610
							+0.025"	20-2086HSM		VG5625

	A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.			20-20870M
							+0.001"		20-20871M	VG5701
							+0.002"		20-20872M	VG5702
							+0.003"		20-20873M	VG5703
							+0.010"		20-20879M	VG5710
							+0.025"		20-2087HSM	VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guides • O.E.M. Replacement • .420" Seal Ø

	A	B	C	D	E	F	G	Intake / Exhaust	
	0.375"	0.375"	1.700"	2.025"	---	0.3095"	0.5620" / Std.	C630 Bronze	Cast Iron
							+0.001"	20-4320	20-4320C
							+0.002"	20-4321	20-4321C
							+0.003"	20-4322	20-4322C
							+0.004"	20-4323	20-4323C
							+0.010"	20-4324	20-4324C
							+0.010"	20-4329	20-4329C



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## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71032-4		Pkg. of 4	0%	
				71032-8		Pkg. of 8	0%	
				71032-16		Pkg. of 16	Less- 10%	
				71032-50		Pkg. of 50	Less- 15%	
		71032-100		Pkg. of 100	Less- 20%			

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71010-4		Pkg. of 4	0%	
				71010-8		Pkg. of 8	0%	
				71010-16		Pkg. of 16	Less- 10%	
				71010-50		Pkg. of 50	Less- 15%	
		71010-100		Pkg. of 100	Less- 20%			
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71045-4		Pkg. of 4	0%	
				71045-8		Pkg. of 8	0%	
				71045-16		Pkg. of 16	Less- 10%	
				71045-50		Pkg. of 50	Less- 15%	
		71045-100		Pkg. of 100	Less- 20%			

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	A	B	C	D	Intake
				0.415"±0.005"	---	---	0.350"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71008-4		Pkg. of 4	0%	
				71008-8		Pkg. of 8	0%	
				71008-16		Pkg. of 16	Less- 10%	
				71008-50		Pkg. of 50	Less- 15%	
		71008-100		Pkg. of 100	Less- 20%			

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
		20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!



# HD® EVO SPORTSTER™ 1200cc 1988-'03



## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Wrist Pin Bushings • High Performance • Nickel Bronze Alloy

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	Nickel Bronze Alloy	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
	20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
	51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Cylinder Dowel • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)

## Dowel • Cone • Oversize

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)



# HD® EVO SPORTSTER™ 1200cc 2004-'19

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20360	Intake	.600"	1.860"	160#	365#	.600"	
		Exhaust						
	Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20364	Intake	.600"	1.860"	160#	365#	.600"	
		Exhaust						
	Kit Includes			4	H.T. Steel Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20350	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20355	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	Kit Includes			4	H.T. Steel Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21400	Intake	.610"	1.860"	175#	400#	.610"	
		Exhaust						
	Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4
			4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21550	Intake	.660"	1.860"	178#	371#	.660"	
		Exhaust						
	Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers		

## Engine Kit with Lightweight Racing Valve Spring Kit

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-22950	Intake	.610"	1.860"	175#	400#	.610"
		Exhaust					
	Kit Includes			4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keepers Pr.
			4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
			4	In/ Ex Red Viton® Seals			
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves	

## Components • Replacement • Engine Kit

NEW PRODUCTS

KPMI P/N	Description	Specification
20-21400	Spring Kit	Includes: H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers, Red Viton® Seals
20-20260	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitronex Stems
20-20265	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitronex Stems

# HD® EVO SPORTSTER™ 1200cc 2004-'19



## Valve Kit • Black Diamond™ • Black Nitroleg Stems NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-22900	Intake	1.805"	45.85mm	0.2760"	Radius	Angle	4.525"	Standard
		Exhaust	1.575"	40.00mm	0.2755"	R0.344	28°		
Kit Includes		2	In Std. Black Diamond™ Valves			2	Ex Std. Black Diamond™ Valves		

## Valves • Black Diamond™ • Black Nitroleg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
	20-20260	Intake	1.805"	45.85mm	0.2760"	Radius	Angle	4.525"	OEM18690-02
		Intake	1.900"	48.26mm	0.2760"	R0.344	28°		
	20-20265	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	OEM18691-02

## Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift

	A	B	C	D	E	F	G	Intake	
	0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	C630 Bronze	Cast Iron
								20-20690	20-20690C
								+0.001"	20-20691
+0.002"	20-20692	20-20692C							
+0.010"	20-20699	20-20699C							
	A	B	C	D	E	F	G	Exhaust	
	0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	C630 Bronze	Cast Iron
								20-20700	20-20700C
								+0.001"	20-20701
+0.002"	20-20702	20-20702C							
+0.010"	20-20709	20-20709C							
	A	B	C	D	E	F	G	Intake	
	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.	Manganese	Ref. AV&V
								20-20690M	VG6600
								+0.001"	20-20691M
+0.002"	20-20692M	VG6602							
+0.010"	20-20699M	VG6610							
	A	B	C	D	E	F	G	Exhaust	
	0.685"	0.735"	0.920"	1.305"	0.615"	0.2760"	0.5625" / Std.	Manganese	Ref. AV&V
								20-20700M	VG6700
								+0.001"	20-20701M
+0.002"	20-20702M	VG6702							
+0.010"	20-20709M	VG6710							

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • Tophat

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.974"	1.457"	3	A	B	C	D	Intake
				0.560"±0.005"	---	---	0.970"	Exhaust
	Part Number		Quantity		Quantity Discount			
	71030-4		Pkg. of 4		0%			
	71030-8		Pkg. of 8		0%			
	71030-16		Pkg. of 16		Less- 10%			
	71030-50		Pkg. of 50		Less- 15%			
	71030-100		Pkg. of 100		Less- 20%			



# HD® EVO SPORTSTER™ 1200cc 2004-'19

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## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.510"	0.665"	5	0.560"±0.002"	---	---	0.375"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71028-4		Pkg. of 4	0%	
				71028-8		Pkg. of 8	0%	
				71028-16		Pkg. of 16	Less- 10%	
				71028-50		Pkg. of 50	Less- 15%	
				71028-100		Pkg. of 100	Less- 20%	

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

## Wrist Pin Bushings • High Performance • C630 Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

## Wrist Pin Bushings • Engine Builder Series • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	20-20810	660 Bearing Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
20-20812	660 Bearing Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1	

Made from SAE660 bearing bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
	20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
		51016-4	Triple Radius Bead	0.275	7.0°	---	0.345"	0.290"	4Pr.	18260-02

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

# HD® EVO SPORTSTER™ 1200cc 2004-'19



HARLEY-DAVIDSON

## Cylinder Dowel • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)							

## Dowel • Cone • Oversize

**NEW PRODUCTS**

	KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
	83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)								

# HD® TWIN CAM™ 88" 1999-2004

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21300	Intake	.610"	1.860"	175#	400#	.610"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers
Kit Includes			4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21500	Intake	.660"	1.860"	178#	371#	.660"
		Exhaust					
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers
Kit Includes			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers	

## Dual Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21650	Intake	.650"	1.860"	185#	440#	.650"	VSK650S
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
Kit Includes			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21600	Intake	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	
Kit Includes			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21750	Intake	.650"	1.860"	185#	440#	.650"	VSK650T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
Kit Includes			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
	20-21700	Intake	.675"	1.860"	185#	450#	.675"	VSK675T
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
Kit Includes			4	H. T. Steel Keepers	4	H. T. Steel Basewashers		



# HD® TWIN CAM™ 88" 1999-2004

HARLEY-DAVIDSON

## Valve Spring Kit • Lightweight Racing

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>20-20122</b>	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
				4	Titanium Retainers	4	H. T. Steel Basewashers	
	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>*20-20132</b>	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
				4	H. T. Steel Retainers	4	H. T. Steel Basewashers	
	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>20-20060</b>	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
				4	Titanium Retainers	4	H. T. Steel Basewashers	
	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>*20-20081</b>	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
				4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Engine Kit with Lightweight Racing Valve Spring Kit NEW PRODUCTS

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>20-23050</b>	Intake	.600"	1.810"	163#	361#	.600"	
		Exhaust						
	<b>Kit Includes</b>			4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keepers Pr.	
				4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
4				In/ Ex Red Viton® Seals				
2				In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		

## Components • Replacement • Engine Kit NEW PRODUCTS

KPMI P/N	Description	Specification
<b>20-20132</b>	Spring Kit	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers
<b>71010-4</b>	Intake / Exhaust Seal	Seal • Red Viton®
<b>20-20055</b>	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>20-20057</b>	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS

	<b>KPMI P/N</b>	<b>Type</b>	<b>Head Diameter</b>		<b>Stem Diameter</b>	<b>Tulip</b>		<b>O. L.</b>	<b>Remarks</b>
	<b>20-23000</b>	Intake	1.840"	46.74mm	0.3100"	Radius	Angle	4.445"	Standard
		Exhaust	1.565"	39.75mm	0.3095"	R0.234	23°		
	<b>Kit Includes</b>			2	In Std. Black Diamond™ Valves			2	Ex Std. Black Diamond™ Valves

# HD® TWIN CAM™ 88" 1999-2004



## Valves • Black Diamond™ • Black Nitroreg Stems For All 5/16 Stem Valves

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
	20-20055	Intake	1.840"	46.74mm	0.3100"	R0.234	23°	4.445"	OEM18074-83A
	20-20056	Intake	1.900"	48.26mm	0.3100"	R0.344	28°	4.420"	Oversize
	20-20108	Intake	2.000"	50.80mm	0.3100"	R0.234	23°	4.445"	Oversize
	20-20900	Intake	2.150"	54.61mm	0.3108"	R0.550	24°	4.480"	AV&V# AV2150
	20-20905	Intake	1.990"	50.55mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1990
	20-20910	Intake	1.940"	49.28mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1940
	20-20915	Intake	1.900"	48.26mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1900
	20-20955	Intake	2.100"	53.34mm	0.3108"	R0.560	24°	4.475"	AV&V# AV2100
	20-20990	Intake	2.020"	51.31mm	0.3108"	R0.670	25°	4.440"	AV&V# AV2020A
	20-20965	Intake	2.020"	51.31mm	0.3108"	R0.645	25°	4.510"	AV&V# AV2020S
	20-20057	Exhaust	1.565"	39.75mm	0.3095"	R0.250	17°	4.505"	OEM18085-991
	20-20920	Exhaust	1.650"	41.91mm	0.3106"	R0.750	25°	4.515"	AV&V# AV1650
	20-20925	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.510"	AV&V# AV1610D
	20-20930	Exhaust	1.585"	40.26mm	0.3106"	R0.750	25°	4.505"	AV&V# AV1585
	20-20960	Exhaust	1.700"	43.18mm	0.3106"	R0.600	25°	4.535"	AV&V# AV1700A
	20-20970	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.565"	AV&V# AV1610S

## Valves • Black Diamond™ • Specially Designed For HD Racing Applications

	KPMI P/N	Type		Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
							Radius	Angle		
	20-4169	In	Black Diamond™	1.940"	49.28mm	0.3100"	R0.234	23°	4.400"	Branch Heads
	20-B101	Ex	Black Diamond™	1.615"	41.02mm	0.3096"	R0.325	R01.625	4.460"	Branch Heads
	20-4170R	Ex	Black Diamond™	1.630"	41.40mm	0.3096"	R0.500	40°	4.525"	Oversize
	20-4170S	Ex	Black Diamond™	1.750"	44.45mm	0.3095"	R0.236	24°	4.480"	Std. Heads

## Valve Guides • C630 Bronze • Cast Iron • O.E.M. Replacement • .420" Seal Ø

	A	B	C	D	E	F	G	Intake / Exhaust	
								C630 Bronze	Cast Iron
	0.375"	0.375"	1.700"	2.025"	---	0.309"	0.5620" / Std.	20-4320	20-4320C
							+0.001"	20-4321	20-4321C
							+0.002"	20-4322	20-4322C
							+0.003"	20-4323	20-4323C
							+0.004"	20-4324	20-4324C
							+0.010"	20-4329	20-4329C

## Valve Guides • Manganese Bronze • .530" Seal Ø • Shortened for .655" Lift

**NEW PRODUCTS**

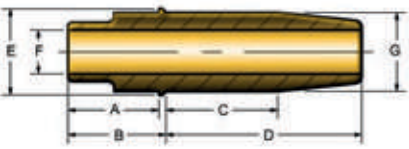

	A	B	C	D	E	F	G		Intake	Exhaust	AV&V#
	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20860M		VG5600
							+0.001"		20-20861M		VG5601
							+0.002"		20-20862M		VG5602
							+0.003"		20-20863M		VG5603
							+0.010"		20-20869M		VG5610
							+0.025"		20-2086HSM		VG5625
	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20870M		VG5700
							+0.001"		20-20871M		VG5701
							+0.002"		20-20872M		VG5702
							+0.003"		20-20873M		VG5703
							+0.010"		20-20879M		VG5710
							+0.025"		20-2087HSM		VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).



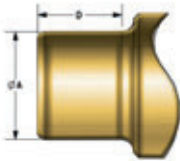

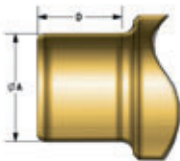

# HD® TWIN CAM™ 88" 1999-2004

Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420" Seal Ø • Shortened for .600" Lift

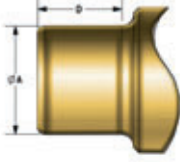

	A	B	C	D	E	F	G	Intake		
	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	C630 Bronze	Cast Iron	Manganese
							+0.001"	20-2120	20-2120C	20-2120M
							+0.002"	20-2121	20-2121C	20-2121M
							+0.003"	20-2122	20-2122C	20-2122M
							+0.004"	20-2123	20-2123C	20-2123M
							+0.010"	20-2124	20-2124C	20-2124M
								20-2129	20-2129C	20-2129M
	A	B	C	D	E	F	G	Exhaust		
	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M
							+0.001"	20-2131	20-2131C	20-2131M
							+0.002"	20-2132	20-2132C	20-2132M
							+0.003"	20-2133	20-2133C	20-2133M
							+0.004"	20-2134	20-2134C	20-2134M
							+0.010"	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.412"	0.566"	5	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.275"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71010-4	Pkg. of 4		0%			
		71010-8	Pkg. of 8		0%			
		71010-16	Pkg. of 16		Less- 10%			
		71010-50	Pkg. of 50		Less- 15%			
		71010-100	Pkg. of 100		Less- 20%			
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.514"	0.671"	5	A	B	C	D	Intake
				0.530"±0.002"	---	---	0.330"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71045-4	Pkg. of 4		0%			
		71045-8	Pkg. of 8		0%			
		71045-16	Pkg. of 16		Less- 10%			
		71045-50	Pkg. of 50		Less- 15%			
		71045-100	Pkg. of 100		Less- 20%			

## Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.385"	0.565"	7	A	B	C	D	Intake
				0.420"±0.002"	---	---	0.315"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71032-4	Pkg. of 4		0%			
		71032-8	Pkg. of 8		0%			
		71032-16	Pkg. of 16		Less- 10%			
		71032-50	Pkg. of 50		Less- 15%			
		71032-100	Pkg. of 100		Less- 20%			

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.82-84).



# HD® TWIN CAM™ 88" 1999-2004



HARLEY-DAVIDSON

## Valve Guide Seals • PC Style

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	0.415"±0.005"	---	---	0.350"	Intake
								Exhaust
		Part Number		Quantity		Quantity Discount		
		71008-4		Pkg. of 4		0%		
		71008-8		Pkg. of 8		0%		
		71008-16		Pkg. of 16		Less- 10%		
		71008-50		Pkg. of 50		Less- 15%		
		71008-100		Pkg. of 100		Less- 20%		

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
		51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
	20-20412	H. T. Steel	6.310"	0.370"	1.250"	1.250"	Pkg. of 8	16834-99A

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Valve Seats • Powdered Metal

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
	10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

## Rocker Arm Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-2106	660 Bearing Bronze	0.6795"	0.548"	1.065"	Pkg. of 8



# HD® TWIN CAM™ 88" 1999-2004

## Cylinder Dowel • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83080-4	Steel	0.4365"	0.323"	0.610"	Pkg. of 4	16595-99A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)							

# HD® TWIN CAM™ 88"-103" 2005-2017

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20360	Intake	.600"	1.860"	160#	365#	.600"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20364	Intake	.600"	1.860"	160#	365#	.600"	
		Exhaust						
Kit Includes			4	H.T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20350	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20355	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
Kit Includes			4	H.T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21400	Intake	.610"	1.860"	175#	400#	.610"	
		Exhaust						
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
			4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-21550	Intake	.660"	1.860"	178#	371#	.660"	
		Exhaust						
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers		

# HD® TWIN CAM™ 88"-103" 2005-2017



## Engine Kit with Lightweight Racing Valve Spring Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-23150	Intake	.610"	1.860"	175#	400#	.610"	
		Exhaust						
	Kit Includes	4	In / Ex H. T. Steel Retainers		4	In / Ex H.T. Steel Keepers Pr.		
		4	In / Ex CrSi Valve Springs		4	In / Ex H. T. Steel Basewashers		
4		In/ Ex Red Viton® Seals						
2		In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves			

## Components • Replacement • Engine Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
20-21400	Spring Kit	Includes: H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keepers
20-20322	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-20325	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks	
	20-23100	Intake	1.805"	45.85mm	0.2760"	Radius	Angle	4.420"	Standard
		Exhaust	1.575"	40.00mm	0.2755"	R0.354	22°		
	Kit Includes			2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves	

## Valves • Black Diamond™ • Black Nitroreg Stems **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks	
	20-20322	Intake	1.805"	45.85mm	0.2760"	Radius	Angle	4.420"	OEM18074-05
	20-20323R	Intake	1.900"	48.26mm	0.2760"	R0.344	28°		
	20-20935	Intake	1.980"	50.29mm	0.2757"	R0.290	23°	4.455"	AV1980-7TGB
	20-20940	Intake	1.900"	48.26mm	0.2757"	R0.475	24°	4.445"	AV1900-7TGB
	20-20325	Exhaust	1.575"	40.00mm	0.2755"	R0.354	22°	4.520"	OEM18085-991
	20-20326R	Exhaust	1.630"	41.40mm	0.2755"	R0.500	34°	4.520"	Oversize
	20-20945	Exhaust	1.610"	40.89mm	0.2755"	R0.595	25°	4.545"	AV1610-7TGB
	20-20950	Exhaust	1.575"	40.00mm	0.2755"	R0.595	25°	4.560"	AV1575-7TGB

## Valves • Black Diamond™ • Fat Stem • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks	
	20-20772	Intake	1.805"	45.85mm	0.2810"	Radius	Angle	4.415"	Standard
		Exhaust	1.575"	40.00mm	0.2805"	R0.374	23°		

KPMI® Reamer GR-2820 should be used to size the OEM valve guides to accommodate these valves.

## Valve Seats • Powdered Metal

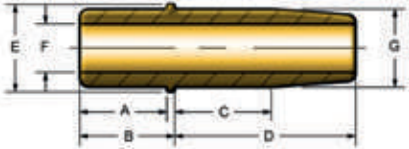
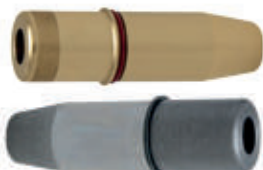
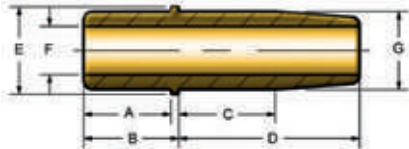

	KPMI P/N	Type	O. D.		I. D.		Height		Quantity
	10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
	10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
	10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
	10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.



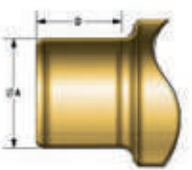

# HD® TWIN CAM™ 88"-103" 2005-2017

Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift

	A	B	C	D	E	F	G	Intake	
								C630 Bronze	Cast Iron
	0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20690	20-20690C
							+0.001"	20-20691	20-20691C
							+0.002"	20-20692	20-20692C
							+0.010"	20-20699	20-20699C
	A	B	C	D	E	F	G	Exhaust	
								C630 Bronze	Cast Iron
	0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20700	20-20700C
							+0.001"	20-20701	20-20701C
							+0.002"	20-20702	20-20702C
							+0.010"	20-20709	20-20709C
	A	B	C	D	E	F	G	Intake	
								Manganese	Ref. AV&V
	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.	20-20690M	VG6600
							+0.001"	20-20691M	VG6601
							+0.002"	20-20692M	VG6602
							+0.010"	20-20699M	VG6610
	A	B	C	D	E	F	G	Exhaust	
								C630 Bronze	Cast Iron
	0.685"	0.735"	0.920"	1.305"	0.615"	0.2760"	0.5625" / Std.	20-20700M	VG6700
							+0.001"	20-20701M	VG6701
							+0.002"	20-20702M	VG6702
							+0.010"	20-20709M	VG6710

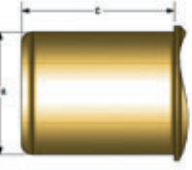

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.510"	0.665"	5	A	B	C	D	Intake
				0.560"±0.002"	---	---	0.375"	Exhaust
				Part Number		Quantity		Quantity Discount
				71028-4		Pkg. of 4		0%
				71028-8		Pkg. of 8		0%
				71028-16		Pkg. of 16		Less- 10%
				71028-50		Pkg. of 50		Less- 15%
				71028-100		Pkg. of 100		Less- 20%

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

## Valve Guide Seals • Tophat

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.974"	1.457"	3	A	B	C	D	Intake
				0.560"±0.005"	---	---	0.970"	Exhaust
				Part Number		Quantity		Quantity Discount
				71030-4		Pkg. of 4		0%
				71030-8		Pkg. of 8		0%
				71030-16		Pkg. of 16		Less- 10%
				71030-50		Pkg. of 50		Less- 15%
				71030-100		Pkg. of 100		Less- 20%

# HD® TWIN CAM™ 88"-103" 2005-2017



## Cylinder Dowel • Steel

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
	83080-4	Steel	0.4365"	0.323"	0.610"	Pkg. of 4	16595-99A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)							

## Cylinder Studs • H. T. Steel

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
	20-20412	H. T. Steel	6.310"	0.370"	1.250"	1.250"	Pkg. of 8	16834-99A

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Wrist Pin Bushings • 660 Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
	20-20780	660 Bearing Bronze	1.019"	0.925"	1.040"	Pkg. of 2
	20-20790	660 Bearing Bronze	1.019"	0.925"	1.040"	Pkg. of 1

Note: Wrist Pins do not include oil hole(s). These must be drilled after installation.

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
		51016-4	Triple Radius Bead	0.275	7.0°	---	0.345"	0.290"	4Pr.	18260-02
The bead height is referenced from the minor diameter of the keeper to the center of the bead.										

# HD® BUELL® XB9™ - XB12™ 2003-2010

## Valve Spring Kit • "High Performance" Ovate Wire Beehive

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	20-21400	Intake	.610"	1.860"	175#	400#	.610"		
		Exhaust							
	Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
				4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers		
20-21550	Intake	.660"	1.860"	178#	371#	.660"			
	Exhaust								
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals	
			4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers			



# HD® BUELL® XB9™ - XB12™ 2003-2010

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20360	Intake	.600"	1.860"	160#	365#	.600"	
		Exhaust						
	Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20364	Intake	.600"	1.860"	160#	365#	.600"	
		Exhaust						
	Kit Includes			4	H.T. Steel Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	20-20350	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*20-20355	Intake	.655"	1.860"	185#	450#	.655"	
		Exhaust						
	Kit Includes			4	H.T. Steel Retainers	4	CrSi Valve Springs	4
			2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers		

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.

\* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

## Engine Kit with Lightweight Racing Valve Spring Kit

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-23250	Intake	.610"	1.860"	175#	400#	.610"
		Exhaust					
	Kit Includes			4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeps Pr.
			4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
			4	In/ Ex Red Viton® Seals			
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves	

## Components • Replacement • Engine Kit

NEW PRODUCTS

KPMI P/N	Description	Specification
20-21400	Spring Kit	Includes: H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeps, Red Viton® Seals
20-20260	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-20265	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Valve Kit • Black Diamond™ • Black Nitroreg Stems

NEW PRODUCTS

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
		Radius	Angle		Radius	Angle		
20-23200	Intake	1.805"	45.85mm	0.2760"	R0.344	28°	4.525"	Standard
	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	Standard
Kit Includes		2	In Std. Black Diamond™ Valves			2	Ex Std. Black Diamond™ Valves	

## Valves • Black Diamond™ • Black Nitroreg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
		Radius	Angle		Radius	Angle		
20-20260	Intake	1.805"	45.85mm	0.2760"	R0.344	28°	4.525"	Standard
20-20262	Intake	1.900"	48.26mm	0.2760"	R0.344	28°	4.500"	Oversize
20-20265	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	Standard

# HD® BUELL® XB9™ - XB12™ 2003-2010



HARLEY-DAVIDSON

## Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>		
	0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	<b>C630 Bronze</b>	<b>Cast Iron</b>	
								+0.001"	<b>20-20690</b>	<b>20-20690C</b>
								+0.002"	<b>20-20691</b>	<b>20-20691C</b>
							+0.010"	<b>20-20692</b>	<b>20-20692C</b>	
							+0.010"	<b>20-20699</b>	<b>20-20699C</b>	
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Exhaust</b>		
	0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	<b>20-20700</b>	<b>20-20700C</b>	
								+0.001"	<b>20-20701</b>	<b>20-20701C</b>
								+0.002"	<b>20-20702</b>	<b>20-20702C</b>
							+0.010"	<b>20-20709</b>	<b>20-20709C</b>	
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>		
	0.685"	0.735"	0.702"	1.305"	0.615"	0.2750"	0.5625" / Std.	<b>Manganese</b>	<b>Ref. AV&amp;V</b>	
								+0.001"	<b>20-20690M</b>	VG6600
								+0.002"	<b>20-20691M</b>	VG6601
							+0.010"	<b>20-20692M</b>	VG6602	
							+0.010"	<b>20-20699M</b>	VG6610	
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Exhaust</b>		
	0.685"	0.735"	0.920"	1.305"	0.615"	0.2750"	0.5625" / Std.	<b>20-20700M</b>	VG6700	
								+0.001"	<b>20-20701M</b>	VG6701
								+0.002"	<b>20-20702M</b>	VG6702
							+0.010"	<b>20-20709M</b>	VG6710	

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Valve Guide Seals • Tophat

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.974"	1.457"	3	A	B	C	D	Intake
				0.560"±0.005"	---	---	0.970"	Exhaust
			<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>	
			<b>71030-4</b>		Pkg. of 4		0%	
			<b>71030-8</b>		Pkg. of 8		0%	
			<b>71030-16</b>		Pkg. of 16		Less- 10%	
			<b>71030-50</b>		Pkg. of 50		Less- 15%	
		<b>71030-100</b>		Pkg. of 100		Less- 20%		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.510"	0.665"	5	A	B	C	D	Intake
				0.560"±0.002"	---	---	0.375"	Exhaust
			<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>	
			<b>71028-4</b>		Pkg. of 4		0%	
			<b>71028-8</b>		Pkg. of 8		0%	
			<b>71028-16</b>		Pkg. of 16		Less- 10%	
			<b>71028-50</b>		Pkg. of 50		Less- 15%	
		<b>71028-100</b>		Pkg. of 100		Less- 20%		

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides



# HD® V-ROD™ 2002-2017

All Models Except VRXSE Destroyer

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-20140	Intake	.500"	1.360"	72#	230#	.500"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip		O. L.	Remarks	
	20-20147	Intake	1.575"	40.00mm	0.2350"	Radius	Angle	4.580"	Standard
		Exhaust	1.360"	34.54mm	0.2345"	R0.310	10°		
20-20152	Exhaust	1.360"	34.54mm	0.2345"	R0.465	25°	4.620"	Standard	

Intake valve: for **2002-2007 Models ONLY** (except 2006 VRSCSE2 and 2007 VRSCX)

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.720"	0.745"	1.050"	1.180"	0.440"	0.2340"	0.3957" / Std.	20-20330		
								+0.001"	20-20331	
	0.720"	0.745"	1.170"	1.300"	0.440"	0.2340"	0.3957" / Std.		20-20340	
								+0.001"	20-20341	
	Use O.E.M valve guide seals.							+0.010"	20-20349	

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	20-20157	Intake	None	31.00mm	1.2195"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
		Exhaust								

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# HD® MILWAUKEE-EIGHT™ 2017-2020

## Valve Spring Kit • Ovate Wire Beehive • High Lift

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21205	Intake	0.550"	1.550"	85#	257#	0.550"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	
			8	**H. T. Steel Basewashers	8	Red Viton® Seals	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	20-21215	Intake	0.550"	1.550"	85#	257#	0.550"
		Exhaust					
Kit Includes			8	H. T. Steel Retainers	8	CrSi Valve Springs	
			8	**H. T. Steel Basewashers	8	Red Viton® Seals	

\*\*Note : These basewashers are designed to fit on top of either the OEM or KPMI Tophat seals provided in this kit.



# HD® MILWAUKEE-EIGHT™ 2017-2020



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## Valve Spring Kit • Ovate Wire Beehive **NEW PRODUCTS**

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	20-21000	Intake	.465"	1.410"	80#	212#	.465"
		Exhaust					
<b>Kit Includes</b>			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H. T. Steel Basewashers	8	*Red Viton® Seals	
	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	20-21050	Intake	.465"	1.410"	80#	212#	.465"
		Exhaust					
<b>Kit Includes</b>			8	H. T. Steel Retainers	8	CrSi Valve Springs	
			8	H. T. Steel Basewashers	8	*Red Viton® Seals	

\*Note : KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.

## Valve Spring Kit • Ovate Wire Beehive **NEW PRODUCTS**

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	20-21800	Intake	.625"	1.500"	85#	280#	.625"
		Exhaust					
<b>Kit Includes</b>			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H. T. Steel Basewashers	8	*Red Viton® Seals	
	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	20-21850	Intake	.625"	1.500"	85#	280#	.625"
		Exhaust					
<b>Kit Includes</b>			8	H. T. Steel Retainers	8	CrSi Valve Springs	
			8	H. T. Steel Basewashers	8	*Red Viton® Seals	

## Engine Kit with Lightweight Racing Valve Spring Kit **NEW PRODUCTS**

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	20-23350	Intake	.465"	1.410"	80#	212#	.465"	
		Exhaust						
	<b>Kit Includes</b>			8	In / Ex H. T. Steel Retainers	8	In / Ex H.T. Steel Keeps Pr.	
				8	In / Ex CrSi Valve Springs	8	In / Ex H. T. Steel Basewashers	
			8	In/ Ex Red Viton® Seals				
			4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves		

## Components • Replacement • Engine Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
20-21050	Spring Kit	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeps, Red Viton® Seals
20-21012	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
20-21016	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems

## Booster Shims • H.T. Steel **NEW PRODUCTS**

KPMI P/N	Outside Diameter	Inside Diameter	Thickness	Quantity
92034-8	1.100"	0.719"	0.015"	Pkg of 8
92019-8	1.100"	0.719"	0.030"	Pkg of 8
92012-8	1.100"	0.719"	0.060"	Pkg of 8



# HD® MILWAUKEE-EIGHT™ 2017-2020

## Valve Kit • Black Diamond™ • Black Nitroreg Stems

NEW PRODUCTS

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks	
					Radius	Angle			
20-23300	Intake	1.571"	39.90mm	0.2347"	R0.235	10°	4.015"	Standard	
	Exhaust	1.264"	32.11mm	0.2342"	R0.460	24°	4.050"	Standard	
Kit Includes		4	In Std. Black Diamond™ Valves			4	Ex Std. Black Diamond™ Valves		

## Valves • Black Diamond™ • Black Nitroreg Stems

NEW PRODUCTS

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks	
					Radius	Angle			
20-21012	Intake	1.571"	39.90mm	0.2347"	R0.235	10°	4.015"	OEM	Standard
20-21015	Intake	1.591"	40.40mm	0.2347"	R0.235	10°	4.015"	0.50mm	Oversize
20-21009	Intake	1.630"	41.40mm	0.2347"	R0.235	10°	4.055"	1.50mm	Oversize
20-21014	Intake	1.650"	41.90mm	0.2347"	R0.235	10°	4.055"	2.00mm	Oversize
20-21016	Exhaust	1.264"	32.11mm	0.2342"	R0.460	24°	4.050"	OEM	Standard
20-21017	Exhaust	1.284"	32.61mm	0.2342"	R0.460	24°	4.050"	0.50mm	Oversize

KPMI® Black Diamond™ Blank Valve PN 20-21019 is available for M8 Application and please see Blank Valve section in back of catalog.

## Valve • White Diamond® • EV8 or Inconel®

NEW PRODUCTS

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks	
					Radius	Angle			
20-21060H	Intake	1.614"	41.00mm	0.2347"	R0.235	15°	4.035"	1.00mm	O/S Ev8
20-21061H	Intake	1.654"	42.00mm	0.2347"	R0.235	15°	4.035"	2.00mm	O/S Ev8
20-21018K	Exhaust	1.284"	32.61mm	0.2342"	R0.460	24°	4.050"	0.50mm	O/S Inconel
20-21062K	Exhaust	1.299"	33.00mm	0.2342"	R0.395	20°	4.055"	1.00mm	O/S Inconel
20-21063K	Exhaust	1.339"	34.00mm	0.2342"	R0.395	20°	4.055"	2.00mm	O/S Inconel

## Valve Guides • C630 Bronze • Cast Iron • Manganese Bronze

NEW PRODUCTS

A	B	C	D	E	F	G	Intake		
							C630 Bronze	Cast Iron	Manganese
							0.480"	0.545"	0.540"
						+0.001"	20-21021	20-21021C	20-21021M
						+0.002"	20-21022	20-21022C	20-21022M
						+0.010"	20-21029	20-21029C	20-21029M
A	B	C	D	E	F	G	Exhaust		
							C630 Bronze	Cast Iron	Manganese
							0.480"	0.545"	0.600"
						+0.001"	20-21031	20-21031C	20-21031M
						+0.002"	20-21032	20-21032C	20-21032M
						+0.010"	20-21039	20-21039C	20-21039M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.82-84).

## Reamer

NEW PRODUCTS

KPMI P/N	Description	A	B	C	D
GR-2357	0.2357" HSS valve guide reamer	7.125"	0.2357"	0.229"	0.228"

# HD® MILWAUKEE-EIGHT™ 2017-2020



## Valve Guide Seals • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	Spring shoulder Ø	
6.0mm	0.712"	1.170"	3	A	B	C	Spring shoulder Ø	Intake
				0.475"±0.002"	---	0.545"	0.707	Exhaust
		Part Number			Quantity		Quantity Discount	
		71046-4			Pkg. of 4		0%	
		71046-8			Pkg. of 8		0%	
		71046-16			Pkg. of 16		Less- 10%	
		71046-50			Pkg. of 50		Less- 15%	
		71046-100			Pkg. of 100		Less- 20%	

## Cylinder Studs • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Material	Body Dia.	O. L.	A	B	Quantity	Rep. HD® OEM P/N
	7/16-14(Typical) Body Diameter	20-21040	H. T. Steel	0.429"	6.240"	1.050"	1.200"	Pkg. of 8

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Rocker Arm Tower Stud Kit • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Material	Body Dia.	O. L.	A	B
	5/16-18 UNC 2A Body Diameter 5/16-24 UNF 2A	20-21045	H. T. Steel	0.308"	1.680"	0.810"
<b>Includes</b>		8	H. T. Steel Studs		8	H. T. Steel Nuts

KPMI® Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement high-performance needs!

## Nuts • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Material	F.D.	O.L.	Thread	Quantity
	Thread O.L. F.D.	41007-4	H. T. Steel	0.520"	0.350"	5/16-24
<b>Note : Designed for HD® M8 rocker arm tower studs, but can be used for general purposes (see diagram for detail)</b>						

These nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. Two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment provides excellent corrosion resistance and appearance.

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
	B D A E	51029-8	Triple Radius Bead	0.236"	7.0°	---	0.200"	0.282"	8Pr.

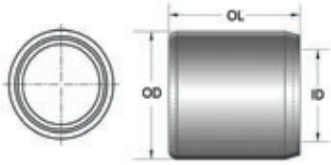


# HD® MILWAUKEE-EIGHT™ 2017-2020

HARLEY-DAVIDSON

## Cylinder Dowel • Steel

**NEW PRODUCTS**



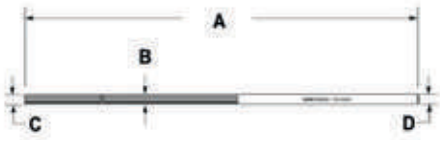
KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83250-8	Steel	0.375"	0.272"	0.400"	Pkg. of 8	16589-99A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.84)

# HD® TOOLS & COMPONENTS

## Reamers • Solid Carbide

**NEW PRODUCTS**



KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
CR-2170	0.2170 carbide valve guide reamer	7.625"	0.2170"	0.212"	0.211"
CR-2357	0.2357 carbide valve guide reamer	7.625"	0.2357"	0.230"	0.228"
CR-2768	0.2768 carbide valve guide reamer	7.625"	0.2768"	0.271"	0.269"
CR-3110	0.3110 carbide valve guide reamer	7.625"	0.3110"	0.306"	0.304"
CR-3115	0.3115 carbide valve guide reamer	7.625"	0.3115"	0.306"	0.304"
CR-3120	0.3120 carbide valve guide reamer	7.625"	0.3120"	0.307"	0.305"
CR-3775	0.3775 carbide valve guide reamer	7.625"	0.3775"	0.372"	0.370"

KPMI® Carbide valve guide reamers are manufactured from Solid Carbide. All KPMI® reamers are ground to: +/- .0002". KPMI® carbide reamers are straight-flute and have a 6-flute design. The pilot portion of KPMI® reamers are 1.0" to 1.5" long. Insert the pilot into a guide that you intend to size. Using a hand held drill, apply honing oil or ATF before and during reaming a guide. KPMI® reamers have been specifically designed for Manganese Bronze valve guides and Cast Iron. **Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it's not advisable to then use it on a bronze guide.**

## Reamers • High Speed Steel



KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
GR-2357	0.2357 HSS valve guide reamer	7.125"	0.2357"	0.229"	0.228"
GR-2770	0.2770 HSS valve guide reamer	7.125"	0.2770"	0.271"	0.270"
GR-2820	0.2820 HSS valve guide reamer	7.125"	0.2820"	0.271"	0.270"
GR-3100	0.3100 HSS valve guide reamer	7.125"	0.3100"	0.304"	0.303"
GR-3110	0.3110 HSS valve guide reamer	7.125"	0.3110"	0.305"	0.304"
GR-3115	0.3115 HSS valve guide reamer	7.125"	0.3115"	0.305"	0.304"
GR-3120	0.3120 HSS valve guide reamer	7.125"	0.3120"	0.306"	0.305"
GR-3400	0.3400 HSS valve guide reamer	7.125"	0.3400"	0.334"	0.333"
GR-3410	0.3410 HSS valve guide reamer	7.125"	0.3410"	0.335"	0.334"
GR-3730	0.3730 HSS valve guide reamer	7.125"	0.3730"	0.367"	0.336"
GR-3775	0.3775 HSS valve guide reamer	7.125"	0.3775"	0.371"	0.370"
GR-3790	0.3790 HSS valve guide reamer	7.125"	0.3790"	0.373"	0.372"

KPMI® valve guide reamers are manufactured from premium hardened High Speed Steel. The advertised finished reamer diameters are ground to: +/- .0002". These spiral fluted reamers incorporate a 1.00" long pilot (reduced diameter) which gets inserted into an unfinished guide bore, to align the reamer to the valve guide centerline, during the sizing process. These reamers have been specifically designed for KPMI® Manganese Bronze and Cast Iron valve guides. **Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it is not advisable to then use it on a bronze guide.**

# HD® TOOLS & COMPONENTS



HARLEY-DAVIDSON

## Installation Tools & Tool Kits

			Tool Kit P/N	Description						
			20-20835	Kit includes all 4 sizes of installations						
Tool P/N	Fits	Color	ØA	ØB	C	ØD	E	Quantity		
20-20830	71032-4	Red	Ø0.575"	0.860"	0.160"	0.404"	0.910	Pkg. of 1		
20-20831	71036-4	Blue	Ø0.758"	0.860"	0.160"	0.404"	0.910	Pkg. of 1		
20-20832	71033-4	White	Ø0.638"	0.860"	0.160"	0.404"	0.910	Pkg. of 1		
	71034-4									
20-20833	71035-4	Black	Ø0.673"	0.860"	0.160"	0.404"	0.910	Pkg. of 1		

These installation tools for OE style seals are manufactured from high strength 6061-T6 Aluminum for increased durability when compared to plastic installers. The tools are designed for precision fitment onto the seal OD to help the builder center the seal over the valve guide so that a few light strikes from a hammer will set the seal. Radiused top striking surface reduces the likelihood of a burr forming from deformation. Each installation tool is color coded and laser marked for each seal size by guide diameter.

## Installation Protector

	KPMI P/N (2-pack)	KPMI P/N (1-pack)	Application	Stem Diameter	Fits	Color
	20-20634	20-20637	Evolution Ironhead Sportster Intake	5/16"	71032-4   71033-4	Green
	20-20635	20-20638	Ironhead Sportster Exhaust	11/32"	71034-4	Clear
	20-20636	20-20639	Panhead Shovelhead 74" & Shovelhead 80"	3/8"	71035-4   71036-4	Red

The flexible thin wall protectors are designed to fit over the top of the valve stem, protecting the sealing element from any sharp edges that might damage it during installation.

## Compression Release Valves NEW PRODUCTS

	KPMI P/N	A	B	C	Quantity	Note
	20-21250	M10 x 1	1.400"	0.350"	Pkg. of 2	Fits Evos, Shortened thread for ease of installation, 6N closing force
	20-21265	M10 x 1	1.400"	0.350"	Pkg. of 20	
	20-21255	M10 x 1	1.730"	0.350"	Pkg. of 2	Fits Twin Cams, Shortened thread for ease of installation, 6N closing force
	20-21270	M10 x 1	1.730"	0.350"	Pkg. of 20	
	20-21260	M10 x 1	1.750"	0.500"	Pkg. of 2	6N closing force
20-21275	M10 x 1	1.750"	0.500"	Pkg. of 20		

- KPMI® Compression Release valves are state of the art and priced competitively
- Designed to reduce "hot start" issues and starter / battery loads
- 5-7 Newtons of closing force resistance, for high demand applications
- Custom molded knobs ensure a cool touch and easy operation
- Embossed with the KPMI® brand to ensure product quality

## Ball Hones

	KPMI P/N	Description	Overall Length A	Hone Head Length B	Hone Diameter C	Shank Diameter D
	GH-2755	7.0mm valve guide hone	7.975"	2.075"	0.325"	0.130"
	GH-3125	5/16 (.3125") valve guide hone	8.125"	2.225"	0.375"	0.145"
	GH-3750	3/8 (.3750") valve guide hone	8.050"	2.190"	0.415"	0.145"

BC Series Flex-Hone are manufactured by Brush Research (BRM). The BC Series Flex-Hone tool is designed for use on any type or size of valve guide from 4mm up to 3/8" in diameter. This guide hone is designed for surface finishing and cross hole deburring. Although Ball Hones have many uses, KPMI® offers them primarily to be used after a guide has been reamed. Using a Ball Hone after reaming creates a uniform surface free of irregularities, which improves surface contact and reduces the risk of galling or seizure. Please see our FAQ for recommended clearances.





# HD® TOOLS & COMPONENTS

## Cone and Cylinder Dowel • Steel

**NEW PRODUCTS**

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.5575"	0.375"	0.505"	16573-83A
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83070-4</b>	Pkg. of 4	0%	Evolution 1984-'99 XL 1100cc 1986-'87 Evo Sportster 883cc 1986-'17 Evo Sportster 1200cc 1988-'17
	<b>83070-8</b>	Pkg. of 8	0%	
	<b>83070-20</b>	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Evolution OEM Replacement
- Can Also Be Used as Multipurpose Dowel

- See Dimensions for Fitment
- Supersedes **part number 20-2099**

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.4365"	0.323"	0.610"	16595-99A
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83080-4</b>	Pkg. of 4	0%	Twin Cam 88" 1999-'07 Twin Cam 88"-103" 2005-'17
	<b>83080-8</b>	Pkg. of 8	0%	
	<b>83080-20</b>	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Twin Cam OEM Replacement
- Can Also Be Used as Multipurpose Dowel

- See Dimensions for Fitment
- Supersedes **part number 20-20413**

Material	OD 1	OD 2 O/S	OL	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
H.T. Steel	0.250"	0.252"	0.520"	50-8022	366
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>	
	<b>83240-4</b>	Pkg. of 4	0%	Panhead 1948-'65 Shovelhead 1966-83 Evolution 1984-'99 Evo Sportster 883cc 1986-'17 Evo Sportster 1200cc 1988-'17	
	<b>83240-8</b>	Pkg. of 8	0%		
	<b>83240-20</b>	Pkg. of 20	Less-5%		

- S&S "Oversized" Dowel for 4" to 4-3/8" Cylinders
- Black Oxide Coated for Corrosion Resistance
- Heat Treated Steel

- Cone Dowel for 1948-'05 Various HD® Applications
- See Description Below for Special Design Features

This KPMI® dowel has been designed to replace the S&S .250" cylinder dowel, or to be used as desired. This dowel features a unique witness line in the center of the part which serves two purposes. First, this witness line serves as a marker for proper installation height and, second, to create two distinct halves of the part. One end of the dowel has a .252" diameter with a machined dimple on the end so you know to use that end in the case or cylinder. The other half incorporates a .250" diameter. This purpose-made change in diameter, and interference, ensures a snug fit on one end and a slip fit on the other as well as fret free use.

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.375"	0.272"	0.400"	16589-99A
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83250-4</b>	Pkg. of 4	0%	Milwaukee-Eight 2017-'18
	<b>83250-8</b>	Pkg. of 8	0%	
	<b>83250-20</b>	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Rounded End Installed in Cylinder or Case
- Tapered End Installed in Head or Cam-Support Cover

- Designed as HD® M8 OEM Replacement
- Can Also Be Used as Multipurpose Dowel
- See Dimensions for Fitment

Designed for the Harley Davidson® Milwaukee-Eight engine, this dowel can also serve as a multi-purpose alignment pin. Our dowel incorporates OEM elements while increasing ease of installation through the overall shape of the part. A radiused end allows for easy insertion into the cylinder or case, and a tapered end provides hassle-free location of the mating holes in the head or cam-support cover. This commonly-sized dowel will serve its purpose wherever you see fit.

# HONDA® CRF™ / XR™ 75-100 1973-2013



HONDA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30235	Intake	.360"	1.165"	47#	130#	.360"	
		Exhaust						
Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2	Spring Shims

## Spring Only Kit • Replacement

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-4062	Intake	.400"	1.210"	54#	145#	.400"	
		Exhaust						
Kit Includes			2	CrSi Valve Springs				

## Valves • Black Diamond™ • Black Nitroleg Stems (Excludes XR75 1973-'76 Intake)

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-30238	Intake	24.00mm	0.945"	0.2145"	20°	3.115"	Standard
			20.50mm	0.807				
30-30241	Exhaust	20.50mm	0.807	0.2140"	20°	3.100"	Standard	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.115"	0.225"	Exhaust
			Part Number			Quantity		Quantity Discount
			71016-2			Pkg. of 2		0%
			71016-4			Pkg. of 4		0%
			71016-8			Pkg. of 8		0%
			71016-16			Pkg. of 16		Less- 10%
			71016-50			Pkg. of 50		Less- 15%
			71016-100			Pkg. of 100		Less- 20%



# HONDA® CRF™ 150R 2007-2019

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30880	Intake	.350"	1.320"	45#	143#	.350"	
		Exhaust						
Kit Includes			2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
			2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Cylinder Head Service Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	30-33430	Intake	.350"	1.320"	45#	143#	.350"		
		Exhaust							
	Kit Includes			2	In, Titanium Retainers	2	In, CrSi Valve Springs	2	In, H. T. Steel Basewashers
				2	Ex, Titanium Retainers	2	Ex, CrSi Valve Springs	2	Ex, H. T. Steel Basewashers
				2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2				In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
1				Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit NEW PRODUCTS

KPMI P/N	Description	Specification
30-30880	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers,
30-30910	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30913	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30890	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30900	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33431	Gasket Kit	<b>Includes:</b> Head Gasket 66mm Bore (1), Valve Stem Seal (4), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-30910	Intake	26.00mm	1.024"	0.1765"	19°	3.065"	Standard
	30-30913	Exhaust	22.50mm	0.886"	0.1760"	19°	3.145"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.550"	0.570"	0.710"	---	0.1765	0.3566" / Std.	30-30890		
								+0.010"	30-30899	
	---	0.790"	0.600"	0.710"	---	0.1760	0.3566" / Std.		30-30900	
								+0.010"		30-30909



# HONDA® CRF™ 150R 2007-2019



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71014-4		Pkg. of 4	0%	
				71014-8		Pkg. of 8	0%	
				71014-16		Pkg. of 16	Less- 10%	
				71014-50		Pkg. of 50	Less- 15%	
				71014-100		Pkg. of 100	Less- 20%	

# HONDA® CB™ 160 1965-1969

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30800	Intake	.354"	1.175"	48#	134 #	.354"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	* H. T. Steel Keepers Pr.	
			4	Titanium Retainers	4	H. T. Steel Basewashers	

\*Designed for use with Kibblewhite® valves only. KPMI® keepers which are supplied with this kit are designed to work with Kibblewhite® valves utilizing a radius groove keeper design.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-30830	Intake	25.00mm	0.984"	0.2157"	21°	2.980"	Standard
	30-30831	Intake	26.00mm	1.024"	0.2157"	21°	2.980"	Oversize
	30-30833	Exhaust	22.00mm	0.866"	0.2152"	15°	2.975"	Standard
	30-30834	Exhaust	23.00mm	0.906"	0.2152"	15°	2.975"	Oversize

Not recommended for O.E.M. replacement. These valves have been designed to work with Kibblewhite® Radius Groove Keepers, which are supplied with Kibblewhite® Spring Kit #30-30800.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.415"	0.450"	0.650"	0.880"	0.440"	0.2155"	0.3975" / Std.	+0.001"	30-30810	
								+0.002"	30-30811	
								+0.010"	30-30812	
								+0.010"	30-30819	
	0.415"	0.450"	0.790"	1.040"	0.440"	0.2152"	0.3975" / Std.		30-30820	
									+0.001"	30-30821
									+0.002"	30-30822
									+0.010"	30-30829

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71016-4		Pkg. of 4	0%	
				71016-8		Pkg. of 8	0%	
				71016-16		Pkg. of 16	Less- 10%	
				71016-50		Pkg. of 50	Less- 15%	
				71016-100		Pkg. of 100	Less- 20%	



# HONDA® CB™ 175 1970-1975

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30840	Intake	.354"	1.175"	47#	133#	.354"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	* H. T. Steel Keepers Pr.	
			4	Titanium Retainers	4	H. T. Steel Basewashers	

\*Designed for use with Kibblewhite® valves only. KPMI® keepers which are supplied with this kit are designed to work with Kibblewhite® valves utilizing a radius groove keeper design.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-30870	Intake	28.00mm	1.102"	0.2157"	21°	2.920"	Standard
	30-30871	Intake	29.00mm	1.142"	0.2157"	21°	2.920"	Oversize
	30-30873	Exhaust	24.00mm	0.945"	0.2152"	15°	2.895"	Standard
	30-30874	Exhaust	25.00mm	0.984"	0.2152"	15°	2.895"	Oversize

Not recommended for O.E.M. replacement. These valves have been designed to work with Kibblewhite® Radius Groove Keepers, which are supplied with Kibblewhite® Spring Kit #30-30840.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.415"	0.450"	0.650"	0.880"	0.440"	0.2155"	0.3975" / Std.	30-30850		
								+0.001"	30-30851	
								+0.002"	30-30852	
								+0.010"	30-30859	
	0.415"	0.450"	0.790"	1.040"	0.440"	0.2152"	0.3975" / Std.		30-30860	
								+0.001"	30-30861	
								+0.002"	30-30862	
							+0.010"	30-30869		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number		Quantity		Quantity Discount
				71016-2		Pkg. of 2		0%
				71016-4		Pkg. of 4		0%
				71016-8		Pkg. of 8		0%
				71016-16		Pkg. of 16		Less- 10%
				71016-50		Pkg. of 50		Less- 15%
			71016-100		Pkg. of 100		Less- 20%	

# HONDA® VARIOUS 185-200 1980-2002



• ATC™ 185 / 200 1980-1986

• XL 200R / XR 200 / XR 200R (non-RFVC) 1980-2002

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-4021	Intake	.450"	1.345"	66#	202#	.450"	
		Exhaust						
Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4016	Intake	.500"	1.390"	57#	145#	.290"
		Exhaust					
Kit Includes			2	CrSi Valve Springs	2	H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30120	Intake	30.00mm	1.181"	0.2145"	23°	3.605"	Standard
	30-30122	Exhaust	25.00mm	0.984"	0.2140"	29°	3.595"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.		30-4069
							+0.004"		30-4159
							+0.015"		30-4160

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number		Quantity		Quantity Discount			
	71016-2		Pkg. of 2		0%			
	71016-4		Pkg. of 4		0%			
	71016-8		Pkg. of 8		0%			
	71016-16		Pkg. of 16		Less- 10%			
	71016-50		Pkg. of 50		Less- 15%			
71016-100		Pkg. of 100		Less- 20%				



# HONDA® XR™ 200R RFVC 1984-1985

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30077	Intake	.355"	1.205"	55#	150#	.355"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	30-3100		
								+0.002"	30-3102	
								+0.010"	30-3110	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number		Quantity		Quantity Discount
				71016-4		Pkg. of 4		0%
				71016-8		Pkg. of 8		0%
				71016-16		Pkg. of 16		Less- 10%
				71016-50		Pkg. of 50		Less- 15%
				71016-100		Pkg. of 100		Less- 20%

# HONDA® CRF™ 250R 2004-'07 / 250X 2004-'17

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30590	Intake	.350"	1.320"	50#	145#	.350"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	

## Valve Spring Kit • High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31300	Intake	.385"	1.185"	50#	160#	.385"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	

# HONDA® CRF™ 250R 2004-'07 / 250X 2004-'17



## Top End Service Kit

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-33700	78.00mm	Intake	.350"	1.320"	50#	145#	.350"
			Exhaust					
	Kit Includes	4	In / Ex Titanium Retainers		4	In / Ex CrSi Valve Springs		
		4	In / Ex Red Viton® Seals		4	In / Ex H. T. Steel Basewashers		
2		In Black Diamond™ Valves		2	Ex Black Diamond™ Valves			
1		High Performance Piston Kit		1	Top End Gasket Kit			
<p><b>IMPORTANT NOTE:</b> The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are <b>NOT INTERCHANGEABLE</b> with O.E.M. piston assembly components.</p>								

## Components • Replacement • Top End Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30590	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-30630	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30633	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-33701	Gasket Kit	<b>Includes:</b> Head Gasket 78mm (1), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Head Oil Drain Cap O-ring (1), Water Outlet O-ring (1), Air Recirculation Valve Seal (1)
30-33702	*Piston Rings	1 complete set
30-33703	*Piston Pin	1 piece
30-33704	*Piston Pin Clips	1 pair

\*These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	30-33300	Intake	.350"	1.320"	50#	145#	.350"		
		Exhaust							
	Kit Includes	4	In / Ex Titanium Retainers		4	In / Ex CrSi Valve Springs		4	In / Ex H. T. Steel Basewashers
		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves			
2		In Std. C630 Valves Guides		2	Ex Std. C630 Valves Guides				
4		In / Ex Red Viton® Seals		1	Top End Gasket Kit				

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30590	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-30630	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30633	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30610	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30620	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33301	Gasket Kit	<b>Includes:</b> Head Gasket 78mm (1), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Head Oil Drain Cap O-ring (1), Water Outlet O-ring (1), Air Recirculation Valve Seal (1)


## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31200	Intake	.350"	1.320"	50#	145#	.350"
	Kit Includes	2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers
2		Black Diamond™ Valves		2	Red Viton® Seals		




# HONDA® CRF™ 250R 2004-'07 / 250X 2004-'17

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30630</b>	Intake	31.00mm	1.220"	0.1961"	20°	3.280"	Standard
	<b>30-30633</b>	Exhaust	26.00mm	1.024"	0.1956"	20°	3.235"	Standard
	<b>30-30634</b>	Exhaust	27.00mm	1.063"	0.1956"	20°	3.235"	Oversize

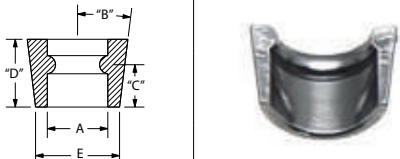
## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-30630T</b>	Intake	31.00mm	1.220"	0.1960"	20°	3.275"	Titanium	14711-KRN-670
	<b>30-30633</b>	Exhaust	26.00mm	1.024"	0.1956"	20°	3.235"	Stainless	14721-KRN-670

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

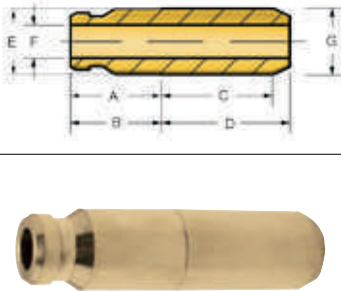
## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**


	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
	<b>51025-4</b>	Single Radius Bead	0.196"	7.0°	0.170"	0.205"	0.236"	4Pr.	14781-MAT-000

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.540"	0.540"	0.710"	0.770"	0.394"	0.1961"	0.3965" / Std.		<b>30-30610</b>
							+0.001"	<b>30-30611</b>	
							+0.002"	<b>30-30612</b>	
							+0.010"	<b>30-30619</b>	
	0.740"	0.740"	0.675"	0.775"	0.394"	0.1956"	0.3965" / Std.		<b>30-30620</b>
							+0.001"	<b>30-30621</b>	
							+0.002"	<b>30-30622</b>	
							+0.004"	<b>30-30624</b>	
							+0.010"	<b>30-30629</b>	


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71014-4</b>			Pkg. of 4		0%		
	<b>71014-8</b>			Pkg. of 8		0%		
	<b>71014-16</b>			Pkg. of 16		Less- 10%		
	<b>71014-50</b>			Pkg. of 50		Less- 15%		
<b>71014-100</b>			Pkg. of 100		Less- 20%			


# HONDA® CRF™ 250R 2008-2009




## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31150	Intake	.350"	1.320"	50#	145#	.350"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	

## Valve Spring Kit • High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31310	Intake	.385"	1.185"	50#	160#	.385"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	


## Cylinder Head Service Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	30-33440	Intake	.350"	1.320"	50#	145#	.350"		
		Exhaust							
	Kit Includes			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
				2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
			4	In / Ex Red Viton® Seals	1	Top End Gasket Kit			


## Components • Replacement • Cylinder Head Service Kit NEW PRODUCTS

KPMI P/N	Description	Specification
30-31150	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-31162	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-31166	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-31170	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-31180	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33441	Gasket Kit	<b>Includes:</b> Head Gasket 78mm Bore (1), Valve Stem Seals (4), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Head Oil Drain Cap O-ring (1), Water Outlet O-ring (1), Air Recirculation Valve Seal (1)

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-31200	Intake	.350"	1.320"	50#	145#	.350"	
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2
			2	Black Diamond™ Valves	2	Red Viton® Seals		


## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-31162	Intake	31.00mm	1.220"	0.1961"	20°	3.280"	Standard
	30-31166	Exhaust	26.00mm	1.024"	0.1760"	20°	3.235"	Standard



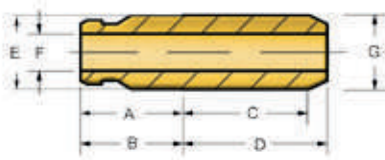

# HONDA® CRF™ 250R 2008-2009

## Valves • O.E.M. Replacement • Titanium • Stainless

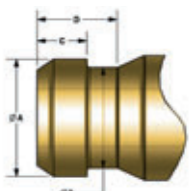

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-31162T</b>	Intake	31.00mm	1.220"	0.1960"	20°	3.275"	Titanium	14711-KRN-670
	<b>30-31166</b>	Exhaust	26.00mm	1.024"	0.1768"	20°	3.235"	Stainless	14721-KRN-A10

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust
	0.540"	0.540"	0.710"	0.770"	0.394"	0.1960"	0.3965" / Std.	<b>30-31170</b>	
							+0.001"	<b>30-31171</b>	
							+0.002"	<b>30-31172</b>	
							+0.010"	<b>30-31179</b>	
	0.740"	0.740"	0.750"	0.850"	0.394"	0.1760"	0.3965" / Std.		<b>30-31180</b>
							+0.001"		<b>30-31181</b>
							+0.002"		<b>30-31182</b>
							+0.010"		<b>30-31189</b>

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
		Part Number				Quantity	Quantity Discount	
		<b>71014-4</b>				Pkg. of 4	0%	
		<b>71014-8</b>				Pkg. of 8	0%	
		<b>71014-16</b>				Pkg. of 16	Less- 10%	
		<b>71014-50</b>				Pkg. of 50	Less- 15%	
<b>71014-100</b>				Pkg. of 100	Less- 20%			

# HONDA® CRF™ 250R 2010-2015

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-31450</b>	Intake	.385"	1.185"	50#	160#	.385"
		Exhaust					
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	Red Viton® Seals	

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>30-31500</b>	Intake	.385"	1.185"	50#	160#	.385"	
	<b>Kit Includes</b>			2	CrSi Valve Springs	2	Titanium Retainers	2
			2	Black Diamond™ Valves	2	Red Viton® Seals		



# HONDA® CRF™ 250R 2010-2015



## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-33310	Intake	.385"	1.185"	50#	160#	.385"
		Exhaust					
	Kit Includes	4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves	
2		In Std. C630 Valves Guides		2	Ex Std. C630 Valves Guides		
4		Red Viton® Seals		1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-31450	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-31462	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-31466	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-31470	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-31480	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33311	Gasket Kit	<b>Includes:</b> Head Gasket 78mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Water Outlet O-ring (1)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-31462	Intake	30.50mm	1.201"	0.1961"	20°	3.500"	Standard
	30-31466	Exhaust	25.00mm	0.984"	0.1760"	20°	3.310"	Standard

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	30-31462T	Intake	30.50mm	1.221"	0.1960"	20°	3.500"	Titanium	14711-KRN-A40
	30-31466	Exhaust	25.00mm	0.984"	0.1760"	20°	3.310"	Stainless	14721-KRN-A40

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.


## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.610"	0.610"	0.745"	0.965"	0.394"	0.1961"	0.3965" / Std.	30-31470		
									+0.001"	30-31471	
									+0.002"	30-31472	
								+0.010"	30-31479		
		0.820"	0.820"	0.650"	0.770"	0.394"	0.1760"	0.3965" / Std.		30-31480	
									+0.001"		30-31481
									+0.002"		30-31482
								+0.010"		30-31489	



# HONDA® CRF™ 250R 2010-2015


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake
								Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71014-4				Pkg. of 4		0%
		71014-8				Pkg. of 8		0%
		71014-16				Pkg. of 16		Less- 10%
		71014-50				Pkg. of 50		Less- 15%
71014-100				Pkg. of 100		Less- 20%		

# HONDA® CRF™ 250R 2016-2017

## Valve Spring Kit • Lightweight Racing


**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-32400	Intake	.380"	1.180"	51#	160#	.380"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	*Red Viton® Seals
			2	In H. T. Steel Basewashers	2	Ex H. T. Steel Basewashers		

\*KPMI® supplied Viton® seals must be used with this kit. O.E.M. seals are NOT compatible.


## Intake Only • Steel Valve Conversion Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-32440	Intake	.380"	1.180"	51#	160#	.380"	
	<b>Kit Includes</b>			2	CrSi Valve Springs	2	Titanium Retainers	2
			2	Black Diamond™ Valves	2	*Red Viton® Seals		

\*KPMI® supplied Viton® seals must be used with this kit. O.E.M. seals are NOT compatible.

## Cylinder Head Service Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33320	Intake	.380"	1.180"	51#	160#	.380"	
		Exhaust						
<b>Kit Includes</b>			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Red Viton® Seals	2	Ex Red Viton® Seals		
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides		
			1	Top End Gasket Kit				

# HONDA® CRF™ 250R 2016-2017




## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>30-32400</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
<b>30-32412</b>	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>30-32416</b>	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>30-32420</b>	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-32430</b>	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-33321</b>	Gasket Kit	<b>Includes:</b> Head Gasket 78mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Water Outlet O-ring (1)

## Valves • Black Diamond™ • Black Nitroreg Stems


**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-32412</b>	Intake	30.50mm	1.201"	0.1961"	20°	3.500"	Standard
<b>30-32416</b>	Exhaust	25.00mm	0.984"	0.1956"	20°	3.310"	Standard	

You must use **KPMI® Spring Kit 30-32400** When installing Black Diamond™ Valves

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

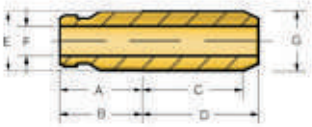
**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-32412T</b>	Intake	30.50mm	1.201"	0.1960"	20°	3.500"	Titanium	14711-KRN-A40
<b>30-32416T</b>	Exhaust	25.00mm	0.984"	0.1956"	20°	3.300"	Titanium	14721-KRN-B10	

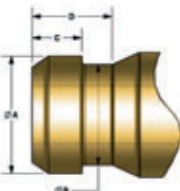

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.675"	0.675"	0.710"	0.815"	0.394"	0.1961"	0.3963" / Std.	+0.001"	<b>30-32420</b>
							+0.002"	<b>30-32421</b>	
							+0.010"	<b>30-32422</b>	
							+0.010"	<b>30-32429</b>	
0.835"	0.835"	0.630"	0.735"	0.394"	0.1956"	0.3963" / Std.			<b>30-32430</b>
							+0.001"		<b>30-32431</b>
							+0.002"		<b>30-32432</b>
							+0.010"		<b>30-32439</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake Exhaust
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		<b>71014-4</b>		Pkg. of 4		0%		
		<b>71014-8</b>		Pkg. of 8		0%		
		<b>71014-16</b>		Pkg. of 16		Less- 10%		
		<b>71014-50</b>		Pkg. of 50		Less- 15%		
<b>71014-100</b>		Pkg. of 100		Less- 20%				



# HONDA® VARIOUS 250-300'S 2011-2019

- CRF250L / RL 2013-2019
- CBR300R 2015-2019
- CB300F 2016-2018
- CBR250R 2011-2013
- CMX300 2017-2019
- CB300R 2019

## Valve Spring Kit • Lightweight Racing **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift*	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33650	Intake	.390"	1.190"	49#	160#	.390"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

\* It may be necessary to use KPMI® Shortened Valve Guides # 30-3367X, to achieve higher than stock lift.

## Valves • Black Diamond™ • Black Nitroreg Stems **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-33662	Intake	30.00mm	1.181"	0.1766"	20°	3.280"	Standard
	30-33664	Intake	32.00mm	1.260"	0.1766"	20°	3.280"	Oversize
	30-33666	Exhaust	24.00mm	0.945"	0.1761"	20°	3.280"	Standard

## Valve Guides • C630 Bronze **NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.505"	0.530"	0.640"	0.940"	0.390"	0.1761"	0.3566" / Std.		30-33670
							+0.001"		30-33671
							+0.002"		30-33672
							+0.010"		30-33679

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Exhaust
				0.321"±0.005"	0.281"	0.120"	0.240"	
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	71014-4			Pkg. of 4		0%		
	71014-8			Pkg. of 8		0%		
	71014-16			Pkg. of 16		Less- 10%		
	71014-50			Pkg. of 50		Less- 15%		
71014-100			Pkg. of 100		Less- 20%			

# HONDA® CRF™ 250R / RX 2018-2020

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium **NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	30-33612T	Intake	33.00mm	1.299"	0.1961"	16°	3.455"	Titanium	14711-K95-A20
	30-33616T	Exhaust	26.00mm	1.024"	0.1956"	18°	3.170"	Titanium	14721-K95-A20

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

# HONDA® TRX™ 250X 1987-1992



HONDA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-3041	Intake	.400"	1.215"	76#	192#	.400"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30088	Intake	25.50mm	1.004"	0.2155"	23°	3.680"	Standard
	30-30090	Exhaust	22.50mm	0.886"	0.2150"	29°	3.650"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.400"	0.495"	1.185"	1.300"	0.800"	0.2150"	0.4355" / Std.	30-3030		
								+0.002"	30-3032	
								+0.010"	30-3040	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number	Quantity		Quantity Discount	
				71016-4	Pkg. of 4		0%	
				71016-8	Pkg. of 8		0%	
				71016-16	Pkg. of 16		Less- 10%	
				71016-50	Pkg. of 50		Less- 15%	
			71016-100	Pkg. of 100		Less- 20%		

# HONDA® XR™ / XL™ 250R RFVC 1984-'95

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30077	Intake	.355"	1.205"	55#	150#	.355"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30081	Intake	28.50mm	1.122"	0.2160"	23°	3.805"	Standard
	*30-30083	Exhaust	23.50mm	0.925"	0.2155"	29°	3.775"	Standard

\* Note # 30-30083 - Recommended for XR250R 1986-1995 and XL250R 1991-1996 Model only



# HONDA® XR™ / XL™ 250R RFVC 1984-'95

## Valve Guides • C630 Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	<b>30-3100</b>	
								+0.002"	<b>30-3102</b>
							+0.010"	<b>30-3110</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

# HONDA® XR™ 250R RFVC 1996-2004

## Valve Spring Kit • Lightweight Racing

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>30-30070</b>	Intake	.465"	1.455"	52#	143#	.300"
		Exhaust					
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	

## Spring Only Kit • High Performance

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>30-4154</b>	Intake	.465"	1.205"	55#	140#	.300"
		Exhaust					
<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	<b>KPMI P/N</b>	<b>Type</b>	<b>Head Diameter</b>		<b>Stem Diameter</b>	<b>Tulip</b>	<b>O. L.</b>	<b>Remarks</b>
	<b>30-30073</b>	Intake	28.50mm	1.122"	0.1960"	23°	3.805"	Standard
	<b>30-30075</b>	Exhaust	23.50mm	0.925"	0.1955"	29°	3.765"	Standard

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

**ORDER 650-557-2046**

# HONDA® XR™ 250L 1991-1996



## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.		<b>30-3100</b>
									+0.002"	<b>30-3102</b>
									+0.010"	<b>30-3110</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake
								Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71016-4</b>		Pkg. of 4		0%		
		<b>71016-8</b>		Pkg. of 8		0%		
		<b>71016-16</b>		Pkg. of 16		Less- 10%		
		<b>71016-50</b>		Pkg. of 50		Less- 15%		
		<b>71016-100</b>		Pkg. of 100		Less- 20%		

# HONDA® TRX™ 300EX / X 1993-2009

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>30-3041</b>	Intake	.400"	1.215"	76#	192#	.400"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30088</b>	Intake	25.50mm	1.004"	0.2155"	23°	3.680"	Standard
		Exhaust	22.50mm	0.886"	0.2150"	29°	3.650"	Standard

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.400"	0.495"	1.185"	1.300"	0.800"	0.2150"	0.4355" / Std.		<b>30-3030</b>
									+0.002"	<b>30-3032</b>
									+0.010"	<b>30-3040</b>


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake
								Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71016-4</b>		Pkg. of 4		0%		
		<b>71016-8</b>		Pkg. of 8		0%		
		<b>71016-16</b>		Pkg. of 16		Less- 10%		
		<b>71016-50</b>		Pkg. of 50		Less- 15%		
		<b>71016-100</b>		Pkg. of 100		Less- 20%		

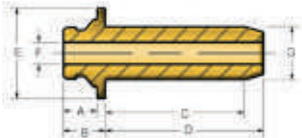



# HONDA® 350 RFVC 1983-1985

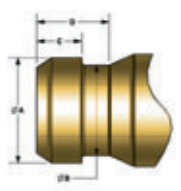

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4083	Intake	.460"	1.390"	65#	204#	.460"
		Exhaust					
Kit Includes			4	CrSi Valve Springs			

## Valve Guides • C630 Bronze


 	A	B	C	D	E	F	G	Intake	Exhaust
	0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.		30-3100
								+0.002"	30-3102
								+0.010"	30-3110

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
 	Part Number		Quantity		Quantity Discount			
	71016-4		Pkg. of 4		0%			
	71016-8		Pkg. of 8		0%			
	71016-16		Pkg. of 16		Less- 10%			
	71016-50		Pkg. of 50		Less- 15%			
71016-100		Pkg. of 100		Less- 20%				

# HONDA® CB™ / CL™ 350 TWIN 1968-'73

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30104	Intake	.465"	1.315"	101#	266#	.465"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.	
			4	Titanium Retainers	4	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

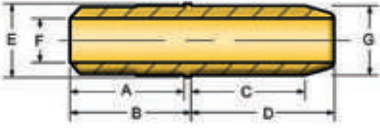



	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30361	Intake	34.00mm	1.339"	0.2745"	15°	3.910"	Standard
	30-30362	Intake	35.00mm	1.378"	0.2745"	15°	3.900"	Oversize
	30-30364	Exhaust	28.00mm	1.102"	0.2740"	23°	3.850"	Standard
	30-30365	Exhaust	29.00mm	1.142"	0.2740"	23°	3.840"	Oversize



# HONDA® CB™ / CL™ 350 TWIN 1968-'73



## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust
		0.830"	0.880"	0.810"	1.020"	0.525"	0.2745"	0.4950" / Std.	<b>30-0359</b>
							+0.002"	<b>30-0360</b>	
							+0.010"	<b>30-0400</b>	
	0.830"	0.880"	1.070"	1.170"	0.525"	0.2740"	0.4950" / Std.		<b>30-0363</b>
							+0.002"		<b>30-0364</b>
							+0.010"		<b>30-0401</b>

No seal required.


# HONDA® CB™ / CL™ 350 TWIN 1968-'73

- Lightweight 5.00mm Conversion System

## Valve Spring Kit • Lightweight Racing

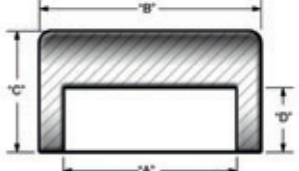
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-30320</b>	Intake	.460"	1.370"	68#	207#	.460"
Exhaust							
Kit Includes	4	CrSi Valve Springs		4	H. T. Steel Keepers Pr.		
	4	Titanium Retainers		4	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30326</b>	Intake	34.00mm	1.339"	0.1965"	20°	3.835"	Standard
	<b>30-30327</b>	Intake	35.00mm	1.378"	0.1965"	20°	3.825"	Oversize
	<b>30-30328</b>	Exhaust	28.00mm	1.102"	0.1960"	23°	3.775"	Standard
	<b>30-30329</b>	Exhaust	29.00mm	1.142"	0.1960"	23°	3.765"	Oversize

Must use Kibblewhite® Lash Caps #94007-4 (Pkg. of 4). Valves have been shortened to fit lash caps.

## Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	<b>94007-4</b>	H.T. Steel	5.00mm	0.277"	0.175"	0.100"	0.075"	Pkg. of 4
			0.1969"					



# HONDA® CB™ / CL™ 350 TWIN 1968-'73

- Lightweight 5.00mm Conversion System

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.440"	0.600"	0.825"	1.165"	0.525"	0.1960"	0.4953" / Std.	<b>30-30330</b>		
									+0.001"	<b>30-30331</b>	
									+0.002"	<b>30-30332</b>	
		0.440"	0.600"	1.000"	1.180"	0.525"	0.1960"	0.4953" / Std.		<b>30-30340</b>	
									+0.001"		<b>30-30341</b>
									+0.002"		<b>30-30342</b>
									+0.010"		<b>30-30349</b>
One seal supplied with each guide.								+0.010"		<b>30-30349</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71015-4</b>		Pkg. of 4		0%		
		<b>71015-8</b>		Pkg. of 8		0%		
		<b>71015-16</b>		Pkg. of 16		Less- 10%		
		<b>71015-50</b>		Pkg. of 50		Less- 15%		
<b>71015-100</b>		Pkg. of 100		Less- 20%				

# HONDA® ATC™ 350X 1985-1986

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-3045</b>	Intake	.415"	1.160"	90#	210#	.415"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	

# HONDA® CB™ 350F / 400F 1972-1977

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift*	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-33500</b>	Intake	.350"	1.175"	66#	156#	.350"
		Exhaust					
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	

\*Note: It may be necessary to use KPMI® Shortened Valve Guides #30-33520 and #30-33530, to achieve higher stock lift. Must use OEM spring shims (Honda P/N 14775-107-000 & 14776-107-010)

# HONDA® CB™ 350F / 400F 1972-1977



## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-1032	Intake	.400"	1.270"	40#	131#	.400"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

## Valves • Black Diamond™ • Black Nitroreg Stems For CB 400F™ 1975-1977 ONLY

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-33512	Intake	26.50mm	1.043"	0.2160"	20°	3.055"	Standard
	30-33516	Exhaust	23.00mm	0.906"	0.2155"	23°	3.030"	Standard

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.370"	0.485"	0.645"	0.915"	0.725"	0.2160"	0.4358" / Std.	30-33520	
							+0.001"	30-33521	
							+0.002"	30-33522	
	0.370"	0.485"	0.810"	1.025"	0.725"	0.2155"	0.4358" / Std.		30-33530
							+0.001"		30-33531
							+0.002"		30-33532
							+0.010"		30-33539

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.330"	0.455"	2	A	B	C	D	Intake
				0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71040-4		Pkg. of 4		0%		
		71040-8		Pkg. of 8		0%		
		71040-16		Pkg. of 16		Less- 10%		
		71040-50		Pkg. of 50		Less- 15%		
71040-100		Pkg. of 100		Less- 20%				

## Keeper • H.T. Steel

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.215"	10.0°	0.076"	0.210"	0.285"	14781-107-003
		Part Number		Quantity	
		51002-4		4 Pairs	
		51002-8		8 Pairs	
		51002-16		16 Pairs	
		51002-50		50 Pairs	
51002-100		100 Pairs			



# HONDA® XL™ 350 1974-1978

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30230	Intake	.440"	1.195"	59#	172#	.440"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	30-0494		
								+0.004"	30-0496	
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.		30-0498	
							+0.004"		30-0500	

## Swing Arm Bushing • Bearing Bronze For XL™350 1976-1978 NEW PRODUCTS

	KPMI P/N	Material	A	B	C	D	E	Quantity
	30-0477	Bearing Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.
<ul style="list-style-type: none"> <li>• Replaces worn or damaged plastic OEM bushing</li> <li>• High quality bearing bronze offers increased durability and better fitment than OEM component</li> <li>• OEM P/N: 52108-457-300 &amp; 52108-422-300</li> </ul>								

# HONDA® XR™ 400R RFVC 1996-2004

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30085	Intake	.430"	1.380"	71#	210#	.430"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-3115	Intake	33.00mm	1.300"	0.2156"	20°	4.040"	Standard
	30-3116	Intake	34.00mm	1.340"	0.2156"	20°	4.020"	Oversize
	30-3117	Exhaust	29.00mm	1.142"	0.2150"	29°	3.980"	Standard
	30-3118	Exhaust	30.00mm	1.181"	0.2150"	29°	3.960"	Oversize

# HONDA® XR™ 400R RFVC 1996-2004



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.645"	1.020"	1.300"	0.715"	0.2150"	0.4355" / Std.	<b>30-3120</b>	
							+0.001"	<b>30-3121</b>	
							+0.002"	<b>30-3122</b>	
							+0.010"	<b>30-3130</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

## Cylinder Stud Kit • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"
	<b>30-33750</b>	1	0.358"	5.0"	.95"	.95"
		Quantity	Body Dia.	"D"	"A"	"B"
		1	0.358"	4.0"	.95"	.95"
		Quantity	Body Dia.	"E"	"A"	"B"
2	0.358"	3.4"	.95"	.95"		
<b>Kit Includes</b>	4	H. T. Steel Studs		4	H. T. Steel Nuts	

# HONDA® TRX™ 400X/ 400EX 1999-'14

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-3111</b>	Intake	.465"	1.375"	70#	157#	.300"
		Exhaust					
<b>Kit Includes</b>	4	CrSi Valve Springs		4	Titanium Retainers		

Running cams with over .350" lift requires the use of shortened KPMI® guide, PN 30-3120

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-33460</b>	Intake	.465"	1.375"	70#	157#	.300"
		Exhaust					
	<b>Kit Includes</b>	4	In / Ex Titanium Retainers		4	In / Ex CrSi Valve Springs	
2		In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves		
4		In/ Ex Std. C630 Valves Guides		1	Top End Gasket Kit		




# HONDA® TRX™ 400X/ 400EX 1999-'14

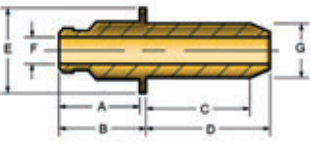
## Components • Replacement • Cylinder Head Service Kit NEW PRODUCTS

KPMI P/N	Description	Specification
30-3111	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs
30-3115	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-3117	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-3120	Intake / Exhaus, Standard Valve Guide	Valve Guide • C630 Bronze
30-33461	Gasket Kit	<b>Includes:</b> Head Gasket 86mm Bore (1), Base Gasket (1), Cylinder Base O-ring (1), Exhaust Gasket (2), Cam Chain Tensioner Gasket (1), Valve Guide O-Ring (1), Valve Seals (4), Cam Chain Tensioner O-ring (1), Valve Adj. Cap O-rings (4), Intake Manifold O-ring (1), Exhaust O-ring (1), Intake O-ring (1)

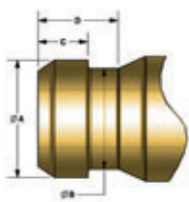
## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-3115	Intake	33.00mm	1.300"	0.2156"	20°	4.040"	Standard
	30-3116	Intake	34.00mm	1.340"	0.2156"	20°	4.020"	Oversize
	30-3117	Exhaust	29.00mm	1.142"	0.2150"	29°	3.980"	Standard
	30-3118	Exhaust	30.00mm	1.181"	0.2150"	29°	3.960"	Oversize

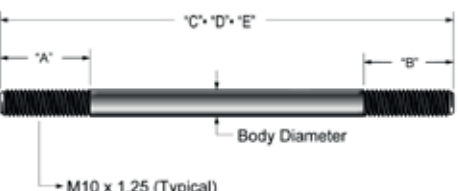
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.645"	1.020"	1.300"	0.715"	0.2150"	0.4355" / Std.		<b>30-3120</b>
							+0.001"		<b>30-3121</b>
							+0.002"		<b>30-3122</b>
							+0.010"		<b>30-3130</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"	Intake
								Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71016-4</b>		Pkg. of 4		0%
				<b>71016-8</b>		Pkg. of 8		0%
				<b>71016-16</b>		Pkg. of 16		Less- 10%
				<b>71016-50</b>		Pkg. of 50		Less- 15%
<b>71016-100</b>		Pkg. of 100		Less- 20%				

## Cylinder Stud Kit • H.T. Steel NEW PRODUCTS

	KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"
	<b>30-33750</b>	1	0.358"	5.0"	.95"	.95"
		Quantity	Body Dia.	"D"	"A"	"B"
		1	0.358"	4.0"	.95"	.95"
		Quantity	Body Dia.	"E"	"A"	"B"
	2	0.358"	3.4"	.95"	.95"	
<b>Kit Includes</b>		4	H. T. Steel Studs		4	H. T. Steel Nuts

# HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.130"	0.210"	1.293"	1.468"	0.702"	0.2750"	0.4955" / Std.		<b>30-0367</b>	
								+0.002"	<b>30-0368</b>	
								+0.004"	<b>30-0369</b>	
	Use O.E.M. valve guide seals.							+0.006"	<b>30-0370</b>	

# HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76

## • Lightweight 5.00mm Conversion System

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-30300</b>	Intake	.460"	1.180"	72#	188#	.460"
		Exhaust					
	Kit Includes	4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.		
4		Titanium Retainers	4	H. T. Steel Basewashers			

### Valves • Black Diamond™ • Black Nitroeneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30306</b>	Intake	38.00mm	1.496"	0.1960"	20°	3.855"	Standard
	<b>30-30307</b>	Intake	39.00mm	1.535"	0.1960"	20°	3.845"	Oversize
	<b>30-30308</b>	Exhaust	33.00mm	1.299"	0.1955"	18°	3.715"	Standard
	<b>30-30309</b>	Exhaust	34.00mm	1.339"	0.1955"	18°	3.695"	Oversize

Valves shortened for lash caps. Use Kibblewhite® Lash Caps #94007-4 (Pkg. of 4). Using these valves as O.E.M. replacements requires Kibblewhite® 5.0mm Conversion Guides and Keepers.

### Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.259"	0.354"	1.311"	1.621"	0.524"	0.1960"	0.4951" / Std.	<b>30-30690</b>		
								+0.001"	<b>30-30691</b>	
								+0.002"	<b>30-30692</b>	
								+0.010"	<b>30-30699</b>	
	A	B	C	D	E	F	G	Intake	Exhaust	
	0.259"	0.354"	1.241"	1.436"	0.524"	0.1955"	0.4951" / Std.		<b>30-30700</b>	
								+0.001"	<b>30-30701</b>	
								+0.002"	<b>30-30702</b>	
	One seal supplied with each guide.							+0.010"	<b>30-30709</b>	

One seal supplied with each guide.



# HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76

## • Lightweight 5.00mm Conversion System

### Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake
								Exhaust
			Part Number		Quantity		Quantity Discount	
			71015-4		Pkg. of 4		0%	
			71015-8		Pkg. of 8		0%	
			71015-16		Pkg. of 16		Less- 10%	
			71015-50		Pkg. of 50		Less- 15%	
			71015-100		Pkg. of 100		Less- 20%	

### Keeper Set • O.E.M. Style • 5.0mm Conversion

	KPMI P/N	Style	A	B	C	D	E	Quantity
	51015-4	Single Radius Bead	0.196"	10.0°	0.160"	0.200"	0.308"	4Pr.

These Kibblewhite® Keepers seamlessly merge the Kibblewhite® 5.0mm Conversion Valves and Guides with the O.E.M. Retainer and Torsion System.

### Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	94007-4	H.T. Steel	5.00mm	0.277"	0.175"	0.100"	0.075"	Pkg. of 4
0.1969"								

# HONDA® CRF™ 450R 2002-2008

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30640	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"
Kit Includes			2 In CrSi Valve Springs	2 In Titanium Retainers	2 In H.T. Steel Basewashers		
			2 *Ex CrSi Valve Springs	2 Ex Titanium Retainers	2 Ex H.T. Steel Basewashers		

### Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31210	Intake	.440"	1.215"	40#	147#	.440"
	Kit Includes			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.




# HONDA® CRF™ 450R 2002-2008



## Top End Service Kit for CRF 450R 2002-2006

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-32700</b>	96.00mm	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"	
<b>Kit Includes</b>	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
	2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
	2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves				
	1	High Performance Piston Kit	1	Top End Gasket Kit				

**IMPORTANT NOTE:** The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE** with O.E.M. piston assembly components.


## Components • Replacement • Top End Service Kit for CRF 450R 2002-2006

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>30-30640</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>30-30220</b>	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
<b>30-30223</b>	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
<b>30-32701</b>	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

## Cylinder Head Service Kit for CRF™ 450R 2002-2006

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-33340</b>	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"	
<b>Kit Includes</b>	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
	2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
	2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
	2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
	1	Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit for CRF 450R 2002-2006

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>30-30640</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>30-30220</b>	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>30-30223</b>	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>30-30200</b>	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-30210</b>	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-33341</b>	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

# HONDA® TRX™ 450R 2004-2005



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30720	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"
Kit Includes			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 *Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Top End Service Kit **NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-32500	94.00mm	Intake	.440"	1.215"	40#	147#	.440"	
			Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes			2 In Titanium Retainers	2 In CrSi Valve Springs	2 In H. T. Steel Basewashers			
				2 Ex Titanium Retainers	2 *Ex CrSi Valve Springs	2 Ex H. T. Steel Basewashers			
2 In Black Diamond™ Valves				2 Ex Black Diamond™ Valves					
			1 High Performance Piston Kit	1 Top End Gasket Kit					

**IMPORTANT NOTE:** The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE** with O.E.M. piston assembly components.

## Components • Replacement • Top End Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30720	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30750	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-30753	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-32501	Gasket Kit	Includes: Base gasket, Engine case gasket, Exhaust gasket, Head gasket, Washers, Valve stem seals

## Cylinder Head Service Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33480	Intake	.440"	1.215"	40#	147#	.440"	
		Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes			2 In Titanium Retainers	2 In CrSi Valve Springs	2 In H. T. Steel Basewashers		
				2 Ex Titanium Retainers	2 *Ex CrSi Valve Springs	2 Ex H. T. Steel Basewashers		
2 In Std. Black Diamond™ Valves				2 Ex Std. Black Diamond™ Valves				
			2 In Std. C630 Valves Guides	2 Ex Std. C630 Valves Guides				
			1 Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30720	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30750	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30753	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30730	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30740	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33481	Gasket Kit	<b>Includes:</b> Head Gasket 94mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Tensioner Bolt Washer (1), Valve Stem Seals (4), Thermostat Cover O-ring (1)

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

# HONDA® CRF™ 450R 2002-2008



## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30220</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.315"	Standard
	<b>30-30221</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.325"	Oversize
	<b>30-30222</b>	Intake	38.00mm	1.496"	0.2158"	20°	3.325"	Oversize
	<b>30-30223</b>	Exhaust	31.00mm	1.220"	0.1957"	20°	3.310"	2002-'06 Std.
	<b>30-30224</b>	Exhaust	32.00mm	1.260"	0.1957"	20°	3.320"	2002-'06 O/S
	<b>30-30225</b>	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	2007-'08 Std.

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-30220T</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.325"	Titanium	14711-MEB-670
	<b>30-30223</b>	Exhaust	31.00mm	1.220"	0.1957"	20°	3.310"	2002-'06 Stainless	14721-MEB-670
	<b>30-30225</b>	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	2007-'08 Stainless	14721-MEN-A00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.		<b>30-30200</b>
							+0.001"	<b>30-30201</b>	
							+0.002"	<b>30-30202</b>	
							+0.004"	<b>30-30204</b>	
							+0.010"	<b>30-30209</b>	
	0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" Std.		<b>30-30210</b>
							+0.001"		<b>30-30211</b>
							+0.002"		<b>30-30212</b>
							+0.004"		<b>30-30214</b>
							+0.010"		<b>30-30219</b>

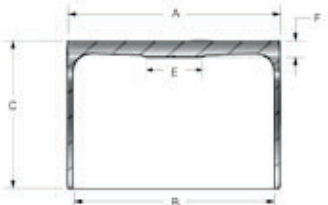
## Valve Guide Seal Kits • High Performance

	Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
					A	B	C	D
	5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"
	Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
					A	B	C	D
	5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"
<b>Part Number</b>	<b>30-30550</b>		<b>Kit Includes</b>		2	Intake Viton® Seals	2	Exhaust Viton® Seals



# HONDA® CRF™ 450R 2002-2008

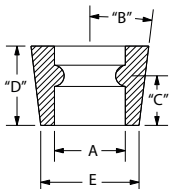

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
		30-30648	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

## Keeper Set • O.E.M. Replacement


**NEW PRODUCTS**

 	KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		30-30650	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"
	Exhaust			0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.


# HONDA® CRF™ 450R 2009-2012

## Valve Spring Kit • Lightweight Racing


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
		30-31250	Intake	.440"	1.215"	40#	147#
	Exhaust		.440"	1.365"	71#	203#	.440"
	<b>Kit Includes</b>		2 In CrSi Valve Springs	2 In Titanium Retainers	2 In H.T. Steel Basewashers		
			2 *Ex CrSi Valve Springs	2 In Titanium Retainers	2 Ex H.T. Steel Basewashers		

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
		30-31240	Intake	.440"	1.215"	40#	147#
	<b>Kit Includes</b>		2 CrSi Valve Springs	2 Titanium Retainers			
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-31262	Intake	36.00mm	1.417"	0.1960"	20°	3.095"	Standard
	30-31266	Exhaust	30.00mm	1.181"	0.1955"	20°	3.175"	Standard
	30-31267	Exhaust	31.00mm	1.220"	0.1955"	20°	3.185"	Oversize

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

# HONDA® CRF™ 450R 2009-2012



## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-31262T</b>	Intake	36.00mm	1.417"	0.1960"	20°	3.095"	Titanium	14711-MEN-A30
	<b>30-31266</b>	Exhaust	30.00mm	1.181"	0.1955"	20°	3.175"	Stainless	14721-MEN-A30

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.535"	0.535"	0.590"	0.670"	0.433"	0.1960"	0.4360" / Std.	<b>30-31270</b>		
								+0.001"	<b>30-31271</b>	
								+0.002"	<b>30-31272</b>	
								+0.010"	<b>30-31279</b>	
	0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		<b>30-31280</b>	
								+0.002"	<b>30-31282</b>	
							+0.010"	<b>30-31289</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71015-4</b>		Pkg. of 4		0%
				<b>71015-8</b>		Pkg. of 8		0%
				<b>71015-16</b>		Pkg. of 16		Less- 10%
				<b>71015-50</b>		Pkg. of 50		Less- 15%
				<b>71015-100</b>		Pkg. of 100		Less- 20%

## Tappets • H.T. Steel • High Performance

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>30-31292</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.



# HONDA® CRF™ 450R 2013-2016

HONDA

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31600	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"
Kit Includes		2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers			
		2 *Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers			
<p>*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.</p>							

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31580	Intake	.440"	1.215"	40#	147#	.440"
	Kit Includes		2 CrSi Valve Springs	2 Titanium Retainers			
		2 Black Diamond™ Valves	2 H. T. Steel Basewashers				

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-31612	Intake	36.00mm	1.417"	0.1960"	20°	3.095"	Standard
	30-31616	Exhaust	31.00mm	1.220"	0.1955"	20°	3.175"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	30-31612T	Intake	36.00mm	1.417"	0.1960"	20°	3.095"	Titanium	14711-MEN-A30
	30-31616	Exhaust	31.00mm	1.220"	0.1955"	20°	3.175"	Stainless	14721-MEN-A70

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.535"	0.535"	0.590"	0.670"	0.433"	0.1960"	0.4360" / Std.	30-31620		
								+0.001"	30-31621	
								+0.002"	30-31622	
								+0.010"	30-31629	
	0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		30-31630	
								+0.001"	30-31631	
								+0.002"	30-31632	
								+0.010"	30-31639	

# HONDA® CRF™ 450R 2013-2016



## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71015-4				Pkg. of 4		0%
		71015-8				Pkg. of 8		0%
		71015-16				Pkg. of 16		Less- 10%
		71015-50				Pkg. of 50		Less- 15%
		71015-100				Pkg. of 100		Less- 20%

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-31642	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.									

# HONDA® CRF™ 450R/RX/WE 2017-2020

## Valve Spring Kit • Lightweight Racing NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-32800	Intake	.440"	1.340"	50#	162#	.440"
		Exhaust	.405"	1.360"	90#	220#	.405"
<b>Kit Includes</b>			2 In CrSi Valve Springs	2 In Titanium Retainers	2 In H. T. Steel Basewashers		
			2 *Ex CrSi Valve Springs	2 Ex Titanium Retainers	2 Ex H. T. Steel Basewashers		

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

## Intake Only • Steel Valve Conversion Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-32780	Intake	.440"	1.340"	50#	162#	.440"
	<b>Kit Includes</b>			2 *CrSi Valve Springs	2 Titanium Retainers		
			2 H. T. Steel Basewashers	2 White Diamond® Valves			

\* The Intake springs in this kit include a progressively wound springs, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

## Cylinder Head Service Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-33330	Intake	.440"	1.340"	50#	162#	.440"
		Exhaust	.405"	1.360"	90#	220#	.405"
	<b>Kit Includes</b>			2 In Titanium Retainers	2 In CrSi Valve Springs	2 In H. T. Steel Basewashers	
				2 Ex Titanium Retainers	2 *Ex CrSi Valve Springs	2 Ex H. T. Steel Basewashers	
				2 In Std. White Diamond® Valves	2 Ex Std. White Diamond® Valves (Inconel®)		
			2 In Std. C630 Valves Guides	2 Ex Std. C630 Valves Guides			
			1 Top End Gasket Kit				



# HONDA® CRF™ 450R/RX/WE 2017-2020


## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>30-32800</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>30-32812H</b>	Intake, Standard Valve	Valve • White Diamond® • Stainless
<b>30-32816K</b>	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
<b>30-32820</b>	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-32830</b>	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-33331</b>	Gasket Kit	<b>Includes:</b> Head Gasket 96mm (1), Base Gasket (1), Case Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Valve Stem Seal (4)


## Valves • White Diamond® • Stainless • Inconel®

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material
	<b>30-32812H</b>	Intake Standard	38.00mm	1.496"	0.1960"	20°	3.080"	Stainless
<b>**30-32816K</b>	Exhaust Standard	31.00mm	1.220"	0.1955"	23°	3.165"	Inconel®	

## Valves • O.E.M. Replacement • Titanium • Inconel®

**NEW PRODUCTS**

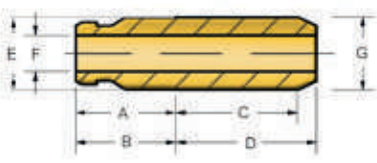

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Replaces OEM P/N
	<b>30-32812T</b>	Intake Standard	38.00mm	1.496"	0.1960"	20°	3.085"	Titanium	14711-MKE-A01
<b>**30-32816K</b>	Exhaust Standard	31.00mm	1.220"	0.1955"	23°	3.165"	Inconel®	14721-MEN-A70	

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

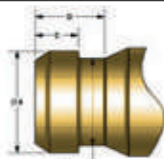

\*\* Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.535"	0.535"	0.590"	0.670"	0.433"	0.1960"	0.4360" / Std.		<b>30-32820</b>
							+0.001"	<b>30-32821</b>	
							+0.002"	<b>30-32822</b>	
							+0.010"	<b>30-32829</b>	
	0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		<b>30-32830</b>
							+0.001"		<b>30-32831</b>
							+0.002"		<b>30-32832</b>
							+0.010"		<b>30-32839</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71015-4</b>				Pkg. of 4		0%
		<b>71015-8</b>				Pkg. of 8		0%
		<b>71015-16</b>				Pkg. of 16		Less- 10%
		<b>71015-50</b>				Pkg. of 50		Less- 15%
<b>71015-100</b>				Pkg. of 100		Less- 20%		



# HONDA® CRF™ 450X 2005-2017



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31050	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"
Kit Includes		2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
		2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-31230	Intake	.440"	1.215"	40#	147#	.440"
	Kit Includes		2	CrSi Valve Springs	2	Titanium Retainers	
		2	Black Diamond™ Valves	2	H. T. Steel Basewashers		

## Top End Service Kit

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-32900	96.00mm	Intake	.440"	1.215"	40#	147#	.440"
			Exhaust	.440"	1.365"	70#	203#	.440"
	Kit Includes		2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
		1	High Performance Piston Kit	1	Top End Gasket Kit			

**IMPORTANT NOTE:** The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE** with O.E.M. piston assembly components.

## Components • Replacement • Top End Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-31050	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-31062	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-31066	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-32901	Gasket Kit	Includes: Base gasket, Engine case gasket, Exhaust gasket, Head gasket, Washers, Valve stem seals

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33450	Intake	.440"	1.215"	40#	147#	.440"	
		Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes		2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
		2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
		1	Top End Gasket Kit					

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.




# HONDA® CRF™ 450X 2005-2017

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

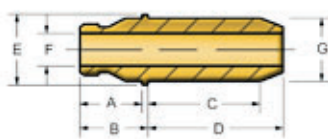

KPMI P/N	Description	Specification
<b>30-31050</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>30-31062</b>	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>30-31066</b>	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
<b>30-31070</b>	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-31080</b>	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>30-33451</b>	Gasket Kit	<b>Includes:</b> Head Gasket 96mm Bore (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Water Outlet O-ring (1)

## Valves • Black Diamond™ • Black Nitroreg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-31062</b>	Intake	35.00mm	1.378"	0.2158"	20°	3.315"	Standard
	<b>30-31063</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.315"	Oversize
	<b>30-31066</b>	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	Standard
	<b>30-31067</b>	Exhaust	31.00mm	1.220"	0.1957"	20°	3.310"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.		<b>30-31070</b>
							+0.001"	<b>30-31071</b>	
							+0.002"	<b>30-31072</b>	
							+0.004"	<b>30-31074</b>	
							+0.010"	<b>30-31079</b>	
	0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" / Std.		<b>30-31080</b>
							+0.001"		<b>30-31081</b>
							+0.002"		<b>30-31082</b>
							+0.004"		<b>30-31084</b>
							+0.010"		<b>30-31089</b>

## Valve Guide Seal Kits • High Performance

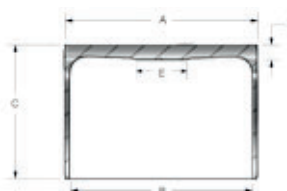
	Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
	5.5mm	0.320"	0.440"	4	A	B	C	D
					0.358"±0.005"	0.320"	0.115"	0.225"
Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	
<b>Part Number</b>	<b>30-31570</b>		<b>Kit Includes</b>	2	Intake Viton® Seals	2	Exhaust Viton® Seals	

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity
		<b>30-31095</b>	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"	2 Pr.
				Exhaust	0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>30-31092</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

# HONDA® TRX™ 450R 2004-2005



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30720	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"
	Kit Includes		2	In, CrSi Valve Springs	2	In, Titanium Retainers	2
		2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Top End Service Kit **NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-32500	94.00mm	Intake	.440"	1.215"	40#	147#	.440"
			Exhaust	.440"	1.365"	70#	203#	.440"
	Kit Includes		2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
		1	High Performance Piston Kit	1	Top End Gasket Kit			

**IMPORTANT NOTE:** The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE** with O.E.M. piston assembly components.

## Components • Replacement • Top End Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30720	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30750	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-30753	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
30-32501	Gasket Kit	Includes: Base gasket, Engine case gasket, Exhaust gasket, Head gasket, Washers, Valve stem seals

## Cylinder Head Service Kit **NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33480	Intake	.440"	1.215"	40#	147#	.440"	
		Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes		2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
		2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			

1 Top End Gasket Kit

## Components • Replacement • Cylinder Head Service Kit **NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30720	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30750	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30753	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30730	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30740	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33481	Gasket Kit	<b>Includes:</b> Head Gasket 94mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Tensioner Bolt Washer (1), Valve Stem Seals (4), Thermostat Cover O-ring (1)

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.



# HONDA® TRX™ 450R 2004-2005

## Intake Only • Steel Valve Conversion Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-33200</b>	Intake	.440"	1.215"	40#	147#	.440"
	<b>Kit Includes</b>		2	CrSi Valve Springs	2	Titanium Retainers	
		2	Black Diamond™ Valves	2	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-30750</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.315"	Standard
	<b>30-30751</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.325"	Oversize
	<b>30-30752</b>	Intake	38.00mm	1.496"	0.2158"	20°	3.325"	Oversize
	<b>30-30753</b>	Exhaust	30.00mm	1.181"	0.2151"	20°	3.315"	Standard
<b>30-30754</b>	Exhaust	31.00mm	1.220"	0.2151"	20°	3.325"	Oversize	

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Racing Valve Kit • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>30-30750T</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.325"	Titanium	14711-HP1-670
	<b>30-30753</b>	Exhaust	30.00mm	1.181"	0.2151"	20°	3.315"	Stainless	14721-HP1-670

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	<b>30-30730</b>	
							+0.001"	<b>30-30731</b>	
							+0.002"	<b>30-30732</b>	
							+0.004"	<b>30-30734</b>	
							+0.010"	<b>30-30739</b>	
		0.580"	0.605"	0.705"	0.830"	0.480"	0.2150"	0.4360" / Std.	<b>30-30740</b>
							+0.001"	<b>30-30741</b>	
							+0.002"	<b>30-30742</b>	
						+0.004"	<b>30-30744</b>		
						+0.010"	<b>30-30749</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>			
	<b>71016-4</b>		Pkg. of 4		0%			
	<b>71016-8</b>		Pkg. of 8		0%			
	<b>71016-16</b>		Pkg. of 16		Less- 10%			
	<b>71016-50</b>		Pkg. of 50		Less- 15%			
<b>71016-100</b>		Pkg. of 100		Less- 20%				

# HONDA® TRX™ 450R 2004-2005



## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	<b>30-30728</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# HONDA® TRX™ 450R / ER 2006-2014

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-30920</b>	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"	
<b>Kit Includes</b>	2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers	
	2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers	

## Top End Service Kit

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-32600</b>	96.00mm	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"	
<b>Kit Includes</b>	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
	2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
	2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves				
	1	High Performance Piston Kit	1	Top End Gasket Kit				

**IMPORTANT NOTE:** The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE** with O.E.M. piston assembly components.

## Components • Replacement • Top End Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>30-30920</b>	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>30-30950</b>	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
<b>30-30953</b>	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
<b>30-32601</b>	Gasket Kit	Includes: Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Gasket Early (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Cam Chain Tensioner Bolt Seal (1), Thermostat Housing Gasket (1)

## Intake Only • Steel Valve Conversion Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-33250</b>	Intake	.440"	1.215"	40#	147#	.440"
<b>Kit Includes</b>	2	CrSi Valve Springs	2	Titanium Retainers			
	2	Black Diamond™ Valves	2	H. T. Steel Basewashers			

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.



# HONDA® TRX 450R / ER 2006-2014

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33360	Intake	.440"	1.215"	40#	147#	.440"	
		Exhaust	.440"	1.365"	70#	203#	.440"	
	Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
		2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
		2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
2		In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides				
1		Top End Gasket Kit						

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
30-30920	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30950	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30953	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-30930	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30940	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33361	Gasket Kit	Includes: Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Gasket Early (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Cam Chain Tensioner Bolt Seal (1), Thermostat Housing Gasket (1)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30950	Intake	36.00mm	1.417"	0.2158"	20°	3.315"	Standard
	30-30951	Intake	37.00mm	1.457"	0.2158"	20°	3.325"	Oversize
	30-30952	Intake	38.00mm	1.496"	0.2158"	20°	3.325"	Oversize
	30-30953	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	Standard
	30-30954	Exhaust	31.00mm	1.220"	0.1957"	20°	3.310"	Oversize
	30-30955	Exhaust	32.00mm	1.260"	0.1957"	20°	3.320"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Racing Valve Kit • Titanium • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	30-30950T	Intake	36.00mm	1.417"	0.2158"	20°	3.325"	Titanium	14711-MEB-670
	30-30953	Exhaust	30.00mm	1.181"	0.1957"	20°	3.310"	Stainless	14721-MEY-670

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guide Seal Kits • High Performance

	Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
					A	B	C	D	
	5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"	
	Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
A					B	C	D		
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"		
Part Number		30-30980		Kit Includes		2	Intake Viton® Seals	2	Exhaust Viton® Seals

\*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

# HONDA® TRX 450R / ER 2006-2014



## Valve Guides • C630 Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	<b>30-30930</b>	
							+0.001"	<b>30-30931</b>	
							+0.002"	<b>30-30932</b>	
							+0.004"	<b>30-30934</b>	
							+0.010"	<b>30-30939</b>	
	0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" / Std.		<b>30-30940</b>
							+0.001"		<b>30-30941</b>
							+0.002"		<b>30-30942</b>
							+0.004"		<b>30-30944</b>
						+0.010"		<b>30-30949</b>	

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

		<b>KPMI P/N</b>	<b>Style</b>	<b>Type</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>Quantity</b>
		<b>30-30655</b>	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"	2 Pr.
				Exhaust	0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Tappets • O.E.M Replacement • H.T. Steel

	<b>KPMI P/N</b>	<b>Type</b>	<b>Coating</b>	<b>A</b>		<b>B</b>	<b>C</b>	<b>E</b>	<b>F</b>	<b>Quantity</b>
	<b>30-30648</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# HONDA® CB™ 500 / 4 - CB™ 550 / 4 1971-'78

## Valve Spring Kit • Lightweight Racing

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>30-31550</b>	Intake	.440"	1.385"	70#	203#	.440"
		Exhaust					
	<b>Kit Includes</b>	8	CrSi Valve Springs		8	Titanium Retainers	
Use O.E.M. Basewashers							

## Spring Only Kit • OEM Replacement

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>
	<b>30-4045</b>	Intake	.440"	1.390"	60#	195#	.440"
		Exhaust					
<b>Kit Includes</b>	8	CrSi Valve Springs					



# HONDA® CB™ 500 / 4 - CB™ 550 / 4 1971-'78

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-31330</b>	Intake	27.50mm	1.083"	0.2150"	20°	3.680"	Standard
	<b>30-31331</b>	Intake	28.50mm	1.122"	0.2150"	20°	3.680"	Oversize
	<b>30-31334</b>	Exhaust	23.00mm	0.905"	0.2145"	30°	3.650"	Standard
	<b>30-31335</b>	Exhaust	24.00mm	0.945"	0.2145"	30°	3.650"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.475"	0.595"	0.980"	1.230"	0.720"	0.2150"	0.4372" / Std.		<b>30-3150</b>
							+0.001"		<b>30-3151</b>
							+0.002"		<b>30-3152</b>
							+0.004"		<b>30-3154</b>
						+0.010"			<b>30-3160</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>			
	<b>71016-4</b>		Pkg. of 4		0%			
	<b>71016-8</b>		Pkg. of 8		0%			
	<b>71016-16</b>		Pkg. of 16		Less- 10%			
	<b>71016-50</b>		Pkg. of 50		Less- 15%			
<b>71016-100</b>		Pkg. of 100		Less- 20%				

## Swing Arm Bushing • Bearing Bronze For CB™500 1975-1976 and CB™550 1975-1978

**NEW PRODUCTS**

	KPMI P/N	Material	A	B	C	D	E	Quantity
	<b>30-0477</b>	Bearing Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.
<ul style="list-style-type: none"> <li>• Replaces worn or damaged plastic OEM bushing</li> <li>• High quality bearing bronze offers increased durability and better fitment than OEM component</li> <li>• OEM P/N: 52108-457-300 &amp; 52108-422-300</li> </ul>								

# HONDA® HAWK NT™ 650 1988-1991

## Valve Spring Kit • Lightweight High-Lift Racing


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-3070</b>	Intake	.500"	1.460"	45#	196#	.500"
		Exhaust	.500"	1.420"	74#	252#	.500"
	<b>Kit Includes</b>	4	In, CrSi Valve Springs	4	In, Titanium Retainers	4	In, H. T. Steel Basewashers
2		Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	4	In, Spring Shims	
2		Ex, Spring Shims	2	Ex, Spring Shims			




# HONDA® CBR™ 600 F2 / F3 1991-1996




## Spring Only Kit • OEM Replacement

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-3020	Intake	.420"	1.220"	50#	140#	.400"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • Titanium

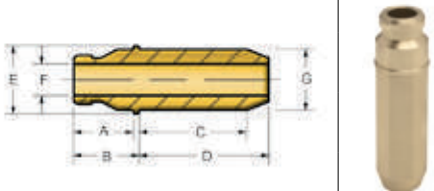
	KPMI P/N	Type	Material	Quantity
	30-3021	Intake	Titanium	Pkg. of 16
Exhaust				

## Valves • Black Diamond™ • Black Nitroreg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	30-3024	Intake	25.50mm	1.004"	0.1566"	19°	3.115"	Standard
	30-3025	Intake	26.50mm	1.043"	0.1566"	19°	3.115"	Oversize
	30-3022	Exhaust	22.00mm	0.866"	0.1561"	20°	3.120"	Standard
	30-3023	Exhaust	23.00mm	0.905"	0.1561"	20°	3.120"	Oversize

Intake valves made from special alloy to resist face recession common in these models

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust	
	0.385"	0.410"	0.800"	0.900"	0.365"	0.1561"	0.3370" / Std.		30-3010	
								+0.002"		30-3012
								+0.010"		30-3019

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-30019	Intake Exhaust	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
	Part Number			Quantity	Quantity Discount			
	71013-4			Pkg. of 4	0%			
	71013-8			Pkg. of 8	0%			
	71013-16			Pkg. of 16	Less- 10%			
	71013-50			Pkg. of 50	Less- 15%			
71013-100			Pkg. of 100	Less- 20%				



# HONDA® CBR™ 600F4i 2001-2006

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-30290	Intake	.360"	1.230"	51#	139#	.360"
		Exhaust					
	Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers
			8	In, H. T. Steel Basewashers	8	Ex, H. T. Steel Basewashers	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type	
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake	
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust	
			Part Number			Quantity		Quantity Discount	
			71013-4			Pkg. of 4		0%	
			71013-8			Pkg. of 8		0%	
			71013-16			Pkg. of 16		Less- 10%	
			71013-50			Pkg. of 50		Less- 15%	
			71013-100			Pkg. of 100		Less- 20%	

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	30-30019	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 16
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

# HONDA® XR™ 650R 2000-2007

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30161	Intake	.440"	1.225"	70#	195#	.440"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30166	Intake	37.00mm	1.457"	0.2590"	19°	4.025"	Standard
	30-30168	Exhaust	32.00mm	1.260"	0.2585"	19°	4.065"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.600"	0.600"	0.805"	1.075"	0.475"	0.2590"	0.4753" / Std.	30-30170		
								+0.001"	30-30171	
								+0.002"	30-30172	
								+0.010"	30-30179	
	0.600"	0.600"	1.000"	1.230"	0.475"	0.2590"	0.4753" / Std.		30-30180	
								+0.001"	30-30181	
								+0.002"	30-30182	
								+0.010"	30-30189	

# HONDA® XR™ 650R 2000-2007



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.5mm	0.353"	0.560"	4	0.475"±0.005"	0.415"	0.115"	0.260"	Intake
								Exhaust
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		71018-4		Pkg. of 4		0%		
		71018-8		Pkg. of 8		0%		
		71018-16		Pkg. of 16		Less- 10%		
		71018-50		Pkg. of 50		Less- 15%		
		71018-100		Pkg. of 100		Less- 20%		

# HONDA® VARIOUS 500cc-650cc 1983-'18

- GB™ 500 1989-1990
- XR™ 500R 1983-1984
- XL™ 600R 1983-1987
- XR™ 600R 1985-2000
- XR™ 650L 1993-2018

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30015	Intake	.465"	1.210"	70#	185#	.400"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4081	Intake	.465"	1.210"	70#	210#	.465"
		Exhaust					
<b>Kit Includes</b>			4	CrSi Valve Springs	4	H. T. Steel Shims	

## Cylinder Head Service Kit for XR™ 650L 1993-2018

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-33490	Intake	.465"	1.210"	70#	185#	.400"	
		Exhaust						
<b>Kit Includes</b>			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Shims
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			4	In / Ex Std. C630 Valves Guides	4	Intake / Exhaust Viton® Seals		
			1	Top End Gasket Kit				

## Components • Replacement • Cylinder Head Service Kit XR™ 650L 1993-2018

**NEW PRODUCTS**


KPMI P/N	Description	Specification
30-30015	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
71018-4	Intake / Exhaust Seals	Valve Stem Seals • 6.5mm • Viton® (Pkg. of 4)
30-3003	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-3004	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
30-3050	Intake / Exhaust Standard Valve Guide	Valve Guide • C630 Bronze
30-33491	Gasket Kit	<b>Includes:</b> Head Gasket 103mm Bore (1), Base Gasket (1)



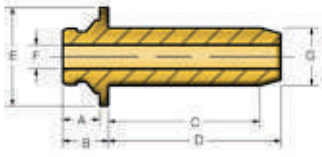

# HONDA® VARIOUS 500cc-650cc 1983-'18

- GB™ 500 1989-1990
- XL™ 600R 1983-1987
- XR™ 650L 1993-2018
- XR™ 500R 1983-1984
- XR™ 600R 1985-2000

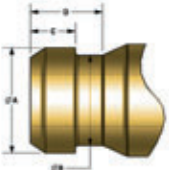

## Valves • Black Diamond™ • Black Nitroreg Stems • Excluding XL™ 600R 1985-1987

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-3003</b>	Intake	36.00mm	1.417"	0.2590"	23°	4.165"	Standard
<b>30-3004</b>	Exhaust	31.00mm	1.220"	0.2585"	29°	4.095"	Standard	

## Valve Guides • C630 Bronze


		A	B	C	D	E	F	G	Intake	Exhaust
		0.300"	0.375"	1.240"	1.410"	0.808"	0.2585"	0.4755"/ Std.		<b>30-3050</b>
								+0.002"	<b>30-3052</b>	
								+0.010"	<b>30-3060</b>	

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.5mm	0.353"	0.560"	4	0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71018-4</b>		Pkg. of 4	0%			
		<b>71018-8</b>		Pkg. of 8	0%			
		<b>71018-16</b>		Pkg. of 16	Less- 10%			
		<b>71018-50</b>		Pkg. of 50	Less- 15%			
<b>71018-100</b>		Pkg. of 100	Less- 20%					

# HONDA® TRX™ 700XX 2008-2009

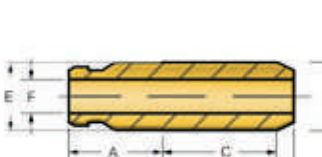

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-31350</b>	Intake	.375"	1.220"	71#	180#	.375"
<b>Kit Includes</b>	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-31362</b>	Intake	36.00mm	1.417"	0.2590"	19°	4.025"	Standard
<b>30-31363</b>	Intake	37.00mm	1.457"	0.2590"	19°	4.025"	Oversize	
<b>30-31366</b>	Exhaust	32.00mm	1.260"	0.2585"	19°	4.065"	Standard	

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.600"	0.600"	0.805"	1.075"	0.475"	0.2590"	0.4753"/ Std.		<b>30-31370</b>
								+0.001"	<b>30-31371</b>	
								+0.002"	<b>30-31372</b>	
								+0.010"	<b>30-31379</b>	
0.600"	0.600"	1.000"	1.230"	0.475"	0.2590"	0.4753"/ Std.			<b>30-31380</b>	
								+0.001"	<b>30-31381</b>	
								+0.002"	<b>30-31382</b>	
								+0.010"	<b>30-31389</b>	

# HONDA® TRX™ 700XX 2008-2009



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.5mm	0.353"	0.560"	4	0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71018-4		Pkg. of 4	0%	
				71018-8		Pkg. of 8	0%	
				71018-16		Pkg. of 16	Less- 10%	
				71018-50		Pkg. of 50	Less- 15%	
				71018-100		Pkg. of 100	Less- 20%	

# HONDA® CB™ 750 SOHC 1969-1977

• Excluding F2/3™ Models

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-0307	Intake	.485"	1.330"	95#	268#	.485"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	30-0308	Intake	Titanium	Pkg. of 8
		Exhaust		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-4186	Intake	32.00mm	1.260"	0.2590"	23°	4.020"	Standard
	30-4187	Intake	33.50mm	1.319"	0.2590"	23°	4.040"	Oversize
	30-4188	Exhaust	28.00mm	1.102"	0.2585"	29°	4.020"	Standard
	30-4189	Exhaust	28.50mm	1.122"	0.2585"	29°	4.040"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.585"	0.635"	0.865"	1.135"	0.495"	0.2590"	0.4762" / Std.	30-0379		
								+0.002"	30-0380	
								+0.015"	30-4034	
	0.585"	0.635"	0.925"	1.195"	0.495"	0.2585"	0.4762" / Std.		30-0383	
								+0.002"	30-0384	
							+0.015"	30-4035		

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.5mm	0.353"	0.560"	4	0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71018-4		Pkg. of 4	0%	
				71018-8		Pkg. of 8	0%	
				71018-16		Pkg. of 16	Less- 10%	
				71018-50		Pkg. of 50	Less- 15%	
				71018-100		Pkg. of 100	Less- 20%	



# HONDA® CB™ 750 SOHC 1969-1977

• Excluding F2/3™ Models

## Cylinder Head Studs For CB™750 1969-1978

**NEW PRODUCTS**

	KPMI P/N	O. L. "C"	O. L. "D"	Body Dia.	A	B	Remarks
	<b>30-0800</b>	6.299"	7.717"	0.309"	0.630"	0.787"	Standard
	<b>Includes</b>	4	6.299" O.L. Studs		12	7.717" O.L. Studs	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Cylinder Head Nuts For CB™750 1969-1978

**NEW PRODUCTS**

	KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
	<b>30-32300</b>	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 16
	<b>41003-4</b>	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 4
Designed for Honda CB750, but can be used for general purpose ( see diagram for detail)						

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

## Swing Arm Bushing • Bearing Bronze For CB™750 1976-1979

**NEW PRODUCTS**

	KPMI P/N	Material	A	B	C	D	E	Quantity
	<b>30-0477</b>	Bearing Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.
	<ul style="list-style-type: none"> <li>• Replaces worn or damaged plastic OEM bushing</li> <li>• High quality bearing bronze offers increased durability and better fitment than OEM component</li> <li>• OEM P/N: 52108-457-300 &amp; 52108-422-300</li> </ul>							

# HONDA® CB™ 750 SOHC 1969-1977

• Excluding F2/3™ Models (5.0mm Conversion System)

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-30150</b>	Intake	.435"	1.375"	71#	203#	.435"
		Exhaust					
<b>Kit Includes</b>	8	CrSi Valve Springs	8	H. T. Steel Keepers Pr.	8	Titanium Retainers	
	8	H. T. Steel Basewashers		8	H. T. Steel Shims		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>30-30157</b>	Intake	32.00mm	1.260"	0.1960"	20°	3.935"	Standard
	<b>30-30158</b>	Intake	34.00mm	1.339"	0.1960"	20°	3.935"	Oversize
	<b>30-30159</b>	Exhaust	27.00mm	1.063"	0.1955"	23°	3.940"	Spl. Undersize
	<b>30-30160</b>	Exhaust	28.00mm	1.102"	0.1955"	23°	3.925"	Standard

Must use Kibblewhite® Lash Caps #94007-8. Valves shortened for lash caps. Must use 5.0mm conversion guides and spring kit with these valves.

# HONDA® CB™ 750 SOHC 1969-1977



- Excluding F2/3™ Models (5.0mm Conversion System)

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.400"	0.440"	0.980"	1.380"	0.510"	0.1960"	0.4762" / Std.	30-0379-5		
								+0.002"	30-0380-5	
							+0.015"	30-4034-5		
	0.400"	0.440"	1.030"	1.430"	0.510"	0.1960"	0.4762" / Std.		30-0383-5	
								+0.002"		30-0384-5
								+0.015"		30-4035-5

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
			Part Number				Quantity	Quantity Discount
			71015-4				Pkg. of 4	0%
			71015-8				Pkg. of 8	0%
			71015-16				Pkg. of 16	Less- 10%
			71015-50				Pkg. of 50	Less- 15%
			71015-100				Pkg. of 100	Less- 20%

## Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C"- "D"	Quantity
	94007-8	H.T. Steel	5.00mm	0.277"	0.175"	0.100"	0.075"	Pkg. of 8
			0.1969"					

## Cylinder Head Studs For CB™750 1969-1978 NEW PRODUCTS

	KPMI P/N	O.L. "C"	O.L. "D"	Body Dia.	A	B	Remarks
	30-0800	6.299"	7.717"	0.309"	0.630"	0.787"	Standard
	<b>Includes</b>	4	6.299" O.L. Studs		12	7.717" O.L. Studs	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Cylinder Head Nuts For CB™750 1969-1978 NEW PRODUCTS

	KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
	30-32300	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 16
	41003-4	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 4

Designed for Honda CB750, but can be used for general purpose ( see diagram for detail)


These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.



