



**2021**

S&S® Cycle Late Model Catalog  
Parts & Accessories for 1999–and later models\*  
\*including 1986 & later xl and Indian® models





# LOOKING FOR REPLACEMENT PARTS?

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# S&S LATE MODEL CONTENTS:

## MILWAUKEE-EIGHT® ENGINES

Exciting new performance products for motorcycles with the HD® Milwaukee Eight® engine

## 2007-2016 BIG TWIN

Performance upgrades for 2007-'17 HD® big twins with Twin Cam 96™, 103™, 110™ engines. From the basics like slip-on mufflers and air cleaners to camshafts, fuel systems, and big bore kits, to complete big inch engines. Replacement parts and service items too!

## 1999-2006 BIG TWIN

Everything you need to upgrade and maintain 1999-'06 HD® big twins with Twin Cam 88® and Twin Cam 88B™ engines. Exhaust, intake, fuel systems, cams, big bore kits, and complete engines. Also many service and replacement components.

## SPORTSTER® & BUELL®

HD® Sportster® motorcycles are becoming increasingly popular. S&S offers a lot of options for increasing displacement and performance. Carburetors, air cleaners, big bore kits, cam shafts, cylinder heads, and much more.

## STREET®

Performance products for Harley-Davidson® Street® & Street Rod™ engines.

## INDIAN®

Performance parts for Indian® motorcycles.

## TOOLS & SHOP SUPPLIES

Every job is easier with the right tools. Keep your bike running in top condition! You'll find special tools, shop supplies and fluids you need, whether you are a "do-it-yourselfer" or a professional servicing technician.

## COMPANY POLICY & WARRANTY

Information on sales, ordering, shipments, S&S internet policy, and special orders. Warranty policies on all S&S parts and S&S assembled engines.

## APPENDIX

Useful information for our customers: identify S&S components, measuring manifolds, and calculating cylinder head bolt lengths.



# A WORD ABOUT DYNO NUMBERS

With a motto like "Proven Performance®", which is a registered trademark of S&S® Cycle Inc., it is very important that we be able to back up our claims regarding performance. It is also vitally important to be able to evaluate new designs in our development process. One of the tools we depend on for both of these functions is the chassis dynamometer.

Something that needs to be understood about dynamometers is that the results from one dyno will not necessarily be identical to those from another dyno. So comparing results from different dynos is bound to create a certain amount of confusion. This is especially true with dynos from different manufacturers. However, results of tests run on the same machine can be compared with a high degree of confidence. We can determine, for example if a performance modification increased power or torque, but there is a problem if you expect absolute values.

There are several brands of dynamometers which are in common use in the performance industry. These dynos will yield very reliable values for comparison, especially when tests are performed on the same machine. However values obtained from these dynos may not always agree. Which value is correct? It depends on who you ask.

## NO ABSOLUTES

In our literature and catalogs, we publish dyno results so our customers easily can see how our products improve performance over stock. However, it must be remembered that these are comparative values, and should not be taken as absolutes. If a similar or even identical engine or motorcycle is tested on another dynamometer, the results will more than likely differ.





# SYMBOL KEY



**CONFIGURE TO ORDER:** CTO allows you to choose available options for a specific part or kit, and covers both "special order" parts and "made to order" kits. Some CTO kits have a base price with additional upcharges for the optional selections. In some cases, the entire price of a kit is determined by upcharges for the options selected. It is best to call an S&S customer service representative and configure the kit with exactly the options you want.



**VIDEO** If you see this icon, there is a video available.



These are our latest innovations to the market.

## EMISSIONS SYMBOLS



Part numbers marked with this logo are replacement parts for specific S&S certified emission engines and are legal for sale and use on these engines. The number(s) listed by each logo in the catalog indicates the model(s) of S&S certified engines that use the part. Use the table below to reference your engine model to its number in the logo.

Engine Model Number	
V96E	1
V100C, V113E, V113C	2
V124E, V124C	3
X117E, X117C	4



Example: This part is legal for use on V96E, V124C, and V124E engine models.



Part numbers marked with this logo are legal to be sold for and used as replacement parts on Harley-Davidson® motorcycles in all 50 states. These parts may only be installed on a motorcycle model listed in the part's description. Selling or installing these parts on a pollution controlled motorcycle not listed is in violation of California and/or Federal emissions laws and could result in fines and penalties.



S&S Cycle's products designed to meet California's emissions standards.



S&S Cycle products that are EC-approved have an e mark from the European Commission in accordance with the mandatory members of the EU Directive and are legal for sale and use in Europe.

## MISSION STATEMENT AND TRADEMARK INFORMATION

**MISSION STATEMENT:** Proven Performance® for the Powersports Industry.

*DISCLAIMER: The names Harley, Harley-Davidson, Buell, H-D, and all trademarks owned by Harley-Davidson and its affiliated companies, and all Harley-Davidson and Buell part numbers and model designations are used for reference only. S&S Cycle is in no way associated with or authorized by Harley-Davidson Motor Co. to manufacture and sell any of the engine parts described in this catalog.*

**THE FOLLOWING ARE TRADEMARKS OF HARLEY-DAVIDSON® MOTORCYCLE COMPANY:** BUELL® • Dyna® •

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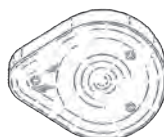
Sportster® • Twin Cam 88® • Twin Cam 88B™ • Twin Cam 96™ • Twin Cam 96B™ • Twin Cam 103™ • Twin Cam 110™ • Tri Glide™

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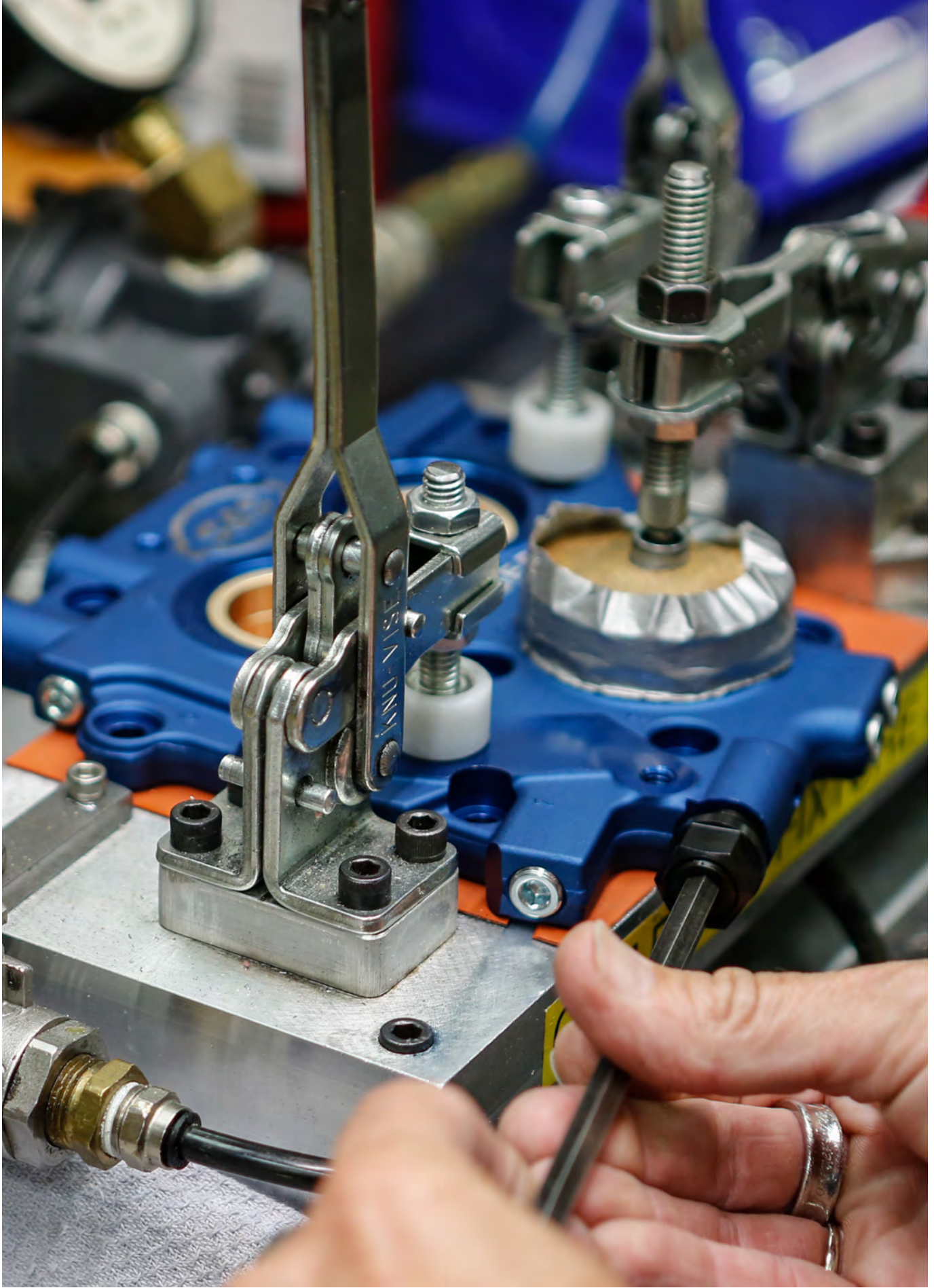
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Body Parts • Dealer Focus • EZFI • Frame Lock • G-Extreme • Grand National • Hot Set Up Kit • IST • Performance Times • Power Tune • Proven Performance • S&S • S&S Service & Speed Center • Sidewinder • SPO • Super Stock • X-Wedge • Flathead Power • Viola V-Twin









# MILWAUKEE-EIGHT®

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# GNX SLIP-ON MUFFLERS

## FITMENT

- 2017–2021 M8 touring models

## FEATURES AND BENEFITS

- 4.5" slip-on with premium fit, finish, sound, and power!
- Show quality chrome or OEM exact match black
- New, unique louvered baffle delivers a rowdier tone
- Clears up to 13.5" shock lengths
- Removable dB Reducer
- Made in USA!



## GNX SLIP-ON MUFFLERS

Finish	Part #
Black	550-0990
Chrome	550-0991

\*Qualified manufacturer declared U.S. 50-State legal emissions replacement part on all MY 2017-2021 FL Touring models

NOTE: Does not fit trike models

⚠ WARNING: Cancer and Reproductive Harm

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.



REPLACEMENT PARTS: SEE PAGE 55



# Mk45 TOURING MUFFLERS

## FITMENT

- 2017–2021 M8 touring models  
Does not fit Tri Glide® or Freewheeler models

## FEATURES AND BENEFITS

- Bold 4.5" design — with stainless steel perforated baffle and Race TEX cartridge packing
- Available in show quality chrome or ceramic black finish
- Produces a deep bass rumble throughout the RPM range
- Choose from S&S Thruster or Tracer end cap designs in chrome or black
- SAE J2825 sound level compliant
- Removable dB reducer
- Made in USA!



Removable dB reducer

## MK45 4.5" SLIP-ON MUFFLERS

Muffler Body Finish	End cap Finish & Style	Part #
Chrome	Chrome Thruster	<b>550-0665</b>
	Black Highlight Machined Thruster	<b>550-0664</b>
	Chrome Tracer	<b>550-0669</b>
	Black Highlight Machined Tracer	<b>550-0668</b>
Black	Black Highlight Machined Thruster	<b>550-0666</b>
	Black Highlight Machined Tracer	<b>550-0670</b>

\*Qualified manufacturer declared U.S. 50-State legal emissions replacement part on all MY 2017-2021 FL Touring models

⚠️ WARNING: Cancer and Reproductive Harm

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.

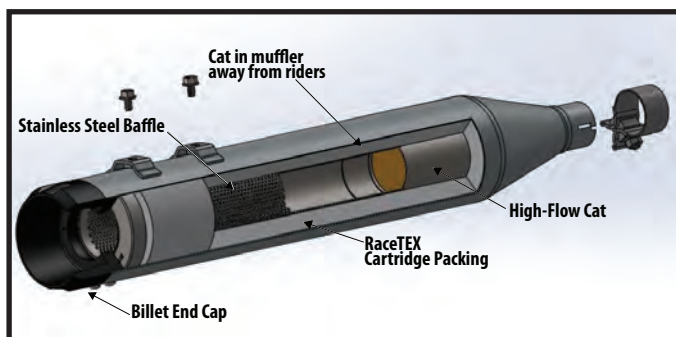


REPLACEMENT PARTS: SEE PAGE 48



# EL DORADO M8 HIGH PERFORMANCE EXHAUST SYSTEM—STREET LEGAL

- 50 State legal—CARB compliant: EO# K-010-10
- Improved power & torque for greater rideability
- Produces a deep bass rumble throughout the RPM range
- Available in show quality chrome or ceramic black heat shields and muffler bodies
- 4.5" mufflers with billet end caps
- Black Highlight Machined Thruster and Tracer, as well as Chrome Tracer tip options
- Includes adapters that allow use of wide band or stock O2 sensors
- O2 sensor location same as stock
- Stainless steel header construction
- High flow cats increase exhaust flow for optimum torque
- Relocation of cats to mufflers reduces rider heat
- Meets SAE J2825 sound standard
- Made in the USA!



## EL DORADO EXHAUST SYSTEM FOR 2017-'19 TOURING MODELS — STREET LEGAL

Finish	End cap	Part #
Chrome	Black Highlight Machined Thruster	<b>550-0699B</b>
Black	Black Highlight Machined Thruster	<b>550-0700B</b>
Chrome	Black Highlight Machined Tracer	<b>550-0701B</b>
Black	Black Highlight Machined Tracer	<b>550-0702B</b>
Chrome	Chrome Tracer	<b>550-0851</b>

\*NOTE: Does not fit Trike models

Exempt from emissions tampering regulations under CARB EO# K-010-10 for all 2017-2019 FL Touring Models

WARNING: Cancer and Reproductive Harm



Black w/Tracer



Black w/Thruster



Chrome w/Thruster



Chrome w/Tracer



Chrome w/Chrome Tracer

### NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.

REPLACEMENT PARTS: SEE PAGE 56



# GRAND NATIONAL® 4" SLIP-ON MUFFLERS FOR 2017–2020 FLH TOURING MODELS

## FITMENT

- 2017–2021 FLH touring models
- 2009–2021 trike models

## FEATURES AND BENEFITS

- Show quality chrome or ceramic black finish
- Aggressive sound and excellent horsepower
- Race inspired Grand National end cap
- High flowing baffle design
- SAE J2825 sound level compliant
- Removable dB reducer
- Excellent choice for trike models (See chart)
- Made in USA!



## GRAND NATIONAL® 4" MUFFLERS FOR 2017–2021 TOURING M8 ENGINES\* EXCEPT FREEWHEELER® OR TRIKE MODELS

Finish	Part #
Chrome	<b>550-0693</b>
Black	<b>550-0694</b>

## GRAND NATIONAL® 4" MUFFLERS TOURING MUFFLERS FOR 2017–2021 TRIKE MODELS††

Finish	Part #
Chrome	<b>550-0689</b>
Black	<b>550-0690</b>

\*Qualified manufacturer declared U.S. 50-State legal emissions replacement part on all MY 2017–2021 FL Touring models

††DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst. Qualified Manufacturer Declared Emissions Replacement Part on 2017 to 2020 Touring Trike Models Only

⚠ WARNING: Cancer and Reproductive Harm

# Grand National



REPLACEMENT PARTS: SEE PAGE 51



19–2006  
1 Cam 88\*

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix

# SLASH CUT 4" SLIP-ON MUFFLERS

## FITMENT

- 2017–2021 FLH touring models
- 2009–2021 trike models

## FEATURES AND BENEFITS

- Classic slash cut styling
- Aggressive sound
- Available in show chrome or ceramic black finish
- High flowing baffle design
- Stripped down styling
- Economical price
- SAE J2825 sound level compliant
- Removable dB reducer included
- Excellent choice for trike models (*See chart*)
- Made in USA!



### SLASH CUT 4" TOURING MUFFLERS FOR 2017–2021 TOURING M8 ENGINES\* EXCEPT FREEWHEELER® OR TRIKE MODELS

Finish	Part #
Chrome	550-0695
Black	550-0696

### SLASH CUT 4" TOURING MUFFLERS FOR 2017–2021 TRIKE MODELS (SEE PAGE 70 FOR MORE DETAILS)\*\*

Chrome	550-0691
Black	550-0692

\*Qualified manufacturer declared U.S. 50-State legal emissions replacement part on all MY 2017–2021 FL Touring models

\*\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst. Qualified Manufacturer Declared Emissions Replacement Part on 2017 to 2019 Touring Trike Models Only

⚠ WARNING: Cancer and Reproductive Harm



REPLACEMENT PARTS: SEE PAGE 51



# SIDEWINDER 2:1 EXHAUST SYSTEM

## FITMENT

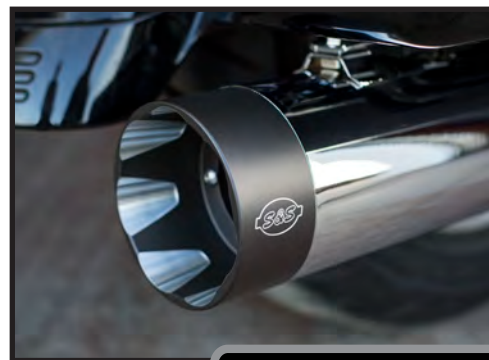
- 2017–2021 M8 FL Models

## FEATURES AND BENEFITS

- 2:1 styling for high-performance baggers
- Stainless steel stepped header
- High-flow cat
- Increased power and torque
- Available in show chrome or ceramic black finish
- Machined aluminum end cap
- Includes adapters that allow use of wide band or stock O2 sensors
- Deep 2:1 performance exhaust note
- SAE J2825 sound level compliant
- Removable dB reducer included (*Race only version*)
- Made in USA!



Removable dB reducer



See next page for Left Side Shadow Pipe



### SIDEWINDER 2:1 EXHAUST SYSTEM FOR 2017–'20 M8 TOURING MODELS — STREET LEGAL†

Finish	Part #
Chrome	<b>550-0758C</b>
Black	<b>550-0759C</b>

### SIDEWINDER 2:1 EXHAUST SYSTEM FOR 2017–2021 M8 TOURING MODELS — RACE ONLY††

Chrome	<b>550-0728</b>
Black	<b>550-0729</b>

†Exempt from emissions tampering regulations under CARB EO# K-010-14 for all 2017-2020 FL Touring Models

††DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

⚠WARNING: Cancer and Reproductive Harm

**NOTE:** Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.



REPLACEMENT PARTS: SEE PAGE 52



# SHADOW PIPE

## FOR 1995–2021 TOURING MODELS WITH S&S SIDEWINDER® 2:1 EXHAUST

### FEATURES AND BENEFITS

- Available in show chrome and ceramic black finish
- Shadow muffler fills left side cutout in extended bags when running Sidewinder 2:1
- Matching end cap for left side is a mirror image of right side Sidewinder 2:1 Cap (not available on any of our slip-on or El Dorado products)
- 4.5" design
- All hardware included
- Made in USA!



### 2009–2021 TOURING MODELS EQUIPPED WITH S&S® SIDEWINDER® 2:1 EXHAUST

Chrome	550-0829
Black	550-0831

### NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.

If you have...			...you'll need
BIKE	FINISH	SIDEWINDER PART #	SHADOW PIPE PART #
2017–2021 touring model	Chrome	550-0728	550-0829
		550-0758C	
	Black	550-0729	550-0831
		550-0759C	



REPLACEMENT PARTS: SEE PAGE 53



# SUPERSTREET 2:1 EXHAUST SYSTEM



## FITMENT

- 2018–2021 HD® Street Bob®, Low Rider®, Softail Slim®, Fat Bob®, Deluxe, Sport Glide® & Heritage® models\*
- 2018–2021 HD® Softail® Fat Boy®, Breakout® & FXDR® models

## FEATURES AND BENEFITS

- Classic 2:1 styling with world famous S&S performance!
- Fits floorboard and forward controls and fits mid mounts with S&S brake pedal kit (560-0259A)
- Saddlebag support compatible! Works with OEM and similar size saddlebags (like Heritage® or Sport Glide® models)
- Full heat shields on both front and rear headers
- Stainless steel stepped header construction
- S&S engineered high performance catalyst brings legal performance to the street! (Street Legal version)

- 50 State legal for 2018–2020 Softail models! CARB EO# K-010-13
- Computer aided design and precision bending for class-leading ground clearance
- Multi-faceted machined end cap design
- Available in show quality chrome, ceramic black, and **NEW** Stainless Steel finish
- Oxygen sensor ports allow use of wide band or stock O2 sensors
- Passenger peg bracket included (Fat Boy, FXDR and Breakout version. All others use OE Heritage location)
- SAE J2825 sound level compliant
- Removable dB reducer included (Race only version)
- Made in the USA!



## NOTE:

Mid mounts require brake pedal kit (part # 560-0259A / msrp \$162.95)

## SUPERSTREET 2:1 EXHAUST SYSTEM — STREET LEGAL\*

Fitment	Finish	Part #
2018–2020 HD® Street Bob®, Low Rider®, Softail Slim®, Fat Bob®, Deluxe, Sport Glide® & Heritage® models*	<b>NEW &gt;&gt;</b> Stainless Steel	<b>550-0996B</b>
	Black	<b>550-0789B</b>
	Chrome	<b>550-0791B</b>
2018–2020 HD® Softail® Fat Boy®, Breakout® & FXDR® models	Black	<b>550-0846B</b>
	Chrome	<b>550-0847B</b>

## SUPERSTREET 2:1 EXHAUST SYSTEM — RACE ONLY†

2018–2021 HD Street Bob, Low Rider, Softail Slim, Fat Bob, Deluxe, Sport Glide & Heritage models	Black	<b>550-0788</b>
	Chrome	<b>550-0790</b>
2018–2021 HD Softail Fat Boy, Breakout & FXDR models	Black	<b>550-0857</b>
	Chrome	<b>550-0858</b>

\*Exempt from emissions tampering regulations under CARB EO# K-010-13 for all 2018-2020 Softail models

†DISCLAIMER: FOR CLOSED COURSE COMPETITION USE ONLY. NOT INTENDED FOR STREET USE. LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES WHICH MAY NEVER BE USED, OR REGISTERED OR LICENSED FOR USE, UPON A HIGHWAY. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT.

⚠ WARNING: Cancer and Reproductive Harm

>> **Stainless Steel** >>

**NEW  
2021**



REPLACEMENT PARTS: SEE PAGE 47



# GRAND NATIONAL® 2:2 EXHAUST SYSTEM

## FOR 2018–2021 HD® STREET BOB®, LOW RIDER®, SLIM®, FAT BOB®, & DELUXE MODELS

### FEATURES AND BENEFITS

- 2:2 Free-flow design equals solid HP gains
- Hidden crossover provides performance benefits of 2:1
- Full heat shields on both front and rear headers
- Stainless steel header construction
- Available in chrome or ceramic black finish
- Fits floorboard and forward controls and fits mid mounts with S&S brake pedal kit (part #560-0259A for \$162.95)
- Right side passenger peg relocation bracket (part #550-0801 for \$69.95)
- Oxygen sensor ports allow use of wide band or stock O2 sensors.
- High flow catalytic converters maintain the performance of a straight through system
- Race inspired Grand National® end cap
- SAE J2825 sound level compliant
- Removable dB reducer included (*Race only version*)
- Made in USA!



**Passenger Peg  
Relocation Bracket**

### NOTE:

Mid mounts require brake pedal kit  
(part # 560-0259A / msrp \$162.95)

### GRAND NATIONAL® 2:2 EXHAUST SYSTEM FOR 2018–'19 HD® STREET BOB®, LOW RIDER, SLIM, FAT BOB, & DELUXE MODELS — STREET LEGAL†

Finish	Part #
Chrome	550-0816A
Black	550-0815A

### GRAND NATIONAL 2:2 EXHAUST SYSTEM FOR 2018–2021 HD STREET BOB, LOW RIDER, SLIM, FAT BOB, & DELUXE MODELS — RACE ONLY\*\*

Chrome	550-0761
Black	550-0760

†Exempt from emissions tampering regulations under CARB EO# K-010-7 for all 2018–2019 Softail Models

\*\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

⚠ WARNING: Cancer and Reproductive Harm

# Grand National



REPLACEMENT PARTS: SEE PAGE 54



# GRAND NATIONAL® SLIP-ON MUFFLERS FOR 2018–2021 HD® FAT BOB® MODELS

## FITMENT

- 2018–2021 Harley-Davidson® Fat Bob® Models

## FEATURES AND BENEFITS

- Up to 12% more horsepower and 6% more torque (when used with Stealth Air Cleaner Kit)
- Race inspired design
- Ceramic black finish
- Deep performance rumble replaces stock whisper tone
- No mapping required
- SAE J2825 sound level compliant
- Removable dB reducer
- Made in USA!



Removable dB reducer



## GRAND NATIONAL® SLIP-ON MUFFLERS FOR 2018–2021 HD® FAT BOB® MODELS

Finish	Part #
Black	550-0734

\*Qualified manufacturer declared U.S. 50-State legal emissions replacement part on all MY 2018–2021 Fat Bob models.

⚠️ WARNING: Cancer and Reproductive Harm

# Grand National



REPLACEMENT PARTS: SEE PAGE 49

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88"

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

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Appendix

# GRAND NATIONAL® SLIP-ON MUFFLERS

## FOR 2018–2021 HD® SOFTAIL® MODELS (EXCEPT FAT BOB®, SPORT GLIDE®, & FXDR MODELS)

### FITMENT

- Fits 2018–2021 HD® Softail® Street Bob®, Low Rider®, Slim®, Fat Boy®, Breakout®, Heritage Classic & Deluxe® models

### FEATURES AND BENEFITS

- Race inspired Grand National end cap design
- Show chrome or ceramic black finish
- All hardware and gaskets included
- Deep performance rumble replaces stock whisper tone
- SAE J2825 sound level compliant
- Removable dB reducer included (*Race only version*)
- Made in USA!



### GRAND NATIONAL® MUFFLERS FOR 2018–2020 M8 HD® SOFTAIL® MODELS — STREET LEGAL†

Fitment	Muffler Body Finish	Part #
M8 HD Softail models: Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® models	Black	<b>550-0754B</b>
M8 HD Softail models: Street Bob, Low Rider, Slim, Fat Boy & Breakout models	Chrome	<b>550-0755B</b>
M8 HD Heritage Softail Classic & Softail Deluxe models	Chrome	<b>550-0757B</b>

### GRAND NATIONAL MUFFLERS FOR 2018–2021 M8 HD® SOFTAIL® MODELS — RACE ONLY††

M8 HD Softail models: Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® models	Black	<b>550-0737</b>
M8 HD Softail models: Street Bob, Low Rider, Slim, Fat Boy & Breakout models	Chrome	<b>550-0738</b>
M8 HD Heritage Softail Classic & Softail Deluxe models	Chrome	<b>550-0740</b>

†Exempt from emissions tampering regulations under CARB EO# K-010-16 for all 2018-2020 Breakout, Fat Boy, Low Rider, Slim, Street Bob, Deluxe, and Heritage Classic Softail Models

††DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

WARNING: Cancer and Reproductive Harm



REPLACEMENT PARTS: SEE PAGE 50



# SLASH CUT SLIP-ON MUFFLERS

## FOR 2018–2021 HD® SOFTAIL® MODELS (EXCEPT FAT BOB®, SPORT GLIDE®, & FXDR MODELS)

### FITMENT

- Fits 2018–2021 HD® Softail® Street Bob®, Low Rider®, Slim®, Fat Boy®, Breakout®, Heritage® & Classic® models

### FEATURES AND BENEFITS

- Classic Slash Cut styling
- Show chrome or ceramic black finish
- All hardware and gaskets included
- Deep performance rumble replaces stock whisper tone
- SAE J2825 sound level compliant
- Removable dB reducer included (*Race only version*)
- Made in USA!



### SLASH CUT MUFFLERS FOR 2018–2020 HD® SOFTAIL® MODELS — STREET LEGAL†

Fitment	Muffler Body Finish	Part #
M8 HD Softail models: Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® models	Black	<b>550-0752B</b>
M8 HD Softail models: Street Bob, Low Rider, Slim, Fat Boy & Breakout models	Chrome	<b>550-0753B</b>
M8 HD Heritage Softail Classic & Softail Deluxe models	Chrome	<b>550-0756B</b>

### SLASH CUT MUFFLERS FOR 2018–2021 M8 SOFTAIL® MODELS — RACE ONLY\*\*

M8 HD Softail models: Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® models	Black	<b>550-0735</b>
M8 HD Softail models: Street Bob, Low Rider, Slim, Fat Boy & Breakout models	Chrome	<b>550-0736</b>
M8 HD Heritage Softail Classic & Softail Deluxe models	Chrome	<b>550-0739</b>

†Exempt from emissions tampering regulations under CARB EO# K-010-16 for all 2018-2020 Breakout, Fat Boy, Low Rider, Slim, Street Bob, Deluxe, and Heritage Classic Softail Models

\*\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on any EPA pollution controlled motor vehicle.

⚠️ WARNING: Cancer and Reproductive Harm



REPLACEMENT PARTS: SEE PAGE 50



# EC SLIP-ON MUFFLERS FOR 2018–2020 HD SOFTAIL MODELS (FOR EUROPE)



## FEATURES & BENEFITS

- EC approved with S&S performance and style
- Race inspired Grand National® end cap design or the classic slash cut design complements any bike style
- Show chrome or ceramic black finish
- 82mm can with perforated stainless steel baffle and Race TEX cartridge packing
- All hardware and gaskets included
- Made in USA



## GRAND NATIONAL® EC SLIP-ON MUFFLERS FOR 2018 M8 HD® SOFTAIL® MODELS

M8 Softail® Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® models	Black	<b>550-0824</b>
M8 Softail® Street Bob, Low Rider, Slim®, Fat Boy & Breakout models	Chrome	<b>550-0825</b>
M8 Softail® Heritage Classic & Deluxe® models	Chrome	<b>550-0826</b>

EU Type-Approval: e9\*134/2014\*2018/295H\*11028\*00

## SLASH CUT EC SLIP-ON MUFFLERS FOR 2018 M8 HD® SOFTAIL® MODELS

M8 Softail® Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® models	Black	<b>550-0821</b>
M8 Softail® Street Bob, Low Rider, Slim, Fat Boy & Breakout models	Chrome	<b>550-0822</b>
M8 Softail® Heritage®/Deluxe® models	Chrome	<b>550-0823</b>

EU Type-Approval: e9\*134/2014\*2018/295H\*11027\*00



REPLACEMENT PARTS: SEE PAGE 58



# EC GRAND NATIONAL® SLIP-ON MUFFLERS FOR 2018–2020 M8 HD® FAT BOB® SOFTAIL® MODELS (FOR EUROPE)

## FEATURES AND BENEFITS

- EC approved with S&S performance & style
- Race inspired Grand National® end cap design
- High temperature ceramic black finish
- 100mm can with perforated stainless steel baffle & Race TEX cartridge packing
- dB reducer included
- All hardware and gaskets included



## GRAND NATIONAL® EC 100MM SLIP-ON FOR 2018–2020 HD® SOFTAIL® FAT BOB® MODELS

Finish	Part #
Black	550-0827

EU Type-Approval: e9\*134/2014\*2018/295G\*11029\*00

# EC Mk45 SLIP-ON MUFFLERS FOR 2017–2020 M8 MODELS (FOR EUROPE)

## FEATURES AND BENEFITS

- EC approved with S&S performance and style
- Bold 4.5" design — with stainless steel baffle and Race TEX cartridge packing
- Choose from S&S Thruster or Tracer end cap designs in chrome or black
- Performance 2.5" stainless steel perforated baffle
- Made in USA!

## Mk45 EC 4.5" SLIP-ON MUFFLERS FOR 2017–2020 TOURING MODELS

Muffler Body Finish	End cap Finish & Style	Part #
Chrome	Chrome Thruster	550-0861
	Black Highlight Machined Thruster	550-0860
	Chrome Tracer	550-0864
	Black Highlight Machined Tracer	550-0863
Black	Black Highlight Machined Thruster	550-0862
	Black Highlight Machined Tracer	550-0865

EU Compliant per 11032 G

EC-Type Approval for non-original motorcycle noise abatement device

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.



REPLACEMENT PARTS: SEE PAGE 48



Chrome with  
Chrome Thruster



Chrome with  
Machined Thruster



Chrome with  
Chrome Tracer



Chrome with  
Machined Tracer



Black with  
Machined Thruster



Black with  
Machined Tracer









# AIR STINGER STEALTH AIR CLEANER KITS

**NEW  
2021**



The Air Stinger takes the existing high flow Stealth air cleaner and replaces the air smoothing stinger with a similarly shaped filter element. More filter surface equals a 5% gain in air flow over the regular Stealth and 55% gain over a factory filter in an M8.

Also available with the classic Mini Teardrop cover in black or chrome or as a replacement cover plate to update your existing Stealth system. The Air Stinger filter element is washable just like the Stealth filters and designed to last for years.



TEARDROP FINISH	PART #
Gloss Black	<b>170-0718</b>
Chrome	<b>170-0717</b>
WITH S&S RING	PART #
Brushed Ring	<b>170-0714</b>
AIR STINGER FILTER ONLY	170-0723

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE

\*Qualified Manufacturer Declared 49-State Federal Emissions Compliant Part



REPLACEMENT PARTS: SEE PAGE 46

Milwaukee-Eight®

2007-2017 Twin Cam  
96/103/110™

1999-2006  
Twin Cam 88\*

1986-2019  
Sportster® & Buell®

2014-2019 Street® &  
Street Rod™

Indian® Models

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Appendix



# STEALTH AIR CLEANER KITS

NEW AIR STINGER STEALTH KITS SEE PAGE 23

## FITMENT

- 2017–2021 Harley-Davidson® models with Milwaukee-Eight® engine
- Works with Screamin' Eagle® 64mm throttle body

## FEATURES AND BENEFITS

- Use with any S&S Stealth cover (see page 25)
- Use with your stock Harley-Davidson Milwaukee-Eight engine air cleaner cover (*Adapter required — see below*)
- High flow (1" taller) filter kit available (P/N 170-0127)
- Backplate made from high-strength advanced synthetic polymer—reduces heat transfer to intake air
- Cooler, denser air allows for more efficient cylinder fill and better performance
- Included actuator cover—hides TBW servo motor for a clean, attractive installation



### STEALTH AIR CLEANER KITS

Description	Part #
Chrome Tribute plus Stealth Kit (170-0354C)	<b>170-0595A<sup>±</sup></b>
Gloss Black Tributeplus Stealth Kit (170-0354C)	<b>170-0598A</b>
Carbon Fiber Teardrop plus Stealth Kit (170-0354C)	<b>170-0498B</b>
Chrome Teardrop plus Stealth Kit (170-0354C)	<b>170-0524B<sup>±</sup></b>
Gloss Black Teardrop plus Stealth Kit (170-0354C)	<b>170-0525B</b>
Chrome Mini Cover plus Stealth Kit (170-0354C)	<b>170-0435C<sup>±</sup></b>
Gloss Black Mini Cover plus Stealth Kit (170-0354C)	<b>170-0436C</b>
Chrome Airstream cover plus Stealth Kit (170-0354C)	<b>170-0390C<sup>±</sup></b>
Gloss Black Airstream cover plus Stealth Kit (170-0354C)	<b>170-0397C</b>
Tri-Spoke cover plus Stealth Kit (170-0354C)	<b>170-0392C</b>
Torker cover plus Stealth Kit (170-0354C)	<b>170-0393C</b>
Air 1 cover plus Stealth Kit (170-0354C)	<b>170-0394C</b>

### KIT ONLY — NO COVER

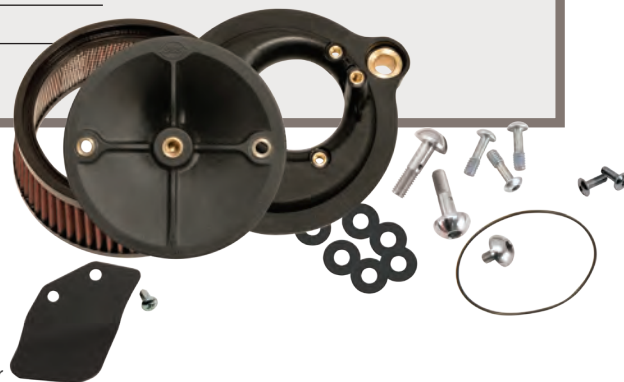
Stealth Air Cleaner Kit for Stock M8 and 64mm throttle body	<b>170-0354C</b>
Adapter for Stock (Center Bolt) M8 Air Cleaner Cover	<b>170-0352</b>

Exempt from emissions tampering regulations under CARB EO# D-355-30 for all fuel injected models

<sup>±</sup> ⚠️ WARNING: Cancer and Reproductive Harm



The S&S Stealth air cleaner backplate in this kit is made from the same high-strength advanced synthetic polymers used in high performance automotive intake manifolds and high-end handgun bodies! This material offers superior mechanical properties, thermal stability, and chemical resistance. Designed to reduce heat transfer to the intake air for more efficient induction.