# HONDA® CB™ 750 SOHC F2/3 1977-'78


## Spring Only Kit • High Performance

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-33000	Intake	.485"	1.460"	78#	248#	.485"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

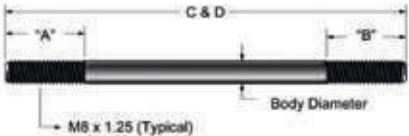
## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-33012	Intake	34.00mm	1.339"	0.2590"	20°	3.960"	Standard
	30-33016	Exhaust	31.00mm	1.220"	0.2585"	25°	3.935"	Standard

## Cylinder Head Studs For CB™750 1969-1978

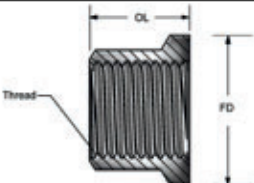
**NEW PRODUCTS**

	KPMI P/N	O. L. "C"	O. L. "D"	Body Dia.	A	B	Remarks
	30-0800	6.299"	7.717"	0.309"	0.630"	0.787"	Standard
	Includes	4	6.299" O.L. Studs		12	7.717" O.L. Studs	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Cylinder Head Nuts For CB™750 1969-1978


**NEW PRODUCTS**

	KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
	30-32300	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 16
	41003-4	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 4
Designed for Honda CB750, but can be used for general purpose ( see diagram for detail)						


These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

# HONDA® CB™ 750 DOHC 1979-1983

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-1017	Intake	.500"	1.390"	60#	185#	.400"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	30-1019	Intake	Titanium	Pkg. of 16
		Exhaust		
These retainers accept a 9.5mm OD shim and requires use of 30-1020 "Shim Under" style tappet. See adjustment shim section for available sizes.				




# HONDA® CB™ 750 DOHC 1979-1983

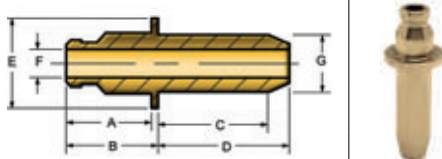


## Valves • Black Diamond™ • Black Nitroreg Stems


**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>30-4221</b>	Intake	0.985"	25.02mm	0.2157"	23°	3.535"	Standard
	<b>30-4222</b>	Exhaust	0.870"	22.10mm	0.2152"	29°	3.475"	Standard


## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	<b>30-4071</b>		
								+0.004"	<b>30-4161</b>	
								+0.015"	<b>30-4162</b>	

## Tappets • Shim On Bottom Conv. • H.T. Steel


	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	<b>30-1020</b>	Intake	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
		Exhaust								
Requires use of Kibblewhite® "Shim Under" Style Retainer # 30-1019 (Pkg. of 16).										

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
			Part Number	Quantity		Quantity Discount		
			<b>71016-4</b>	Pkg. of 4		0%		
			<b>71016-8</b>	Pkg. of 8		0%		
			<b>71016-16</b>	Pkg. of 16		Less- 10%		
			<b>71016-50</b>	Pkg. of 50		Less- 15%		
		<b>71016-100</b>	Pkg. of 100		Less- 20%			

# HONDA® CBR™ 900RR 1993-1999

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-6068</b>	Intake	.480"	1.270"	45#	135#	.400"
		Exhaust					
<b>Kit Includes</b>			16	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	<b>30-6067</b>	Intake	Titanium	Pkg. of 16
		Exhaust		



# HONDA® CBR™ 900RR 1993-1999

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.545"	0.570"	0.660"	0.780"	0.385"	0.1765"	0.3570" / Std.		<b>30-30050</b>
							+0.001"		<b>30-30051</b>
							+0.002"		<b>30-30052</b>
							+0.010"		<b>30-30059</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71014-4</b>			Pkg. of 4		0%		
	<b>71014-8</b>			Pkg. of 8		0%		
	<b>71014-16</b>			Pkg. of 16		Less- 10%		
	<b>71014-50</b>			Pkg. of 50		Less- 15%		
<b>71014-100</b>			Pkg. of 100		Less- 20%			

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>30-30227</b>	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 16
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

# HONDA® VARIOUS 900cc-1100cc 1980-'83

• **CB™ 900/ 1000 / 1100F DOHC1980-1983**

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>30-1017</b>	Intake	.500"	1.390"	60#	185#	.400"
		Exhaust					
<b>Kit Includes</b>			16	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	<b>30-1019</b>	Intake	Titanium	Pkg. of 16
		Exhaust		
These retainers accept a 9.5mm OD shim and requires use of 30-1020 "Shim Under" style tappet. See adjustment shim section for available sizes.				

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.		<b>30-4071</b>
							+0.004"		<b>30-4161</b>
							+0.015"		<b>30-4162</b>

# HONDA® VARIOUS 900cc-1100cc 1980-'83



- CB™ 900/ 1000 / 1100F DOHC1980-1983

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake
								Exhaust
					Part Number		Quantity	Quantity Discount
					71016-4		Pkg. of 4	0%
					71016-8		Pkg. of 8	0%
					71016-16		Pkg. of 16	Less- 10%
					71016-50		Pkg. of 50	Less- 15%
					71016-100		Pkg. of 100	Less- 20%

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	30-1020	Intake Exhaust	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# HONDA® VTR™ 1000 1998-2005

## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-4023	Intake	.520"	1.490"	55#	176#	.340"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

# HONDA® VARIOUS 1000's 2016-2019

- CRF™ 1000A/D 2017-2018
- Pioneer™ 1000 2016-2019
- Talon™ 1000X/R 2019

## Valves • White Diamond® • Stainless • Inconel®

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	
	30-33812H	Intake	Standard	36.50mm	1.437"	0.2158"	20°	3.675"	Stainless
		Standard							
	30-33813H	Intake	Oversize	37.50mm	1.476"	0.2158"	20°	3.675"	Stainless
		Oversize							
	*30-33816K	Exhaust	Standard	31.00mm	1.220"	0.2153"	20°	3.775"	Inconel®
Standard									
*30-33817K	Exhaust	Oversize	32.00mm	1.260"	0.2153"	20°	3.775"	Inconel®	
	Oversize								

\*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.



# HONDA® CBR™ 1000 2004-2005

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30760	Intake	.385"	1.320"	46#	140#	.385"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	30-30790	Intake	29.00mm	1.142"	0.1570"	10°	3.740"	Standard
	30-30791	Intake	30.00mm	1.181"	0.1570"	10°	3.740"	Oversize
	30-30793	Exhaust	24.00mm	0.945"	0.1565"	20°	3.755"	Standard
	30-30794	Exhaust	25.00mm	0.984"	0.1565"	20°	3.755"	Oversize

## Tappets • O.E.M Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	30-30766	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"
Exhaust									
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.									

# HONDA® CBR™ 1100XX-BLACKBIRD™ 1997-'03

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	30-30100	Intake	.405"	1.290"	66#	168#	.405"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
		51025-16	Single Radius Bead	0.196"	7.0°	0.170"	0.205"	0.236"	16Pr.	14781-MAT-000
Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.										

# HONDA® CBX 6 CYLINDER 1979-1982


## Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	30-1018	Intake	.500"	1.390"	60#	175	.400"
		Exhaust					
Kit Includes			24	CrSi Valve Springs			


# HONDA® CBX 6 CYLINDER 1979-1982



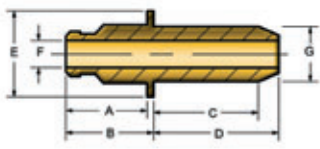

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	<b>30-1021</b>	Intake	Titanium	Pkg. of 24
		Exhaust		
These retainers accept a 9.5mm OD shim and requires use of 30-1022 "Shim Under" style tappet. See adjustment shim section for available sizes.				

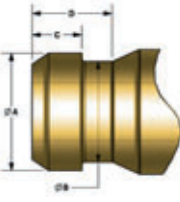

## Valves • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>30-4221</b>	Intake	0.985"	25.02mm	0.2157"	23°	3.535"	Standard
	<b>30-4222</b>	Exhaust	0.870"	22.10mm	0.2152"	29°	3.475"	Standard


## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.		<b>30-4071</b>	
									+0.004"		<b>30-4161</b>
									+0.015"		<b>30-4162</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number		Quantity	Quantity Discount			
		<b>71016-4</b>		Pkg. of 4	0%			
		<b>71016-8</b>		Pkg. of 8	0%			
		<b>71016-16</b>		Pkg. of 16	Less- 10%			
		<b>71016-24</b>		Pkg. of 24	Less- 10%			
		<b>71016-50</b>		Pkg. of 50	Less- 15%			
<b>71016-100</b>		Pkg. of 100	Less- 20%					

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>30-1022</b>	Intake	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 24
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

## Swing Arm Bushing • Bearing Bronze For CBX™ 1979 NEW PRODUCTS

	KPMI P/N	Material	A	B	C	D	E	Quantity
	<b>30-0477</b>	Bearing Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.
<ul style="list-style-type: none"> <li>Replaces worn or damaged plastic OEM bushing</li> <li>High quality bearing bronze offers increased durability and better fitment than OEM component</li> <li><b>OEM P/N: 52108-457 &amp; 52108-422-300</b></li> </ul>								



# HUSQVARNA® 350 / 410 1991-2000

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	93-93020	Intake	.400"	1.210"	74#	189#	.400"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	93-93010	Intake	32.50mm	1.280"	0.2352"	23°	4.020"	Standard
	93-93011	Exhaust	27.00mm	1.063"	0.2347"	29°	4.020"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.430"	0.465"	0.970"	1.110"	0.510"	0.2350"	0.4750" / Std.	93-93000	
								+0.010"	93-93009
Use O.E.M. valve guide seal.									

# HUSQVARNA® VARIOUS 510-610cc 1983-2001

- TX™ 510 1983-'88
- TE™ 510 1983-'90
- TC™ 510 1987-'90
- WXE™ 610 1991-'96
- WMX™ 610 1991
- TE™ 610 1992-'98
- TC™ 610 1992-'98
- WXC™ 610 1992-'96
- SM™ 610 R 2000-2001

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	93-93012	Intake	35.00mm	1.378"	0.2352"	23°	3.970"	Standard
	93-93014	Exhaust	30.00mm	1.181"	0.2347"	29°	3.970"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.430"	0.465"	0.970"	1.110"	0.510"	0.2350"	0.4750" / Std.	93-93000	
								+0.010"	93-93009
Use O.E.M. valve guide seal.									

# HUSQVARNA® VARIOUS 450'S 2014-2018



• FS 450 2017-2018

• FX 450 2017

• FC 450 2014-2018

## Valve Spring Kit • Beehive Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
	96-96500	Intake	.435"	1.360"	80#	205#	.435"			
		Exhaust								
Kit Includes			2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers	2	In H. T. Steel Shims
			2	Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers	--	Ex H. T. Steel Shims

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	96-96540	Intake	.435"	1.360"	80#	205#	.435"	
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2
			2	Black Diamond™ Valves	2	H.T. Steel Shims		

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	96-96512	Intake	39.93mm	1.572"	0.2358"	15°	3.675"	Standard
	96-96516	Exhaust	33.15mm	1.305"	0.2353"	30°	3.645"	Standard

You must use KPMI® Spring Kit 96-96500 when installing Black Diamond™ Valves

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	96-96512T	Intake	39.93mm	1.572"	0.2358"	15°	3.675"	Titanium	78936030100
	96-96516T	Exhaust	33.15mm	1.305"	0.2353"	30°	3.645"	Titanium	78936031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	*A	*C	*D	E	F	G	Intake	Exhaust
	0.555"	0.945"	1.140"	0.433"	0.2353"	0.4352" / Std.	96-96520	
						+0.001"	96-96521	
						+0.002"	96-96522	
						+0.010"	96-96529	
	0.635"	0.865"	1.060"	0.433"	0.2353"	0.4352" / Std.		96-96520
						+0.001"		96-96521
						+0.002"		96-96522
						+0.010"		96-96529
	*Note: One guide design installs at two different heights depending on Intake or Exhaust usage. You must install to lower line for exhaust and upper line for intake.							



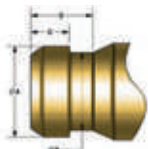

# HUSQVARNA® VARIOUS 450'S 2014-2018

• FS 450 2017-2018

• FX 450 2017

• FC 450 2014-2018

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.210"	Intake
								Exhaust
 		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71029-4				Pkg. of 4		0%
		71029-8				Pkg. of 8		0%
		71029-16				Pkg. of 16		Less- 10%
		71029-50				Pkg. of 50		Less- 15%
		71029-100				Pkg. of 100		Less- 20%


# HUSQVARNA® VARIOUS 450-510cc 2006-'08

• TE/ TC/ TXC 450-510


• SM 450R-510R

• SM 450RR 2006

## Valve Spring Kit • Lightweight High-Lift Racing

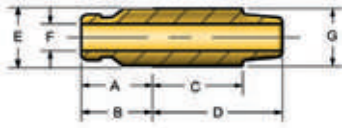

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	93-93050	Intake	.440"	1.350"	50#	160#	.440"	
		Exhaust	.440"	1.390"	40#	150#	.440"	
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	93-93062	Intake	37.00mm	1.457"	0.2160"	20°	3.955"	Standard
	93-93063	Intake	38.00mm	1.496"	0.2160"	20°	3.955"	Oversize
	93-93066	Exhaust	31.00mm	1.220"	0.1958"	20°	3.565"	Standard
	93-93067	Exhaust	32.00mm	1.260"	0.1958"	20°	3.565"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.515"	0.515"	0.660"	1.290"	0.432"	0.2160"	0.4355" / Std.		93-93070
							+0.001"	93-93071	
							+0.002"	93-93072	
							+0.010"	93-93079	
	0.650"	0.650"	0.700"	0.990"	0.412"	0.1958"	0.4156" / Std.		93-93080
							+0.001"		93-93081
							+0.002"		93-93082
							+0.010"		93-93089

Use O.E.M. valve guide seal.



# KAWASAKI® MOJAVE™ 1987-2004



KAWASAKI

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4190	Intake	29.00mm	1.142"	0.2155"	20°	3.510"	Standard
	40-4192	Exhaust	24.50mm	0.965"	0.2150"	25°	3.430"	Standard
	40-4193	Exhaust	25.00mm	0.984"	0.2150"	25°	3.440"	Oversize

# KAWASAKI® KX250F™ 2004-2016

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40100	Intake	.445"	1.320"	46#	155#	.445"	
		Exhaust						
<b>Kit Includes</b>			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

## Cylinder Head Service Kit for KX250F™ 2004-2006

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-41500	Intake	.445"	1.320"	46#	155#	.445"	
		Exhaust						
	<b>Kit Includes</b>			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4
			2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves		
			4	In/ Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit for KX250F™ 2004-2006

**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40100	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40143H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40120	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41501	Gasket Kit	<b>Includes:</b> Head Gasket 77mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

## Cylinder Head Service Kit for KX250F™ 2007-2008

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-41510	Intake	.445"	1.320"	46#	155#	.445"	
		Exhaust						
	<b>Kit Includes</b>			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4
			2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves		
			4	In/ Ex Std. C630 Valves Guides	1	Top End Gasket Kit		



# KAWASAKI® KX250F™ 2004-2016


## Components • Replacement • Cylinder Head Service Kit for KX250F™ 2007-2008

**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40100	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40143H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40520	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
40-40120	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41511	Gasket Kit	<b>Includes:</b> Head Gasket 77mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

## Cylinder Head Service Kit for KX250F™ 2009-2016

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-41520	Intake		.445"	1.320"	46#	155#
Exhaust							
<b>Kit Includes</b>	4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
	2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves			
	4	In/ Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit for KX250F™ 2009-2016

**NEW PRODUCTS**


KPMI P/N	Description	Specification
40-40100	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40143H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40520	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
40-40120	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41521	Gasket Kit	<b>Includes:</b> Head Gasket 77mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40350	Intake		.445"	1.320"	46#	155#
<b>Kit Includes</b>	2	CrSi Valve Springs	2	Titanium Retainers			
	2	White Diamond® Valves	2	H. T. Steel Basewashers			

## Valves • White Diamond® • Hard Chrome Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40140	Intake	31.00mm	1.220"	0.1765"	20°	3.120"	Standard
	40-40143	Exhaust	25.00mm	0.985"	0.1756"	25°	3.125"	Standard

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **White Diamond® Valves**.

# KAWASAKI® KX250F™ 2004-2016



## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>40-40140T</b>	Intake	31.00mm	1.220"	0.1765"	20°	3.120"	Titanium	12004-0033
	<b>40-40143T</b>	Exhaust	25.00mm	0.985"	0.1756"	25°	3.125"	Titanium	12005-0002

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.465"	0.465"	0.565"	0.870"	0.374"	0.1765"	0.3765" / Std.	<b>40-40520</b>	
							+0.001"	<b>40-40521</b>	
							+0.002"	<b>40-40522</b>	
							+0.010"	<b>40-40529</b>	
<b>Note: #40-40520 - Recommended for 2007-2016 model only</b>									
	0.440"	0.465"	0.590"	0.850"	0.410"	0.1765"	0.3765" / Std.	<b>40-40120</b>	
							+0.001"	<b>40-40121</b>	
							+0.002"	<b>40-40122</b>	
							+0.010"	<b>40-40129</b>	
<b>Note: #40-40120 - Recommended for Intake 2004-2006 model only and Exhaust 2004-2016 all model.</b>									

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
	<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>			
	<b>71013-4</b>		Pkg. of 4		0%			
	<b>71013-8</b>		Pkg. of 8		0%			
	<b>71013-16</b>		Pkg. of 16		Less- 10%			
	<b>71013-50</b>		Pkg. of 50		Less- 15%			
	<b>71013-100</b>		Pkg. of 100		Less- 20%			

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	<b>40-40106</b>	Intake	H. T. Steel	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 2
<b>Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.</b>										

# KAWASAKI® KX250F™ 2017-2019

## Valve Spring Kit • Lightweight High-Lift Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-41400</b>	Intake	.415"	1.315"	65#	181#	.415"
		Exhaust	.415"	1.310"	49#	155#	.415"
<b>Kit Includes</b>			2 In CrSi Valve Springs	2 In Titanium Retainers	2 In H. T. Steel Basewashers		
			2 Ex CrSi Valve Springs	2 Ex Titanium Retainers	2 Ex H. T. Steel Basewashers		



# KAWASAKI® KX250F™ 2017-2019

## Intake Only • Steel Valve Conversion Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-41450	Intake	.415"	1.315"	65#	181#	.415"	
	Kit Includes		2	CrSi Valve Springs		2	Titanium Retainers	
			2	White Diamond® Valves		2	H. T. Steel Basewashers	

## Valves • White Diamond® • Hard Chrome Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-41412H	Intake	31.00mm	1.220"	0.1764"	20°	3.460"	Standard
	40-41416H	Exhaust	25.00mm	0.984"	0.1759"	25°	3.170"	Standard

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	40-41412T	Intake	31.00mm	1.220"	0.1764"	20°	3.465"	Titanium	12004-0741
	40-41416T	Exhaust	25.00mm	0.984"	0.1759"	25°	3.165"	Titanium	12005-0761

**Note:** These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
				Part Number		Quantity		Quantity Discount
				71013-4		Pkg. of 4		0%
				71013-8		Pkg. of 8		0%
				71013-16		Pkg. of 16		Less- 10%
				71013-50		Pkg. of 50		Less- 15%
			71013-100		Pkg. of 100		Less- 20%	

# KAWASAKI® KLX™ 300R/ 250R/ S/ SF 1994-'14



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40008	Intake	.440"	1.245"	49#	156#	.440"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	
			4	H. T. Steel Basewashers	4	H. T. Steel Shims	

## Valve Spring Kit • High Performance for O.E.M. Retainers

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-4431	Intake	.430"	1.245"	51#	155#	.430"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Basewashers	4	H. T. Steel Shims

## Valves • White Diamond® • Hard Chrome Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4372H	Intake	29.00mm	1.142"	0.1765"	20°	3.360"	Standard
	40-4374H	Intake	30.00mm	1.181"	0.1765"	20°	3.360"	Oversize
	40-4373H	Exhaust	25.00mm	0.895"	0.1760"	20°	3.375"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4420	
								+0.010"	40-4430

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
				Part Number			Quantity	Quantity Discount
				71013-4			Pkg. of 4	0%
				71013-8			Pkg. of 8	0%
				71013-16			Pkg. of 16	Less- 10%
				71013-50			Pkg. of 50	Less- 15%
			71013-100			Pkg. of 100	Less- 20%	

# KAWASAKI® KLX™ / KFX™ 400 2001-'06

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40148	Intake	.440"	1.205"	57#	171#	.440"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers



# KAWASAKI® KLX™ / KFX™ 400 2001-'06

## Valves • White Diamond® • Hard Chrome Stems NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40188H	Intake	36.00mm	1.417"	0.1960"	20°	3.245"	Standard
	40-40189H	Intake	37.00mm	1.457"	0.1960"	20°	3.245"	Oversize
	40-40191H	Exhaust	29.00mm	1.142"	0.1953"	17°	3.210"	Standard
	40-40192H	Exhaust	30.00mm	1.181"	0.1953"	17°	3.210"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.390"	0.430"	0.570"	0.770"	0.466"	0.1960"	0.4167" / Std.		40-40170
							+0.001"		40-40171
							+0.002"		40-40172
							+0.004"		40-40174
							+0.010"		40-40179

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			

# KAWASAKI® KLX 450R™ 2008-2020

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40700	Intake	.415"	1.325"	50#	155#	.415"	
		Exhaust	.415"	1.215"	50#	144#	.415"	
	Kit Includes			2	In, CrSi Valve Springs	2	In, Titanium Retainers	2
			2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40712	Intake	35.00mm	1.378"	0.2158"	20°	3.280"	Standard
	40-40713	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Oversize
	40-40716	Exhaust	30.00mm	1.181"	0.2150"	20°	3.230"	Standard
	40-40717	Exhaust	31.00mm	1.221"	0.2150"	20°	3.230"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	40-40742	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
	Exhaust									

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# KAWASAKI® KLX 450R™ 2008-2020



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.390"	0.550"	0.895"	0.434"	0.2150"	0.4365" / Std.		<b>40-40720</b>
								+0.001"	<b>40-40721</b>
								+0.002"	<b>40-40722</b>
								+0.010"	<b>40-40729</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
	<b>71016-100</b>			Pkg. of 100		Less- 20%		

# KAWASAKI® KX 450F™ 2006-2008

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-40300</b>	Intake	.415"	1.325"	51#	155#	.415"	
		Exhaust	.415"	1.215"	52#	146#	.415"	
Kit Includes			2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
			2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-40360</b>	Intake	.415"	1.325"	51#	155#	.415"
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>40-40312</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Standard
	<b>40-40313</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Oversize
	<b>40-40316</b>	Exhaust	31.00mm	1.220"	0.2150"	20°	3.230"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.



# KAWASAKI® KX 450F™ 2006-2008

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.390"	0.390"	0.550"	0.895"	0.434"	0.2150"	0.4365" / Std.		<b>40-40320</b>
							+0.001"		<b>40-40321</b>
							+0.002"		<b>40-40322</b>
							+0.010"		<b>40-40329</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>40-40342</b>	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

# KAWASAKI® KX 450F™ 2009-2016

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-40660</b>	Intake	.415"	1.290"	64#	169#	.415"
		Exhaust	.415"	1.240"	65#	170#	.415"
<b>Kit Includes</b>			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Cylinder Head Service Kit for KX 450F™ 2009-2015

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-41470</b>	Intake	.415"	1.290"	64#	169#	.415"	
		Exhaust	.415"	1.240"	65#	170#	.415"	
	<b>Kit Includes</b>			2 In Titanium Retainers	2 In CrSi Valve Springs	2 In H. T. Steel Basewashers		
				2 Ex Titanium Retainers	2 Ex CrSi Valve Springs	2 Ex H. T. Steel Basewashers		
			2 In Std. Black Diamond™ Valves	2 Ex Std. Black Diamond™ Valves				
			4 In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit			



# KAWASAKI® KX 450F™ 2009-2016




## Components • Replacement • Cylinder Head Service Kit for KX 450F™ 2009-2015

**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40660	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40652	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40656	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40670	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41471	Gasket Kit	<b>Includes:</b> Head Gasket 96.5mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Tensioner Gasket (1), Spark Plug O-Ring (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seals (4)

## Cylinder Head Service Kit for KX 450F™ 2016

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-41480	Intake		.415"	1.290"	64#	169#
Exhaust			.415"	1.240"	65#	170#	.415"
Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
	2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
	4	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit for KX 450F™ 2016


**NEW PRODUCTS**

KPMI P/N	Description	Specification
40-40660	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40652	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40656	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
40-40670	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41481	Gasket Kit	<b>Includes:</b> Head Gasket 96.5mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Tensioner Gasket (1), Spark Plug O-Ring (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seals (4)

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40380	Intake		.415"	1.290"	64#	169#
Kit Includes	2	CrSi Valve Springs	2	Titanium Retainers			
	2	Black Diamond™ Valves	2	H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40652	Intake	35.99mm	1.417"	0.2155"	20°	3.080"	Standard
	40-40656	Exhaust	31.01mm	1.221"	0.2150"	20°	3.030"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.



# KAWASAKI® KX 450F™ 2009-2016

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.380"	0.525"	0.760"	0.434"	0.2150'	0.4365" / Std.	<b>40-40670</b>		
								+0.001"	<b>40-40671</b>	
								+0.002"	<b>40-40672</b>	
							+0.010"	<b>40-40679</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	<b>71016-4</b>			Pkg. of 4		0%		
	<b>71016-8</b>			Pkg. of 8		0%		
	<b>71016-16</b>			Pkg. of 16		Less- 10%		
	<b>71016-50</b>			Pkg. of 50		Less- 15%		
<b>71016-100</b>			Pkg. of 100		Less- 20%			

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>40-40690</b>	Intake	H. T. Steel	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

# KAWASAKI® KFX 450R™ 2008-2014

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-40550</b>	Intake	.415"	1.325"	51#	155#	.415"	
		Exhaust	.415"	1.215"	52#	146#	.415"	
<b>Kit Includes</b>			2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
			2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>40-40950</b>	Intake	.415"	1.325"	51#	155#	.415"
	<b>Kit Includes</b>			2	CrSi Valve Springs	2	Titanium Retainers
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	

# KAWASAKI® KFX 450R™ 2008-2014



## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40562	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Standard
	40-40563	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Oversize
	40-40566	Exhaust	31.00mm	1.221"	0.2150"	20°	3.230"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.390"	0.390"	0.550"	0.895"	0.434"	0.2150"	0.4365" / Std.		40-40570
								+0.001"	40-40571
								+0.002"	40-40572
							+0.010"	40-40579	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number		Quantity		Quantity Discount
				71016-4		Pkg. of 4		0%
				71016-8		Pkg. of 8		0%
				71016-16		Pkg. of 16		Less- 10%
				71016-50		Pkg. of 50		Less- 15%
				71016-100		Pkg. of 100		Less- 20%

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-40592	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
		Exhaust								
Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.										

# KAWASAKI® KLR™ 600 / 650 1984-2010


## Valve Spring Kit • High Performance for O.E.M. Retainers

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4350	Intake	.460"	1.205"	75#	175#	.460"
		Exhaust					
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Basewashers	




# KAWASAKI® NINJA 500R™ 1987-2009

## Valves • Black Diamond™ • Black Nitroneg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4190	Intake	29.00mm	1.142"	0.2155"	20°	3.510"	Standard
	40-4192	Exhaust	24.50mm	0.965"	0.2150"	25°	3.430"	Standard
	40-4193	Exhaust	25.00mm	0.984"	0.2150"	25°	3.440"	Oversize

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71016-4		Pkg. of 4		0%		
		71016-8		Pkg. of 8		0%		
		71016-16		Pkg. of 16		Less- 10%		
		71016-50		Pkg. of 50		Less- 15%		
		71016-100		Pkg. of 100		Less- 20%		

# KAWASAKI® KZ™ 650 / 750 1976-1985

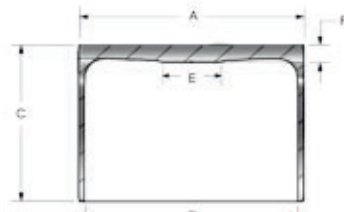
## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-0893	Intake	.500"	1.330"	90#	268#	.500"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			

## Retainer Set • O.E.M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	40-1008	Intake	Titanium	Pkg. of 8
		Exhaust		

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-1013	Intake	None	33.00mm	1.298"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										

# KAWASAKI® NINJA™ 650R / VERSYS 2006-'16



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40800	Intake	.400"	1.215"	39#	136#	.400"
		Exhaust					
Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers	

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-40820	
								+0.010"	40-40829

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71013-4			Pkg. of 4		0%		
	71013-8			Pkg. of 8		0%		
	71013-16			Pkg. of 16		Less- 10%		
	71013-50			Pkg. of 50		Less- 15%		
71013-100			Pkg. of 100		Less- 20%			

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-40807	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 8
		Exhaust								
NOTE: Shims of less than 1.90mm may cause clearance issues between tappet and retainer. Always check clearances before installing smaller than O.E.M. shims. Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.										

# KAWASAKI® VARIOUS 2005-2013

- KFX™ 700 • 2005-'09
- Brute Force™ 650 • 2005-'13
- Brute Force™ 650I • 2006-'12
- Prairie™ 700 • 2005-'06
- Brute Force™ 750I • 2005-'12
- Teryx™ 750 • 2008-'12 (Excluding Teryx 4)

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40400	Intake	.500"	1.400"	59#	210#	.500"	
		Exhaust						
Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers	8	H. T. Steel Shims


KPMI® Guides must be installed when using cams greater than .430" valve lift.



# KAWASAKI® VARIOUS 2005-2013

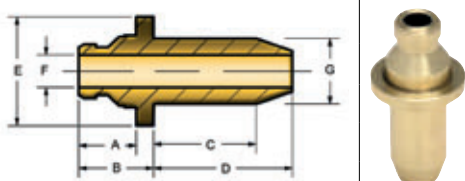
- KFX™ 700 • 2005-'09
- Brute Force™ 650 • 2005-'13
- Brute Force™ 650I • 2006-'12
- Prairie™ 700 • 2005-'06
- Brute Force™ 750I • 2005-'12
- Teryx™ 750 • 2008-'12 (Excluding Teryx 4)

## Valves • Black Diamond™ • Black Nitroreg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>40-40412</b>	Intake	30.00mm	1.181"	0.1960"	10°	3.610"	Standard
	<b>40-40413</b>	Intake	31.00mm	1.220"	0.1960"	10°	3.610"	Oversize
	<b>40-40416</b>	Exhaust	26.00mm	1.024"	0.1955"	10°	3.655"	Standard
<b>40-40417</b>	Exhaust	27.00mm	1.063"	0.1955"	10°	3.655"	Oversize	

Custom oversize's available +3 and +4 mm, call for availability.

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust
	0.450"	0.550"	0.590"	0.790"	0.675"	0.1955"	0.4161" / Std.		<b>40-40420</b>
							+ 0.001"		<b>40-40421</b>
							+ 0.002"		<b>40-40422</b>
							+0.010"		<b>40-40429</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake
								Exhaust
	Part Number		Quantity		Quantity Discount			
	<b>71015-4</b>		Pkg. of 4		0%			
	<b>71015-8</b>		Pkg. of 8		0%			
	<b>71015-16</b>		Pkg. of 16		Less- 10%			
	<b>71015-50</b>		Pkg. of 50		Less- 15%			
<b>71015-100</b>		Pkg. of 100		Less- 20%				


# KAWASAKI® KLX™ 650 / 650R 1993-'96

## Valve Spring Kit with Shim Under Conversions • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-40051</b>	Intake	.450"	1.195"	77#	207#	.450"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	4	Titanium Retainers
			4	H. T. Steel Basewashers	4	H. T. Steel Tappets	4	Adj. Shims

To prevent high lift cams from spitting shims, Kibblewhite® recommends using shim under tappets for cams with over 0.400" lift. See Kibblewhite® Tappet Section in back of catalog.


## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>40-4349</b>	Intake	.400"	1.200"	75#	191#	.400"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

# KAWASAKI® KLX™ 650 / 650R 1993-'96




## Valve Spring Only Kit • High Performance for O.E.M. Retainers

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4089	Intake	.450"	1.380"	75#	175#	.450"
		Exhaust					
Kit Includes			4	CrSi Valve Springs			

# KAWASAKI® VARIOUS 650 / 750 / 800 2012-'20


- Brute Force 650 4x4 / 4x4i • 2013
- Brute Force 750 4x4i • 2013-2018
- Teryx™ • 2013-2020
- Teryx 4™ • 2012-2019

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40900	Intake	.500"	1.400"	59#	210#	.500"
		Exhaust					
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	
			8	H. T. Steel Basewashers	8	H. T. Steel Shims	

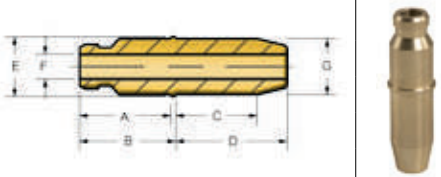
Note: KPMI® Guides must be installed when using cams greater than 0.430" valve lift.

## Valves • Black Diamond™ • Black Nitroleg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-40920	Intake	30.00mm	1.181"	0.1960"	10°	3.610"	Standard
	40-40921	Intake	31.00mm	1.220"	0.1960"	10°	3.610"	Oversize
	40-40924	Exhaust	26.00mm	1.024"	0.1955"	10°	3.655"	Standard
	40-40925	Exhaust	27.00mm	1.063"	0.1955"	10°	3.655"	Oversize

If the above sizes are not what you need, we can make any size custom valve. Please call for more information.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.500"	0.550"	0.590"	0.790"	0.510"	0.1955"	0.4161" / Std.	40-40910		
								+ 0.001"	40-40911	
								+ 0.002"	40-40912	
								+0.010"	40-40919	

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71014-4			Pkg. of 4		0%		
	71014-8			Pkg. of 8		0%		
	71014-16			Pkg. of 16		Less- 10%		
	71014-50			Pkg. of 50		Less- 15%		
71014-100			Pkg. of 100		Less- 20%			




# KAWASAKI® KZ™ / Z1™ 900 1973-1977

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## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-0449	Intake	.425"	1.330"	90#	245#	.425"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			


## Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

	KPMI P/N	Type	Material	Quantity	Remarks
	40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
		Exhaust			


## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1016	Intake	.475"	1.330"	90#	265#	.475"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1007	Intake	.490"	1.320"	95#	269#	.490"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1014	Intake	.565"	1.405"	105#	305#	.565"	
Exhaust								
Kit Includes			8	CrSi Valve Springs				

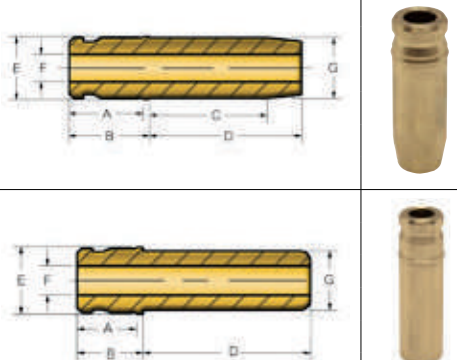
## Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

	KPMI P/N	Type	Material	Quantity
	40-1008	Intake	Titanium	Pkg. of 8
		Exhaust		
Use with Kibblewhite® "Shim On Bottom" Style Tappets # 40-1013 with this retainer.				

## Valves • White Diamond® • Hard Chrome Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-4180H	Intake	36.00mm	1.417"	0.2745"	23°	3.615"	Standard
	40-4181H	Intake	37.50mm	1.476"	0.2745"	23°	3.615"	Oversize (max w/ stock seat)
	40-4183H	Exhaust	30.00mm	1.181"	0.2745"	29°	3.555"	Standard
	40-4184H	Exhaust	31.00mm	1.220"	0.2745"	29°	3.555"	Oversize (max w/ stock seat)

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	40-0478	
							+0.002"	40-0479	
							+0.004"	40-0480	
							+0.006"	40-0481	
							+0.015"	40-4036	
							+0.027"	40-0499	
	0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		40-0482
							+0.002"		40-0483
							+0.004"		40-0484
						+0.006"		40-0485	
						+0.015"		40-4037	



# KAWASAKI® KZ™ / Z1™ 900 1973-1977



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		71019-4		Pkg. of 4		0%		
		71019-8		Pkg. of 8		0%		
		71019-16		Pkg. of 16		Less- 10%		
		71019-50		Pkg. of 50		Less- 15%		
		71019-100		Pkg. of 100		Less- 20%		

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-1013	Intake	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
		Exhaust								
	40-4202	Intake	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
Exhaust										
40-4203	Intake	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)	
	Exhaust									

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

## Retainer Set • Replacement • High Performance

	KPMI P/N	Type	Material	Description			
	40-4006	Intake	Titanium	"Shim Under" Style supplied with 15° Jumbo Keepers for radius groove valves.			
		Exhaust					
<b>Set Includes</b>			8	Titanium Retainers	8	H.T. Steel Keepers Pr.	

15° Jumbo keepers are designed for high spring loads in racing application.

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
			51008-8	Single Radius Bead	0.275"	7.0°	0.188"		

# KAWASAKI® NINJA™ 900 1984-1986

## Valves • Black Diamond™ • Black Nitroneg Stems


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4190	Intake	29.00mm	1.142"	0.2155"	20°	3.510"	Standard
	40-4192	Exhaust	24.50mm	0.965"	0.2150"	25°	3.430"	Standard
	40-4193	Exhaust	25.00mm	0.984"	0.2150"	25°	3.440"	Oversize




# KAWASAKI® KZ™ / Z1™ POLICE 1000 1977-'05

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## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-0449	Intake	.425"	1.330"	90#	245#	.425"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			


## Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

	KPMI P/N	Type	Material	Quantity	Remarks
	40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
		Exhaust			


## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1016	Intake	.475"	1.330"	90#	265#	.475"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1007	Intake	.490"	1.320"	95#	269#	.490"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1014	Intake	.565"	1.405"	105#	305#	.565"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			


## Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

	KPMI P/N	Type	Material	Quantity
	40-1008	Intake	Titanium	Pkg. of 8
		Exhaust		
Use with Kibblewhite® "Shim On Bottom" Style Tappets # 40-1013 with this retainer.				

## Valves • White Diamond® • Hard Chrome Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4180H	Intake	36.00mm	1.417"	0.2745"	23°	3.615"	Standard
	40-4181H	Intake	37.50mm	1.476"	0.2745"	23°	3.615"	Oversize (max w/ stock seat)
	40-4183H	Exhaust	30.00mm	1.181"	0.2745"	29°	3.555"	Standard
40-4184H	Exhaust	31.00mm	1.220"	0.2745"	29°	3.555"	Oversize (max w/ stock seat)	

## Valves • White Diamond® • J Model Valves • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4281H	Intake	38.50mm	1.516"	0.2745"	23°	3.565"	Standard
40-4285H	Exhaust	32.00mm	1.260"	0.2745"	29°	3.500"	Standard	

# KAWASAKI® KZ™ / Z1™ POLICE 1000 1977-'05



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## Valve Guides • C630 Bronze

Diagram	Image	A	B	C	D	E	F	G	Intake	Exhaust
		0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	+0.002"	<b>40-0478</b>
								+0.002"	<b>40-0479</b>	
								+0.004"	<b>40-0480</b>	
								+0.006"	<b>40-0481</b>	
								+0.015"	<b>40-4036</b>	
								+0.027"	<b>40-0499</b>	
		0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		<b>40-0482</b>
								+0.002"		<b>40-0483</b>
								+0.004"		<b>40-0484</b>
								+0.006"		<b>40-0485</b>
								+0.015"		<b>40-4037</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71019-4</b>	Pkg. of 4		0%			
		<b>71019-8</b>	Pkg. of 8		0%			
		<b>71019-16</b>	Pkg. of 16		Less- 10%			
		<b>71019-50</b>	Pkg. of 50		Less- 15%			
		<b>71019-100</b>	Pkg. of 100		Less- 20%			

## Tappets • Shim On Bottom Conv. • H.T. Steel

Diagram	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>40-1013</b>	Intake	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
	Exhaust									
	<b>40-4202</b>	Intake	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
		Exhaust								
	<b>40-4203</b>	Intake	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
		Exhaust								

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

## Retainer Set • Titanium

Image	KPMI P/N	Type	Material	Description			
	<b>40-4006</b>	Intake	Titanium	"Shim Under" Style supplied with 15° Jumbo Keepers for radius groove valves.			
	Exhaust						
Set Includes			8	Titanium Retainers	8	H.T. Steel Keepers Pr.	
15° Jumbo keepers are designed for high spring loads in racing application.							

## Keeper Set • O.E.M. Replacement


Diagram	Image	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
		<b>51008-8</b>	Single Radius Bead	0.275"	7.0°	0.188"	0.323"	0.342"	8Pr.	12011-004 (Shortened to increase tip length)



# KAWASAKI® NINJA™ 1000R 1986-1987

KAWASAKI


## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4190	Intake	29.00mm	1.142"	0.2155"	20°	3.510"	Standard
	40-4192	Exhaust	24.50mm	0.965"	0.2150"	25°	3.430"	Standard
	40-4193	Exhaust	25.00mm	0.984"	0.2150"	25°	3.440"	Oversize

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust


	Part Number	Quantity	Quantity Discount
	71016-4	Pkg. of 4	0%
	71016-8	Pkg. of 8	0%
	71016-16	Pkg. of 16	Less- 10%
	71016-50	Pkg. of 50	Less- 15%
	71016-100	Pkg. of 100	Less- 20%

# KAWASAKI® GPZ™ 1100 1981-1982


## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-0449	Intake	.425"	1.330"	90#	245#	.425"
		Exhaust					
	Kit Includes			8	CrSi Valve Springs		


## Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

	KPMI P/N	Type	Material	Quantity	Remarks
	40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
		Exhaust			

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1016	Intake	.475"	1.330"	90#	265#	.475"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1007	Intake	.490"	1.320"	95#	269#	.490"	
		Exhaust						
	Kit Includes			8	CrSi Valve Springs			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-1014	Intake	.565"	1.405"	105#	305#	.565"	
Exhaust								
Kit Includes			8	CrSi Valve Springs				

## Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

	KPMI P/N	Type	Material	Quantity
	40-1008	Intake	Titanium	Pkg. of 8
		Exhaust		
Use with Kibblewhite® "Shim On Bottom" Style Tappets # 40-1013 with this retainer.				

# KAWASAKI® GPZ™ 1100 1981-1982



## Valves • White Diamond® • J Model Valves • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	40-4281H	Intake	38.50mm	1.516"	0.2745"	23°	3.565"	Standard
	40-4285H	Exhaust	32.00mm	1.260"	0.2745"	29°	3.500"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	40-0478	
							+0.002"	40-0479	
							+0.004"	40-0480	
							+0.006"	40-0481	
							+0.015"	40-4036	
	0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		40-0482
							+0.002"		40-0483
							+0.004"		40-0484
							+0.006"		40-0485
							+0.015"		40-4037

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type	
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake	
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust	
				Part Number		Quantity		Quantity Discount	
				71019-4		Pkg. of 4		0%	
				71019-8		Pkg. of 8		0%	
				71019-16		Pkg. of 16		Less- 10%	
				71019-50		Pkg. of 50		Less- 15%	
				71019-100		Pkg. of 100		Less- 20%	

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-1013	Intake	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
		Exhaust								
	40-4202	Intake	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
		Exhaust								
	40-4203	Intake	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
Exhaust										

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

## Retainer Set • Replacement • High Performance

	KPMI P/N	Type	Material	Description			
	40-4006	Intake	Titanium	"Shim Under" Style supplied with 15° Jumbo Keepers for radius groove valves.			
		Exhaust					
	Set Includes			8	Titanium Retainers	8	H.T. Steel Keepers Pr.
15° Jumbo keepers are designed for high spring loads in racing application.							

## Keeper Set • O.E.M. Replacement

	KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
	51008-8	Single Radius Bead	0.275"	7.0°	0.188"	0.323"	0.342"	8Pr.	12011-004 (Shortened to increase tip length)



# KAWASAKI® ZX-7R™ 1991-1995

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-4385	Intake	.425"	1.220"	55#	159#	.425"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
										+0.010"

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71013-4		Pkg. of 4		0%		
		71013-8		Pkg. of 8		0%		
		71013-16		Pkg. of 16		Less- 10%		
		71013-50		Pkg. of 50		Less- 15%		
71013-100		Pkg. of 100		Less- 20%				

# KAWASAKI® VULCAN™ 1500 1986-'08

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40004	Intake	.450"	1.450"	67#	227#	.450"	
		Exhaust						
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Shims

# KAWASAKI® VULCAN™ 1500 (Mean Streak) 2002-'03


## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40060	Intake	.450"	1.450"	67#	227#	.450"
		Exhaust					
Kit Includes			8	CrSi Valve Springs	8	Titanium Retainers	



# KAWASAKI® ZX-7R™ 1996-2003



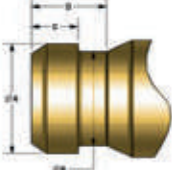

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4395	Intake	.460"	1.260"	45#	157#	.460"
		Exhaust					
Kit Includes			16 CrSi Valve Springs	16 Titanium Retainers	16 H. T. Steel Basewashers		

## Valve Guides • C630 Bronze


		A	B	C	D	E	F	G	Intake	Exhaust
		0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
										+0.010"

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake
								Exhaust
		Part Number		Quantity		Quantity Discount		
		71013-4		Pkg. of 4		0%		
		71013-8		Pkg. of 8		0%		
		71013-16		Pkg. of 16		Less- 10%		
		71013-50		Pkg. of 50		Less- 15%		
		71013-100		Pkg. of 100		Less- 20%		

# KAWASAKI® ZX-9R™ 1994-2003

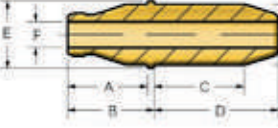

## Valve Spring Kit • Lightweight Racing For 1994-1997 Models

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4385	Intake	.425"	1.220"	55#	159#	.425"
		Exhaust					
Kit Includes			16 CrSi Valve Springs	16 Titanium Retainers	16 H. T. Steel Basewashers		

## Valve Spring Kit • Lightweight Racing For 1998-2003 Models

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4500	Intake	.470"	1.280"	40#	155#	.470"
		Exhaust					
Kit Includes			16 CrSi Valve Springs	16 Titanium Retainers	16 H. T. Steel Basewashers		

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
										+0.010"



# KAWASAKI® ZX-9R™ 1994-2003

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71013-4		Pkg. of 4	0%	
				71013-8		Pkg. of 8	0%	
				71013-16		Pkg. of 16	Less- 10%	
				71013-50		Pkg. of 50	Less- 15%	
				71013-100		Pkg. of 100	Less- 20%	

# KAWASAKI® ZX-10R™ 1988-1990

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4611	Intake	.500"	1.400"	39#	160#	.400"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	40-4612	Intake	Titanium	Pkg. of 16
		Exhaust		

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71015-4		Pkg. of 4	0%	
				71015-8		Pkg. of 8	0%	
				71015-16		Pkg. of 16	Less- 10%	
				71015-50		Pkg. of 50	Less- 15%	
				71015-100		Pkg. of 100	Less- 20%	

# KAWASAKI® ZX-10R™ 2004-2007

## Single Spring Kit • High Performance

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40500	Intake	.425"	1.320"	65#	182#	.425"
		Exhaust					
Kit Includes			16	CrSi Valve Springs	16	H. T. Steel Retainers	

\* Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® supplies this kit with the 40-40501 Retainers for increased durability over the OEM Aluminum Retainers.

## Retainer Set • H. T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Material	Quantity
	40-40501	Intake	H. T. Steel	Pkg. of 16
		Exhaust		



# KAWASAKI® ZX-10R™ 2004-2007



## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40450	Intake	.445"	1.350"	50#	162#	.445"
		Exhaust	.445"	1.240"	44#	153#	.445"
Kit Includes			8 In, CrSi Valve Springs	8 In, Titanium Retainers	8 In, H. T. Steel Basewashers		
			8 Ex, CrSi Valve Springs	8 Ex, Titanium Retainers	8 Ex, H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40462	Intake	30.00mm	1.181"	0.1765"	10°	3.565"	Standard
	40-40463	Intake	31.00mm	1.220"	0.1765"	11°	3.580"	Oversize

## Valves • Tensilite® • Exhaust • Chromium Nitride PVD Coated Titanium NEW PRODUCTS

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	40-40466T	Exhaust	25.50mm	1.004"	0.1762"	25°	3.595"
<p>All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which exceeds OEM specifications.</p>							

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-40485	Intake	H. T. Steel	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 16
		Exhaust								
<p>Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.</p>										

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
	<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>		
	71013-4			Pkg. of 4		0%		
	71013-8			Pkg. of 8		0%		
	71013-16			Pkg. of 16		Less- 10%		
	71013-50			Pkg. of 50		Less- 15%		
	71013-100			Pkg. of 100		Less- 20%		

# KAWASAKI® ZX-10R™ 2008-2010

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-41100	Intake	.445"	1.350"	50#	162#	.445"
		Exhaust	.445"	1.240"	44#	153#	.445"
Kit Includes			8 In, CrSi Valve Springs	8 In, Titanium Retainers	8 In, H. T. Steel Basewashers		
			8 Ex, CrSi Valve Springs	8 Ex, Titanium Retainers	8 Ex, H. T. Steel Basewashers		



# KAWASAKI® ZX-10R™ 2008-2010

## Single Spring Kit • High Performance

**NEW PRODUCTS**



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41120	Intake	.425"	1.320"	65#	182#	.425"
	Exhaust					
<b>Kit Includes</b>		16	CrSi Valve Springs	16	H. T. Steel Retainers	

Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® supplies this kit with the 40-41121 Retainers for increased durability over the OEM Aluminum Retainers.

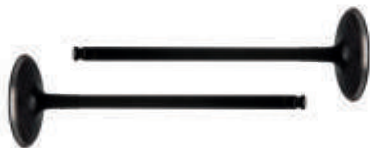
## Retainer Set • H. T. Steel

**NEW PRODUCTS**



KPMI P/N	Type	Material	Quantity
40-41121	Intake	H. T. Steel	Pkg. of 16
	Exhaust		

## Valves • Black Diamond™ • Black Nitroreg Stems



KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
40-41112	Intake	30.00mm	1.181"	0.1767"	10°	3.565" Standard
40-41113	Intake	31.00mm	1.220"	0.1767"	10°	3.580" Oversize
40-41116	Exhaust	24.50mm	0.965"	0.1762"	25°	3.590" Standard

## Valves • Tensilite® • Exhaust • Chromium Nitride PVD Coated Titanium

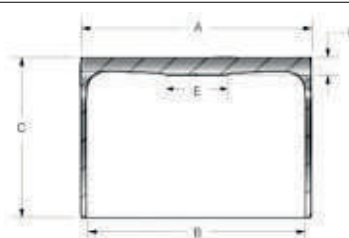


KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
40-41117T	Exhaust	25.50mm	1.004"	0.1762"	25°	3.595" Oversize

All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which exceeds OEM specifications.

## Tappets • O.E.M. Replacement • H.T. Steel

**NEW PRODUCTS**



KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
40-41125	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 16
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.0mm	0.310"	0.380"	2	A	B	C	D	Intake
				0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust
				Part Number		Quantity		Quantity Discount
				71013-4		Pkg. of 4		0%
				71013-8		Pkg. of 8		0%
				71013-16		Pkg. of 16		Less- 10%
				71013-50		Pkg. of 50		Less- 15%
				71013-100		Pkg. of 100		Less- 20%

# KAWASAKI® ZX-10R™ 2011-2013



## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40850	Intake	.445" *	1.350"	50#	162#	.445"
		Exhaust	.445"	1.240"	44#	153#	.445"
	Kit Includes		8	In, CrSi Valve Springs		8	In, Titanium Retainers
		8	In, H. T. Steel Basewashers		8	In, H. T. Steel Shims	
		8	Ex, CrSi Valve Springs	8	Ex, Titanium Retainers	8	Ex, H. T. Steel Basewashers

\* When converting to a stainless steel intake valve, it is recommend to not exceed the OEM cam lift. Stainless steel exhaust valve OK to 0.445" lift. Titanium IN&EX valves OK to 0.445"

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake Exhaust
		Part Number		Quantity		Quantity Discount		
		71013-4		Pkg. of 4		0%		
		71013-8		Pkg. of 8		0%		
		71013-16		Pkg. of 16		Less- 10%		
		71013-50		Pkg. of 50		Less- 15%		
		71013-100		Pkg. of 100		Less- 20%		

# KAWASAKI® ZX-11™ / ZRX™ 1100/ 1200 1999-'05

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-4611	Intake	.500"	1.400"	39#	160#	.400"
		Exhaust					
Kit Includes		16	CrSi Valve Springs				

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	40-4612	Intake Exhaust	Titanium	Pkg. of 16

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake Exhaust
		Part Number		Quantity		Quantity Discount		
		71015-4		Pkg. of 4		0%		
		71015-8		Pkg. of 8		0%		
		71015-16		Pkg. of 16		Less- 10%		
		71015-50		Pkg. of 50		Less- 15%		
		71015-100		Pkg. of 100		Less- 20%		



# KAWASAKI® ZX-12R™ 2000-2005

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40025	Intake	.435"	1.335"	63#	185#	.435"
		Exhaust					
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	
			16	H. T. Steel Basewashers	16	H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40030	Intake	33.40mm	1.315"	0.1960"	10°	3.845"	Standard
	40-40031	Intake	34.40mm	1.354"	0.1960"	10°	3.845"	Oversize
	40-40032	Exhaust	28.24mm	1.112"	0.1955"	10°	3.865"	Standard
	40-40033	Exhaust	29.26mm	1.152"	0.1955"	10°	3.865"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.690"	0.730"	0.555"	0.855"	0.460"	0.1955"	0.4165" / Std.		40-40040
								+0.001"	40-40041
								+0.002"	40-40042
								+0.010"	40-40050

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
			Part Number	Quantity		Quantity Discount		
			71015-4	Pkg. of 4		0%		
			71015-8	Pkg. of 8		0%		
			71015-16	Pkg. of 16		Less- 10%		
			71015-50	Pkg. of 50		Less- 15%		
		71015-100	Pkg. of 100		Less- 20%			

# KAWASAKI® ZX-14™ 2006-2011


## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	40-40267	Intake	.405"	1.285"	66#	168#	.405"	
		Exhaust						
Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

# KAWASAKI® ZX-14™ 2006-2011




## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40292	Intake	.425"	1.320"	65#	182#	.425"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			


Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® recommends the 40-40291 Retainer for increased durability over the OEM .

## Retainer Set • O. E. M. Replacement • H. T. Steel

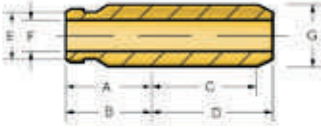

**NEW PRODUCTS**

	KPMI P/N	Type	Material	Quantity
	40-40291	Intake	H. T. Steel	Pkg. of 16
		Exhaust		

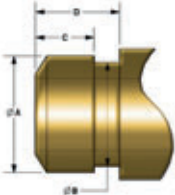

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40273	Intake	33.40mm	1.315"	0.1958"	10°	3.565"	Standard
	40-40274	Intake	34.40mm	1.354"	0.1958"	10°	3.565"	Oversize
	40-40276	Exhaust	28.25mm	1.112"	0.1953"	10°	3.575"	Standard

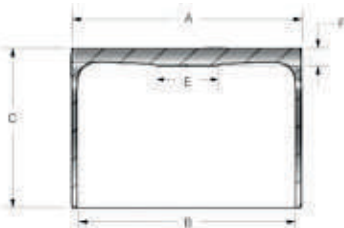
## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust		
		0.460"	0.460"	0.500"	0.780"	0.413"	0.1950"	0.4162" / Std.	40-40280			
										+0.001"	40-40281	
										+0.002"	40-40282	
										+0.010"	40-40289	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number		Quantity		Quantity Discount		
		71015-4		Pkg. of 4		0%		
		71015-8		Pkg. of 8		0%		
		71015-16		Pkg. of 16		Less- 10%		
		71015-50		Pkg. of 50		Less- 15%		
		71015-100		Pkg. of 100		Less- 20%		

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	40-40271	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 16
		Exhaust								
Refer to <b>KPMI® Tappet Section</b> , in back of catalog, when selecting oversize tappets.										



# KAWASAKI® PWC™ 2006-2019

- STX™ • 2009-2010
- STX-15F™ • 2006-2019
- SX-R™ • 2017-2019
- Ultra 250X™ • 2007-2008
- Ultra LX™ • 2008-2019
- Ultra 260X™ • 2009-2010
- Ultra 260LX™ • 2009-2010

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	40-40750	Intake	.435"	1.335"	63#	185#	.435"
		Exhaust					
	Kit Includes			16	CrSi Valve Springs	16	Titanium Retainers
			16	H. T. Steel Basewashers	8	In, H. T. Steel Shims	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	40-40762	Intake	33.40mm	1.315"	0.1960"	10°	3.845"	Standard
	40-40763	Intake	34.40mm	1.354"	0.1960"	10°	3.845"	Oversize
	40-40766	Exhaust	28.24mm	1.112"	0.1955"	10°	3.865"	Standard
	40-40767	Exhaust	29.26mm	1.152"	0.1955"	10°	3.865"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.690"	0.730"	0.555"	0.855"	0.460"	0.1955"	0.4165" / Std.	40-40770		
								+0.001"	40-40771	
								+0.002"	40-40772	
								+0.010"	40-40779	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			

# KTM® 250 2005-2007



• For RC4 Engines

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96090	Intake	.425"	1.175"	60#	169#	.425"
		Exhaust	.425"	1.175"	60#	169#	.425"
Kit Includes			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96130	Intake	.425"	1.175"	60#	169#	.425"
	Kit Includes			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	96-96102	Intake	30.95mm	1.218"	0.1960"	15°	3.910"	Standard
	96-96106	Exhaust	26.60mm	1.047"	0.1955"	30°	3.665"	Standard

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71041-4		Pkg. of 4	0%	
				71041-8		Pkg. of 8	0%	
				71041-16		Pkg. of 16	Less- 10%	
				71041-50		Pkg. of 50	Less- 15%	
		71041-100		Pkg. of 100	Less- 20%			



# KTM® 250 2008-2011

• For RC4 Engines

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96250	Intake	.425"	1.175"	60#	169#	.425"
		Exhaust	.425"	1.175"	60#	169#	.425"
Kit Includes			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96450	Intake	.425"	1.175"	60#	169#	.425"
	Kit Includes			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	96-96262	Intake	30.95mm	1.218"	0.1960"	15°	3.910"	Standard
	96-96266	Exhaust	26.60mm	1.047"	0.1955"	30°	3.665"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.200"	0.475"	1.020"	1.335"	0.470"	0.1960"	0.3958" / Std.	96-96270		
								+0.001"	96-96271	
								+0.002"	96-96272	
	0.200"	0.475"	0.765"	1.200"	0.470"	0.1955"	0.3958" / Std.		96-96280	
								+0.001"	96-96281	
								+0.002"	96-96282	
								+0.010"	96-96289	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.320"	0.435"	5	A	B	C	D	Intake
				0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71041-4			Pkg. of 4		0%		
	71041-8			Pkg. of 8		0%		
	71041-16			Pkg. of 16		Less- 10%		
	71041-50			Pkg. of 50		Less- 15%		
71041-100			Pkg. of 100		Less- 20%			



# KTM® 250 2012-2013



• For RC4 Engines

• XCF - W™ Only • 2013

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96250	Intake	.425"	1.175"	60#	169#	.425"
		Exhaust	.425"	1.175"	60#	169#	.425"
Kit Includes			2 In, CrSi Valve Springs	2 In, Titanium Retainers	2 In, H. T. Steel Basewashers		
			2 Ex, CrSi Valve Springs	2 Ex, Titanium Retainers	2 Ex, H. T. Steel Basewashers		

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96450	Intake	.425"	1.175"	60#	169#	.425"
	Kit Includes			2 CrSi Valve Springs	2 Titanium Retainers		
			2 Black Diamond™ Valves	2 H. T. Steel Basewashers			

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	96-96262	Intake	30.95mm	1.218"	0.1960"	15°	3.910"	Standard
	96-96266	Exhaust	26.60mm	1.047"	0.1955"	30°	3.665"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	---	0.475"	1.020"	1.335"	---	0.1960"	0.4352" / Std.	96-96290		
								+0.001"	96-96291	
								+0.002"	96-96292	
	---	0.475"	0.765"	1.200"	---	0.1955"	0.4352" / Std.		96-96300	
								+0.001"	96-96301	
								+0.002"	96-96302	
								+0.010"	96-96309	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.320"	0.435"	5	A	B	C	D	Intake
				0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71041-4			Pkg. of 4		0%		
	71041-8			Pkg. of 8		0%		
	71041-16			Pkg. of 16		Less- 10%		
	71041-50			Pkg. of 50		Less- 15%		
71041-100			Pkg. of 100		Less- 20%			



# KTM® SX-F / XC-F 250 2013-2015

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	96-96400	Intake	.450"	1.340"	50#	165#	.450"	
		Exhaust						
Kit Includes			2	In, CrSi Valve Springs	2	In, H. T. Steel Retainers	2	In, H. T. Steel Basewashers
			2	Ex, CrSi Valve Springs	2	In, H. T. Steel Retainers	2	Ex, H. T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96480	Intake	.450"	1.340"	50#	165#	.450"
	Kit Includes			2	CrSi Valve Springs	2	H. T. Steel Retainers
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	96-96412	Intake	32.51mm	1.280"	0.1960"	15°	3.770"	Standard
	96-96416	Exhaust	26.55mm	1.045"	0.1955"	30°	3.875"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	96-96412T	Intake	32.51mm	1.280"	0.1960"	15°	3.770"	Titanium	77736030000
	96-96416T	Exhaust	26.55mm	1.045"	0.1955"	30°	3.875"	Titanium	77736031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.490"	0.715"	1.165"	---	0.1960"	0.4352" / Std.	96-96420	
							+0.001"	96-96421	
							+0.002"	96-96422	
	---	0.490"	0.885"	1.165"	---	0.1955"	0.4352" / Std.		96-96430
							+0.001"		96-96431
							+0.002"		96-96432
							+0.010"		96-96439

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.320"	0.435"	5	A	B	C	D	Intake
				0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71041-4			Pkg. of 4		0%		
	71041-8			Pkg. of 8		0%		
	71041-16			Pkg. of 16		Less- 10%		
	71041-50			Pkg. of 50		Less- 15%		
71041-100			Pkg. of 100		Less- 20%			

# KTM® 450 2007-2011



• For RF4 Engines

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	96-96162T	Intake	40.25mm	1.585"	0.2358"	15°	3.455"	Titanium	77336030200
									77336030300
	96-96166T	Exhaust	31.70mm	1.248"	0.2353"	30°	3.520"	Titanium	77336031200
				77336031300					

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.315"	0.520"	5	A	B	C	D	Intake
				0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust
				Part Number		Quantity		Quantity Discount
				71029-4		Pkg. of 4		0%
				71029-8		Pkg. of 8		0%
				71029-16		Pkg. of 16		Less- 10%
				71029-50		Pkg. of 50		Less- 15%
				71029-100		Pkg. of 100		Less- 20%

# KTM® 400cc-530cc 2008-2013

• For XC4 Engines

• EXC-R / XCR-W / EXC / XC-W

## Valves • O.E.M. Replacement • Titanium • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	96-96212T	Intake	39.95mm	1.573"	0.2350"	15°	3.650"	Titanium	78036030000
									78936030000
	96-96216	Exhaust	33.10mm	1.303"	0.1955"	30°	3.620"	Stainless	78036031000
				78936031000					

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## High Performance Valve Guide Seal Kits

		Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
		6.0mm	0.315"	0.520"	5	A	B	C	D
						0.435"±0.002"	0.395"	0.120"	0.215"
		Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
5.0mm	0.320"	0.435"	5	A	B	C	D		
				0.305"±0.002"	0.265"	0.100"	0.195"		
<b>Part Number</b>		<b>96-96380</b>		<b>Kit Includes</b>		2	Intake Viton® Seals	2	Exhaust Viton® Seals



# KTM® ALL RFS ENGINES 400cc-560cc 2000-'09

• All RFS ATV Engines 450cc-525cc 2008-2009

• All RFS DIRT BIKE Engines 400cc-560cc 2000-2009

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96000	Intake	.435"	1.175"	75#	214#	.435"
		Exhaust					
	Kit Includes	2	In, CrSi Valve Springs	2	In Titanium Retainers	2	In, H. T. Steel Basewashers
2		Ex, CrSi Valve Springs	2	ex Titanium Retainers	2	Ex, H. T. Steel Basewashers	
2		In, Spring Shims		2	Ex, Spring Shims		

## Cylinder Head Service Kit • 89mm Bore NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96560	Intake	.435"	1.175"	75#	214#	.435"
		Exhaust					
	Kit Includes	2	In, Titanium Retainers	2	In, CrSi Valve Springs	2	In, H. T. Steel Basewashers
		2	Ex, Titanium Retainers	2	Ex, CrSi Valve Springs	2	Ex, H. T. Steel Basewashers
		2	In H. T. Steel Spring Shims		2	Ex H. T. Steel Spring Shims	
		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves	
		2	In Std. C630 Valves Guides		2	Ex Std. C630 Valves Guides	
1	Top End Gasket Kit						

## Components • Replacement • Cylinder Head Service Kit • 89mm Bore NEW PRODUCTS

KPMI P/N	Description	Specification
96-96000	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H. T. Steel Spring Shims
96-96004	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
96-96007	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
96-96010	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
96-96020	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
96-96561	Gasket Kit	<b>Includes:</b> Head Gasket 89mm Bore (1), Base Gasket (1), Valve Seals (4), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Rocker Arm O-ring (1), Oil Filter O-rings (2), Valve Cover Gasket (2), Crush Washers (4), Water Pump Gasket (1)

## Cylinder Head Service Kit • 95mm Bore NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96570	Intake	.435"	1.175"	75#	214#	.435"
		Exhaust					
	Kit Includes	2	In, Titanium Retainers	2	In, CrSi Valve Springs	2	In, H. T. Steel Basewashers
		2	Ex, Titanium Retainers	2	Ex, CrSi Valve Springs	2	Ex, H. T. Steel Basewashers
		2	In H. T. Steel Spring Shims		2	Ex H. T. Steel Spring Shims	
		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves	
		2	In Std. C630 Valves Guides		2	Ex Std. C630 Valves Guides	
1	Top End Gasket Kit						

## Components • Replacement • Cylinder Head Service Kit • 95mm Bore NEW PRODUCTS

KPMI P/N	Description	Specification
96-96000	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H. T. Steel Spring Shims
96-96004	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
96-96007	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
96-96010	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
96-96020	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
96-96571	Gasket Kit	<b>Includes:</b> Head Gasket 95mm Bore (1), Base Gasket (1), Timing Chain Tens. Gasket (1), Exhaust Gasket (1), Oil Screen Plug O-ring (4), Oil Filter O-ring (2), Valve Cover Gasket (2), Crush Washers (4)

# KTM® ALL RFS ENGINES 400cc-560cc 2000-'09



• All RFS ATV Engines 450cc-525cc 2008-2009

• All RFS DIRT BIKE Engines 400cc-560cc 2000-2009

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	96-96070	Intake	.435"	1.175"	75#	214#	.435"
	<b>Kit Includes</b>		2	CrSi Valve Springs	2	In Titanium Retainers	
		2	Black Diamond™ Valves	2	H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	96-96004	Intake	35.00mm	1.378"	0.2350"	20°	3.815"	Standard
	96-96005	Intake	36.00mm	1.417"	0.2350"	20°	3.815"	Oversize
	96-96007	Exhaust	30.00mm	1.181"	0.2342"	24°	3.815"	Standard
	96-96008	Exhaust	31.00mm	1.220"	0.2342"	24°	3.815"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.410"	0.450"	0.555"	0.945"	0.525"	0.2360"	0.4745" / Std.	96-96010		
								+0.001"	96-96011	
								+0.002"	96-96012	
								+0.010"	96-96019	
	0.410"	0.450"	0.740"	1.100"	0.525"	0.2360"	0.4745" / Std.		96-96020	
								+0.001"	96-96021	
							+0.002"	96-96022		
							+0.010"	96-96029		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.315"	0.520"	5	A	B	C	D	Intake
				0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust
				Part Number		Quantity		Quantity Discount
				71029-4		Pkg. of 4		0%
				71029-8		Pkg. of 8		0%
				71029-16		Pkg. of 16		Less- 10%
				71029-50		Pkg. of 50		Less- 15%
				71029-100		Pkg. of 100		Less- 20%



# KTM® VARIOUS 450'S 2013-2018

**NEW PRODUCTS**

• 450 XC-F 2013-2017

• 450 SX-F 2013-2018

## Valve Spring Kit • Beehive Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
	96-96500	Intake	.435"	1.360"	80#	205#	.435"			
		Exhaust								
Kit Includes			2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers	2	In H. T. Steel Shims
			2	Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers	--	Ex H. T. Steel Shims

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	96-96540	Intake	.435"	1.360"	80#	205#	.435"	
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers	2
			2	Black Diamond™ Valves	2	H.T. Steel Shims		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	96-96512	Intake	39.93mm	1.572"	0.2358"	15°	3.675"	Standard
	96-96516	Exhaust	33.15mm	1.305"	0.2353"	30°	3.645"	Standard

You must use KPMI® Spring Kit 96-96500 when installing Black Diamond™ Valves

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	96-96512T	Intake	39.93mm	1.572"	0.2358"	15°	3.675"	Titanium	78936030100
	96-96516T	Exhaust	33.15mm	1.305"	0.2353"	30°	3.645"	Titanium	78936031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	*A	*C	*D	E	F	G	Intake	Exhaust
	0.555"	0.945"	1.140"	0.433"	0.2353"	0.4352" / Std.	96-96520	
						+0.001"	96-96521	
						+0.002"	96-96522	
						+0.010"	96-96529	
	0.635"	0.865"	1.060"	0.433"	0.2353"	0.4352" / Std.		96-96520
						+0.001"		96-96521
						+0.002"		96-96522
					+0.010"		96-96529	

\*Note: One guide design installs at two different heights depending on Intake or Exhaust usage. You must install to lower line for exhaust and upper line for intake.

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# KTM® VARIOUS 450'S 2013-2018



• 450 XC-F 2013-2017

• 450 SX-F 2013-2018

**NEW PRODUCTS**

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.210"	Intake
								Exhaust
			Part Number		Quantity		Quantity Discount	
			71029-4		Pkg. of 4		0%	
			71029-8		Pkg. of 8		0%	
			71029-16		Pkg. of 16		Less- 10%	
			71029-50		Pkg. of 50		Less- 15%	
			71029-100		Pkg. of 100		Less- 20%	

# MOTO GUZZI® ALL 2-VALVE "BIG-BLOCKS" 1971-'12

## Valve Spring Kit • Lightweight High-Lift Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	90-90000	Intake	.575"	1.420"	111#	204#	.375"	
		Exhaust						
Kit Includes			4	CrSi Valve Springs	4	H.T. Steel Retainers	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	90-9100	Intake	41.00mm	1.614"	0.3145"	23°	4.200"	Standard (OEM #13036000)
	90-9102	Intake	44.00mm	1.732"	0.3145"	23°	4.185"	Standard (OEM #14036050)
	90-9101	Exhaust	36.00mm	1.417"	0.3140"	27°	4.130"	Standard (OEM #13033100)
	90-9103	Exhaust	37.10mm	1.461"	0.3140"	27°	4.100"	Standard (OEM #14036150)

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.645"	0.695"	1.205"	1.405"	0.620"	0.3145"	0.5538" / Std.		90-4067	
								+0.002"		90-4068
	Seal not required.							+0.015"		90-4175



# NORTON® 750 1968-1973

NORTON

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	* Installed Height	Seat Pressure	Open Pressure	@ Lift
	50-0460	Intake	.500"	1.420"	105#	185#	.320"
		Exhaust					
	Kit Includes			4	7075-T6 H. A. Retainers	4	H. T. Steel Keepers Pr.
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

\*Important: In order to achieve the above installation height, it will be necessary to spot face the spring pad prior to guide installation.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes					
	50-50000	Intake	H. T. Steel Retainers		CrSi Valve Springs		H. T. Steel Basewashers	
		Exhaust	4	50-50001	4	50-50004	4	50-50003
	Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift	
.410"	1.280"	93#		170#		.320"		

All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	50-4092	Intake	38.10mm	1.500"	0.3115"	1.5" R	4.065"	Standard
	50-4092-1	Intake	39.62mm	1.560"	0.3115"	1.5" R	4.055"	Oversize
	50-4091	Exhaust	33.02mm	1.300"	0.3110"	27°	4.015"	Standard
	50-4091-1	Exhaust	34.54mm	1.360"	0.3110"	27°	4.005"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.330"	0.430"	1.025"	1.525"	0.680"	0.3105"	0.5010" / Std.	50-0403		
									+0.002"	50-0404	
									+0.004"	50-0405	
		0.470"	0.655"	0.785"	1.345"	0.682"	0.3105"	0.5010" / Std.		50-0410	
									+0.002"		50-0411
									+0.004"		50-0412
									+0.006"		50-0413

## Push Rod • Alloy Tube • H. T. Steel Endpieces

	KPMI P/N	Type	Material	"A"	"B"	Quantity
	50-50010	Intake	H. T. Seamless Aluminum	8.150"	8.010"	Pkg. of 2
		Exhaust		7.300"	7.160"	Pkg. of 2

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0500"±0.010"	0.445"	0.230"	0.280"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71012-4			Pkg. of 4		0%	
		71012-8			Pkg. of 8		0%	
		71012-16			Pkg. of 16		Less- 10%	
		71012-50			Pkg. of 50		Less- 15%	
71012-100			Pkg. of 100		Less- 20%			

**ORDER 650-557-2046**

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# NORTON® 850 1973-1977



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	* Installed Height	Seat Pressure	Open Pressure	@ Lift
	50-0460	Intake	.500"	1.420"	105#	185#	.320"
		Exhaust					
	Kit Includes		4	7075-T6 H. A. Retainers		4	H. T. Steel Keepers Pr.
		4	CrSi Valve Springs		4	H. T. Steel Basewashers	

\*Important: In order to achieve the above installation height, it will be necessary to spot face the spring pad prior to guide installation.

## Valve Spring Kit • O. E. M. Replacement

	KPMI P/N	Type	Kit Includes					
	50-50000	Intake	H. T. Steel Retainers		CrSi Valve Springs		H. T. Steel Basewashers	
		Exhaust	4	50-50001	4	50-50004	4	50-50003
	Max Valve Lift	Installed Height	Seat Pressure		Open Pressure		@ Lift	
.410"	1.280"	93#		170#		.320"		

All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	50-4092	Intake	38.10mm	1.500"	0.3115"	1.5" R	4.065"	Standard
	50-4092-1	Intake	39.62mm	1.560"	0.3115"	1.5" R	4.055"	Oversize
	50-4091	Exhaust	33.02mm	1.300"	0.3110"	27°	4.015"	Standard
	50-4091-1	Exhaust	34.54mm	1.360"	0.3110"	27°	4.005"	Oversize

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.330"	0.400"	1.030"	1.560"	0.680"	0.3105'	0.6260" / Std.	50-0648		
									+0.002"	50-0649	
									+0.004"	50-0650	
									+0.006"	50-0651	
		0.525"	0.580"	0.955'	1.420"	0.680"	0.3105'	0.6260" / Std.		50-0652	
									+0.002"		50-0653
									+0.004"		50-0654
									+0.006"		50-0655
		Note: Exhaust seals are not required.									

## Push Rod • Alloy Tube • H. T. Steel Endpieces

	KPMI P/N	Type	Material	"A"	"B"	Quantity
	50-50010	Intake	H. T. Seamless Aluminum	8.150"	8.010"	Pkg. of 2
		Exhaust		7.300"	7.160"	Pkg. of 2

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0500"±0.010"	0.445"	0.230"	0.280"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71012-4			Pkg. of 4		0%	
		71012-8			Pkg. of 8		0%	
		71012-16			Pkg. of 16		Less- 10%	
		71012-50			Pkg. of 50		Less- 15%	
		71012-100			Pkg. of 100		Less- 20%	



# POLARIS® 400-500 1996-'14, Series 10, 11

- Ranger™ 400 2010-2014
- Sportsman™ 500 1996-2013
- Xpedition™ 425 2000-2002
- Scrambler™ 500 1997-2012
- Magnum™ 500 1996-2003
- Ranger™ 500 1999-'13, Series 10,11

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82000	Intake	.440"	1.285"	40#	140#	.440"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82005	Intake	31.00mm	1.220"	0.2345"	14°	3.970"	Standard
	82-82008	Exhaust	26.55mm	1.063"	0.2340"	25°	3.985"	Standard

# POLARIS® PREDATOR™ / OUTLAW™ 500 2003-'07

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82012	Intake	.440"	1.375"	66#	199#	.440"
		Exhaust					
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	

## Cylinder Head Service Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83200	Intake	.440"	1.375"	66#	199#	.440"
		Exhaust					
	Kit Includes			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs
				2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves
			4	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit	

## Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
82-82012	Spring Kit	<b>Includes:</b> Titanium Retainers, CrSi Valve Springs
82-82052	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82055	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82030	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
82-83201	Gasket Kit	<b>Includes:</b> Head Gasket 99mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Exhaust Gasket (2), Oil Filter Copper Washer (6), Valve Stem Seals (4)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82052	Intake	37.00mm	1.457"	0.2345"	20°	4.030"	Standard
	82-82053	Intake	38.00mm	1.496"	0.2345"	20°	4.030"	Oversize
	82-82055	Exhaust	32.00mm	1.260"	0.2345"	22°	4.055"	Standard
	82-82056	Exhaust	33.00mm	1.300"	0.2345"	22°	4.055"	Oversize

# POLARIS® PREDATOR™ / OUTLAW™ 500 2003-'07



## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.375"	0.545"	0.880"	0.980"	0.704"	0.2345"	0.4160" / Std.		<b>82-82030</b>	
									+0.001"		<b>82-82031</b>
									+0.010"		<b>82-82039</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
		Part Number		Quantity		Quantity Discount		
		<b>71017-4</b>	Pkg. of 4	0%				
		<b>71017-8</b>	Pkg. of 8	0%				
		<b>71017-16</b>	Pkg. of 16	Less- 10%				
		<b>71017-50</b>	Pkg. of 50	Less- 15%				
		<b>71017-100</b>	Pkg. of 100	Less- 20%				

# POLARIS® SPORTSMAN™ 800 2006-'14

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>82-82060</b>	Intake	.500"	1.495"	65#	235#	.500"	
		Exhaust						
	Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	2
			2	In, H.T. Steel Basewashers	2	Ex, H.T. Steel Basewashers		

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. Use the recommended #71017-4 seals when using KPMI® Valve Guides.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>82-82065</b>	Intake	35.00mm	1.378"	0.2357"	25°	4.510"	Standard
	<b>82-82068</b>	Exhaust	30.00mm	1.181"	0.2352"	11°	4.555"	Standard

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.470"	0.560"	0.495"	1.335"	0.544"	0.2360"	0.4950" / Std.		<b>82-82070</b>	
									+0.001"		<b>82-82071</b>
									+0.002"		<b>82-82072</b>
								+0.010"		<b>82-82079</b>	
		0.525"	0.615"	0.520"	1.115"	0.544"	0.2355"	0.4531" / Std.		<b>82-82080</b>	
									+0.001"		<b>82-82081</b>
									+0.002"		<b>82-82082</b>
								+0.010"		<b>82-82089</b>	



# POLARIS® SPORTSMAN™ 800 2006-'14

## Valve Guide Seals • Viton® for Use with KPMI® Guides Only

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Intake
								Exhaust
				Part Number		Quantity	Quantity Discount	
				71017-4		Pkg. of 4	0%	
				71017-8		Pkg. of 8	0%	
				71017-16		Pkg. of 16	Less- 10%	
				71017-50		Pkg. of 50	Less- 15%	
				71017-100		Pkg. of 100	Less- 20%	

## Valve Guide Seals • Viton® for Use with O.E.M. Intake Guides Only

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.524"	0.615"	5	0.495"±0.002"	---	---	0.385"	Intake
				Part Number		Quantity	Quantity Discount	
				71031-4		Pkg. of 4	0%	
				71031-8		Pkg. of 8	0%	
				71031-16		Pkg. of 16	Less- 10%	
				71031-50		Pkg. of 50	Less- 15%	
				71031-100		Pkg. of 100	Less- 20%	

# POLARIS® RZR™ 800 2008-2010

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82200	Intake	.500"	1.495"	65#	235#	.500"
		Exhaust					
Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	2	In, Viton® Seals	
	2	In, H. T. Steel Basewashers	2	Ex, H. T. Steel Basewashers			

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. Use the recommended #71017-4 seals when using KPMI® Valve Guides.

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82212	Intake	35.00mm	1.378"	0.2357"	25°	4.510"	Standard
	82-82216	Exhaust	30.00mm	1.181"	0.2352"	11°	4.555"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.470"	0.560"	0.495"	1.335"	0.544	0.2360"	0.4950" / Std.	82-82220	
							+0.001"	82-82221	
						+0.002"	82-82222		
						+0.010"	82-82229		
0.525"	0.615"	0.520"	1.115"	0.544"	0.2355"	0.4531" / Std.	82-82230		
						+0.001"	82-82231		
						+0.002"	82-82232		
						+0.010"	82-82239		

# POLARIS® RZR™ 800 2008-2010



## Valve Guide Seals • Viton® for Use with KPMI® Guides Only

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Intake
								Exhaust
				Part Number		Quantity		Quantity Discount
				71017-4		Pkg. of 4		0%
				71017-8		Pkg. of 8		0%
				71017-16		Pkg. of 16		Less- 10%
				71017-50		Pkg. of 50		Less- 15%
				71017-100		Pkg. of 100		Less- 20%

## Valve Guide Seals • Viton® for Use with O.E.M. Intake Guides Only

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.524"	0.615"	5	0.495"±0.002"	---	---	0.385"	Intake
				Part Number		Quantity		Quantity Discount
				71031-4		Pkg. of 4		0%
				71031-8		Pkg. of 8		0%
				71031-16		Pkg. of 16		Less- 10%
				71031-50		Pkg. of 50		Less- 15%
				71031-100		Pkg. of 100		Less- 20%

# POLARIS® RZR™ 800 (&S/4) / RANGER 800 2011-'17

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82300	Intake	.500"	1.495"	65#	235#	.500"
		Exhaust					
Kit Includes			4 Titanium Retainers	4 CrSi Valve Springs	2 In, Viton® Seals	2 In, H. T. Steel Basewashers	2 Ex, H. T. Steel Basewashers

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. Use the recommended #71017-4 seals when using KPMI® Valve Guides.

## Valves • Black Diamond™ • Black Nitroeng Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82312	Intake	35.00mm	1.378"	0.2357"	25°	4.510"	Standard
	82-82313	Intake	36.00mm	1.417"	0.2357"	25°	4.510"	Oversize
	82-82316	Exhaust	30.00mm	1.181"	0.2352"	11°	4.555"	Standard
	82-82317	Exhaust	31.00mm	1.220"	0.2352"	11°	4.555"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.490"	0.580"	1.385"	1.515"	0.552"	0.2352'	0.4531" / Std.		82-82320
							+0.001"		82-82321
							+0.002"		82-82322
							+0.010"		82-82329


## Valve Guide Seals • Viton® for Use with KPMI® Guides Only

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Intake
								Exhaust
				Part Number		Quantity		Quantity Discount
				71017-4		Pkg. of 4		0%
				71017-8		Pkg. of 8		0%
				71017-16		Pkg. of 16		Less- 10%
				71017-50		Pkg. of 50		Less- 15%
				71017-100		Pkg. of 100		Less- 20%




# POLARIS® RZR™ 800 (&S/4) / RANGER 800 2011-'17

## Valve Guide Seals • Viton® for Use with O.E.M. Intake Guides Only

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.394"	0.480"	5	0.447"±0.002"	---	---	0.265"	Intake
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		71037-4		Pkg. of 4		0%		
		71037-8		Pkg. of 8		0%		
		71037-16		Pkg. of 16		Less- 10%		
		71037-50		Pkg. of 50		Less- 15%		
		71037-100		Pkg. of 100		Less- 20%		



# POLARIS® RZR™ XP900 2011-2012

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	82-82160	Intake	.450"	1.375"	57#	150#	.450"		
		Exhaust							
	<b>Kit Includes</b>			8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	*82-82650	Intake	.450"	1.375"	57#	150#	.450"		
Exhaust									
<b>Kit Includes</b>			8	H. T. Steel Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers	

\*KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.

## Valve Spring Kit • High Performance "Turbo" Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	82-82190	Intake	.450"	1.375"	65#	200#	.450"		
		Exhaust							
	<b>Kit Includes</b>			8	Titanium Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	82-83300	Intake	.450"	1.375"	64#	181#	.450"		
Exhaust									
<b>Kit Includes</b>			8	Titanium Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	*82-82700	Intake	.450"	1.375"	65#	200#	.450"		
		Exhaust							
	<b>Kit Includes</b>			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	*82-83350	Intake	.450"	1.375"	64#	181#	.450"		
Exhaust									
<b>Kit Includes</b>			8	H. T. Steel Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers	

\*KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.

# POLARIS® RZR™ XP900 2011-2012



## Valve Spring Kit • Beehive Racing NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82580	Intake	.435"	1.360"	80#	205#	.435"	
		Exhaust						
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82155	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	82-82156	Intake	38.72mm	1.524"	0.2160"	17°	3.775"	Oversize
	82-82158	Exhaust	32.44mm	1.277"	0.2155"	25°	3.815"	Standard
	82-82159	Exhaust	33.44mm	1.317"	0.2155"	25°	3.815"	Oversize

## Cylinder Head Service Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83230	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
	Kit Includes			8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
				8	In / Ex H. T. Steel Basewashers**	8	Viton® Seals**
			4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves	
			4	In / Ex Std. Mng. Brz. Valves Guides	4	Top End Gasket Kit	

## Components • Replacement • Cylinder Head Service Kit NEW PRODUCTS

KPMI P/N	Description	Specification
82-82580	Beehive Spring Kit	<b>Includes:</b> H.T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers**
71015-8	Viton® Seals	Valve Stem Seals • 5.5mm • Viton® (Pkg. of 8)**
82-82155	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82158	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82170	Intake, Exhaust, Standard Valve Guide	Valve Guides • Manganese Bronze
82-83231	Gasket Kit	<b>Includes:</b> Head Gasket 93.5mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Water Inlet Gasket (1), Exhaust Gasket (2), Valve Stem Seals (8)

\*\*Some early models came from the OEM with guides that included a seal detail. These guides require the use of seal P/N 71015-8 and the basewashers found in the Spring Kit. All others utilize the tophat style seal found in the Gasket Kit.

## Valve Guides • Manganese Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	---	0.460"	0.815"	0.960"	0.433"	0.2155"	0.4353" / Std.	<b>82-82170</b>	
							+0.001"	<b>82-82171</b>	
							+0.002"	<b>82-82172</b>	
							+0.004"	<b>82-82174</b>	
							+0.010"	<b>82-82179</b>	

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>	
		71015-4			Pkg. of 4		0%	
		71015-8			Pkg. of 8		0%	
		71015-16			Pkg. of 16		Less- 10%	
		71015-50			Pkg. of 50		Less- 15%	
71015-100			Pkg. of 100		Less- 20%			




# POLARIS® RZR™ XP900 2011-2012

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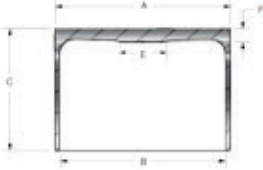
## Valve Guide Seals • OEM Replacement • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C		Intake	
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Exhaust	3610212
				Part Number		Quantity		Quantity Discount	
		71048-4		Pkg. of 4	0%				
		71048-8		Pkg. of 8	0%				
		71048-16		Pkg. of 16	Less- 10%				
		71048-50		Pkg. of 50	Less- 15%				
		71048-100		Pkg. of 100	Less- 20%				

## Tappets • O.E.M. Replacement • H.T. Steel

**NEW PRODUCTS**



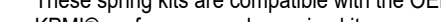
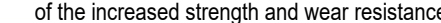
	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	82-82185	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"
	Exhaust								
*82-82187	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								

**\*Note:** Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications.

# POLARIS® RZR™ XP900 2013-2014

## Valve Spring Kit • High Performance "Turbo" Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82350	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
	Kit Includes		8	Titanium Retainers	8	CrSi Valve Springs	
		8	H.T. Steel Basewashers	8	Viton® Seals		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83400	Intake	.450"	1.375"	64#	181#	.450"
		Exhaust					
	Kit Includes		8	Titanium Retainers	8	CrSi Valve Springs	
		8	H.T. Steel Basewashers	8	Viton® Seals		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83000	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
	Kit Includes		8	H.T. Steel Retainers	8	CrSi Valve Springs	
		8	H.T. Steel Basewashers	8	Viton® Seals		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83450	Intake	.450"	1.375"	64#	181#	.450"
		Exhaust					
	Kit Includes		8	H.T. Steel Retainers	8	CrSi Valve Springs	
		8	H.T. Steel Basewashers	8	Viton® Seals		

Our Turbo spring kits have been designed for applications with up to 15psi of boost.

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides. Some early 2013 models came from the OEM with guides that included a seal detail. These guides require the use of KPMI® seal P/N 71015-8.



# POLARIS® RZR™ XP900 2013-2014



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82400	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82950	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	

## Valve Spring Kit • Beehive Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82550	Intake	.435"	1.360"	80#	205#	.435"	
		Exhaust						
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals

- 1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
- 2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
- 3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

## Cylinder Head Service Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83210	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
Kit Includes			8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs	
			4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves	
			4	In Std. Mng. Brz Valves Guides	4	Ex Std. Mng. Brz. C630 Valves Guides	
			1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	<b>Includes:</b> H.T. Steel Retainers, CrSi Valve Springs
82-82462	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82466	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82480	Intake, Standard Valve Guide	Valve Guides • Manganese Bronze
82-82470	Exhaust, Standard Valve Guide	Valve Guides • Manganese Bronze
82-83211	Gasket Kit	<b>Includes:</b> Head Gasket 93.5mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Water Inlet Gasket (1), Exhaust Gasket (2), Valve Stem Seals (8)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82462	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	82-82463	Intake	38.72mm	1.524"	0.2160"	17°	3.775"	Oversize
	82-82466	Exhaust	32.44mm	1.277"	0.2155"	25°	3.815"	Standard
	82-82467	Exhaust	33.44mm	1.317"	0.2155"	25°	3.815"	Oversize



# POLARIS® RZR™ XP900 2013-2014

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## Valve Guides • Manganese Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.455"	0.755"	0.940"	0.433"	0.2160"	0.4353" / Std.	<b>82-82480</b>	
							+0.001"	<b>82-82481</b>	
							+0.002"	<b>82-82482</b>	
							+0.010"	<b>82-82489</b>	
	---	0.455"	0.815"	0.940"	0.433"	0.2155"	0.4353" / Std.		<b>82-82470</b>
							+0.001"		<b>82-82471</b>
							+0.002"		<b>82-82472</b>
							+0.010"		<b>82-82479</b>

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
			Part Number		Quantity		Quantity Discount	
			<b>71016-4</b>		Pkg. of 4		0%	
			<b>71016-8</b>		Pkg. of 8		0%	
			<b>71016-16</b>		Pkg. of 16		Less- 10%	
			<b>71016-50</b>		Pkg. of 50		Less- 15%	
			<b>71016-100</b>		Pkg. of 100		Less- 20%	

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides in conjunction with KPMI® dual spring kits.

## Valve Guide Seals • OEM Replacement • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
5.5mm	0.630"	1.043"	3	A	B	C		Intake	3610212
				0.435"±0.005"	---	0.480"	Exhaust		
			Part Number		Quantity		Quantity Discount		
			<b>71048-4</b>		Pkg. of 4		0%		
			<b>71048-8</b>		Pkg. of 8		0%		
			<b>71048-16</b>		Pkg. of 16		Less- 10%		
			<b>71048-50</b>		Pkg. of 50		Less- 15%		
			<b>71048-100</b>		Pkg. of 100		Less- 20%		

## Tappets • Shim On Bottom • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>82-82459</b>	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
		Exhaust								
	<b>*82-82495</b>	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
		Exhaust								

Note: For 2014 models the OEM system does not use an adjustment shim, these tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system. \*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications.

# POLARIS® VARIOUS 900'S 2013-2016



POLARIS

• Ranger™ 900 XP 2013-2015

• RZR™ 900 2015-2016

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82400	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
	Kit Includes	8	Titanium Retainers	8	H.T. Steel Basewashers		
8		CrSi Valve Springs	8	Viton® Seals			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82950	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
	Kit Includes	8	H.T. Steel Retainers	8	H.T. Steel Basewashers		
8		CrSi Valve Springs	8	Viton® Seals			

## Valve Spring Kit • High Performance "Turbo" Racing

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82350	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
	Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs		
8		H.T. Steel Basewashers	8	Viton® Seals			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83400	Intake	.450"	1.375"	64#	181#	.450"
		Exhaust					
	Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs		
8		H.T. Steel Basewashers	8	Viton® Seals			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83000	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
	Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs		
8		H.T. Steel Basewashers	8	Viton® Seals			
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83450	Intake	.450"	1.375"	64#	181#	.450"
		Exhaust					
	Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs		
8		H.T. Steel Basewashers	8	Viton® Seals			

Our Turbo spring kits have been designed for applications with up to 15psi of boost.

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.



# POLARIS® VARIOUS 900'S 2013-2016

• Ranger™ 900 XP 2013-2015

• RZR™ 900 2015-2016

## Valve Spring Kit • Beehive Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82550	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals	

- 1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
- 2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
- 3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

## Cylinder Head Service Kit for RZR™ 900 2015-2016

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83240	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
	Kit Includes	8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs		
		4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves		
4		In Std. Mng. Brz. Valves Guides	4	Ex Std. Mng. Brz. Valves Guides			
1		Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit for RZR™ 900 2015-2016

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	<b>Includes:</b> H.T. Steel Retainers, CrSi Valve Springs
82-82255	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82258	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82270	Intake, Standard Valve Guide	Valve Guides • Manganese Bronze
82-82420	Exhaust, Standard Valve Guide	Valve Guides • Manganese Bronze
82-83241	Gasket Kit	<b>Includes:</b> Head Gasket 93.5mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Water Inlet Gasket (1), Exhaust Gasket (2), Valve Stem Seals (8)

## Valve Guides • Manganese Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.455"	0.815"	0.940"	0.433"	0.2155'	0.4353" / Std.	82-82270	
							+0.001"	82-82271	
							+0.002"	82-82272	
							+0.010"	82-82279	
	---	0.455"	1.090"	1.190"	0.433"	0.2155'	0.4353" / Std.		82-82420
							+0.001"		82-82421
							+0.002"		82-82422
							+0.010"		82-82429

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX


# POLARIS® VARIOUS 900'S 2013-2016



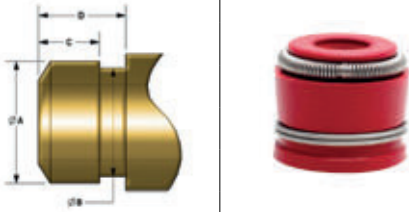
• Ranger™ 900 XP 2013-2015

• RZR™ 900 2015-2016

## Valves • Black Diamond™ • Black Nitroleg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>82-82255</b>	Intake	34.42mm	1.355"	0.2160"	17°	3.765"	Standard
	<b>82-82258</b>	Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard
	<b>82-82259</b>	Exhaust	30.21mm	1.189"	0.2155"	25°	3.805"	Oversize


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71016-4</b>		Pkg. of 4		0%
				<b>71016-8</b>		Pkg. of 8		0%
				<b>71016-16</b>		Pkg. of 16		Less- 10%
				<b>71016-50</b>		Pkg. of 50		Less- 15%
				<b>71016-100</b>		Pkg. of 100		Less- 20%

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides in conjunction with KPMI® dual spring kits.

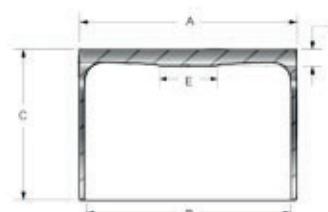
## Valve Guide Seals • OEM Replacement • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
5.5mm	0.630"	1.043"	3	A	B	C	0.697"	Intake	3610212
				0.435"±0.005"	---	0.480"		Exhaust	
				Part Number		Quantity		Quantity Discount	
				<b>71048-4</b>		Pkg. of 4		0%	
				<b>71048-8</b>		Pkg. of 8		0%	
				<b>71048-16</b>		Pkg. of 16		Less- 10%	
				<b>71048-50</b>		Pkg. of 50		Less- 15%	
				<b>71048-100</b>		Pkg. of 100		Less- 20%	

## Tappets • Shim On Bottom Conv. • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>82-82285</b>	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
		Exhaust								
	<b>*82-82287</b>	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
Exhaust										



**\*Note:** These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system. \*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications.



# POLARIS® RZR™ XP1000 2014

POLARIS

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82400	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	H.T. Steel Basewashers	
			8	CrSi Valve Springs	8	Viton® Seals	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82950	Intake	.450"	1.375"	57#	150#	.450"
		Exhaust					
Kit Includes			8	H.T. Steel Retainers	8	H.T. Steel Basewashers	
			8	CrSi Valve Springs	8	Viton® Seals	

The tappet must never contact the retainer for this application. To ensure this, the top surface of the shim must never fall below the top surface of the retainer.

## Valve Spring Kit • High Performance "Turbo" Racing

NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82350	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83400	Intake	.450"	1.375"	64#	181#	.450"
		Exhaust					
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83000	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83450	Intake	.450"	1.375"	64#	181#	.450"
		Exhaust					
Kit Includes			8	H.T. Steel Retainers	8	CrSi Valve Springs	
			8	H.T. Steel Basewashers	8	Viton® Seals	

Our Turbo spring kits have been designed for applications with up to 15psi of boost.


- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

# POLARIS® RZR™ XP1000 2014



## Valve Spring Kit • Beehive Racing


**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	82-82550	Intake	.435"	1.360"	80#	205#	.435"	
		Exhaust						
<b>Kit Includes</b>			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals

- 1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
- 2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
- 3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

## Cylinder Head Service Kit

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83220	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
	<b>Kit Includes</b>			8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
				4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves
4				In Std. Mng. Brz. Valves Guides	4	Ex Std. Mng. Brz. Valves Guides	
1				Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

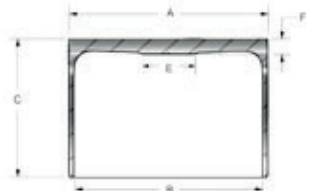
KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	<b>Includes:</b> H.T. Steel Retainers, CrSi Valve Springs
82-82362	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82366	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82370	Intake, Standard Valve Guide	Valve Guides • Manganese Bronze
82-82380	Exhaust, Standard Valve Guide	Valve Guides • Manganese Bronze
82-83221	Gasket Kit	<b>Includes:</b> Head Gasket 94mm Bore (1), Base Gasket (1), Cam Chain Tensioner Gasket (1), Header Gasket (1), Valve Spring Seat with Seal (1), Thermostat Seal (1), Water Outlet O-ring (1)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	82-82362	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	82-82363	Intake	38.72mm	1.524"	0.2160"	17°	3.775"	Oversize
	82-82366	Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard
	82-82367	Exhaust	30.21mm	1.189"	0.2155"	25°	3.805"	Oversize

## Tappets • Shim On Bottom Conv. • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	82-82359	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
		Exhaust								
	*82-82395	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
Exhaust										

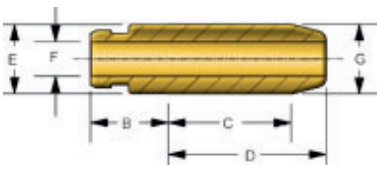

**\*Note:** These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system. \*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications.



# POLARIS® RZR™ XP1000 2014


POLARIS

## Valve Guides • Manganese Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.455"	0.750"	0.935"	0.433"	0.2160"	0.4353" / Std.	+0.001"	<b>82-82370</b>
							+0.002"	<b>82-82371</b>	
							+0.010"	<b>82-82372</b>	
							+0.010"	<b>82-82379</b>	
	---	0.455"	1.090"	1.190"	0.433"	0.2155"	0.4353" / Std.		<b>82-82380</b>
							+0.001"		<b>82-82381</b>
							+0.002"		<b>82-82382</b>
							+0.010"		<b>82-82389</b>

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX


## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
			<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>	
			<b>71016-4</b>		Pkg. of 4		0%	
			<b>71016-8</b>		Pkg. of 8		0%	
			<b>71016-16</b>		Pkg. of 16		Less- 10%	
			<b>71016-50</b>		Pkg. of 50		Less- 15%	
			<b>71016-100</b>		Pkg. of 100		Less- 20%	

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides in conjunction with KPMI® dual spring kits.

## Valve Guide Seals • OEM Replacement • Tophat

**NEW PRODUCTS**

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C		Intake	
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Exhaust	3610212
			<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
			<b>71048-4</b>		Pkg. of 4		0%		
			<b>71048-8</b>		Pkg. of 8		0%		
			<b>71048-16</b>		Pkg. of 16		Less- 10%		
			<b>71048-50</b>		Pkg. of 50		Less- 15%		
			<b>71048-100</b>		Pkg. of 100		Less- 20%		


# POLARIS® RZR™ XP1000 / XP TURBO 2015-'20

• RZR™ XP1000 2015-2020

• XP Turbo 2016-2020

## Valve Spring Kit • Beehive Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>82-82550</b>	Intake	.435"	1.360"	80#	205#	.435"	
		Exhaust						
<b>Kit Includes</b>			8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals

- 1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
- 2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
- 3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution



# POLARIS® RZR™ XP1000 / XP TURBO 2015-'20



• RZR™ XP1000 2015-2020

• XP Turbo 2016-2020

## Valve Spring Kit • High Performance “Turbo” Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-82350	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
	Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs		
		8	H.T. Steel Basewashers	8	Viton® Seals		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83400	Intake	.450"	1.375"	64#	181#	.450"
		Exhaust					
	Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs		
		8	H.T. Steel Basewashers	8	Viton® Seals		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83000	Intake	.450"	1.375"	65#	200#	.450"
		Exhaust					
	Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs		
		8	H.T. Steel Basewashers	8	Viton® Seals		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83450	Intake	.450"	1.375"	64#	181#	.450"
		Exhaust					
	Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs		
		8	H.T. Steel Basewashers	8	Viton® Seals		

Our Turbo spring kits have been designed for applications with up to 15psi of boost.

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

## Cylinder Head Service Kit for RZR™ XP1000 2015-'20

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	82-83150	Intake	.435"	1.360"	80#	205#	.435"
		Exhaust					
	Kit Includes	8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs		
		4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves		
4		In Std. Mng. Brz. Valves Guides	4	Ex Std. Mng. Brz. Valves Guides			
1		Top End Gasket Kit					



# POLARIS® RZR™ XP1000 / XP TURBO 2015-'20

• RZR™ XP1000 2015-2020

• XP Turbo 2016-2020


## Components • Replacement • Cylinder Head Service Kit for RZR™ XP1000 2015-'20

**NEW PRODUCTS**

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	<b>Includes:</b> H.T. Steel Retainers, CrSi Valve Springs
82-82612	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82616	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
82-82620	Intake, Standard Valve Guide	Valve Guides • Manganese Bronze
82-82630	Exhaust, Standard Valve Guide	Valve Guides • Manganese Bronze
82-83151	Gasket Kit	<b>Includes:</b> Head Gasket 94mm (1), Base Gasket (1), Header Gasket (1), Valve Spring Seat w/ Seal (8), Thermostat Seal (1), Water Outlet O-ring (1)

## Cylinder Head Service Kit for RZR™ Turbo 2016-'20

**NEW PRODUCTS**

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
							
<b>Kit Includes</b>		8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs		
		4	In Std. White Diamond® Valves	4	Ex Std. White Diamond® Valves		
		4	In Std. Mng. Brz. Valves Guides	4	Ex Std. Mng. Brz. Valves Guides		
		1	Top End Gasket Kit				


## Components • Replacement • Cylinder Head Service Kit for RZR™ Turbo 2016-'20

**NEW PRODUCTS**

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	<b>Includes:</b> H.T. Steel Retainers, CrSi Valve Springs
82-83112H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
82-83116K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
82-82620	Intake, Standard Valve Guide	Valve Guides • Manganese Bronze
82-82630	Exhaust, Standard Valve Guide	Valve Guides • Manganese Bronze
82-83161	Gasket Kit	<b>Includes:</b> Head Gasket 94mm (1), Base Gasket (1), Header Gasket (1), Valve Spring Seat w/ Seal (8), Thermostat Seal (1), Water Outlet O-ring (1)

## Valves • Black Diamond™ • Black Nitroreg Stems


**NEW PRODUCTS**

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks	
		mm	in					
	82-82612	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	82-82613	Intake	38.72mm	1.524"	0.2160"	17°	3.775"	Oversize
	*82-82616	Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard
	*82-82617	Exhaust	30.21mm	1.189"	0.2155"	25°	3.805"	Oversize

Note: \*Not recommended for Turbo applications (see KPMI® Turbo valve PN's 82-83100 & 82-83116)

## Valve Kit • Turbo

**NEW PRODUCTS**

KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks		
	82-83100	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
		Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard
<b>Kit Includes</b>		4	Intake White Diamond® Valves		4	Exhaust Inconel® Valves		

The Turbo Valve Kit is specifically designed for Turbo applications using our 1-Pc forged "Super Alloy" Inconel® 751 exhaust valve that retains mechanical properties and corrosion resistance at elevated temperatures. The exhaust valve is paired with a 1-Pc White Diamond® Stainless Intake for superior performance and longevity. Together this valve kit provides the performance for boosted applications at a competitive selling price.

# POLARIS® RZR™ XP1000 / XP TURBO 2015-'20



• RZR™ XP1000 2015-2020

• XP Turbo 2016-2020

## Valves • White Diamond® • Inconel® NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>82-83112H</b>	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
	<b>**82-83116K</b>	Exhaust	29.21mm	1.150"	0.2155"	25°	3.805"	Standard -Inconel® Recommended for Turbos

\*\*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • Manganese Bronze NEW PRODUCTS

	A	B	C	D	E	F	G	Intake	Exhaust
	---	0.455"	0.755"	0.940"	0.433"	0.2160"	0.4353" / Std.	<b>82-82620</b>	
							+0.001"	<b>82-82621</b>	
							+0.002"	<b>82-82622</b>	
							+0.010"	<b>82-82629</b>	
	---	0.455"	1.090"	1.190"	0.433"	0.2155"	0.4353" / Std.		<b>82-82630</b>
							+0.001"		<b>82-82631</b>
							+0.002"		<b>82-82632</b>
							+0.010"		<b>82-82639</b>

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

## Valve Guide Seals • OEM Replacement • Tophat NEW PRODUCTS

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
5.5mm	0.630"	1.043"	3	A	B	C		Intake	3610212
				0.435"±0.005"	---	0.480"	0.697"	Exhaust	
				Part Number	Quantity		Quantity Discount		
				<b>71048-4</b>	Pkg. of 4		0%		
				<b>71048-8</b>	Pkg. of 8		0%		
				<b>71048-16</b>	Pkg. of 16		Less- 10%		
				<b>71048-50</b>	Pkg. of 50		Less- 15%		
			<b>71048-100</b>	Pkg. of 100		Less- 20%			

## Tappets • Shim On Bottom Conv. • H.T. Steel NEW PRODUCTS

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>82-82607</b>	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
		Exhaust								
	<b>***82-82609</b>	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
Exhaust										

**\*\*\*Note:** These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.\*Our coated tappets undergo a low temperature \*PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications.



# SUZUKI® DR™ 250/ 350S/ SE 1990-1999

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-6041	Intake	.350"	1.200"	61#	141#	.350"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.		60-6030
							+0.001"		60-6031
							+0.002"		60-6032
							+0.003"		60-6033
						+0.010"		60-6040	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			

# SUZUKI® RM-Z250™ 2004-2006

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60170	Intake	.445"	1.320"	46#	155#	.445"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60450	Intake	.445"	1.320"	46#	155#	.445"
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers
			2	White Diamond® Valves	2	H. T. Steel Basewashers	

# SUZUKI® RM-Z250™ 2004-2006



## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-61800	Intake	.445"	1.320"	46#	155#	.445"
		Exhaust					
	Kit Includes	4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2		In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves			
4		In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
60-60170	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60210H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
60-60213H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
60-60190	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
60-61801	Gasket Kit	<b>Includes:</b> Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Camchain Tensioner O-Ring (1), Valve Stem Seal (4)

## Valves • White Diamond® • Hard Chrome Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60210H	Intake	31.00mm	1.220"	0.1765"	20°	3.120"	Standard
	60-60213H	Exhaust	25.00mm	0.984"	0.1756"	25°	3.125"	Standard

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing White Diamond® Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	60-60210T	Intake	31.00mm	1.220"	0.1765"	20°	3.110"	Titanium	K1200-40002
	60-60213T	Exhaust	25.00mm	0.984"	0.1756"	25°	3.115"	Titanium	K1200-50002

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.440"	0.465"	0.590"	0.850"	0.410"	0.1765"	0.3765" / Std.	<b>60-60190</b>	
							+0.001"	<b>60-60191</b>	
							+0.002"	<b>60-60192</b>	
							+0.010"	<b>60-60199</b>	



# SUZUKI® RM-Z250™ 2004-2006

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake
								Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71013-4				Pkg. of 4		0%
		71013-8				Pkg. of 8		0%
		71013-16				Pkg. of 16		Less- 10%
		71013-50				Pkg. of 50		Less- 15%
		71013-100				Pkg. of 100		Less- 20%

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	60-60176	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 2

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

# SUZUKI® RM-Z250™ 2007-2017

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60500	Intake	.445"	1.300"	51#	160#	.445"
		Exhaust					
<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	
			4	H.T. Steel Basewashers	4	Red Viton® Seals	

KPMI® Supplied Viton® Seals must be used with this kit. OEM seals are NOT compatible.

## Cylinder Head Service Kit for RM-Z250™ 2007-2009

**NEW PRODUCTS**

	KPMI P/N	Type	Max valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61810	Intake	.445"	1.300"	51#	160#	.445"	
		Exhaust						
<b>Kit Includes</b>			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
			4	Red Viton® Seals	2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves
			4	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit for RM-Z250™ 2007-2009

**NEW PRODUCTS**

KPMI P/N	Description	Specification
60-60500	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
60-60512H	Intake, Standard Valve	Valve • White Diamond® • Stainless
60-60516H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
60-60520	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
60-61811	Gasket Kit	<b>Includes:</b> Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Bolt (1), Valve Stem Seals (4)

# SUZUKI® RM-Z250™ 2007-2017



## Cylinder Head Service Kit for RM-Z250™ 2010-2017

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-61600	Intake	.445"	1.300"	51#	160#	.445"
		Exhaust					
	Kit Includes	4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4		Red Viton® Seals	2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves	
4		In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit for RM-Z250™ 2010-2017

**NEW PRODUCTS**

KPMI P/N	Description	Specification
60-60500	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
60-60512H	Intake, Standard Valve	Valve • White Diamond® • Stainless
60-60516H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
60-60520	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
60-61601	Gasket Kit	<b>Includes:</b> Head Gasket 77mm (1), Valve Stem Seals (4), Base Gasket (1), Exhaust Gasket (1), Head Drain Seal (1), Water Temp Sensor O-ring (1), Cam Chain Tensioner O-ring (1), Cam Tower O-ring Seal (1)

## Intake Only • Steel Valve Conversion Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60470	Intake	.445"	1.300"	51#	160#	.445"
	Kit Includes	2	Titanium Retainers	2	CrSi Valve Springs	2	Red Viton® Seals
2		White Diamond® Valves	2	H. T. Steel Basewashers			

KPMI® Supplied Viton® Seals must be used with this kit. OEM seals are NOT compatible.

## Valves • White Diamond® • Hard Chrome Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	60-60512H	Intake	31.00mm	1.220"	0.1765"	15°	3.175"	Standard
	60-60516H	Exhaust	25.00mm	0.985"	0.1760"	25°	3.185"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	60-60512T	Intake	31.00mm	1.220"	0.1765"	15°	3.165"	Titanium	12911-49H00
	60-60516T	Exhaust	25.00mm	0.985"	0.1760"	25°	3.175"	Titanium	1212-10H00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.545"	0.545"	0.530"	0.700"	0.374"	0.1765	0.3778" / Std.	60-60520		
								+0.001"	60-60521	
								+0.002"	60-60522	
								+0.010"	60-60529	



# SUZUKI® RM-Z250™ 2007-2017

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Intake
								Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71013-4</b>				Pkg. of 4		0%
		<b>71013-8</b>				Pkg. of 8		0%
		<b>71013-16</b>				Pkg. of 16		Less- 10%
		<b>71013-50</b>				Pkg. of 50		Less- 15%
		<b>71013-100</b>				Pkg. of 100		Less- 20%

## Cam Tower Bolt • H.T. Steel for Suzuki® RM-Z250 2010-2017

**NEW PRODUCTS**

KPMI P/N	Thread	Hex	T. L.	O. L.	Flange Ø	Quantity	Kit Quantity	Rep. OEM P/N
			-A-	-B-				
<b>60-61455</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 8	09103-06266
	M6 x 1.0	10mm	18mm	45mm	0.495	4ea.		09103-06026
<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	4ea.	Pkg. of 4	09103-06165
<b>41006-4</b>	M6 x 1.0	10mm	18mm	45mm	12.57mm 0.495"	4ea.	Pkg. of 4	09103-06293

Works with other applications (see dimensions for compatibility)

# SUZUKI® LT-Z / D-RZ 400 2000-2019

• LT-Z™ 400 2003-2018

• D-RZ™ 400E/ S/ SM™ 2000-2019

## Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
<b>60-60045</b>	Intake	.440"	1.205"	57#	171#	.440"	
	Exhaust						
<b>Kit Includes</b>		4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
<b>60-61790</b>	Intake	.440"	1.205"	57#	171#	.440"	
	Exhaust						
<b>Kit Includes</b>		4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
		2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves		
		4	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>60-60045</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>60-60050H</b>	Intake, Standard Valve	Valve • White Diamond® • Stainless
<b>60-60053H</b>	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
<b>60-60060</b>	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>60-61791</b>	Gasket Kit	<b>Includes:</b> Head Gasket 92mm Bore (1), Base Gasket (1), Exhaust Gasket (2), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Washer (1), Valve Stem Seals (4)



# SUZUKI® LT-Z / D-RZ 400 2000-2019



• LT-Z™ 400 2003-2018

• D-RZ™ 400E/ S/ SM™ 2000-2019

## Top End Service Kit

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-61850	92.00mm	Intake	.440"	1.205"	57#	171#	.440"
			Exhaust					
	Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
		2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
2		In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves				
1		High Performance Piston Kit	1	Top End Gasket Kit				

**IMPORTANT NOTE:** The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE** with O.E.M. piston assembly components.

## Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
60-60045	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60050H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Hard Chrome Stems
60-60053H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
60-61851	Gasket Kit	<b>Includes:</b> Head Gasket 92mm Bore (1), Base Gasket (1), Exhaust Gasket (2), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Washer (1), Valve Stem Seals (4)
60-61852	*Piston Rings	1 complete set
60-61853	*Piston Pin	1 piece
60-61854	*Piston Pin Clips	1 pair

\* These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Valves • White Diamond® • Hard Chrome Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	60-60050H	Intake	36.00mm	1.418"	0.1960"	20°	3.245"	Standard
	60-60051H	Intake	37.00mm	1.457"	0.1960"	20°	3.245"	Oversize
	60-60053H	Exhaust	29.00mm	1.142"	0.1953"	17°	3.210"	Standard
	60-60054H	Exhaust	30.00mm	1.182"	0.1953"	17°	3.210"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.390"	0.430"	0.570"	0.770"	0.466"	0.1960"	0.4167" / Std.		60-60060
							+0.001"		60-60061
							+0.002"		60-60062
							+0.004"		60-60064
							+0.010"		60-60069

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			



# SUZUKI® LTR™ 450 / 450Z 2006-2009

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60280	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.215"	56#	157#	.415"	
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60850	Intake	.415"	1.190"	61#	168#	.415"
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift		
	60-61780	Intake	.415"	1.190"	61#	168#	.415"		
		Exhaust	.415"	1.215"	56#	157#	.415"		
	Kit Includes			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
				2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
			1	Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
60-60280	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60310	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
60-60313	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
60-60290	Intake Standard Valve Guide	Valve Guide • C630 Bronze
60-60300	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
60-61781	Gasket Kit	<b>Includes:</b> Head Gasket 96mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Valve Stem Seals (4)


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71016-4		Pkg. of 4	0%	
				71016-8		Pkg. of 8	0%	
				71016-16		Pkg. of 16	Less- 10%	
				71016-50		Pkg. of 50	Less- 15%	
		71016-100	Pkg. of 100	Less- 20%				

# SUZUKI® LTR™ 450 / 450Z 2006-2009

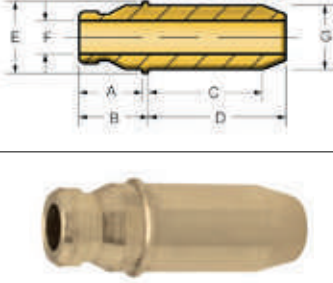


## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60310	Intake	36.00mm	1.418"	0.2155"	20°	3.210"	Standard
	60-60311	Intake	37.00mm	1.457"	0.2155"	20°	3.210"	Oversize
	60-60313	Exhaust	29.00mm	1.142"	0.2150"	20°	3.190"	Standard
	60-60314	Exhaust	30.00mm	1.182"	0.2150"	20°	3.190"	Oversize


Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust
	0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.	60-60290	
							+0.001"	60-60291	
							+0.002"	60-60292	
							+0.004"	60-60294	
							+0.010"	60-60299	
	0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.		60-60300
							+0.001"		60-60301
							+0.002"		60-60302
							+0.004"		60-60304
						+0.010"		60-60309	

# SUZUKI® RM-Z450™ 2005-2006

## Valve Spring Kit • Lightweight Racing


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60240	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.220"	55#	156#	.415"	
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

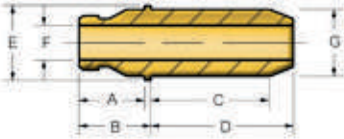
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60460	Intake	.415"	1.190"	61#	168#	.415"
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers
			2	White Diamond® Valves	2	H. T. Steel Basewashers	

## Valves • White Diamond® • Hard Chrome Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60270H	Intake	36.00mm	1.418"	0.1960"	20°	3.245"	Standard
	60-60271H	Intake	37.00mm	1.456"	0.1960"	20°	3.245"	Oversize
	60-60273H	Exhaust	29.00mm	1.142"	0.1953"	17°	3.210"	Standard
	60-60274H	Exhaust	30.00mm	1.182"	0.1953"	17°	3.210"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.375"	0.410"	0.580"	0.800"	0.460"	0.1955"	0.4170" / Std.		60-60320
							+0.001"		60-60321
							+0.002"		60-60322
							+0.010"		60-60329



# SUZUKI® RM-Z450™ 2005-2006

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Intake
								Exhaust
		<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>		
		71015-4		Pkg. of 4		0%		
		71015-8		Pkg. of 8		0%		
		71015-16		Pkg. of 16		Less- 10%		
		71015-50		Pkg. of 50		Less- 15%		
		71015-100		Pkg. of 100		Less- 20%		

# SUZUKI® RM-Z450™ 2007

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60650	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.220"	55#	156#	.415"	
<b>Kit Includes</b>			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-61000	Intake	.415"	1.190"	61#	168#	.415"
	<b>Kit Includes</b>			2	CrSi Valve Springs	2	Titanium Retainers
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	60-60662	Intake	36.00mm	1.418"	0.2160"	20°	3.240"	Standard
	60-60666	Exhaust	29.00mm	1.142"	0.2150"	20°	3.190"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.		60-60670	
								+0.001"		60-60671
								+0.002"		60-60672
								+0.010"		60-60679

# SUZUKI® RM-Z450™ 2007



## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake
								Exhaust
			Part Number		Quantity		Quantity Discount	
			71016-4		Pkg. of 4		0%	
			71016-8		Pkg. of 8		0%	
			71016-16		Pkg. of 16		Less- 10%	
			71016-50		Pkg. of 50		Less- 15%	
			71016-100		Pkg. of 100		Less- 20%	

# SUZUKI® RM-Z450™ 2008-2019

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60700	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.220"	56#	157#	.415"	
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Cylinder Head Service Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61610	Intake	.415"	1.190"	61#	168#	.415"	
		Exhaust	.415"	1.220"	56#	157#	.415"	
Kit Includes			4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
			2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
			4	In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit		

## Components • Replacement • Cylinder Head Service Kit NEW PRODUCTS

KPMI P/N	Description	Specification
60-60700	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60712	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
60-60718	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
60-60730	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
60-61611	Gasket Kit	<b>Includes:</b> Head Gasket 97mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Valve Seals (4)


## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60720	Intake	.415"	1.190"	61#	168#	.415"
	Kit Includes			2	CrSi Valve Springs	2	Titanium Retainers
			2	Black Diamond™ Valves	2	H. T. Steel Basewashers	




# SUZUKI® RM-Z450™ 2008-2019

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60712</b>	Intake	36.00mm	1.418"	0.2155"	20°	3.210"	Standard
	<b>60-60713</b>	Intake	37.00mm	1.417"	0.2155"	20°	3.210"	Oversize
	<b>60-60718</b>	Exhaust	31.00mm	1.220"	0.2150"	20°	3.195"	Standard

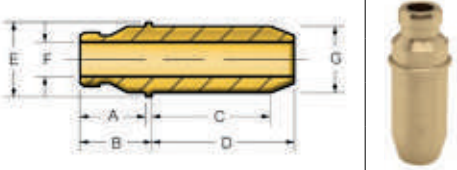
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>60-60712T</b>	Intake	36.00mm	1.418"	0.2155"	20°	3.215"	Titanium	12911-28H00
	<b>60-60718T</b>	Exhaust	31.00mm	1.220"	0.2150"	20°	3.180"	Titanium	12912-28H00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

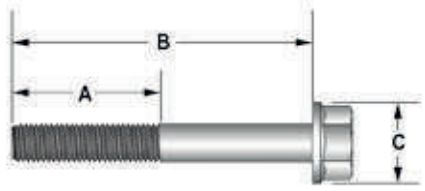
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.		<b>60-60730</b>
							+0.001"		<b>60-60731</b>
							+0.002"		<b>60-60732</b>
							+0.004"		<b>60-60734</b>
							+0.010"		<b>60-60739</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
				Part Number			Quantity	Quantity Discount
				<b>71016-4</b>			Pkg. of 4	0%
				<b>71016-8</b>			Pkg. of 8	0%
				<b>71016-16</b>			Pkg. of 16	Less- 10%
				<b>71016-50</b>			Pkg. of 50	Less- 15%
				<b>71016-100</b>			Pkg. of 100	Less- 20%

## Cam Tower Bolt • H.T. Steel NEW PRODUCTS

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N	
	<b>60-61460</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 8	09103-06266	
		M6 x 1.0	10mm	18mm	45mm	0.495"			09103-06026	
	<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.		Pkg. of 4	09103-06165
						0.495"			09103-06293	
<b>41006-4</b>	M6 x 1.0	10mm	18mm	45mm	12.57mm	4ea.	Pkg. of 4	09103-06266		
					0.495"		09103-06165			
								09103-06293		

Works with other applications (see dimensions for compatibility)

# SUZUKI® GS 500E™ 1989-2009



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60120	Intake	.500"	1.345"	90#	268#	.500"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	H.T. Steel Keepers Pr.	4	CrSi Valve Springs
			4	H.T. Steel Basewashers	4	H.T. Steel Spring Shims		

# SUZUKI® SV™ 650 1999-2009

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60030	Intake	.405"	1.285"	66#	168#	.405"	
		Exhaust						
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs		
			8	H.T. Steel Basewashers	8	H.T. Steel Spring Shims		

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.435"	0.460"	0.875"	1.020"	0.460"	0.1750"	0.4170" / Std.	<b>60-60080</b>		
								+0.001"	<b>60-60081</b>	
								+0.010"	<b>60-60089</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
				Part Number			Quantity	Quantity Discount
				<b>71014-4</b>			Pkg. of 4	0%
				<b>71014-8</b>			Pkg. of 8	0%
				<b>71014-16</b>			Pkg. of 16	Less- 10%
				<b>71014-50</b>			Pkg. of 50	Less- 15%
			<b>71014-100</b>			Pkg. of 100	Less- 20%	



# SUZUKI® GSX-R™ 600 1997-2000

SUZUKI

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-1006	Intake	.420"	1.225"	55#	157#	.420"
		Exhaust					
Kit Includes			16 Titanium Retainers	16 CrSi Valve Springs	16 H.T. Steel Basewashers		

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	60-6156	Intake	Titanium	Pkg. of 16
		Exhaust		

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.435"	0.460"	0.875"	1.020"	0.460"	0.1750"	0.4170" / Std.	60-6130		
								+0.001"	60-6131	
								+0.010"	60-6140	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
				Part Number		Quantity	Quantity Discount	
				71014-4		Pkg. of 4	0%	
				71014-8		Pkg. of 8	0%	
				71014-16		Pkg. of 16	Less- 10%	
				71014-50		Pkg. of 50	Less- 15%	
			71014-100		Pkg. of 100	Less- 20%		

# SUZUKI® GSX-R™ 600 / 750 2004-2018

## Cam Tower Bolt • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	60-61450	M6 x 1.0	10mm	18mm	40mm	12.57mm	20ea.	Pkg. of 20	09103-06266
									09103-06026
	41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
0.495"						09103-06026			

Works with other applications (see dimensions for compatibility)

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# SUZUKI® KING QUAD's 700-750 2005-'20



SUZUKI

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61500	Intake	.390"	1.440"	50#	148#	.390"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61550	Intake	.390"	1.440"	50#	148#	.390"	
		Exhaust						
Kit Includes			4	H.T. Steel Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	60-61512	Intake	36.00mm	1.417"	0.2160"	20°	3.695"	Standard
	60-61516	Exhaust	33.00mm	1.299"	0.2155"	20°	3.705"	Standard

## Cam Tower Bolt • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	60-61545	M6 x 1.0	10mm	18mm	40mm	12.57mm	8ea.	Pkg. of 8	09103-06266
						0.495"			09103-06026
	41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
0.495"						09103-06026			

Works with other applications (see dimensions for compatibility)

## Tappets • Shim On Bottom Conv. • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	60-61530	Std.	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
	60-61540	Std.	DLC Coated	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.620"	0.655"	0.645"	0.825"	0.460"	0.2155"	0.4167" / Std.		<b>60-61520</b>
								+0.001"	<b>60-61521</b>
								+0.002"	<b>60-61522</b>
								+0.010"	<b>60-61529</b>



# SUZUKI® KING QUAD's 700-750 2005-'20

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71016-4</b>				Pkg. of 4		0%
		<b>71016-8</b>				Pkg. of 8		0%
		<b>71016-16</b>				Pkg. of 16		Less- 10%
		<b>71016-50</b>				Pkg. of 50		Less- 15%
		<b>71016-100</b>				Pkg. of 100		Less- 20%

# SUZUKI® GS™ 750 PRE-1980

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-0891</b>	Intake	.480"	1.375"	78#	250#	.480"
		Exhaust					
<b>Kit Includes</b>	8	CrSi Valve Springs					

## Retainer Set • Titanium

	KPMI P/N	Type	Material					
	<b>60-6106</b>	Intake	Titanium					
		Exhaust						
<b>Set Includes</b>	8	Titanium Retainers	8	H. T. Steel Keepers Pr.				