# EC STEALTH AIR CLEANER KITS (FOR EUROPE)

- 2018–'20 M8 Softail® models (e9 11026G)
- 2017–'20 M8 touring models

### EC STEALTH AC KITS

2018–'20 M8 Softail® models <i>cover sold separately</i>	<b>170-0521</b>
2017–'20 M8 touring models <i>cover sold separately</i>	<b>170-0521</b>

EU Type-Approval: e9\*134/2014\*2018/295G\*11026



REPLACEMENT PARTS: SEE PAGE 46



# STEALTH AIR CLEANER COVERS (ONLY)



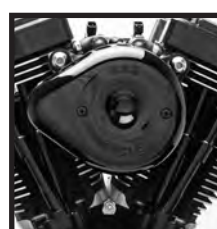
Tribute in Gloss Black



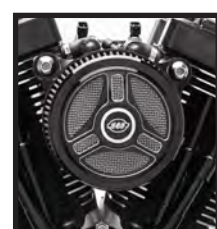
Teardrop



Carbon Fiber



Mini in Gloss Black



Tri-Spoke



Torker



Air 1



Airstream in Chrome



Airstream in Gloss Black

## STEALTH COVERS

Tribute		Teardrop		Teardrop—Slasher		Carbon Fiber	Mini	
Chrome	Gloss Black	Chrome	Gloss Black	Chrome	Gloss Black	Black	Chrome	Gloss Black
<b>170-0592</b>	<b>170-0593</b>	<b>170-0530</b>	<b>170-0531</b>	<b>170-0532</b>	<b>170-0533</b>	<b>170-0501</b>	<b>170-0367</b>	<b>170-0366</b>

Tri-Spoke	Torker	Air 1	Airstream		Displacement		
Gloss Black w/Highlights	Gloss Black w/Highlights	Gloss Black w/Highlights	Chrome	Gloss Black	111	124	143
<b>170-0210</b>	<b>170-0206</b>	<b>170-0214</b>	<b>170-0118</b>	<b>170-0396</b>	<b>170-0319</b>	<b>170-0321</b>	<b>170-0323</b>

WARNING: Cancer and Reproductive Harm

# HIGH FLOW AIR FILTER KITS

## FITMENT

- S&S Stealth Air Cleaners

## FEATURES AND BENEFITS

- Low restriction filter element comes pre-oiled for true plug and play installation
- 1" wider filtration area provides up to 37% more airflow over standard S&S filters

- Resulting band of exposed filter material imparts a high performance look

## KIT CONTENTS

- Wide filter
- Filter spacers

## HIGH FLOW AIR FILTERS

Description	Fitment	Part #
High Flow Air Filter Kit <i>(includes spacers)</i>	Stealth, 1" Taller	<b>170-0127*</b>
1" Taller Filter Only	Stealth	<b>170-0154</b>
Spacer	Classic Teardrop & Stealth, 1" Taller	<b>50-5009-S</b>

\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

# STANDARD REPLACEMENT FILTERS

## STANDARD REPLACEMENT AIR FILTERS

Fitment	Part #
Stealth	<b>170-0126</b>



170-0197

# PRE-FILTERS

## FITMENT

- S&S® Stealth Air Filters

## FEATURES AND BENEFITS

- Water resistant
- Prevents large debris from prematurely clogging filter
- Washable Nylon
- Promotes longer filter life
- Reduces the risk of water entering air intake system

## PRE-FILTERS

Application	Part #
Standard	<b>170-0193</b>
1" Tall	<b>170-0197</b>



# 124" & 128" BIG BORE KITS

## FITMENT:

- 2017–2021 touring models
- 2018–2021 Softail® models

## FEATURES AND BENEFITS:

- 107" to 124" Big Bore Kit
- 114" to 128" Big Bore Kit
- 114" & 117" CVO™ to 128" Big Bore Kit
- 4.250" bore
- Forged pistons
- 11.1 compression ratio
- Wrinkle black or black granite finish
- Available with or without highlighted fins
- Bolt-on kit — *No machining required*
- Includes head, base, & exhaust gaskets and hardware

## SPECS FOR 124" & 128" BIG BORE KITS

Displacement	Bore	Stroke	Piston Type	Compression Ratio
124"	4.250	4.375	Forged	11.1
128"	4.250	4.5	Forged	11.1

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.

## 124" & 128" BIG BORE KITS FOR 2017–2021 TOURING MODELS & 2018–2021 SOFTAIL® MODELS

Displacement	Finish	Part #
124"	Wrinkle Black with Non-Highlighted Fins	<b>910-0681</b>
	Wrinkle Black with Highlighted Fins	<b>910-0625</b>
128"	Wrinkle Black with Non-Highlighted Fins	<b>910-0685</b>
	Wrinkle Black with Highlighted Fins	<b>910-0684</b>
	Black Granite with Highlighted Fins	<b>910-0733</b>

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# 131" CYLINDER & PISTON KIT

- Huge displacement increase means huge power increase
- Works with stock crankcases, cylinder heads, oil pump, and cam plate can be reused, saving hundreds of dollars
- Original engine serial numbers are retained
- Powder coat finish match factory finish, giving bike a "sleeper" advantage
- .045" MLS (multi-layered steel) head gaskets
- Retains stock engine height
- Includes 131" Cam Cover Badge
- Must be used with our stroker flywheels to achieve 131" displacement (see page 31)

## CYLINDER & PISTON KITS FOR 2017–2021 TOURING MODELS & 2018–2021 SOFTAIL® MODELS

Displacement	Finish	Part #	
131"	Wrinkle Black with Non-Highlighted Fins	<b>910-0763</b>	
	Wrinkle Black with Highlighted Fins	<b>910-0762</b>	
	Black Granite with Highlighted Fins	<b>910-0764</b>	

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## NOTE

See our 131" flywheels on page 31



## BIG BORE CYLINDERS

### FITMENT:

- 2017–2021 touring models
- 2018–2021 Softail® models

### FEATURES AND BENEFITS:

- 4.250" Bore
- Wrinkle black or black granite finish
- Available with or without highlighted fins

### CYLINDER SETS

Displacement	Finish	Part #
124"	Wrinkle Black with Non-Highlighted Fins	<b>910-0683</b>
128"	Wrinkle Black with Highlighted Fins	<b>910-0682</b>
131"	Black Granite with Highlighted Fins	<b>910-0739</b>

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# BIG BORE PISTON KITS

- Piston kits include set of pistons, rings, wristpins, and clips



## 4.250" BORE PISTON KIT FOR M8 MODELS

Displacement	Deck Height	Stroke	Standard	+.010
124" 4.3cc Dished	1.143"	4.375"	<b>920-0135</b>	<b>920-0141</b>
128" 7.3cc Dished	1.0805"	4.500"	<b>920-0140</b>	<b>920-0142</b>
131" 10.3cc Dished	1.0805"	4.625"	<b>920-0149</b>	<b>920-0148</b>

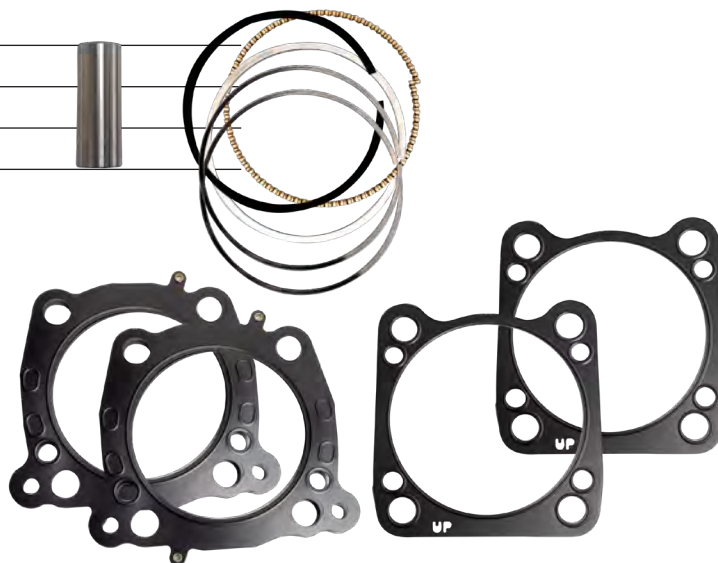
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# REPLACEMENT PARTS FOR PISTONS

Piston Ring Set	2 Pack	<b>940-0060</b>	
Piston +.010" Ring Set	2 Pack	<b>940-0062</b>	
Wristpin Keeper		<b>94-9278-S</b>	
Wristpin, .927" x 2.500"		<b>940-0037</b>	

## GASKET KIT

Description	Thickness	Qty	Part #
Head gasket, 4.250" Bore, Stock bolt pattern	.030"	2 Pack	<b>930-0140</b>
Base gasket, Stock to 4.250" Bore, Stock bolt pattern	.014"	2 Pack	<b>930-0139</b>
Gasket Kit, includes Head, Base, & Exhaust, 4.25" Bore			<b>900-0955</b>
Plug			<b>500-0835</b>
Cylinder Dowel Pin		4 Pack	<b>500-0849</b>
<b>HARDWARE KIT</b>			<b>910-0677</b>





# 124" POWER PACKS



## 107" TO 124" BIG BORE KIT:

- Available with or without fin highlighting
- Bolt-on kit — *No case machining required*
- 4.250" bore
- Forged pistons
- 11.1 Compression ratio

## OIL PUMP/CAM PLATE:

- Precision machined from billet aluminum
- Passage plugs removable for servicing
- Independent scavenge sections for flywheel cavity and cam chest
- Debris screens in both scavenge pickups
- Magnet in cam chest to help to stop debris from entering oil pump
- 44% flow increase on supply side & 58% flow increase on scavenge side
- Pressure relief valve is adjustable with unit installed in engine
- Kits now include updated oil pump with groove for optional OEM oil seal

## PUSHRODS:

- Quickee pushrods
- Chrome or gloss black pushrod tubes available

## TAPPETS:

- Hand assembled to exacting tolerances
- Reduced valve train noise from start up to shut down
- Close tolerances for low leak down rates
- Fast pump up and superior high RPM performance

## TAPPET CUFFS:

- Hard anodized black coating
- Billet aluminum construction
- Improve tappet stability in high lift & high rpm situations

## CAM:

- S&S 550 cam—*Designed for big bore applications*
- Available in both gear drive & chain drive variations
- Gear drive kits provide improved cam timing accuracy & eliminate stock chain tensioner
- Gear drive kits include outer drive gears

## VALVE SPRINGS:

- Works well with cams up to .605 lift
- High performance conical single wire spring
- Includes top collars, keepers, & valve seals/bottom collars

## CAM CHAIN TENSIONER

- Comes with Chain Drive Kits
- Precision Machined from Billet Aluminum
- Thicker shoe for longer wear
- Direct chain oiling
- Larger piston for more consistent pressure
- Tighter tolerances improves stability

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.

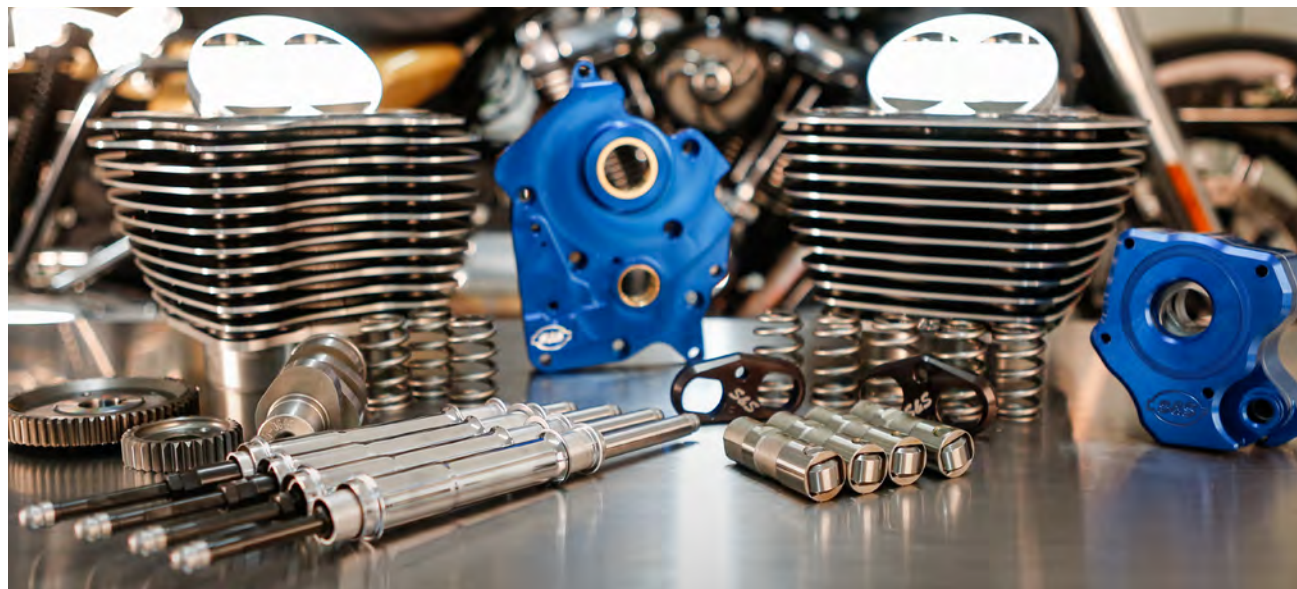
## 124" POWER PACKAGE KIT FOR 2017 TOURING MODELS & ALL 2018–2021 HD® MODELS WITH 107" ENGINE

Cooling System	Finish	Drive	Pushrod Tubes	Part #
Oil	Wrinkle Black with Highlighted Fins	Chain	Chrome	<b>310-1052B</b>
Oil	Wrinkle Black with Highlighted Fins	Gear	Chrome	<b>310-1053A</b>
Oil	Wrinkle Black with Highlighted Fins	Chain	Black	<b>310-1056B</b>
Oil	Wrinkle Black with Highlighted Fins	Gear	Black	<b>310-1058A</b>
Oil	Wrinkle Black with Non-Highlighted Fins	Chain	Black	<b>310-1057B</b>
Oil	Wrinkle Black with Non-Highlighted Fins	Gear	Black	<b>310-1059A</b>
Water	Wrinkle Black with Highlighted Fins	Chain	Chrome	<b>310-1050B</b>
Water	Wrinkle Black with Highlighted Fins	Gear	Chrome	<b>310-1051A</b>
Water	Wrinkle Black with Highlighted Fins	Chain	Black	<b>310-1054A</b>
Water	Wrinkle Black with Highlighted Fins	Gear	Black	<b>310-1055A</b>

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# 128" POWER PACKS FOR 2017–2021 M8 MODELS W/4.500" STROKE



## 114" TO 128" BIG BORE KIT &

### 114" & 117" CVO TO 128" BIG BORE KIT:

- Wrinkle black or black granite finish
- Available with or without fin highlighting for wrinkle black
- Bolt-on kit — No case machining required
- 4.250" Bore
- Forged pistons
- 11.1:1 Compression ratio

### OIL PUMP/CAM PLATE:

- Precision machined from billet aluminum
- Passage plugs removable for servicing
- Independent scavenge sections for flywheel cavity & cam chest
- Debris screens in both scavenge pickups
- Magnet in cam chest to help to stop debris from entering oil pump
- Increased flow capacity on both feed & scavenge side
- Pressure relief valve is adjustable with unit installed in engine
- Kits now include updated oil pump with groove for optional OEM oil seal

### PUSHRODS:

- Quickee pushrods with chrome covers

### TAPPETS:

- Hand assembled to exacting tolerances
- Reduced valve train noise from start up to shut down
- Close tolerances for low leak down rates
- Fast pump up and superior high RPM performance

### TAPPET CUFFS:

- Hard anodized black coating
- Billet aluminum construction
- Stronger than stock material eliminates distortion
- Improve tappet stability in high lift & high rpm situations

### CAM:

- S&S 550 cam—Designed for big bore applications
- Available in both gear drive & chain drive variations
- Gear drive kits provide improved cam timing accuracy & eliminate stock chain tensioner
- Gear drive kits include outer drive gears

### VALVE SPRINGS:

- Work well with cams up to .605 Lift
- High performance conical single wire spring
- Includes top collars, keepers, & valve seals/bottom collars

### CAM CHAIN TENSIONER

- Comes with Chain Drive Kits
- Precision Machined from Billet Aluminum
- Thicker shoe for longer wear
- Direct chain oiling
- Larger piston for more consistent pressure
- Tighter tolerances improves stability

## 128" POWER PACKAGE KIT FOR 2017–2021 M8 MODELS WITH 4.500" STROKE

Cooling System	Finish	Drive	Part #
Water	Wrinkle Black with Highlighted Fins	Chain	<b>310-1101B</b>
Water	Wrinkle Black with Highlighted Fins	Gear	<b>310-1102A</b>
Oil	Wrinkle Black with Highlighted Fins	Chain	<b>310-1103B</b>
Oil	Wrinkle Black with Highlighted Fins	Gear	<b>310-1104A</b>
Oil	Wrinkle Black with Non-Highlighted Fins	Chain	<b>310-1105B</b>
Oil	Wrinkle Black with Non-Highlighted Fins	Gear	<b>310-1106A</b>
Water	Black Granite with Highlighted Fins	Chain	<b>310-1107B</b>
Water	Black Granite with Highlighted Fins	Gear	<b>310-1108A</b>
Oil	Black Granite with Highlighted Fins	Chain	<b>310-1109B</b>
Oil	Black Granite with Highlighted Fins	Gear	<b>310-1110A</b>

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.



# 3 PIECE FLYWHEEL ASSEMBLIES

The crankshaft is the heart of any performance engine and S&S Cycle has been perfecting the art for over six decades. Stronger, more durable, and trued to a spec others can only dream of, our new crankshaft assemblies for the Milwaukee-Eight® platform are the best of the best to build your high performance engine around.

## FEATURES AND BENEFITS:

- Available in 4 $\frac{3}{8}$ ", 4 $\frac{1}{2}$ " & 4 $\frac{5}{8}$ " Stroke
- Available with or without Balancer Gear
- Heat Treated 4140 Material is harder & more than twice as strong as stock
- Stronger assembly eliminates need to weld crankpin
- S&S High Strength Connecting Rods are designed with Finite Element Analysis to eliminate weak spots and handle more power!
- Available with either full width or tapered wristpin connecting rods
- Perfect for Gear Drive Cams
- Consistent balance & precision machining
- Capable of higher RPM – *More available power!*



Tapered connecting rods



Full Width connecting rods



REPLACEMENT PARTS: SEE PAGE 62

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.

### FLYWHEEL ASSEMBLIES FOR 2017–2021 M8 MODELS

Displacement	Stroke	Compression Ratio	Balanced to Total Piston Weight (gms)	Rod Wristpin End Style	Balancer Gear	Part #
<b>107"</b> <i>(with stock pistons)</i>	4 $\frac{3}{8}$ "	9.9	1060	Tapered	Yes	<b>320-0601</b> <sup>†</sup>
					No	<b>320-0616</b> <sup>†</sup>
<b>124"</b> <i>(with S&amp;S® cylinders &amp; pistons)</i>	4 $\frac{3}{8}$ "	10.8	1060	Tapered	Yes	<b>320-0601</b> <sup>†</sup>
					No	<b>320-0616</b> <sup>†</sup>
<b>124"</b> <i>(with S&amp;S cylinders &amp; pistons)</i>	4 $\frac{3}{8}$ "	10.8	1213	Full	Yes	<b>320-0604</b> <sup>††</sup>
					No	<b>320-0619</b> <sup>††</sup>
<b>114"</b> <i>(with stock pistons)</i>	4 $\frac{1}{2}$ "	10.3	1060	Tapered	Yes	<b>320-0598</b> <sup>†</sup>
					No	<b>320-0615</b> <sup>†</sup>
<b>128"</b> <i>(with S&amp;S cylinders &amp; pistons)</i>	4 $\frac{1}{2}$ "	10.8	1060	Tapered	Yes	<b>320-0598</b> <sup>†</sup>
					No	<b>320-0615</b> <sup>†</sup>
<b>128"</b> <i>(with S&amp;S cylinders &amp; pistons)</i>	4 $\frac{1}{2}$ "	10.8	1213	Full	Yes	<b>320-0603</b> <sup>††</sup>
					No	<b>320-0618</b> <sup>††</sup>
<b>117"</b> <i>(with stock 114" pistons)</i>	4 $\frac{5}{8}$ "	10.6	1060	Tapered	Yes	<b>320-0602</b> <sup>††</sup>
					No	<b>320-0617</b> <sup>††</sup>
<b>131"</b> <i>(with S&amp;S cylinders &amp; pistons)</i>	4 $\frac{5}{8}$ "	10.8	1060	Tapered	Yes	<b>320-0602</b> <sup>††</sup>
					No	<b>320-0617</b> <sup>††</sup>
<b>131"</b> <i>(with S&amp;S cylinders &amp; pistons)</i>	4 $\frac{5}{8}$ "	10.8	1213	Full	Yes	<b>320-0605</b> <sup>††</sup>
					No	<b>320-0620</b> <sup>††</sup>

<sup>†</sup>50-State Replacement Part

<sup>††</sup>DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

# TOP END GUARDIAN KIT

**NEW  
2021**



The M8 engine platform is capable of serious power, but it also has a few weak spots. The new S&S Cycle Guardian Kit is designed to update the top end to better support big bore and cam mods. If you're doing a 124/128/131 conversion this kit is a must have!

- *Everything you need* to update top end in one convenient kit!
- *Rocker arm shafts* are 66% stronger than stock
- *Rocker arm stud kit* extends the life of your cylinder heads by preventing damage to the rocker arm towers
- *Head bolt kit* is made of 8640 heat treated steel with 200,000 psi Ultimate Tensile strength cold rolled threads & formed washer make these head bolts durable & reusable
- *Roller rocker arms* help relieve additional stress caused by high lift camshafts running at high rpm!

**TOP END GUARDIAN KIT**

**900-1092**

**\$829.95**

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# 475 PERFORMANCE CAM KIT WITH TUNER

First of its kind, emissions legal performance cam for M8 touring models. True 100+ HP at the wheel. Kit includes 475 cam and Dynojet PV-3 tuner in gear or chain drive.

## FEATURES AND BENEFITS:

- Bolt-in, legal performance
- Choose between chain or gear driven cam kits
- No need for expensive dyno tuning
- Display vehicle data channels in real-time
- Weather-resistant for use in all conditions
- High contrast display, viewable in direct sunlight



## 475 PERFORMANCE CAM KIT FOR M8 MODELS

475 Chain Drive	<b>330-0725</b>	\$549.95
475 Gear Drive	<b>330-0726</b>	\$724.95

Exempt from emissions tampering regulations under CARB EO# D-355-32



Milwaukee-Eight®

2007-2017 Twin Cam  
96™/103™/110™1999-2006  
Twin Cam 88®1986-2019  
Sportster® & Buell®2014-2019 Street® &  
Street Rod™

Indian® Models

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Appendix

# CAMSHAFT SPECS

**465:** Bolt-in cam designed to make best power from 1500–4500 RPM. Excellent low and mid-range torque make this a great choice for two-up riding and touring where low end grunt is the priority. Works great with stock bore, heads and throttle body and with compression ratios up to around 10:1.

**475:** Bolt-in cam providing best power from 2200–5200 RPM in engines with displacements from 107–135 cubic inches. Compatible with compression ratios up to 11:1. Works great with stock heads and throttle body for mid range power but with the ability to stretch the power higher into the RPM band with more mods.

**540:** Designed to add even more stump pulling torque to your big bore M8, for those that keep the revs below 6000 RPM.

**550:** High lift cams for maximizing peak torque and horsepower. Designed to make top end power in combination with our Big Bore cylinder and piston kits. Excellent power from 3000 RPM to redline. Requires performance valve springs and adjustable pushrods. Suitable for compression ratios between 10:1 and 12:1.

**590:** Designed as an all out Horsepower Cam for 124 and larger engines. Big lift lets your big mill breathe high into the RPM range! Requires performance valve springs and adjustable pushrods.



## S&S® CAMSHAFT SPECIFICATIONS

Cam Name	Cylinder	Valve Timing		Valve Duration		Valve Lift		Lobe Center Line		Valve Lift @ TDC	
		Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust	Intake	Exhaust
		Open BTDC/ Close ABDC	Open BBDC/ Close ATDC								
350G Stock Grind Gear Drive	Both	-7.0/1.0	33.0/-14.0	174.0	199.0	.350	.374	94.0	113.5	.057	.048
465 Performance	Front	2.6/14.6	30.1/8.8	197.2	218.9	.462	.462	96.0	100.6	.087	.109
	Rear	2.8/14.4	33.1/5.8	197.2	218.9	.462	.462	95.8	103.6	.088	.098
475 HP	Front	6.2/27.2	55.5/28.5	213.5	263.9	.475	.475	100.5	103.5	.107	.208
	Rear	2.2/31.2	52.5/20.2	213.5	252.5	.475	.475	104.5	106.0	.093	.170
540 Big Bore Torque	Front	17.7/30.6	21.2/33.9	228.3	235.1	0.540	0.540	96.4	83.6	0.175	0.262
	Rear	14.9/28.7	37.7/26.9	223.6	244.6	0.540	0.540	96.9	95.4	0.161	0.216
550 Big Bore	Front	9.4/29.4	62.5/30.5	218.9	273.1	.550	.550	100.0	106.0	.127	.232
	Rear	3.1/31.1	59.4/38.4	214.2	277.8	.550	.550	104.0	100.5	.099	.264
590 Big Bore Max HP	Front	15.6/43.7	64.8/21.2	239.4	266.1	0.59	0.59	104.1	111.7	0.165	0.186
	Rear	20.2/53.6	62.7/15.7	253.9	258.4	0.59	0.59	106.7	113.5	0.186	0.158

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# CAM KITS

## FITMENT:

- 2017–2021 touring and 2018–2021 Softail® models

## FEATURES & BENEFITS:

- 590 Cam is designed as an all out Horsepower Cam for 124 & larger engines —*Big lift lets your big mill breathe high into the RPM range!*
- 540 Cam was designed to add even more stump pulling torque to your big bore M8, for those that keep the revs below 6000 rpm
- 465 Cam is designed for touring applications, focusing power in lower RPM range and substantial increase in torque
- 475 Cam bumps HP to over a 100 and makes bigger power towards top end of RPM range

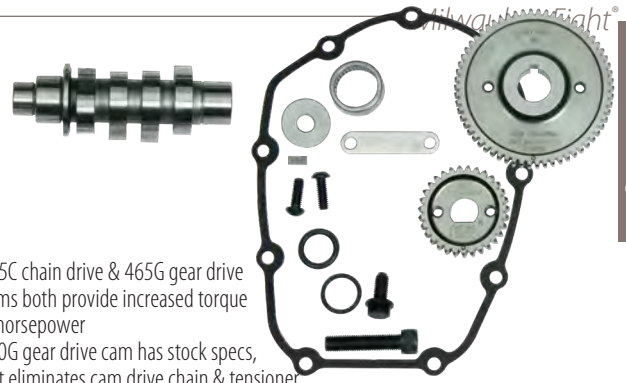
### CHAIN DRIVE CAMSHAFTS FOR 2017–2021 HD® MODELS WITH M8 ENGINE

Description	Part #
465C	<b>330-0620</b>
475C	<b>330-0641</b>
540C	<b>330-0713</b>
550C	<b>330-0643</b>
590C	<b>330-0730</b>

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## REPLACEMENT PARTS

Description	Part #
Cam Cover Gasket	<b>310-0911</b>
Pinion Gear	<b>330-0622</b>
Undersized Pinion Gear	<b>330-0626</b>
Oversized Pinion Gear	<b>330-0627</b>
Cam Gear Drive	<b>330-0621</b>



- 465C chain drive & 465G gear drive cams both provide increased torque & horsepower
- 350G gear drive cam has stock specs, but eliminates cam drive chain & tensioner
- Cam kits include all required bearings, o-rings, and hardware
- Gear drive cams provide improved valve timing accuracy
- Made in the USA

### GEAR DRIVE CAMSHAFTS FOR 2017–2021 HD® MODELS WITH M8 ENGINE

Description	Part #
350G - Stock	<b>330-0625*</b>
465G	<b>330-0624</b>
475G	<b>330-0645</b>
540G	<b>330-0715</b>
550G	<b>330-0647</b>
590G	<b>330-0732</b>

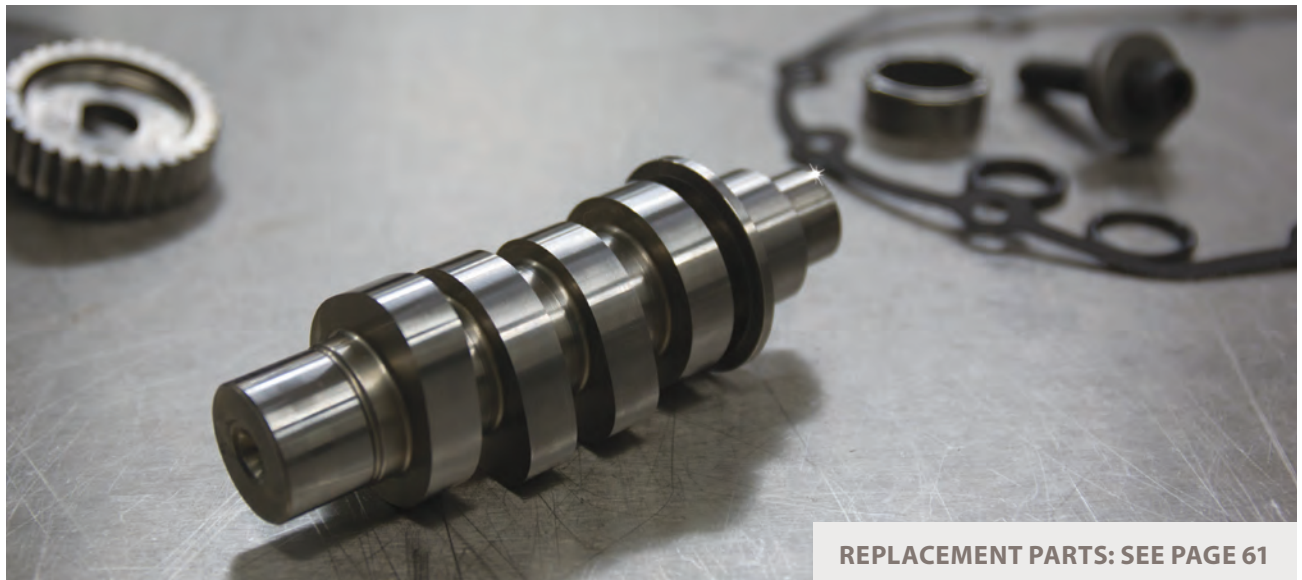
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\*Qualified Manufacturer Declared 49-State Emissions Compliant Part on MY 2017-2021 touring models

S&S Camshaft installation kits for M8 models include the essentials for performance cam installations: a high quality inner needle bearing, cam cover gasket, o-rings and gear drive specific hardware on gear drive kits are bundled with step by step instructions to smooth out your bumpstick install.

### CAMSHAFT INSTALLATION KITS FOR ALL 2017–2021 M8 MODELS

Description	Part #
Chain Drive Installation Kit	<b>330-0619</b>
Gear Drive Installation Kit	<b>330-0623</b>



REPLACEMENT PARTS: SEE PAGE 61



# CAM PLATE & OIL PUMP KITS

## FITMENT

- 2017–2021 M8 models

## CAM PLATE

- Precision machined from billet aluminum
- Passage plugs removable for servicing
- Bronze bushings for better lubrication & improved wear characteristics
- Made in USA

## OIL PUMPS

- Precision machined from billet aluminum
- Independent scavenge sections for flywheel cavity and cam chest
- Debris screens in both scavenge pickups
- Magnet in cam chest to help prevent debris from entering pump
- Increased flow capacity on both feed and scavenge side
- Pressure relief valve can be adjusted with unit in engine
- Made in USA

## KITS

- Buy together and save \$\$

### CAM PLATE & OIL PUMP KITS FOR M8 MODELS

Description	Part #
Cam Plate & Oil Pump/Oil-Cooled	<b>310-0998B</b>
Cam Plate & Oil Pump/Water-Cooled	<b>310-0997B</b>
<b>CAM PLATE ONLY</b>	<b>310-0939A</b>

### OIL PUMP ONLY

Description	Part #
Oil-Cooled	<b>310-0959A</b>
Water-Cooled	<b>310-0947A</b>



**44% FLOW INCREASE ON SUPPLY SIDE &  
58% FLOW INCREASE ON SCAVENGE**

**REPLACEMENT PARTS:  
SEE PAGE 59 & PAGE 60**



# CAM CHAIN TENSIONER

## FITMENT

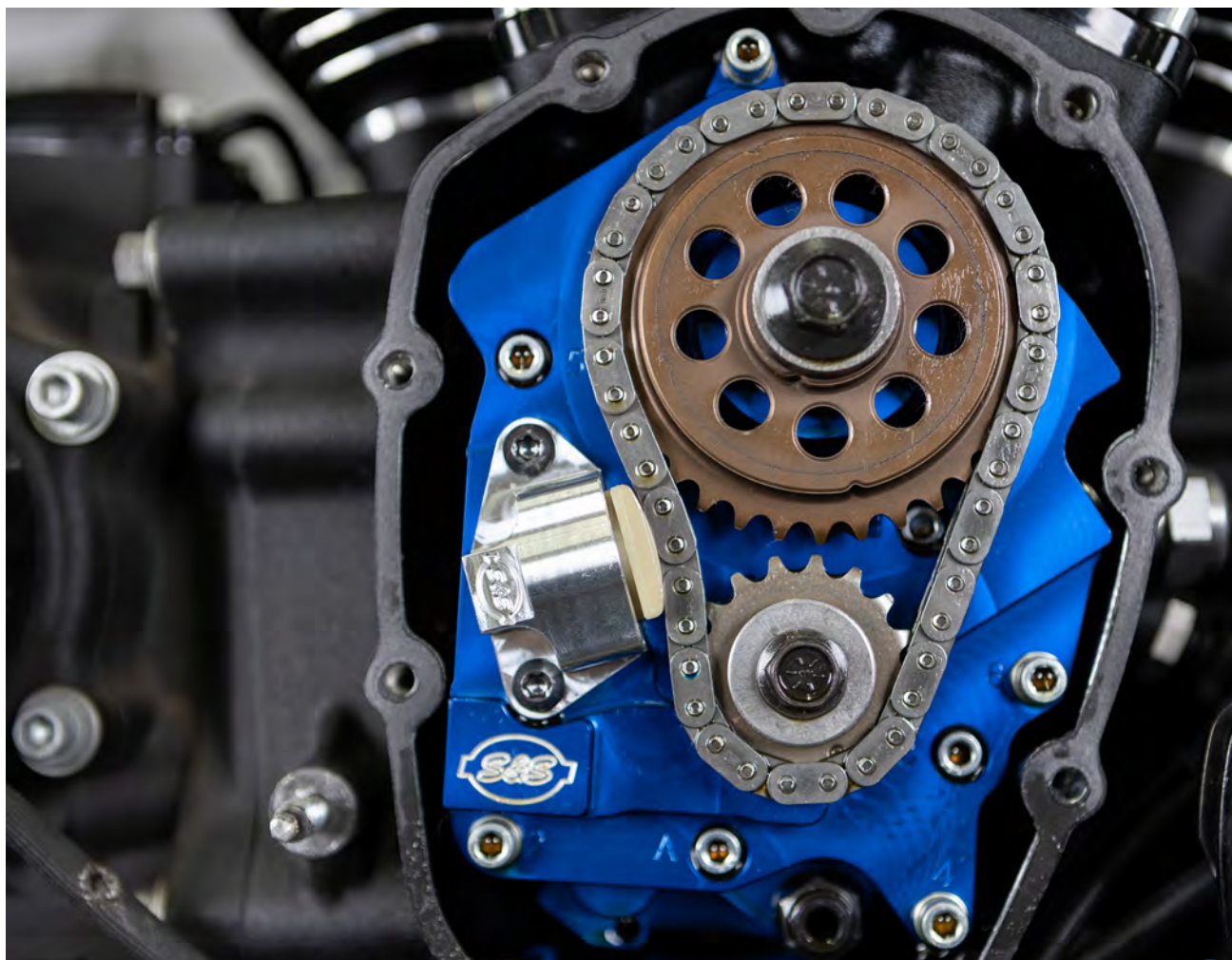
- 2017–2021 M8 models

## FEATURES & BENEFITS:

- Precision Machined from Billet Aluminum
- Thicker shoe for longer wear
- Direct chain oiling
- Larger piston for more consistent pressure
- Tighter tolerances improves stability



CAM CHAIN TENSIONER FOR M8 MODELS | 330-0737



Milwaukee-Eight®

2007–2017 Twin Cam  
96™/103™/110™1999–2006  
Twin Cam 88®1986–2019  
Sportster® & Buell®2014–2019 Street® &  
Street Rod™

Indian® Models

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Appendix

# CAM CHEST KITS

## **FITMENT**

- 2017–2021 Harley-Davidson® touring models
- 2018–2021 Harley-Davidson Softail® models

## **OIL PUMP/CAM PLATE:**

- Precision machined from billet aluminum
- Passage plugs removable for servicing
- Independent scavenge sections for flywheel cavity and cam chest
- Debris screens in both scavenge pickups
- Magnet in cam chest to help to stop debris from entering oil pump
- 44% flow increase on supply side and 58% flow increase on scavenge
- Pressure relief valve is adjustable with unit installed in engine
- Kits now include updated oil pump with groove for optional OEM oil seal

## **PUSHRODS:**

- Quicke Pushrods
- Chrome or Gloss Black pushrod tubes available

## **TAPPETS:**

- Hand assembled to exacting tolerances
- Reduced valve train noise from start up to shut down
- Close tolerances for low leak down rates
- Fast pump up and superior high RPM performance

## **TAPPET CUFFS:**

- Hard anodized black coating
- Billet aluminum construction
- Improve tappet stability in high lift and high rpm situations

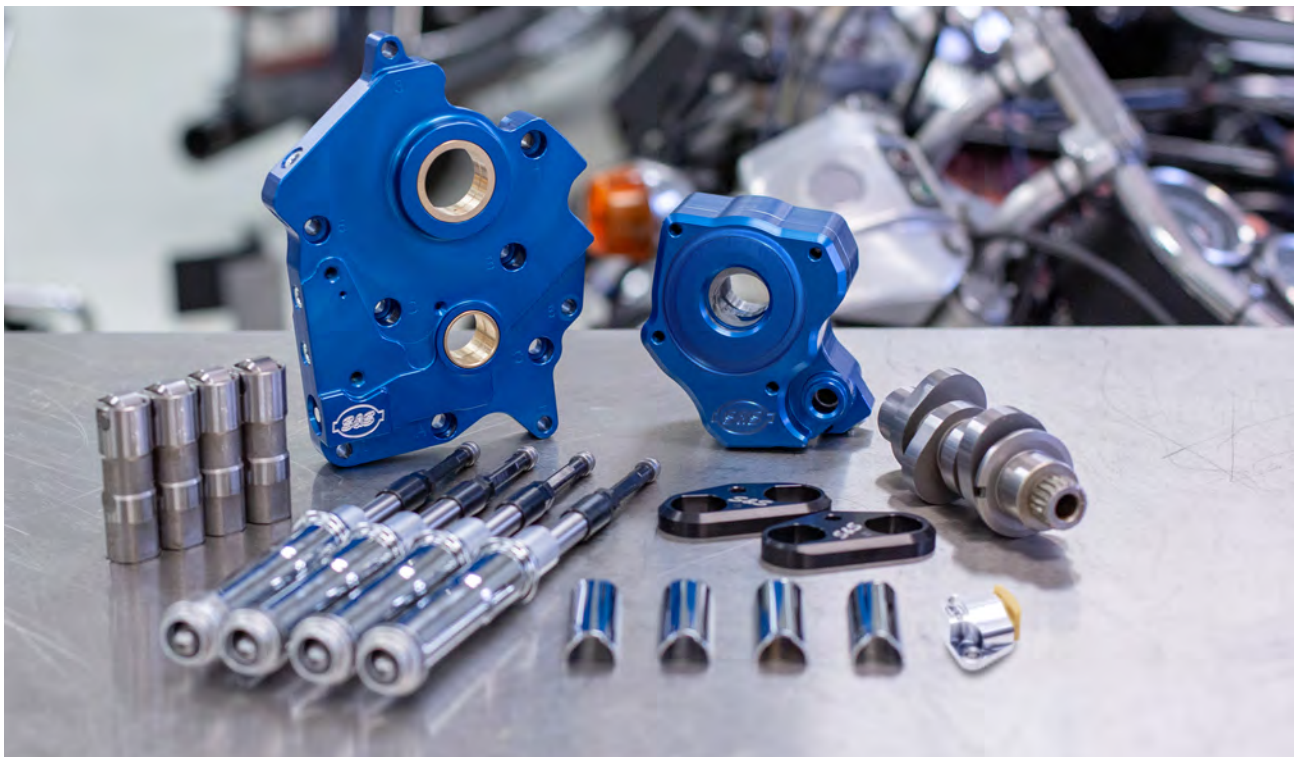
## **CAM:**

- S&S 465, 475, 540, or 550 cam
- 465 is a torque cam—perfect for touring applications
- 475 is a bolt-in 100hp cam!
- 540 is designed to add even more stump pulling torque to your big bore M8 for those that keep the revs below 6000 rpm. Requires the addition of valve springs *(included in kit)*
- 550 is designed for use with large displacement engines. Requires the addition of valve springs *(included in kit)*
- Available in both gear drive and chain drive variations
- Gear drive kits provide improved cam timing accuracy and eliminate the stock cam chain tensioner

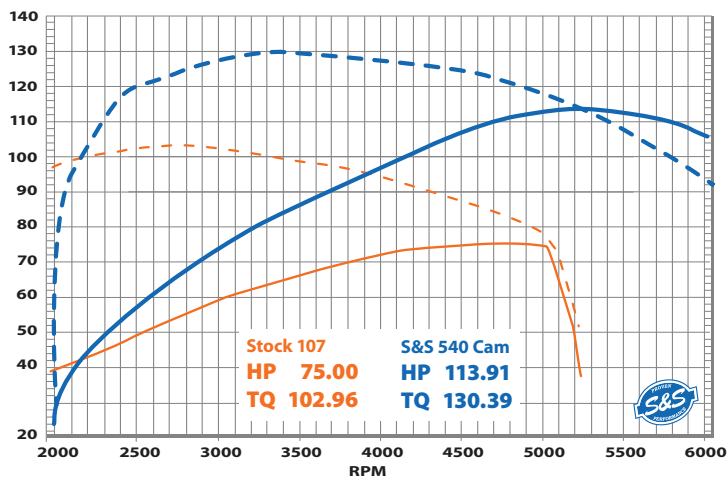
## **CAM CHAIN TENSIONER**

- Comes with Chain Drive Kits
- Precision Machined from Billet Aluminum
- Thicker shoe for longer wear
- Direct chain oiling
- Larger piston for more consistent pressure
- Tighter tolerances improves stability

**INCLUDES ALL GASKETS, BEARINGS, AND HARDWARE REQUIRED FOR INSTALLATION • MADE IN USA**







**STOCK CAM vs 540 CAM**

on a 2017 HD® Limited — 124 Big Bore kit, 5.5 g/s injectors, 2:1 Sidewinder, Stealth +1 Air Cleaner

**CAM CHEST KITS FOR 2017-2021 TOURING MODELS & 2018-2021 SOFTTAIL® MODELS**

Cooling system	Cam	Pushrods	Part #
Oil Cooled	Chain Drive 550C	Chrome	<b>310-1082B</b>
	Chain Drive 540C	Chrome	<b>310-1118A</b>
	Chain Drive 475C	Chrome	<b>310-1004B</b>
	Chain Drive 465C	Chrome	<b>310-1003B</b>
	Gear Drive 550G	Chrome	<b>310-1083A</b>
	Gear Drive 540G	Chrome	<b>310-1119</b>
	Gear Drive 475G	Chrome	<b>310-1006A</b>
	Gear Drive 465G	Chrome	<b>310-1005A</b>
	Chain Drive 475C	Black	<b>310-1012B</b>
	Chain Drive 465C	Black	<b>310-1011B</b>
	Gear Drive 475G	Black	<b>310-1014A</b>
Gear Drive 465G	Black	<b>310-1013A</b>	
Water Cooled	Chain Drive 550C	Chrome	<b>310-1080B</b>
	Chain Drive 540C	Chrome	<b>310-1116A</b>
	Chain Drive 475C	Chrome	<b>310-1000B</b>
	Chain Drive 465C	Chrome	<b>310-0999B</b>
	Gear Drive 550G	Chrome	<b>310-1081A</b>
	Gear Drive 540G	Chrome	<b>310-1117</b>
	Gear Drive 475G	Chrome	<b>310-1002A</b>
	Gear Drive 465G	Chrome	<b>310-1001A</b>
	Chain Drive 475C	Black	<b>310-1008B</b>
	Chain Drive 465C	Black	<b>310-1007B</b>
	Gear Drive 475G	Black	<b>310-1010A</b>
Gear Drive 465G	Black	<b>310-1009A</b>	

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# TAPPET CUFFS

Factory tappet guides are constructed of plastic and are at risk for allowing the tappets to twist under heavy stress. S&S Tappet Cuffs capture the tappets without impacting vertical motion and keep them perfectly aligned, even in high stress, high RPM situations

## FITMENT

- 2017–2021 touring models
- 2018–2021 HD Softail® models

## FEATURES AND BENEFITS

- Hard anodized black coating
- Billet aluminum construction
- Stronger material eliminates distortion
- Improve tappet stability in high lift and high rpm situations
- An easy upgrade when changing tappets or doing a cam change



## TAPPET CUFFS

Fitment	Part #
2017–2021 HD® touring models 2018–2021 HD Softail® models	<b>330-0655</b>

# PRECISION TAPPETS

High performance tappets are a cornerstone of the S&S line up and we are always looking to improve our products. After months of research and countless hours of testing we are excited to reveal the latest in performance tappets. The S&S Cycle Precision Tappets replace both our standard as well as premium tappets. Each Precision Tappet is hand assembled to exacting tolerances and designed for quiet operation and rapid pump up and all are made in the USA.

## FITMENT

- 2017–2021 big twins with M8 engine

## FEATURES

- Reduced valve train noise from start up to shut down
- Close tolerances for low leak down rates
- Fast pump up and superior high rpm performance

## PRECISION TAPPETS

Set of 4 tappets	<b>330-0718</b>
------------------	-----------------





# QUICKEE ADJUSTABLE PUSHRODS

## FITMENT

- 2017–2021 big twins with M8 engine

## FEATURES AND BENEFITS

- Adjustable to accommodate all tappets and cam base circle diameters and engine heights
- Easy to install — removal of rocker arms not needed
- No threads on wrench flats
- Also available in gloss black

## KIT CONTENTS

- Pushrods, gloss black or chrome pushrod covers, o-rings, and cover keepers

GLOSS BLACK ALSO AVAILABLE



## QUICKEE ADJUSTABLE PUSHRODS

Description	Part #
<b>Gloss Black Pushrod Kit</b> <i>(includes black pushrod covers, o-rings &amp; cover keepers)</i>	<b>930-0137</b>
<b>Chrome Pushrod Kit</b> <i>(includes chrome pushrod covers, o-rings, &amp; cover keepers)</i>	<b>930-0123<sup>±</sup></b>
<b>Pushrods Only</b>	<b>93-5122</b> 



## PUSHROD REPLACEMENT PARTS FOR 2017–2021 BIG TWINS WITH THE M8 ENGINE

Description	Part #
<b>Pushrod Cover Kit</b> <i>(includes top &amp; bottom covers, cover cap, cover spring, spring washer, &amp; o-rings for four pushrods)</i>	Gloss Black <b>930-0124</b>
	Chrome <b>106-1340</b>
<b>Top Cover</b>	<b>93-4016</b>
<b>Bottom Cover</b>	<b>93-4015</b>
<b>Cover Cap</b>	<b>93-4017</b>
<b>Cover Spring</b>	<b>93-4018</b>
<b>Cover Cap Washer</b>	<b>50-7131</b>
<b>Pushrod O-ring Kit</b> <i>(includes top, middle, &amp; bottom o-rings for four pushrods)</i>	<b>93-4022</b>
<b>Top O-ring</b>	<b>50-8039</b>
<b>Middle O-ring</b>	<b>50-8038</b>
<b>Bottom O-ring</b>	<b>50-8037</b>

 WARNING: Cancer and Reproductive Harm

## NOTE

S&S quickee pushrods require S&S aftermarket tubes.

## PUSHROD COVER KEEPER SETS

Pushrod Cover Keeper Kit (2.200")	Gloss Black	<b>930-0138</b>
	Chrome	<b>930-0129</b>



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"1999–2006  
Twin Cam 88®1986–2019  
Sportster® & Buell®2014–2019 Street® &  
Street Rod™

Indian® Models

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Appendix

# ROCKER ARM SHAFT SET

**NEW  
2021**



- M8 Rocker Arm Shafts are a direct replacement for OEM (HD® part #17300059B)
- Improved durability
- Made from bearing quality steel, precision centerless ground for perfect fit!
- S&S Shafts are 66% stronger, preventing damage from radical cam profiles



**ROCKER ARM SHAFT SET** | **900-1090** | \$149.95

## NOTE

S&S recommends installing Rocker Stud kit 900-1013. See page 43

# FORGED ROLLER ROCKER ARMS

Big lift cams can open up the high rpm potential of the M8 powerplant, but they can also cause their own issues due to the extra stresses and stock valve train geometry. Excessive valve thrust and valve train wear inspired S&S engineers to design stronger, more durable components that will help you get the most out of your M8. S&S Forged Roller Rocker arms for M8 models are stronger, more durable and easier on the rest of your valve train, and are essential for increasing the longevity of your valvetrain components on cams with .540" or greater lift!

### FEATURES & BENEFITS:

- Forged from 8620 steel for greater strength
- Designed using Finite Element Analysis (FEA)
- Rollers eliminate thrusting on valves for decreased wear on the valve train
- Rocker geometry is better suited to high lift cams
- Larger surface area on the thrust surfaces reduces wear on the heads
- Oil is sprayed directly on the valve springs, reducing potential for breaking a valve due to over-heating (*stock rockers tend to oil the rocker boxes, not the valves*)
- Compatible with stock or S&S CNC heads
- 1.640 Ratio
- Capable of .650" max Valve Lift
- Serviceable and rebuildable for long term durability
- A must have for cams with .540" or greater lift!

### FORGED ROLLER ROCKER ARMS

S&S Forged Roller Rocker Arms for M8 Models	<b>900-1084</b>	
Rebuild Kit	<b>900-1087</b>	



All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.



# ROCKER ARM STUD KIT

## FEATURES AND BENEFITS

- Extend the life of your cylinder heads
- Prevent damage to rocker arm towers
- Install studs and safely re-torque nuts
- Black oxide finish
- 12 pt nuts

**ROCKER ARM STUD KIT** | **900-1013**



# VALVE SPRINGS

## FEATURES AND BENEFITS

- Works with cams up to .605" lift
- High performance conical single wire spring
- Kit includes: springs, top collars, keepers, valve seal/bottom collar

Lift	Installed Height	Seat Force	Force @ Max Lift
.605"	1.535"	68 lb.	264 lb.

## VALVE SPRING KIT

Description	Part #
Valve Spring Kit for M8 2017–2021 Models	<b>900-0958</b>



## REPLACEMENT PARTS FOR VALVE SPRING KITS

Description	Part #
Valve Keeper	<b>900-0956</b>
Top Collar	<b>900-0952</b>
Valve Stem Oil Seal, Hat Style, 6mm, M8 models	<i>8 pack</i> <b>900-0959</b>

# HEAD BOLTS

## FEATURES AND BENEFITS

- 14% increase in strength over stock
- Heat treated 8640 steel
- 200,000 psi ultimate tensile strength
- Durable black oxide coating
- ¾" 12 point head with integral washer
- Formed threads
- Cold formed head
- Compatible with both MLS & graphite head gaskets
- Reusable



## HEAD BOLTS

Description	Part #
Sold as set of 8	<b>900-1006</b>

# INNER PRIMARY BEARING RACE

The tendency of the stock inner primary bearing race on late model big twins to shift on the transmission mainshaft under high torque loads, also known as "walking" of the race, can cause destruction of the transmission mainshaft seal, and ultimately the mainshaft seal, output gear and output gear bearing. The S&S inner primary bearing race features an extra step on the inside diameter that acts as a stop on the transmission mainshaft. When the race is pressed on to the shaft, the step will not allow the race to move inward toward the mainshaft seal. The improved S&S bearing race is a must for any high performance application.



## INNER PRIMARY BEARING RACE

Description	Part #
2017–2021 M8 models	<b>560-0241</b>
2008–2017 big twin models	

## FITS:

- 2017–2021 M8 models
- 2008–'17 big twin models with stock 6 speed Cruise Drive™ transmissions

## FEATURES AND BENEFITS

- Will not "walk" on transmission mainshaft
- Prevents costly damage to mainshaft seal, output gear & output gear bearing
- Simple to install

# S&S® OIL

## FEATURES AND BENEFITS

- Ultimate protection
- Superior lubrication for reduced engine wear and lower oil temperatures
- Provides consistent viscosity and resists thermal breakdown and oxidation at elevated temperatures
- Includes an oil drain plug o-ring for convenience

### S&S® OIL CHANGE KIT

Description	Part #
2017–2021 Harley-Davidson® models with Milwaukee-Eight® engine 5 quarts of SAE 20W-50 synthetic engine oil with chrome oil filter	<b>3601-0492</b>

### S&S® OIL

Description	Part #
20W50 Synthetic, 1 quart	<b>3601-0407</b>
20W50 Synthetic, 2.5 Gallon	<b>3601-0408</b>
Primary, Synthetic, 1 quart	<b>3603-0044</b>
80W140 Gear, Synthetic, 1 quart	<b>3604-0007</b>



# OIL FILTERS

## FEATURES AND BENEFITS

- Captures smaller particles than stock filters
- Low restriction to oil flow
- Direct bypass — bypass oil does not pass over dirty filter media
- Smaller diameter for easier installation
- Black or chrome finish



### S&S® OIL FILTERS

Year Application	Micron Rating	QTY	Chrome	Black
1999–'17* Twin Cam 88®/96™/103™ and Milwaukee-Eight® engines	10μ	each	<b>31-4104A</b> 63798-99A	<b>31-4103A</b> 63731-99A
		12 pack	<b>310-0242</b>	<b>310-0241</b>

\*Contains an anti-drain back valve

# GASKETS

## GASKETS

Cam Cover		<b>310-0911</b>
Exhaust Gaskets	each	<b>106-5029</b>
	10 pack	<b>93-1072</b>
Head gasket, 4.25" Bore, .030" Stock bolt pattern	2 pack	<b>930-0140</b>
Base gasket, Stock to 4.250" Bore, .014" Stock bolt pattern	2 pack	<b>930-0139</b>

Gasket Kit, includes Head, Base, & Exhaust, 4.250" Bore	<b>900-0955</b>
O-ring kit, Oil Pump	<b>500-0850</b>



# REPLACEMENT PARTS

Milwaukee-Eight®

2007-2017 Twin Cam  
96°/103°/110°

1999-2006  
Twin Cam 88°

1986-2019  
Sportster® & Buell®

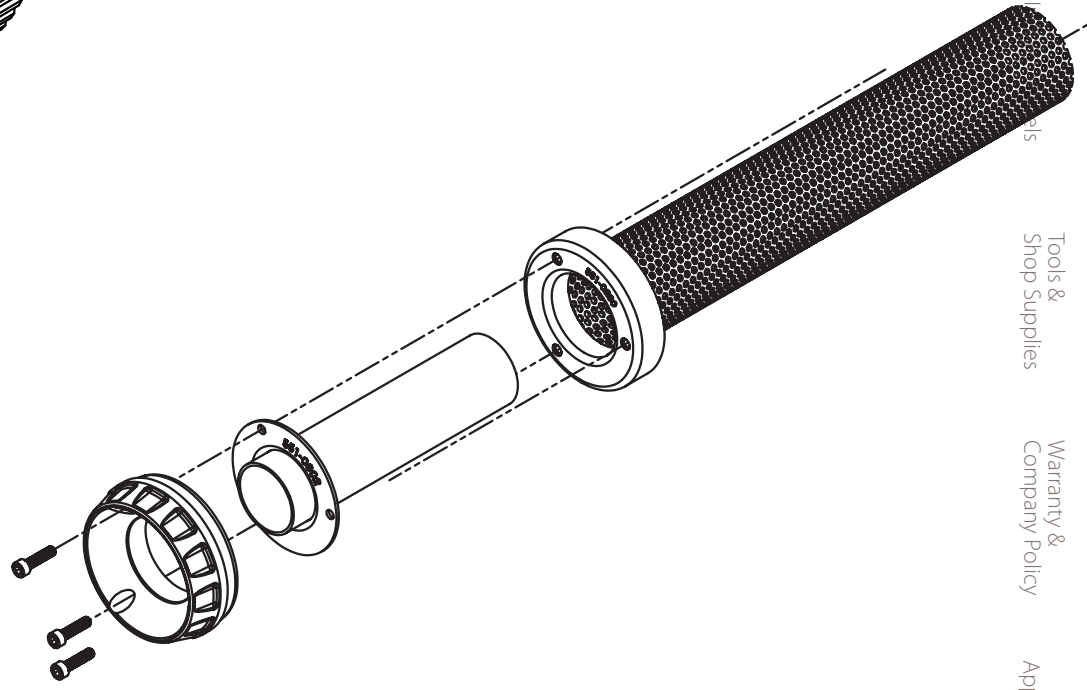
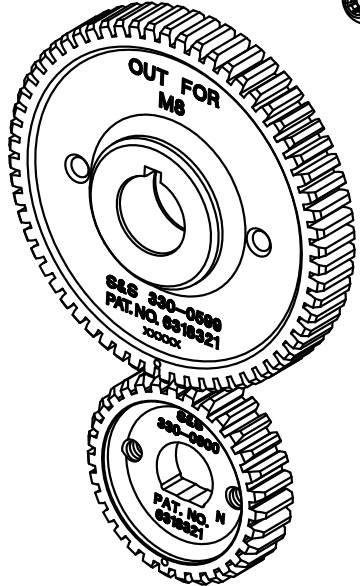
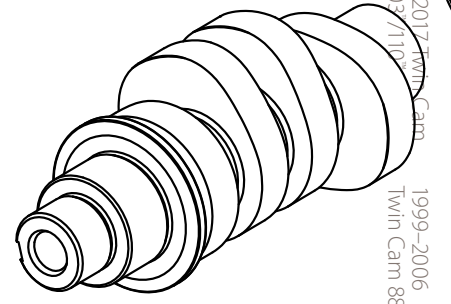
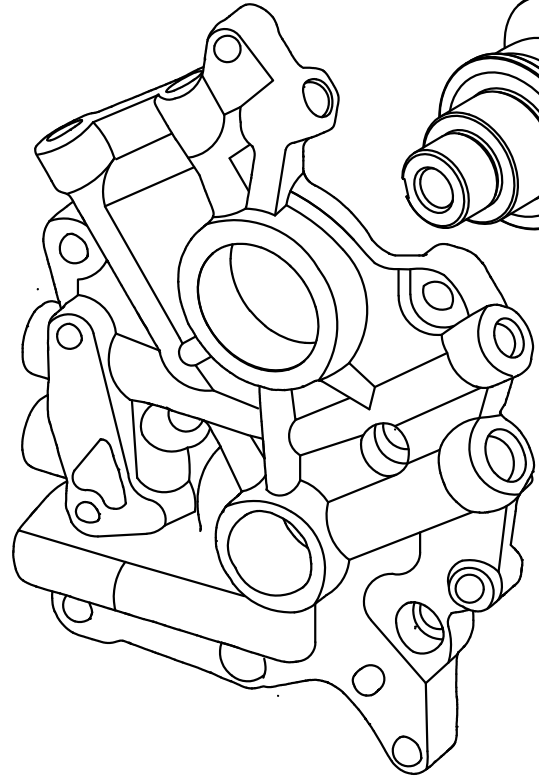
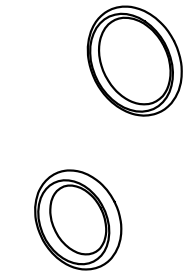
2014-2019 Street® &  
Street Rod™

Parts

Tools &  
Shop Supplies

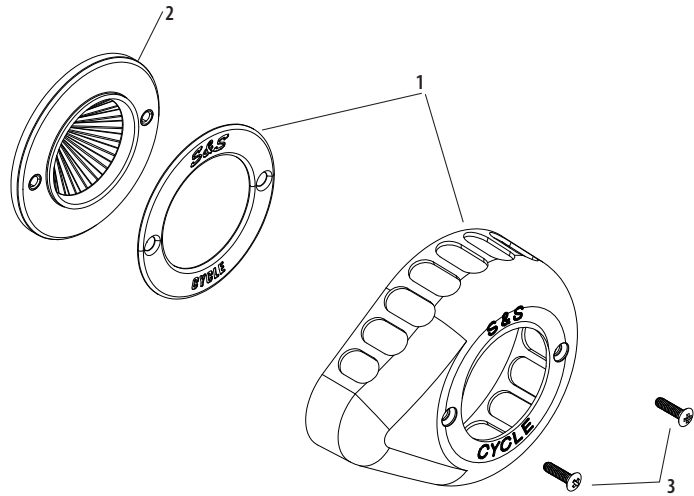
Warranty &  
Company Policy

Appendix



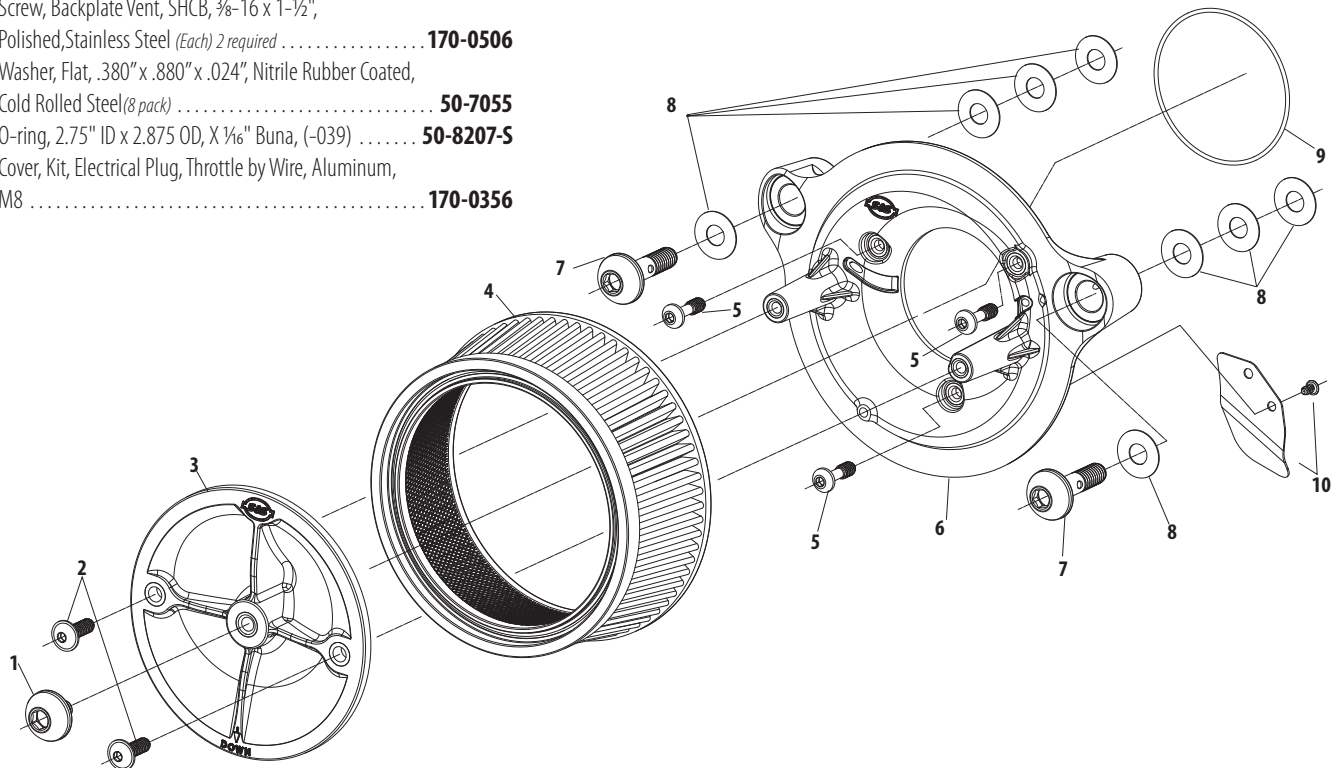
# AIR STINGER STEALTH AIR CLEANER KIT REPLACEMENT PARTS

1. Cover
  - Gloss Black Teardrop ..... **170-0686**
  - Chrome Teardrop ..... **170-0687**
  - Billet S&S Script Ring ..... **170-0502**
2. Filter ..... **170-0723**
3. Screws
  - Bright Stainless Steel (2 pack) ..... **500-0657**
  - Black (2 pack) ..... **500-0711**
  - Brushed Stainless for S&S Ring (2 pack) ..... **500-0854**



# STEALTH AIR CLEANER KIT REPLACEMENT PARTS INCLUDING EC VERSIONS

1. Screw, SHCB, 5/16-18 x .500", Polished, Stainless Steel .... **170-0508**
2. Screw, SHC, Flanged Button, 1/4-20 UNC x .750" (Each) .... **500-0060**
3. Plate, Top, Air Filter, Molded, Plastic ..... **170-0026**
4. Filter, Air, Tapered, Standard Pleated,  
5.500" x 6.000" x 2.375", Cotton ..... **170-0126**
5. Screw, SHCB, 1/4-20 UNC X .825" (Each) 3 required ..... **500-0059**
6. Backplate, Air Cleaner, Throttle by Wire, Stock Bore, Injection Molded  
Polymer, M8 ..... **170-0353**  
EC Backplate ..... **N/A**
7. Screw, Backplate Vent, SHCB, 3/8-16 x 1-1/2",  
Polished, Stainless Steel (Each) 2 required ..... **170-0506**
8. Washer, Flat, .380" x .880" x .024", Nitrile Rubber Coated,  
Cold Rolled Steel (8 pack) ..... **50-7055**
9. O-ring, 2.75" ID x 2.875 OD, X 1/16" Buna, (-039) ..... **50-8207-S**
10. Cover, Kit, Electrical Plug, Throttle by Wire, Aluminum,  
M8 ..... **170-0356**





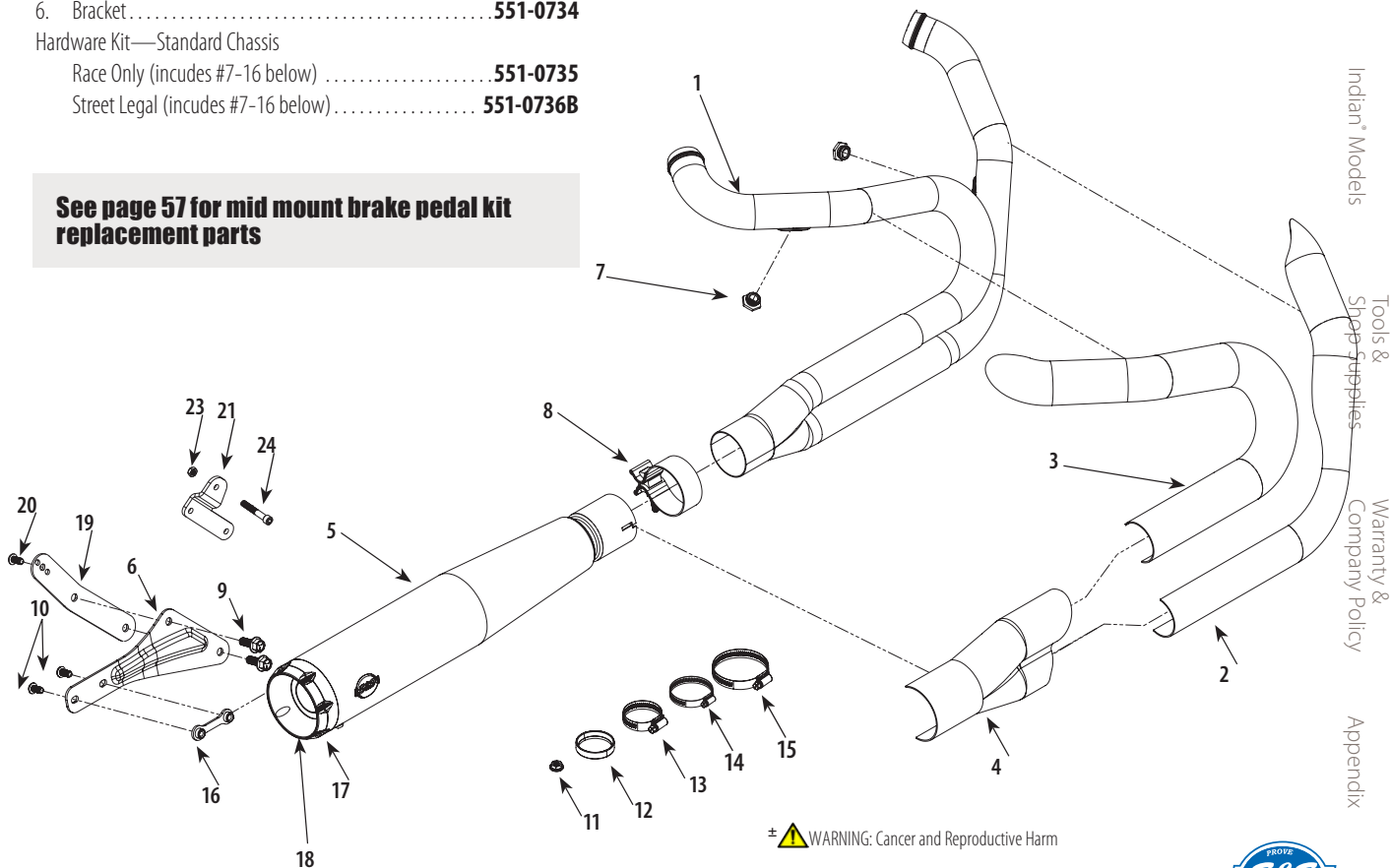
# SUPERSTREET 2:1 EXHAUST SYSTEM REPLACEMENT PARTS

1. Pipe, Header, Super Street, 2 into 1, Weldment, 2018-20 M8 Softail™, Standard Chassis ..... **551-0761**±  
Fat Boy, FXDR & Breakout ..... **551-1050**±
2. Front Shield (Standard Chassis)  
Black ..... **551-0764A**  
Chrome ..... **551-0766**±  
Stainless ..... **551-1417**  
Front Shield (Fat Boy, FXDR & Breakout)  
Black ..... **551-1057A**  
Chrome ..... **551-1060**±
3. Rear Shield (Standard Chassis)  
Black ..... **551-0769A**  
Chrome ..... **551-0771**±  
Stainless ..... **551-1418**  
Rear Shield (Fat Boy, FXDR & Breakout)  
Black ..... **551-1055A**  
Chrome ..... **551-1059**±
4. Collector Shield  
Black ..... **551-1139**  
Chrome ..... **551-0776**±  
Stainless ..... **551-1391**
5. Muffler—Race Only  
Black ..... **551-0750**  
Chrome ..... **551-0754**±  
Muffler—Street Legal  
Black ..... **551-0751B**  
Chrome ..... **551-0755B**±  
Stainless ..... **551-1414**
6. Bracket ..... **551-0734**  
Hardware Kit—Standard Chassis  
Race Only (includes #7-16 below) ..... **551-0735**  
Street Legal (includes #7-16 below) ..... **551-0736B**