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.620"	0.670"	0.860"	1.115"	0.495"	0.2745"	0.4752" / Std.		<b>60-0860</b>	
								+0.002"	<b>60-0861</b>	
							+0.015"	<b>60-4090</b>		
	0.620"	0.670"	---	1.115"	0.495"	0.2745"	0.4752" / Std.		<b>60-0864</b>	
								+0.002"	<b>60-0865</b>	
								+0.015"	<b>60-4107</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.374"	0.560"	4	A	B	C	D	Intake
				0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		<b>71019-4</b>				Pkg. of 4		0%
		<b>71019-8</b>				Pkg. of 8		0%
		<b>71019-16</b>				Pkg. of 16		Less- 10%
		<b>71019-50</b>				Pkg. of 50		Less- 15%
		<b>71019-100</b>				Pkg. of 100		Less- 20%

# SUZUKI® DR™ 750 / 800 BIG 1988-'98



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752"	<b>60-60090</b>		
								+0.002"	<b>60-60092</b>	
								+0.004"	<b>60-60094</b>	
							+0.015"	<b>60-60099</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust
	Part Number			Quantity	Quantity Discount			
	<b>71019-4</b>			Pkg. of 4	0%			
	<b>71019-8</b>			Pkg. of 8	0%			
	<b>71019-16</b>			Pkg. of 16	Less- 10%			
	<b>71019-50</b>			Pkg. of 50	Less- 15%			
<b>71019-100</b>			Pkg. of 100	Less- 20%				

# SUZUKI® GS™ 750 E/ ES/ L/ T 1980-1986

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-1028</b>	Intake	.390"	1.215"	50#	138#	.390"
		Exhaust					
<b>Kit Includes</b>			16	CrSi Valve Springs			

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	<b>60-1034T</b>	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs				

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60220</b>	Intake	27.50mm	1.083"	0.2145"	27°	3.380" Standard
	<b>60-4301</b>	Intake	28.50mm	1.122"	0.2155"	23°	3.435" Oversize
	<b>60-4311</b>	Intake	29.50mm	1.161"	0.2155"	23°	3.435" Oversize
	<b>60-4302</b>	Intake	31.00mm	1.220"	0.2155"	23°	3.435" Oversize
<b>60-4304</b>	Exhaust	24.50mm	0.965"	0.2145"	27°	3.415" Oversize	



# SUZUKI® GS™ 750 E/ ES/ L/ T 1980-1986

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.465"	0.510"	0.780"	0.940"	0.488"	0.2160"	0.4365" / Std.		<b>60-1029</b>	
								+0.002"		<b>60-1030</b>	
								+0.015"		<b>60-4030</b>	
								+0.065"		<b>60-1052</b>	
<b>Valve Guides • C630 Bronze • Special 5.0mm Conversion</b>											
		A	B	C	D	E	F	G	Intake	Exhaust	
		0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"		<b>60-4298</b>	
		<b>Special Blank</b>									
		A	B	C	D	E	F	G	Intake	Exhaust	
		0.465"	---	---	1.285"	0.435"	0.2145"	0.6250"±0.010		<b>60-4031</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number			Quantity		Quantity Discount	
		<b>71016-4</b>	Pkg. of 4		0%			
		<b>71016-8</b>	Pkg. of 8		0%			
		<b>71016-16</b>	Pkg. of 16		Less- 10%			
		<b>71016-50</b>	Pkg. of 50		Less- 15%			
		<b>71016-100</b>	Pkg. of 100		Less- 20%			

## Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number			Quantity		Quantity Discount	
		<b>71015-4</b>	Pkg. of 4		0%			
		<b>71015-8</b>	Pkg. of 8		0%			
		<b>71015-16</b>	Pkg. of 16		Less- 10%			
		<b>71015-50</b>	Pkg. of 50		Less- 15%			
		<b>71015-100</b>	Pkg. of 100		Less- 20%			

# SUZUKI® GSX-R™ 750 1986-1992


## Valve Spring Only Kit • High Performance For 1986-1990 Models

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-1002</b>	Intake	.440"	1.215"	55#	170#	.440"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			


# SUZUKI® GSX-R™ 750 1986-1992



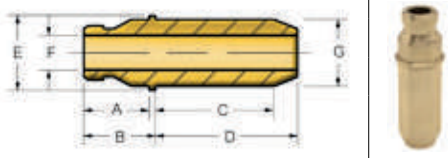
## Valve Spring Only Kit • High Performance For 1991-1992 Models

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-1003	Intake	.440"	1.255"	45#	158#	.440"
		Exhaust					
Kit Includes			16	CrSi Valve Springs	16	Spring Shim	


## Retainer Set • Titanium

	KPMI P/N	Type	Material	Models	Quantity
	60-6155	Intake	Titanium	1986-1990	Pkg. of 16
		Exhaust			
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1002					

## Valve Guides • C630 Bronze


	A	B	C	D	E	F	G	Intake	Exhaust	
	0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.	60-4156-1		
								+0.002"	60-4157-1	
								+0.006"	60-4159-1	
								+0.085"	60-4160-1	

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71015-4			Pkg. of 4		0%		
	71015-8			Pkg. of 8		0%		
	71015-16			Pkg. of 16		Less- 10%		
	71015-50			Pkg. of 50		Less- 15%		
71015-100			Pkg. of 100		Less- 20%			

# SUZUKI® GSX-R™ 750 1993-1995

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60040	Intake	.440"	1.230"	50#	158#	.440"	
		Exhaust						
Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	60-6154	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs				



# SUZUKI® GSX-R™ 750 1993-1995

## Valve Guides • C630 Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	0.655"	0.680"	0.770"	0.915"	0.460"	0.1760"	0.4170" / Std.	<b>60-6000</b>	
								+0.002"	<b>60-6002</b>
							+0.010"	<b>60-6010</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type	
4.5mm	0.331"	0.370"	4	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	Intake	
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust	
			<b>Part Number</b>				<b>Quantity</b>	<b>Quantity Discount</b>	
			<b>71014-4</b>				Pkg. of 4		0%
			<b>71014-8</b>				Pkg. of 8		0%
			<b>71014-16</b>				Pkg. of 16		Less- 10%
			<b>71014-50</b>				Pkg. of 50		Less- 15%
<b>71014-100</b>				Pkg. of 100		Less- 20%			

# SUZUKI® GSX-R™ 750 SRAD 1996-1999

## Valve Spring Kit • Lightweight Racing

	<b>KPMI P/N</b>	<b>Type</b>	<b>Max Valve Lift</b>	<b>Installed Height</b>	<b>Seat Pressure</b>	<b>Open Pressure</b>	<b>@ Lift</b>	
	<b>60-1005</b>	Intake	.420"	1.220"	55#	157#	.420"	
		Exhaust						
<b>Kit Includes</b>			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

## Retainer Set • O. E. M. Replacement • Titanium

	<b>KPMI P/N</b>	<b>Type</b>	<b>Material</b>	<b>Quantity</b>
	<b>60-6155</b>	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs				

## Valve Guides • C630 Bronze

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>Intake</b>	<b>Exhaust</b>
	0.435"	0.460"	0.875"	1.020"	0.460"	0.1755"	0.4170" / Std.	<b>60-6130</b>	
								+0.002"	<b>60-6131</b>
							+0.010"	<b>60-6140</b>	

# SUZUKI® GSX-R™ 750 SRAD 1996-'99



## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake
								Exhaust
		<b>Part Number</b>			<b>Quantity</b>		<b>Quantity Discount</b>	
		71014-4			Pkg. of 4		0%	
		71014-8			Pkg. of 8		0%	
		71014-16			Pkg. of 16		Less- 10%	
		71014-50			Pkg. of 50		Less- 15%	
		71014-100			Pkg. of 100		Less- 20%	

# SUZUKI® GS™ 850 1979-1983

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-0891	Intake	.480"	1.375"	78#	250#	.480"
		Exhaust					
<b>Kit Includes</b>			8	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material					
	60-6106	Intake	Titanium					
		Exhaust						
<b>Set Includes</b>		8	Titanium Retainers	8	H. T. Steel 15° Jumbo Keepers Pr.			

# SUZUKI® GS™ 1000 PRE-1981

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-0891	Intake	.480"	1.375"	78#	250#	.480"
		Exhaust					
<b>Kit Includes</b>			8	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material					
	60-6106	Intake	Titanium					
		Exhaust						
<b>Set Includes</b>		8	Titanium Retainers	8	H. T. Steel 15° Jumbo Keepers Pr.			



# SUZUKI® GS™ 1000 PRE-1981

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.620"	0.670"	0.860"	1.115"	0.495"	0.2745"	0.4752" / Std.	<b>60-0860</b>		
									+0.002"	<b>60-0861</b>	
							+0.015"	<b>60-4090</b>			
		0.620"	0.670"	---	1.115"	0.495"	0.2745"	0.4752" / Std.		<b>60-0864</b>	
									+0.002"		<b>60-0865</b>
									+0.015"		<b>60-4107</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type	
				A	B	C	D	Intake	Exhaust
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Intake	Exhaust
		Part Number		Quantity		Quantity Discount			
		<b>71019-4</b>		Pkg. of 4		0%			
		<b>71019-8</b>		Pkg. of 8		0%			
		<b>71019-16</b>		Pkg. of 16		Less- 10%			
		<b>71019-50</b>		Pkg. of 50		Less- 15%			
<b>71019-100</b>		Pkg. of 100		Less- 20%					

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>60-1026</b>	Std.	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 8
	<b>60-4220</b>	+0.020	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1

Requires Kibblewhite® Shim On Bottom Retainers # 60-6106 (Pkg. of 8). Refer to KPMI® Tappet Section, in back of catalog, when selecting other size tappets.

# SUZUKI® GSX-R1000™ 2001-2004

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-60146</b>	Intake	.440"	1.320"	46#	154#	.440"
		Exhaust					
Kit Includes			16 Titanium Retainers	16 CrSi Valve Springs	16 H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	<b>60-60140</b>	Intake	29.00mm	1.142"	0.1568"	20°	3.740"	Standard
	<b>60-60141</b>	Intake	30.00mm	1.181"	0.1568"	20°	3.740"	Oversize
	<b>60-60143</b>	Exhaust	24.00mm	0.945"	0.1563"	20°	3.755"	Standard
<b>60-60144</b>	Exhaust	25.00mm	0.984"	0.1563"	20°	3.755"	Oversize	



# SUZUKI® GSX-R1000™ 2001-2004



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.425"	0.450"	0.750"	0.990"	0.385"	0.1570"	0.3573" / Std.		<b>60-60150</b>
							+0.001"		<b>60-60151</b>
							+0.002"		<b>60-60152</b>
							+0.010"		<b>60-60159</b>

# SUZUKI® GSX-R™ 1000 2005-2008

## Valve Spring Only Kit • "Performance Rebuild" Beehive NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-60950</b>	Intake	.425"	1.335"	60#	181#	.425"
		Exhaust					
<b>Kit Includes</b>			16	CrSi Valve Springs	16	H. T. Steel Basewashers	

- These springs have been designed to provide pressures to control stainless steel valves. Experienced engine builders who are running aggressive camshafts or higher than factory RPM's may choose to run these elevated pressures with titanium valves as well
- These high quality replacement springs have been designed to exceed the OEM specifications by fitting precisely on the spring shoulder diameter of both the OEM retainers, and KPMI H.T. Steel retainers (P/N 60-60941)
- This kit also includes H.T. Steel basewashers in order to achieve a precision fitment on the large end of our beehive spring which, better controls the lateral motion of the spring, ensuring longer life and less wear on the spring, retainer, and basewasher.
- KPMI® has gone a step further and specified the latest in spring materials and processing, for an extremely robust design that will last longer than anything currently on the market
- Unique features of this spring include is beehive variable rate wind to reduce the chances of spring surge due to cam harmonics, Super-Clean Chrome Silicon wire with additional Vanadium and Nickel added for increased strength, and a gas nitrided and double shot peened finish for greater fatigue life

## Retainer Set • O. E. M. Replacement • H. T. Steel NEW PRODUCTS

	KPMI P/N	Type	Material	Quantity
	<b>60-60941</b>	Intake	H.T. Steel	Pkg. of 16
		Exhaust		

- By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer
- These retainers are intended as an OEM replacement and are completely compatible with the OEM springs, keepers, and shims
- The spring shoulder diameter has been designed to match the OEM retainer and spring as well as KPMI's beehive spring (P/N 60-60950), making this retainer your high performance OEM alternative

## Valve Spring Kit • Lightweight Racing and Stainless Steel Conversion


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>60-60600</b>	Intake	<b>Titanium Valve Only</b>					
		Exhaust	.445"	1.330"	43#	152#	.445"	
		Intake	<b>Stainless Steel Conversion</b>					
		Exhaust	.370"	1.245"	65#	156#	.370"	
<b>Kit Includes</b>			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers
			16	Spring Shims		16	Spring Shims	

To achieve the proper installed height when using the stainless valve conversion, it may be necessary to utilize the 0.030" & 0.060" shims provided with the kit.




# SUZUKI® GSX-R™ 1000 2005-2008

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60612</b>	Intake	30.00mm	1.181"	0.1765"	25°	3.760"	Standard
	<b>60-60616</b>	Exhaust	24.00mm	0.945"	0.1760"	14°	3.750"	Standard
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.								


## Valve • Titanium • Tensilite® • Intake

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60614T</b>	Intake	31.00mm	1.220"	0.1765"	25°	3.755"	Oversize

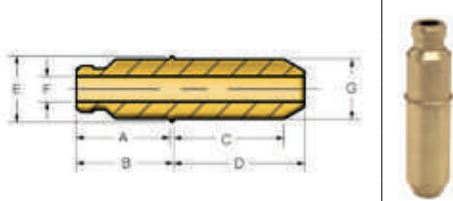
## Valve • White Diamond® • Inconel® • Exhaust

**NEW PRODUCTS**


	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60618K</b>	Exhaust	24.00mm	0.945"	0.1760"	14°	3.750"	Standard

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

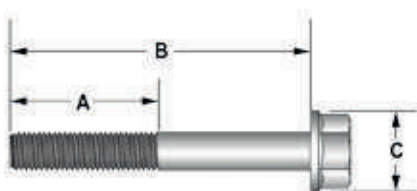
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.		<b>60-60620</b>
								+0.001"	<b>60-60621</b>
								+0.002"	<b>60-60622</b>
								+0.010"	<b>60-60629</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
	Part Number			Quantity		Quantity Discount		
	<b>71014-4</b>			Pkg. of 4		0%		
	<b>71014-8</b>			Pkg. of 8		0%		
	<b>71014-16</b>			Pkg. of 16		Less- 10%		
	<b>71014-50</b>			Pkg. of 50		Less- 15%		
<b>71014-100</b>			Pkg. of 100		Less- 20%			

## Cam Tower Bolt • H.T. Steel

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	<b>60-61450</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm	20ea.	Pkg. of 20	09103-06266 09103-06026
	<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	4ea.	Pkg. of 4	09103-06266 09103-06026

Works with other applications (see dimensions for compatibility)

# SUZUKI® GSX-R™ 1000 2009-2016



## Valve Spring Kit • Beehive

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61710	Intake	.425	1.335"	60#	181#	.425"	
		Exhaust						
Kit Includes			16	H. T. Steel Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

- By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer
- KPMI® has gone a step further and specified the latest in spring materials and processing, for an extremely robust design that will last longer than anything currently on the market
- Unique features of this spring include a beehive variable rate wind to reduce the chances of spring surge due to cam harmonics, Super-Clean Chrome Silicon wire with additional Vanadium and Nickel added for increased strength, and a gas nitrided and double shot peened finish for greater fatigue life

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-61650	Intake	.445"	1.330"	43#	152#	.445"	
		Exhaust						
Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

## Valve • Titanium • Tensilite® • Intake

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	60-61662T	Intake	31.00mm	1.220"	0.1765"	25°	3.755"

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

		A	B	C	D	E	F	G	Intake	Exhaust		
		0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.		<b>60-61670</b>		
									+0.001"		<b>60-61671</b>	
									+0.002"		<b>60-61672</b>	
									+0.010"		<b>60-61679</b>	

## Valve Guide Seals • Viton®

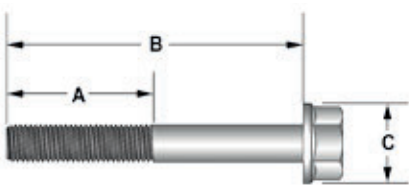
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number				Quantity		Quantity Discount
		<b>71016-4</b>				Pkg. of 4		0%
		<b>71016-8</b>				Pkg. of 8		0%
		<b>71016-16</b>				Pkg. of 16		Less- 10%
		<b>71016-50</b>				Pkg. of 50		Less- 15%
		<b>71016-100</b>				Pkg. of 100		Less- 20%



# SUZUKI® GSX-R™ 1000 2009-2016

## Cam Tower Bolt • H.T. Steel


**NEW PRODUCTS**

	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
	<b>60-61690</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	20ea.	Pkg. of 20	09103-06266 09103-06026
<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	4ea.	Pkg. of 4	09103-06266 09103-06026	


Works with other applications (see dimensions for compatibility)

# SUZUKI® GS™ 1100 E / ES / S 1980-1986

## Valve Spring Only Kit • High Performance


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-1028</b>	Intake	.390"	1.215"	50#	138#	.390"
Exhaust							
<b>Kit Includes</b>			16	CrSi Valve Springs			

## Retainer Set • O. E. M. Replacement • Titanium

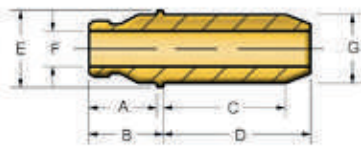
	KPMI P/N	Type	Material	Quantity
	<b>60-1034T</b>	Intake	Titanium	Pkg. of 16
Exhaust				

Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1028

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-60220</b>	Intake	27.50mm	1.083"	0.2145"	27°	3.380"	Standard
	<b>60-4301</b>	Intake	28.50mm	1.122"	0.2155"	23°	3.435"	Oversize
	<b>60-4311</b>	Intake	29.50mm	1.161"	0.2155"	23°	3.435"	Oversize
	<b>60-4302</b>	Intake	31.00mm	1.220"	0.2155"	23°	3.435"	Oversize
	<b>60-4304</b>	Exhaust	24.50mm	0.965"	0.2145"	27°	3.415"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.465"	0.510"	0.780"	0.940"	0.488"	0.2160"	0.4365" / Std.		<b>60-1029</b>
							+0.002"	<b>60-1030</b>	
							+0.015"	<b>60-4030</b>	
							+0.065"	<b>60-1052</b>	
<b>Valve Guides • C630 Bronze • Special 5.0mm Conversion</b>									
A	B	C	D	E	F	G	Intake	Exhaust	
0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"		<b>60-4298</b>	

# SUZUKI® GS™ 1100 E / ES / S 1980-1986



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71016-4				Pkg. of 4		0%
		71016-8				Pkg. of 8		0%
		71016-16				Pkg. of 16		Less- 10%
		71016-50				Pkg. of 50		Less- 15%
		71016-100				Pkg. of 100		Less- 20%

## Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		<b>Part Number</b>				<b>Quantity</b>		<b>Quantity Discount</b>
		71015-4				Pkg. of 4		0%
		71015-8				Pkg. of 8		0%
		71015-16				Pkg. of 16		Less- 10%
		71015-50				Pkg. of 50		Less- 15%
		71015-100				Pkg. of 100		Less- 20%

# SUZUKI® GSX-R™ 1100 1986-1990

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-1002	Intake	.440"	1.215"	55#	170#	.440"
		Exhaust					
<b>Kit Includes</b>			16	CrSi Valve Springs			

## Retainer Set • Titanium

	KPMI P/N	Type	Material	Quantity
	60-4155	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1002				

## Valve • White Diamond® • Stainless

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	60-4216H	Intake	28.50mm	1.122"	0.1958"	19°	3.390"	Standard
	60-4218H	Intake	30.00mm	1.181"	0.1958"	19°	3.390"	Oversize
	60-4215H	Exhaust	25.00mm	0.984"	0.1948"	17°	3.360"	Standard
	60-4217H	Exhaust	26.00mm	1.024"	0.1948"	17°	3.360"	Oversize



# SUZUKI® GSX-R™ 1100 1986-1990

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.	<b>60-4156-1</b>		
								+0.002"	<b>60-4157-1</b>	
								+0.006"	<b>60-4159-1</b>	
							+0.085"	<b>60-4160-1</b>		

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71015-4</b>		Pkg. of 4		0%
				<b>71015-8</b>		Pkg. of 8		0%
				<b>71015-16</b>		Pkg. of 16		Less- 10%
				<b>71015-50</b>		Pkg. of 50		Less- 15%
			<b>71015-100</b>		Pkg. of 100		Less- 20%	

# SUZUKI® GSX-R™ 1100 1991-1992

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>60-1003</b>	Intake	.440"	1.255"	45#	158#	.440"
		Exhaust					
<b>Kit Includes</b>			16	CrSi Valve Springs	16	Spring Shim	

## Valve • White Diamond® • Stainless

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>60-6091H</b>	Intake	28.50mm	1.122"	0.1958"	19°	3.450"	Standard
	<b>60-6092H</b>	Exhaust	25.00mm	0.984"	0.1948"	17°	3.420"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.	<b>60-4156-1</b>		
								+0.002"	<b>60-4157-1</b>	
								+0.006"	<b>60-4159-1</b>	
							+0.085"	<b>60-4160-1</b>		

# SUZUKI® GSX-R™ 1100 1991-1992



## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71015-4			Pkg. of 4		0%	
		71015-8			Pkg. of 8		0%	
		71015-16			Pkg. of 16		Less- 10%	
		71015-50			Pkg. of 50		Less- 15%	
		71015-100			Pkg. of 100		Less- 20%	

# SUZUKI® GSX-R™ 1100 1993-1998

- Water Cooled

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60040	Intake	.440"	1.235"	50#	158#	.440"	
		Exhaust						
Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	60-6154	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs				

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.		60-60620
								+0.001"	60-60621
								+0.002"	60-60622
								+0.010"	60-60629


## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust
		Part Number			Quantity		Quantity Discount	
		71014-4			Pkg. of 4		0%	
		71014-8			Pkg. of 8		0%	
		71014-16			Pkg. of 16		Less- 10%	
		71014-50			Pkg. of 50		Less- 15%	
		71014-100			Pkg. of 100		Less- 20%	




# SUZUKI® GS™ 1150 1984-1986


## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-1028	Intake	.390"	1.215"	50#	138#	.390"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

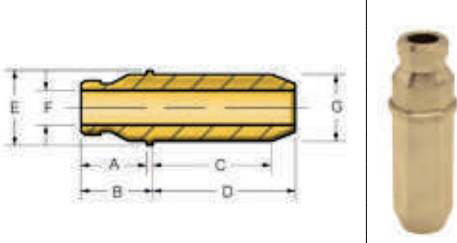
## Retainer Set • O. E. M. Replacement • Titanium

	KPMI P/N	Type	Material	Quantity
	60-1034T	Intake	Titanium	Pkg. of 16
		Exhaust		
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1028				


## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60220	Intake	27.50mm	1.083"	0.2145"	27°	3.380"	Standard
	60-4301	Intake	28.50mm	1.122"	0.2155"	23°	3.435"	Oversize
	60-4311	Intake	29.50mm	1.161"	0.2155"	23°	3.435"	Oversize
	60-4302	Intake	31.00mm	1.220"	0.2155"	23°	3.435"	Oversize
	60-4304	Exhaust	24.50mm	0.965"	0.2145"	27°	3.415"	Oversize


## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.465"	0.510"	0.780"	0.940"	0.488"	0.2160"	0.4365" / Std.		<b>60-1029</b>
							+0.002"		<b>60-1030</b>
							+0.015"		<b>60-4030</b>
							+0.065"		<b>60-1052</b>
<b>Valve Guides • C630 Bronze • Special 5.0mm Conversion</b>									
A	B	C	D	E	F	G	Intake	Exhaust	
0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"		<b>60-4298</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity	Quantity Discount			
	<b>71016-4</b>			Pkg. of 4	0%			
	<b>71016-8</b>			Pkg. of 8	0%			
	<b>71016-16</b>			Pkg. of 16	Less- 10%			
	<b>71016-50</b>			Pkg. of 50	Less- 15%			
<b>71016-100</b>			Pkg. of 100	Less- 20%				

## Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
	Part Number			Quantity	Quantity Discount			
	<b>71015-4</b>			Pkg. of 4	0%			
	<b>71015-8</b>			Pkg. of 8	0%			
	<b>71015-16</b>			Pkg. of 16	Less- 10%			
	<b>71015-50</b>			Pkg. of 50	Less- 15%			
<b>71015-100</b>			Pkg. of 100	Less- 20%				



# SUZUKI® HAYABUSA™ 1999-2019



## Valve Spring Kit • "Shim in Tappet" Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60750	Intake	.490"	1.455"	65#	195#	.415"
		Exhaust					
	Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs
			16	H. T. Steel Basewashers	16	H. T. Steel Tappets	

This high lift kit is designed for maximum performance applications on 1999-2014 models. It includes KPMI® "Shim in Tappet" design tappets that solve the issues of retainer counter-bore ovaling and adjustment shims becoming dislodged. It is especially recommended for use with reduced base circle cams.

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60760	Intake	.490"	1.455"	65#	190#	.415"	
		Exhaust						
	Kit Includes			16	Titanium Retainers	16	CrSi Valve Springs	16

This high lift kit is designed for maximum performance applications on 1999-2014 models, and includes lightweight titanium retainers as well as high lift, super-clean chrome silicon wire dual valve springs.

## Valve Spring Kit • Lightweight Racing NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	60-60900	Intake	.490"	1.455"	65#	190#	.415"	
		Exhaust						
	Kit Includes			16	H. T. Steel Retainers	16	CrSi Valve Springs	16

KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With 65lbs of seat pressure these kits are the ultimate setup for any 1999-'14 'Busa street/strip tuner.

## Retainer Set • O. E. M. Replacement • H. T. Steel NEW PRODUCTS

	KPMI P/N	Type	Material	Quantity
	60-60901	Intake	H. T. Steel	Pkg. of 16
		Exhaust		

Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-60900

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	60-60560	Intake	.490"	1.455"	65#	195#	.415"
		Exhaust					
	Kit Includes			16	CrSi Valve Springs		

This spring set fits the stock retainers and bases on all 1999-2015 'Busa models. It is the street/strip tuner's answer for high performance valve springs.



# SUZUKI® HAYABUSA™ 1999-2019

## Valve Kit • High Performance Racing

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60910	Intake	34.00mm	1.339"	0.1962"	21°	3.745"	Oversize
		Exhaust	27.50mm	1.083"	0.1956"	17°	3.735"	Standard
Kit Includes			8	Intake Titanium Valves		8	Exhaust Inconel® Valves	

The High Performance Racing Valve Kit for the Suzuki Hayabusa is a specially formulated combination of valve materials and sizes, designed in conjunction with top racers, for maximum performance. The kit includes a +1mm oversize Tensilite Titanium Intake Valve and a White Diamond Inconel Exhaust Valve (standard head size). Components are designed for increased air flow and resistance to the high operating temperatures from applications running forced induction and/or exotic fuels. This combination has been offered as a kit to provide the greatest value for builders and racers looking for the ultimate valve setup.

## Valve • Titanium • Tensilite® • Intake

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60413T	Intake	34.00mm	1.339"	0.1962"	21°	3.745"	Oversize

All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which is much tougher than the OEM oxidizing process. These +1mm oversized valves offer a 33% savings in mass over the '99-'07 steel valves and come within 2 grams of the '08 and later titanium valves.

## Valves • White Diamond® • Inconel® • Exhaust

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60436K	Exhaust	27.50mm	1.083"	0.1956"	17°	3.735"	Standard
	60-60437K	Exhaust	28.50mm	1.122"	0.1956"	17°	3.735"	Oversize

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valves • White Diamond® • Hard Chrome Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	60-60008H	Intake	33.00mm	1.299"	0.1962"	18°	3.740"	Standard
	60-60009H	Intake	34.00mm	1.339"	0.1962"	18°	3.750"	Oversize
	60-60010H	Exhaust	27.50mm	1.083"	0.1956"	17°	3.735"	Standard
	60-60011H	Exhaust	28.50mm	1.122"	0.1956"	17°	3.725"	Oversize

## Valve Guide Installer

	KPMI P/N	O.L.	Body Ø	Inner Ø 1	Inner Ø 2	Depth 1	Depth 2	Quantity
		A	B	C	D	E	F	
	60-61400	8.000"	0.615"	0.425"	0.348"	0.285"	0.650"	Pkg. of 1

Specifically designed for KPMI's Cast Iron, C630 and Manganese Bronze guides

## Valve Guide Remover

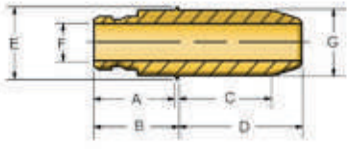

	KPMI P/N	O.L.	Body Ø	Ø 1	Ø 2	Length 1	Length 2	Quantity
		A	B	C	D	E	F	
	60-61405	8.000"	0.615"	0.182"	0.397"	1.000"	4.000"	Pkg. of 1

Works with other applications (see dimensions for compatibility)

# SUZUKI® HAYABUSA™ 1999-2019

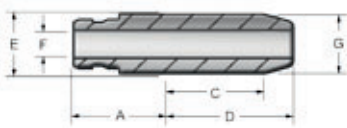



## Valve Guides • C630 Bronze • Manganese Bronze NEW PRODUCTS

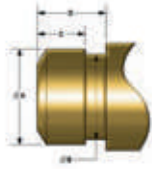

		A	B	C	D	E	F	G	Intake / Exhaust	
		0.560"	0.585"	0.650"	0.860"	0.460"	0.1962"	0.4170" / Std.	C630 Bronze	Manganese
										+0.001"
								+0.002"	<b>60-60021</b>	<b>60-60021-M</b>
								+0.004"	<b>60-60022</b>	<b>60-60022-M</b>
								+0.010"	<b>60-60024</b>	<b>60-60024-M</b>
									<b>60-60029</b>	<b>60-60029-M</b>

For sizing **KPMI® Manganese Bronze Valve guides** please use **Reamer #GR-1970**. For a complete listing of hones and reamers please see component section in back of catalog.

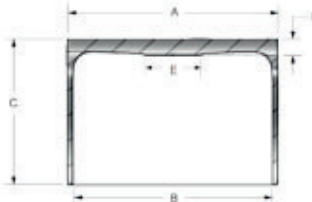
## Valve Guides • Cast Iron NEW PRODUCTS

		A	B	C	D	E	F	G	Intake / Exhaust	
		0.585"	----	0.650"	0.860"	0.415"	0.1931"	0.4170" / Std.		
										+0.001"
								+0.002"	<b>60-60021-C</b>	
								+0.004"	<b>60-60022-C</b>	
								+0.010"	<b>60-60024-C</b>	
									<b>60-60029-C</b>	

## Valve Guide Seals • Viton®

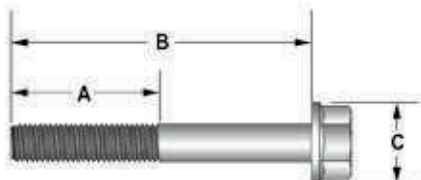
Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust
 	<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>			
	<b>71015-4</b>		Pkg. of 4		0%			
	<b>71015-8</b>		Pkg. of 8		0%			
	<b>71015-16</b>		Pkg. of 16		Less- 10%			
	<b>71015-50</b>		Pkg. of 50		Less- 15%			
	<b>71015-100</b>		Pkg. of 100		Less- 20%			

## Tappets • O.E.M. Replacement • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	<b>60-60014</b>	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 16
		Exhaust								
<b>60-60035</b>	Intake	None	28.50mm	1.1220"	1.058"	0.763"	0.320"	0.098"	Pkg. of 16	
	Exhaust									
<b>60-60335</b>	Intake	DLC Coated	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 16	
	Exhaust									

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting other size tappets.

## Cam Tower Bolt • H.T. Steel NEW PRODUCTS

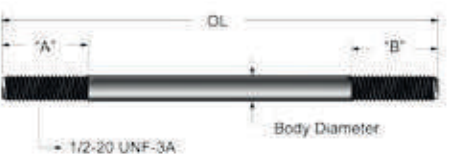
	KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N	
	<b>60-61465</b>	M6 x 1.0	10mm	18mm	18mm	40mm	12.57mm	16ea.	Pkg. of 20	09103-06266
										09103-06026
M6 x 1.0		10mm	18mm	45mm	0.495	4ea.	09103-06165			
							09103-06293			
<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266	
						0.495"			09103-06026	
<b>41006-4</b>	M6 x 1.0	10mm	18mm	45mm	45mm	12.57mm	4ea.	Pkg. of 4	09103-06165	
						0.495"			09103-06293	

Works with other applications (see dimensions for compatibility)




# SUZUKI® HAYABUSA™ 1999-2019

## Cylinder Stud Kit • H. T. Steel • Oversize • 1/2" -20 Thread NEW PRODUCTS

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
	<b>60-61200</b>	H. T. Steel	8.200"	0.498"	1.340"	1.340"	1/2" Dia. Oversize
	<b>Kit Includes</b>	10	H. T. Steel Studs		10	H. T. Steel Nuts	10 H. T. Steel Washers

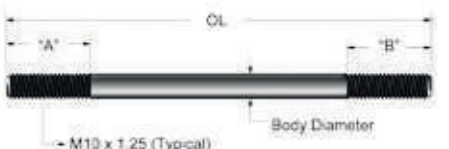
- 1/2" Oversized studs for maximum strength, intended for high HP and forced induction applications
- High quality CNC machined, heat treated steel nuts and studs with rolled threads for maximum tensile strength
- 12- Point Nut pattern allows maximum power transmission and clearance when installing
- Cases must be drilled and tapped for 1/2-20 thread, prior to installation
- Aftermarket head/base gaskets that can accept a 1/2" diameter stud are required
- Black Oxided for enhanced corrosion resistance
- Nuts also sold separately, see the KPMI® "Tools & Components" section of our website and catalog for purchasing information

## Cylinder Stud • H. T. Steel • Oversize • 1/2" -20 Thread NEW PRODUCTS

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
	<b>60-61201</b>	H. T. Steel	8.200"	0.498"	1.340"	1.340"	1/2" Dia. Oversize
	<b>Includes</b>	10	H. T. Steel Studs				

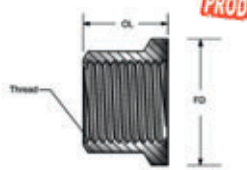

- Replaces the stock cylinder head bolt design, with a superior stud / nut configuration
- 1/2" Oversized studs for maximum strength, intended for high HP and forced induction applications
- High quality CNC machined, heat treated steel studs with rolled threads (not cut) for maximum tensile strength

## Cylinder Studs • H. T. Steel • M10 x 1.25 Thread

	KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
	<b>60-60825</b>	H. T. Steel	8.010"	0.370"	1.155"	1.310"	Std. Length
	<b>Includes</b>	10	H. T. Steel Studs		10	H. T. Steel Washers	


KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. Further, the case end thread is designed to have a slight interference fit to minimize distortion and maintain good thread contact during torque procedure. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

## Cylinder Nuts • Steel NEW PRODUCTS

	KPMI P/N	Material	F.D.	O.L.	Thread	Quantity
	<b>41002-4</b>	H.T. Steel	0.786"	0.520"	1/2-20 UNF 2A	Pkg. of 4
	<b>60-60820</b>	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 10
	<b>41001-4</b>	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 4

- High quality CNC machined, heat treated steel nuts with rolled threads for maximum tensile strength
- Black Oxided for enhanced corrosion resistance

## Washers • Spacers for 10M x 1.25 Thread

	KPMI P/N	Material	O.D.	O.L.	Thickness	Quantity
	<b>60-60840</b>	Stainless Steel	0.787"	0.413"	0.079"	Pkg. of 10
	<b>60-60835</b>	C630 Bronze	0.740"	0.396"	0.100"	Pkg. of 10

Note: Washers may be needed with +0.200" Length Studs

# TRIUMPH® 500 TWIN 1958-1973



## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70030	Intake	.455"	1.205"	74#	206#	.455"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	70-4290	Intake	39.12mm	1.540"	0.3105"	23°	3.480"	Standard
	70-4291	Exhaust	33.66mm	1.325"	0.3100"	27°	3.425"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.560"	0.610"	0.620"	1.160"	0.550"	0.3105"	0.5010" / Std.		<b>70-0339</b>
								+0.002"	<b>70-0340</b>
								+0.004"	<b>70-0341</b>
								+0.006"	<b>70-0342</b>
							+0.015"	<b>70-4031</b>	
No seal required.									

## Fork Bushing • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0646	Top	1.4990"	1.3075"	1.000"	Pkg. of 1
	70-0647	Bottom	1.4945"	1.2495"	0.875"	Pkg. of 1

Note: Fits 1963-1970 Triumph 500 Twin's.

## Crankshaft Bushings • Bearing Bronze

	KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
	70-0817	Bronze	1.814"	1.439"	1.035"	Standard	Pkg. of 1
	70-0818	Bronze	1.814"	1.429"	1.035"	-0.010"	Pkg. of 1
	70-0819	Bronze	1.814"	1.419"	1.035"	-0.020"	Pkg. of 1
	70-0820	Bronze	1.814"	1.409"	1.035"	-0.030"	Pkg. of 1

Machined from high quality mill certified SAE660 Bearing Bronze (custom sizes available).




# TRIUMPH® PRE-UNIT 500/ 650 1951-'62

TRIUMPH

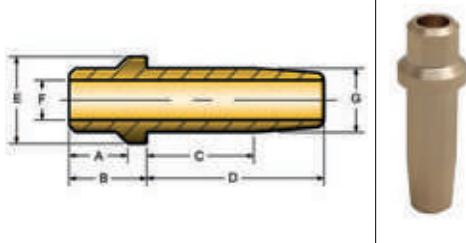
## Valves • Black Diamond™ • Black Nitroreg Stems • For Pre-Unit 650 1956-1962

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>70-70380</b>	Intake	38.10mm	1.500"	0.3105"	R1.4	3.790"	Standard
<b>70-70385</b>	Exhaust	34.11mm	1.343"	0.3100"	15°	3.775"	Standard	

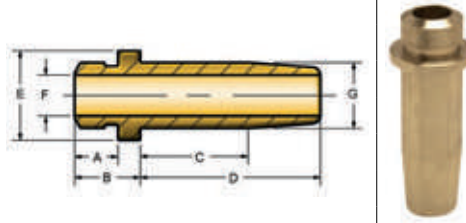
Welded tips (no lash caps required).

## Valve Guides • C630 Bronze • Manganese

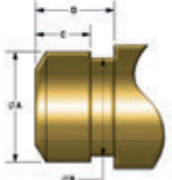

	A	B	C	D	E	F	G	Intake / Exhaust	
								C630 Bronze	Manganese
	0.460"	0.610"	0.840"	1.390"	0.680"	0.3105"	0.5010" / Std.	<b>70-0331</b>	<b>70-0331-M</b>
							+0.002"	<b>70-0332</b>	<b>70-0332-M</b>
							+0.004"	<b>70-0333</b>	<b>70-0333-M</b>
							+0.006"	<b>70-0334</b>	<b>70-0334-M</b>
							+0.015"	<b>70-0840</b>	<b>70-0840-M</b>
							+0.050"	<b>70-4033</b>	<b>70-4033-M</b>

For sizing KPMI® Cast Iron and Manganese Bronze Valve guides please use Reamers #GR-3115. For a complete listing of hones and reamers please see component section in back of catalog.

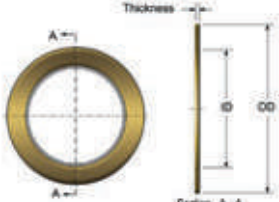
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
		0.315"	0.405"	0.820"	1.370"	0.680"	0.3105"	0.5010" / Std.	<b>70-0331S</b>
							+0.002"	<b>70-0332S</b>	
							+0.004"	<b>70-0333S</b>	
							+0.006"	<b>70-0334S</b>	
							+0.015"	<b>70-0840S</b>	
							+0.050"	<b>70-4033S</b>	

## Valve Guide Seals • Viton® • 6.00mm Coverison Systems

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust
				Part Number		Quantity		Quantity Discount
				<b>71012-4</b>		Pkg. of 4		0%
				<b>71012-8</b>		Pkg. of 8		0%
				<b>71012-16</b>		Pkg. of 16		Less- 10%
				<b>71012-50</b>		Pkg. of 50		Less- 15%
				<b>71012-100</b>		Pkg. of 100		Less- 20%

## Thrust Washer • Transmission • C674 Bronze • For Pre-Unit 650's 1960-1962

	KPMI P/N	Material	O.D.	O.L.	Thickness	Quantity
		<b>70-0474</b>	Bronze	1.280"	0.880"	0.090"

Note: Transmission thrust washer for needle bearing gearbox

# TRIUMPH® PRE-UNIT 500/ 650 1951-'62



## Fork Bushing • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0646	Top	1.4990"	1.3075"	1.000"	Pkg. of 1
	70-0647	Bottom	1.4945"	1.2495"	0.875"	Pkg. of 1

## Camshaft Bushings • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0458	Outer (Timing Side)	1.270"	0.8740"	1.000"	Pkg. of 1
	70-0467	Inner (Drive Side)	1.0015"	0.809"	0.937"	Pkg. of 1

## Wrist Pin Bushings • Bearing Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0459	Rod (Small End)	0.815"	0.6885"	1.031"	Pkg. of 1

## Push Rods Alloy Tube • For Pre-Unit 650's 1956-1962

	KPMI P/N	Material	A	B	Quantity
	70-0301	H.T. Steel Endpieces	6.302"	6.022"	Pkg. of 4

Made from light, strong, and tough, aircraft quality heat treated seamless aluminum tubing. These push rods are assembled with hardened steel ends that are held to exacting radius and surface finish tolerances. They are a perfect match for the rocker and tappet. After assembly, the OD of the entire push rod is precision ground to create a part that is first class in finish, fit, and function. This is the push rod of choice for Triumph racers, rebuilders, and restorers around the world.

## Blank Pushrods • Steel • Chrome Moly Tube

**NEW PRODUCTS**

	A	Ø.371" OD			
	B	9.120" Overall Length			
	C	Ø.305" ID Before Machining			
	D	E	F	G	
	R.156	0.420"	0.120"	0.310"	
<b>KPMI P/N</b>	<b>Model</b>	<b>Material</b>		<b>Kit Includes</b>	
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		2 Female Ended Pushrods / 2 Female Endpieces	
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		4 Female Ended Pushrods / 4 Female Endpieces	

1. Break ID edge only at .015 x 45°

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
		51017-4	Square Bead	0.310	7.0°	---	0.245"	0.369"	4Pr.	40-0167, 71-3748, WE259, WE259A 99-0062/3



# TRIUMPH® PRE-UNIT 500/ 650 1951-'62

TRIUMPH

## Tappet Blocks • Racing For Pre-Unit 500 / 650 1946 -1968

	KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
	70-70360	Bronze - 674	0.450"	1.0005"	Pkg. of 1
	70-70362	Bronze - 674	0.450"	1.0005"	Pkg. of 2
	70-70370	Cast Iron - G2	0.450"	1.0005"	Pkg. of 1
	70-70372	Cast Iron - G2	0.450"	1.0005"	Pkg. of 2

Note : See KPMI® P/N GR-3120/ CR-3120 for the piloted reamer and P/N GH-3125 for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

# TRIUMPH® 650 / 750 1963-1983

## • 6.00mm Conversion System

### Valve Spring Kit • Beehive For Triumph 650

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	70-70510	Intake	.460"	1.375"	90#	220#	.460"
		Exhaust					
	Kit Includes	4	Titanium Retainers		4	H. T. Steel Keepers	
4		CrSi Valve Springs		4	H. T. Steel Basewashers		

Note: Must use 6.0mm Valves and Guides

### Valve Spring Kit • Beehive For Triumph 750

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	70-70520	Intake	.460"	1.375"	90#	220#	.460"
		Exhaust					
	Kit Includes	4	Titanium Retainers		4	H. T. Steel Keepers	
4		CrSi Valve Springs		4	H. T. Steel Basewashers		

Note: Must use 6.0mm Valves and Guides

### Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	70-70550	Intake	40.64mm	1.600"	0.2355"	23°	3.850"	Standard
	70-70551	Intake	42.16mm	1.660"	0.2355"	23°	3.830"	Oversize
	70-70553	Exhaust	36.58mm	1.440"	0.2350"	29°	3.780"	Standard
	70-70554	Exhaust	38.10mm	1.500"	0.2350"	29°	3.760"	Oversize

Note: Welded tips (no lash caps required). Titanium Valves Available Custom

### Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	94008-4	H.T. Steel	6.00mm 0.2362"	0.315"	0.120"	0.080"	0.040"	Pkg. of 4



# TRIUMPH® 650 / 750 1963-1983



## • 6.00mm Conversion System

### Valve Guides • C630 Bronze • 6.00mm Conversion Systems

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.330"	0.500"	0.820"	1.370"	0.685"	0.2350"	0.5010" / Std.	70-70530		
								+0.002"	70-70532	
	One seal supplied with each guide.							+0.015"	70-70545	

### Valve Guide Seals • Viton® • 6.00mm Conversion Systems

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
	Part Number			Quantity			Quantity Discount	
	71017-4			Pkg. of 4			0%	
	71017-8			Pkg. of 8			0%	
	71017-16			Pkg. of 16			Less- 10%	
	71017-50			Pkg. of 50			Less- 15%	
	71017-100			Pkg. of 100			Less- 20%	

These seals are designed to work with the KPMI® Guides.

# TRIUMPH® 650 / 750 1963-1983

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-0300	Intake	.520"	1.420"	104#	234#	.520"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	
			4	H.A. 7075-T6 Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70170	Intake	.520"	1.420"	104#	234#	.520"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Keepers	
			4	Titanium Retainers	4	H. T. Steel Basewashers		
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	*70-70400 for 650cc	Intake	.460"	1.310"	90#	220#	.460"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	4
			4	CrSi Valve Springs	4	H. T. Steel Retainers	4	H. T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70450 for 750cc	Intake	.460"	1.310"	90#	220#	.460"	
		Exhaust						
	Kit Includes			4	CrSi Valve Springs	4	H. T. Steel Retainers	4
			4	CrSi Valve Springs	4	H. T. Steel Retainers	4	H. T. Steel Basewashers

\*O.E.M. Replacement Keepers available in pairs P/N 51017-4

### Valve Spring Kit • Beehive • For Triumph 650

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70270	Intake	.460"	1.375"	90#	220#	.460"	
		Exhaust						
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers



# TRIUMPH® 650 / 750 1963-1983

TRIUMPH

## Valve Spring Kit • Beehive • For Triumph 750

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70280	Intake	.460"	1.375"	90#	220#	.460"	
		Exhaust						
Kit Includes			4	H. T. Steel Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

## Valve Spring Kit • O. E. M. Replacement For Triumph 650

	KPMI P/N	Type	Kit Includes						
			H. T. Steel Retainers	H. T. Steel Keepers	CrSi Valve Springs	H. T. Steel Basewashers			
	70-70140	Intake	4	70-70141	Use O.E.M	4	70-70143	4	70-70145
		Exhaust							
Max Valve Lift		Installed Height		Seat Pressure		Open Pressure		@ Lift	
.415"		1.250"		68#		145#		.348"	

This kit is designed for stock valve lift and up to 0.415".  
 O.E.M. Replacement keepers available in pairs #51017-4.  
 1963-1965: Basewasher and springs are not direct O.E.M. replacements, all spring kit parts must be used together.  
 1966-1972: All components are direct O.E.M. replacements. These O.E.M. replacements parts may be purchased separately using the above part numbers.  
 It may be necessary to use KPMI® shortened valve guides (KPMI® #70-033X/M/S) to achieve higher than stock lift.

## Valve Spring Kit • O. E. M. Replacement For Triumph 750

	KPMI P/N	Type	Kit Includes						
			H. T. Steel Retainers	H. T. Steel Keepers	CrSi Valve Springs	H. T. Steel Basewashers			
	70-70250	Intake	4	70-70251	Use O.E.M	4	70-70253	4	70-70255
		Exhaust							
Max Valve Lift		Installed Height		Seat Pressure		Open Pressure		@ Lift	
.415"		1.250"		68#		145#		.348"	

This kit is designed for stock valve lift and up to 0.415".  
 All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. specifications. These O.E.M. replacements parts may be purchased separately using the above part numbers.  
 It may be necessary to use KPMI® shortened valve guides (KPMI® #70-033X/M/S) to achieve higher than stock lift.

## Valve Guides • C630 Bronze • Manganese

	A	B	C	D	E	F	G	Intake / Exhaust	
								C630 Bronze	Manganese
	0.460"	0.610"	0.840"	1.390"	0.680"	0.3105"	0.5010" / Std.	70-0331	70-0331-M
							+0.002"	70-0332	70-0332-M
							+0.004"	70-0333	70-0333-M
							+0.006"	70-0334	70-0334-M
							+0.015"	70-0840	70-0840-M
						+0.050"	70-4033	70-4033-M	

Note : No seal required.

For sizing KPMI® Cast Iron and Manganese Bronze Valve guides please use Reamers #GR-3115. For a complete listing of hones and reamers please see component section in back of catalog.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.315"	0.405"	0.820"	1.370"	0.680"	0.3105"	0.5010" / Std.	70-0331S	
							+0.002"	70-0332S	
							+0.004"	70-0333S	
							+0.006"	70-0334S	
							+0.015"	70-0840S	
						Machined for seal, seals sold separately.	+0.050"	70-4033S	

# TRIUMPH® 650 / 750 1963-1983



## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	70-4228	Intake	40.64mm	1.600"	0.3105"	1.5" R	3.850"	Standard
	70-4229	Intake	42.16mm	1.660"	0.3105"	1.5" R	3.830"	Oversize
	70-4230	Exhaust	36.58mm	1.440"	0.310"	24°	3.780"	Standard
	70-4231	Exhaust	38.10mm	1.500"	0.310"	24°	3.760"	Oversize

## Valves • Untreated Stems • O.E.M. Replacement (RAW)

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	70-70500	Intake	40.64mm	1.600"	0.3105"	1.5" R	3.850"	Standard
	70-70501	Intake	42.16mm	1.660"	0.3105"	1.5" R	3.830"	Oversize
	70-70504	Exhaust	36.58mm	1.440"	0.310"	24°	3.780"	Standard
	70-70505	Exhaust	38.10mm	1.500"	0.310"	24°	3.760"	Oversize

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.465"	0.550"	1	0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust
				Part Number		Quantity	Quantity Discount	
		71012-4		Pkg. of 4	0%			
		71012-8		Pkg. of 8	0%			
		71012-16		Pkg. of 16	Less- 10%			
		71012-50		Pkg. of 50	Less- 15%			
		71012-100		Pkg. of 100	Less- 20%			

## Tappet Blocks • Racing For Pre-Unit 500 / 650 1946 -1968 NEW PRODUCTS

	KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
	70-70360	Bronze - 674	0.450"	1.0005"	Pkg. of 1
	70-70362	Bronze - 674	0.450"	1.0005"	Pkg. of 2
	70-70370	Cast Iron - G2	0.450"	1.0005"	Pkg. of 1
	70-70372	Cast Iron - G2	0.450"	1.0005"	Pkg. of 2

Note : See KPMI® P/N GR-3120/ CR-3120 for the piloted reamer and P/N GH-3125 for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

## Tappet Blocks • Racing For 650 / 750 1969 -1983 NEW PRODUCTS

	KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
	70-0448	Bronze - 674	0.450"	1.0005"	Pkg. of 1
	70-70332	Bronze - 674	0.450"	1.0005"	Pkg. of 2
	70-70340	Cast Iron - G2	0.450"	1.0005"	Pkg. of 1
	70-70342	Cast Iron - G2	0.450"	1.0005"	Pkg. of 2

Note : See KPMI® P/N GR-3120/ CR-3120 for the piloted reamer and P/N GH-3125 for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

## Clutch Springs

	KPMI P/N	Description	A	B	C	Quantity
	70-0124	3 Clutch Spring Models	0.452"	0.662"	1.858"	Pkg. of 3
	70-0465	4 Clutch Spring Models	0.452"	0.662"	1.858"	Pkg. of 4

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.



# TRIUMPH® 650 / 750 1963-1983

TRIUMPH

## Thrust Washer • Transmission • C674 Bronze

	KPMI P/N	Material	O.D.	I.D.	Thickness	Quantity
	70-0474	Bronze	1.280"	0.880"	0.090"	Pkg. of 1
Note: Transmission thrust washer for needle bearing gearbox						

## Thrust Washer • Clutch • C674 Bronze

	KPMI P/N	Material	O.D.	I.D.	Thickness	Quantity
	70-0476	Bronze	2.625"	2.020"	0.060"	Pkg. of 1
	70-0477	Bronze	2.625"	1.837"	0.060"	Pkg. of 1

## Fork Bushing • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0646	Top	1.4990"	1.3075"	1.000"	Pkg. of 1
	70-0647	Bottom	1.4945"	1.2495"	0.875"	Pkg. of 1

## Camshaft Bushings • Nickel Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0458	Outer (Timing Side)	1.270"	0.8740"	1.000"	Pkg. of 1
	70-0467	Inner (Drive Side)	1.0015"	0.809"	0.937"	Pkg. of 1

## Wrist Pin Bushings • Bearing Bronze

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-0459	Rod (Small End)	0.815"	0.6885"	1.031"	Pkg. of 1

## High Gear Bushings • Bronze • For 650 1963-1972 Models

	KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
	70-70160	4-Speed	0.910"	0.810"	1.100"	1 Pr.

These bushings are designed to replace the single OEM style bushing. They maintain the same bearing surface while the gap between each bushing provides a large cavity for oil to pool, aiding in lubrication of the shaft.

## Push Rods Alloy Tube • H.T. Steel Endpieces

	KPMI P/N	Material	A	B	Quantity
	70-0301	H.T. Steel Endpieces (for 650)	6.302"	6.022"	Pkg. of 4
	70-0447	H.T. Steel Endpieces (for 750)	5.905"	5.625"	Pkg. of 4

Made from light, strong, and tough, aircraft quality heat treated seamless aluminum tubing. These push rods are assembled with hardened steel ends that are held to exacting radius and surface finish tolerances. They are a perfect match for the rocker and tappet. After assembly, the OD of the entire push rod is precision ground to create a part that is first class in finish, fit, and function. This is the push rod of choice for Triumph racers, rebuilders, and restorers around the world.

# TRIUMPH® 650 / 750 1963-1983



## Lash Caps • H.T. Steel

	KPMI P/N	Material	"A"	"B"	"C"	"D"	"C" - "D"	Quantity
	94001-4	H.T. Steel	7.94mm 0.3126"	0.395"	0.160"	0.080"	0.080"	Pkg. of 4

## Clutch Push Rod • H.T. Steel

	KPMI P/N	Material	Type	A	B	Quantity
	70-0505	H.T. Steel	Drill Rod ( H.T. tips)	11.812"	0.219"	Pkg. of 1

## Blank Pushrods • Steel • Chrome Moly Tube

NEW PRODUCTS

	A	Ø.371" OD	Machining Information: 1.						
	B	9.120" Overall Length							
	C	Ø.305" ID Before Machining							
	D	R.156	E	0.420"	F	0.120"	G	0.310"	Break ID edge only at .015 x 45°
	KPMI P/N		Model	Material		Kit Includes			
90512-2		Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		2 Female Ended Pushrods / 2 Female Endpieces				
90512-4		Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips		4 Female Ended Pushrods / 4 Female Endpieces				

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
		51017-4	Square Bead	0.310	7.0°	---	0.245"	0.369"	4Pr.	40-0167, 71-3748, WE259, WE259A 99-0062/3

# TRIUMPH® TRIDENT™ 1971-1976

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70350	Intake	.400"	1.350"	95#	242#	.400"	
		Exhaust						
Kit Includes			6	Titanium Retainers	6	CrSi Valve Springs	6	H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems • For 1971-1972 Models

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	70-1009	Intake	38.86mm	1.530"	0.3105"	1.5" R	3.975" Standard
	70-1010	Intake	40.39mm	1.590"	0.3105"	1.5" R	3.950" Oversize
	70-1011	Exhaust	33.40mm	1.315"	0.3100"	25°	3.915" Standard
	70-1012	Exhaust	35.56mm	1.400"	0.3100"	25°	3.890" Oversize



# TRIUMPH® TRIDENT™ 1971-1976

TRIUMPH

## Valves • Black Diamond™ • Black Nitroreg Stems • For 1973-1976 Models

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	70-0885	Intake	38.86mm	1.530"	0.3105"	1.5" R	3.735"	Standard
	70-0852	Intake	40.39mm	1.590"	0.3105"	1.5" R	3.710"	Oversize
	70-0886	Exhaust	33.40mm	1.315"	0.3100"	25°	3.680"	Standard
	70-0853	Exhaust	35.56mm	1.400"	0.3100"	25°	3.655"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.460"	0.560"	0.760"	1.310"	0.560"	0.3105"	0.5010" / Std.	70-0343		
								+0.002"	70-0344	
								+0.015"	70-4153	

No seal required

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.330"	0.430"	0.765"	1.315"	0.560"	0.3105"	0.5010" / Std.	70-0812		
								+0.002"	70-0813	
								+0.004"	70-0814	
								+0.006"	70-0815	
							+0.015"	70-4039		

One seal supplied with each guide.

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5/16"	0.465"	0.550"	1	A	B	C	D	Intake
				0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust
				Part Number		Quantity		Quantity Discount
				71012-4		Pkg. of 4		0%
				71012-8		Pkg. of 8		0%
				71012-16		Pkg. of 16		Less- 10%
				71012-50		Pkg. of 50		Less- 15%
			71012-100		Pkg. of 100		Less- 20%	

# TRIUMPH® 865 2001-2010

## Valve Spring Kit • Lightweight Racing • Shim Under Conversion


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70300	Intake	.450"	1.415"	55#	191#	.450"	
		Exhaust						
Kit Includes			8	Titanium Retainers	8	H. T. Steel Keeper Pr.	8	CrSi Valve Springs
			8	H. T. Steel Basewashers	8	H. T. Steel Tappets	8	Adj. Shims 9.5mm OD

Spring Kit requires 9.5mm adjustment shims. See Kibblewhite® Adjustment Shim Section in back of catalog for more information.

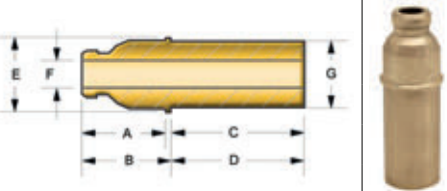
# TRIUMPH® 865 2001-2010



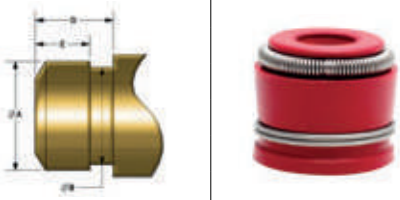
## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70120	Intake	.450"	1.280"	52#	166#	.450"	
		Exhaust						
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.625"	0.670"	0.995"	0.995"	0.590"	0.2150'	0.5338" / Std.	70-70320		
								+0.001"	70-70321	
								+0.002"	70-70322	
								+0.010"	70-70329	

## Valve Guide Seals • Viton®


Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71016-4			Pkg. of 4		0%		
	71016-8			Pkg. of 8		0%		
	71016-16			Pkg. of 16		Less- 10%		
	71016-50			Pkg. of 50		Less- 15%		
71016-100			Pkg. of 100		Less- 20%			

# TRIUMPH® VARIOUS 885cc-955cc 1997-2001

• T509 885cc 1997-1998


• T595 / 955I / 955cc 1997-2001

## Valve Spring Kit • Lightweight Racing • Shim Under Conversion

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70035	Intake	.440"	1.375"	68#	201#	.440"	
		Exhaust						
Kit Includes			12	Titanium Retainers	12	H. T. Steel Keeper Pr.	12	CrSi Valve Springs
			12	H. T. Steel Basewashers	12	H. T. Steel Tappets	12	Spacers

Spring Kit requires 9.5mm adjustment shims. See Kibblewhite® Adjustment Shim Section in back of catalog for more information.

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	70-70026	Intake	.440"	1.375"	65#	204#	.440"	
		Exhaust						
Kit Includes			12	Titanium Retainers	12	H. T. Steel Keeper Pr.	12	CrSi Valve Springs
			12	H. T. Steel Basewashers	12	Spacers		



# YAMAHA® RAPTOR™ 250 2008-2013

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80550	Intake	.440"	1.240"	65#	192#	.440"	
		Exhaust						
Kit Includes			2	Titanium Retainers	2	CrSi Valve Springs	2	H. T. Steel Basewashers

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.455"	0.490"	0.845"	1.245"	0.480"	0.2355"	0.4552" / Std.	80-80570		
								+0.002"	80-80572	
							+0.010"	80-80579		
	0.455"	0.490"	0.975"	1.295"	0.480"	0.2350"	0.4552" / Std.		80-80580	
								+0.002"		80-80582
								+0.010"		80-80589

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
				Part Number			Quantity	Quantity Discount
				71017-2			Pkg. of 2	0%
				71017-4			Pkg. of 4	0%
				71017-8			Pkg. of 8	0%
				71017-16			Pkg. of 16	Less- 10%
				71017-50			Pkg. of 50	Less- 15%
			71017-100			Pkg. of 100	Less- 20%	

# YAMAHA® SR™ / TT™ / XT™ 250 1976-1981

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.645"	0.765"	0.970"	1.200"	0.905"	0.3135"	0.5535" / Std.		80-8100
								+0.001"	
							+0.010"		80-8110



# YAMAHA® SRX™ 250 / XT™ 250 / 350 1984-2000



## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust
		0.470"	0.610"	0.585"	0.850"	0.470"	0.2160"	0.4350" / Std.		<b>80-8030</b>
								+0.002"		<b>80-8032</b>
								+0.015"		<b>80-8039</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
		Part Number			Quantity		Quantity Discount	
		<b>71016-4</b>			Pkg. of 4		0%	
		<b>71016-8</b>			Pkg. of 8		0%	
		<b>71016-16</b>			Pkg. of 16		Less- 10%	
		<b>71016-50</b>			Pkg. of 50		Less- 15%	
<b>71016-100</b>			Pkg. of 100		Less- 20%			

# YAMAHA® TTR™ 250 1999-2006

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80000</b>	Intake	.380"	1.165"	32#	75#	.380"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

# YAMAHA® WR™ / YZ™ 250F 2001-2013

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80066</b>	Intake	.380"	1.105"	39#	86#	.380"	
		Exhaust						
	Kit Includes			3	In Titanium Retainers	3	In CrSi Valve Springs	3
2				Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
3				In Viton® Seals		2	Ex Viton® Seals	

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80850</b>	Intake	.380"	1.105"	39#	86#	.380"	
	Kit Includes			3	In Titanium Retainers	3	In CrSi Valve Springs	3
2				Outer In Black Diamond™ Valves	1	Center In Black Diamond™ Valves		



# YAMAHA® WR™ / YZ™ 250F 2001-2013

## Cylinder Head Service Kit

**NEW PRODUCTS**




KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82400	Intake	.380"	1.105"	39#	86#	.380"
	Exhaust					
Kit Includes	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
	3	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
	3	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides		
	1	Top End Gasket Kit				

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**


KPMI P/N	Description	Specification
80-80066	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80073	Intake (Outer), Standard Valve	Valve • Black Diamond™ • Black Nitroleg Stems
80-80075	Intake (Center), Standard Valve	Valve • Black Diamond™ • Black Nitroleg Stems
80-80077	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroleg Stems
80-80080	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80090	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82401	Gasket Kit	<b>Includes:</b> Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tens. Gasket (1), Ex. Valve Stem Seal (2), In. Valve Stem Seal (3)

## Valves • Black Diamond™ • Black Nitroleg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80073	Intake	23.00mm	0.906"	0.1568"	25°	3.150"	Standard
	80-80075	Intake (Center)	23.00mm	0.906"	0.1568"	25°	3.095"	Standard
	80-80077	Exhaust	24.50mm	0.965"	0.1758"	25°	3.070"	Standard

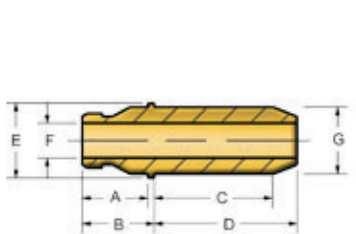
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	80-80073T	Intake	23.00mm	0.906"	0.1570"	25°	3.150"	Titanium	5NL-12112-30-00
	80-80075T	Intake (Center)	23.00mm	0.906"	0.1570"	25°	3.090"	Titanium	5NL-12111-30-00
	80-80077T	Exhaust	24.50mm	0.965"	0.1758"	25°	3.070"	Titanium	5NL-12121-10-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

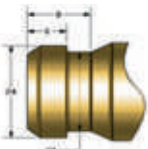



## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.375"	.400"	0.520"	0.720"	.400"	0.1570"	0.3563" / Std.	80-80080	
							+0.001"	80-80081	
							+0.002"	80-80082	
							+0.010"	80-80089	
	0.405"	.430"	0.590"	0.790"	.440"	0.1760"	0.3958" / Std.	80-80090	
							+0.001"	80-80091	
							+0.002"	80-80092	
							+0.010"	80-80099	

# YAMAHA® WR™ / YZ™ 250F 2001-2013




## Valve Guide Seal Kits • High Performance


		Intake Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
						A	B	C	D
		4.0mm	0.320"	0.355"	5	0.285"±0.002"	0.245"	0.120"	0.215"
		Exhaust Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs			
						A	B	C	D
		4.5mm	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"
<b>Part Number</b>		<b>80-80440</b>		<b>Kit Includes</b>		3	Intake Viton® Seals	2	Exhaust Viton® Seals

# YAMAHA® WR™ / YZ™ 250F / FX 2014-2018


## Valve Spring Kit • Lightweight Racing for Titanium Valves

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80900</b>	Intake		.425"	1.180"	48#	151#	.425"
Exhaust			.400"	1.125"	40#	119#	.400"	
<b>Kit Includes</b>			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

## Valve Spring Kit • Lightweight Racing for Stainless Valves NEW PRODUCTS


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-81400</b>	Intake		.395"	1.150"	55#	151#	.395"
Exhaust			.370"	1.100"	46#	119#	.370"	
<b>Kit Includes</b>			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

## Intake Only • Titanium Valve Kit

	KPMI P/N	Type	*Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-80970</b>	Intake		.425"	1.180"	48#	151#
<b>Kit Includes</b>			2	Intake Titanium Retainers	2	Intake CrSi Valve Springs	
			2	Intake H. T. Steel Basewashers	2	Intake Tensilite® Titanium Valves	

\* It may be necessary to use KPMI shortened valve guides (KPMI® #80-8092X & 80-8093X) to achieve higher than stock lift.

## Top End Service Kit For WR / YZ 250F 2014-2016 NEW PRODUCTS

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-81200</b>	77.00mm	Intake		.395"	1.150"	55#	151#
		Exhaust		.370"	1.100"	46#	119#	.370"
<b>Kit Includes</b>			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
			1	High Performance Piston Kit	1	Top End Gasket Kit		
<b>IMPORTANT NOTE:</b> The piston assembly (piston, rings, valves, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are <b>NOT INTERCHANGEABLE</b> with O.E.M. valves and piston assembly components.								



# YAMAHA® WR™ / YZ™ 250F / FX 2014-2018

## Components • Replacement • Top End Service Kit For WR / YZ 250F 2014-2016


**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-81400	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80912	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
80-80916	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroreg Stems
80-81201	Gasket Kit	<b>Includes:</b> Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Ex. Valve Stem Seal (2), In. Valve Stem Seal (2), Cylinder Head Drain Seal (1), Cam Chain Tens. Crush Seal (1), TPS O-ring (1)

These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

## Cylinder Head Service Kit

**NEW PRODUCTS**

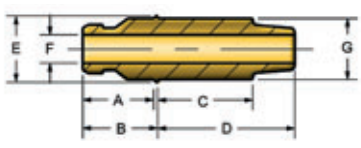

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
							
Exhaust	.370"	1.100"	46#	119#	.370"		
Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
	2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
	2	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
	1	Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit



**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-81400	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80912	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80916	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80920	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80930	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82411	Gasket Kit	<b>Includes:</b> Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Ex. Valve Stem Seal (2), In. Valve Stem Seal (2), Cylinder Head Drain Seal (1), Cam Chain Tens. Crush Seal (1), TPS O-ring (1)

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
		0.350"	0.360"	0.535"	0.905"	0.430"	0.1962"	0.3957" / Std.	80-80920
							+0.001"	80-80921	
							+0.002"	80-80922	
							+0.010"	80-80929	
	0.330"	0.340"	0.615"	1.015"	0.391"	0.1760"	0.3563" / Std.		80-80930
							+0.001"		80-80931
							+0.002"		80-80932
							+0.010"		80-80939


## Valve Guide Seal Kits • High Performance

	Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
	A	B	C	D				
	5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"
	Exhaust Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
	4.5mm	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"
Part Number	80-80990		Kit Includes		2	Intake Viton® Seals	2	Exhaust Viton® Seals

# YAMAHA® WR™ / YZ™ 250F / FX 2014-2018




## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>80-80912T</b>	Intake	31.00mm	1.220"	0.1962"	18°	3.280"	Titanium	1SM-12111-10-00
	<b>80-80916T</b>	Exhaust	25.00mm	0.984"	0.1760"	30°	3.235"	Titanium	1SM-12121-10-00


Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-80912</b>	Intake	31.00mm	1.220"	0.1962"	18°	3.265"	Standard
	<b>80-80916</b>	Exhaust	25.00mm	0.984"	0.1760"	30°	3.235"	Standard


# YAMAHA® YZ™ 250F 2019-2020

## Valve Spring Kit • Lightweight Racing NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-82300</b>	Intake	.420"	1.315"	69#	187#	.420"
		Exhaust	.400"	1.160"	52#	149#	.400"
<b>Kit Includes</b>			2 In Titanium Retainers	2 *In CrSi Valve Springs	2 In H. T. Steel Basewashers		
			2 Ex Titanium Retainers	2 Ex CrSi Valve Springs	2 Ex H. T. Steel Basewashers		


\*The Intake springs for this kit include a progressively wound Outer Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

## Intake Only • Steel Valve Conversion Kit NEW PRODUCTS


	KPMI P/N	Type	**Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-82350</b>	Intake	.420"	1.315"	69#	187#	.420"
	<b>Kit Includes</b>			2 Intake Titanium Retainers	2 **Intake CrSi Valve Springs		
			2 Intake H. T. Steel Basewashers	2 Intake Black Diamond™ Valves			

\*\*The Intake springs for this kit include a progressively wound Outer Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

## Valves • Black Diamond™ • Black Nitroreg Stems NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-82312</b>	Intake	31.00mm	1.220"	0.1962"	18°	3.245"	Standard
	<b>80-82316</b>	Exhaust	25.00mm	0.984"	0.1760"	30°	3.240"	Standard

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium NEW PRODUCTS

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>80-82312T</b>	Intake	31.00mm	1.220"	0.1962"	18°	3.250"	Titanium	B7B-12111-00-00
	<b>80-82316T</b>	Exhaust	25.00mm	0.984"	0.1760"	30°	3.235"	Titanium	1SM-12121-10-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.



# YAMAHA® YZ™ 250F 2019-2020

YAMAHA

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust
	0.435"	0.470"	0.415"	0.745"	0.430"	0.1962"	0.3957" / Std.	<b>80-82320</b>	
							+0.001"	<b>80-82321</b>	
							+0.002"	<b>80-82322</b>	
	0.330"	0.365"	0.590"	0.815"	0.391"	0.1760"	0.3563" / Std.		<b>80-82330</b>
							+0.001"		<b>80-82331</b>
							+0.002"		<b>80-82332</b>
							+0.010"		<b>80-82339</b>

## Valve Guide Seal Kits • High Performance

**NEW PRODUCTS**

		Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
		5.0mm	0.350"	0.405"	4	A	B	C	D
		Exhaust Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
		4.5mm	0.331"	0.370"	4	A	B	C	D
Part Number		<b>80-82345</b>		Kit Includes		2	Intake Viton® Seals	2	Exhaust Viton® Seals

# YAMAHA® YFM™ 350-450 1987-2020

- **BIG BEAR™ 350 1987-'99**
- **WARRIOR™ 350 1987-'04**
- **KODIAK™ 400 1987-'06**
- **GRIZZLY™ 350 2007-'14**
- **WOLVERINE™ 350 1995-'09**
- **KODIAK™ 450 2018-'20**
- **RAPTOR™ 350 2004-'13**
- **BIG BEAR™ 400 2000-'12**

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-8000</b>	Intake	.475"	1.325"	97#	266#	.475"
		Exhaust					
	Kit Includes			2	Titanium Retainers	2	H. T. Steel Keepers Pr.
			2	CrSi Valve Springs	2	H. T. Steel Basewashers	

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-80012</b>	Intake	40.00mm	1.575"	0.2750"	23°	4.020"	Standard
	<b>80-80014</b>	Exhaust	34.00mm	1.339"	0.2745"	29°	3.945"	Standard

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.475"	0.515"	1.100"	1.290"	0.520"	0.2750"	0.4942" / Std.	<b>80-8010</b>	
							+0.002"	<b>80-8012</b>	
							+0.010"	<b>80-8020</b>	

Use O.E.M. valve guide seal.

# YAMAHA® WR™ / YZ™ 400F / 426F 1998-'02



YAMAHA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80100	Intake	.375"	1.105"	39#	85#	.375"
		Exhaust	.375"	1.105"	39#	85#	.375"
	Kit Includes	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
2		Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
3		In Viton® Seals		2	Ex Viton® Seals		

## Valves • White Diamond® • Hard Chrome Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-8055H	Intake	27.00mm	1.063"	0.1765"	15°	3.320"	Standard
	80-8056H	Intake (Center)	27.00mm	1.063"	0.1765"	15°	3.280"	Standard
	80-8057H	Exhaust	28.00mm	1.102"	0.1955"	25°	3.220"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond™ Valves.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.550"	0.580"	0.510"	0.640"	0.430"	0.1765"	0.3957" / Std.	80-80110	
							+0.002"	80-80112	
							+0.010"	80-80119	
	0.580"	0.610"	0.580"	0.695"	0.420"	0.1955"	0.3957" / Std.		80-80120
							+0.002"		80-80122
							+0.010"		80-80129

Use O.E.M. valve guide seal.

## Valve Guide Seal Kits • High Performance

	In / Ex Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				
					A	B	C	D	
	4.5mm	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"	
Part Number		80-80106		Kit Includes		3	Intake Viton® Seals	2	Exhaust Viton® Seals

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity
	80-80130	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	3 Pr.
Exhaust			0.196"	6.5°	0.181"	0.216"	0.270"	2 Pr.	

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.



# YAMAHA® VARIOUS 400-450cc 1998-'13

- WR™ 400F 1998-'00
- WR™ 426F 2001-'02
- WR™ 450F 2003-'06
- YFZ™ 450 2004-'13
- YZ™ 400F 1998-'99
- YZ™ 426F 2000-'02
- YZ™ 450F 2003-'05

## Cylinder Stud Kit • H.T. Steel NEW PRODUCTS

	KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"	
	80-82650	2	0.358"	6.7"	1.42"	1.42"	
		Quantity	Body Dia.	"D"	"E"	"F"	
2	0.358"	6.5"	1.42"	1.42"			
<b>Kit Includes</b>		4	H. T. Steel Studs	4	H. T. Steel Nuts	4	H. T. Steel Washers

# YAMAHA® VARIOUS 450cc 2003-'20

- WR™ 450 2003-'15
- YZ™ 450F 2003-'09
- YFZ™ 450 2004-'09
- YFZ™ 450X 2008-'11
- YFZ™ 450R 2009-'20
- YFZ™ 450R SE 2010-'20

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80206	Intake	.380"	1.105"	39#	86#	.380"	
		Exhaust	.380"	1.105"	39#	86#	.380"	
<b>Kit Includes</b>			3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
			3	In Viton® Seals		2	Ex Viton® Seals	

## Top End Service Kit For YZ 450F 2003-'05 / WR 450 2003-'06 NEW PRODUCTS

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-81900	95.00mm	Intake	.380"	1.105"	39#	86#	.380"	
			Exhaust	.380"	1.105"	39#	86#	.380"	
	<b>Kit Includes</b>			3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
				2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
				2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves
			3	In Viton® Seals		2	Ex Viton® Seals		
			1	High Performance Piston Kit		1	Top End Gasket Kit		
<b>IMPORTANT NOTE:</b> The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are <b>NOT INTERCHANGEABLE</b> with O.E.M. piston assembly components.									

## Components • Replacement • Top End Service Kit For YZ 450F 2003-'05 / WR 450 2003-'06 NEW PRODUCTS

KPMI P/N	Description	Specification
80-80206	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80213H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80215H	Intake, Standard (Center) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80217H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
80-81901	Gasket Kit	<b>Includes:</b> Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).




# YAMAHA® VARIOUS 450cc 2003-'20



YAMAHA

## Top End Service Kit For YZ 450F 2006-'09 / WR 450 2007-'15

**NEW PRODUCTS**

	KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-82000</b>	95.00mm	Intake	.380"	1.105"	39#	86#	.380"
		Exhaust	.380"	1.105"	39#	86#	.380"	
<b>Kit Includes</b>	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers		
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
	2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves		
	3	In Viton® Seals		2	Ex Viton® Seals			
	1	High Performance Piston Kit		1	Top End Gasket Kit			

**IMPORTANT NOTE:** The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE** with O.E.M. piston assembly components.


## Components • Replacement • Top End Service Kit For YZ 450F 2006-'09 / WR 450 2007-'15

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>80-80206</b>	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>80-80213H</b>	Intake, Standard (Outer) Valve	Valves • White Diamond® • Hard Chrome Stems
<b>80-80215H</b>	Intake, Standard (Center) Valve	Valves • White Diamond® • Hard Chrome Stems
<b>80-80217H</b>	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
<b>80-82001</b>	Gasket Kit	<b>Includes:</b> Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).

## Cylinder Head Service Kit for YZ450F 2003-'05 / WR450 2003-'06

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-82050</b>	Intake	.380"	1.105"	39#	86#	.380"
	Exhaust	.380"	1.105"	39#	86#	.380"	
<b>Kit Includes</b>	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
	3	In Std. White Diamond® Valves		2	Ex Std. White Diamond® Valves		
	3	In Std. C630 Valves Guides		2	Ex Std. C630 Valves Guides		
	1	Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit for YZ450F 2003-'05 / WR450 2003-'06

**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>80-80206</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>80-80213H</b>	Intake, Standard (Outer) Valve	Valve • White Diamond® • Stainless
<b>80-80215H</b>	Intake, Standard (Center) Valve	Valve • White Diamond® • Stainless
<b>80-80217H</b>	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
<b>80-80220</b>	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
<b>80-80230</b>	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>80-82051</b>	Gasket Kit	<b>Includes:</b> Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).




# YAMAHA® VARIOUS 450cc 2003-'20

- WR™ 450 2003-'15
- YZ™ 450F 2003-'09
- YFZ™ 450 2004-'09
- YFZ™ 450X 2008-'11
- YFZ™ 450R 2009-'20
- YFZ™ 450R SE 2010-'20

## Cylinder Head Service Kit for YZ450F 2006-'09 / WR450 2007-'15 / YFZ450R 2009-'20

**NEW PRODUCTS**


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-82060</b>		Intake	.380"	1.105"	39#	86#
		Exhaust	.380"	1.105"	39#	86#	.380"
<b>Kit Includes</b>	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
	3	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves			
	3	In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides			
	1	Top End Gasket Kit					

## Components • Replacement • Cylinder Head Service Kit for YZ450F 2006-'09 / WR450 2007-'15 / YFZ450R 2009-'20


**NEW PRODUCTS**

KPMI P/N	Description	Specification
<b>80-80206</b>	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
<b>80-80213H</b>	Intake, Standard (Outer) Valve	Valve • White Diamond® • Stainless
<b>80-80215H</b>	Intake, Standard (Center) Valve	Valve • White Diamond® • Stainless
<b>80-80217H</b>	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
<b>80-80220</b>	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
<b>80-80230</b>	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
<b>80-82061</b>	Gasket Kit	<b>Includes:</b> Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Drain Plug Gasket (1), Oil Line Washers (4)

## Intake Only • Stainless Valve Conversion Kit


	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-80950</b>		Intake	.380"	1.105"	39#	86#
<b>Kit Includes</b>	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
	3	In Viton® Seals	3	In White Diamond® Valves			

## Valves • White Diamond® • Hard Chrome Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-80213H</b>	Intake	27.00mm	1.063"	0.1765"	15°	3.040"	Standard
<b>80-80214H</b>	Intake	28.00mm	1.102"	0.1765"	15°	3.030"	Oversize	
<b>80-80215H</b>	Intake	27.00mm	1.063"	0.1765"	15°	3.000"	Std.(Center)	
<b>80-80216H</b>	Intake	28.00mm	1.102"	0.1765"	15°	2.990"	OS (Center)	
<b>80-80217H</b>	Exhaust	28.00mm	1.102"	0.1956"	20°	2.955"	Standard	
<b>80-80218H</b>	Exhaust	29.00mm	1.142"	0.1956"	20°	2.945"	Oversize	

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond®<sup>un</sup> Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>80-80213T</b>	Intake	27.00mm	1.063"	0.1765"	15°	3.030"	Titanium	5TA-12112-00-00
<b>80-80215T</b>	Intake (Center)	27.00mm	1.063"	0.1765"	15°	2.995"	Titanium	5TA-12111-00-00	
<b>80-80217T</b>	Exhaust	28.00mm	1.102"	0.1957"	20°	2.950"	Titanium	5TA-12121-00-00	

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

# YAMAHA® VARIOUS 450cc 2003-'20



- WR™ 450 2003-'15
- YZ™ 450F 2003-'09
- YFZ™ 450 2004-'09
- YFZ™ 450X 2008-'11
- YFZ™ 450R 2009-'20
- YFZ™ 450R SE 2010-'20

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.350"	0.385"	0.480"	0.680"	0.430"	0.1768"	0.3957" / Std.	80-80220	
							+0.001"	80-80221	
							+0.002"	80-80222	
							+0.010"	80-80229	
	0.350"	0.385"	0.510"	0.680"	0.430"	0.1961"	0.3957" / Std.		80-80230
							+0.001"		80-80231
							+0.002"		80-80232
							+0.010"		80-80239

## Valve Guide Seal Kits • High Performance

		In / Ex Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
						A	B	C	D
		4.5mm /	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"
Part Number		80-80710		Kit Includes		3	Intake Viton® Seals	2	Exhaust Viton® Seals

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity			
					80-80715	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	3 Pr.
							Exhaust	0.196"	6.5°	0.181"	0.216"	0.270"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

# YAMAHA® YZ™ 450F 2010-2013

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80750	Intake	.450"	1.185"	46#	155#	.450"	
		Exhaust	.450"	1.185"	46#	155#	.450"	
Kit Includes			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

The use of KPMI® guides(#80-8077X and #80-8078X) may be necessary when using higher than stock lift cams.

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81050	Intake	.450"	1.185"	46#	155#	.450"
	Kit Includes			2	Intake Titanium Retainers	2	Intake CrSi Valve Springs
			2	Intake H. T. Steel Basewashers	2	Intake Black Diamond™ Valves	

The use of KPMI® guides(#80-8077X and #80-8078X) may be necessary when using higher than stock lift cams.



# YAMAHA® YZ™ 450F 2010-2013

YAMAHA

## Valves • Black Diamond™ • Black Nitroneg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	<b>80-80762</b>	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Standard
	<b>80-80763</b>	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Oversize
	<b>80-80766</b>	Exhaust	30.00mm	1.181"	0.2155"	20°	3.385"	Standard

Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves**.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
	<b>80-80762T</b>	Intake	36.00mm	1.417"	0.2160"	20°	3.280"	Titanium	33D-12111-00-00
	<b>80-80766T</b>	Exhaust	30.00mm	1.181"	0.2155"	20°	3.375"	Titanium	33D-12121-00-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.540"	0.540"	0.560"	0.775"	0.432"	0.2160"	0.4352" / Std.	<b>80-80770</b>	
							+0.001"	<b>80-80771</b>	
							+0.002"	<b>80-80772</b>	
							+0.010"	<b>80-80779</b>	
	0.390"	0.390"	0.760"	1.030"	0.432"	0.2155"	0.4352" Std.		<b>80-80780</b>
							+0.001"		<b>80-80781</b>
							+0.002"		<b>80-80782</b>
							+0.010"		<b>80-80789</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.333"	0.455"	2	A	B	C	D	Intake
				0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust
				Part Number			Quantity	Quantity Discount
				<b>71040-4</b>			Pkg. of 4	0%
				<b>71040-8</b>			Pkg. of 8	0%
				<b>71040-16</b>			Pkg. of 16	Less- 10%
				<b>71040-50</b>			Pkg. of 50	Less- 15%
				<b>71040-100</b>			Pkg. of 100	Less- 20%

# YAMAHA® YZ™ 450F 2014-'19 / 450FX 2016-'19

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	<b>80-80750</b>	Intake	.450"	1.185"	46#	155#	.450"	
		Exhaust	.450"	1.185"	46#	155#	.450"	
<b>Kit Includes</b>			2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
			2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

The use of **KPMI® guides (#80-8077X and #80-8078X)** may be necessary when using higher than stock lift cams.

# YAMAHA® YZ™ 450F 2014-'19 / 450FX 2016-'19



## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-82070	Intake	.450"	1.185"	46#	155#	.450"	
		Exhaust	.450"	1.185"	46#	155#	.450"	
	Kit Includes	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
		2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
		2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
2		In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides				
1		Top End Gasket Kit						

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-80750	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80872	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80876	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80770	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80780	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82071	Gasket Kit	<b>Includes:</b> Head Gasket 97mm (1), Valve Stem Seals (4), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1)

## Intake Only • Steel Valve Conversion Kit

	KPMI P/N	Type	*Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81100	Intake	.450"	1.185"	46#	155#	.450"
	Kit Includes	2	Intake Titanium Retainers	2	Intake CrSi Valve Springs		
2		Intake H. T. Steel Basewashers	2	Intake Black Diamond™ Valves			

The use of KPMI® guides(#80-8077X and #80-8078X) may be necessary when using higher than stock lift cams.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80872	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Standard
	80-80876	Exhaust	30.50mm	1.201"	0.2155"	28°	3.380"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N	
	80-80872T	Intake	37.00mm	1.457"	0.2160"	18°	3.280"	Titanium	1SL-12111-00-00
	80-80876T	Exhaust	30.50mm	1.201"	0.2155"	28°	3.375"	Titanium	1SL-12121-00-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.



# YAMAHA® YZ™ 450F 2014-'19 / 450FX 2016-'19

YAMAHA

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.540"	0.540"	0.560"	0.775"	0.432"	0.2160"	0.4352" / Std.	<b>80-80770</b>	
							+0.001"	<b>80-80771</b>	
							+0.002"	<b>80-80772</b>	
							+0.010"	<b>80-80779</b>	
	0.390"	0.390"	0.760"	1.030"	0.432"	0.2155"	0.4352" Std.		<b>80-80780</b>
							+0.001"		<b>80-80781</b>
							+0.002"		<b>80-80782</b>
							+0.010"		<b>80-80789</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.333"	0.455"	2	A	B	C	D	Intake
				0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust
			Part Number				Quantity	Quantity Discount
			<b>71040-4</b>				Pkg. of 4	0%
			<b>71040-8</b>				Pkg. of 8	0%
			<b>71040-16</b>				Pkg. of 16	Less- 10%
			<b>71040-50</b>				Pkg. of 50	Less- 15%
			<b>71040-100</b>				Pkg. of 100	Less- 20%

# YAMAHA® SR™ / TT™ / XT™ 500 1976-1981

## Valve Spring Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	<b>80-81500</b>	Intake	.515"	1.690"	117#	254#	.515"
		Exhaust					
	<b>Kit Includes</b>			2	H.T. Steel Retainers	2	H.T. Steel Keeper Pr.
			2	CrSi Valve Springs	2	H.T. Steel Spring Shims	

This kit supersedes KPMI® spring only kit **80-0514**, which is no longer available

## Retainer Set • H. T. Steel

	KPMI P/N	Type	Material				
	<b>80-80350</b>	Intake	H.T. Steel				
		Exhaust					
	<b>Set Includes</b>		2	H.T. Steel Retainers		2	H. T. Steel Keepers Pr.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.645"	0.765"	0.970"	1.200"	0.905"	0.3135"	0.5535" / Std.		<b>80-8100</b>
								+0.001"	<b>80-8101</b>
								+0.010"	<b>80-8110</b>

Use O.E.M. valve guide seal

# YAMAHA® SR™ / TT™ / XT™ 550 / 600 1982-'95



## Valve Spring Kit • High Lift

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80241	Intake	.438"	1.220"	70#	197#	.438"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

# YAMAHA® XJ™ 650 / 700 1980-1984

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80200	Intake	.440"	1.335"	75#	200#	.440"	
		Exhaust						
Kit Includes			8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Keeper Pr.

# YAMAHA® XS™ 650 1970-1983

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80340	Intake	.515"	1.450"	100#	228#	.515"
		Exhaust					
Kit Includes			4	H. T. Steel Retainers	4	H. T. Steel Keeper Pr.	
			4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Must use Kibblewhite® Guides with high lift cams. This kit is supplied with radiused bead keepers and must be used with radius groove valves

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80380	Intake	41.15mm	1.620"	0.3145"	25°	4.105"	Standard
	80-80381	Intake	42.15mm	1.659"	0.3145"	25°	4.085"	Oversize
	80-80383	Exhaust	35.15mm	1.384"	0.3140"	29°	4.030"	Standard
	80-80384	Exhaust	36.15mm	1.423"	0.3140"	29°	4.010"	Oversize

These valves utilize a radiused keeper groove. To install in models prior to 1973, use with radius beaded keepers #51012-4

## Valve Guides • C630 Bronze

		A	B	C	D	E	F	G	Intake	Exhaust	
		0.430"	0.550"	0.840"	1.290"	0.905"	0.3140"	0.5930" / Std.	80-80370		
									+0.001"	80-80371	
									+0.002"	80-80372	
								+0.010"	80-80379		
		0.430"	0.550"	1.150"	1.550"	0.905"	0.3140"	0.5930" / Std.		80-80360	
									+0.001"	80-80361	
									+0.002"	80-80362	
Use O.E.M. valve guide seal								+0.010"	80-80369		




# YAMAHA® VARIOUS 660'S 2001-2008

• GRIZZLY™ 2002-2008


• RAPTOR™ 2001-2005

• RHINO™ 2004-2007

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80030	Intake	.450"	1.205"	55#	145#	.345"
		Exhaust					
Kit Includes			5	Titanium Retainers	5	CrSi Valve Springs	
			3	In H. T. Steel Basewashers	2	Ex H. T. Steel Basewashers	

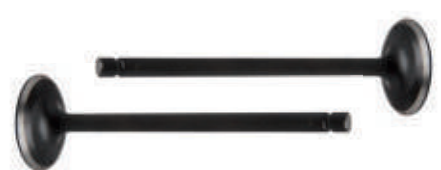
## Cylinder Head Service Kit NEW PRODUCTS

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-82390	Intake	.450"	1.205"	55#	145#	.345"	
		Exhaust						
	Kit Includes			5	In / Ex Titanium Retainers	5	In / Ex CrSi Valve Springs	
				3	In H. T. Steel Basewashers	2	Ex H. T. Steel Basewashers	
				3	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves	
3				In Std. C630 Valves Guides	2	Ex Std. C630 Valves Guides		
			1	Top End Gasket Kit				

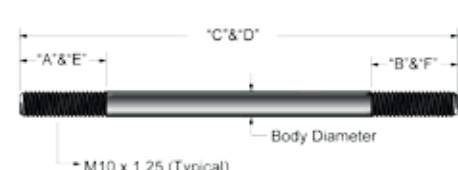
## Components • Replacement • Cylinder Head Service Kit NEW PRODUCTS

KPMI P/N	Description	Specification
80-80030	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80060	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80063	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80040	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80050	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82391	Gasket Kit	<b>Includes:</b> Head Gasket 100mm Bore (1), Base Gasket (1), Exhaust Gasket (2), Cam Chain Tensioner Gasket (1), Valve Stem Seal (5), Radiator Hose O-ring (1), Valve Cover Plug O-ring (1), Oil Tank O-ring (1), Cam Chain Tens. Cap O-ring (1), Dipstick O-ring (1), Tappet Cover O-ring (1), Cylinder Base O-ring (1), Intake Valve Adj. Cover O-ring (1), Oil Line Washers (8)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80060	Intake	30.00mm	1.181"	0.2355"	15°	3.960"	Standard
	80-80061	Intake	31.00mm	1.220"	0.2355"	15°	3.960"	Oversize
	80-80063	Exhaust	32.00mm	1.260"	0.2348"	25°	3.650"	Standard
	80-80064	Exhaust	33.00mm	1.299"	0.2348"	25°	3.650"	Oversize

## Cylinder Stud Kit • H.T. Steel NEW PRODUCTS

	KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"		
	80-82600	4	0.319"	5.0"	1.65"	.95"		
		Quantity	Body Dia.	"D"	"E"	"F"		
		2	0.319"	2.2"	.70"	.70"		
Kit Includes			6	H. T. Steel Studs	6	H. T. Steel Nuts	6	H. T. Steel Washers

YAMAHA



# YAMAHA® VARIOUS 660'S 2001-2008



• GRIZZLY™ 2002-2008

• RAPTOR™ 2001-2005

• RHINO™ 2004-2007

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.315"	0.350"	1.125"	1.255"	0.495"	0.2345"	0.4550" / Std.	80-80040		
								+0.001"	80-80041	
								+0.002"	80-80042	
								+0.010"	80-80049	
	0.440"	0.475"	0.860"	0.990"	0.495"	0.2348"	0.4550" / Std.		80-80050	
							+0.001"		80-80051	
							+0.002"		80-80052	
							+0.010"		80-80059	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
			Part Number	Quantity		Quantity Discount		
			71017-4	Pkg. of 4		0%		
			71017-5	Pkg. of 5		0%		
			71017-8	Pkg. of 8		0%		
			71017-16	Pkg. of 16		Less- 10%		
			71017-50	Pkg. of 50		Less- 15%		
		71017-100	Pkg. of 100		Less- 20%			

## Keeper Set • O.E.M. Replacement

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
		51028-4	Single Radius Bead	Intake Exhaust	0.235"	7.0°	0.075"	0.238"	0.295"	4 Pr.	4G0-12118-00-00

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

# YAMAHA® VARIOUS 700'S 2006-2020

• GRIZZLY™ 2007-2015

• RAPTOR™ 2006-2020

• VIKING™ 2014-2020

• GRIZZLY™ 2019-2020

• RHINO™ 2008-2013

• KODIAK™ 2019-2020

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80410	Intake	.480"	1.420"	54#	195#	.480"	
		Exhaust						
Kit Includes			4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers



# YAMAHA® VARIOUS 700'S 2006-2020

- GRIZZLY™ 2007-2015
- GRIZZLY™ 2019-2020
- RAPTOR™ 2006-2020
- RHINO™ 2008-2013
- VIKING™ 2014-2020
- KODIAK™ 2019-2020

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-82080	Intake	.480"	1.420"	54#	195#	.480"
		Exhaust					
	Kit Includes	4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2		In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
4		In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-80410	Spring Kit	<b>Includes:</b> Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80430	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80433	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-80420	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82081	Gasket Kit	<b>Includes:</b> Head Gasket 103mm Bore (1), Base Gasket, Exhaust Gasket (2), Throttle Body O-ring (1), Water Pump O-ring (1), Thermostat O-ring (1), Cam Cover O-ring (1), Valve Cover O-rings (2), Valve Seal (4), Cam Chain Tensioner Gasket (1)

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80430	Intake	38.00mm	1.496"	0.2355"	11°	4.025"	Standard
	80-80431	Intake	39.00mm	1.535"	0.2355"	11°	4.010"	Oversize
	80-80432	Intake	40.00mm	1.575"	0.2355"	11°	4.010"	Oversize (+2mm)
	80-80433	Exhaust	32.00mm	1.260"	0.2350"	25°	3.785"	Standard
	80-80434	Exhaust	33.00mm	1.299"	0.2350"	25°	3.770"	Oversize
	80-80435	Exhaust	34.00mm	1.339"	0.2350"	25°	3.770"	Oversize (+2mm)

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.485"	0.525"	0.790"	1.110"	0.495"	0.2350"	0.4550" / Std.		80-80420
							+0.001"		80-80421
							+0.002"		80-80422
							+0.010"		80-80429

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71017-4			Pkg. of 4		0%		
	71017-8			Pkg. of 8		0%		
	71017-16			Pkg. of 16		Less- 10%		
	71017-50			Pkg. of 50		Less- 15%		
71017-100			Pkg. of 100		Less- 20%			

# YAMAHA® VARIOUS 700'S 2006-2020



- GRIZZLY™ 2007-2015
- GRIZZLY™ 2019-2020

- RAPTOR™ 2006-2020
- RHINO™ 2008-2013

- VIKING™ 2014-2020
- KODIAK™ 2019-2020

## Cylinder Stud Kit • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"	
	80-82450	2	0.319"	6.2"	1.95"	.95"	
		Quantity	Body Dia.	"D"	"F"	"G"	
		2	0.319"	6.7"	1.45"	.95"	
		Quantity	Body Dia.	"E"	"H"	"I"	
2	0.319"	2.2"	.70"	.70"			
Kit Includes		6	H. T. Steel Studs	6	H. T. Steel Nuts	6	H. T. Steel Washers

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

		KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
		51028-4	Single Radius Bead	Intake	0.235"	7.0°	0.075"	0.238"	0.295"	4 Pr.	4G0-12118-00-00
				Exhaust							

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

# YAMAHA® YXZ 1000R 2016-2020

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-81300	Intake	.445"	1.300"	53#	167#	.445"	
		Exhaust						
Kit Includes			12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-81700	Intake	.445"	1.300"	53#	167#	.445"	
		Exhaust						
Kit Includes			12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

It may be necessary to use KPMI® Shortened Valve Guides # 80-81320, to achieve higher than stock lift.

## Valve Spring Kit • "Shim in Tappet" Lightweight Racing

**NEW PRODUCTS**

		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
		80-82150	Intake	.445"	1.300"	53#	167#	.445"
			Exhaust					
Kit Includes				12	Titanium Retainers	12	CrSi Valve Springs	
				12	H. T. Steel Basewashers	12	H. T. Steel Tappets	
		KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
		80-82500	Intake	.445"	1.300"	53#	167#	.445"
			Exhaust					
Kit Includes				12	H.T. Steel Retainers	12	CrSi Valve Springs	
				12	H. T. Steel Basewashers	12	H. T. Steel Tappets	

KPMI® shim in tappet systems locate the adjustment shim in the hardened steel of the tappet body, where it is impervious to wearing (ovaling) and kicking the shim out. By designing the tappet and retainer together as a system, the shim counterbore depth in the tappet has been maximized. This allows for increased insurance against losing the shim even in the event of valvetrain separation during severe operating conditions, over-revs, or extreme boost pressures. It may be necessary to use KPMI® Shortened Valve Guides # 80-81320, to achieve higher than stock lift.



# YAMAHA® YXZ 1000R 2016-2020

## Cylinder Head Service Kit

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-82090	Intake	.445"	1.300"	53#	167#	.445"
		Exhaust					
	Kit Includes	12	In / Ex H. T. Steel Retainers	12	In / Ex CrSi Valve Springs	12	In / Ex H. T. Steel Basewashers
6		In Std. Black Diamond™ Valves	6	Ex Std. Black Diamond™ Valves	12	In / Ex Valve Stem Seals	
12		In / Ex Std. C630 Valves Guides	1	Top End Gasket Kit			

## Components • Replacement • Cylinder Head Service Kit

**NEW PRODUCTS**

KPMI P/N	Description	Specification
80-81700	Spring Kit	<b>Includes:</b> H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers
*71014-12	Valve Stem Seals	Seals • 4.5 mm • Red Viton®
80-81312	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-81316	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroreg Stems
80-81320	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82091	Gasket Kit	<b>Includes:</b> Head Gasket 82.5mm (1), Engine Case Gasket (1), Exhaust Gasket (3), O-ring (1), Copper Washer (1)

\* NOTE: It is important to use the valve stem seals included in the KPMI labeled bags. These valve stem seals are designed for specific compatibility with the KPMI spring kit. The COMETIC® gasket kit may contain additional valve stem seals, however these should NOT be used with the KPMI® spring kit and can be discarded.

## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-81312	Intake	31.00mm	1.220"	0.1765"	15°	3.495"	Standard
	80-81313	Intake	32.00mm	1.260"	0.1765"	15°	3.495"	Oversize
	80-81316	Exhaust	26.00mm	1.024"	0.1760"	25°	3.470"	Standard
	80-81317	Exhaust	27.00mm	1.063"	0.1760"	25°	3.470"	Oversize

## Valve • White Diamond® • Inconel® • Exhaust

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-81316K	Exhaust	26.00mm	1.024"	0.1760"	25°	3.465"	Standard

\*\* Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.530"	0.530"	0.585"	0.750"	0.354"	0.1760"	0.3564" / Std.		<b>80-81320</b>
							+0.001"		<b>80-81321</b>
							+0.002"		<b>80-81322</b>
							+0.004"		<b>80-81324</b>
							+0.010"		<b>80-81329</b>

# YAMAHA® YXZ 1000R 2016-2020



## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake
								Exhaust
				Part Number		Quantity		Quantity Discount
				71014-4		Pkg. of 4		0%
				71014-8		Pkg. of 8		0%
				71014-12		Pkg. of 12		0%
				71014-16		Pkg. of 16		Less- 10%
				71014-50		Pkg. of 50		Less- 15%
				71014-100		Pkg. of 100		Less- 20%

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
	80-81330	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	12 Pr.	1WG-12118-00-00
			Exhaust							3SO-E2118-00-00

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Tappets • O.E.M. Replacement • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	80-81340	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 12
		Exhaust								

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting other size tappets.

# YAMAHA® FJ™ 1100/ 1200 1984-1993

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-1017	Intake	.500"	1.390"	60#	210#	.500"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • Shim On Bottom Conversion • Titanium

	KPMI P/N	Type	Material			
	80-1019	Intake	Titanium			
		Exhaust				
Set Includes		16	Titanium Retainers	16	H. T. Steel Keepers Pr.	

Retainer may not be used separately as O.E.M. replacement. Use of Shim On Bottom conversion **Tappet, PN 80-1020**, is required when using these retainers. Retainers require the use of 9.5mm adjustment shim; see **KPMI® Adjustment Shim Section** in back of catalog for more information.



# YAMAHA® FJ™ 1100/ 1200 1984-1993

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-8120	Intake	29.00mm	1.142"	0.2160"	20°	3.700"	Standard
	80-8122	Intake	30.50mm	1.201"	0.2160"	20°	3.690"	Oversize
	80-8121	Exhaust	25.00mm	0.984"	0.2155"	20°	3.690"	Standard
	80-8123	Exhaust	26.00mm	1.024"	0.2155"	20°	3.690"	Oversize

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.470"	0.610"	0.695"	0.960"	0.470"	0.2160"	0.4350" / Std.		80-4172
							+0.002"		80-4173
							+0.004"		80-4180
							+0.006"		80-4181
						+0.015"			80-4174

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust
	Part Number			Quantity		Quantity Discount		
	71016-4			Pkg. of 4		0%		
	71016-8			Pkg. of 8		0%		
	71016-16			Pkg. of 16		Less- 10%		
	71016-50			Pkg. of 50		Less- 15%		
71016-100			Pkg. of 100		Less- 20%			

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
	80-1020	Intake Exhaust	None	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16

Use of Shim On Bottom conversion Retainer Set, PN 80-1019, is required when using these tappets. Refer to **KPMI® Tappet Section**, in back of catalog, when selecting other size tappets.

# YAMAHA® XS™ 1100 1978-1981

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-0449	Intake	.440"	1.275"	85#	215#	.440"
		Exhaust					
Kit Includes			8	CrSi Valve Springs			


Note: Use OEM Retainers.

# YAMAHA® V-MAX™ 1985-2007




YAMAHA

## Valve Spring Only Kit • High Performance

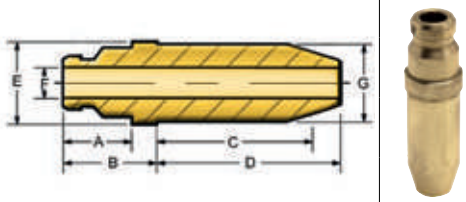
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-8021	Intake	.450"	1.375"	65#	198#	.450"
		Exhaust					
Kit Includes			16	CrSi Valve Springs			

## Retainer Set • Shim On Bottom Conversion • Titanium

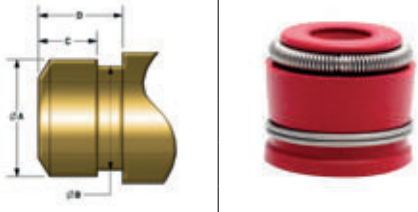
	KPMI P/N	Type	Material			
	80-8023	Intake	Titanium			
		Exhaust				
Set Includes		16	Titanium Retainers	16	H. T. Steel Keepers Pr.	

Retainer may not be used separately as O.E.M. replacement. Use of Shim On Bottom conversion **Tappet, PN 80-1020**, is required when using these retainers. Retainers require the use of 9.5mm adjustment shim; see KPMI® Adjustment Shim Section in back of catalog for more information.

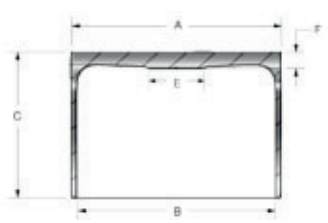
## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.470"	0.610"	0.585"	0.850"	0.470"	0.2160"	0.4350" / Std.	80-8030		
								+0.002"	80-8032	
								+0.015"	80-8039	

## Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type	
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake	
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust	
			Part Number				Quantity		Quantity Discount
			71016-4				Pkg. of 4		0%
			71016-8				Pkg. of 8		0%
			71016-16				Pkg. of 16		Less- 10%
			71016-50				Pkg. of 50		Less- 15%
71016-100				Pkg. of 100		Less- 20%			

## Tappets • Shim On Bottom Conv. • H.T. Steel

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity	
	80-1020	Intake	None	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
		Exhaust								

Use of Shim On Bottom conversion **Retainer Set, PN 80-1023**, is required when using these tappets. Refer to **KPMI® Tappet Section**, in back of catalog, when selecting other size tappets.



# YAMAHA® YZF™ R1 1998-2003

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80250	Intake	.380"	1.200"	28#	74#	.380"	
		Exhaust	.380"	1.120"	38#	84#	.380"	
Kit Includes			12	In Titanium Retainers	20	CrSi Valve Springs	12	In H. T. Steel Basewashers
			8	Ex Titanium Retainers	8	Ex Viton® Seals	8	Ex H. T. Steel Basewashers

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80394	Intake	.350"	1.370"	30#	90#	.350"	
		Exhaust	.315"	1.415"	44#	95#	.315"	
Kit Includes			12	In CrSi Valve Springs	8	Ex. CrSi Valve Springs	8	Ex H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80280	Intake	23.00mm	0.906"	0.1568"	15°	3.620"	Standard
	80-80281	Intake	23.50mm	0.925"	0.1568"	15°	3.620"	Oversize
	80-80283	Intake	23.00mm	0.906"	0.1568"	15°	3.565"	Standard (Center)
	80-80284	Intake	23.50mm	0.925"	0.1568"	15°	3.565"	Oversize (Center)
	80-80286	Exhaust	24.50mm	0.965"	0.1757"	25°	3.505"	Standard
80-80287	Exhaust	25.00mm	0.984"	0.1757"	25°	3.505"	Oversize	

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.580"	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	80-80190	
							+0.001"	80-80191	
							+0.010"	80-80199	
Intake - Use O.E.M valve guide seal									
	0.580"	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		80-80180
							+0.001"		80-80181
							+0.010"		80-80189

## Valve Guide Seals • Viton® • Exhaust

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Exhaust
				0.321"±0.005"	0.281"	0.120"	0.240"	
	Part Number			Quantity		Quantity Discount		
	71014-4			Pkg. of 4		0%		
	71014-8			Pkg. of 8		0%		
	71014-16			Pkg. of 16		Less- 10%		
	71014-20			Pkg. of 20		Less- 10%		
	71014-50			Pkg. of 50		Less- 15%		
71014-100			Pkg. of 100		Less- 20%			



# YAMAHA® YZF™ R1 2004-2006



YAMAHA

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80500	Intake	.340"	1.325"	48#	118#	.340"	
		Exhaust						
Kit Includes			12	In Titanium Retainers	20	CrSi Valve Springs	12	In H. T. Steel Basewashers
			8	Ex Titanium Retainers	8	Ex H. T. Steel Basewashers		

# YAMAHA® YZF™ R1 2007-2008

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80650	Intake	.400"	1.410"	50#	188#	.400"	
		Exhaust	.400"	1.280"	66#	167#	.400"	
Kit Includes			8	In Titanium Retainers	8	Ex Titanium Retainers	8	In CrSi Valve Springs
			8	Ex CrSi Valve Springs	8	In H. T. Steel Basewashers		
			8	In H. T. Steel Basewashers	8	Ex H. T. Steel Basewashers		

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80666	Exhaust	25.00mm	0.989"	0.1760"	15°	3.565"	Standard
	80-80667	Exhaust	26.00mm	1.024"	0.1760"	15°	3.565"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

## Valves • Tensilite® • Chromium Nitride PVD Coated Titanium

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80662T	Intake	31.00mm	1.220"	0.1960"	25°	3.590"	Standard
	80-80663T	Intake	32.00mm	1.260"	0.1960"	25°	3.590"	Oversize

## Keeper Set • O.E.M. Replacement

**NEW PRODUCTS**

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity
	80-80660	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	8 Pr.
			Exhaust	0.196"	6.5°	0.181"	0.216"	0.270"	8 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.



# YAMAHA® VARIOUS 1049cc TRIPLES 2008-'15

• FX NYTRO™ 2008-2014

• SRVIPER™ 2014-2015

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-80450	Intake	.445"	1.300"	53#	167#	.445"	
		Exhaust						
Kit Includes			12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	80-81800	Intake	.445"	1.300"	53#	167#	.445"	
		Exhaust						
Kit Includes			12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

It may be necessary to use KPMI® Shortened Valve Guides # 80-80470, to achieve higher than stock lift.

## Valve Spring Kit • "Shim in Tappet" Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
	80-81850	Intake	.445"	1.300"	53#	167#	.445"			
		Exhaust								
Kit Includes			12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers	12	H. T. Steel Tappets
	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift			
	80-82550	Intake	.445"	1.300"	53#	167#	.445"			
		Exhaust								
Kit Includes			12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers	12	H. T. Steel Tappets



Shim In Tappet (SIT)

KPMI® shim in tappet systems locate the adjustment shim in the hardened steel of the tappet body, where it is impervious to wearing (ovalling) and kicking the shim out. By designing the tappet and retainer together as a system, the shim counterbore depth in the tappet has been maximized. This allows for increased insurance against losing the shim even in the event of valvetrain separation during severe operating conditions, over-revs, or extreme boost pressures. It may be necessary to use KPMI® Shortened Valve Guides # 80-80470, to achieve higher than stock lift.

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks	
	80-80462	Intake	31.00mm	1.220"	0.1765"	15°	3.495"	Standard
	80-80463	Intake	32.00mm	1.260"	0.1765"	15°	3.495"	Oversize
	80-80466	Exhaust	26.00mm	1.024"	0.1760"	25°	3.470"	Standard
	80-80467	Exhaust	27.00mm	1.063"	0.1760"	25°	3.470"	Oversize

## Valve • White Diamond® • Inconel® • Exhaust

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter	Stem Diameter	Tulip	O. L.	Remarks
	80-80466K	Exhaust	26.00mm	1.024"	0.1760"	25°	3.465"

\*\* Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

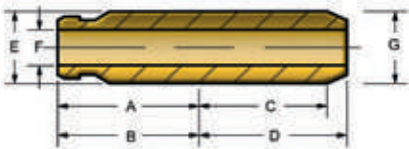

# YAMAHA® VARIOUS 1049cc TRIPLES 2008-'15



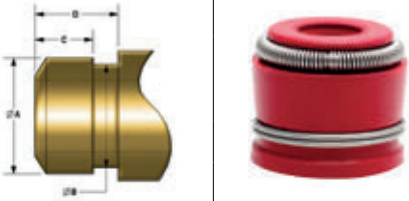
• FX NYTRO™ 2008-2014

• SRVIPER™ 2014-2015

## Valve Guides • C630 Bronze

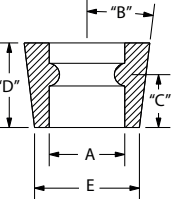
	A	B	C	D	E	F	G	Intake	Exhaust
	0.530"	0.530"	0.585"	0.750"	0.354"	0.1760"	0.3564" / Std.		<b>80-80470</b>
							+0.001"	<b>80-80471</b>	
							+0.002"	<b>80-80472</b>	
							+0.004"	<b>80-80474</b>	
							+0.010"	<b>80-80479</b>	

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Intake
								Exhaust
	<b>Part Number</b>		<b>Quantity</b>		<b>Quantity Discount</b>			
	<b>71014-4</b>		Pkg. of 4		0%			
	<b>71014-8</b>		Pkg. of 8		0%			
	<b>71014-12</b>		Pkg. of 12		0%			
	<b>71014-16</b>		Pkg. of 16		Less- 10%			
	<b>71014-50</b>		Pkg. of 50		Less- 15%			
<b>71014-100</b>		Pkg. of 100		Less- 20%				

## Keeper Set • O.E.M. Replacement

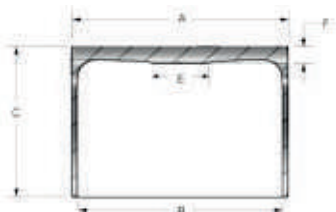
**NEW PRODUCTS**

	KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
				0.177"	6.0°	0.186"	0.221"	0.212"		
	<b>80-80495</b>	Single Radius Bead	Intake Exhaust							

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

## Tappets • O.E.M. Replacement • H.T. Steel

**NEW PRODUCTS**

	KPMI P/N	Type	Coating	A	B	C	E	F	Quantity
	<b>80-80493</b>	Intake Exhaust	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting other size tappets.