- Hardware Kit—Fat Boy, FXDR & Breakout  
Race Only (includes #7-16 below) ..... **551-1066**  
Street Legal (includes #7-16 below) ..... **551-1083A**
7. Adapter, Oxygen Sensor, 12mm to 18mm, Stainless Steel ..... **550-0375**
  8. Muffler clamp, band style ..... **551-0135**
  9. Screw ..... **500-0877**
  10. Screw ..... **500-0763**
  11. Nut, HSFH, 5/16-24 UNF-2B x .283", Zinc, Steel<sup>7593</sup> ..... **50-5025-S**
  12. Gasket, Exh, Tapered, Stainless Steel 65324-83B, 65324-83A ..... **106-5029**
  13. Clamp, Hose, Worm Drive, SAE #20 ..... **551-0527**
  14. Clamp, Hose, Worm Drive, SAE #24 ..... **500-0791**
  15. Clamp, Hose, Worm Drive, SAE #40 ..... **551-0402**
  16. Plate, Nut, 5/16-18 x 2", Clear, Zinc ..... **551-0469**
  17. Screw, BHC, High Temp Lock Patch, 1/4-20 x 3/8", Stainless Steel ..... **500-0441**
  18. End cap, SuperStreet, Black ..... **551-0931**
  19. Bracket, Bag Mount, (Standard Chassis) ..... **551-1095**
  20. Screw, BHC, 5/16-18 x 5/8", Zinc Plated (Standard Chassis) ..... **500-0763**
  21. Passenger Peg Bracket (Fat Boy, FXDR & Breakout) ..... **551-1219**
  22. Screw, SHC, 3/8-16 x 2-1/2", Zinc, Steel (Fat Boy, FXDR & Breakout) ..... **500-1206**
  23. Nut, Lock, Nylon Insert, Gr8, 3/8-16, Low Carbon Steel (Fat Boy, FXDR & Breakout) ..... **500-1207**

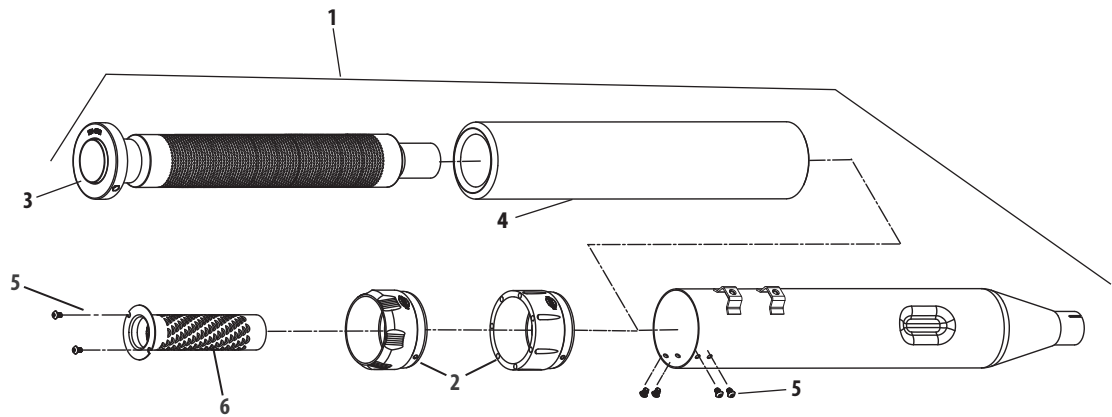
- Not Shown:**  
dB Reducer ..... **551-0063**  
Screw, SHC 10-32 x 3/4 ..... **500-0569**

**See page 57 for mid mount brake pedal kit replacement parts**



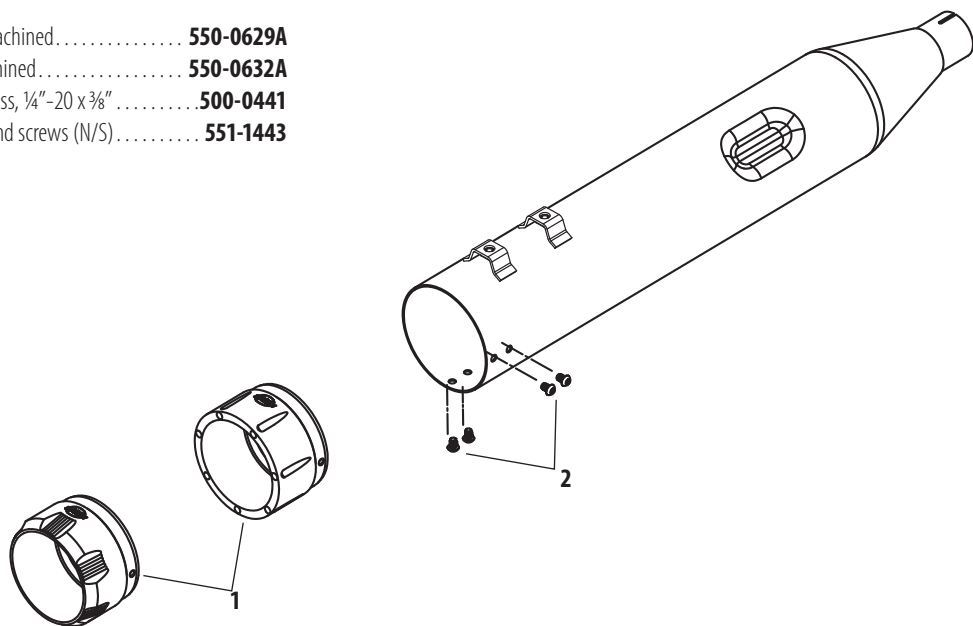
# Mk45 4.5" MUFFLER REPLACEMENT PARTS INCLUDING EC VERSION

- |  |                   |
|--|-------------------|
| 1. 4.5" Muffler assembly for M8 Models                   |                   |
| Left, chrome.....  | <b>551-0149±</b>  |
| Right chrome.....  | <b>551-0150±</b>  |
| Left black.....  | <b>551-0151</b>   |
| Right black.....   | <b>551-0152</b>   |
| 2. End cap   |                   |
| Thruster chrome.....                                     | <b>550-0634A±</b> |
| Thruster Black Highlight Machined.....                   | <b>550-0629A</b>  |
| Tracer chrome.....                                       | <b>550-0636A±</b> |
| Tracer Black Highlight Machined.....                     | <b>550-0632A</b>  |
| 3. Main baffle assembly, 4.5" muffler for M8 Models      |                   |
| Left.....  | <b>551-0007</b>   |
| Right.....   | <b>551-0138</b>   |
| 4. Insulation, 4.5" muffler.....                         | <b>551-0003</b>   |
| 5. Button head cap screw, Stainless, 1/4"-20 x 3/8"..... | <b>500-0441</b>   |
| 6. Baffle, Assembly, Muffler, SAE J2825.....             | <b>551-0026</b>   |
| 7. Hardware kit, muffler clamp and screws (N/S)          |                   |
| Left.....  | <b>551-1443</b>   |
| Right.....   | <b>551-1444</b>   |



## Mk45 REPLACEMENT MUFFLER SYSTEM FOR EL DORADO M8 HIGH PERFORMANCE EXHAUST SYSTEM—STREET LEGAL

- |  |                  |
|--|------------------|
| 1. End cap   |                  |
| Thruster Black Highlight Machined.....                   | <b>550-0629A</b> |
| Tracer Black Highlight Machined.....                     | <b>550-0632A</b> |
| 2. Button head cap screw, Stainless, 1/4"-20 x 3/8"..... | <b>500-0441</b>  |
| 3. Hardware kit, muffler clamp and screws (N/S).....     | <b>551-1443</b>  |

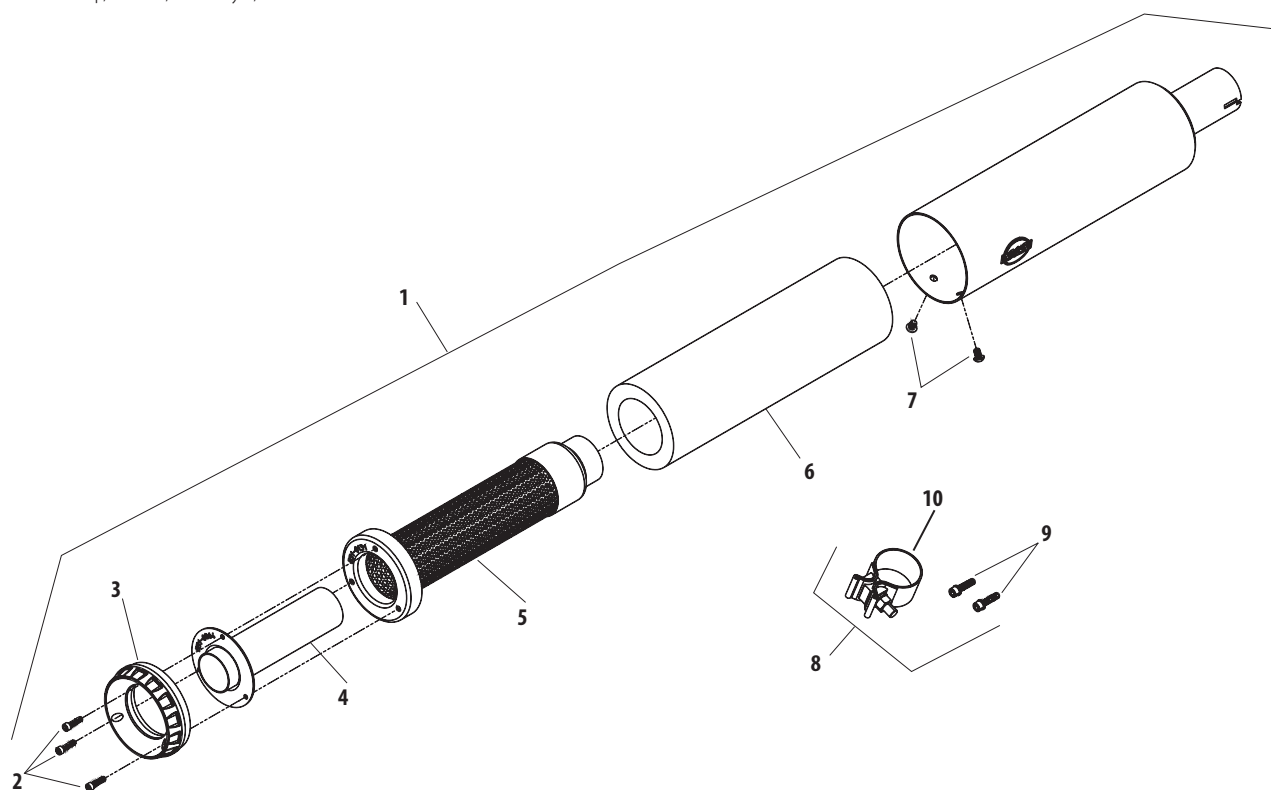


±  WARNING: Cancer and Reproductive Harm



# GRAND NATIONAL® MUFFLER REPLACEMENT PARTS FOR 2018–2021 FAT BOB® MODELS

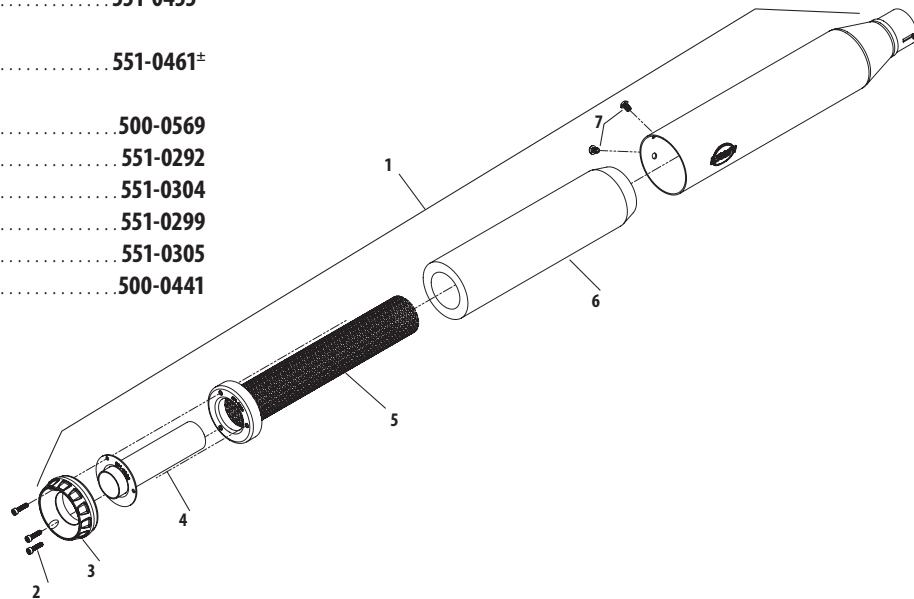
1. Muffler, Grand National, Black, M8 Fat Bob®  
Front/Rear ..... **551-0431**
2. Screw, Shc, High Temp Lock Patch, 10-32 X 3/4",  
Stainless Steel ..... **500-0569**
3. 4" End cap, Grand National, Black ..... **551-0291**
4. dB Reducer Baffle Assembly ..... **551-0063**
5. Baffle, Assembly ..... **551-0422**
6. Fiberglass Wrap, Pillow, 12" X 13" ..... **551-0276**
7. Screw, BHC, High Temp Lock Patch, 1/4-20 ..... **500-0441**
8. Hardware Kit, Muffler, 2018 M8 Fat Bob® ..... **551-0425**  
Screw, Shcs, W/ Flat Washer, 1/4-20 X 1",
9. Zinc, Astm A574-92A 4741A ..... **50-0092-5**
10. Clamp, Muffler, Band Style, 1.75" ..... **551-0569**



# GRAND NATIONAL® MUFFLER REPLACEMENT PARTS FOR 2018-'19 SOFTAIL® MODELS (EXCEPT FAT BOB®, SPORT GLIDE®, & FXDR MODELS)

1. Muffler Assembly  
M8 HD® Softail® Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® models  
Top  
Black ..... **551-0440**  
Chrome ..... **551-0443±**  
Bottom  
Black ..... **551-0452**  
Chrome ..... **551-0455±**  
M8 Softail® Heritage® Classic and Deluxe  
Chrome Front or Rear ..... **551-0461±**
2. Screw, SHC, High Temp Lock Patch,  
10-32x3/4", Stainless Steel ..... **500-0569**
3. 3.25" End cap, Grand National, Black ..... **551-0292**
4. dB Reducer Baffle Assembly ..... **551-0304**
5. Baffle Assembly ..... **551-0299**
6. Fiberglass Wrap ..... **551-0305**
7. Screw, BHC, High Temp Lock Patch, 1/4-20 ..... **500-0441**

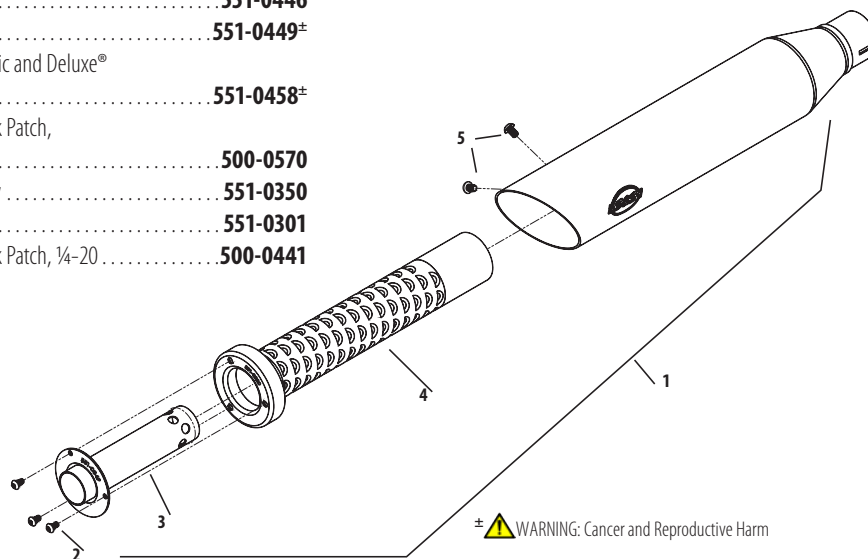
- Parts Not Shown**
8. Hardware Kit, Muffler, 2018 M8 Fat Bob® ..... **551-0425**
  9. Screw, SHCS, w/Flat Washer, 1/4-20x1" 4741A ..... **50-0092-S**
  10. Clamp, Muffler, Band Style, 1.75" ..... **551-0028**
  11. Muffler Gasket ..... **551-0360**
  12. Bracket Cover (Exc. Heritage® Classic and Deluxe) ..... **551-0538**



# SLASH CUT MUFFLER REPLACEMENT PARTS FOR 2018-'19 SOFTAIL® MODELS (EXCEPT FAT BOB®, SPORT GLIDE®, & FXDR MODELS)

1. Muffler Assembly  
M8 HD® Softail® Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® models  
Top  
Black ..... **551-0434**  
Chrome ..... **551-0437±**  
Bottom  
Black ..... **551-0446**  
Chrome ..... **551-0449±**  
M8 Softail® Heritage® Classic and Deluxe®  
Chrome, Front, or Rear ..... **551-0458±**
2. Screw, BHC, High Temp Lock Patch,  
10-32x3/8", Stainless Steel ..... **500-0570**
3. dB Reducer Baffle Assembly ..... **551-0350**
4. Baffle Assembly ..... **551-0301**
5. Screw, BHC, High Temp Lock Patch, 1/4-20 ..... **500-0441**

- Parts Not Shown**
6. Hardware Kit, Muffler ..... **551-0425**
  7. Screw, SHCS, w/Flat Washer, 1/4-20x1" 4741A ..... **50-0092-S**
  8. Clamp, Muffler, Band Style, 1.75" ..... **551-0028**
  9. Muffler Gasket ..... **551-0360**
  10. Bracket Cover (Exc. Heritage® Classic and Deluxe®) ..... **551-0538**

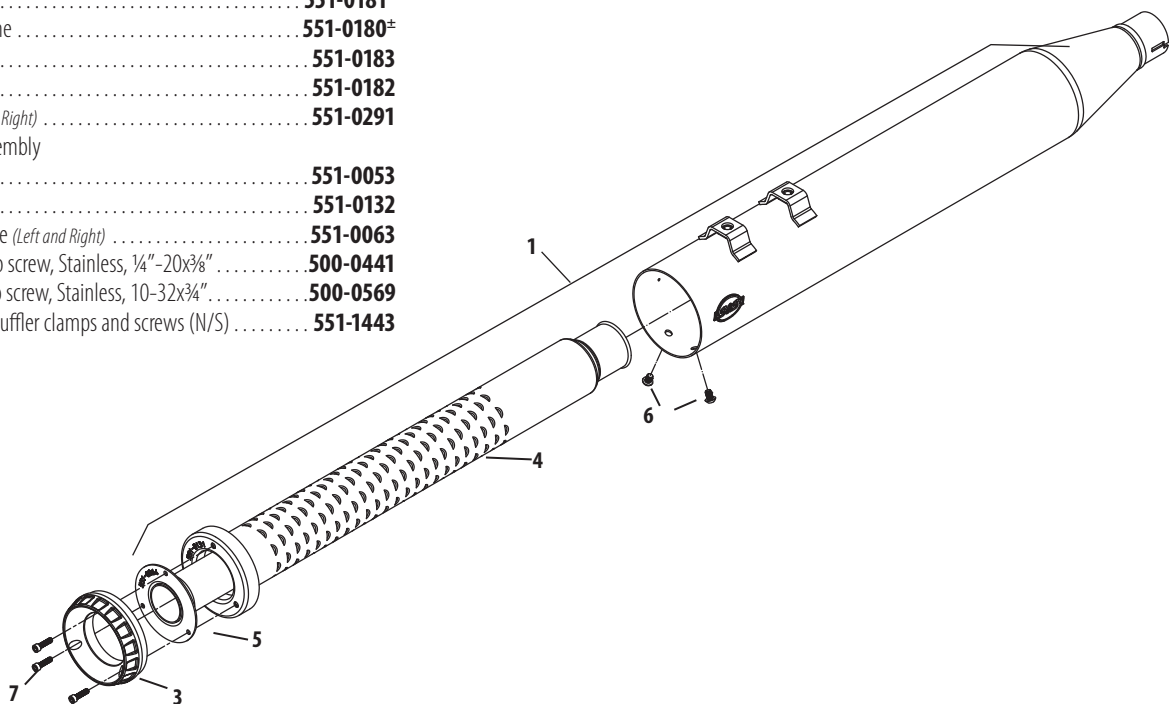


± **WARNING: Cancer and Reproductive Harm**



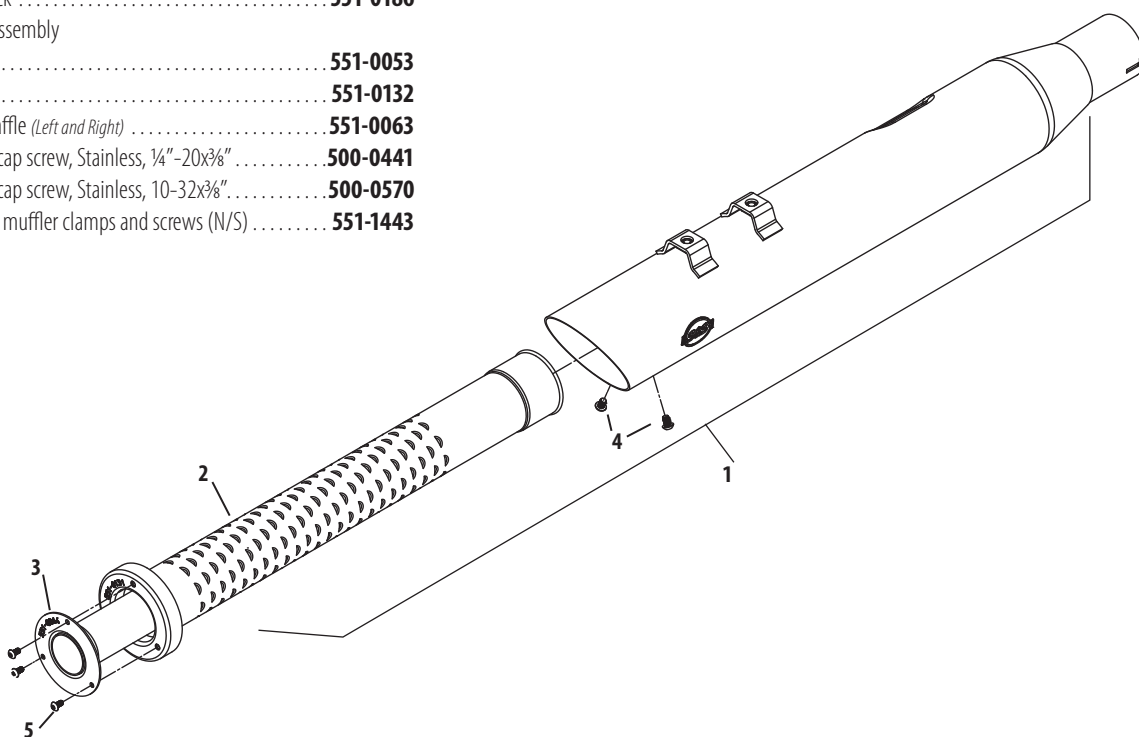
# GRAND NATIONAL® 4" MUFFLERS REPLACEMENT PARTS

1. 4" Muffler assembly with Grand National End cap
  - Left, Chrome ..... **551-0181±**
  - Right, Chrome ..... **551-0180±**
  - Left, Black ..... **551-0183**
  - Right, Black ..... **551-0182**
3. End cap (Left and Right) ..... **551-0291**
4. Main baffle assembly
  - Left ..... **551-0053**
  - Right ..... **551-0132**
5. dB reducer baffle (Left and Right) ..... **551-0063**
6. Button head cap screw, Stainless, ¼"-20x¾" ..... **500-0441**
7. Socket head cap screw, Stainless, 10-32x¾" ..... **500-0569**
9. Hardware kit, muffler clamps and screws (N/S) ..... **551-1443**



# SLASH CUT 4" MUFFLERS REPLACEMENT PARTS

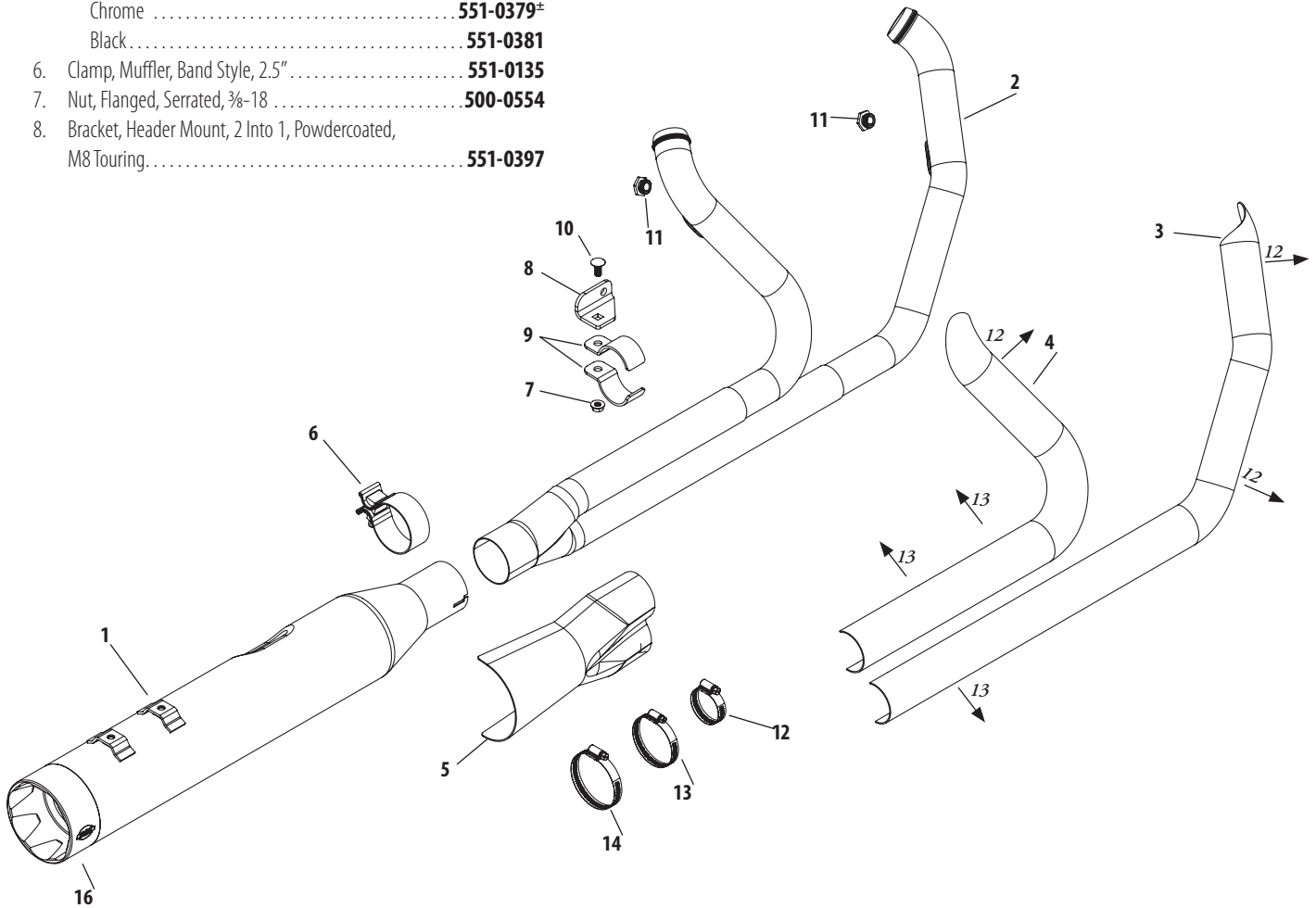
1. 4" Muffler assembly Slash Down
  - Left, Chrome ..... **551-0185±**
  - Right, Chrome ..... **551-0184±**
  - Left, Black ..... **551-0187**
  - Right, Black ..... **551-0186**
2. Main baffle assembly
  - Left ..... **551-0053**
  - Right ..... **551-0132**
3. dB reducer baffle (Left and Right) ..... **551-0063**
4. Button head cap screw, Stainless, ¼"-20x¾" ..... **500-0441**
5. Button head cap screw, Stainless, 10-32x¾" ..... **500-0570**
6. Hardware kit, muffler clamps and screws (N/S) ..... **551-1443**



± WARNING: Cancer and Reproductive Harm

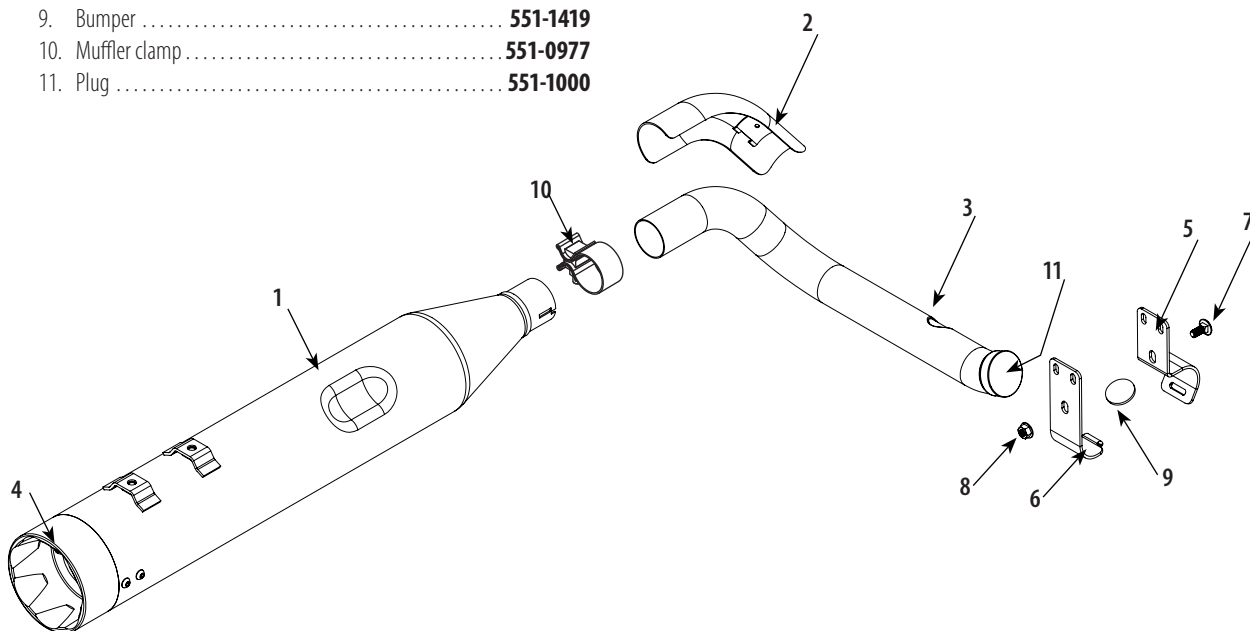
# SIDEWINDER 2:1 EXHAUST SYSTEM REPLACEMENT PARTS

- |   |                   |  |
|---|-------------------|--|
| 1. Muffler, Assembly, 2 Into 1, M8 Touring  |                   |  |
| Race, Chrome.....   | <b>551-0403±</b>  |  |
| Race, Black.....  | <b>551-0394</b>   |  |
| Street Legal, Chrome.....   | <b>551-0529C±</b> |  |
| Street Legal, Black.....  | <b>551-0530C</b>  |  |
| 2. Header, Assembly, Weldment, M8 Touring   | <b>551-0367</b>   |  |
| 3. Shield, Front, Heat, Touring   |                   |  |
| Chrome.....   | <b>551-0385±</b>  |  |
| Black.....  | <b>551-0387</b>   |  |
| 4. Shield, Rear, Heat, M8 Touring   |                   |  |
| Chrome.....   | <b>551-0391±</b>  |  |
| Black.....  | <b>551-0393</b>   |  |
| 5. Collector, Heat Shield, M8 Touring   |                   |  |
| Chrome.....   | <b>551-0379±</b>  |  |
| Black.....  | <b>551-0381</b>   |  |
| 6. Clamp, Muffler, Band Style, 2.5"   | <b>551-0135</b>   |  |
| 7. Nut, Flanged, Serrated, 3/8-18   | <b>500-0554</b>   |  |
| 8. Bracket, Header Mount, 2 Into 1, Powdercoated, M8 Touring.....                         | <b>551-0397</b>   |  |
| 9. Clamp, Header Mount, 2 Into 1, Chrome Plate, Mild Steel, 11 Gauge, 2017-'18 M8 Touring | <b>551-0361±</b>  |  |
| 10. Bolt, Carriage, 3/8-16 x 1-1/4"   | <b>500-0553</b>   |  |
| 11. Adapter, Oxygen Sensor, 12mm To 18mm, Stainless Steel                                 | <b>550-0375</b>   |  |
| 12. Clamp, Hose, Worm Drive, SAE #20  | <b>551-0527</b>   |  |
| 13. Clamp, Hose, Worm Drive, SAE #24  | <b>500-0791</b>   |  |
| 14. Clamp, Hose, Worm Drive, SAE #40  | <b>551-0402</b>   |  |
| 15. dB reducer (N/S)  | <b>551-0026</b>   |  |
| 16. End cap, Sidewinder 2:1   | <b>551-0395</b>   |  |
| 17. Nut, HSFH, 5/16-24  | <b>50-5025-S</b>  |  |
| 18. Gasket, Exhaust, Tapered  | <b>106-5029</b>   |  |