# YAMAHA® APEX™ / RX-1 (ALL MODELS) 2003-'10

## Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80600	Intake	.365"	1.100"	40#	85#	.365"
		Exhaust					
	Kit Includes	12	In Titanium Retainers	12	In CrSi Valve Springs	12	In H. T. Steel Basewashers
8		Ex Titanium Retainers	8	Ex CrSi Valve Springs	8	Ex H. T. Steel Basewashers	
8		Ex Viton® Seals					

## Valve Spring Only Kit • High Performance

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-80394	Intake	.350"	1.370"	30#	90#	.350"
		Exhaust	.315"	1.415"	44#	95#	.315"
	Kit Includes	12	In CrSi Valve Springs	8	Ex. CrSi Valve Springs	8	Ex H. T. Steel Basewashers

## Valves • Black Diamond™ • Black Nitroreg Stems

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-80612	Intake	23.00mm	0.906"	0.1568"	15°	3.620"	Standard
	80-80613	Intake	23.50mm	0.925"	0.1568"	15°	3.620"	Oversize
	80-80614	Intake	23.00mm	0.906"	0.1568"	15°	3.565"	Standard (Center)
	80-80615	Intake	23.50mm	0.925"	0.1568"	15°	3.565"	Oversize (Center)
	80-80616	Exhaust	24.50mm	0.965"	0.1757"	25°	3.505"	Standard
80-80617	Exhaust	25.00mm	0.984"	0.1757"	25°	3.505"	Oversize	

## Valve Guides • C630 Bronze

	A	B	C	D	E	F	G	Intake	Exhaust
	0.580"	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	80-80620	
							+0.001"	80-80621	
							+0.010"	80-80629	
Intake - Use O.E.M valve guide seal									
	0.580"	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		80-80630
							+0.001"		80-80631
							+0.010"		80-80639

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Exhaust
				0.321"±0.005"	0.281"	0.120"	0.240"	
	Part Number			Quantity		Quantity Discount		
	71014-4			Pkg. of 4		0%		
	71014-8			Pkg. of 8		0%		
	71014-16			Pkg. of 16		Less- 10%		
	71014-50			Pkg. of 50		Less- 15%		
71014-100			Pkg. of 100		Less- 20%			

# YAMAHA® MR-1™ WATERCRAFT ENG. 2002-'13



- FX1000™ 2002-2006
- FX140™ 2002-2004
- SR230™ 2003-2007
- AR230™ 2004-2009
- FX™ MODELS 2004-2006
- SX230™ 2004-2009
- AR210™ 2006-2013
- SR210™ 2006-2007
- SX210™ 2006-2013
- 212SS/ X™ 2008-2010
- 232 LIMITED 2008-2009
- VX CRUISER™ 2011-2013
- WAVE RUNNER™ FX's & VX's 2005-2013

## Valve Spring Kit • Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift		Installed Height		Seat Pressure	Open Pressure	@ Lift
	80-81150	Intake	.365"		1.100"		40#	85#	.365"
		Exhaust							
Kit Includes			12	In Titanium Retainers	12	In CrSi Valve Springs	12	In H. T. Steel Basewashers	
			8	Ex Titanium Retainers	8	Ex CrSi Valve Springs	8	Ex H. T. Steel Basewashers	
			8	Ex Viton® Seals					

## Valves • Black Diamond™ • Black Nitroreg Stems

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-81162	Intake	23.00mm	0.906"	0.1568"	15°	3.620"	Standard
	80-81163	Intake	23.50mm	0.925"	0.1568"	15°	3.620"	Oversize
	80-81164	Intake	23.00mm	0.906"	0.1568"	15°	3.565"	Standard (Center)
	80-81165	Intake	23.50mm	0.925"	0.1568"	15°	3.565"	Oversize (Center)
	80-81166	Exhaust	24.50mm	0.965"	0.1757"	25°	3.505"	Standard
	80-81167	Exhaust	25.00mm	0.984"	0.1757"	25°	3.505"	Oversize

## Valve Guides • C630 Bronze

**NEW PRODUCTS**

	A	B	C	D	E	F	G	Intake	Exhaust	
	0.580"	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	80-81170		
								+0.001"	80-81171	
								+0.010"	80-81179	
Intake - Use O.E.M valve guide seal										
	0.580"	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		80-81180	
								+0.001"		80-81181
								+0.010"		80-81189

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Exhaust
				0.321"±0.005"	0.281"	0.120"	0.240"	
				Part Number		Quantity		Quantity Discount
				71014-4		Pkg. of 4		0%
				71014-8		Pkg. of 8		0%
				71014-16		Pkg. of 16		Less- 10%
				71014-50		Pkg. of 50		Less- 15%
			71014-100		Pkg. of 100		Less- 20%	



# YAMAHA® 1.8L 4V WATERCRAFT 2008-'19

YAMAHA

## Valve Spring Kit • High Performance Lightweight Racing

**NEW PRODUCTS**

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81000	Intake	.425"	1.375"	85#	221#	.425"
		Exhaust					
Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers	

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	80-81600	Intake	.425"	1.375"	85#	221#	.425"
		Exhaust					
Kit Includes	16	H.T. Steel Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers	

- Spring Kit is designed with increased spring rate and higher lift compatibility over the stock components
- Spring Kit is specifically designed for high boost / high RPM applications
- CNC'd Titanium or H.T. Steel Retainers and Cr-Si dual springs provide valvetrain control at high RPM with high performance camshaft compatibility

## Valves • White Diamond® • Hard Chrome Stems • Inconel®

**NEW PRODUCTS**

	KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
	80-81012H	Intake	34.00mm	1.339"	0.2159"	15°	3.560"	Standard (Stainless)
	*80-81016K	Exhaust	29.00mm	1.142"	0.2154"	25°	3.535"	Standard (Inconel®)

\*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

## Valve Guides • C630 Bronze

**NEW PRODUCTS**


		A	B	C	D	E	F	G	Intake	Exhaust
		0.435"	0.495"	0.730"	1.020"	0.475"	0.2154"	0.3774" / Std.		<b>80-81020</b>
									+0.001"	<b>80-81021</b>
									+0.002"	<b>80-81022</b>
									+0.010"	<b>80-81029</b>

## Valve Guide Seals • Viton®

Stem Diameter	O.L.	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.333"	0.455"	2	A	B	C	D	Intake
				0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust
		Part Number				Quantity		Quantity Discount
		<b>71040-4</b>				Pkg. of 4		0%
		<b>71040-8</b>				Pkg. of 8		0%
		<b>71040-16</b>				Pkg. of 16		Less- 10%
		<b>71040-50</b>				Pkg. of 50		Less- 15%
<b>71040-100</b>				Pkg. of 100		Less- 20%		


## BMW™ M3™ • E36

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	90-90010	Intake	.500"	1.430"	50#	191#	.500"
		Exhaust					
<b>Kit Includes</b>			24	Titanium Retainers	24	CrSi Valve Springs	
			24	H. T. Steel Basewashers (Outer)	24	H. T. Steel Basewashers (Inner)	

## MITSUBISHI™ 3.0L 24V 6G72


### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	97-97040	Intake	.465"	1.300"	88#	219#	.465"	
		Exhaust						
<b>Kit Includes</b>			24	Titanium Retainers	24	CrSi Valve Springs	24	H. T. Steel Basewashers


## PORSCHE™ 911 / 930 / 964 / 2V

2.0L / 2.2L / 2.4L / 2.7L / 3.0L / 3.2L / 3.3L

### Valve Spring Kit • Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	
	98-98000	Intake	.540"	1.485"	91#	226#	.540"	
		Exhaust						
<b>Kit Includes</b>			12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

### Valve Spring Kit • Turbocharged Lightweight Racing

	KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
	98-98010	Intake	.540"	1.455"	100#	233#	.540"
		Exhaust					
<b>Kit Includes</b>			12	Titanium Retainers	12	CrSi Valve Springs	
			12	H. T. Steel Basewashers (Outer)	12	H. T. Steel Shims	



# DOWELS

Here at KPMI®, we pay attention to the finest of details. We have created a set of multi-use steel dowels that aid in cylinder to head, cylinder to case, and cam support cover to case alignment. These dowels are designed to work in various applications dependent on need for a solid or hollow dowel. Ease of installation and serviceability, especially on faced heads and cylinders, were at the forefront when designing these dowels. Additionally, all KPMI® dowels are single-point machined and heat treated (where applicable) to create a lasting product. KPMI® dowels are conveniently packaged in quantities of: 4, 8, and 20. A 5% value added savings has been built into the 20 quantity pack.

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.5575"	0.375"	0.505"	16573-83A
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83070-4</b>	Pkg. of 4	0%	Evolution 1984-'99 XL 1100cc 1986-'87 Evo Sportster 883cc 1986-'17 Evo Sportster 1200cc 1988-'17
	<b>83070-8</b>	Pkg. of 8	0%	
	<b>83070-20</b>	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Evolution OEM Replacement
- Can Also Be Used as Multipurpose Dowel

- See Dimensions for Fitment
- Supersedes **part number 20-2099**

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.4365"	0.323"	0.610"	16595-99A
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83080-4</b>	Pkg. of 4	0%	Twin Cam 88" 1999-'07 Twin Cam 88"-103" 2005-'17
	<b>83080-8</b>	Pkg. of 8	0%	
	<b>83080-20</b>	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Twin Cam OEM Replacement
- Can Also Be Used as Multipurpose Dowel

- See Dimensions for Fitment
- Supersedes **part number 20-20413**

Material	OD 1	OD 2 O/S	OL	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
H.T. Steel	0.250"	0.252"	0.520"	50-8022	366
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>	
	<b>83240-4</b>	Pkg. of 4	0%	Panhead 1948-'65 Shovelhead 1966-'83 Evolution 1984-'99 Evo Sportster 883cc 1986-'17 Evo Sportster 1200cc 1988-'17	
	<b>83240-8</b>	Pkg. of 8	0%		
	<b>83240-20</b>	Pkg. of 20	Less-5%		

- S&S "Oversized" Dowel for 4" to 4-3/8" Cylinders
- Black Oxide Coated for Corrosion Resistance
- Heat Treated Steel

- Cone Dowel for 1948-'05 Various HD® Applications
- See Description Below for Special Design Features

This KPMI® dowel has been designed to replace the S&S .250" cylinder dowel, or to be used as desired. This dowel features a unique witness line in the center of the part which serves two purposes. First, this witness line serves as a marker for proper installation height and, second, to create two distinct halves of the part. One end of the dowel has a .252" diameter with a machined dimple on the end so you know to use that end in the case or cylinder. The other half incorporates a .250" diameter. This purpose-made change in diameter, and interference, ensures a snug fit on one end and a slip fit on the other as well as fret free use.

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.375"	0.272"	0.400"	16589-99A
	<b>KPMI P/N</b>	<b>Quantity</b>	<b>Discount</b>	<b>Fits</b>
	<b>83250-4</b>	Pkg. of 4	0%	Milwaukee-Eight 2017-'18
	<b>83250-8</b>	Pkg. of 8	0%	
	<b>83250-20</b>	Pkg. of 20	Less-5%	

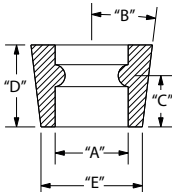

- Black Oxide Coated for Corrosion Resistance
- Rounded End Installed in Cylinder or Case
- Tapered End Installed in Head or Cam-Support Cover

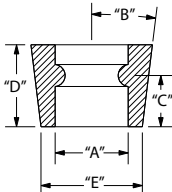

- Designed as HD® M8 OEM Replacement
- Can Also Be Used as Multipurpose Dowel
- See Dimensions for Fitment

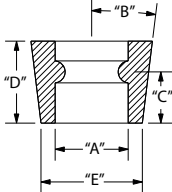

Designed for the Harley Davidson® Milwaukee-Eight engine, this dowel can also serve as a multi-purpose alignment pin. Our dowel incorporates OEM elements while increasing ease of installation through the overall shape of the part. A radiused end allows for easy insertion into the cylinder or case, and a tapered end provides hassle-free location of the mating holes in the head or cam-support cover. This commonly-sized dowel will serve its purpose wherever you see fit.

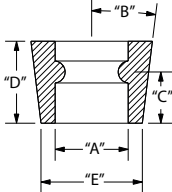



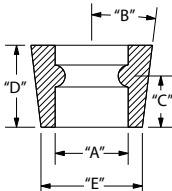

All KPMI® keepers are single-point machined from high tensile strength billet material (with the exception of forged multi-bead styles). After machining, the keepers are split, tumbled and then heat treated. At KPMI® we pay close attention to the surface finish and tolerance of all diameters, taper angle, and bead location. This type of detail insures repeatability you can count on. All Kibblewhite® Keepers are sold in pairs of 4, 8, 16, 50, and 100. \* The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.215"</b>	10.0°	0.076"	0.210"	0.285"	---
		Part Number		Quantity	
		51002-4		4 Pairs	
		51002-8		8 Pairs	
		51002-16		16 Pairs	
		51002-50		50 Pairs	
		51002-100		100 Pairs	

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.196"</b>	7.0°	0.185"	0.225"	0.279"	---
		Part Number		Quantity	
		51004-4		4 Pairs	
		51004-8		8 Pairs	
		51004-16		16 Pairs	
		51004-50		50 Pairs	
		51004-100		100 Pairs	

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	15.0°	0.135"	0.300"	0.350"	---
		Part Number		Quantity	
		51006-4		4 Pairs	
		51006-8		8 Pairs	
		51006-16		16 Pairs	
		51006-50		50 Pairs	
		51006-100		100 Pairs	

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	7.0°	0.188"	0.323"	0.342"	12011-004
		Part Number		Quantity	
		51008-4		4 Pairs	
		51008-8		8 Pairs	
		51008-16		16 Pairs	
		51008-50		50 Pairs	
		51008-100		100 Pairs	
Note: Keeper, 51008 is shortened to increase tip length					

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.215"</b>	10.0°	0.199"	0.237"	0.288"	---
		Part Number		Quantity	
		51010-4		4 Pairs	
		51010-8		8 Pairs	
		51010-16		16 Pairs	
		51010-50		50 Pairs	
		51010-100		100 Pairs	



# KEEPERS

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## Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	7.0°	0.190"	0.340"	0.349"	11 34 0 026 460 (Non-rotating)
	<b>Part Number</b>		<b>Quantity</b>		
	51011-4		4 Pairs		
	51011-8		8 Pairs		
	51011-16		16 Pairs		
	51011-50		50 Pairs		
51011-100		100 Pairs			

## Single Radius Bead

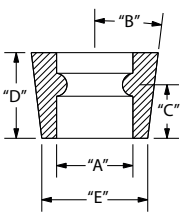

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.315"</b>	15.0°	0.100"	0.300"	0.344"	---
	<b>Part Number</b>		<b>Quantity</b>		
	51012-4		4 Pairs		
	51012-8		8 Pairs		
	51012-16		16 Pairs		
	51012-50		50 Pairs		
51012-100		100 Pairs			

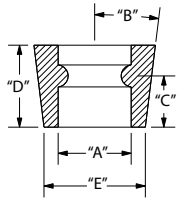

## Single Radius Bead

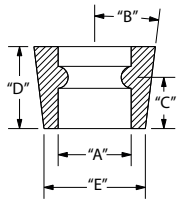

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.235"</b>	7.0°	0.153"	0.250"	0.300"	---
	<b>Part Number</b>		<b>Quantity</b>		
	51013-4		4 Pairs		
	51013-8		8 Pairs		
	51013-16		16 Pairs		
	51013-50		50 Pairs		
51013-100		100 Pairs			

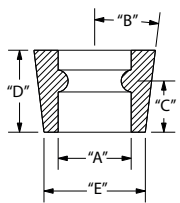

## Single Radius Bead

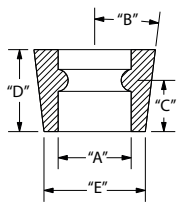

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.196"</b>	10.0°	0.160"	0.200"	0.308"	---
	<b>Part Number</b>		<b>Quantity</b>		
	51015-4		4 Pairs		
	51015-8		8 Pairs		
	51015-16		16 Pairs		
	51015-50		50 Pairs		
51015-100		100 Pairs			

Single Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	10.0°	0.235"	0.285"	0.417"	71-1166
		Part Number		Quantity	
		51023-4		4 Pairs	
		51023-8		8 Pairs	
		51023-16		16 Pairs	
		51023-50		50 Pairs	
		51023-100		100 Pairs	

Single Radius Bead <span style="color: red; font-weight: bold;">NEW PRODUCTS</span>					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.215"</b>	7.0°	0.179"	0.214"	0.262"	14781-MEB-670
		Part Number		Quantity	
		51024-4		4 Pairs	
		51024-8		8 Pairs	
		51024-16		16 Pairs	
		51024-50		50 Pairs	
		51024-100		100 Pairs	

Single Radius Bead <span style="color: red; font-weight: bold;">NEW PRODUCTS</span>					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.196"</b>	7.0°	0.170"	0.205"	0.236"	14781-MAT-000
		Part Number		Quantity	
		51025-4		4 Pairs	
		51025-8		8 Pairs	
		51025-16		16 Pairs	
		51025-50		50 Pairs	
		51025-100		100 Pairs	

Single Radius Bead <span style="color: red; font-weight: bold;">NEW PRODUCTS</span>					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.177"</b>	6.0°	0.186"	0.221"	0.212"	1WG-12118-00-00 3S0-E2118-00-00
		Part Number		Quantity	
		51026-4		4 Pairs	
		51026-8		8 Pairs	
		51026-16		16 Pairs	
		51026-50		50 Pairs	
		51026-100		100 Pairs	

Single Radius Bead <span style="color: red; font-weight: bold;">NEW PRODUCTS</span>					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.196"</b>	6.5°	0.181"	0.216"	0.270"	1AA-12118-00-00
		Part Number		Quantity	
		51027-4		4 Pairs	
		51027-8		8 Pairs	
		51027-16		16 Pairs	
		51027-50		50 Pairs	
		51027-100		100 Pairs	



# KEEPERS

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## Single Radius Bead NEW PRODUCTS

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.235"</b>	7.0°	0.075"	0.238"	0.295"	4G0-12118-00-00
		<b>Part Number</b>		<b>Quantity</b>	
		51028-4		4 Pairs	
		51028-8		8 Pairs	
		51028-16		16 Pairs	
		51028-50		50 Pairs	
		51028-100		100 Pairs	

## Single Radius Bead NEW PRODUCTS

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	9.0°	0.300"	0.345"		---
		<b>Part Number</b>		<b>Quantity</b>	
		51030-4		4 Pairs	
		51030-8		8 Pairs	
		51030-16		16 Pairs	
		51030-50		50 Pairs	
		51030-100		100 Pairs	

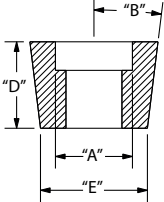

## Shouldered Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.375"</b>	15.0°	----	0.305"	0.403"	188228-36
		<b>Part Number</b>		<b>Quantity</b>	
		51005-4		4 Pairs	
		51005-8		8 Pairs	
		51005-16		16 Pairs	
		51005-50		50 Pairs	
		51005-100		100 Pairs	

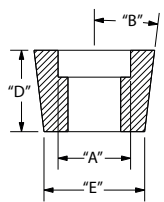

## Shouldered Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	15.0°	----	0.315"	0.381"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51007-4		4 Pairs	
		51007-8		8 Pairs	
		51007-16		16 Pairs	
		51007-50		50 Pairs	
		51007-100		100 Pairs	

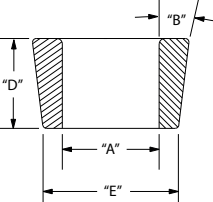

### Shouldered Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	15.0°	----	0.343"	0.375"	18228-30
		<b>Part Number</b>		<b>Quantity</b>	
		51009-4		4 Pairs	
		51009-8		8 Pairs	
		51009-16		16 Pairs	
		51009-50		50 Pairs	
		51009-100		100 Pairs	

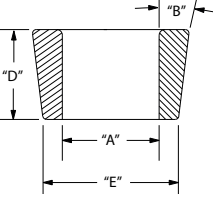

### Shouldered Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.315"</b>	15.0°	----	0.315"	0.379"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51018-4		4 Pairs	
		51018-8		8 Pairs	
		51018-16		16 Pairs	
		51018-50		50 Pairs	
		51018-100		100 Pairs	

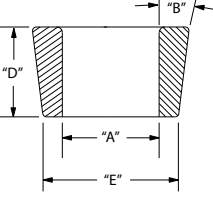

### Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	7.0°	---	0.245"	0.369"	40-0167, 71-3748, WE259, WE259A, 99-0062/3
		<b>Part Number</b>		<b>Quantity</b>	
		51017-4		4 Pairs	
		51017-8		8 Pairs	
		51017-16		16 Pairs	
		51017-50		50 Pairs	
		51017-100		100 Pairs	

### Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	7.0°	----	0.250"	0.371"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51020-4		4 Pairs	
		51020-8		8 Pairs	
		51020-16		16 Pairs	
		51020-50		50 Pairs	
		51020-100		100 Pairs	

### Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	15.0°	----	0.235"	0.380"	18228-30
		<b>Part Number</b>		<b>Quantity</b>	
		51022-4		4 Pairs	
		51022-8		8 Pairs	
		51022-16		16 Pairs	
		51022-50		50 Pairs	
		51022-100		100 Pairs	



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## Single Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	15.0°	0.220"	0.365"	0.360"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51003-4		4 Pairs	
		51003-8		8 Pairs	
		51003-16		16 Pairs	
		51003-50		50 Pairs	
		51003-100		100 Pairs	

## Single Square Bead

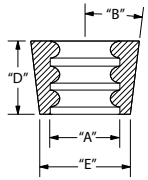

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	7.0°	0.190"	0.380"	0.380"	18229-83
		<b>Part Number</b>		<b>Quantity</b>	
		51014-4		4 Pairs	
		51014-8		8 Pairs	
		51014-16		16 Pairs	
		51014-50		50 Pairs	
		51014-100		100 Pairs	

## Single Square Bead NEW PRODUCTS

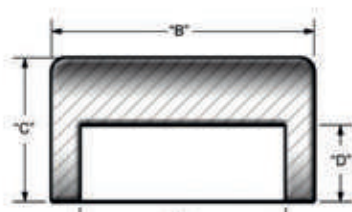
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.310"</b>	9.0°	0.155"	0.345"	0.398"	---
		<b>Part Number</b>		<b>Quantity</b>	
		51031-4		4 Pairs	
		51031-8		8 Pairs	
		51031-16		16 Pairs	
		51031-50		50 Pairs	
		51031-100		100 Pairs	

## Triple Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.275"</b>	7.0°	---	0.290"	0.345"	18260-02
		<b>Part Number</b>		<b>Quantity</b>	
		51016-4		4 Pairs	
		51016-8		8 Pairs	
		51016-16		16 Pairs	
		51016-50		50 Pairs	
		51016-100		100 Pairs	

<b>Triple Radius Bead</b> <span style="float: right; color: red; font-weight: bold;">NEW PRODUCTS</span>					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
<b>0.236"</b>	7.0°	---	0.200"	0.282"	18100060
				Part Number	Quantity
				<b>51029-4</b>	4 Pairs
				<b>51029-8</b>	8 Pairs
				<b>51029-16</b>	16 Pairs
				<b>51029-50</b>	50 Pairs
				<b>51029-100</b>	100 Pairs

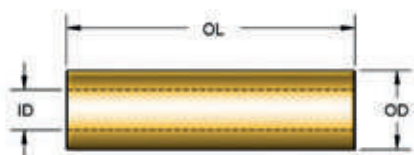
## LASH CAPS



KPMI® lash caps are machined from a tough steel that is heat treated to a specific depth, creating a hard impact and wear resistant surface, with a ductile core so they do not crack.

<b>Lash Caps</b>										
Qty. 4 KPMI P/N	Qty. 8 KPMI P/N	Qty. 16 KPMI P/N	Qty. 50 KPMI P/N	Qty. 100 KPMI P/N	"A" Bore Diameter		"B" Outside Diameter	"C" Overall Length	"D" Counterbore Depth	("C"- "D") Roof Thickness
					mm	in				
<b>94001-4</b>	<b>94001-8</b>	<b>94001-16</b>	<b>94001-50</b>	<b>94001-100</b>	7.94mm	0.3126"	0.395"	0.160"	0.080"	0.080"
<b>94002-4</b>	<b>94002-8</b>	<b>94002-16</b>	<b>94002-50</b>	<b>94002-100</b>	7.00mm	0.2756"	0.355"	0.160"	0.080"	0.080"
<b>94003-4</b>	<b>94003-8</b>	<b>94003-16</b>	<b>94003-50</b>	<b>94003-100</b>	6.50mm	0.2595"	0.335"	0.120"	0.080"	0.040"
<b>94004-4</b>	<b>94004-8</b>	<b>94004-16</b>	<b>94004-50</b>	<b>94004-100</b>	5.50mm	0.2165"	0.295"	0.090"	0.050"	0.040"
<b>94005-4</b>	<b>94005-8</b>	<b>94005-16</b>	<b>94005-50</b>	<b>94005-100</b>	5.00mm	0.1969"	0.277"	0.090"	0.050"	0.040"
<b>94006-4</b>	<b>94006-8</b>	<b>94006-16</b>	<b>94006-50</b>	<b>94006-100</b>	5.00mm	0.1969"	0.277"	0.230"	0.150"	0.080"
<b>94007-4</b>	<b>94007-8</b>	<b>94007-16</b>	<b>94007-50</b>	<b>94007-100</b>	5.00mm	0.1969"	0.277"	0.175"	0.100"	0.075"
<b>94008-4</b>	<b>94008-8</b>	<b>94008-16</b>	<b>94008-50</b>	<b>94008-100</b>	6.00mm	0.2282"	0.315"	0.120"	0.080"	0.040"

## MANGANESE BLANK GUIDES



The Manganese blank guides are designed with large OD's and long lengths to allow maximum versatility and can be machined to fit a large variety of applications. The Manganese material is easily reamed, and then can be delicately finished with our high quality ball hones. These blank guides are a perfect choice for repair work or machining a custom guide for hard to find applications.

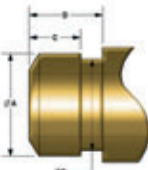

<b>Manganese Blank Guides</b> <span style="float: right; color: red; font-weight: bold;">NEW PRODUCTS</span>					
KPMI P/N	ID	OD	OL	Quantity	Fits
<b>20-20380</b>	7.0mm	0.740"	2.700"	Pkg. of 1	Universal
<b>20-20381</b>	0.308"	0.740"	2.700"	Pkg. of 1	Universal
<b>20-20382</b>	0.372"	0.740"	2.700"	Pkg. of 1	Universal
<b>20-20383</b>	0.341"	0.740"	2.700"	Pkg. of 1	Universal



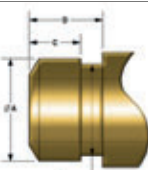

# VALVE GUIDE SEALS

All KPMI® seals are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. Value added savings have been built into the 16, 50, and 100 quantity packs with 10, 15, and 20% savings respectively. Select your seal type and then use the diagram and specifications to ensure your valve guides share the same dimensions for a proper fit.

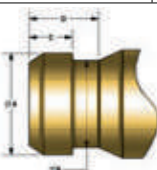

## Seal Style 1 - Solid Viton®

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
8.0mm	0.285"	0.455"	A	B	C	D	764.1.013.1A
			0.466"-0.475"	0.411"-0.430"	0.040"	0.135"	
 			KPMI P/N		Quantity	Quantity Discount	
			71043-4		Pkg. of 4	0%	
			71043-8		Pkg. of 8	0%	
			71043-16		Pkg. of 16	Less- 10%	
			71043-50		Pkg. of 50	Less- 15%	
			71043-100		Pkg. of 100	Less- 20%	

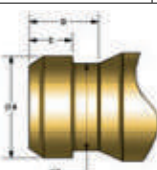

## Seal Style 1 - Solid Viton®

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.465"	0.550"	A	B	C	D	---
			0.500"±0.010"	0.445"	0.230"	0.280"	
 			KPMI P/N		Quantity	Quantity Discount	
			71012-4		Pkg. of 4	0%	
			71012-8		Pkg. of 8	0%	
			71012-16		Pkg. of 16	Less- 10%	
			71012-50		Pkg. of 50	Less- 15%	
			71012-100		Pkg. of 100	Less- 20%	

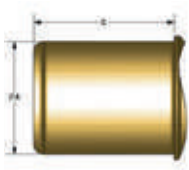

## Seal Style 2 - Solid Viton® w/ Tension Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
4.0mm	0.310"	0.380"	A	B	C	D	12209-KT7-013
			0.315"±0.005"	0.270"	0.120"	0.235"	
 			KPMI P/N		Quantity	Quantity Discount	
			71013-4		Pkg. of 4	0%	
			71013-8		Pkg. of 8	0%	
			71013-16		Pkg. of 16	Less- 10%	
			71013-50		Pkg. of 50	Less- 15%	
			71013-100		Pkg. of 100	Less- 20%	

## Seal Style 2 - Solid Viton® w/ Tension Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.5mm	0.330"	0.455"	A	B	C	D	51Y-12119-00-00
			0.365"±0.002"	0.325"	0.120"	0.235"	
 			KPMI P/N		Quantity	Quantity Discount	
			71040-4		Pkg. of 4	0%	
			71040-8		Pkg. of 8	0%	
			71040-16		Pkg. of 16	Less- 10%	
			71040-50		Pkg. of 50	Less- 15%	
			71040-100		Pkg. of 100	Less- 20%	

## Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N
			A	B	C		
5.0mm	0.460"	0.975"	A	B	C	0.674"	420431671
			0.355"±0.005"	---	0.290"		
 			KPMI P/N		Quantity	Quantity Discount	
			71047-4		Pkg. of 4	0%	
			71047-8		Pkg. of 8	0%	
			71047-16		Pkg. of 16	Less- 10%	
			71047-50		Pkg. of 50	Less- 15%	
			71047-100		Pkg. of 100	Less- 20%	

**NEW PRODUCTS**





# VALVE GUIDE SEALS





## Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

**NEW PRODUCTS**



Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N	
			A	B	C			
 	0.630"	1.043"	0.435"±0.005"	---	0.480"	0.697"	3610212	
			KPMI P/N			Quantity		Quantity Discount
			71048-4			Pkg. of 4		0%
			71048-8			Pkg. of 8		0%
			71048-16			Pkg. of 16		Less- 10%
			71048-50			Pkg. of 50		Less- 15%
71048-100			Pkg. of 100		Less- 20%			

## Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

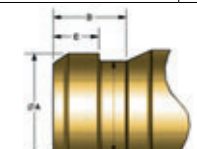

**NEW PRODUCTS**

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N	
			A	B	C			
 	0.712"	1.170"	0.475"±0.005"	---	0.545"	0.707"	18100044	
			KPMI P/N			Quantity		Quantity Discount
			71046-4			Pkg. of 4		0%
			71046-8			Pkg. of 8		0%
			71046-16			Pkg. of 16		Less- 10%
			71046-50			Pkg. of 50		Less- 15%
71046-100			Pkg. of 100		Less- 20%			

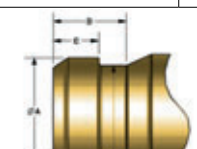

## Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N	
			A	B	C			
 	0.974"	1.457"	0.560"±0.005"	---	0.700"	0.970"	18094-02A	
			KPMI P/N			Quantity		Quantity Discount
			71030-4			Pkg. of 4		0%
			71030-8			Pkg. of 8		0%
			71030-16			Pkg. of 16		Less- 10%
			71030-50			Pkg. of 50		Less- 15%
71030-100			Pkg. of 100		Less- 20%			

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N	
			A	B	C	D		
 	0.331"	0.370"	0.321"±0.005"	0.281"	0.120"	0.240"	12209-ML0-722	
			KPMI P/N			Quantity		Quantity Discount
			71014-4			Pkg. of 4		0%
			71014-8			Pkg. of 8		0%
			71014-16			Pkg. of 16		Less- 10%
			71014-50			Pkg. of 50		Less- 15%
71014-100			Pkg. of 100		Less- 20%			

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

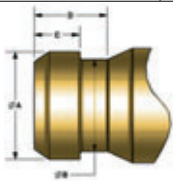

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N	
			A	B	C	D		
 	0.350"	0.405"	0.340"±0.005"	0.303"	0.125"	0.230"	09289-05011	
			KPMI P/N			Quantity		Quantity Discount
			71015-4			Pkg. of 4		0%
			71015-8			Pkg. of 8		0%
			71015-16			Pkg. of 16		Less- 10%
			71015-50			Pkg. of 50		Less- 15%
71015-100			Pkg. of 100		Less- 20%			



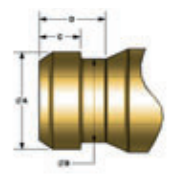

# VALVE GUIDE SEALS

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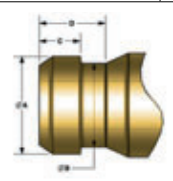

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.5mm	0.320"	0.440"	A	B	C	D	12206.502-005
			0.358"±0.005"	0.320"	0.110"	0.200"	
 			KPMI P/N		Quantity	Quantity Discount	
			71016-4		Pkg. of 4	0%	
			71016-8		Pkg. of 8	0%	
			71016-16		Pkg. of 16	Less- 10%	
			71016-50		Pkg. of 50	Less- 15%	
			71016-100		Pkg. of 100	Less- 20%	

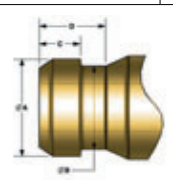

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.5mm	0.353"	0.560"	A	B	C	D	12209-300-003
			0.475"±0.005"	0.415"	0.115"	0.260"	
 			KPMI P/N		Quantity	Quantity Discount	
			71018-4		Pkg. of 4	0%	
			71018-8		Pkg. of 8	0%	
			71018-16		Pkg. of 16	Less- 10%	
			71018-50		Pkg. of 50	Less- 15%	
			71018-100		Pkg. of 100	Less- 20%	

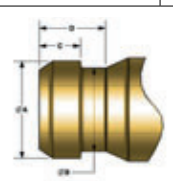

## Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.374"	0.560"	A	B	C	D	92049-016
			0.475"±0.005"	0.430"	0.115"	0.240"	
 			KPMI P/N		Quantity	Quantity Discount	
			71019-4		Pkg. of 4	0%	
			71019-8		Pkg. of 8	0%	
			71019-16		Pkg. of 16	Less- 10%	
			71019-50		Pkg. of 50	Less- 15%	
			71019-100		Pkg. of 100	Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
4.0mm	0.320"	0.355"	A	B	C	D	---
			0.285"±0.002"	0.245"	0.120"	0.215"	
 			KPMI P/N		Quantity	Quantity Discount	
			71039-4		Pkg. of 4	0%	
			71039-8		Pkg. of 8	0%	
			71039-16		Pkg. of 16	Less- 10%	
			71039-50		Pkg. of 50	Less- 15%	
			71039-100		Pkg. of 100	Less- 20%	

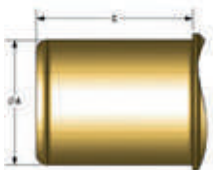

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.0mm	0.320"	0.435"	A	B	C	D	77036027000
			0.305"±0.002"	0.265"	0.100"	0.195"	
 			KPMI P/N		Quantity	Quantity Discount	
			71041-4		Pkg. of 4	0%	
			71041-8		Pkg. of 8	0%	
			71041-16		Pkg. of 16	Less- 10%	
			71041-50		Pkg. of 50	Less- 15%	
			71041-100		Pkg. of 100	Less- 20%	

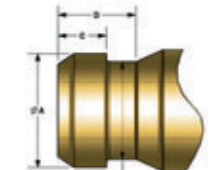

# VALVE GUIDE SEALS



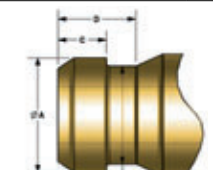

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
5.5mm	0.540"	0.524"	A	B	C	D	---
			0.435"±0.002"	---	---	0.410"	
 			KPMI P/N		Quantity	Quantity Discount	
			71038-4		Pkg. of 4	0%	
			71038-8		Pkg. of 8	0%	
			71038-16		Pkg. of 16	Less- 10%	
			71038-50		Pkg. of 50	Less- 15%	
			71038-100		Pkg. of 100	Less- 20%	

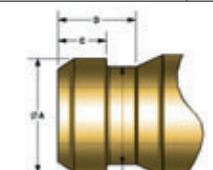

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
5.5mm	0.315"	0.455"	A	B	C	D	420430420
			0.325"±0.002"	0.310"	0.110"	0.220"	
 			KPMI P/N		Quantity	Quantity Discount	
			71042-4		Pkg. of 4	0%	
			71042-8		Pkg. of 8	0%	
			71042-16		Pkg. of 16	Less- 10%	
			71042-50		Pkg. of 50	Less- 15%	
			71042-100		Pkg. of 100	Less- 20%	

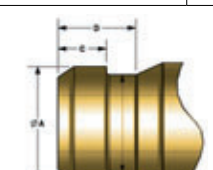

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
6.0mm	0.371"	0.480"	A	B	C	D	5H0-12119-00-00
			0.385"±0.002"	0.341"	0.120"	0.255"	
 			KPMI P/N		Quantity	Quantity Discount	
			71017-4		Pkg. of 4	0%	
			71017-8		Pkg. of 8	0%	
			71017-16		Pkg. of 16	Less- 10%	
			71017-50		Pkg. of 50	Less- 15%	
			71017-100		Pkg. of 100	Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
6.0mm	0.400"	0.560"	A	B	C	D	711230510
			0.435"±0.002"	0.400"	0.120"	0.285"	
 			KPMI P/N		Quantity	Quantity Discount	
			71025-4		Pkg. of 4	0%	
			71025-8		Pkg. of 8	0%	
			71025-16		Pkg. of 16	Less- 10%	
			71025-50		Pkg. of 50	Less- 15%	
			71025-100		Pkg. of 100	Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
6.5mm	0.315"	0.520"	A	B	C	D	59036027000
			0.435"±0.002"	0.395"	0.120"	0.210"	
 			KPMI P/N		Quantity	Quantity Discount	
			71029-4		Pkg. of 4	0%	
			71029-8		Pkg. of 8	0%	
			71029-16		Pkg. of 16	Less- 10%	
			71029-50		Pkg. of 50	Less- 15%	
			71029-100		Pkg. of 100	Less- 20%	



# VALVE GUIDE SEALS

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## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.524"	0.615"	A	B	C	D	---
			0.495"±0.002"	---	---	0.385"	
			KPMI P/N		Quantity	Quantity Discount	
			71031-4		Pkg. of 4	0%	
			71031-8		Pkg. of 8	0%	
			71031-16		Pkg. of 16	Less- 10%	
			71031-50		Pkg. of 50	Less- 15%	
			71031-100		Pkg. of 100	Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.394"	0.555"	A	B	C	D	---
			0.447"±0.002"	---	---	0.265"	
			KPMI P/N		Quantity	Quantity Discount	
			71037-4		Pkg. of 4	0%	
			71037-8		Pkg. of 8	0%	
			71037-16		Pkg. of 16	Less- 10%	
			71037-50		Pkg. of 50	Less- 15%	
			71037-100		Pkg. of 100	Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.517"	0.550"	A	B	C	D	022-1516
			0.435"±0.002"	---	---	0.310"	
			KPMI P/N		Quantity	Quantity Discount	
			71026-4		Pkg. of 4	0%	
			71026-8		Pkg. of 8	0%	
			71026-16		Pkg. of 16	Less- 10%	
			71026-50		Pkg. of 50	Less- 15%	
			71026-100		Pkg. of 100	Less- 20%	

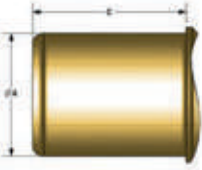

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.510"	0.665"	A	B	C	D	---
			0.560"±0.002"	---	---	0.375"	
			KPMI P/N		Quantity	Quantity Discount	
			71028-4		Pkg. of 4	0%	
			71028-8		Pkg. of 8	0%	
			71028-16		Pkg. of 16	Less- 10%	
			71028-50		Pkg. of 50	Less- 15%	
			71028-100		Pkg. of 100	Less- 20%	

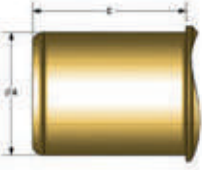

# VALVE GUIDE SEALS



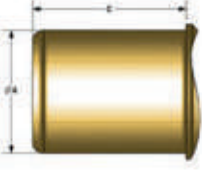

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
7.0mm	0.360"	0.520"	A	B	C	D	764.1.087.1A
			0.383"-0.389"	---	---	0.255"	
		KPMI P/N		Quantity		Quantity Discount	
		71044-4		Pkg. of 4		0%	
		71044-8		Pkg. of 8		0%	
		71044-16		Pkg. of 16		Less- 10%	
		71044-50		Pkg. of 50		Less- 15%	
		71044-100		Pkg. of 100		Less- 20%	

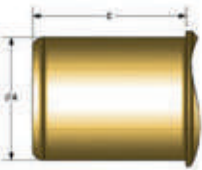

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
8.0mm	0.374"	0.598"	A	B	C	D	E6TZ6571A
			0.427"±0.002"	---	---	0.265"	
		KPMI P/N		Quantity		Quantity Discount	
		71027-4		Pkg. of 4		0%	
		71027-8		Pkg. of 8		0%	
		71027-16		Pkg. of 16		Less- 10%	
		71027-50		Pkg. of 50		Less- 15%	
		71027-100		Pkg. of 100		Less- 20%	

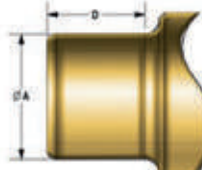

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
5/16"	0.412"	0.566"	A	B	C	D	35178930
			0.420"±0.002"	---	---	0.275"	
		KPMI P/N		Quantity		Quantity Discount	
		71010-4		Pkg. of 4		0%	
		71010-8		Pkg. of 8		0%	
		71010-16		Pkg. of 16		Less- 10%	
		71010-50		Pkg. of 50		Less- 15%	
		71010-100		Pkg. of 100		Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring NEW PRODUCTS

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
5/16"	0.514"	0.671"	A	B	C	D	---
			0.530"±0.002"	---	---	0.330"	
		KPMI P/N		Quantity		Quantity Discount	
		71045-4		Pkg. of 4		0%	
		71045-8		Pkg. of 8		0%	
		71045-16		Pkg. of 16		Less- 10%	
		71045-50		Pkg. of 50		Less- 15%	
		71045-100		Pkg. of 100		Less- 20%	

## Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

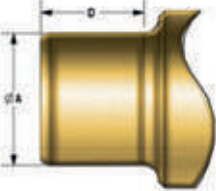

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
3/8"	0.516"	0.661"	A	B	C	D	---
			0.562"±0.002"	---	---	0.210"	
		KPMI P/N		Quantity		Quantity Discount	
		71011-4		Pkg. of 4		0%	
		71011-8		Pkg. of 8		0%	
		71011-16		Pkg. of 16		Less- 10%	
		71011-50		Pkg. of 50		Less- 15%	
		71011-100		Pkg. of 100		Less- 20%	



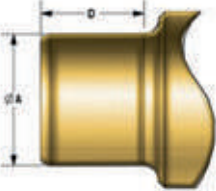

# VALVE GUIDE SEALS

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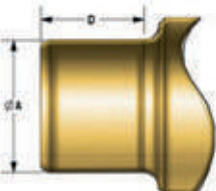

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.386"	0.512"	A	B	C	D	5403212
			0.425"±0.002"	---	---	0.235"	
 		KPMI P/N		Quantity		Quantity Discount	
		71003-4		Pkg. of 4		0%	
		71003-8		Pkg. of 8		0%	
		71003-16		Pkg. of 16		Less- 10%	
		71003-50		Pkg. of 50		Less- 15%	
		71003-100		Pkg. of 100		Less- 20%	

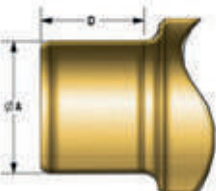

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.510"	0.600"	A	B	C	D	---
			0.500"±0.002"	---	---	0.365"	
 		KPMI P/N		Quantity		Quantity Discount	
		71006-4		Pkg. of 4		0%	
		71006-8		Pkg. of 8		0%	
		71006-16		Pkg. of 16		Less- 10%	
		71006-50		Pkg. of 50		Less- 15%	
		71006-100		Pkg. of 100		Less- 20%	

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.517"	0.510"	A	B	C	D	8921209
			0.415"±0.002"	---	---	0.350"	
 		KPMI P/N		Quantity		Quantity Discount	
		71008-4		Pkg. of 4		0%	
		71008-8		Pkg. of 8		0%	
		71008-16		Pkg. of 16		Less- 10%	
		71008-50		Pkg. of 50		Less- 15%	
		71008-100		Pkg. of 100		Less- 20%	

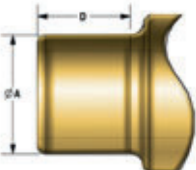

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.506"	0.632"	A	B	C	D	---
			0.530"±0.002"	---	---	0.365"	
 		KPMI P/N		Quantity		Quantity Discount	
		71009-4		Pkg. of 4		0%	
		71009-8		Pkg. of 8		0%	
		71009-16		Pkg. of 16		Less- 10%	
		71009-50		Pkg. of 50		Less- 15%	
		71009-100		Pkg. of 100		Less- 20%	

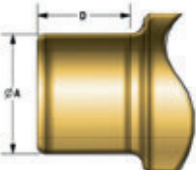

# VALVE GUIDE SEALS



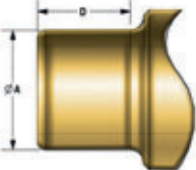

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>11/32"</b>	0.510"	0.596"	A	B	C	D	---
			0.500"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71005-4		Pkg. of 4		0%	
		71005-8		Pkg. of 8		0%	
		71005-16		Pkg. of 16		Less- 10%	
		71005-50		Pkg. of 50		Less- 15%	
		71005-100		Pkg. of 100		Less- 20%	

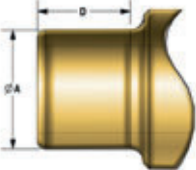

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>11/32"</b>	0.514"	0.654"	A	B	C	D	---
			0.562"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71007-4		Pkg. of 4		0%	
		71007-8		Pkg. of 8		0%	
		71007-16		Pkg. of 16		Less- 10%	
		71007-50		Pkg. of 50		Less- 15%	
		71007-100		Pkg. of 100		Less- 20%	

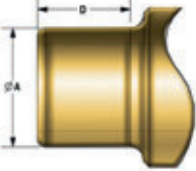

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>3/8"</b>	0.502"	0.626"	A	B	C	D	---
			0.530"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71001-4		Pkg. of 4		0%	
		71001-8		Pkg. of 8		0%	
		71001-16		Pkg. of 16		Less- 10%	
		71001-50		Pkg. of 50		Less- 15%	
		71001-100		Pkg. of 100		Less- 20%	

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>3/8"</b>	0.518"	0.650"	A	B	C	D	---
			0.562"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71002-4		Pkg. of 4		0%	
		71002-8		Pkg. of 8		0%	
		71002-16		Pkg. of 16		Less- 10%	
		71002-50		Pkg. of 50		Less- 15%	
		71002-100		Pkg. of 100		Less- 20%	

## Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

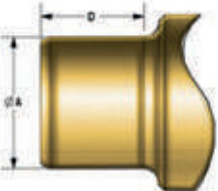

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>3/8"</b>	0.507"	0.600"	A	B	C	D	---
			0.500"±0.002"				
		KPMI P/N		Quantity		Quantity Discount	
		71004-4		Pkg. of 4		0%	
		71004-8		Pkg. of 8		0%	
		71004-16		Pkg. of 16		Less- 10%	
		71004-50		Pkg. of 50		Less- 15%	
		71004-100		Pkg. of 100		Less- 20%	



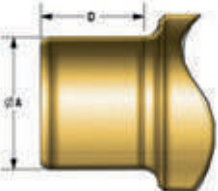

# VALVE GUIDE SEALS

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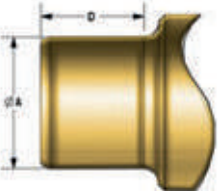

## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>5/16"</b>	0.385"	0.565"	A	B	C	D	18001-83B
			0.420"±0.002"	---	---	0.315"	
 		KPMI P/N		Quantity		Quantity Discount	
		71032-4		Pkg. of 4		0%	
		71032-8		Pkg. of 8		0%	
		71032-16		Pkg. of 16		Less- 10%	
		71032-50		Pkg. of 50		Less- 15%	
		71032-100		Pkg. of 100		Less- 20%	

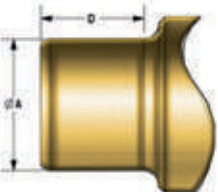

## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>5/16"</b>	0.375"	0.630"	A	B	C	D	1804698
			0.530"±0.002"	---	---	0.295"	
 		KPMI P/N		Quantity		Quantity Discount	
		71033-4		Pkg. of 4		0%	
		71033-8		Pkg. of 8		0%	
		71033-16		Pkg. of 16		Less- 10%	
		71033-50		Pkg. of 50		Less- 15%	
		71033-100		Pkg. of 100		Less- 20%	

## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>11/32"</b>	0.375"	0.630"	A	B	C	D	---
			0.530"±0.002"	---	---	0.365"	
 		KPMI P/N		Quantity		Quantity Discount	
		71034-4		Pkg. of 4		0%	
		71034-8		Pkg. of 8		0%	
		71034-16		Pkg. of 16		Less- 10%	
		71034-50		Pkg. of 50		Less- 15%	
		71034-100		Pkg. of 100		Less- 20%	

## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
<b>3/8"</b>	0.375"	0.660"	A	B	C	D	---
			0.562"±0.002"	---	---	0.315"	
 		KPMI P/N		Quantity		Quantity Discount	
		71035-4		Pkg. of 4		0%	
		71035-8		Pkg. of 8		0%	
		71035-16		Pkg. of 16		Less- 10%	
		71035-50		Pkg. of 50		Less- 15%	
		71035-100		Pkg. of 100		Less- 20%	



# VALVE GUIDE SEALS



## Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L.	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
3/8"	0.400"	0.720"	0.625"±0.002"	---	---	0.310"	1800081
		KPMI P/N		Quantity		Quantity Discount	
		71036-4		Pkg. of 4		0%	
		71036-8		Pkg. of 8		0%	
		71036-16		Pkg. of 16		Less- 10%	
		71036-50		Pkg. of 50		Less- 15%	
		71036-100		Pkg. of 100		Less- 20%	

# INSTALLATION PROTECTORS



The flexible thin wall protectors are designed to fit over the top of the valve stem, protecting the sealing element from any sharp edges that might damage it during installation.

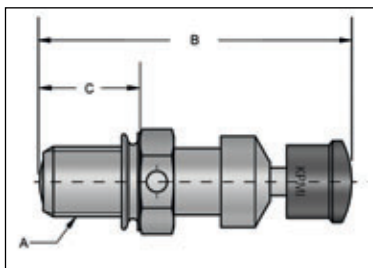
**20-20637 / 20-20638 / 20-20639**

## Installation Protector

KPMI P/N (2-pack)	KPMI P/N (1-pack)	Application	Stem Diameter	Fits		Color
20-20634	20-20637	Evolution & Ironhead Sportster Intake	5/16"	71032-4	71033-4	Green
20-20635	20-20638	Ironhead Sportster Exhaust	11/32"	71034-4		Clear
20-20636	20-20639	Panhead & Shovelhead 74" & Shovelhead 80"	3/8"	71035-4	71036-4	Red

# COMPRESSION RELEASE VALVES

**NEW PRODUCTS**



- KPMI® Compression Release valves are state of the art and priced competitively
- Designed to reduce "hot start" issues and starter / battery loads
- 5-7 Newtons of closing force resistance, for high demand applications
- Custom molded knobs ensure a cool touch and easy operation
- Embossed with the KPMI® brand to ensure product quality

**20-21260 / 20-21255 / 20-21250**

## Compression Release Valves

KPMI P/N (2-pack)	KPMI P/N (20-pack)	A	B	C	Note
20-21250	20-21265	M10 x 1	1.400"	0.350"	Fits Evos, Shortened thread for ease of installation, 6N closing force
20-21255	20-21270	M10 x 1	1.730"	0.350"	Fits Twin Cams, Shortened thread for ease of installation, 6N closing force
20-21260	20-21275	M10 x 1	1.750"	0.500"	6N closing force



# INSTALLATION TOOLS

These installation tools for OE style seals are manufactured from high strength 6061-T6 Aluminum for increased durability when compared to plastic installers. The tools are designed for precision fitment onto the seal OD to help the builder center the seal over the valve guide so that a few light strikes from a hammer will set the seal. Radiused top striking surface reduces the likelihood of a burr forming from deformation. Each installation tool is color coded and laser marked for each seal size by guide diameter.



**20-20830**



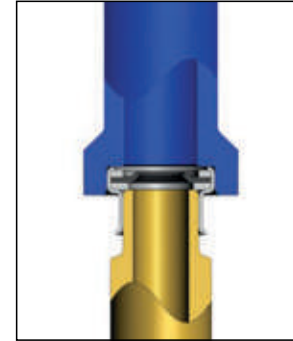
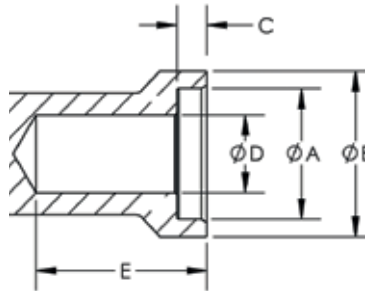
**20-20831**



**20-20832**



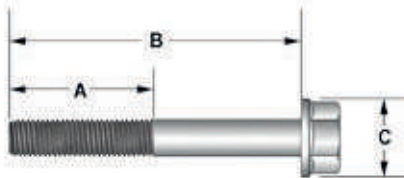
**20-20833**



Installation Tools								
KPMI P/N (1-pack)	Application	ØA	ØB	C	ØD	E	Fits KPMI Seal P/N	Color
<b>20-20830</b>	Evolution 5/16" Stem	Ø0.575	0.860	0.160	0.404	0.910	71032-4	Red
<b>20-20831</b>	Shovelhead 80"	Ø0.728	0.860	0.160	0.404	0.910	71036-4	Blue
<b>20-20832</b>	Ironhead Sportster In/ Ex	Ø0.638	0.860	0.160	0.404	0.910	71033-4   71034-4	White
<b>20-20833</b>	Panhead & Shovelhead 74"	Ø0.673	0.860	0.160	0.404	0.910	71035-4	Black

Installation Tool Kit	
KPMI P/N	Description
<b>20-20835</b>	Kit includes all 4 sizes of installations

# CAM TOWER BOLTS

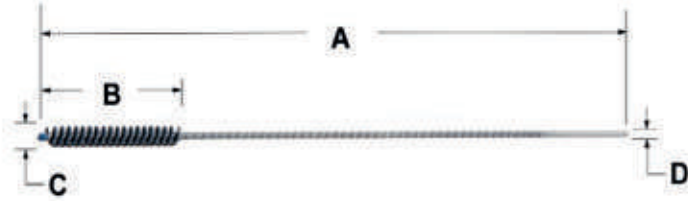


**41005-4**

- Manufactured from high tensile strength heat treated steel for superior strength over OEM bolts
- Strong enough for repeated removal and installation
- Black Oxide treatment for corrosion resistance
- Reduced flange diameters designed specifically with clearance for installation in cam tower braces
- Works with other applications (see dimensions for compatibility)

Cam Tower Bolt • Steel - Generic <span style="color: red; font-weight: bold;">NEW PRODUCTS</span>							
KPMI P/N	Thread	Hex Pattern	Thread Length -A-	Shank Length -B-	Flange Ø -C-	Quantity	Rep. OEM P/N
<b>41005-4</b>	M6 x 1.0	10mm	18mm	40mm	12.57mm	Pkg. of 4	09103-06266
					0.495"		09103-06026
<b>41006-4</b>	M6 x 1.0	10mm	18mm	45mm	12.57mm	Pkg. of 4	09103-06165
					0.495"		09103-06293

# BALL HONES



- Silicon Carbide composite for Bronze or Cast Iron
- Ideal for finishing a reamed hole
- Cleaning up a used guide
- Minor sizing less than a thou



## Ball Hones - Universal

KPMI P/N	Description	Overall Length "A"	Hone Head Length "B"	Hone Diameter "C"	Shank Diameter "D"
<b>GH-1574</b>	4.0mm valve guide hone	6.010"	0.925"	0.180"	0.055"
<b>GH-1771</b>	4.5mm valve guide hone	6.010"	0.975"	0.205"	0.060"
<b>GH-1968</b>	5.0mm valve guide hone	8.055"	1.775"	0.220"	0.085"
<b>GH-2165</b>	5.5mm valve guide hone	8.120"	1.790"	0.240"	0.085"
<b>GH-2362</b>	6.0mm valve guide hone	7.975"	1.590"	0.260"	0.110"
<b>GH-2755</b>	7.0mm valve guide hone	7.975"	2.075"	0.325"	0.130"
<b>GH-3125</b>	5/16 (.3125") valve guide hone	8.125"	2.225"	0.375"	0.145"
<b>GH-3750</b>	3/8 (.3750") valve guide hone	8.050"	2.190"	0.415"	0.145"

BC Series Flex-Hone are manufactured by Brush Research (BRM). The BC Series Flex-Hone tool is designed for use on any type or size of valve guide from 4mm up to 3/8" in diameter. This guide hone is designed for surface finishing and cross hole deburring. Although Ball Hones have many uses, KPMI® offers them primarily to be used after a guide has been reamed. Using a Ball Hone after reaming creates a uniform surface free of irregularity, which improves surface contact and reduces the risk of galling or seizure. Please see our FAQ for recommended clearances.

# NUTS

These nuts are manufactured from a premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth to create hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.



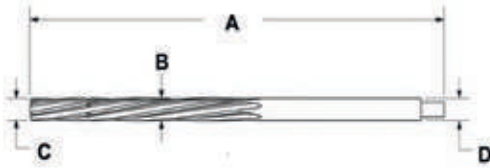
## Nuts NEW PRODUCTS

KPMI P/N	Thread	Overall Length	Flange Diameter	HEX Pattern	Quantity
<b>41001-4</b>	M10 x 1.25	0.750"	0.740"	14mm	Pkg. of 4
<b>41002-4</b>	1/2-20 UNF	0.520"	0.786"	14mm	Pkg. of 4
<b>41003-4</b>	M8 x 1.25	0.385"	0.670"	13mm	Pkg. of 4
<b>41004-4</b>	3/8-24 UNF	0.390"	0.625"	7/16"	Pkg. of 4
<b>41007-4</b>	5/16-24	0.350"	0.520"	--	Pkg. of 4
<b>41008-4</b>	M9 x 1.25	0.315"	0.615"	11mm	Pkg. of 4



# HIGH SPEED STEEL REAMERS

KPMI® valve guide reamers are manufactured from premium hardened High Speed Steel. The advertised finished reamer diameters are ground to: +/- .0002". These spiral fluted reamers incorporate a 1.00" long pilot (reduced diameter) which gets inserted into an unfinished guide bore, to align the reamer to the valve guide centerline, during the sizing process. These reamers have been specifically designed for KPMI® Manganese Bronze and Cast Iron valve guides. Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it is not advisable to then use it on a bronze guide.



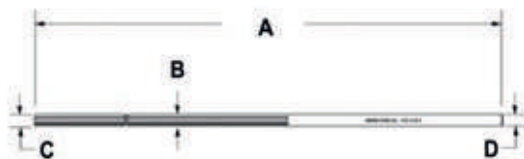
**GR-3770 / GR-2770**

## Reamers

KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
<b>GR-1970</b>	0.1970 HSS valve guide reamer	7.125"	0.1970"	0.191"	0.190"
<b>GR-2357</b>	0.1970 HSS valve guide reamer	7.125"	0.2357"	0.229"	0.288"
<b>GR-2770</b>	0.2770 HSS valve guide reamer	7.125"	0.2770"	0.271"	0.270"
<b>GR-2820</b>	0.2820 HSS valve guide reamer	7.125"	0.2820"	0.272"	0.275"
<b>GR-3100</b>	0.3100 HSS valve guide reamer	7.125"	0.3100"	0.304"	0.303"
<b>GR-3110</b>	0.3110 HSS valve guide reamer	7.125"	0.3110"	0.305"	0.304"
<b>GR-3115</b>	0.3115 HSS valve guide reamer	7.125"	0.3115"	0.305"	0.304"
<b>GR-3120</b>	0.3120 HSS valve guide reamer	7.125"	0.3120"	0.306"	0.305"
<b>GR-3400</b>	0.3400 HSS valve guide reamer	7.125"	0.3400"	0.334"	0.333"
<b>GR-3410</b>	0.3410 HSS valve guide reamer	7.125"	0.3410"	0.335"	0.334"
<b>GR-3730</b>	0.3730 HSS valve guide reamer	7.125"	0.3730"	0.367"	0.336"
<b>GR-3770</b>	0.3770 HSS valve guide reamer	7.125"	0.3770"	0.371"	0.370"
<b>GR-3775</b>	0.3775 HSS valve guide reamer	7.125"	0.3775"	0.371"	0.370"
<b>GR-3780</b>	0.3780 HSS valve guide reamer	7.125"	0.3780"	0.372"	0.371"
<b>GR-3790</b>	0.3790 HSS valve guide reamer	7.125"	0.3790"	0.373"	0.372"

# SOLID CARBIDE REAMERS

KPMI® Carbide valve guide reamers are manufactured from Solid Carbide. All KPMI® reamers are ground to: +/- .0002". KPMI® carbide reamers are straight-flute and have a 6-flute design. The pilot portion of KPMI® reamers are 1.0" to 1.5" long. Insert the pilot into a guide that you intend to size. Using a hand held drill, apply honing oil or ATF before and during reaming a guide. KPMI® reamers have been specifically designed for Manganese Bronze valve guides and Cast Iron. Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it's not advisable to then use it on a bronze guide.



**CR-1971 / CR-3115**

## Solid Carbide Reamers

KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
<b>CR-1971</b>	0.1971 carbide valve guide reamer	7.625"	0.1971"	0.192"	0.190"
<b>CR-2170</b>	0.2170 carbide valve guide reamer	7.625"	0.2170"	0.212"	0.211"
<b>CR-2357</b>	0.2357 carbide valve guide reamer	7.625"	0.2357"	0.230"	0.228"
<b>CR-2768</b>	0.2768 carbide valve guide reamer	7.625"	0.2768"	0.271"	0.269"
<b>CR-3110</b>	0.3110 carbide valve guide reamer	7.625"	0.3110"	0.306"	0.304"
<b>CR-3115</b>	0.3115 carbide valve guide reamer	7.625"	0.3115"	0.306"	0.304"
<b>CR-3120</b>	0.3120 carbide valve guide reamer	7.625"	0.3120"	0.307"	0.305"
<b>CR-3775</b>	0.3775 carbide valve guide reamer	7.625"	0.3775"	0.372"	0.370"

# HIGH PERFORMANCE BLANK PUSHRODS



- KPMI® Pushrods are designed with thin walled Chrome Moly tube for increased stiffness over OEM components.
- Male and female endpieces are made from hardened steel and offer increased wear resistance over aluminum OEM parts.
- Blank Pushrod Kits come with one female endpiece pressed into the body and loose endpieces specified in the kit.
- Designed for BSA® and Triumph® applications but can be used as desired (see dimensions for fitment).
- Custom length pushrods up to 9" in "B" dimension available upon request.