# SHADOW PIPE REPLACEMENT PARTS FOR 2009–2021 MODELS

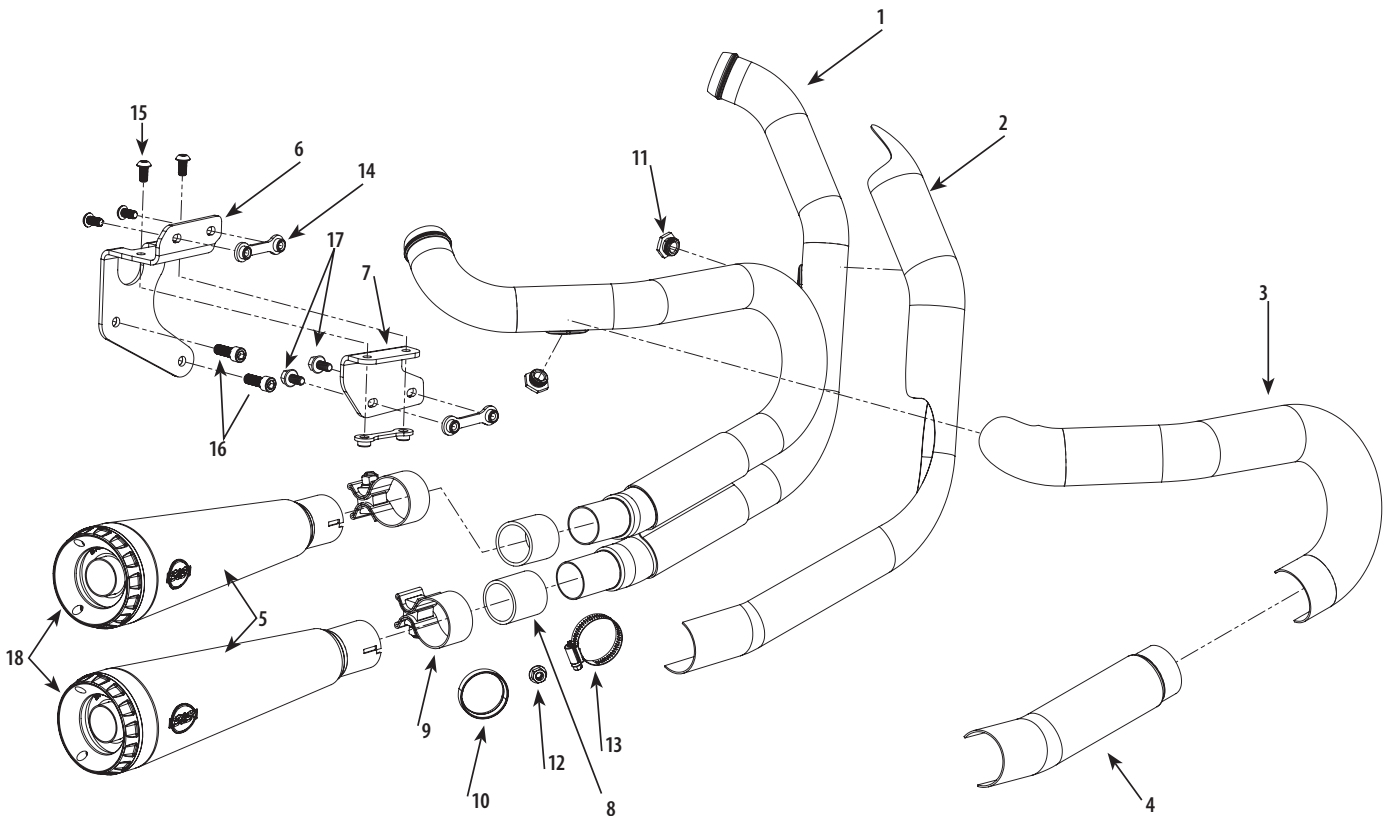
- |   |                  |
|---|------------------|
| 1. Muffler shell  |                  |
| Chrome .....  | <b>551-0992</b>  |
| Black .....   | <b>551-0993</b>  |
| 2. Heat Shield  |                  |
| Chrome .....  | <b>551-0115</b>  |
| Black .....   | <b>551-0116</b>  |
| 3. Crossover .....                                      | <b>551-0080</b>  |
| 4. End Cap .....  | <b>551-0994</b>  |
| Hardware Kit, Includes #5–9 .....                       | <b>551-1005</b>  |
| 5. Female clamp half .....                              | <b>551-0568</b>  |
| 6. Male clamp half .....                                | <b>551-0567</b>  |
| 7. Bolt, Carriage, 5/16-18 x 3/4" .....                 | <b>500-0555</b>  |
| 8. Nut, HSFH, 5/16-18 UNC-2B x .283", Zinc, Steel ..... | <b>50-5053-S</b> |
| 9. Bumper .....   | <b>551-1419</b>  |
| 10. Muffler clamp .....                                 | <b>551-0977</b>  |
| 11. Plug .....  | <b>551-1000</b>  |





# GRAND NATIONAL® 2:2 EXHAUST SYSTEM REPLACEMENT PARTS

- |   |            |   |           |
|---|------------|---|-----------|
| 1. Pipe, Header, 2 into 2, Weldment, M8 Softail™ except Fat Boy™, and ... Breakout™ | 551-0547   | 7. Bracket, Bottom, Mounting, 2 Into 2, Black             | 551-0563  |
| 2. Front Shield,  |            | 8. Gasket, Muffler, 3.25", 2018 M8 Softail®               | 551-0360  |
| Black   | 551-0551   | 9. Clamp, Muffler, Band Style                             | 551-0028  |
| Chrome  | 551-0553±  | 10. Gasket, Exhaust, Tapered, Stainless Steel,            |           |
| 3. Rear Shield,   |            | 1984-up bt, 1986-up xl                                    | 106-5029  |
| Black   | 551-0557   | 11. Adapter, Oxygen Sensor, 12mm to 18mm, Stainless Steel | 550-0375  |
| Chrome  | 551-0559±  | 12. Nut, HSFH, 5/16-18 UNC-2B x .283", Zinc, Steel        | 50-5053-S |
| 4. Lower Rear Shield,   |            | 13. Clamp, Hose, Worm Drive, SAE #20                      | 551-0527  |
| Black   | 551-0661   | 14. Plate, Nut, 5/16-18 x 2", Clear, Zinc                 | 551-0469  |
| Chrome  | 551-0663±  | 15. Screw, BHC, 5/16-18 x 5/8", Zinc Plated               | 500-0763  |
| 5. Muffler Body,  |            | 16. Screw, SHCS, 3/8-16 x 1"                              | 50-0161   |
| Race  |            | 17. Screw, Flanged, 5/16-18 x 5/8", Zinc Plated           | 500-0984  |
| Black   | 551-0474   | 18. End cap   | 551-0291  |
| Chrome  | 551-0477±  |   |           |
| Street Legal  |            |   |           |
| Black   | 551-0905A  |   |           |
| Chrome  | 551-0906A± |   |           |
| 6. Bracket, Mounting, 2 Into 2, Black, M8 Softail®                                  | 551-0562   |   |           |



See page 57 for mid mount brake pedal kit replacement parts

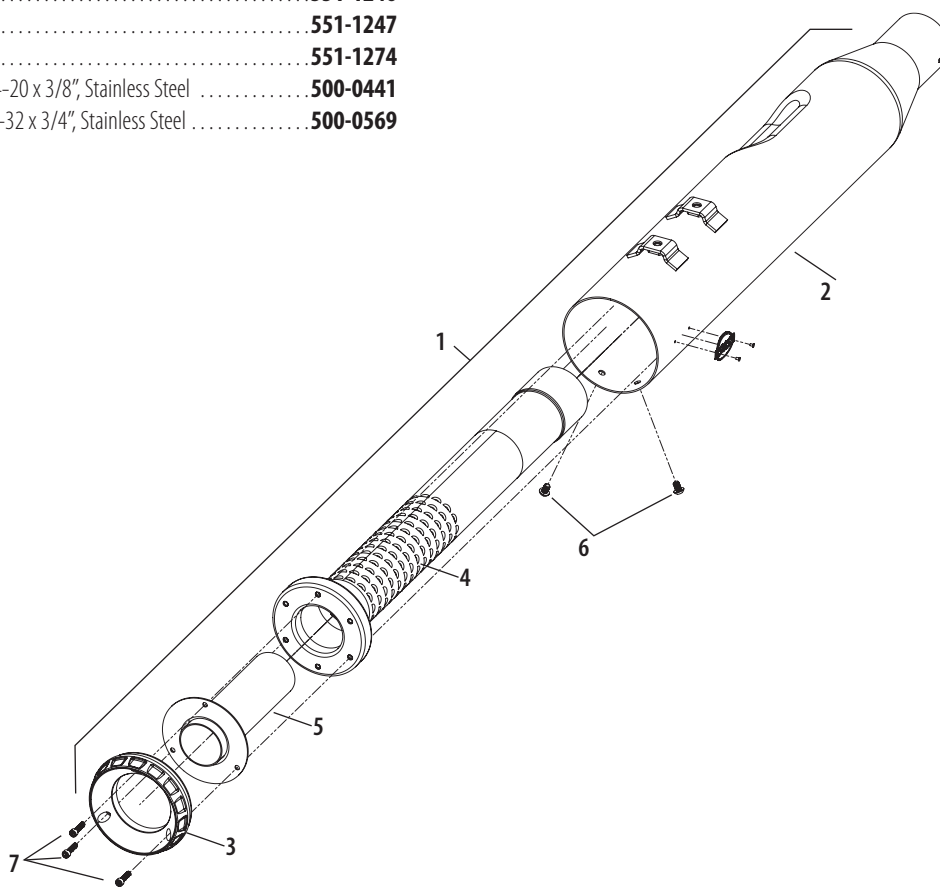
± ⚠ WARNING: Cancer and Reproductive Harm

# GNX SLIP-ON REPLACEMENT PARTS

1. 4.5" Muffler assembly for M8 Models
  - Right, Black ..... **551-1268**
  - Left, Black ..... **551-1269**
  - Right, Chrome ..... **551-1270**
  - Left, Chrome ..... **551-1271**
2. Muffler Shell (with Badge)
  - Right, Black ..... **551-1259**
  - Left, Black ..... **551-1262**
  - Right, Chrome ..... **551-1260**
  - Left, Chrome ..... **551-1263**
3. End cap ..... **551-1251**
4. Baffle
  - Left,..... **551-1246**
  - Right..... **551-1247**
5. dB reducer ..... **551-1274**
6. Screw, BHC, 1/4-20 x 3/8", Stainless Steel ..... **500-0441**
7. Screw, SHC, 10-32 x 3/4", Stainless Steel ..... **500-0569**

## Not Shown

- Hardware kit, muffler clamps and screws
- Left ..... **551-1443**
- Right..... **551-1444**



# POWER TUNE® DUAL REPLACEMENT HEADER SYSTEM FOR EL DORADO M8 HIGH PERFORMANCE EXHAUST SYSTEM—STREET LEGAL

## REPLACEMENT HEADER FOR EL DORADO M8 HIGH PERFORMANCE EXHAUST SYSTEM—STREET LEGAL

Finish	Part #
Chrome	<b>550-0704</b>
Black	<b>550-0705</b>



DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATION-WIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

This part is emissions compliant only when used as part of a complete El Dorado exhaust package.

**⚠️ WARNING:** Cancer and Reproductive Harm

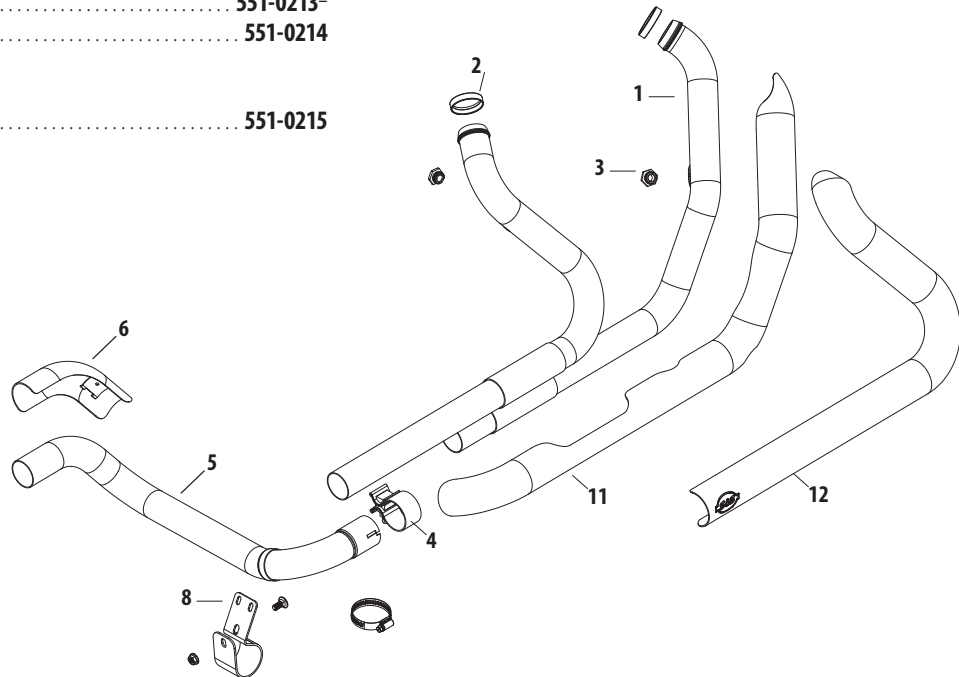
# POWER TUNE® DUAL HEADER REPLACEMENT PARTS FOR EL DORADO M8 HIGH PERFORMANCE EXHAUST SYSTEM—STREET LEGAL

- 1. Pipe, header, power tune dual, header pipe weldment ..... **551-0198**
- 2. Gasket, exhaust, tapered, stainless steel, (2 Req) ..... **106-5029**
- 3. Adapter, oxygen sensor, 12mm to 18mm, stainless steel (2 Req) ..... **550-0375**
- 4. Clamp, muffler, band style ..... **551-0028**
- 5. Tube, crossover, power tune dual, formed, ..... **551-0229**
- 6. Shield, left, power tune dual,
  - Chrome ..... **551-0115±**
  - Black ..... **551-0116**
- 7. Nut, HSFH, 5/16-18 UNC-2b x .283", Zinc, steel ..... **50-5053-S**
- 8. Clamp, p-style, crossover, power tune dual header ..... **551-0121**
- 9. Bolt, carriage, 5/16"-18 x 3/4" ..... **500-0555**
- 10. Clamp, hose (8 Req) ..... **551-0124**
- 11. Shield, front, power tune dual,
  - Chrome ..... **551-0206±**
  - Black ..... **551-0207**
- 12. Shield, rear, power tune dual,
  - Chrome ..... **551-0213±**
  - Black ..... **551-0214**

Not Shown

Hardware kit, power tune dual, header

Includes items 2, 3, 4, 7, 8, and 9 ..... **551-0215**

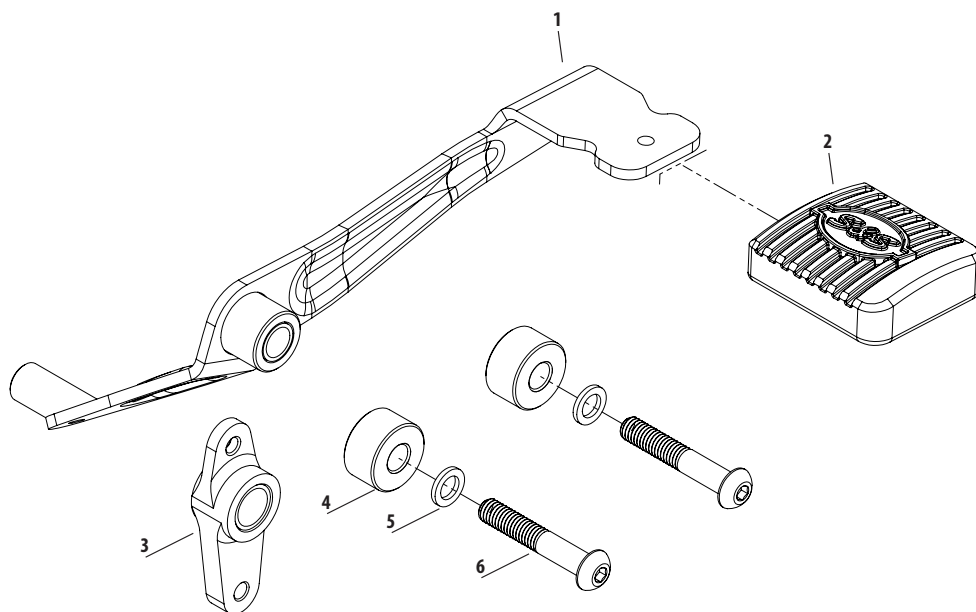


**⚠️ WARNING:** Cancer and Reproductive Harm



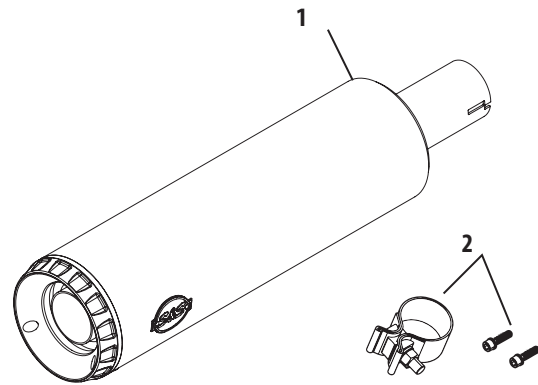
# MID MOUNT BRAKE PEDAL KIT REPLACEMENT PARTS FOR S&S SUPERSTREET 2:1 & GRAND NATIONAL 2:2 EXHAUST SYSTEMS

1. Lever, Brake, Mid Control, Powdercoated, Gloss Black, 2018-up M8 Softail™ ..... **561-0014**
2. Pad, Footrest, Slip On, 2-1/2" x 2-3/4" x 7/8", Rubber ..... **500-0954**
3. Bellcrank, Mid Control, Powdercoated, Gloss Black, 2018-up M8 Softail™ ..... **561-0012**
- Hardware Kit, Brake Lever, Mid Control, 2018-up M8 Softail™ .. **561-0005**  
(includes 4-6 below)
4. Spacer, Powdercoated, 1-1/8" OD x 7/16" ID x 5/8", Gloss Black ..... **561-0004**
5. Washer, Flat, 5/8" x .390" x .078", Stainless Steel, 18-8 (each, qty 2 needed) ..... **500-1060**
6. Screw, BHC, 3/8-16 x 2-1/4", Zinc Plated, Alloy Steel (each, qty 2 needed) ..... **500-1044**



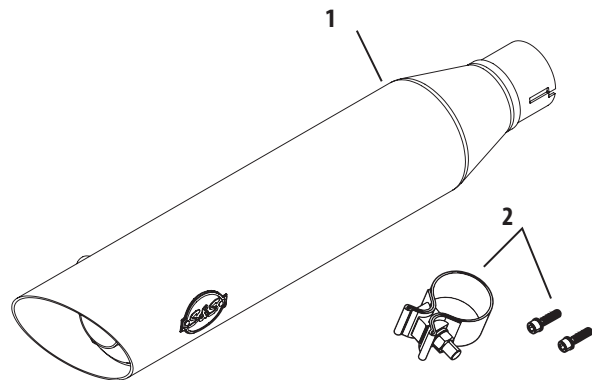
# GRAND NATIONAL® EC SLIP-ON MUFFLER REPLACEMENT PARTS

1. Muffler
  - Upper, Black,  
Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® . . . . . **551-0946**
  - Lower, Black,  
Street Bob, Low Rider, Slim, Fat Boy & Breakout . . . . . **551-0948**
  - Upper, Chrome,  
Street Bob, Low Rider, Slim, Fat Boy & Breakout . . . . . **551-0947**
  - Lower, Chrome,  
Street Bob, Low Rider, Slim, Fat Boy & Breakout . . . . . **551-0949**
  - Chrome, Heritage® and Deluxe . . . . . **551-0950**
2. Hardware Kit . . . . . **551-0425**
3. Gasket (N/S) . . . . . **551-0360**



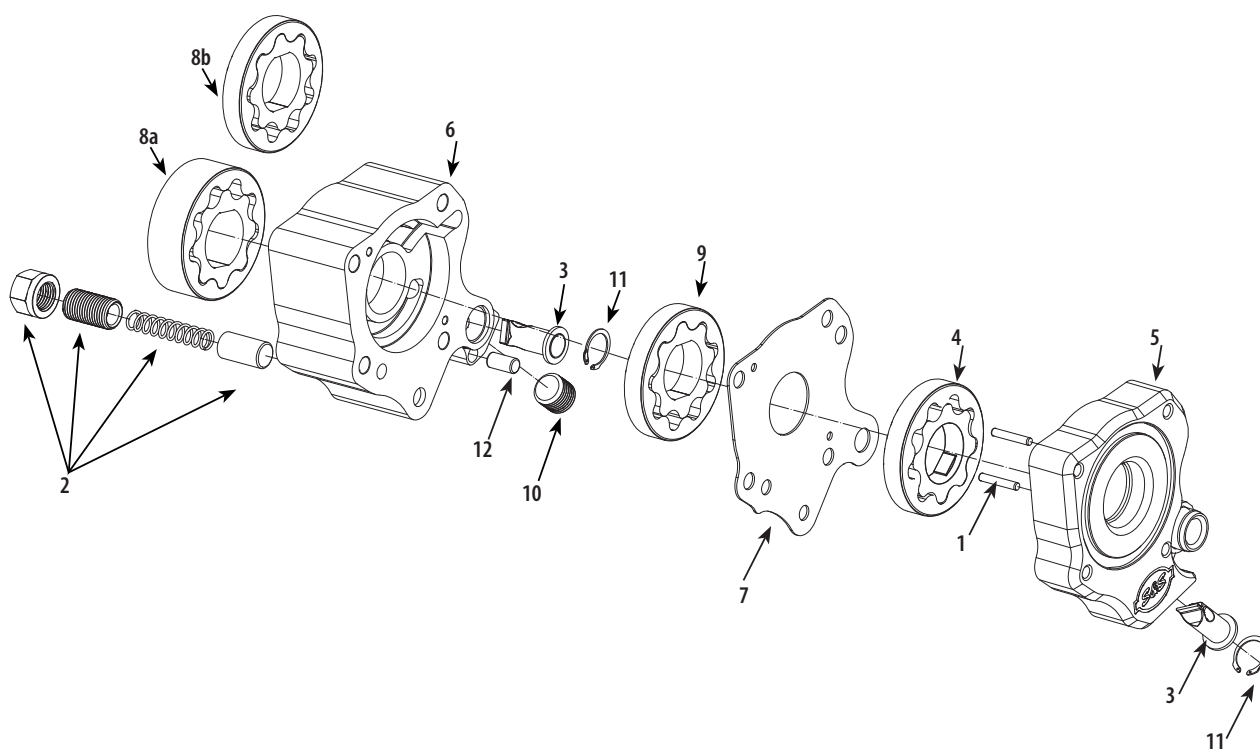
# SLASH-CUT EC SLIP-ON MUFFLER REPLACEMENT PARTS

1. Muffler
  - Upper, Black,  
Street Bob®, Low Rider®, Slim®, Fat Boy® & Breakout® . . . . . **551-0941**
  - Lower, Black,  
Street Bob, Low Rider, Slim, Fat Boy & Breakout . . . . . **551-0943**
  - Upper, Chrome,  
Street Bob, Low Rider, Slim, Fat Boy & Breakout . . . . . **551-0942**
  - Lower, Chrome,  
Street Bob, Low Rider, Slim, Fat Boy & Breakout . . . . . **551-0944**
  - Chrome, Heritage and Deluxe . . . . . **551-0945**
2. Hardware Kit . . . . . **551-0425**
3. Gasket (N/S) . . . . . **551-0360**



# OIL PUMP REPLACEMENT PARTS

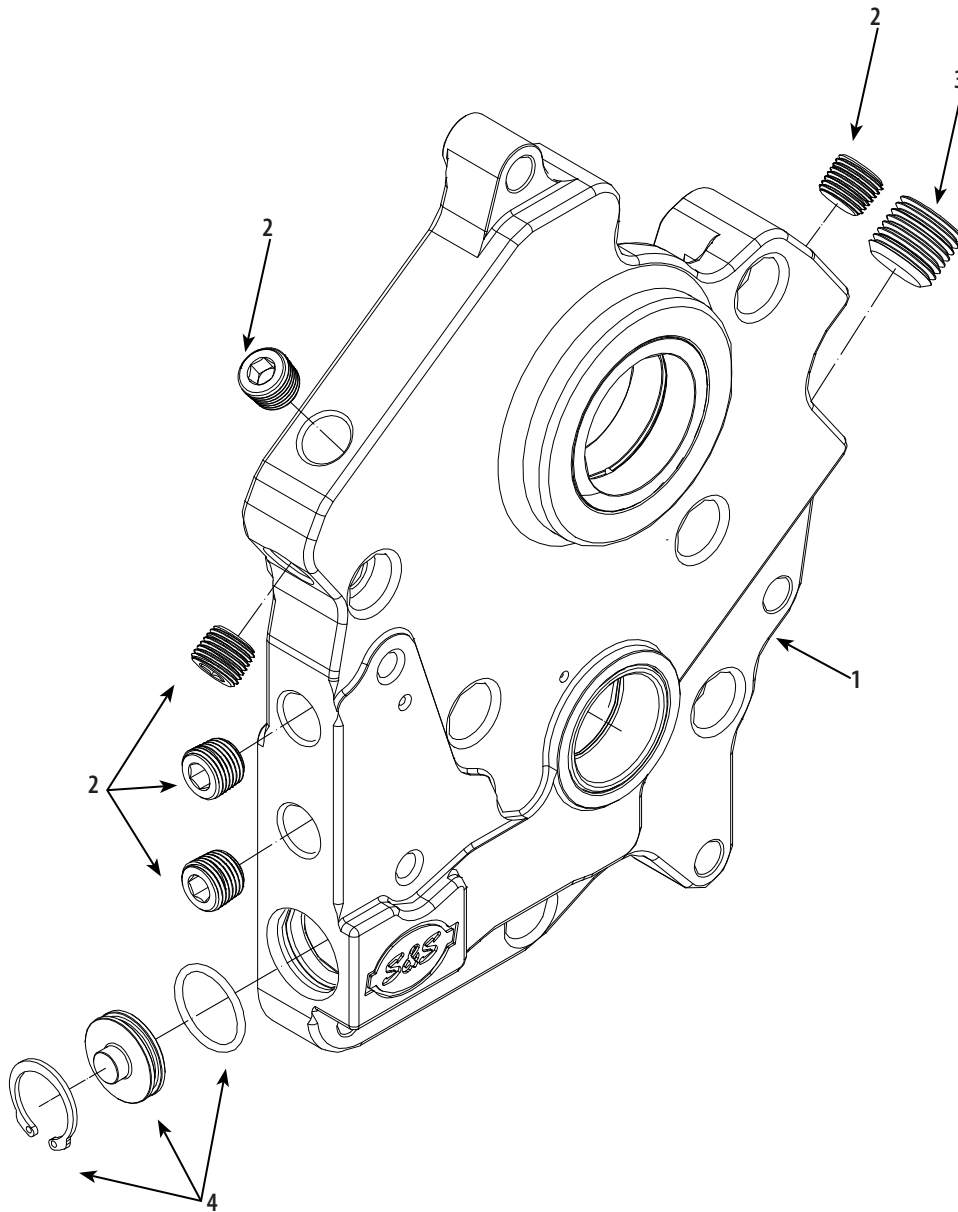
1. Dowel pin, 0.125"x0.750", 2 Pack ..... **500-0967**
2. Pressure Relief Valve Assembly ..... **500-0949**
3. Stainless Steel Mesh Screen (2) ..... **310-0546**
4. Rotor Set, Oil Pump, Cam Chest Scavenge ..... **310-1092**
5. Oil Pump Housing, Return Side ..... **N/A**
6. Oil Pump Housing, Supply Side,  
Oil Cooled ..... **N/A**  
Oil Pump Housing, Supply Side  
Water Cooled ..... **N/A**
7. Divider Plate ..... **310-0948**
- 8a. Rotor Set, Oil Pump Feed Gear (Oil-Cooled models) ..... **310-0955**
- 8b. Rotor Set, Oil Pump Feed Gear (Water-Cooled models) .. **310-1048**
9. Rotor Set, Oil Pump, Flywheel Scavenge ..... **310-1048**
10. ¼" Pipe Plug 5 Pack ..... **500-0969**
11. Retaining Ring 5 Pack ..... **500-0968**
12. Magnet, .250" x .500" ..... **N/A**





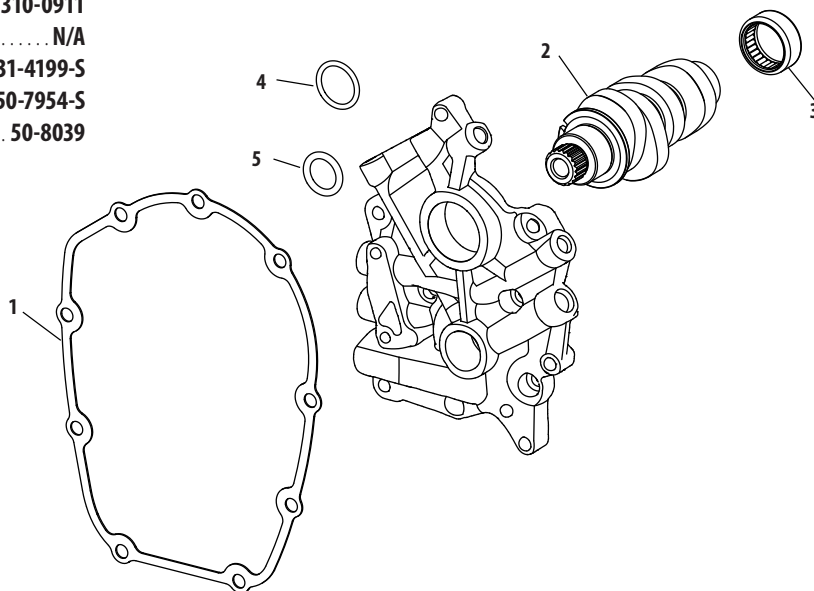
# CAM SUPPORT PLATE REPLACEMENT PARTS

1. Cam support plate ..... N/A
2. 1/8" pipe plug, 45830-48 10 pack ..... 50-1015
3. 1/4" pipe plug, 5 pack ..... 500-0969
4. M8 cam support plate oil supply plug kit ..... 500-0966
5. Hydraulic tensioner block off plate kit N/S ..... 310-0962
6. O-ring kit N/S ..... 500-0850



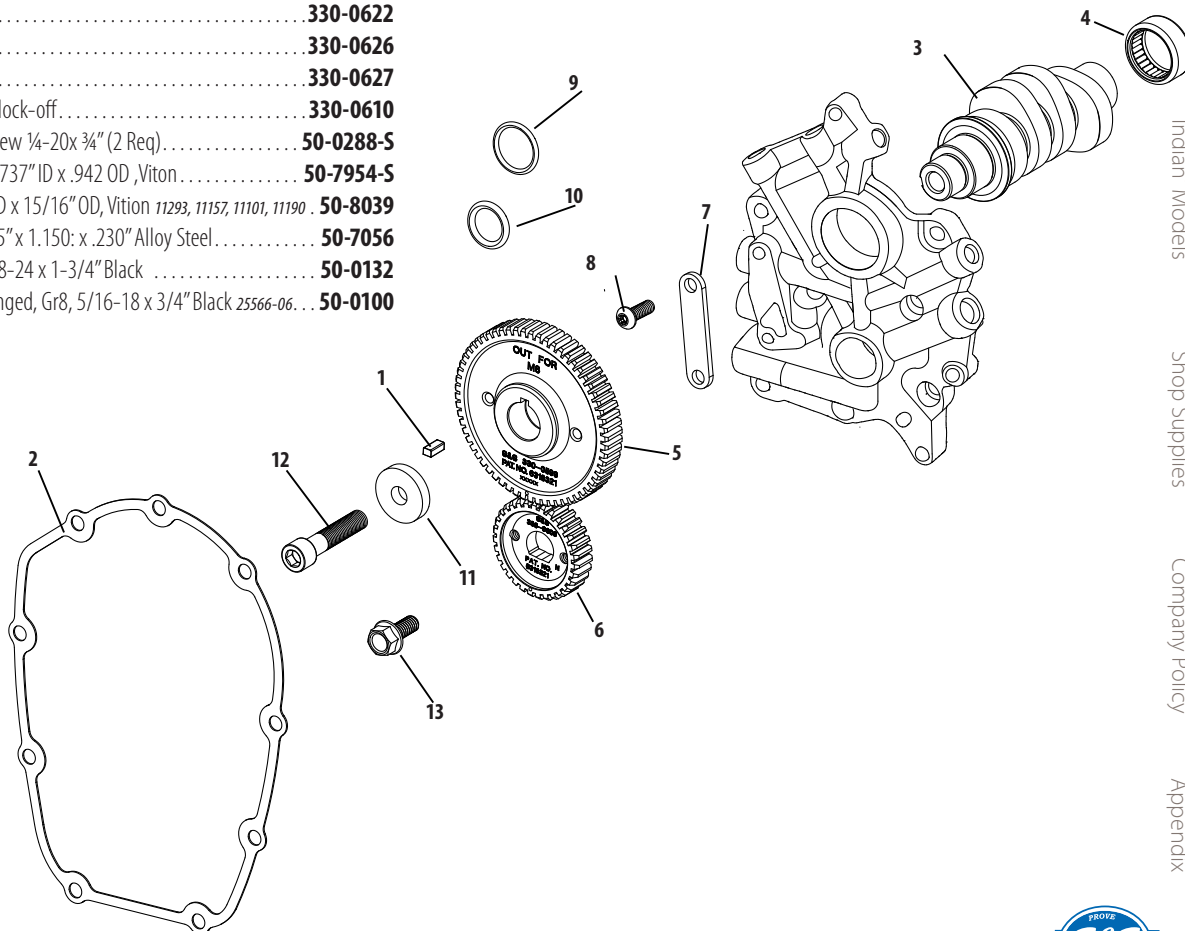
# CAM KIT REPLACEMENT PARTS—CHAIN

- 1. Gasket Cam Cover M8 ..... **310-0911**
- 2. Cam Shaft ..... **N/A**
- 3. Inner Cam Bearing<sup>9275</sup> ..... **31-4199-S**
- 4. O-Ring, (-116) .737" ID x .942 OD, Viton ..... **50-7954-S**
- 5. O-Ring, 11/16 ID x 15/16" OD, Viton 11293, 11157, 11101, 11190 ..... **50-8039**



# CAM KIT REPLACEMENT PARTS—GEAR

- 1. Parallel Key ..... **106-1348**
- 2. Gasket Cam Cover M8 ..... **310-0911**
- 3. Cam Shaft ..... **N/A**
- 4. Inner Cam Bearing<sup>9275</sup> ..... **31-4199-S**
- 5. Gear, Cam Drive ..... **330-0621**
- 6. Gear, Pinion 31 tooth  
Standard Size ..... **330-0622**  
Undersized ..... **330-0626**  
Oversized ..... **330-0627**
- 7. Plate, Oil Hole Block-off ..... **330-0610**
- 8. Button Head Screw ¼-20x ¾" (2 Req) ..... **50-0288-S**
- 9. O-Ring, (-116) .737" ID x .942 OD, Viton ..... **50-7954-S**
- 10. O-Ring, 11/16 ID x 15/16" OD, Viton 11293, 11157, 11101, 11190 ..... **50-8039**
- 11. Flat Washer, .405" x 1.150: x .230" Alloy Steel ..... **50-7056**
- 12. Screw, SHCS, 3/8-24 x 1-3/4" Black ..... **50-0132**
- 13. Screw, HHC, Flanged, Gr8, 5/16-18 x 3/4" Black 25566-06 ..... **50-0100**



Milwaukee-Eight®

2007-2017 Twin Cam  
96"/103"/110"

1999-2006  
Twin Cam 88®

1986-2019  
Sportster® & Buell®

2014-2019 Street® &  
Street Rod®

Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix

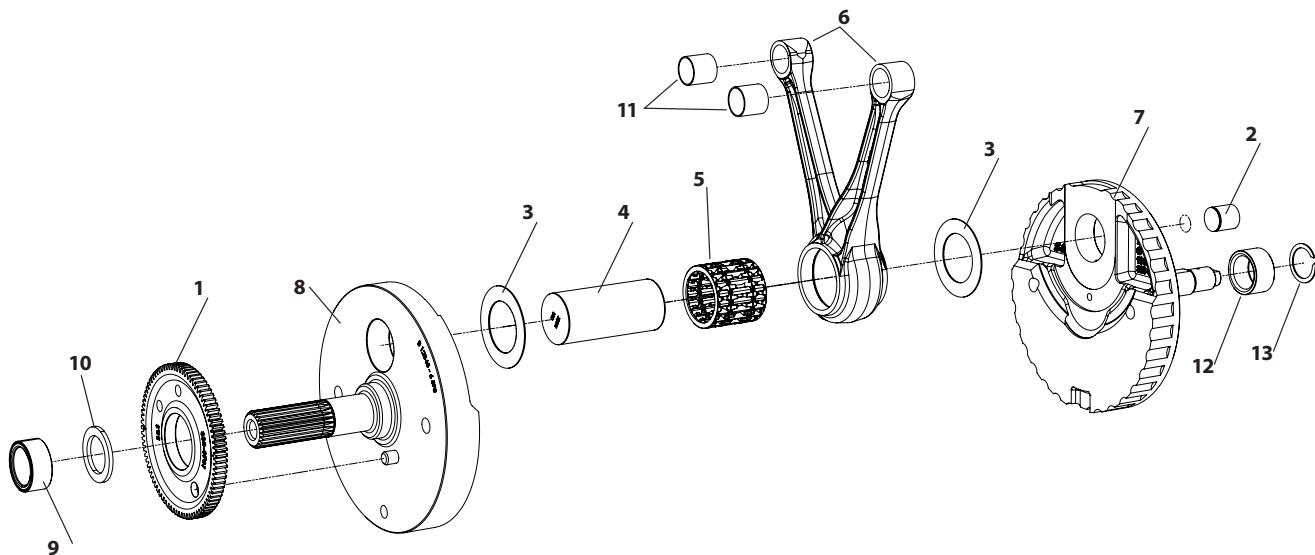
# 3 PIECE FLYWHEEL REPLACEMENT PARTS

## Replacement Parts:

- |  |          |   |          |
|--|----------|---|----------|
| 1. Gear, Balancer Drive, 2017-up M8 Models   | 330-0701 | 7. Flywheel, Partial Assembled, Right   | N/A      |
| 2. Plug, Drive, .8992" x .950", Steel, Fatigue Proof   | 106-4991 | 8. Flywheel, Partial Assembled, Left  | N/A      |
| 3. Washer, Flywheel, Thrust, 1.780" x 2.812" x .040",<br>Bronze, 2017-up M8 Models               | 320-0597 | 9. Race, Inr, L Main Brg, Mach, 1.25"x1.65"x0.713   | 330-0154 |
| 4. Crankpin, Press-In, Straight, Standard, 1.772",<br>2017-up M8 Models                          | 340-0200 | 10. Washer,FW,Thrust,1.25" x 1.83" x .136"  | 320-0034 |
| 5. Bearing, Assembly, Connecting Rod, Roller, 1.772" CP,<br>3 Piece, Standard, 2017-up M8 Models | 340-0222 | 11. Bushing, Wristpin, .928", Bronze  | 340-0024 |
| 6. Connecting Rod, Assembly, Heavy Duty, Tapered Wristpin,<br>8.015", 2017-up M8 Models          | 340-0202 | 12. Race, Inr, R Main Brg, 1.25"x1.65"x0.872"   | 330-0700 |
| Connecting Rod, Assembly, Heavy Duty, Full Width Wristpin,<br>8.015", 2017-up M8 Models          | 340-0203 | 13. Retaining Ring, External, Pinion Bearing, 1.160" x 1.480" x .046", Carbon<br>Steel, SAE 1060-1090 | 50-8057  |
| Connecting Rod, Assembly, Heavy Duty, Tapered Wristpin,<br>7.953", 2017-up M8 Models             | 340-0204 |   |          |
| Connecting Rod, Assembly, Heavy Duty, Full Width Wristpin, 7<br>.953", 2017-up M8 Models         | 340-0205 |   |          |
| Connecting Rod, Set, Heavy Duty, Tapered Wristpin, 8.015",<br>2017-up M8 Models                  | 340-0214 |   |          |
| Connecting Rod, Set, Heavy Duty, Full Width Wristpin,<br>8.015", 2017-up M8 Models               | 340-0215 |   |          |
| Connecting Rod, Set, Heavy Duty, Tapered Wristpin,<br>7.953", 2017-up M8 Models                  | 340-0216 |   |          |
| Connecting Rod, Set, Heavy Duty, Full Width Wristpin,<br>7.953", 2017-up M8 Models               | 340-0217 |   |          |

## NOTE:

A rod set consists of two connecting rods and installed wristpin bushings (6 and 11). A connecting rod assembly includes two connecting rods with installed wristpin bushings (6 and 11), drive plug (2), thrust washers (3), crankpin (4) and bearing set (5)





# 2007–2017 BIG TWINS

## **Performance Kits**

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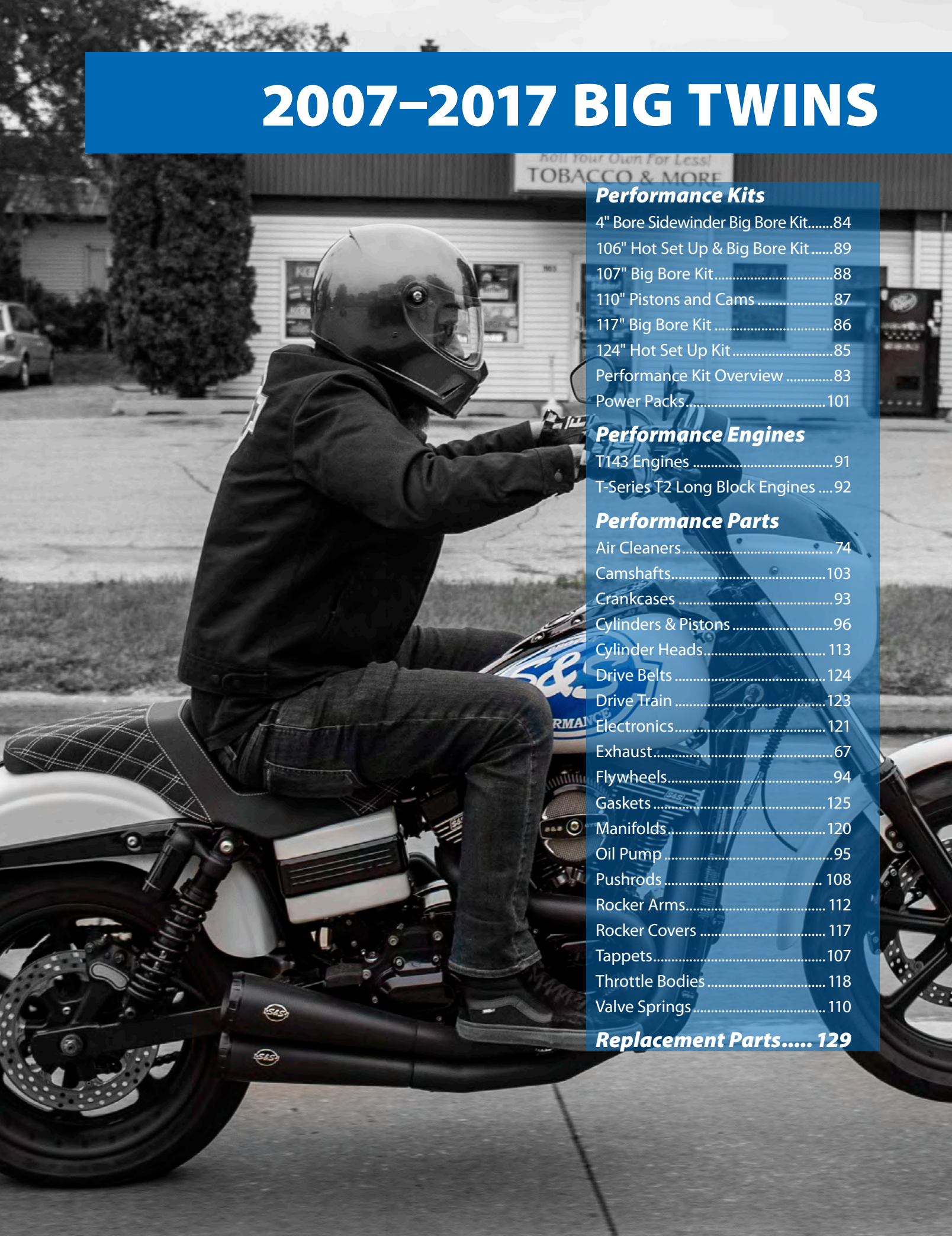
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## **Replacement Parts..... 129**



# SIDEWINDER® 2:1 EXHAUST FOR 1995-'16 TOURING MODELS



- 2:1 styling for high-performance baggers
- High-flow cat (550-0771A & 550-0772A)
- Increased power and torque
- Available in show chrome or ceramic black finish
- Machined aluminum end cap
- Includes adapters that allow use of wide band or stock O2 sensors
- Stainless steel stepped header construction
- Some fitments 50-State Legal: CARB EO# K-010-3
- Removable dB reducer included
- Made in the USA!



## SIDEWINDER® 2:1 EXHAUST SYSTEM FOR 2007–2016 FL MODELS — STREET LEGAL<sup>†</sup>

Finish	Part #
Chrome with Black Highlighted Machined end cap	550-0771A
Black with Black Highlighted Machined end cap	550-0772A

## SIDEWINDER® 2:1 EXHAUST SYSTEM FOR 1995–'09 FL MODELS — 1995–'03, 2007 FL MODELS — CA EMISSIONS LEGAL<sup>††</sup>

Chrome with Black Highlighted Machined end cap	550-0776
Black with Black Highlighted Machined end cap	550-0777

<sup>†</sup>Exempt from emissions tampering regulations under CARB EO# K-010-3 for all 2007-2016 FL touring models

<sup>††</sup>DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on EPA pollution controlled vehicles originally equipped with catalyst.

\*Qualified manufacturer declared emissions replacement part on FL touring models listed below.

### California Models:

Fuel Injected Non-CVO FL Touring Model Years: 1995-2003 and 2007

CVO FL Touring Model Years: 2000-2003

### 49 State Models:

Fuel Injected Non-CVO FL Touring Model Years: 1995-2005 and 2007-2009

CVO FL Touring Model Years: 2000-2005

WARNING: Cancer and Reproductive Harm

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.

**See next page for Left Side Shadow Pipe**



**REPLACEMENT PARTS: SEE PAGE 157**



# SHADOW PIPE

## FOR 1995–2020 TOURING MODELS WITH S&S SIDEWINDER® 2:1 EXHAUST

### FEATURES AND BENEFITS

- Available in show chrome and ceramic black finish
- Shadow muffler fills left side cutout in extended bags when running Sidewinder 2:1
- Matching end cap for left side is a mirror image of right side Sidewinder 2:1 Cap (not available on any of our slip-on or El Dorado products)
- 4.5" design
- All hardware included
- Made in USA!



### 2009–2020 TOURING MODELS EQUIPPED WITH S&S® SIDEWINDER® 2:1 EXHAUST

Chrome	<b>550-0829</b>	
Black	<b>550-0831</b>	

### 1995–2008 TOURING MODELS EQUIPPED WITH S&S® SIDEWINDER® 2:1 EXHAUST

Chrome	<b>550-0828</b>	
Black	<b>550-0830</b>	

**NOTE:** Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.

If you have...			...you'll need
BIKE	FINISH	SIDEWINDER PART #	SHADOW PIPE PART #
2009–2016 touring model	Chrome	550-0776	550-0829
		550-0771A	
	Black	550-0777	550-0831
		550-0772A	
1995–2008 touring model	Chrome	550-0776	550-0828
		550-0771B	
	Black	550-0777	550-0830
		550-0772A	



REPLACEMENT PARTS: SEE PAGE 158

Milwaukee-Eight™

2007–2017 Twin Cam 96°/103°/110°

1999–2006 Twin Cam 88°

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod™

Indian® Models

Tools & Shop Supplies

Warranty & Company Policy

Appendix





# EL DORADO TOURING EXHAUST SYSTEM

## MK45 MUFFLER/HEADER PACKAGE

### FITMENT

- 2009–'16 touring models

### FEATURES AND BENEFITS

- Improved power and torque
- Deep bass rumble throughout the RPM range
- Stainless steel header construction
- Includes adapters for OE or wide band O2 sensors
- O2 sensor location same as stock
- 50-state legal CARB EO# K-010
- SAE J2825 sound level compliant
- High Flow Cats increase exhaust flow for optimum torque
- Catalysts located in mufflers moves heat away from rider
- Show chrome or ceramic black finish
- Highlight Machined Thruster or Tracer end caps
- Made in USA!



Black w/Thruster



Chrome w/Thruster



Black w/Tracer



Chrome w/Tracer

### EL DORADO EXHAUST SYSTEM FOR 2009–2016 TOURING MODELS — STREET LEGAL

Description/Finish	End cap	Part #
Chrome	Highlight Machined Thruster	550-0677A
Chrome	Highlight Machined Tracer	550-0678A
Black	Highlight Machined Thruster	550-0679A
Black	Highlight Machined Tracer	550-0680A

Exempt from emissions tampering regulations under CARB EO# K-010 for all 2007-2016 FL touring models

WARNING: Cancer and Reproductive Harm

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.

# SLASH CUT SLIP-ON MUFFLERS FOR DYNA® MODELS

## FITMENT

- 1995–2009 Dyna® models with staggered exhaust
- 2008–'17 Dyna® models with 2-1-2 exhaust

## FEATURES AND BENEFITS

- Up to 16% more horsepower and 10% more torque (when used with Stealth Air Cleaner Kit)
- Wake up your bike without breaking your budget
- Classic slash cut styling
- Show chrome or ceramic black finish
- SAE J2825 sound level compliant
- 50-state legal
- Removable dB reducer
- Made in USA!



Removable dB reducer



### SLASH CUT MUFFLERS FOR 1995–2009 DYNA® MODELS WITH STAGGERED EXHAUST†

Finish	Part #
Chrome	550-0718

### SLASH CUT MUFFLERS FOR 2008–2017 DYNA® MODELS WITH 2-1-2 EXHAUST††

Chrome	550-0722
Black	550-0724

†DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified Manufacturer Declared Emissions Replacement Part on the Dyna Models Listed Below.

California Models: MY 2006–2007, Except CVO models

49 State Models: MY 1995–2009, Except CVO models

††DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified Manufacturer Declared Emissions Replacement Part on the Dyna Models Listed Below.

California Models: Fat Bob MY 2008, 2010–2017; Wide Glide MY 2010–2017; Low Rider S MY 2017

49 State Models: Fat Bob MY 2008–2017; Wide Glide MY 2010–2017; Low Rider S MY 2017

⚠ WARNING: Cancer and Reproductive Harm

REPLACEMENT PARTS: SEE PAGE 153



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix

# GRAND NATIONAL® SLIP-ON MUFFLERS FOR DYNA® MODELS

## FITMENT

- 1995–2009 Dyna® models with staggered exhaust
- 2008–'17 Dyna® models with 2-1-2 exhaust

## FEATURES AND BENEFITS

- Up to 17% more horsepower and 9% more torque (*when used with Stealth Air Cleaner Kit*)
- Race inspired Grand National end caps
- Show chrome or ceramic black finish
- Deep performance rumble
- SAE J2825 sound level compliant
- 50-state legal
- Removable dB reducer
- Made in USA!



Removable dB reducer



### GRAND NATIONAL® MUFFLERS FOR 1995–2009 DYNA® MODELS WITH STAGGERED EXHAUST†

Finish	Part #
Chrome	550-0719
Black	550-0721

### GRAND NATIONAL MUFFLERS FOR 2008–2017 DYNA® MODELS WITH 2-1-2 EXHAUST††

Chrome	550-0723
Black	550-0725

†DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified Manufacturer Declared Emissions Replacement Part on the Dyna Models Listed Below.

California Models: MY 2006-2007, Except CVO models

49 State Models: MY 1995–2009, Except CVO models

††DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified Manufacturer Declared Emissions Replacement Part on the Dyna Models Listed Below.

California Models: Fat Bob MY 2008, 2010–2017; Wide Glide MY 2010–2017; Low Rider S MY 2017

49 State Models: Fat Bob MY 2008–2017; Wide Glide MY 2010–2017; Low Rider S MY 2017

⚠ WARNING: Cancer and Reproductive Harm

**REPLACEMENT PARTS: SEE PAGE 154**



# Mk45 TOURING MUFFLERS

Mk45 4.5" Touring Mufflers are the result of decades of riding, racing and tuning. Combining both a stainless steel baffle and fiberglass packing, they create a deep rumble and improved horsepower and torque, all while adding a unique look with styled aluminum end caps.

## FITMENT

- 1995–2016 HD® touring models

## FEATURES AND BENEFITS

- 7 horsepower gain\*
- Bold 4.5" design — with stainless steel baffle and RaceTEX cartridge pack
- Available in show quality chrome or ceramic black finish
- Choose from S&S® Thruster or Tracer end-cap designs in chrome or black
- SAE J2825 sound level compliant
- 50-state legal
- Removable dB reducer
- Made in USA!

\*Tested with S&S Power Tune® Dual Header and Stealth Air Cleaner Kit



### Mk45 4.5" TOURING MUFFLERS W/END CAPS

Muffler Body Finish	end cap Finish & Style	Part #
Chrome	Chrome Thruster	550-0620
	Black Highlight Machined Thruster	550-0619
	Chrome Tracer	550-0624
	Black Highlight Machined Tracer	550-0623
Ceramic black	Chrome Thruster	550-0622
	Black Highlight Machined Thruster	550-0621
	Chrome Tracer	550-0626
	Black Highlight Machined Tracer	550-0625

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified manufacturer declared emissions replacement part on the FL touring models listed below.

California FL Touring Models:

Fuel Injected MY 1995–2003, 2007, and 2009–2016

CVO MY 2000–2003, and 2009–2016

49 State FL touring Models:

Carbureted MY 1995–2005

Fuel Injected MY 1995–2005, 2007–2016

CVO MY 2000–2005, and 2009–2016

WARNING: Cancer and Reproductive Harm

**NOTE:** Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.



Removable dB reducer



550-0620



550-0619



550-0624



550-0623



550-0622



550-0621



550-0626



550-0625

REPLACEMENT PARTS: SEE PAGE 155

# SLASH CUT 4" SLIP-ON MUFFLERS

## FITMENT

- 1995–2016 Harley-Davidson® touring models with non-catalyst mufflers
- 2009–'20 trike models

## FEATURES AND BENEFITS

- Show quality chrome or ceramic black finish
- Economical price
- High flow baffle
- Aggressive sound & excellent HP
- Excellent clearance on trike models
- SAE J2825 sound level compliant
- Removable dB reducer
- Made in USA!



Removable dB reducer

## SLASH CUT 4" TOURING MUFFLERS FOR 1995–2016 BIG TWINS AND 2009–'20 TRIKE MODELS

Finish	Part #
Chrome	550-0691
Black	550-0692

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified manufacturer declared emissions replacement part on the FL touring models listed below.

California FL Touring Models:

Fuel Injected MY 1995-2003, 2007, and 2009-2016

CVO MY 2000-2003, and 2009-2016

49 State FL touring Models:

Carbureted MY 1995-2005

Fuel Injected MY 1995-2005, 2007-2016

CVO MY 2000-2005, and 2009-2016

⚠ WARNING: Cancer and Reproductive Harm

REPLACEMENT PARTS: SEE PAGE 156



# GRAND NATIONAL® 4" SLIP-ON MUFFLERS

## FITMENT

- 1995–2016 Harley-Davidson® touring models with non-catalyst mufflers (except 2010 Road Glide® and Street Glide® using OEM 2:1 Header)
- 2009–'20 trike models

## FEATURES AND BENEFITS

- Show quality chrome or ceramic black finish
- Race inspired Grand National end cap
- High flow baffle
- Aggressive sound & excellent HP
- SAE J2825 sound level compliant
- 50-state legal on most models
- Removable dB reducer
- Made in USA!



Removable dB reducer

# Grand National

## GRAND NATIONAL® 4" MUFFLERS FOR 1995–2016 BIG TWINS AND 2009–'20 TRIKE MODELS

Finish	Part #
Chrome	550-0689
Black	550-0690

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified manufacturer declared emissions replacement part on the FL touring models listed below.

California FL Touring Models:

Fuel Injected MY 1995–2003, 2007, and 2009–2016

CVO MY 2000–2003, and 2009–2016

49 State FL touring Models:

Carbureted MY 1995–2005

Fuel Injected MY 1995–2005, 2007–2016

CVO MY 2000–2005, and 2009–2016

⚠ WARNING: Cancer and Reproductive Harm

REPLACEMENT PARTS: SEE PAGE 156

2006  
Road  
Glide®  
and  
Street  
Glide®

1986–2019  
Sportster® &

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix





# GRAND NATIONAL® 2:2 EXHAUST SYSTEM FOR DYNA® MODELS

## FITMENT

- 2006–2017 Dyna® models

## FEATURES AND BENEFITS

- 2:2 Free-flow design equals solid HP gains
- Hidden crossover provides performance benefits of 2:1
- Full heat shields on both front and rear headers
- Stainless steel header construction
- Race inspired Grand National end cap
- Available in chrome or ceramic black finish
- Oxygen sensor ports allow use of wide band or stock O2 sensors.
- Right side passenger peg relocation bracket available (*part #550-0801 for \$69.95*)
- SAE J2825 sound level compliant
- Removable dB reducers
- Made in USA!



Removable dB reducer

## GRAND NATIONAL® 2:2 EXHAUST SYSTEM FOR 2006–2007 DYNA® MODELS

Finish	Part #
Chrome	550-0743
Black	550-0742

## GRAND NATIONAL® 2:2 EXHAUST SYSTEM FOR 2008–2017 DYNA® MODELS — RACE ONLY

Chrome	550-0743
Black	550-0742

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. NOT LEGAL FOR SALE OR USE ON EPA POLLUTION CONTROLLED MOTORCYCLES ORIGINALLY EQUIPPED WITH CATALYST.

\*QUALIFIED MANUFACTURER DECLARED EMISSIONS REPLACEMENT PART ON THE DYNA MODELS LISTED BELOW.

CALIFORNIA MODELS: MY 2006-2007, EXCEPT CVO MODELS

49 STATE MODELS: MY 2006-2009, EXCEPT CVO MODELS

⚠ WARNING: Cancer and Reproductive Harm

# Grand National



REPLACEMENT PARTS: SEE PAGE 159

# POWER TUNE® DUAL HEADERS

## FITMENT

- Non-catalyst equipped Harley-Davidson® touring models<sup>†</sup>
- 2006–2016 Harley-Davidson® Tri Glide® & Freewheeler® models<sup>††</sup>

## FEATURES AND BENEFITS

- Adds up to 8 horsepower over stock header pipes
- Independent dual look with hidden crossover
- Exclusive design moves the rear cylinder header away from the passenger to reduce radiated heat
- Full chrome or ceramic black heat shielding with 220° coverage
- Updated styling to give the bike a modern look
- Oxygen sensor bungs<sup>†</sup>
- Spherical inlet design for improved sealing and exhaust gasket durability
- Hardware included to mount crossover pipe
- Exhaust port gaskets included
- All hardware included
- Made in USA!



550-0003A



550-0142A

## NOTES

Fuel injection tuning is not required with this product but is highly recommended for best results.

Power Tune® Dual Headers can be used on 1993–'94 models if 1995–up mufflers are used.

2010 Road Glide® and Street Glide® using OEM 2:1 Header require 1 of each HD® part 65723-85 mounting bracket and 65724-85A rubber mount for left side muffler mounting.

## POWER TUNE® DUAL HEADERS

Fitment	Finish	Part #
1995–'08 <sup>†</sup> big twins	Chrome	550-0003A**
	Black	550-0142A**
2009–'16 non-catalyst equipped touring and 2009–'16 Tri Glide <sup>††</sup> & Freewheeler models	Chrome	550-0004B***
	Black	550-0143B***

<sup>†</sup>Has 18mm sensor fittings in the stock locations for 2007–'08 bikes. If not equipped with oxygen sensors, the ports can be used for tuning. Plugs are included if ports are not used.

<sup>††</sup>Requires the Trike Adaptor Kit. See chart below.

\*\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on EPA pollution controlled vehicles originally equipped with catalyst.

\*Qualified manufacturer declared emissions replacement part on FL touring models listed below.

California Models:

FL Touring Fuel Injected MY 1995-2003, and 2007  
CVO FL Touring MY 2000-2003

49 State Models:

FL Touring Carbureted MY 1995-2005  
FL Touring Fuel Injected MY 1995-2005 and 2007-2008  
CVO FL Touring MY 2000-2005

\*\*\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with a catalyst exhaust

\*Qualified Manufacturer Declared Emissions Compliant Part for 2009 Harley-Davidson 49-State Non-CVO FL Touring Models Only

⚠ WARNING: Cancer and Reproductive Harm



## †† TRIKE ADAPTOR KIT

Fitment	Finish	Part #
2009, 2014–'20 Tri Glide® & Freewheeler® models	Chrome	550-0799

⚠ WARNING: Cancer and Reproductive Harm

REPLACEMENT PARTS: SEE PAGE 160

## SPECIAL NOTES

It may be necessary to re-jet the carburetor or recalibrate the fuel injection system for best performance when a change is made in the exhaust system. Dyno results are from tests performed at the S&S® Research and Development facility in Viola, Wisconsin.

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

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# AIR STINGER STEALTH AIR CLEANER KITS

**NEW  
2021**



The Air Stinger takes the existing high flow Stealth air cleaner and replaces the air smoothing stinger with a similarly shaped filter element. More filter surface equals 55% gain over a factory filter.

Also available with the classic Mini Teardrop cover in black or chrome or as a replacement cover plate to update your existing Stealth system. The Air Stinger filter element is washable just like the Stealth filters and designed to last for years.

<b>FITMENT</b>	<b>TEARDROP FINISH</b>	<b>PART #</b>
2001-'17 big twin <i>except Throttle by Wire</i>	Gloss Black	<b>170-0722</b>
2001-'17 big twin <i>except Throttle by Wire</i>	Chrome	<b>170-0721</b>
2008-'16 touring, '16-'17 Softail® models	Gloss Black	<b>170-0720</b>
2008-'16 touring, '16-'17 Softail models	Chrome	<b>170-0719</b>
<b>FITMENT</b>	<b>WITH S&amp;S RING</b>	<b>PART #</b>
2001-'17 big twin <i>except Throttle by Wire</i>	Brushed Ring	<b>170-0716</b>
2008-'16 touring, '16-'17 Softail models	Brushed Ring	<b>170-0715</b>
<b>AIR STINGER FILTER ONLY</b>		<b>170-0723</b>

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE

\*Qualified Manufacturer Declared 49-State Federal Emissions Compliant Part



**REPLACEMENT PARTS: SEE PAGE 145**



# STEALTH AIR CLEANER KITS

**NEW AIR STINGER STEALTH KITS**  
SEE PAGE 74



- 1999–'17 big twins (except 2017 touring models)
- Air directional stinger cone in the filter

- Pre-filters are available — See page 82
- Use with any of several S&S designed covers — See page 78

- High flow (1" taller) filter kit available — See page 82
- Backplate adaptor for Rushmore covers also available — See page 82

Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster™ & Buell™

2014–2019 Street™ &  
Street Rod™

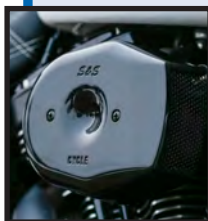
Indian™ Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix

## STEALTH TRIBUTE COVER AIR CLEANER KITS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS



Fitment	Finish	Part #
2008–'16 touring & 2016–'17 Softail models (except Tri-Glide® & CVO® Models)	Chrome±	<b>170-0594</b>
	Gloss Black	<b>170-0597</b>
2001–'17 big twin (except Throttle by Wire)	Chrome±	<b>170-0596</b>
	Gloss Black	<b>170-0599</b>

± WARNING: Cancer and Reproductive Harm

## STEALTH TEARDROP AIR CLEANER KIT EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS



Application	Fuel System	Finish	Part #
2001–'17 big twin (except 2017 touring models & Throttle by Wire) Includes Stealth AC Kit 170-0300B	Stock EFI, Delphi® EFI	Chrome	<b>170-0528±</b>
		Gloss Black	<b>170-0529</b>
2008–'16 touring, '16–'17 Softail® (except Tri-Glide® & CVO® Models) Includes Stealth AC Kit 170-0301B	Throttle by Wire	Chrome	<b>170-0522±</b>
		Gloss Black	<b>170-0523</b>

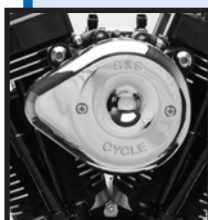
± WARNING: Cancer and Reproductive Harm

## CARBON FIBER TEARDROP KIT EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS



Application	Part #
2001–'17 big twin (except Throttle by Wire)	<b>170-0499</b>
2008–'16 touring models and 2016–'17 Softail® models	<b>170-0500</b>

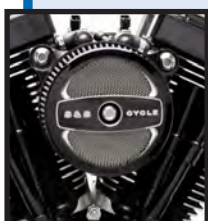
## MINI TEARDROP AIR CLEANER KIT EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS



Application	Fuel System	Finish	Part #
2001–'17 big twin (except 2017 touring models & Throttle by Wire) Includes Stealth AC Kit 170-0300B	Stock EFI, Delphi® EFI	Chrome	<b>170-0441±</b>
		Gloss Black	<b>170-0442</b>
2008–'16 touring, '16–'17 ST® (except Tri-Glide® & CVO® Models) Includes Stealth AC Kit 170-0301B	Throttle by Wire	Chrome	<b>170-0437±</b>
		Gloss Black	<b>170-0438</b>

± WARNING: Cancer and Reproductive Harm

## AIR 1 AIR CLEANER KIT EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS



Application	Fuel System	Part #
2001–'17 big twin (except 2017 touring models & Throttle By Wire) Includes Stealth AC Kit 170-0300B	Stock EFI Delphi®	<b>170-0478</b>
2008–'17 big twin (except 2017 touring models, Tri Glide® & CVO® Models) Includes Stealth AC Kit 170-0301B	Throttle By Wire	<b>170-0485</b>



# CON'T STEALTH AIR CLEANER KITS



## TRI-SPOKE AIR CLEANER KIT EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS

Application	Fuel System	Part #
2001–'17 big twin (except 2017 touring models & Throttle By Wire) Includes Stealth AC Kit 170-0300B	Stock EFI Delphi®	<b>170-0476</b>
2008–'17 big twin (except 2017 touring models, Tri-Glide® & CVO® Models) Includes Stealth AC Kit 170-0301B	Throttle By Wire	<b>170-0483</b>



## TORKER AIR CLEANER KIT EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS

Application	Fuel System	Part #
2001–'17 big twin (except 2017 touring models & Throttle By Wire) Includes Stealth AC Kit 170-0300B	Stock EFI Delphi®	<b>170-0477</b>
2008–'17 big twin (except 2017 touring models, Tri-Glide® & CVO® Models) Includes Stealth AC Kit 170-0301B	Throttle By Wire	<b>170-0484</b>



## AIRSTREAM AIR CLEANER KIT EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS

Application	Fuel System	Finish	Part #
2001–'17 big twin (except 2017 touring models & Throttle By Wire) Includes Stealth AC Kit 170-0300B	Stock EFI Delphi®	Chrome	<b>170-0479<sup>±</sup></b>
		Gloss Black	<b>170-0480</b>
2008–'17 big twin (except 2017 touring models, Tri-Glide® & CVO® Models) Includes Stealth AC Kit 170-0301B	Throttle By Wire	Chrome	<b>170-0486<sup>±</sup></b>
		Gloss Black	<b>170-0487</b>

± WARNING: Cancer and Reproductive Harm



## STEALTH AIR CLEANER KITS — NO COVER

EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS

Application	Fuel System	Part #
2001–'17 big twin (except 2017 touring models & Throttle By Wire)	Stock EFI Delphi®	<b>170-0300B</b>
2008–'17 big twin (except 2017 touring models, Tri-Glide® & CVO® Models)	Throttle By Wire	<b>170-0301B</b>

REPLACEMENT PARTS: SEE PAGE 146

**NOTE** Fuel injection tuning is not required for this product.



## CHROME AIRSTREAM AIR CLEANER KITS

Application	Fuel System	Part #
1999–2017 big twins (except '99 Softail® carb & Throttle by Wire)	Stock CV/EFI Delphi®	<b>170-0056</b>
2008–2017 big twins (except 2017 touring models)	Throttle by Wire	<b>170-0054</b>

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

WARNING: Cancer and Reproductive Harm

## STEALTH AIR CLEANER KITS\* — NO COVER

Application	Fuel System	Part #
1999–2017 big twins (except '99 Softail® carb & Throttle by Wire)	Stock CV/EFI Delphi®	<b>170-0060</b>
2008–2017 big twins (except 2017 touring models)	Throttle by Wire	<b>170-0061</b>

\*These kits do not contain covers – Choose an S&S cover or use your stock Twin Cam 88®, 96™ or 103™ cover

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

# STEALTH AIR CLEANER KITS FOR S&S ENGINES

- Covers sold separately. See page 78 for options.

## STEALTH AIR CLEANER KITS FOR S&S ENGINES

Fitment	Fuel System	Part #
2003–'17 HD® Models (except '17 touring models)	S&S 66mm Throttle Hog	<b>170-0165</b>
2003–'17 HD® Models (except '17 touring models)	S&S 58mm Throttle Hog	<b>170-0164</b>
1995–1999 S&S Super Stock Engines	S&S Single Bore VFI 52mm Throttle Bodies	<b>170-0287</b>
1995–1999 EFI big twin models	S&S Single Bore VFI 58mm Throttle Bodies	<b>170-0283</b>
1999–2006 EFI big twin models	S&S Single Bore VFI 58mm Throttle Bodies	<b>170-0284</b>
T124 1999–'06 big twin models (except '06 Dyna® models) (Engines produced after 2013)	S&S E or G Carburetor	<b>170-0058</b>
T124 1999–'06 big twin models (except '06 Dyna® models) (Engines produced after 2013)	Stock CV/EFI Delphi®	<b>170-0060</b>
T111 1999–'06 big twin models (except '06 Dyna® models) (Engines produced after 2013)	S&S E or G Carburetor	<b>170-0058</b>
T111 1999–'06 big twin models (except '06 Dyna® models) (Engines produced after 2013)	Stock CV/EFI Delphi®	<b>170-0060</b>

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

## EC STEALTH AIR CLEANER KITS

- 110" Harley-Davidson® Dyna® & Softail® Models up to 2017 (e9 11002G)
  - 103" Harley-Davidson Dyna & Softail Models up to 2017 (e9 11003G)
- Covers sold separately. See page 78 for options.