## Blank Pushrods • Steel • Alloy Tube for Various Applications

Machining Information:		A		B		C			
Ø.371" OD		9.120" Overall Length		Ø.305" ID Before Machining					
		D	R.156	E	0.420"	D	R.124	E	0.675"
		F	0.120"	G	0.310"	F	0.375"	G	0.310"
								1. Break ID edge only at .015 x 45°	
KPMI P/N	Model	Material				Kit Includes			
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips				2 Female Ended Pushrods / 2 Male Endpieces			
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips				2 Female Ended Pushrods / 2 Female Endpieces			
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips				4 Female Ended Pushrods / 4 Male Endpieces			
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips				4 Female Ended Pushrods / 4 Female Endpieces			

# VALVE GUIDE INSTALLATION & REMOVAL TOOLS

- Machined to properly fit KPMI® Hayabusa valve guide designs
- Extra-long handles provide ergonomically grooved gripping area and the ability to work in tough to reach situations
- Guide installation tool is designed to register on uniquely designed seal relief minimizing guide deformation on the seal end, ensuring proper height above the head without guess and check measuring as seen in Figure (1)
- Guide removal tool allows the user to drive any 5mm guide with a 10mm outer diameter through lengthy guide bores thanks to its added length below the gripping area shown in Figure (2)
- Driver material is a high strength bronze purposefully selected for its shock absorption capabilities allowing for comfortable use as well as compatibility with cast and bronze guides



Figure 1 Figure 2

60-61400 / 60-61405

## Special - Valve Guide Installer

KPMI P/N	O.L	Body Ø	Inner Ø 1	Inner Ø 2	Depth 1	Depth 2	Quantity
	A	B	C	D	E	F	
60-61400	8.000"	0.615"	0.425"	0.348"	0.285"	0.650"	Pkg. of 1

## Install & Remove Valve Guides - Universal

KPMI P/N	O.L	Body Ø	Ø 1	Ø 2	Length 1	Length 2	Quantity
	A	B	C	D	E	F	
60-61405	8.000"	0.615"	0.182"	0.397"	1.000"	4.000"	Pkg. of 1



# BLACK DIAMOND™ VALVE BLANKS

The Proprietary Black Diamond™ process is not a coating. It penetrates and treats the steel to a depth of .002", so it can never peel or flake off. Coatings such as chrome are "surface build ups" that rely on adhesion to remain intact. They can crack, peel, and flake off, depositing abrasive debris in the guide, causing wear and seizure. The Black Diamond™ process creates an extremely hard and smooth finish, preventing accelerated wear on the stem and keeper groove areas. This hard smooth finish has a low coefficient of friction, making it less aggressive on the valve guide, and promoting longer guide life. In exhaust environments, the Black Diamond™ process offers increased resistance to corrosion which is critical for long life.



Black Diamond™ Valve Blanks						
KPMI Part No.	Type	Head Diameter		Stem Diameter	Tulip Profile	Overall Length
3/8" Stem Diameter						
<b>20-4194B</b>	IN	54.00mm	2.125"	0.3765"	23°	5.000"
<b>20-4195B</b>	EX	47.00mm	1.850"	0.3745"	29°	5.000"
5/16" Stem Diameter						
<b>20-4171B2</b>	IN	57.15mm	2.250"	0.3100"	23°	5.000"
<b>20-4171B1</b>	IN	53.34mm	2.100"	0.3100"	23°	5.000"
<b>20-4171B</b>	IN	50.80mm	2.000"	0.3100"	23°	5.000"
<b>20-4170B2</b>	EX	44.45mm	1.750"	0.3096"	30°	5.000"
<b>20-4170B</b>	EX	43.56mm	1.715"	0.3096"	40°	5.000"
7.0mm Stem Diameter						
<b>11-10008</b>	IN	50.80mm	2.000"	0.2750"	23°	5.200"
<b>40-4178B</b>	IN	42.00mm	1.654"	0.2745"	23°	5.000"
6.5mm Stem Diameter						
<b>30-30228B</b>	IN	42.00mm	1.653"	0.2590"	20°	5.000"
6.0mm Stem Diameter						
<b>93-93015B</b>	IN	42.00mm	1.653"	0.2352"	23°	5.000"
<b>20-21019</b>	IN	44.00mm	1.732"	0.2347"	10°	5.200"
5.5mm Stem Diameter						
<b>30-30244B</b>	IN	40.00mm	1.575"	0.2158"	20°	5.000"
<b>60-4303B</b>	IN	34.00mm	1.339"	0.2155"	23°	5.000"
<b>40-4176B</b>	EX	29.00mm	1.142"	0.2145"	29°	5.000"
5.0mm Stem Diameter						
<b>60-60012B</b>	IN	34.00mm	1.339"	0.1962"	18°	5.000"
<b>60-60013B</b>	EX	28.50mm	1.122"	0.1953"	17°	5.000"
<b>60-60076B</b>	IN	40.00mm	1.575"	0.1962"	20°	5.000"
4.5mm Stem Diameter						
<b>11-10004</b>	IN	34.00mm	1.339"	0.1760"	18°	5.000"
<b>11-10005</b>	IN	32.00mm	1.260"	0.1765"	18°	5.000"
<b>11-10006</b>	EX	28.00mm	1.102"	0.1755"	20°	5.000"
<b>11-10007</b>	EX	26.00mm	1.024"	0.1755"	20°	5.000"
4.0mm Stem Diameter						
<b>11-10000</b>	IN	32.00mm	1.260"	0.1568"	18°	5.000"
<b>11-10001</b>	IN	28.00mm	1.102"	0.1568"	18°	5.000"
<b>11-10002</b>	EX	26.00mm	1.024"	0.1563"	20°	5.000"
<b>11-10003</b>	EX	24.00mm	0.945"	0.1563"	20°	5.000"

# TENSILITE® TITANIUM / WHITE DIAMOND® WHITE BLANKS



Tensilite® Titanium Valve Blanks						
KPMI Part No.	Type	Head Diameter	Stem Diameter	Tulip Profile	Overall Length	
7.0mm Stem Diameter						
<b>40-4244T</b>	IN / Ex	48.00mm	1.890"	0.2745"	17°	5.100"
<b>40-4238T</b>	IN / Ex	42.00mm	1.654"	0.2745"	23°	5.000"
6.0mm Stem Diameter						
<b>11-10020T</b>	IN / EX	42.00mm	1.653"	0.2355"	23°	5.320"
5.5mm Stem Diameter						
<b>60-1062T</b>	IN / Ex	40.00mm	1.575"	0.2155"	20°	5.000"
<b>60-1060T</b>	IN / Ex	34.00mm	1.339"	0.2155"	20°	5.000"
5.0mm Stem Diameter						
<b>11-10017T</b>	IN / Ex	38.00mm	1.496"	0.1960"	18°	5.000"
4.5mm Stem Diameter						
<b>11-10016T</b>	IN / Ex	28.00mm	1.102"	0.1755"	20°	4.300"
4.0mm Stem Diameter						
<b>11-10013T</b>	IN / Ex	30.00mm	1.181"	0.1568"	18°	5.000"
<b>11-10014T</b>	IN / Ex	26.00mm	1.024"	0.1560"	20°	5.000"

White Diamond® Valve Blanks							
KPMI Part No.	Type	Head Diameter	Stem Diameter	Tulip Profile	Overall Length	AV&V Part No.	
5/16" Stem Diameter							
<b>*20-20975BH</b>	IN	55.88mm	2.200"	0.3108"	25°	5.700"	AV2200BC
<b>*20-20980BH</b>	IN	53.34mm	2.100"	0.3108"	24°	5.700"	AV2100BC
<b>*20-20985BH</b>	EX	43.18mm	1.700"	0.3106"	25°	5.700"	AV1700BC
*Note: Bi-metallic composition provides the ability to flame harden the valve tip for when added wear resistance is an absolute must.							
7.0mm Stem Diameter							
<b>40-4179BH</b>	EX	33.00mm	1.299"	0.2745"	29°	5.200"	---
5.0mm Stem Diameter							
<b>60-4310BH</b>	IN / EX	34.00mm	1.339"	0.1958"	23°	4.900"	---

Kibblewhite® Tensilite® titanium valves are manufactured from solid U.S. milled titanium bar. The titanium bar is cut, and forged, and then the stem is pulled from the forging process and cross-sectionally reduced.

These one piece forgings made from 6AL4V or 6-2-4-2 titanium alloy reflect the latest developments in titanium valve alloys. These alloys have superior hardness, strength, and thermal characteristics.

After final grinding and machining, Tensilite® valves are encased in a hard Chromium Nitride (CrN) shell. CrN offers excellent resistance to impact, abrasion and corrosion. These qualities and its low coefficient of friction make CrN the coating of choice for high performance titanium valves.



**Tensilite®  
Valve Blank**

We fully CNC machine our White Diamond® Valves from a one-piece forging of either EV8 Stainless Steel or Inconel-751. These materials have proven heat and corrosion resistance properties and are hard chromed with a 360 degree anode to produce the highest possible grade of hard chrome finish.



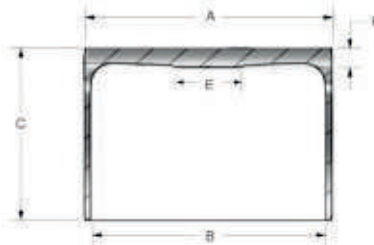
**White Diamond®  
Valve Blank**



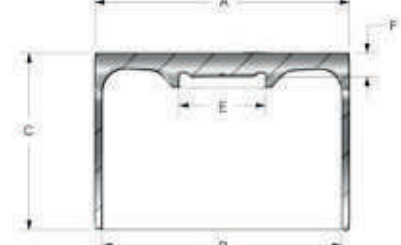
# TAPPETS



Shim On Bottom (SOB)



Shim In Tappet (SIT)



## Tappet / Shim On Bottom (SOB)

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Button Diameter E	Roof Thickness F
600-100001	26.00mm	1.0232"	0.970"	0.790"	0.236"	0.115"
600-100050	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"
600-100200	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"
600-100202	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"
600-100250	28.50mm	1.1220"	1.058"	0.763"	0.320"	0.098"
600-100500	31.00mm	1.2195"	1.156"	0.800"	0.325"	0.108"
600-100525	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"
600-100700	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"
600-100750	33.50mm	1.3184"	1.250"	1.025"	0.340"	0.115"
600-100800	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"
600-101095	36.95mm	1.4547"	1.388"	1.040"	0.400"	0.105"
600-101300	39.00mm	1.5350"	1.457"	1.040"	0.400"	0.145"

## Tappet / Shim In Tappet (SIT)

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Shim Diameter E	Roof Thickness F
600-100850	26.50mm	1.0420"	0.992	0.748"	0.297"	0.120"
600-100205	28.00mm	1.1017"	1.038"	0.763"	0.375"	0.100"

Kibblewhite® Engineers design our tappets using Finite Element Stress Analysis (FEA) software. This software allows our engineers to lighten the tappets without sacrificing strength so we can create the strongest, lightest tappets possible. These tappets are machined from aircraft quality solid steel bar stock. They undergo a proprietary heat treat process that creates a hard surface and a non brittle-core, maximizing toughness and wear resistance. Kibblewhite® tappets are run in high performance automotive and motorcycle applications including Motocross, Flat Track, Road Race, Drag Race, and Land Speed Racing at the Bonneville Salt Flats.

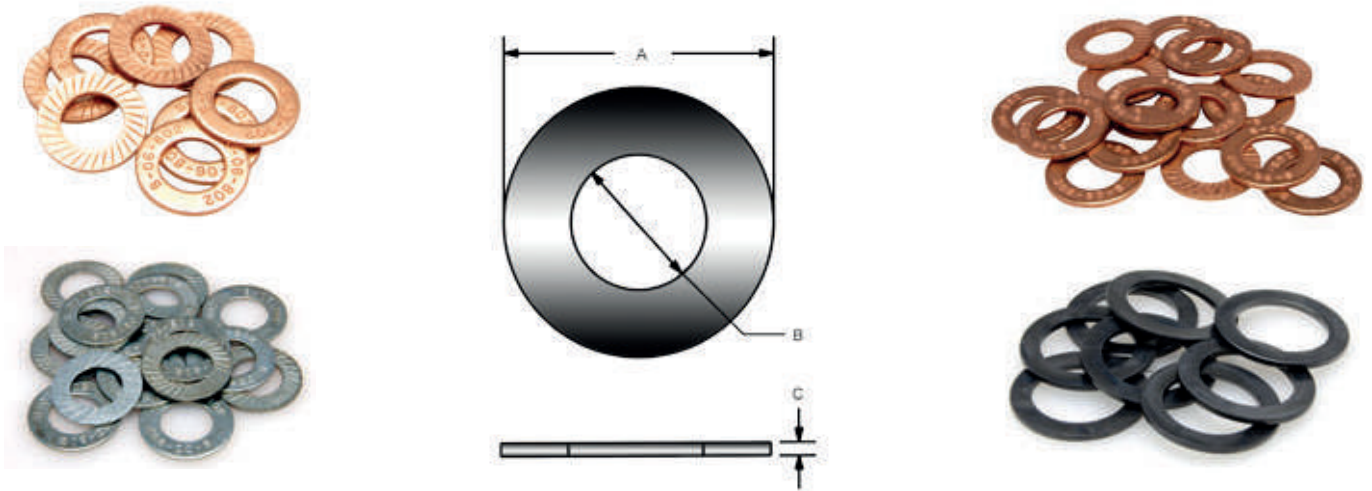
## Tappet / DLC Coated

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Button Diameter E	Roof Thickness F
600-100202-DLC	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"
600-100525-DLC	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"

Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® never recommends running a camshaft off the edge of the tappet, this coating may help increase durability in these applications.



# SHIMS BOOSTER / VALVE SPRING

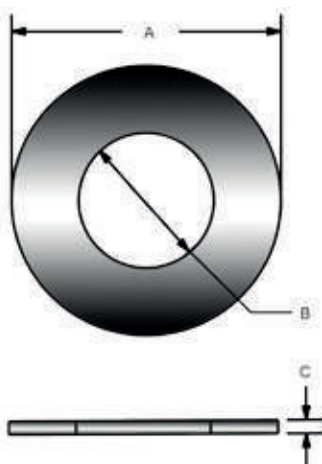


**Shims - Booster / Valve Spring**

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Outside Diameter A	Inside Diameter B	Thickness C
92001-4	92001-8	92001-16	92001-50	92001-100	1.437"	0.645"	0.015"
92002-4	92002-8	92002-16	92002-50	92002-100	1.437"	0.645"	0.030"
92003-4	92003-8	92003-16	92003-50	92003-100	1.437"	0.645"	0.060"
92004-4	92004-8	92004-16	92004-50	92004-100	0.760"	0.578"	0.060"
92005-4	92005-8	92005-16	92005-50	92005-100	0.760"	0.578"	0.030"
92006-4	92006-8	92006-16	92006-50	92006-100	0.760"	0.578"	0.015"
92007-4	92007-8	92007-16	92007-50	92007-100	0.920"	0.520"	0.030"
92008-4	92008-8	92008-16	92008-50	92008-100	0.920"	0.520"	0.060"
92009-4	92009-8	92009-16	92009-50	92009-100	1.218"	0.875"	0.060"
92010-4	92010-8	92010-16	92010-50	92010-100	1.156"	0.828"	0.030"
92011-4	92011-8	92011-16	92011-50	92011-100	1.020"	0.735"	0.125"
92012-4	92012-8	92012-16	92012-50	92012-100	1.100"	0.719"	0.060"
92013-4	92013-8	92013-16	92013-50	92013-100	1.250"	0.812"	0.060"
92014-4	92014-8	92014-16	92014-50	92014-100	1.250"	0.812"	0.030"
92015-4	92015-8	92015-16	92015-50	92015-100	1.125"	0.719"	0.030"
92016-4	92016-8	92016-16	92016-50	92016-100	1.125"	0.719"	0.060"
92017-4	92017-8	92017-16	92017-50	92017-100	1.312"	0.765"	0.030"
92018-4	92018-8	92018-16	92018-50	92018-100	1.218"	0.875"	0.030"
92019-4	92019-8	92019-16	92019-50	92019-100	1.100"	0.719"	0.030"
92020-4	92020-8	92020-16	92020-50	92020-100	1.000"	0.688"	0.060"
92021-4	92021-8	92021-16	92021-50	92021-100	1.000"	0.765"	0.060"
92022-4	92022-8	92022-16	92022-50	92022-100	1.438"	1.059"	0.030"
92023-4	92023-8	92023-16	92023-50	92023-100	1.000"	0.688"	0.030"
92024-4	92024-8	92024-16	92024-50	92024-100	1.000"	0.688"	0.015"
92025-4	92025-8	92025-16	92025-50	92025-100	1.360"	1.000"	0.060"
92026-4	92026-8	92026-16	92026-50	92026-100	1.360"	1.000"	0.030"
92027-4	92027-8	92027-16	92027-50	92027-100	1.360"	1.000"	0.015"
92028-4	92028-8	92028-16	92028-50	92028-100	1.500"	1.031"	0.060"
92029-4	92029-8	92029-16	92029-50	92029-100	1.500"	1.031"	0.030"
92030-4	92030-8	92030-16	92030-50	92030-100	1.500"	1.031"	0.015"
92031-4	92031-8	92031-16	92031-50	92031-100	1.000"	0.765"	0.030"



# SHIMS BOOSTER / VALVE SPRING



## Shims - Booster / Valve Spring

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Outside Diameter A	Inside Diameter B	Thickness C
92032-4	92032-8	92032-16	92032-50	92032-100	1.000"	0.765"	0.015"
92033-4	92033-8	92033-16	92033-50	92033-100	1.218"	0.875"	0.015"
92034-4	92034-8	92034-16	92034-50	92034-100	1.100"	0.719"	0.015"
92035-4	92035-8	92035-16	92035-50	92035-100	1.250"	0.625"	0.060"
92036-4	92036-8	92036-16	92036-50	92036-100	1.250"	0.625"	0.030"
92037-4	92037-8	92037-16	92037-50	92037-100	1.250"	0.625"	0.015"
92038-4	92038-8	92038-16	92038-50	92038-100	0.970"	0.445"	0.060"
92039-4	92039-8	92039-16	92039-50	92039-100	0.970"	0.445"	0.030"
92040-4	92040-8	92040-16	92040-50	92040-100	0.970"	0.445"	0.015"
92041-4	92041-8	92041-16	92041-50	92041-100	0.915"	0.640"	0.060"
92042-4	92042-8	92042-16	92042-50	92042-100	0.915"	0.640"	0.030"
92043-4	92043-8	92043-16	92043-50	92043-100	0.915"	0.640"	0.015"
92044-4	92044-8	92044-16	92044-50	92044-100	0.796"	0.515"	0.060"
92045-4	92045-8	92045-16	92045-50	92045-100	0.796"	0.515"	0.030"
92046-4	92046-8	92046-16	92046-50	92046-100	0.796"	0.515"	0.015"
92047-4	92047-8	92047-16	92047-50	92047-100	1.312"	0.765"	0.060"
92048-4	92048-8	92048-16	92048-50	92048-100	1.312"	0.765"	0.015"
92049-4	92049-8	92049-16	92049-50	92049-100	1.480"	0.703"	0.060"
92050-4	92050-8	92050-16	92050-50	92050-100	1.480"	0.703"	0.030"
92051-4	92051-8	92051-16	92051-50	92051-100	1.480"	0.703"	0.015"
92052-4	92052-8	92052-16	92052-50	92052-100	1.640"	0.635"	0.060"
92053-4	92053-8	92053-16	92053-50	92053-100	1.640"	0.635"	0.030"
92054-4	92054-8	92054-16	92054-50	92054-100	1.640"	0.635"	0.015"
92055-4	92055-8	92055-16	92055-50	92055-100	1.500"	0.765"	0.060"
92056-4	92056-8	92056-16	92056-50	92056-100	1.500"	0.765"	0.030"
92057-4	92057-8	92057-16	92057-50	92057-100	1.477"	0.765"	0.015"
92058-4	92058-8	92058-16	92058-50	92058-100	1.500"	0.562"	0.060"
92059-4	92059-8	92059-16	92059-50	92059-100	1.500"	0.562"	0.030"
92060-4	92060-8	92060-16	92060-50	92060-100	1.500"	0.562"	0.015"
92061-4	92061-8	92061-16	92061-50	92061-100	1.247"	0.518"	0.060"
92062-4	92062-8	92062-16	92062-50	92062-100	1.247"	0.518"	0.030"
92063-4	92063-8	92063-16	92063-50	92063-100	1.247"	0.518"	0.015"

# SHIMS VALVE ADJUSTMENT



Manufactured from heat treated aircraft quality steel, KPMI® holds exact dimensional tolerances, height and perpendicularity on these shims. KPMI® sets specific hardness and surface finish specifications to insure optimum fit, Performance, strength, and durability.

Shims are available in 7.5mm, 9.5mm, and 13.0mm ODs.

All KPMI® adj. shims are conveniently packaged in quantities of: 4, 8, 16, 50, and 100.



## 7.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93075-4	93075-8	93075-16	93075-50	93075-100	1.20mm
93076-4	93076-8	93076-16	93076-50	93076-100	1.25mm
93077-4	93077-8	93077-16	93077-50	93077-100	1.30mm
93078-4	93078-8	93078-16	93078-50	93078-100	1.35mm
93079-4	93079-8	93079-16	93079-50	93079-100	1.40mm
93080-4	93080-8	93080-16	93080-50	93080-100	1.45mm
93081-4	93081-8	93081-16	93081-50	93081-100	1.50mm
93082-4	93082-8	93082-16	93082-50	93082-100	1.55mm
93083-4	93083-8	93083-16	93083-50	93083-100	1.60mm
93084-4	93084-8	93084-16	93084-50	93084-100	1.65mm
93085-4	93085-8	93085-16	93085-50	93085-100	1.70mm
93086-4	93086-8	93086-16	93086-50	93086-100	1.75mm
93087-4	93087-8	93087-16	93087-50	93087-100	1.80mm
93088-4	93088-8	93088-16	93088-50	93088-100	1.85mm
93089-4	93089-8	93089-16	93089-50	93089-100	1.90mm
93090-4	93090-8	93090-16	93090-50	93090-100	1.95mm
93091-4	93091-8	93091-16	93091-50	93091-100	2.00mm
93092-4	93092-8	93092-16	93092-50	93092-100	2.05mm
93093-4	93093-8	93093-16	93093-50	93093-100	2.10mm
93094-4	93094-8	93094-16	93094-50	93094-100	2.15mm
93095-4	93095-8	93095-16	93095-50	93095-100	2.20mm
93096-4	93096-8	93096-16	93096-50	93096-100	2.25mm
93097-4	93097-8	93097-16	93097-50	93097-100	2.30mm
93098-4	93098-8	93098-16	93098-50	93098-100	2.35mm
93099-4	93099-8	93099-16	93099-50	93099-100	2.40mm
93100-4	93100-8	93100-16	93100-50	93100-100	2.45mm
93101-4	93101-8	93101-16	93101-50	93101-100	2.50mm
93102-4	93102-8	93102-16	93102-50	93102-100	2.55mm
93103-4	93103-8	93103-16	93103-50	93103-100	2.60mm
93104-4	93104-8	93104-16	93104-50	93104-100	2.65mm
93105-4	93105-8	93105-16	93105-50	93105-100	2.70mm
93106-4	93106-8	93106-16	93106-50	93106-100	2.75mm
93107-4	93107-8	93107-16	93107-50	93107-100	2.80mm
93108-4	93108-8	93108-16	93108-50	93108-100	2.85mm
93109-4	93109-8	93109-16	93109-50	93109-100	2.90mm
93110-4	93110-8	93110-16	93110-50	93110-100	2.95mm
93111-4	93111-8	93111-16	93111-50	93111-100	3.00mm
93112-4	93112-8	93112-16	93112-50	93112-100	3.05mm



# SHIMS VALVE ADJUSTMENT



Manufactured from heat treated aircraft quality steel, KPMI® holds exact dimensional tolerances, height and perpendicularity on these shims. KPMI® sets specific hardness and surface finish specifications to insure optimum fit, Performance, strength, and durability. Shims are available in 7.5mm, 9.5mm, and 13.0mm ODs.

All KPMI® adj. shims are conveniently packaged in quantities of: 4, 8, 16, 50, and 100.

## 7.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93113-4	93113-8	93113-16	93113-50	93113-100	3.10mm
93114-4	93114-8	93114-16	93114-50	93114-100	3.15mm
93115-4	93115-8	93115-16	93115-50	93115-100	3.20mm
93116-4	93116-8	93116-16	93116-50	93116-100	3.25mm
93117-4	93117-8	93117-16	93117-50	93117-100	3.30mm
93118-4	93118-8	93118-16	93118-50	93118-100	3.35mm
93119-4	93119-8	93119-16	93119-50	93119-100	3.40mm
93120-4	93120-8	93120-16	93120-50	93120-100	3.45mm
93121-4	93121-8	93121-16	93121-50	93121-100	3.50mm

## 9.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93001-4	93001-8	93001-16	93001-50	93001-100	1.20mm
93002-4	93002-8	93002-16	93002-50	93002-100	1.25mm
93003-4	93003-8	93003-16	93003-50	93003-100	1.30mm
93004-4	93004-8	93004-16	93004-50	93004-100	1.35mm
93005-4	93005-8	93005-16	93005-50	93005-100	1.40mm
93006-4	93006-8	93006-16	93006-50	93006-100	1.45mm
93007-4	93007-8	93007-16	93007-50	93007-100	1.50mm
93008-4	93008-8	93008-16	93008-50	93008-100	1.55mm
93009-4	93009-8	93009-16	93009-50	93009-100	1.60mm
93010-4	93010-8	93010-16	93010-50	93010-100	1.65mm
93011-4	93011-8	93011-16	93011-50	93011-100	1.70mm
93012-4	93012-8	93012-16	93012-50	93012-100	1.75mm
93013-4	93013-8	93013-16	93013-50	93013-100	1.80mm
93014-4	93014-8	93014-16	93014-50	93014-100	1.85mm
93015-4	93015-8	93015-16	93015-50	93015-100	1.90mm
93016-4	93016-8	93016-16	93016-50	93016-100	1.95mm
93017-4	93017-8	93017-16	93017-50	93017-100	2.00mm
93018-4	93018-8	93018-16	93018-50	93018-100	2.05mm
93019-4	93019-8	93019-16	93019-50	93019-100	2.10mm
93020-4	93020-8	93020-16	93020-50	93020-100	2.15mm
93021-4	93021-8	93021-16	93021-50	93021-100	2.20mm
93022-4	93022-8	93022-16	93022-50	93022-100	2.25mm
93023-4	93023-8	93023-16	93023-50	93023-100	2.30mm
93024-4	93024-8	93024-16	93024-50	93024-100	2.35mm
93025-4	93025-8	93025-16	93025-50	93025-100	2.40mm
93026-4	93026-8	93026-16	93026-50	93026-100	2.45mm
93027-4	93027-8	93027-16	93027-50	93027-100	2.50mm
93028-4	93028-8	93028-16	93028-50	93028-100	2.55mm

# SHIMS VALVE ADJUSTMENT



## 9.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93029-4	93029-8	93029-16	93029-50	93029-100	2.60mm
93030-4	93030-8	93030-16	93030-50	93030-100	2.65mm
93031-4	93031-8	93031-16	93031-50	93031-100	2.70mm
93032-4	93032-8	93032-16	93032-50	93032-100	2.75mm
93033-4	93033-8	93033-16	93033-50	93033-100	2.80mm
93034-4	93034-8	93034-16	93034-50	93034-100	2.85mm
93035-4	93035-8	93035-16	93035-50	93035-100	2.90mm
93036-4	93036-8	93036-16	93036-50	93036-100	2.95mm
93037-4	93037-8	93037-16	93037-50	93037-100	3.00mm
93038-4	93038-8	93038-16	93038-50	93038-100	3.05mm
93039-4	93039-8	93039-16	93039-50	93039-100	3.10mm
93040-4	93040-8	93040-16	93040-50	93040-100	3.15mm
93041-4	93041-8	93041-16	93041-50	93041-100	3.20mm
93042-4	93042-8	93042-16	93042-50	93042-100	3.25mm
93043-4	93043-8	93043-16	93043-50	93043-100	3.30mm
93044-4	93044-8	93044-16	93044-50	93044-100	3.35mm
93045-4	93045-8	93045-16	93045-50	93045-100	3.40mm
93046-4	93046-8	93046-16	93046-50	93046-100	3.45mm
93047-4	93047-8	93047-16	93047-50	93047-100	3.50mm

## 13mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93050-4	93050-8	93050-16	93050-50	93050-100	2.05mm
93051-4	93051-8	93051-16	93051-50	93051-100	2.10mm
93052-4	93052-8	93052-16	93052-50	93052-100	2.15mm
93053-4	93053-8	93053-16	93053-50	93053-100	2.20mm
93054-4	93054-8	93054-16	93054-50	93054-100	2.25mm
93055-4	93055-8	93055-16	93055-50	93055-100	2.30mm
93056-4	93056-8	93056-16	93056-50	93056-100	2.35mm
93057-4	93057-8	93057-16	93057-50	93057-100	2.40mm
93058-4	93058-8	93058-16	93058-50	93058-100	2.45mm
93059-4	93059-8	93059-16	93059-50	93059-100	2.50mm
93060-4	93060-8	93060-16	93060-50	93060-100	2.55mm
93061-4	93061-8	93061-16	93061-50	93061-100	2.60mm
93062-4	93062-8	93062-16	93062-50	93062-100	2.65mm
93063-4	93063-8	93063-16	93063-50	93063-100	2.70mm
93064-4	93064-8	93064-16	93064-50	93064-100	2.75mm
93065-4	93065-8	93065-16	93065-50	93065-100	2.80mm
93066-4	93066-8	93066-16	93066-50	93066-100	2.85mm
93067-4	93067-8	93067-16	93067-50	93067-100	2.90mm
93068-4	93068-8	93068-16	93068-50	93068-100	2.95mm
93069-4	93069-8	93069-16	93069-50	93069-100	3.00mm
93070-4	93070-8	93070-16	93070-50	93070-100	3.05mm
93071-4	93071-8	93071-16	93071-50	93071-100	3.10mm



# SEATS (HIGH CHROME)



- 18-22% Chromium for resistance to abrasion, corrosion and deformation
- 1-2% Nickel content, which lends to corrosion-resistance and toughness
- Machined from solid bar stock and ground to exacting tolerances
- The alternative to Powder Metal
- Machines as a continuous chip
- Use KPMI® "High Chromium Seats" for your next gasoline or diesel engine rebuild

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
<b>NEW PRODUCTS</b> 10-HC350	35.00mm	1.378"	26.00mm	1.024"	11.02mm	0.434"
10-HC414	41.40mm	1.630"	29.97mm	1.180"	9.78mm	0.385"
<b>NEW PRODUCTS</b> 10-HC440	43.99mm	1.732"	35.81mm	1.410"	10.92mm	0.430"
10-HC446	44.63mm	1.757"	34.82mm	1.371"	10.92mm	0.430"
<b>NEW PRODUCTS</b> 10-HC447	44.63mm	1.757"	35.81mm	1.410"	10.92mm	0.430"
10-HC462	46.23mm	1.820"	34.93mm	1.375"	11.43mm	0.450"
10-HC477	47.75mm	1.880"	36.45mm	1.435"	10.41mm	0.410"
10-HC478	47.80mm	1.882"	38.61mm	1.520"	10.41mm	0.410"
10-HC493	49.38mm	1.944"	40.01mm	1.575"	10.16mm	0.400"
10-HC494	49.40mm	1.945"	34.93mm	1.375"	11.18mm	0.440"
10-HC510	51.00mm	2.008"	40.89mm	1.610"	11.18mm	0.440"
10-HC518	51.82mm	2.040"	43.18mm	1.700"	10.80mm	0.425"
10-HC525	52.53mm	2.068"	44.45mm	1.750"	8.00mm	0.315"
10-HC526	52.58mm	2.070"	40.89mm	1.610"	11.68mm	0.460"
10-HC541	54.15mm	2.132"	45.72mm	1.800"	11.68mm	0.460"
10-HC542	54.23mm	2.135"	44.45mm	1.750"	10.16mm	0.400"
10-HC549	54.94mm	2.163"	44.45mm	1.750"	11.56mm	0.455"
10-HC573	57.33mm	2.257"	39.37mm	1.550"	12.70mm	0.500"

# SEATS (HIGH CHROME)



## Seat Application

### Replacement Valve Seats For Shovel Head 1200 & 1340

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC493	Intake / Exhaust	1.944"	1.575"	.400"
10-HC542	Intake / Exhaust	2.135"	1.750"	.400"

### Oversize Seats for Shovel, Evolution & Twin Cam- Machining Required

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC414	Intake / Exhaust	1.630"	1.180"	.385"
<b>NEW PRODUCTS</b> 10-HC447	Intake / Exhaust	1.757"	1.410"	.430"
10-HC478	Intake / Exhaust	1.882"	1.530"	.410"
10-HC510	Intake / Exhaust	2.008"	1.610"	.440"
10-HC518	Intake / Exhaust	2.040"	1.700"	.425"
10-HC526	Intake / Exhaust	2.070"	1.610"	.450"
10-HC541	Intake / Exhaust	2.132"	1.800"	.460"
10-HC549	Intake / Exhaust	2.163"	1.750"	.455"

### Iron Head Sportster

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC446	Intake / Exhaust	1.757"	1.371"	.315"
10-HC525	Intake / Exhaust	2.068"	1.750"	0.315

### Milwaukee-Eight

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
<b>NEW PRODUCTS</b> 10-HC350	Intake / Exhaust	1.378"	1.024"	.434"
<b>NEW PRODUCTS</b> 10-HC447	Intake / Exhaust	1.757"	1.410"	.430"

### Universal Repair Seat

KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
<b>NEW PRODUCTS</b> 10-HC350	Intake / Exhaust	1.378"	1.024"	.434"
<b>NEW PRODUCTS</b> 10-HC440	Intake / Exhaust	1.732"	1.410"	.430"
10-HC462	Intake / Exhaust	1.820"	1.375"	.450"
10-HC494	Intake / Exhaust	1.945"	1.375"	.440"
10-HC573	Intake / Exhaust	2.257"	1.550"	.500"
<b>NEW PRODUCTS</b> 10-HC477	Intake / Exhaust	1.880"	1.435"	.410"



# SEATS (POWDERED METAL)



In an effort to develop valve seats that fit our exacting standards, Kibblewhite® tested and chemically separated several iron based valve seats. We specified a combination of materials that gave us a seat with good uniform hardness and resistance to microwelding, wear, and recession. Casting a seat with this combination of alloys was not possible, and only with the latest in Powdered Metal Technology were we able to blend these alloys creating a high density seat with exceptional wear resistance, machinability, and thermal qualities. This material is compatible with all types of fuel blends, resists corrosion and burning, and is machinable with standard tooling. These seats have been thoroughly tested on the track and street, in high RPM multi-valve applications, high spring load V-twin applications, with leaded and unleaded gasoline, ethanol, methanol, and in naturally aspirated and forced induction applications. In each case they have performed flawlessly, making these the seats of choice for cylinder head builders everywhere.

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
	mm	in	mm	in	mm	in
10-SC250	25.00mm	0.984"	17.00mm	0.669"	9.00mm	0.355"
10-SC260	26.00mm	1.024"	18.00mm	0.709"	9.00mm	0.355"
10-SC270	27.00mm	1.063"	19.00mm	0.748"	9.00mm	0.355"
10-SC280	28.00mm	1.102"	20.00mm	0.787"	9.00mm	0.355"
10-SC290	29.00mm	1.142"	21.00mm	0.827"	9.50mm	0.375"
10-SC300	30.00mm	1.181"	22.00mm	0.866"	9.50mm	0.375"
10-SC310	31.00mm	1.220"	23.00mm	0.906"	9.50mm	0.375"
10-SC320	32.00mm	1.260"	24.00mm	0.945"	9.50mm	0.375"
10-SC330	33.00mm	1.299"	25.00mm	0.984"	9.50mm	0.375"
10-SC340	34.00mm	1.339"	26.00mm	1.024"	9.50mm	0.375"
10-SC350	35.00mm	1.378"	26.00mm	1.024"	11.00mm	0.434"
10-SC360	36.00mm	1.417"	27.00mm	1.063"	11.00mm	0.434"
10-SC370	37.00mm	1.457"	28.00mm	1.102"	11.00mm	0.434"
10-SC380	38.00mm	1.496"	29.00mm	1.142"	11.00mm	0.434"
10-SC390	39.00mm	1.535"	30.00mm	1.181"	11.00mm	0.434"
10-SC400	40.00mm	1.575"	30.00mm	1.181"	11.00mm	0.434"
10-SC410	41.00mm	1.614"	31.00mm	1.220"	11.00mm	0.434"
10-SC414	41.43mm	1.631"	30.15mm	1.187"	11.43mm	0.450"
10-SC420	42.00mm	1.654"	32.00mm	1.260"	11.00mm	0.434"
10-SC430	43.00mm	1.693"	33.00mm	1.299"	11.00mm	0.434"
10-SC440	44.00mm	1.732"	34.00mm	1.339"	11.00mm	0.434"
10-SC446	44.62mm	1.757"	35.00mm	1.375"	11.43mm	0.450"
10-SC450	45.00mm	1.772"	34.50mm	1.358"	11.00mm	0.434"
10-SC460	46.00mm	1.811"	35.50mm	1.398"	11.00mm	0.434"
10-SC462	46.20mm	1.819"	34.93mm	1.375"	11.43mm	0.450"
10-SC470	47.00mm	1.850"	36.50mm	1.437"	11.00mm	0.434"
10-SC478	47.78mm	1.881"	36.50mm	1.437"	11.43mm	0.450"
10-SC480	48.00mm	1.890"	37.50mm	1.476"	11.00mm	0.434"
10-SC490	49.00mm	1.929"	38.50mm	1.516"	11.00mm	0.434"
10-SC494	49.40mm	1.945"	38.10mm	1.500"	11.43mm	0.450"
10-SC500	50.00mm	1.969"	39.00mm	1.535"	11.50mm	0.453"
10-SC510	50.98mm	2.007"	39.67mm	1.562"	11.43mm	0.450"
10-SC523	52.32mm	2.060"	39.67mm	1.562"	11.43mm	0.450"
10-SC525	52.53mm	2.068"	42.85mm	1.687"	11.43mm	0.450"
10-SC541	54.15mm	2.132"	42.93mm	1.690"	11.43mm	0.450"
10-SC550	54.97mm	2.164"	44.45mm	1.750"	11.43mm	0.450"
10-SC557	55.73mm	2.194"	45.72mm	1.800"	11.43mm	0.450"
10-SC573	57.30mm	2.256"	47.50mm	1.870"	11.43mm	0.450"



# SEATS (NICKEL ALUMINUM BRONZE)



TITANIUM valves require the use of Kibblewhite® Nickel Aluminum Bronze valve seat inserts. This premium copper based alloy is designed specifically for use with titanium valves. These seats are the product of a 2 year Kibblewhite® R&D effort during which we recorded and verified results with 4&5 valve singles, domestic and foreign sport compacts, multi valve and single cylinder street bikes, as well as British and European 4strokes. In every one of our tests for wear, thermal conductivity, and machinability, the seats surpassed the standard we set for success.

These seats have been used successfully with titanium valves in drag race, road race, desert race, motocross, and land speed racing. The seats are tall, have ample material on the ID for shaping, and are offered in several sizes making them truly universal in application. The ODs have a smooth surface finish that offers maximum contact with the head counterbore for optimum heat transfer, and a generous radius on the leading edge to prevent galling during installation.

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
	mm	in	mm	in	mm	in
10-SB240	24.00	0.945	16.00	0.630	9.00	0.355
10-SB250	25.00	0.984	17.00	0.669	9.00	0.355
10-SB260	26.00	1.024	18.00	0.709	9.00	0.355
10-SB270	27.00	1.063	19.00	0.748	9.00	0.355
10-SB275	27.50	1.083	19.00	0.748	9.00	0.355
10-SB280	28.00	1.102	20.00	0.787	9.00	0.355
10-SB285	28.50	1.122	20.00	0.787	9.00	0.355
10-SB290	29.00	1.142	21.00	0.827	9.50	0.375
10-SB295	29.50	1.161	21.00	0.827	9.50	0.375
10-SB300	30.00	1.181	22.00	0.866	9.50	0.375
10-SB305	30.50	1.201	22.00	0.866	9.50	0.375
10-SB310	31.00	1.220	23.00	0.906	9.50	0.375
10-SB315	31.50	1.240	23.00	0.906	9.50	0.375
10-SB320	32.00	1.260	24.00	0.945	9.50	0.375
10-SB325	32.50	1.280	24.00	0.945	9.50	0.375
10-SB330	33.00	1.299	25.00	0.984	9.50	0.375
10-SB335	33.50	1.319	25.00	0.984	9.50	0.375
10-SB340	34.00	1.339	26.00	1.024	9.50	0.375
10-SB345	34.50	1.358	26.00	1.024	9.50	0.375
10-SB350	35.00	1.378	25.00	0.984	11.00	0.434
10-SB355	35.50	1.398	26.00	1.024	11.00	0.434
10-SB360	36.00	1.417	27.00	1.063	11.00	0.434
10-SB365	36.50	1.437	27.00	1.063	11.00	0.434
10-SB370	37.00	1.457	28.00	1.102	11.00	0.434
10-SB375	37.50	1.476	28.00	1.102	11.00	0.434
10-SB380	38.00	1.496	29.00	1.142	11.00	0.434
10-SB385	38.50	1.516	29.00	1.142	11.00	0.434
10-SB390	39.00	1.535	30.00	1.181	11.00	0.434
10-SB395	39.50	1.555	30.00	1.181	11.00	0.434
10-SB400	40.00	1.575	30.00	1.181	11.00	0.434
10-SB405	40.50	1.594	30.00	1.181	11.00	0.434
10-SB410	41.00	1.614	31.00	1.220	11.00	0.434
10-SB415	41.50	1.634	31.00	1.220	11.00	0.434
10-SB420	42.00	1.654	32.00	1.260	11.00	0.434
10-SB430	43.00	1.693	33.00	1.299	11.00	0.434
10-SB440	44.00	1.732	34.00	1.339	11.00	0.434
10-SB450	45.00	1.772	34.50	1.358	11.00	0.434
10-SB460	46.00	1.811	35.50	1.398	11.00	0.434
10-SB470	47.00	1.850	36.50	1.437	11.00	0.434
10-SB480	48.00	1.890	37.50	1.476	11.00	0.434
10-SB490	49.00	1.929	38.50	1.516	11.00	0.434
10-SB500	50.00	1.969	39.00	1.535	11.50	0.453



# KPMI® APPAREL

## • SNAPBACKS



## • BEANIES



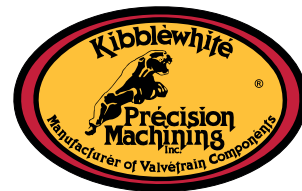
- Black, Navy, and Red
- One Size
- Ribbed knit. Logo Patch
- 100% Acrylic

## • T-Shirts



- Black
- KPMI® screen printed graphics
- Soft 100% Cotton
- Regular fit
- Size : Medium, Large, and Extra Large

## • STICKERS



Item Detail	
Size	Quantity
5 in x 1/4 in	Pkg. of 10
8.5 in x 1.55	Pkg. of 4
10.5 in x 1.88	Pkg. of 4

Item Detail	
Size	Quantity
5 in x 1/4 in	Pkg. of 10
8.5 in x 1.55	Pkg. of 4
10.5 in x 1.88	1 ea.



# KPMI® RACING TEAMS

## Kibblewhite Racing

**Cole Crowley**  
2009 District 36 250cc Champion



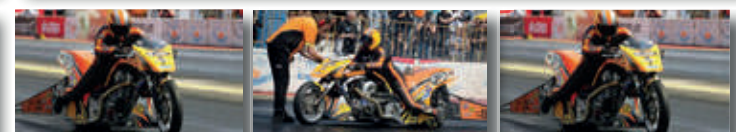
**Larry "Spiderman" McBride**  
16 Time Top Fuel World Champion



**Jordan Phillips**  
Grand National Cross Country



**Ton Pels**  
European Super Twin Top Fuel Championship  
7 Time 1st / 2nd Finisher



# KPMI® RACING TEAMS



RACING TEAMS

**Ian King**  
10 Time European Top Fuel Champion



**Sammy Halbert**  
2012 AMA Flat Track Finals/ Expert Singles Champion



**Alp Sungurtekin**  
175MPH Worlds Fastest 650cc Pushrod Engine  
SCTA & AMA LSR Grand National Champion



**Sims Motorsports**  
2012 New record  
with APS-1350-G/ M-2000-G Class





# KPMI® CUSTOM VALVE ORDER FORM

## KPMI® Custom Valve Order Form

<b>Part Number</b>		
<b>Engr. Approval / Date</b>		

<b>Customer Information</b>	
<b>Contact:</b>	
<b>Company:</b>	
<b>Phone:</b>	<b>Fax:</b>
<b>E-Mail:</b>	<b>Date:</b>
<b>Make:</b>	<b>Disp:</b>
<b>Model:</b>	<b>Years:</b>
<b>Material:</b>	<input type="checkbox"/> S.S. <input type="checkbox"/> Ti. <input type="checkbox"/> Other: _____
<b>Blank Part #:</b>	
<b>Notes:</b>	

<b>Additional Specifications</b>	<b>Rocker Arm</b>	YES <input type="checkbox"/>
	<b>Rocker Arm (w/ Elephant Foot)</b>	YES <input type="checkbox"/>
	<b>Cam Follower (Shim &amp; Bucket)</b>	YES <input type="checkbox"/>
	<b>Using Lash Cap</b>	YES <input type="checkbox"/>
	<b>Intake Valve</b>	YES <input type="checkbox"/>
	<b>Exhaust Valve</b>	YES <input type="checkbox"/>

<b>Customer Approval:</b>	
	<b>Date:</b>

Groove Dimensions			
	<b>Radius Groove</b>	<b>Square Groove</b>	<b>Triple Groove</b>
<b>Groove Location:</b>			
<b>Groove Minor Ø:</b>			
<b>Groove Width:</b>			
<b>Groove Radius:</b>	N/A		
<b>Groove Spacing:</b>	N/A		

Groove Location is measured from the tip of the valve to the center of the radius or to the top of the square groove (for the triple groove it is measured from the tip of the valve to the center of the middle radius)

**Reduced Dia. Groove Detail (if applicable)**

<b>-A- Undercut Ø:</b>	
<b>-B- Undercut Length:</b>	
<b>-C- Groove Location:</b>	
<b>-D- Groove Ø:</b>	
<b>-E- Groove Width:</b> <small>E = √(A-D) · (A-D)</small>	
<b>-F- Groove Radius:</b>	

**Dish Dimensions**

<b>Radius Dish: h</b>	
<b>-A- Dish Radius:</b>	<b>-D- Dish Depth:</b>
<b>-B- Dish Depth:</b>	<b>-E- Dish Width:</b>
<b>-C- Dish Width:</b>	<b>-F- Dish Angle:</b>

# KPMI® CUSTOM GUIDE ORDER FORM



## KPMI® Custom Guide Order Form



Part Number	
Engr. Approval / Date	
Customer Information	
Company:	
Contact:	
Phone:	
Fax:	Date:
E-mail:	
Material:	Cast Iron <input type="checkbox"/> Ni Al Bronze <input type="checkbox"/> Manganese <input type="checkbox"/>
Notes:	

Overall Length

Dist. Above Head

Dist. in Port

Taper Length

Bore  $\varnothing$

Outer  $\varnothing$

Taper Minor  $\varnothing$

Shouldered Guide	Snap Ring Guide	Stepped Shoulder Guide
Make:	Model:	Disp:
		Years:

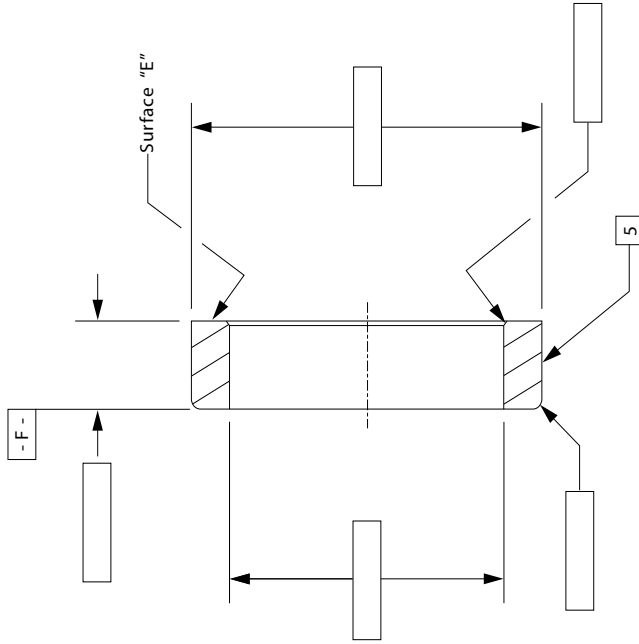
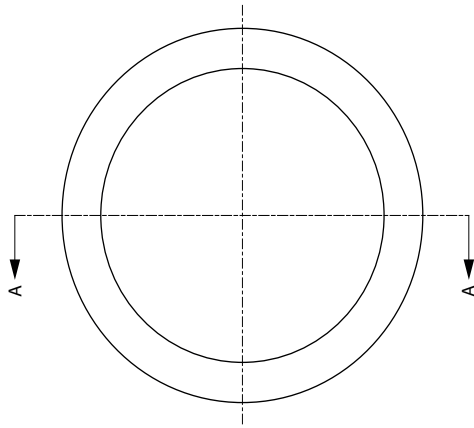


# KPMI® CUSTOM SEAT ORDER FORM

## KPMI® Custom Seat Order Form



Part Number:



<b>Customer Information</b>			
Contact Name:			
Company Name:			
Phone:	Date:	Model:	Years:
Make:			
Disp:			
Customer Approval:			Date:

<b>Seat Information</b>			
Additional Notes:			
KPMI Blank P/N:			
Material:	<input type="checkbox"/> SAE 630	<input type="checkbox"/> G2 Cast Iron	
(KPMI use only) Total Cost Per Seat:		Qty.	
(KPMI use only) Total Cost:			

**NOTES:**

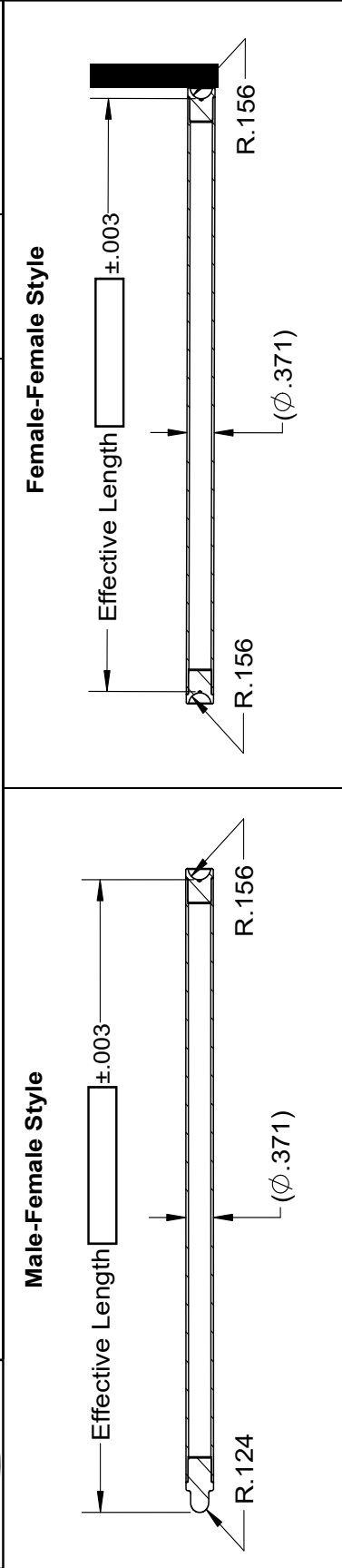
1. Break and deburr all sharp edges 0.010" X 45°
2. Finish O.D. to RMS-16 parallel and round within 0.0004" (For wall thickness less than 0.120", parallel and round within 0.0008")
3. Surface "E" parallel to Datum F within 0.002"
4. I.D. and O.D. must be concentric within 0.010" TIR
5. I.D. and O.D. must be parallel within 0.002"
6. O.D. must be perpendicular to Datum F within 0.002"
7. (U.O.S.) Unless Otherwise Specified



# KPMI® CUSTOM PUSHROD ORDER FORM



<h2 style="color: yellow; font-size: 2em; margin: 0;">Custom Pushrod Order Form</h2>	Part Number: <input style="width: 90%;" type="text"/> Date: <input style="width: 90%;" type="text"/>
--	---



Machining Information: 													
A: $\varnothing .371$ OD B: 9.120 Overall Length C: $\varnothing .305$ ID Before Machining	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">D</td> <td style="width: 15%;">R.124</td> <td style="width: 15%;">E</td> <td style="width: 15%;">0.675</td> </tr> <tr> <td>F</td> <td>G</td> <td>H</td> <td>I</td> </tr> <tr> <td>0.375</td> <td>0.310</td> <td></td> <td></td> </tr> </table>	D	R.124	E	0.675	F	G	H	I	0.375	0.310		
D	R.124	E	0.675										
F	G	H	I										
0.375	0.310												
<b>Kit Includes</b>	<b>Model</b>												
90502-2 2 Female Ended Pushrods / 2 Loose Male Endpieces	Various												
90512-2 2 Female Ended Pushrods / 2 Loose Female Endpieces	Various												
90502-4 4 Female Ended Pushrods / 4 Loose Male Endpieces	Various												
90512-4 4 Female Ended Pushrods / 4 Loose Female Endpieces	Various												
<b>KPMI P/N</b>	<b>Material</b>												
90502-2	•Thin Wall Chrome Moly Tube •H.T. Steel Tips												
90512-2	•Thin Wall Chrome Moly Tube •H.T. Steel Tips												

<b>Customer Information</b>	
Contact Name:	
Company Name:	
Phone:	
E-mail:	
Make:	Model: <input style="width: 50%;" type="text"/> Disp: <input style="width: 50%;" type="text"/> Years: <input style="width: 50%;" type="text"/>
<b>Pushrod Information</b>	
KPMI Blank P/N:	Male-Female 90502-2 QTY: <input style="width: 50%;" type="text"/> 90502-4 QTY: <input style="width: 50%;" type="text"/>
KPMI Blank P/N:	Female-Female 90512-2 QTY: <input style="width: 50%;" type="text"/> 90512-4 QTY: <input style="width: 50%;" type="text"/>
Custom Work Pricing:	
Notes:	

Customer Approval: <input style="width: 95%;" type="text"/>	Date: <input style="width: 95%;" type="text"/>
---	--



# KPMI® PRODUCT ORDER FORM



## ORDER FORM

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

CUST #: \_\_\_\_\_ P.O. #: \_\_\_\_\_

BILL TO: \_\_\_\_\_

SHIP TO: \_\_\_\_\_

CONTACT NAME: \_\_\_\_\_

STREET: \_\_\_\_\_

CITY: \_\_\_\_\_

ZIP CODE: \_\_\_\_\_ COUNTRY: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_ FAX NUMBER: \_\_\_\_\_

**UPS**

- RED - 1 Day
- BLUE - 2 Day
- ORANGE - 3 Day
- GROUND

**FEDEX**

- RED - 1 Day
- BLUE - 2 Day
- SAVER - 3 Day

**USPS**

- AIR
- PRIORITY
- EXPRESS

- CREDIT CARD
- WILL CALL
- COD
- OPEN ACCT.

WEIGHT: \_\_\_\_\_

SHIP CHRG \$: \_\_\_\_\_

INS \$: \_\_\_\_\_

COD \$: \_\_\_\_\_

MISC \$: \_\_\_\_\_

**TOTAL \$:** \_\_\_\_\_

ITEM #	QTY ORDERED	KPMI PART NO. / DESCRIPTION	PRICE	NOTES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

NAME ON CARD: \_\_\_\_\_

CARD NUMBER: \_\_\_\_\_

EXP DATE: \_\_\_\_\_ SEC CODE: \_\_\_\_\_

CONTACT IF BACK ORDERED: Y \_\_\_\_\_ N \_\_\_\_\_

- VISA
- MASTERCARD
- AMER. EXP.
- OTHER

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# KPMI® DEALER APPLICATION



## Kibblewhite® Precision Machining, Inc.

### Dealer / Credit Application

Page 1 of 2

Company Name \_\_\_\_\_ Resale# \_\_\_\_\_  
Street Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Attn: \_\_\_\_\_ County \_\_\_\_\_ Country \_\_\_\_\_  
Phone # \_\_\_\_\_ Fax# \_\_\_\_\_ E-Mail \_\_\_\_\_

Type of Business  Partnership  Sole Proprietor  LLC  Corporation Date Business Started \_\_\_\_\_  
please check one:  Speed Shop  Machine Shop  Parts Store / Warehouse  Other \_\_\_\_\_

Principal/Owner(s) Name \_\_\_\_\_ Title \_\_\_\_\_ Phone Number \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Soc. Sec# \_\_\_\_\_ Fed. ID# \_\_\_\_\_ WA Contractor # \_\_\_\_\_ Expires \_\_\_\_\_

Tres/Controller \_\_\_\_\_ Years in business under this ownership, at this location \_\_\_\_\_

If in business less than one year, please submit prior business work history.

Name of Bank \_\_\_\_\_ Branch \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Years at this bank \_\_\_\_\_ Account# \_\_\_\_\_

**Trade References:** Please list two firms within the industry and one firm outside the industry.

1. Company \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

2. Company \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

3. Company \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Please indicate the type of account required  C.O.D. (Co check OK - A credit inquiry is required. Please allow 2-weeks for credit inquiry processing.) or  Credit Card account with KIBBLEWHITE PRECISION MACHINING INC. I understand that all account balances are payable to KIBBLEWHITE PRECISION MACHINING, Inc. at the address specified on invoices or statements. I also understand that interest will be charged on past due balances at a rate not to exceed the applicable legal maximum.

Handling Fees: Handling fees may apply to all shippers.

**If establishing a credit card account please indicate the following:**

Type of card \_\_\_\_\_ Card Number \_\_\_\_\_ Exp. Date \_\_\_\_\_

Signature \_\_\_\_\_ Printed \_\_\_\_\_ Date \_\_\_\_\_

Title \_\_\_\_\_

Please provide at least two of the following:

- Copy of your business license  Copy of your state sales tax certificate  Copy of an ad from any trade Magazine  Copy of Yellow Pages ad

#### Applicant's Authorization & Agreement

In support of this application KIBBLEWHITE PRECISION MACHINING INC. is hereby authorized to obtain credit and/or financial information from my/our bank(s), other financial institutions or commercial firms with whom I/we have done business. It is understood that any such credit and/or financial information will be held in strict confidence and used only in consideration of this application.

Upon approval of this application, it is agreed that each invoice will be paid in full upon receipt or in accordance with the terms of sale as stated on the invoices(s). Should I/we not pay KIBBLEWHITE PRECISION MACHINING INC. according to term, it is understood that credit privileges may be withdrawn. Should KIBBLEWHITE PRECISION MACHINING INC. find it necessary to obtain assistance in collecting any past due balance, I/we agree to pay interest at the rate of 1.5% per month (or such other rate allowable by State law), reasonable attorney fees, collection fees and/or court costs allowable by law. At KIBBLEWHITE PRECISION MACHINING INC. option, jurisdiction and venue of any suit brought to collect this account shall be had in San Mateo County, CA. A copy of this statement and application has been received.

SIGNATURE \_\_\_\_\_ TITLE \_\_\_\_\_ Fax \_\_\_\_\_

(must be signed by an officer or principal of the firm)

#### PERSONAL GUARANTEE

The undersigned, [print name] \_\_\_\_\_, of the applicant corporation/company hereby agrees to the above terms and conditions and assumes personal responsibility for payment of said corporation's/company's account. It is understood that credit would not be extended to said corporation/company without this assumption of liability.

(owner, partner or corporate officer)

#### CREDIT DEPARTMENT USE ONLY

CUSTOMER# \_\_\_\_\_ CREDIT LIMIT \_\_\_\_\_ TERMS CODE \_\_\_\_\_

CREDIT MANAGER SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_



# KPMI® DEALER APPLICATION

## Kibblewhite® Precision Machining, Inc. Dealer / Credit Application Page 2 of 2

The only way to become and sustain KPMI Dealer status is to meet the following requirements:

### Minimum Dealer Requirements

Full Dealer Status (all products available)
<ul style="list-style-type: none"> <li>• 400 U\$D Initial Order (Pre - Paid Only)</li> <li>• 100 U\$D minimum orders thereafter</li> <li>• Purchase a minimum of 1,200 U\$D of product per calendar year</li> <li>• Credit based on approval</li> </ul>

Company Name \_\_\_\_\_

Number of active customers \_\_\_\_\_ Approximate sales last 12 Months \_\_\_\_\_

Primary Focus of your business: \_\_\_\_\_

Types pf equipment served: Motorcycle  Automobile  ATV  Other \_\_\_\_\_

Percentage of business related to engine components: \_\_\_\_\_ %

Other engine components marketed regularly: \_\_\_\_\_

KPMI components would be sold as: KPMI Brand  Bundled with other components  Repackaged in your packaging  Used in OEM applications   
Other \_\_\_\_\_

Geographical areas currently covered in your dealer network:

- US Northwest       US Southwest       US Midwest       US Southeast       US Northeast
- California       Canada (NE & Quebec)       Canada Ontario       Canadian West       Canadian Prairie
- Mexico       Other South America       Brazil       Other Central America       European Union
- Australia       New Zealand       Japan       Korea       Germany
- Other Asia \_\_\_\_\_       Other \_\_\_\_\_

Vehicle Manufacturers currently supported by your dealer network:

- Harley-Davidson       Indian       Norton       Triumph       Honda
- Kawasaki       Yamaha       Suzuki       BMW       Rotax
- BSA       Ducati       Moto Guzzi       Bombardier       Polaris
- Acura       Mitsubishi       Ford       Dodge       Porsche
- Husqvarna       Other Not Listed: \_\_\_\_\_

Trade magazines your advertisements appear in: \_\_\_\_\_  
\_\_\_\_\_

How KPMI product would fit into your business: \_\_\_\_\_  
\_\_\_\_\_

\* No parts manufactured or sold by Kibblewhite Precision Machining, Inc. are licensed manufactured, sponsored, or endorsed by Harley Davidson, Inc. Use of the word Harley Davidson, various model names and designations are provided solely for reference. There is no affiliation between Kibblewhite Precision Machining, Inc. and Harley-Davidson, Inc. nor is any affiliation implied.

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