### EC STEALTH AC KITS

Cable Throttle Body 103" HD® Dyna® & Softail® models up to 2017	<b>170-0331</b>
Throttle by Wire 103" HD Dyna® & Softail models up to 2017	<b>170-0332</b>
Cable Throttle Body 110" HD Dyna & Softail models up to 2017	<b>170-0333</b>
Throttle by Wire 110" HD Dyna & Softail models up to 2017	<b>170-0334</b>



## NOTE

These Stealth air cleaner kits do not come with cover. See page 78 for options.



# STEALTH AIR CLEANER KIT COVERS (ONLY)



Tribute in Gloss Black



Carbon Fiber



Mini in Chrome



Mini in Gloss Black



Tri-Spoke



Torker



Air 1



Airstream in Chrome



Airstream in Gloss Black



111



124



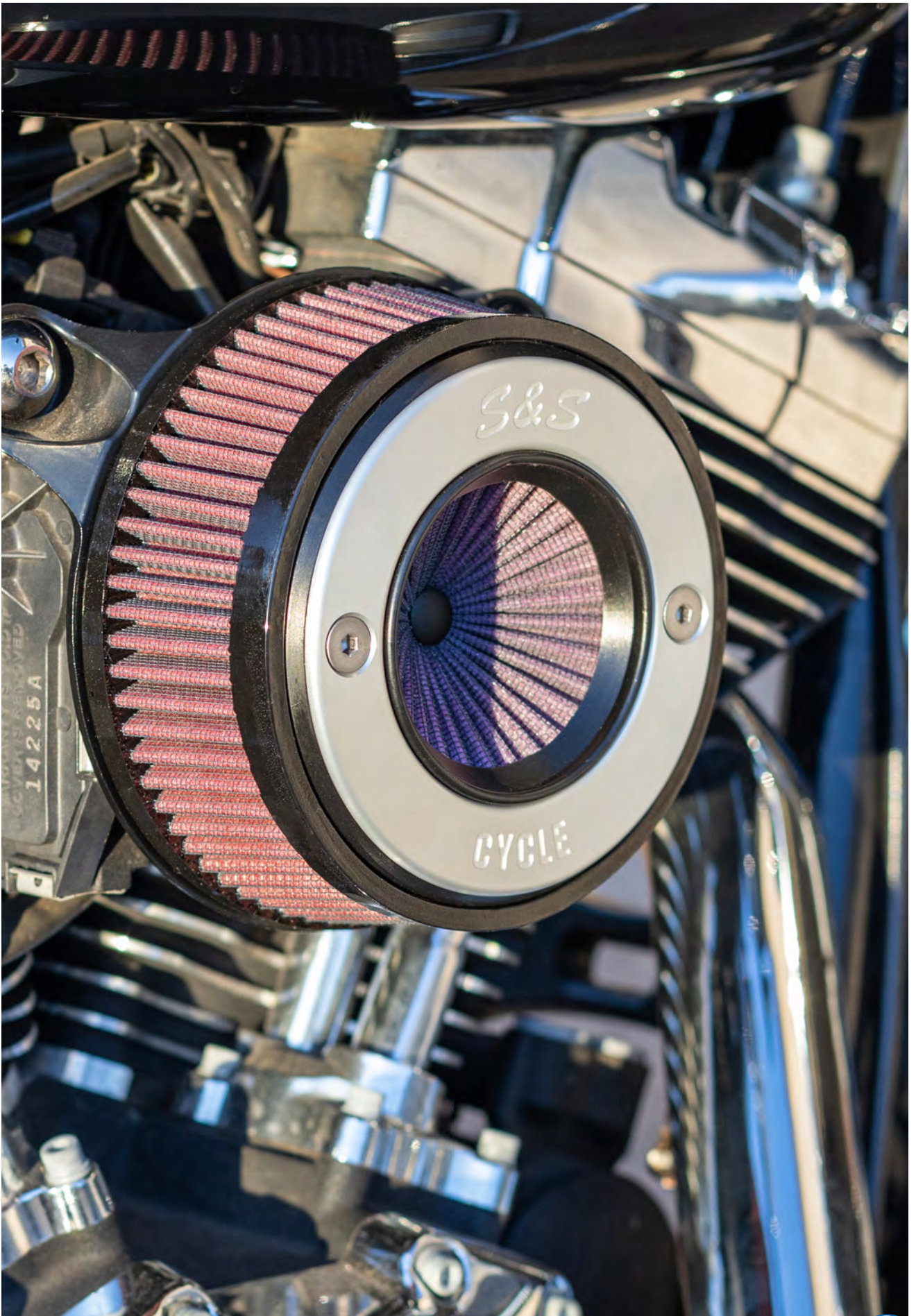
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## STEALTH COVERS

Tribute		Teardrop		Teardrop—Slasher		Carbon Fiber	Mini	
Chrome	Gloss Black	Chrome	Gloss Black	Chrome	Gloss Black	Black	Chrome	Gloss Black
170-0592	170-0593	170-0530	170-0531	170-0532	170-0533	170-0501	170-0367	170-0366

Tri-Spoke	Torker	Air 1	Airstream		Displacement		
Gloss Black w/Highlights	Gloss Black w/Highlights	Gloss Black w/Highlights	Chrome	Gloss Black	111	124	143
170-0210	170-0206	170-0214	170-0118	170-0396	170-0319	170-0321	170-0323

WARNING: Cancer and Reproductive Harm



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

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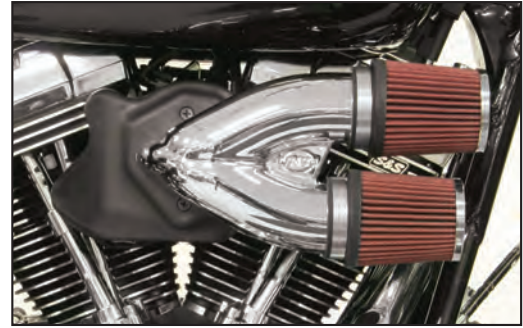
# SINGLE BORE TUNED INDUCTION SYSTEM

## FITMENT

- 2007–'17 big twin models including Harley-Davidson® Tri Glide® models (except 2007–'08 FXDWG & 2009 FXDC/FXDF and 2017 touring models)

## FEATURES AND BENEFITS

- Bolt-on performance—over twice the filtering area over stock intake system
- Increases horsepower and torque across the rpm range using air column inertia and carefully timed gas dynamic pressure waves
- Smooth intake tract of carefully selected tuned lengths increases performance
- High flow washable and reusable cotton media provides performance, protection, and economy



### SINGLE BORE TUNED INDUCTION SYSTEM KITS

EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS



Fitment	Fuel System	Finish	Part #
2001–'17 Harley-Davidson® big twin (except Throttle By Wire and CVO® Models)	Stock EFI Delphi®	Chrome/Red Filters	<b>170-0308B</b>
2008–'16 HD® touring and '16 & '17 Softail® (except Tri-Glide® & CVO® Models)	Throttle By Wire	Chrome/Red Filters	<b>170-0310B</b>

WARNING: Cancer and Reproductive Harm

### SINGLE BORE TUNED INDUCTION SYSTEM KITS

Fitment	Fuel Delivery	Finish	Part #
2007–2017 big twins (except 2017 touring models)	EFI Delphi®	Chrome/Red Filters	<b>170-0087</b>

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WARNING: Cancer and Reproductive Harm



Chrome billet adaptor bracket for 2007–'17 big twins, except touring



Molded black adaptor bracket for 2008–'16 touring models

## NOTES

- Does not fit Screamin' Eagle 58mm or 64mm throttle bodies, or S&S 58mm or 66mm Throttle Hogs.
- Single bore tuned induction will not fit on motorcycles equipped with fairing lower glove boxes.
- Fuel injection tuning is not required with this product but is highly recommended for best results.

**REPLACEMENT PARTS:  
SEE PAGE 148 & SEE PAGE 149**



# CLASSIC TEARDROP AIR CLEANER KIT

## FITMENT

- 2007–'17 big twin models including Harley-Davidson® Tri Glide® models (except 2017 touring models)

## FEATURES AND BENEFITS

- Efficient and free flowing intake that can add two to five horsepower
- Uniquely designed back plate has air horn style radiused entryway to reduce turbulence
- Dimpled cover with directional air cone on inside creates smooth path for air
- Great addition to performance exhaust or cams

## KIT CONTENTS

- Filter
- Backing plate and cover
- All mounting hardware
- Instructions



**CLASSIC TEARDROP AIR CLEANER KITS FOR STOCK EFI**  
EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS

Fitment	Fuel System	Finish	Stock EFI, W/ 96 & 103 Engines
2001–'17 HD® big twin models <i>(except Throttle By Wire and CVO® Models)</i>	Stock EFI Delphi®	Chrome	<b>170-0303B±</b>
		Gloss Black	<b>170-0304B</b>
2008–'16 HD® touring stock-bore and '16 & '17 Softail® models <i>(except Tri-Glide® &amp; CVO® Models)</i>	Throttle By Wire	Chrome	<b>170-0305B±</b>
		Gloss Black	<b>170-0312B</b>

± ⚠️ WARNING: Cancer and Reproductive Harm



## CLASSIC TEARDROP AIR CLEANER KITS FOR STOCK CARB/EFI

Fitment	Finish	Stock EFI, With 110 Engines
2008–2017 big twins <i>(except 2017 touring)</i>	Chrome	<b>106-2091±</b>
2007–'10 Softail® CVO® Models (& 1993–'06 HD® carbureted big twins)	Chrome	<b>17-0450±</b>
	Gloss Black	<b>170-0181A</b>

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± ⚠️ WARNING: Cancer and Reproductive Harm

## CLASSIC TEARDROP AIR CLEANER KITS FOR S&S SINGLE BORE EFI THROTTLE BODIES

Fitment	Finish	52mm
Stock Harley-Davidson® heads, S&S-T-Series Long block engines or S&S Heads for stock breathing system	Chrome	<b>17-0498</b>

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⚠️ WARNING: Cancer and Reproductive Harm

## NOTE

Fuel injection tuning is not required with this product but is highly recommended for best results.

**REPLACEMENT PARTS: SEE PAGE 152**



## CLASSIC TEARDROP AIR CLEANER COVERS

Style	Finish	Part #
Classic Teardrop	Chrome	<b>17-0378±</b>
	Gloss Black	<b>170-0384A</b>
Slasher Teardrop	Chrome	<b>17-0004±</b>
	Gloss Black	<b>170-0419</b>
Nostalgic Teardrop	Polished	<b>17-0071</b>

± ⚠️ WARNING: Cancer and Reproductive Harm

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/130"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

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# STEALTH BACKPLATE ADAPTOR FOR RUSHMORE COVER FOR 2014–2016 TOURING MODELS

S&S Stealth air cleaners allow owners of 1999–later big twins to use their stock air cleaner cover to hide a performance air cleaner. The new adaptor kit for Rushmore Models allows late model bagger owners to fly under the radar too.

## FITMENT

- 2014–2016 touring models

### STEALTH BACKPLATE ADAPTOR FOR RUSHMORE COVER

Fitment	Part #
2014–2016 touring models	170-0261



# PRE-FILTERS

## FITMENT

- S&S® Stealth Air Filters

## FEATURES AND BENEFITS

- Water resistant
- Prevents large debris from prematurely clogging filter
- Washable Nylon
- Promotes longer filter life
- Reduces the risk of water entering air intake system

### PRE-FILTERS

Application	Part #
Standard	170-0193
1" Tall	170-0197



170-0197

# HIGH FLOW AIR FILTER KITS

## FITMENT

- S&S Classic Teardrop air cleaners for Super E & G carbs and S&S EFI throttle bodies

## FEATURES AND BENEFITS

- Low restriction filter element comes pre-oiled for true plug and play installation
- 1" wider filtration area provides up to 37% more airflow over standard S&S filters
- Resulting band of exposed filter material imparts a high performance look

## KIT CONTENTS

- Wide filter
- Filter spacers



170-0127

### HIGH FLOW AIR FILTERS

Description	Fitment	Part #
High Flow Air Filter Kit (includes spacers)	Classic Teardrop	17-0045
	Stealth, 1" Taller	170-0127*
1" Taller Filter Only	Classic Teardrop	106-4724
	Stealth	170-0154
Spacer	Classic Teardrop & Stealth, 1" Taller	50-5009-S

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17-0045

# STANDARD REPLACEMENT FILTERS

### STANDARD REPLACEMENT AIR FILTERS

Description	Fitment	Part #
Standard Filter Only	Classic Teardrop	106-4722
	Stealth	170-0126

# PERFORMANCE KIT OVERVIEW

## FOR HARLEY-DAVIDSON® TWIN CAM 96™ AND 103™



### 4" BORE BOLT-IN SIDEWINDER® BIG BORE KIT

S&S 4" big bore cylinder and piston kits boost 88 and 96/103" Harley-Davidson® big twin engines to 100" and 110" respectively. These bolt-in kits don't require any machining, rebalancing or engine removal, and include just about everything you'll need to complete the installation. The biggest cylinder bore that can be installed in a stock crankcase without machining! [See page 84](#)



### 124" HOT SET UP KIT

Ready for the ultimate? The 124" HSU kit will take you to the limit increasing both your bore and stroke. The included flywheel increases the stroke from 4 3/8" to 4 5/8". The kit's cylinders open the stock 3 3/4" bore to 4 1/8". S&S Easy Start 640 gear drive camshafts are included! Kits are available for balanced and unbalanced engines. CTO allows you to select other camshaft and cylinder head options to build the ultimate kit of your dreams. Your crankcase will require machining for these cylinder spigots to fit. Fuel injection tuning required. [See page 85](#)



### 117" BIG BORE KIT

The S&S 117" big bore top end kit, for 96" and 103" engines, is an economical route to big inches and increased performance. Use the stock crankcases, flywheel assembly, and cylinder heads for a stock look and a smaller price tag. Crankcase boring is required to accommodate the larger 4 1/8" bore cylinders. Finish the conversion off with your choice of performance cams, fuel system upgrade, and tuning. Available in dished dome or flat topped pistons and in wrinkle black or silver powder coat finish that matches the stock heads and cases. [See page 86](#)



### 107" & 106" BIG BORE KIT

A low cost bolt-on kit provides big displacement! The 107" and 106" Big Bore Kits offer the simplicity of a bolt-on cylinder kit. Satisfy your thirst for speed! Bore is increased from 3.750" to 3.927", taking your displacement from 96" or 103" to 106"! The kit contains cylinders, pistons, rings and all gaskets needed. Fuel injection tuning required. [See page 88](#)

PERFORMANCE KIT SPECIFICATIONS FOR HARLEY-DAVIDSON® TWIN CAM 96™/103™/110™													
KIT DESCRIPTION	BORE	STROKE	COMPRESSION RATIO								CAMSHAFT	HORSEPOWER	TORQUE
			Stock Heads	79cc	89cc	91cc	CNC Heads					(CNC Heads)	
							83cc	85cc	87cc	90cc			
Power Pack	4"	4 3/8"	10.5	11.1	10.2	9.9	10.7	10.5	10.3	10	585	110	119
124" Hot Set Up Kit (Flat Top Piston)	4 1/8"	4 5/8"	11.4:1	*	11:1	10.8:1	11.6:1	11.4:1	11.2:1	10.9:1	640	127	130
106" Big Bore Kit	3.927"	4 3/8"	10.0:1	10.7:1	9.7:1	9.5:1	10.2:1	10.1:1	9.9:1	9.6:1	–	106	108

*\*Not Recommended*

PERFORMANCE KIT CONTENTS, OPTIONS AND REQUIREMENTS FOR HARLEY-DAVIDSON® TWIN CAM 96™/103™/110™													
KIT DESCRIPTION	PACKAGE CONTENTS										MACHINING REQUIRED	CTO OPTIONS*	REJETTING OR CALIBRATION CHANGE
	Flywheels	Cylinders	Pistons w/rings	Rocker Arms	Pushrods w/covers	Lifters	Camshafts	Valve Springs	Heads w/springs	Gaskets			
Power Pack		●	●			●	●						
124" Hot Set Up Kit	●	●	●	●	●	●	●		①	●	③ ④	⑤ ⑥ ⑦	●
117" Big Bore Kit		●	●						①	●	③ ④	⑤ ⑥ ⑦	●
106" Big Bore Kit		●	●							●			●

① = Optional  
 ② = Bore & hone cylinders  
 ③ = Crankcase machining for center stud  
 ④ = Crankcase machining for cylinder spigots  
 ⑤ = Camshaft selection  
 ⑥ = CNC heads  
 ⑦ = Combustion chamber size selection  
 ⑧ = Cylinder & piston set available

*\*The CTO option column lists only the major items offered. Virtually any option can be selected from our product offerings through the Configure To Order (CTO) program.*

FUEL INJECTION TUNING REQUIRED. S&S OFFERS FUEL INJECTION TUNING SOLUTIONS: SEE PAGE 122



Milwaukee-Eight®

2007–2017 Twin Cam 96"/103"/110™

1999–2006 Twin Cam 88®

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod™

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# 4" BORE BOLT-IN SIDEWINDER® BIG BORE KITS



S&S 4" big bore cylinder and piston kits boost 96/103" HD® big twin engines to 110". These bolt-in kits don't require any machining, rebalancing or engine removal and include just about everything you'll need to complete the installation. The biggest cylinder bore that can be installed in a stock crankcase without machining!

## FEATURES & BENEFITS

- Bolts in. No machining, balancing, or splitting the crankcases
- 96" and 103" engines end up at 110"
- Complete kits include cylinders, pistons, gaskets, and instructions
- Choose from wrinkle black or silver powder coat cylinders – matches stock finish

## FITMENT

- 2007–17 big twins (except 2014–'16 Twin-Cooled™ & 2017 touring models)

## SPECS FOR S&S 4" BORE BOLT-IN CYLINDER & PISTON KITS

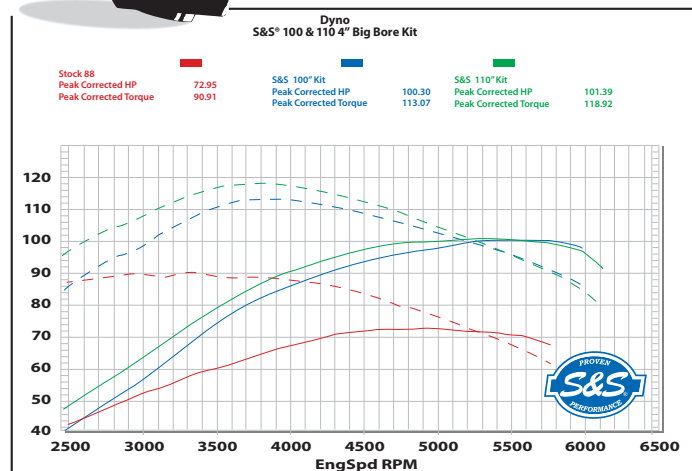
Year	Stroke	Bore	Cylinder Length	Piston Type	Dome Volume	Compression Ratio		
						83cc CNC Heads	85cc Stock Heads	89cc S&S Heads
2007–2017	4 3/8"	4.00"	4.937"	Forged	.75 pop up	10.7:1	10.5:1	10.2:1



## 4" BORE BOLT-IN SIDEWINDER® BIG BORE KITS

Displacement	Year	Stroke	Finish	Part #
110	2007–'17 big twin (except 2014–2016 Twin-Cooled™ & 2017 touring)	4 3/8"	Silver	910-0650
	2007–'17 big twin (except 2014–2016 Twin-Cooled™ & 2017 touring)	4 3/8"	Wrinkle Black	910-0651

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These dyno results from our DynoJet® 250i chassis dynamometer clearly show the performance increases available with the S&S bolt-in 4 inch bore kits. The lowest (red) set of curves represents a stock 88 cid engine in a 2004 Harley-Davidson® FLHR Road King®. The next curves above the stock baseline (blue) shows the performance of the S&S 100" bolt-in big bore kit. The highest set of curves show the results from an S&S 110" big bore kit installed in a 96 cid engine. The engines with the S&S 100" and 110" kits were also set up with S&S 585 cams, Power Tune® headers, MK45 muffler, and the stock EFI throttle body with an S&S Stealth air cleaner.

## NOTES

Not for use with S&S 79cc Cylinder Heads.

Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.

# 124" HOT SET UP KIT®

## FITMENT

- All 2007–'17 big twin models and 2006 Dyna® models, except 2017 touring models (2016 Twin-Cooled™ models not compatible with kits containing heads)

## FEATURES AND BENEFITS

- Huge displacement increase means huge power increase
- Stock crankcases, cylinder heads, oil pump, and cam cover can be reused
- Original engine serial numbers are retained
- Gear drive S&S 640 Easy Start Cams included!
- Wrinkle black& stone gray powder coat finish matches factory finish
- .045" MLS (multi-layered steel) head gaskets
- Adds .096" to engine height—still fits in stock frames
- Kits with S&S heads use stock length manifolds (S&S size 405)
- Cylinder w/piston kits include fitted pistons ready to install



## OPTIONS

The following three options are examples of the most commonly ordered kits. Option 1 (10.8:1 compression ratio) includes:

- S&S 91cc high flow Super Stock® heads
- Flat topped pistons

Option 2 (without heads, 10.4:1 compression ratio intended for stock 85cc chamber cylinder heads) includes:

- 10.9cc Dished pistons

### S&S® 124" HOT SET UP KIT® SPECIFICATIONS

Year	Stroke	Bore	Cylinder Length	Piston Type/Compression Ratio			
				91cc S&S Heads	89cc S&S Heads	85cc Stock Heads	95cc Stock 110 CVO Heads
2007–'16	4 5/8"	4 1/8"	5.004"	Flat top forged/10.8:1	Flat top forged/11:1	Forged, 10.9cc dish/10.4:1	10.5:1



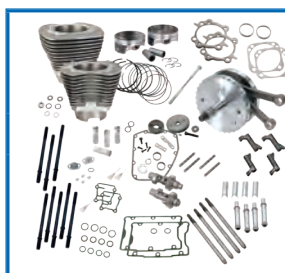
900-0569

### 124" HOT SET UP KITS® FOR HARLEY-DAVIDSON® TWIN CAM 96™/96B™ /103™/110™ ENGINES (Kits include S&S® Super Stock® 91cc Cylinder Heads 10.8:1 Compression)

Model or Engine Type	Cam	Finish	Part #
2006 Dyna® & 2007–'17 Twin Cam 96™/103™ & 2008–up touring models	640GE	Wrinkle Black	900-0568
2007–'17 big twins w/Balancer			900-0569

Does not fit Twin-Cooled™ models

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### 124" HOT SET UP KIT® WITHOUT HEADS FOR HARLEY-DAVIDSON® CVO 110 ENGINES (KITS INCLUDE FLAT TOP PISTONS 10.5:1 COMPRESSION WHEN USED WITH 95CC STOCK 110 CVO HEADS)

Year	Cam	Finish	Part #
2007–'17 CVO 110 engines	640	Stone Gray	900-0690

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## NOTES

Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.

S&S Easy Start Cams save you money—no need to buy compression releases or S&S rocker covers.

Twin-Cooled applications will require separate purchase of 900-0609 head gaskets.

For engines with cable controlled throttle bodies we recommend the S&S 58mm or 66mm Throttle Hog (See page 118). For 2008–up touring models with electronic throttle control S&S recommends a S&S Throttle Hog 58mm or 66mm Throttle body (See page 119).

This kit will require that the case be bored to accept the larger cylinders.

Main Bearing Note: S&S flywheel assemblies included in a 124" S&S Hot Set Up Kit® for 1999–'16 big twin engines are designed for use with Timken® sprocket shaft bearings. They will fit directly in stock 1999–'02 Harley-Davidson® crankcases and in all S&S crankcases for 1999–'16 big twin engines, with no modifications. However, stock 2003 and later engines use a roller type bearing for the sprocket shaft, and will require modification.

Due to the amount of power these engines produce with an S&S Hot Set Up Kit, S&S strongly recommends retrofitting 2003–'16 model crankcases to accept a Timken sprocket shaft bearing. A Timken conversion sleeve such as Screamin' Eagle® #34822-08 or Jim's® #956 may be used. A charging system spacer for 1999–'02 model year is also required.

If you choose not to convert your crankcases to a Timken sprocket shaft bearing, S&S flywheels may be used in 2003 and later engines with the installation of the Harley-Davidson® bearing kit #24004-03B. This bearing kit adapts the S&S sprocket shaft to be compatible with stock roller type bearings. Verify that the bearing kit contains the 24604-00D or 24607-07 or sprocket shaft bearing or S&S p/n 310-0761 for touring models. Do not use a 24604-00, 24604-00A, 24604-00B or 24604-00C bearing. Please be advised that if this type of bearing is used, sprocket shaft bearing failure WILL NOT be covered under warranty.

Fuel injection tuning is required. S&S offers fuel injection tuning solutions: See page 122

Kits with S&S heads are machined special to compensate for engine height change to accommodate a stock length manifold. When using a kit with stock cylinder heads, S&S recommends using the appropriate length manifold. For a 124" with stock OEM cylinder heads, the standard manifold length is 417.

Center case bolt between cylinders will use waisted bolt kit 900-0807

Milwaukee-Eight®

2007–2017 Twin Cam 96"/103"/110"

1999–2006 Twin Cam 88"

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod™

Indian® Models

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# 117" BIG BORE KITS

## FITMENT

- 2007–'17 big twins, *except 2017 touring models*  
(Twin-Cooled™ models require 900-0609 head gaskets)

## FEATURES AND BENEFITS

- Large displacement increase with a small price
- Your original crankcase, flywheel, cylinder heads, oil pump, and cam cover are reused
- Silver or wrinkle black powder coat matches factory finish
- .060" shorter than stock engine – no frame clearance issues
- Piston weight is the same as stock Twin Cam 96™/103™—no balancing required
- Piston is plated for extreme durability and skirts feature low friction Wiseco ArmorGlide® coating



## 117" BIG BORE KITS

Model or Engine Type	Piston	Finish	Part #
117" Standard Compression	Flat Top	Silver	<b>910-0213</b> †
		Wrinkle Black	<b>910-0221</b> †
117" Low Compression	Dished	Silver	<b>910-0321</b>
		Wrinkle Black	<b>910-0318</b>
Special Order*		Specify	<b>91-7506</b> *

\*Download the Special Order Form

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## S&S® 117" BIG BORE KIT SPECIFICATIONS

Year	Stroke	Displacement	Bore	Cylinder Length	Piston Type	Compression Ratio			
						91cc Super Stock Heads	89cc Super Stock Heads	85cc Stock Heads	83cc CNC Ported Stock Heads
2007–'17	4 3/8"	117"	4 1/8"	4.878"	Flat Top 106-3491A	10.4:1	10.5:1	10.9:1	11.2:1
2007–'17	4 3/8"	117" LC	4 1/8"	4.878"	Dished, 10cc 920-0046	9.5:1	9.7:1	10.0:1	10.3:1

## NOTES

†Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.

Twin-Cooled applications will require separate purchase of 900-0609 head gaskets.

The 117" cylinder kit will reduce the engine height ~.060"; this may require the stock manifold be shortened by sanding some material off each side of the intake runner.

Cylinder w/piston kits included in this Hot Set Up Kit are pre-fit and ready to install.

2008-up touring models with electronic throttle control recommends S&S Throttle Hog 58mm or 66mm Throttle body (See page 119) and Harley-Davidson® race tuner.

This kit will require that the case be bored to accept the larger cylinders.

.030" MLS head gaskets optional: Part #900-0217

S&S recommends retrofitting a Timken bearing (31-4013) into 2003–'16 model crankcases with the use of a Timken sleeve, Screamin' Eagle #34822-08 or Jim's #956. A charging system spacer for 1999–'02 model year is also required. S&S p/n 310-0761.

Requires recalibration.



# 110" PISTONS AND CAMS

**MAKE THAT BIG HOG REALLY RUN!**

**S&S CAMS AND PISTONS FOR CVO™ 110**

Not satisfied with 86 horsepower from your CVO™ 110 engine? Neither were we! Fortunately, we can show you how to make that big hog really run. Here's how.

1. Install an S&S performance exhaust and air cleaner — *a must for any performance upgrade*
2. Install a set of S&S 585 bolt-in cams and tune the EFI system — *produces over 107 horsepower*
3. Increase the compression ratio from the stock 9.3:1 to 10.6:1 with S&S high compression pistons — *brings the horsepower up to 114*

## FITMENT

- 2007–Up Harley-Davidson® CVO™ 110 engines

## FEATURES AND BENEFITS

- Significant performance increase — *See the dyno chart*
- Don't trade torque for horsepower — *get more of both! See the dyno chart*
- Easy installation! All parts bolt in without splitting the cases or even removing engine from the frame
- S&S Easy Start Cams ensure reliable starting even with high compression pistons



## NOTES

Will not work with Twin-Cooled™ heads

### 10.6:1 HIGH COMPRESSION PISTONS FOR HARLEY-DAVIDSON® CVO™ 110 ENGINES

Fitment	Deck Height	Wristpin Diameter	Standard	+ .010"
2007–'17 bt CVO™ 110" engines	1.0895"	.927"	<b>920-0114</b>	<b>920-0115</b>

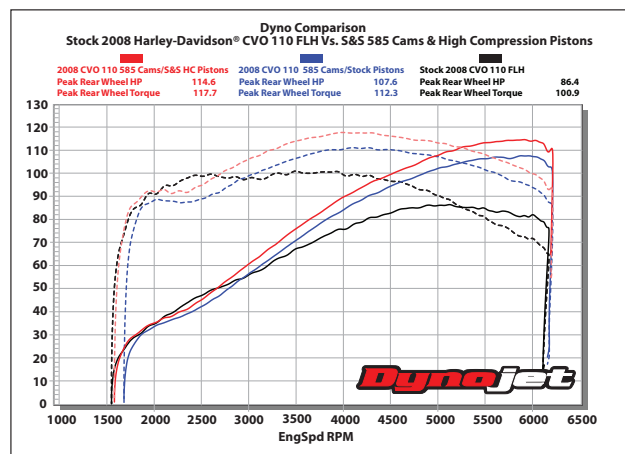
*Will not work with Twin-Cooled™ heads*

### 585 CAMSHAFTS FOR HARLEY-DAVIDSON® CVO™ 110 ENGINES

Cam Style	Easy Start*	Standard
Chain Drive 585 cams (includes installation kit)	<b>106-5233</b>	<b>106-4382</b>
Gear Drive 585 cam kits (includes inner and outer gears and installation kit)	<b>106-5225</b>	<b>33-5268</b>

\*S&S Easy Start cams feature a built-in automatic compression release for reliable starting.

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The Dynojet® 250i chassis dynamometer shows how this 2008 Harley-Davidson® CVO™ FLH revealed its true potential with the addition of S&S performance exhaust, intake and 585 cams. The top set of curves show that bumping the compression with S&S 10.6:1 pistons really wakes up the engine and makes over 114 horsepower. That's a total increase of over 28 horsepower or nearly 33%! All tests were done with the stock 50mm throttle body. Make even more power with an S&S 58mm Throttle Hog or cable controlled throttle body.

Milwaukee-Eight™

2007–2017 Twin Cam 96"/103"/110"

1999–2006 Twin Cam 88™

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod™

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# 107" BIG BORE KITS

## FITMENT

- 2007–2017 big twins, *except 2017 touring models*
- 2014–2017 Twin Cooled models, *except 2017 touring models*

## FEATURES AND BENEFITS

- 3.937" bore
- Cylinder and piston kits make going to a larger bore size easy—*no machining required*
- Stock engine height is maintained
- 11 fin cylinder design closely resembles OEM shape and come final honed—*ready to install*
- Increased fin area for better heat dissipation
- Centrifugal cast, gray iron liner features 40,000 psi tensile strength—*superior wear and performance*
- CP Pistons are recognized as industry leaders and provide exceptional wear, performance and noise characteristics

## KIT CONTENTS

- S&S cylinders with gaskets
- Piston set with rings, wristpins, and wristpin clips



910-0500

### S&S® 107" BIG BORE KIT AND HOT SET UP KIT SPECIFICATION CHART

Year	Stroke	Bore	Cylinder Length	Piston Type	COMPRESSION RATIO (with provided .045" head gasket)		
					83cc CNC Ported Stock Heads	85cc Stock Heads	89cc S&S Heads
2007–2017	4 3/8"	3.937"	4.937"	Forged, 3cc Dome	10.7:1	10.5:1	10.1:1

*Cylinder w/piston kits include pistons and cylinders that require no boring or honing.*

## 107" BIG BORE KITS

Fitment	Cylinder Finish	Part #
2007–'17 big twin, <i>except 2017 touring models</i>	Silver	910-0480
	Wrinkle Black	910-0500

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**PISTON REPLACEMENT PARTS: SEE PAGE 100**

# 106" BIG BORE KITS

## FITMENT

- 2007–2017 big twins, *except 2017 touring models*
- 2014–2016 Twin-Cooled™ models

## FEATURES AND BENEFITS

- Increased fin area for better heat dissipation—be cool!
- Increase bore size from 3.750" to 3.927"—bigger is better!
- Easy installation — no machining or rebalancing required—economical!
- Forged coated pistons are compatible with stock or S&S Super Stock® 79cc & 89cc heads
- Valve pocket recessed in S&S pistons are enlarged for oversize valves and higher lift cams
- Maintains stock engine height and stock piston weight
- Cosmetic improvements—hard to tell from stock cylinders
  - 11 fins and full fin pattern on cam side closely resembles OEM shape
  - S&S logo and part numbers are less conspicuous
  - Better overall appearance

## OPTIONS

- Oversize pistons available  
-See page 99

## KIT CONTENTS

- S&S cylinders with gaskets
- Piston set with rings
- Top end gasket kit
- Instructions

S&S® 106" BIG BORE KIT SPECIFICATION CHART								
Year	Stroke	Bore	Cylinder Length	Piston Type	COMPRESSION RATIO			
					85cc Stock Heads	79cc S&S Heads	89cc S&S Heads	83cc CNC Ported Stock Heads
2007–'17	4 $\frac{3}{8}$ "	3.927"	4.937"	Forged Flat Top	10.0:1	10.7:1	9.7:1	10.2:1

*Cylinder w/piston kits include fitted pistons and cylinders that require no boring or honing.*

## 106" BIG BORE KITS

Fitment	Finish	Part #
2007–'17 big twin and 2014–'16 Twin-Cooled™ Models	Wrinkle Black	<b>910-0206</b>
	Silver	<b>910-0202</b>

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## 106" HOT SET UP KITS® WITH CYLINDERS & PISTONS WITHOUT HEADS

Model Year	Cam	Compression Ratio	Piston Type	Finish	Part #
2007–'17 big twin and 2014–'16 Twin-Cooled™ Models	585CE	10.0:1	Flat top	Wrinkle Black	<b>900-0354</b>
				Silver	<b>900-0355</b>

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**PISTON REPLACEMENT PARTS: SEE PAGE 100**



## NOTES

S&S® highly recommends installing a performance cam for easier starting and better engine performance.  
S&S high flow cylinder heads or CNC ported stock heads will provide further horsepower gains.  
These kits require tuning.



# ENGINE OVERVIEW

S&S performance engines for 2007–'17 Harley-Davidson® big twins are available as long blocks which do not include fuel or ignition systems. Engines are protected by super tough powder coat finishes. Available in silver and chrome, wrinkle black and chrome, stone grey and chrome, and Black Edition color schemes. Stone grey matches the engine finish on CVO models, and Black Edition is a wrinkle black engine with gloss black covers.

## **BLACK EDITION**

S&S Cycle's new Black Edition engines combine classic wrinkle black with high gloss black powder coated covers for a subtle contrast and elegant look while still producing the power and reliability you've come to expect.

## **T143 (143 cid)**

The T143 T2 long block engine is the largest (143 cid) S&S engine that will fit in a stock chassis. Long blocks come without fuel or ignition systems (available separately) and an oil line installation kit is required. Available in silver, wrinkle black, stone grey, or Black Edition finishes. The 160 rear wheel horsepower also requires performance drive train upgrades. Not for the faint of heart!

## **T124 (124 cid)**

The S&S T124 T2 long block engine has been our daily rider hot rod since 2004. The combination of day in and day out reliability and brutal power make it the perfect choice. Available in silver, wrinkle black, stone grey, or Black Edition finishes. Long blocks come without fuel or ignition systems. Our Throttle Hog EFI throttle bodies are highly recommended.

## **T111 (111 cid)**

The S&S T111 T2 long block is the ultimate sport touring engine. The shorter stroke provides a perfect combination of performance, engine life, quiet operation, and reduced vibration. Available in silver, wrinkle black, stone grey, or Black Edition finishes. Long blocks come without fuel or ignition systems. Our Throttle Hog EFI throttle bodies are available to complete the package.



# T143 ENGINES

If Bigger is Better, the T143 is the Best...  
The **BIGGEST, BADDEST, BOLT-IN** for a Stock Frame.

All joking about size aside, it does matter. The S&S T143 Long Block engine for Harley-Davidson® models is the largest S&S engine that will fit in a stock Harley-Davidson® chassis. It's big, 143 cubic inches.\* Nuff said.

At double the HP of a stock motor the power of the T143 requires technical expertise for the installation and tuning along with an experienced rider. This is an ultra performance/race engine. Longevity, engine noise, vibration and throttle sensitivity have all been compromised to reach this level of performance while fitting in a stock chassis and as such is not suitable for every situation. It is the purchaser's responsibility to consider the suitability for their application. Engine noise and damage from abuse is not covered under warranty.

## FITMENT

- 2007–'16 Harley-Davidson® touring models
- 2006–'17 Dyna® models

## FEATURES AND BENEFITS

- Fits in stock chassis—no cutting or frame modifications
- S&S B3 cylinder heads CNC machined with 2 bolt exhaust flanges
- S&S Super Stock T2 Crankcases with reed breather valve
- 3 Piece Flywheels
- TC3 Oil Pump and Cam Plate
- S&S 635 Easy Start Gear Drive Cams and S&S 1.725:1 rocker arms for .674" total lift.
- S&S Precision Tappets
- 1 year warranty

## OPTIONS

- Wrinkle Black, Stone Gray, or Black Edition powder coat finish

## SUGGESTED ACCESSORIES

- Stealth Air Cleaner Kit 143 Cover: [See page 78](#)



## NOTE

T-Series engines are not compatible with HD® Softail® models.  
\*Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.

## T143 ENGINES WITHOUT FUEL AND IGNITION SYSTEMS

Chassis Style	Displacement	Bore	Stroke	Cam	Piston Type	CR	Warranty	Finish	Part #
2007–'16 touring models	143"	4.425"	4 7/8"	635	S&S Forged Flat Top	10.5:1	1 year	Wrinkle Black & Chrome	<b>310-0548A</b> ‡
								Stone Gray	<b>310-0549A</b> ‡
								Black Edition	<b>310-0837A</b> ‡
2006–'17 Dyna® Models	143"	4.425"	4 7/8"	635	S&S Forged Flat Top	10.5:1	1 year	Black Edition	<b>310-0901A</b>
								Wrinkle Black & Chrome	<b>310-0883A</b>

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**⚠ REQUIRES OIL LINE INSTALLATION KIT.** See chart.

## INSTALLATION PARTS

Description	Part #
Oil Line Install Kit for 2006–'17 Dyna® Models	Wrinkle Black <b>310-0870</b>
Oil Line Kit for 2007–'16 touring models	<b>310-0435</b> ‡
Transmission Drilling Fixture Kit for 2007–'16 touring models	<b>530-0006</b>
Head Mount Bracket	2009–'16 touring <b>900-0798</b>
	2008 touring <b>900-0797</b>
Fuel Injector 2 pack	<b>550-0603</b>

Description	Part #
70mm Induction Kit* 2008–'16 touring (includes injectors)	<b>170-0253</b> ‡
70mm Induction Kit Cable operated 2007–'17 Dyna® models & 2007 touring models (includes injectors)	<b>170-0288</b>

\*Includes a 70mm S&S Throttle Hog specially designed for the T143 engine in which a functional, stock, throttle by wire throttle body must be supplied to build. See page 119 for more details.

‡ **⚠ WARNING:** Cancer and Reproductive Harm

Milwaukee-Eight®

2007–2017 Twin Cam 96"/103"/110"

1999–2006 Twin Cam 88®

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod®

Indian® Models

Tools & Shop Supplies

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Appendix



# T-SERIES T2 LONG BLOCK ENGINES

## FITMENT

- 2007–'16 touring models (except Twin-Cooled™ models)
- 2006–'17 Dyna® Models

## FEATURES AND BENEFITS

- No fuel system or ignition systems included—Use what you already have
- Special Head machining—Fits stock length intake manifolds (S&S manifold size 405)
- Stock style breathing system—stock breather spacing and function is compatible with stock and most performance air cleaners
- Super Stock™ T2 Crankcase
- 3 Piece Flywheels
- TC3 Oil Pump and Cam Plate
- S&S Easy Start gear drive cams
- Stock Twin Cam 96™ bolt pattern

## OPTIONS

- T111—111 cubic inches, perfect sport-touring engine
- T124—124 cubic inches, hot-rod performance, 640 Easy Start gear drive cams
- T124LC—124 cubic inches with slightly lower compression, 585 Easy Start gear drive cams
- Stone Gray powder coat finish that matches the Granite color of a “stock” CVO engine

## SUGGESTED ACCESSORIES

- Stealth Air Cleaner Kits:  
See page 75



## T124 ENGINES WITHOUT FUEL AND IGNITION SYSTEMS

Chassis Style	Displacement	Bore	Stroke	Cam	Piston Type	CR	Warranty	Finish	Part #
2007–'16 touring models	124"	4 1/8"	4 5/8"	640	S&S Forged Flat Top	10.8:1	2 Year	Black Edition	310-0835A <sup>‡</sup>
								Wrinkle Black & Chrome	310-0400A <sup>‡</sup>
								Stone Gray	310-0511A <sup>‡</sup>
				585	S&S Forged Dished, 11cc	10.2:1	2 Year	Black Edition	310-0836A <sup>‡</sup>
								Wrinkle Black & Chrome	310-0401A <sup>‡</sup>
								Stone Gray	310-0512A <sup>‡</sup>
2006–'17 Dyna® Models	124"	4 1/8"	4 5/8"	640	S&S Forged Flat Top	10.8:1	2 Year	Black Edition	310-0900A
								Wrinkle Black & Chrome	310-0882A

**NOTE:**<sup>‡</sup>Not recommended for Tri Glide® or other three wheel models including conversion due to lugging nature of these bikes.

## T111 ENGINES WITHOUT FUEL AND IGNITION SYSTEMS

Chassis Style	Displacement	Bore	Stroke	Cam	Piston Type	CR	Warranty	Finish	Part #
2007–'16 touring models	111"	4 1/8"	4 1/8"	585	S&S Forged	9.8:1	2 Year	Wrinkle Black & Chrome	310-0402A
2007–'16 touring models				585				Black Edition	310-0834A

**!** **REQUIRES OIL LINE INSTALLATION KIT.** See chart.

## INSTALLATION PARTS FOR S&S T-SERIES T2 LONG BLOCK ENGINES

Description	Part #
Oil Line Kit for 2007–'16 touring models	310-0435 <sup>‡</sup>
Transmission Drilling Fixture Kit	530-0006
Oil Line Install Kit for 2006–'17 Dyna® models*	Wrinkle Black 310-0870

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<sup>‡</sup> **!** WARNING: Cancer and Reproductive Harm

## COMPLETE ENGINE REBUILD GASKET KITS

S&S Engine Family	Bore Size	Part #
T-Series	4 1/8"	310-0335



**NOTES** T-Series engines are not compatible with HD® Softail® models.

## ENGINE MANAGEMENT AND FUEL SYSTEMS

Cylinder heads on these engines are specially machined to compensate for the non-stock cylinder length. As a result, they are compatible with manifolds and throttle bodies with stock length intake runners. In addition, the breather vent bolt locations have been adjusted so they are in the stock location, so stock style air cleaner back plates will bolt up to these engines.

Will require early style sprocket shaft spacer for charging system us S&S pn 310-0761 for touring models.

For best performance, S&S Throttle Hog Throttle Body is recommended. See page 119.

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# SUPER STOCK™ T2 CRANKCASE

## FITMENT

- 2007–'16 Harley-Davidson® touring models
- 2006–'17 Dyna® models

## FEATURES AND BENEFITS

- Stock looking, but stronger—Thicker wall sections and superior 356-T6 aircraft grade aluminum
- Tough powder coat finish
- Reinforced front motor mount for extra strength
- Timken® sprocket shaft bearing—Strong enough for the most demanding applications
- Clearanced for strokes up to 4<sup>3</sup>/<sub>16</sub>" and cams up to .720" lift
- Includes pinion and Timken® bearing
- Manufacturer's Statement of Origin (MSO) included
- Includes studs and cam bearings installed

## KIT CONTENTS

- S&S crankcase
- Bearings and hardware
- Instructions

## INSTALLATION PARTS

- S&S oil line kit (required)
- S&S transmission drilling fixture kit (recommended for easy installation)



310-0435±

530-0006

## NOTE

Will require early style sprocket shaft spacer for charging system. Use S&S pn 310-0761 for touring models.



## INSTALLATION PARTS

Description		Part #
Oil Line Kit for 2007–'16 touring models		310-0435±
Transmission Drilling Fixture Kit		530-0006
Oil Line Install Kit for 2006–'17 Dyna® Models	Wrinkle Black	310-0870

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± ⚠️ WARNING: Cancer and Reproductive Harm

## SUPER STOCK™ T2 CRANKCASES FOR 2007–'16 HARLEY-DAVIDSON® FL BIG TWIN ENGINES

Bore Size	Stone Gray	Wrinkle Black	Silver
Stock Bore (Stock Bolt Pattern) 2007–'16 touring models	–	310-0367A†	–
Stock Bore (Dyna® models)	–	310-0878*	310-0881*
CV0 110 Stock Bore	310-0543A†	–	–
4 <sup>1</sup> / <sub>8</sub> " Bore (Stock Bolt Pattern) 2007–'16 touring models	310-0503*	310-0369*	310-0368*
4 <sup>1</sup> / <sub>8</sub> " Bore (Dyna models with Stock Bolt Pattern)	–	310-0856*	–
4 <sup>3</sup> / <sub>8</sub> " Bore (S&S Bolt Pattern)†† 2007–'16 touring models	–	–	310-0370*
4.425" Bore 2007–'16 touring models	310-0691	310-0690	–
4.425" Bore (Dyna® models)	–	310-0859	–

†† Requires separate purchase of tappet covers sets #330-0281

† Exempt from emissions tampering regulations under CARB EO# D-355-18 when used with stock bore cylinders

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⚠️ WARNING: Cancer and Reproductive Harm

REPLACEMENT PARTS: SEE PAGE 132

# CRANKCASE BREATHER REED VALVES

## FITMENT

- Twin Cam 96™/103™ (except "B" engines)
- S&S T-Series engines

## FEATURES AND BENEFITS

- Improved oil scavenging and reduced oil carryover

## CRANKCASE BREATHER REED VALVES

Oil Pump Fitment	Year Application	Part #
For Engines with S&S Gear Oil Pump	2007–up S&S crankcases	310-0742

## REPLACEMENT SPRING

Spring, Wave, 1.6" x 2" x 2", 2.8mm	31-2078-S
-------------------------------------	-----------



310-0742

## NOTES

The crankcases breather valve for Twin Cam 96™/103™ engines was designed and developed for use with S&S Gear Oil Pumps and tappets, and may not be compatible with some aftermarket components.

Not available for Twin Cam 96™/103™ "B" engines with internal balancers.

Does not fit with aftermarket oil pumps.

Milwaukee-Eight®

2007–2017 Twin Cam 96™/103™/110™

1999–2006 Twin Cam 88®

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod™

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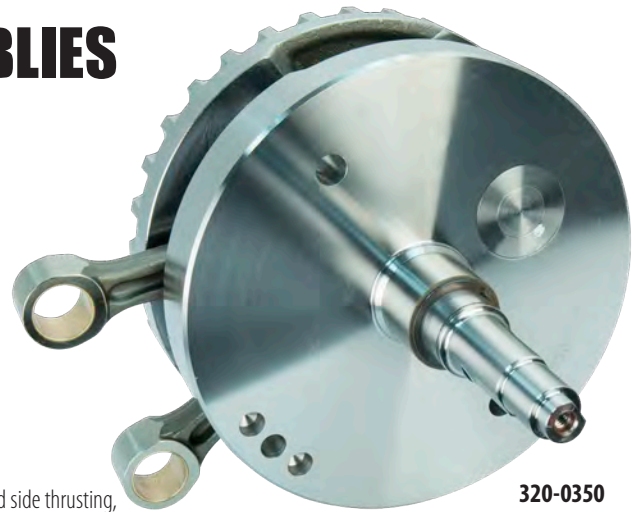
# 3 PIECE FLYWHEEL ASSEMBLIES

## FITMENT

- 2007–'17 Harley-Davidson® big twins (except 2017 touring models)—Balanced and unbalanced models
- S&S T-Series Engine and Hot Set Up Kit® replacement flywheels


## FEATURES AND BENEFITS

- Heat-treated 4140 material is harder and 114% stronger than stock
- New light weight connecting rod forgings
- Available with full width wristpin connecting rods
- 1.671" diameter crankpin — increased contact area and tighter press fit for a stronger joint.
- No welding required!
- Integral mainshafts - eliminates two potential points of weakness
- Consistent balance and precision machining — Truer flywheels and less vibration
- Reduced mainshaft deflection at high rpm — less vibration, reduced piston and rod side thrusting, prevents oil pump damage, fully compatible with gear drive cams
- Capable of higher rpm — More available power!



320-0350

## FLYWHEEL ASSEMBLIES FOR 2007–2017 HARLEY-DAVIDSON® BIG TWIN MODELS (EXCEPT 2017 TOURING MODELS)

Engine Displacement	Stroke	Balanced to Total Piston Weight (gms)	Rod WP End Style	Sprocket Bearing Race	Harley-Davidson® Twin Cam 96®/103™	Harley-Davidson® Twin Cam 96B™/103B™
96, 103, 106 big bore, 110, 117 w/S&S Pistons	4 3/8"	1035	Straight	Yes**	<b>320-0350</b>	<b>320-0356</b>
				No	<b>320-0351</b>	<b>320-0357</b>
96, 103, 110 w/Stock Pistons* 	4 3/8"	1035	Tapered*	Yes**	<b>320-0352</b>	<b>320-0358</b>
				No	<b>320-0353</b>	<b>320-0359</b>
S&S 106 Stroker***	4 1/2"	1108	Straight	No	<b>320-0450</b>	<b>320-0544</b>
S&S 111	4 1/8"	1035	Straight	No	<b>320-0407</b>	<b>320-0413</b>
SE 120R (uses 7.575" length rods)†	4 5/8"	1035	Straight	No	<b>320-0523</b>	<b>320-0529</b>
S&S 124	4 5/8"	1035	Straight	No	<b>320-0464</b>	<b>320-0471</b>
S&S 143 (uses 7.800" length rods)	4 5/8"	1290	Straight	No	<b>320-0545</b>	—
Special Order	Specify	Specify	Specify	Specify	<b>329-0002</b>	<b>329-0002</b>

\*Stock pistons in 2007 and later engines require rods with tapered wristpin ends.

Note: All S&S Flywheels for 2007 and later engines have 7.659" length connecting rods (except the SE120R & S&S 143, see chart).

\*\*Note: Flywheel assemblies supplied with sprocket shaft bearing race installed are compatible with stock roller style sprocket shaft bearings. Assemblies with no race require a Timken® sprocket shaft bearing.

\*\*\*4 1/2" stroke flywheels include 7.667" long connecting rods.

## NOTES

† These flywheels are replacement flywheels for the SE 120R. When installing these flywheels in a Harley-Davidson® case, they need to run the HD piston oiling jets— not the S&S® piston oiling jets.

Strokes longer than stock will require S&S Piston Oiler Set, part #31-2026.

2007–up stock rod length is 7.659".

Main Bearing Note: Most S&S flywheel assemblies for 1999–'17 big twin engines are designed for use with Timken® sprocket shaft bearings. They will fit directly in stock 1999–'02 Harley-Davidson® crankcases and in all S&S crankcases for 1999–'17 big twin engines, with no modifications. However, stock 2003 and later engines use a roller type bearing for the sprocket shaft. S&S does offer flywheel assemblies that are compatible with late roller style stock sprocket shaft bearings, but they are not recommended for very large, high performance engines.

S&S strongly recommends retrofitting 2003–'16 model crankcases to accept a Timken sprocket shaft bearing. A Timken conversion sleeve such as Screamin' Eagle® #34822-08 or Jim's® #956 may be used. A charging system spacer for 1999–'02 model year is also required.

If you choose not to convert your crankcases to a Timken sprocket shaft bearing, S&S flywheels may be used in 2003 and later engines by either purchasing the stock compatible flywheels or by installing Harley-Davidson® bearing kit #24004-03B when using S&S flywheels designed for Timken bearings. This bearing kit adapts the S&S sprocket shaft so it is compatible with stock roller type bearings. Verify that the bearing kit contains the 24604-00D or 24607-07 sprocket shaft bearing. Do not use a 24604-00, 24604-00A, 24604-00B or 24604-00C bearing. Please be advised that if this type of bearing is used, sprocket shaft bearing failure WILL NOT be covered under warranty.

**TRYING TO IDENTIFY AN S&S® FLYWHEEL?**  
SEE FLYWHEEL I.D. CHART: SEE PAGE 358

**REPLACEMENT PARTS: SEE PAGE 135**

# TC3 CAM PLATE

S&S cam support plates are just what the doctor ordered when repairing a damaged engine or installing new camshafts. CNC machined from forged aluminum for excellent strength and dimensional accuracy. S&S cam support plates are available to fit 1999–2006 and 2007–'17 Harley-Davidson® big twin engines. We don't want to encourage bad habits so plates for 1999–2006 are not compatible with stock spring-loaded chain tensioners, and require late style hydraulic tensioners and oil pump. We suggest the S&S TC3 oil pumps be installed with S&S TC3 Cam Plate.

### FITMENT

- 2007–'17 big twins and 2006 Dyna models, *except 2017 touring models*

### FEATURES AND BENEFITS

- Precision CNC machined forged aluminum
- Adjustable oil pressure regulator—adjust without removing plate from engine
- Passage plugs are removable for service
- Made In The USA

\*Not compatible with stock spring-loaded chain tensioners or stock 1999–2006 oil pumps. Hydraulic tensioners (Unless running gear drive cams) and 2007–later style oil pump is required.



### TC3 CAM PLATE

Fitment	Part #
2006 Dyna® models & 2007–'17 bt <i>except 2017 touring models</i>	<b>310-0625</b>

# TC3 OIL PUMP

If engine oil is the lifeblood of an engine, then the oil pump is its heart. If your engine needs a transplant, the S&S TC3 Oil Pumps are a great solution for worn out or destroyed stock units. Common causes of stock pump failure are debris and excessive pinion shaft run out. The new S&S oil pumps are much less likely to be damaged by either. Oh, and by the way, the S&S TC3 Oil Pumps pump and scavenge way more oil than stock. While you've got that engine apart, it would be a good time to install a forged S&S TC3 Cam Plate.

### FITMENT

- 2007–'17 big twins and 2006 Dyna models, *except 2017 touring models*

### FEATURES AND BENEFITS

- Consistent pressure and reliable scavenging
- Separate scavenge sections for flywheel cavity and cam chest—no interference
- Screens and magnetic traps help protect the scavenge rotors from debris
- Special design allows S&S pumps to tolerate more pinion shaft run out without damage
- Made in the USA!



### TC3 OIL PUMP

Fitment	Part #
2006 Dyna® models & 2007–'17 bt <i>except 2017 touring models</i>	<b>310-0641</b>

# TC3 OIL PUMP & CAM PLATE KITS



### TC3 OIL PUMP AND CAM PLATE KITS

Fitment	Part #
2006 Dyna® models & 2007–'17 bt, <i>except 2017 touring models</i>	<b>310-0732</b>

**REPLACEMENT PARTS:  
SEE PAGE 136 & SEE PAGE 137**



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

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# DIE CAST GEARCOVER

## FITMENT

- 1999–'17 Twin Cam 88<sup>°</sup>, 96<sup>™</sup> and 103<sup>™</sup> (except 2017 touring models)
- S&S-Series engines



## DIE CAST GEARCOVER

Finish		Part #
Gloss Black	143"	<b>310-1084</b>
	124"	<b>310-1085</b>
	111"	<b>310-1086</b>
Chrome <sup>±</sup>	143"	<b>310-1087</b>
	124"	<b>310-1088</b>
	111"	<b>310-1089</b>

± WARNING: Cancer and Reproductive Harm

# CYLINDERS WITH PISTONS KIT

- Cylinder w/piston kits include fitted pistons and cylinders, head gaskets, base, and exhaust gaskets
- Cylinder kits with pistons are honed to fit the pistons included.

## S&S® 4" BORE BOLT-IN SIDEWINDER® KITS SPECIFICATION CHART

Displacement	Stroke	Bore	Cylinder Length	Piston Type	Dome Volume	Compression Ratio		
						83cc CNC Heads	85cc Stock Heads	89cc S&S Heads
110"	4 3/8"	4.00"	4.937"	Forged	.75 pop up	10.7:1	10.5:1	10.2:1

## 4" BORE BOLT-IN SIDEWINDER® BIG BORE KITS

Displacement	Silver	Wrinkle Black
110	<b>910-0650</b>	<b>910-0651</b>

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## NOTES

Not for use with S&S 79cc Cylinder Heads.

Not for use on trike models.

**PISTON REPLACEMENT PARTS: SEE PAGE 100**



## CYLINDERS WITH PISTONS KIT CON'T

- Cylinder w/piston kits include fitted pistons and cylinders, head gaskets, base, and exhaust gaskets
- Cylinder kits with pistons are honed to fit the pistons included.



Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster™ & Buell™

2014–2019 Street™ &  
Street Rod™

Indian™ Models

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### S&S® 4 1/8" BORE CYLINDERS WITH PISTONS SPECIFICATION CHART FOR 124" AND 117" KITS

Displacement	Stroke	Cylinder Length	Forged Piston Type	Compression Ratio			
				85cc stock heads	89cc S&S heads	91cc S&S heads	SE 95cc heads
124"	4.625	5.004	Flat Top	11.4:1	11.0:1	10.8:1	10.5:1
124" Dish	4.625	5.004	10.9 cc dish	10.6:1	10.2:1	10.2:1	9.7:1
117"	4.375	4.878	Flat Top	10.9:1	10.5:1	10.4:1	10.0:1
117" Dish	4.375	4.878	10.9 cc dish	10.0:1	9.7:1	9.5:1	9.3:1
111"	4.125	4.754	Flat Top	10.3:1	9.9:1	9.8:1	9.4:1

### 4 1/8" BORE CYLINDERS WITH PISTONS FOR 124" AND 117" KITS

Displacement	STOCK HEADS OR S&S HEADS WITH STOCK BOLT PATTERN		
	Stone Gray	Silver	Wrinkle Black
124"	<b>910-0469</b>	<b>910-0341</b>	<b>910-0338</b>
124" dish	<b>910-0490</b>	<b>910-0327</b>	<b>910-0324</b>
117"	<b>910-0474</b>	<b>910-0213</b>	<b>910-0221</b>
117" dish	—	<b>910-0321</b>	<b>910-0318</b>

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### S&S® BIG BORE KIT SPECIFICATION CHART FOR 106" & 107" KITS

Displacement	Bore	Stroke	Cylinder Length	Forged Piston Type	Compression Ratio (with provided .045" head gasket)			
					79cc S&S Heads	83cc CNC Ported Stock Heads	85cc Stock Heads	89cc S&S Heads
107"	3.937"	4 3/8"	4.937"	3cc Dome	N/A	10.7:1	10.5:1	10.1:1
106"	3.927"	4 3/8"	4.937"	Flat Top	10.6:1	10.2:1	10.0:1	9.7:1

*Cylinder w/piston kits include pistons and cylinders that require no boring or honing.*

### BOLT-IN BIG BORE KITS

Displacement	Silver	Wrinkle Black
107"	<b>910-0480</b>	<b>910-0500</b>
106"	<b>910-0202</b>	<b>910-0206</b>

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**ALL OTHER BORES AND FINISHES ARE AVAILABLE THROUGH SPECIAL ORDER**

\* Special Order: Download the Special Order Form

**91-7506\*** Call for Pricing

**PISTON REPLACEMENT PARTS: SEE PAGE 100**



# CYLINDERS

- Individual cylinders and cylinder sets without pistons are bored slightly under nominal size and are not honed.

## 4.425" BORE CYLINDERS WITHOUT PISTONS FOR T143

Displacement		Stone Gray	Wrinkle Black
143"	Set	<b>910-0562</b>	<b>910-0565</b>

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## 4 7/8" BORE CYLINDERS WITHOUT PISTONS FOR 124" AND 117" HOT SET UP KITS (STOCK BOLT PATTERN)

Displacement		Stone Gray	Silver	Wrinkle Black
124"	Set	<b>910-0494</b>	<b>910-0392</b>	<b>910-0401</b>
117"	Set	<b>910-0497</b>	<b>910-0231</b>	<b>910-0252</b>

DISCLAIMER: FOR CLOSED COURSE COMPETITION USE ONLY. NOT INTENDED FOR STREET USE. LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES WHICH MAY NEVER BE USED, OR REGISTERED OR LICENSED FOR USE, UPON A HIGHWAY. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT.

### NOTE

S&S 4 7/8" pistons are machined to such close tolerances that it is not necessary to measure the piston. Additionally, the low friction coating on the piston skirt of early production pistons without micrometer window makes taking measurements very difficult. Therefore, hone cylinders to nominal diameter +/- 0.0001" for correct clearance. Current production pistons have micrometer windows in the coating on the piston skirts that allow accurate measurements to be taken. These pistons may be installed by honing cylinder to nominal diameter +/- 0.0001" or by measuring piston and honing cylinder to achieve .002"-.0025" close clearance for street applications or .0032"-.0045" loose clearance for immediate competition use.

## 3.937" BORE CYLINDER

Displacement		Silver	Wrinkle Black
107"	Front or Rear	<b>910-0478</b>	<b>910-0477</b>

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

## 3.927" BORE CYLINDERS

Displacement		Silver	Wrinkle Black
106"	Front or Rear	<b>910-0210</b>	<b>910-0212</b>

### NOTE

S&S 3.927" & 3.937" pistons are machined to such close tolerances that it is not necessary to measure the piston. Additionally, the low friction coating on the piston skirt of early production pistons with out micrometer window makes taking measurements very difficult. Therefore, hone cylinders to nominal diameter +/- 0.0001" for correct clearance. Current production pistons have micrometer windows in the coating on the piston skirts that allow accurate measurements to be taken. These pistons may be installed by honing cylinder to nominal diameter +/- 0.0001" or by measuring piston and honing cylinder to achieve .002"-.0025" close clearance for street applications or .0032"-.0045" loose clearance for immediate competition use.





# PISTON KITS

- Piston kits include set of pistons, rings, wristpins, and clips

## 4" BORE FORGED PISTON KITS FOR 110

Displacement	Deck Height	Stroke	Standard
110	1.090"	4 $\frac{3}{8}$ "	<b>920-0127</b>

## 4.425" BORE FORGED PISTON KITS FOR T143

Displacement	Deck Height	Stroke	Standard	
T143	1.167"	4 $\frac{3}{8}$ "	<b>920-0106</b>	<b>920-0111</b>

## 4 $\frac{1}{8}$ " BORE FORGED PISTON KITS FOR HOT SET UP KITS®

Displacement	Deck Height	Stroke	Standard	+.010"	+.020"	+.030"
124" & 117" 10cc Dished	1.050"	Up To 4 $\frac{5}{8}$ "	<b>920-0046</b>	<b>920-0047</b>	<b>920-0050</b>	<b>920-0053</b>
124", 117" & 111" Flat Top	1.050"	Up To 4 $\frac{5}{8}$ "	<b>106-3491A</b>	<b>106-3872A</b>	<b>106-3964A</b>	<b>920-0094</b>

## 10.6:1 HIGH COMPRESSION PISTONS FOR HARLEY-DAVIDSON® CVO™ 110 ENGINES

Fitment	Deck Height	Wristpin Diameter	Standard	+.010"
2007–'17 bt CVO™ 110" engines	1.0895"	.927"	<b>920-0114</b>	<b>920-0115</b>

*Will not work with Twin-Cooled™ heads*

## 3.937" BORE FORGED PISTON KIT

Displacement	Deck Height	Stroke	Standard
107", 3cc dome	1.085"	4 $\frac{3}{8}$ "	<b>920-0100</b>

## 3.927" BORE FORGED PISTON KITS FOR 106" TOP END KITS

Displacement	Deck Height	Stroke	Standard	+.010"
106" Flat top	1.090"	4 $\frac{3}{8}$ "	<b>106-3690</b>	<b>106-4416</b>

## 3 $\frac{7}{8}$ " BORE FORGED PISTON KITS FOR 103" ENGINES

Displacement	Deck Height	Stroke	Standard	+.005"	+.010"
103" Forged, 5.2cc pop-up dome	1.083"	4 $\frac{3}{8}$ "	<b>106-0432</b>	<b>106-0433</b>	<b>106-0434</b>

## NOTE

S&S' 4 $\frac{1}{8}$ ", 3.937", 3.927", and 3 $\frac{7}{8}$ " pistons are machined to such close tolerances that it is not necessary to measure the piston. Additionally, the low friction coating on the piston skirt of early production pistons with out micrometer window makes taking measurements very difficult. Therefore, hone cylinders to nominal diameter +/- 0.0001" for correct clearance. Current production pistons have micrometer windows in the coating on the piston skirts that allow accurate measurements to be taken. These pistons may be installed by honing cylinder to nominal diameter +/- 0.0001" or by measuring piston and honing cylinder to achieve .002"–.0025" close clearance for street applications or .0032"–.0045" loose clearance for immediate competition use.



Milwaukee-Eight™

2007–2017 Twin Cam

1999–2006  
Twin Cam 88™1986–2019  
Sportster® & Buell®2014–2019 Street® &  
Street Rod™Tools &  
Shop SuppliesWarranty &  
Company Policy

Appendix

# REPLACEMENT PARTS FOR PISTONS

## REPLACEMENT CHROMOLY FACED PISTON RINGS

Bore	Standard		+ .005"		+ .010"		+ .020"		+ .030"
4.425"	<b>940-0043</b>						<b>940-0044</b>		
4 1/8"	<b>940-0014</b>				<b>940-0012</b>		<b>940-0013</b>		<b>940-0017</b>
3 7/8"	<b>94-1290X</b>		<b>94-1294X</b>		<b>94-1291X</b>				
3.927"	<b>106-3709A</b>				<b>106-4422A</b>				
3.937"	<b>940-0032*</b>								
4"	<b>940-0056*</b>								
4.060" CVO 110"	<b>940-0040</b>				<b>940-0041</b>				

\*Only includes one set of rings.

## REPLACEMENT PISTON WRISTPINS

Description	Part #
For 4.425" Pistons	<b>940-0037</b>
For 4 1/8", 3 7/8", 3.927" Pistons	<b>106-1052</b>
For 3.937" Pistons	<b>940-0033</b>
For 4" Pistons	<b>940-0057</b>

## REPLACEMENT PISTON KEEPERS

Description	Part #	
Keeper	each	<b>94-9278-S</b>
	2 pack	<b>94-9278-2</b>
	4 pack	<b>106-2304</b>
Keeper for 4.425"	each	<b>94-9278-S</b>
Keeper for 3.937" & 4"	2 pack	<b>940-0034</b>



# POWER PACK

Bump 2007–'17 engines from 96ci or 103ci to 110ci with the new S&S 4" big bore kit. The kit also includes matched cams, cam plate, oil pump and everything else a high performance big inch engine needs to reliably make serious power.

## FITMENT

- All 2007–'17 big twin models and 2006 Dyna® models, (except 2014–'16 Twin-Cooled™ & 2017 touring models)

## FEATURES AND BENEFITS

- Largest big bore kit available without doing crankcase mods
- Upgrade Twin Cam 96° and Twin Cam 103™ to 110 cu inches
- Cylinders fit to pistons—No machining required
- All parts required to upgrade to gear drive cam or hydraulic tensioners
- Engineered package to deliver the best bolt-in performance available



## POWER PACKAGE KIT

Fitment	Finish	Cam	Drive	Part #
2007–'17 (except 2014–2016 Twin-Cooled™ & 2017 touring)	Silver	585CE	Chain	<b>330-0666</b>
2007–'17 (except 2014–2016 Twin-Cooled™ & 2017 touring)	Silver	585GE	Gear	<b>330-0667</b>
2007–'17 (except 2014–2016 Twin-Cooled™ & 2017 touring)	Black	585CE	Chain	<b>330-0668</b>
2007–'17 (except 2014–2016 Twin-Cooled™ & 2017 touring)	Black	585GE	Gear	<b>330-0669</b>

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## NOTES

- Pinion shaft runout must be less than .003" to use gear drive cams
- Kit not available to fit '06 Dyna® models but parts may be purchased separately.
- Not for use with S&S 79cc Cylinder Heads.
- Not for use with trike models.



Milwaukee-Eight®

2007–2017 Twin Cam 96°/103°/110™

1999–2006 Twin Cam 88®

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod™

Indian® Models

Tools & Shop Supplies

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Appendix



# CAMSHAFT OVERVIEW

**OES:** Original Equipment Specification (OES) A bolt-in replacement cam with stock cam timing is designed for riders with stock engines. Does not require tuning. Bolt-in stock. Equivalent to HD® A-Grind

**510:** Designed as a bolt-in cam for 88, 95, and 96 CID engines with compression ratios below 9.7:1, it is primarily intended for use with stock, un-ported heads. 3000–5500 rpm. Bolt-in.

**551:** Designed for engines with 96 to 106 CID and 9:1 to 9:9 compression, this is a bolt-in cam set designed for stock or mildly modified touring bikes. 551 cams are not recommended for compression ratios of 10:1 or greater. Greatly improves low-end and midrange torque, strongest from idle–4000rpm. Bolt-in torque.

**557:** Designed for Tri Glide® models, this bolt-in cam, with its short duration, produces lots of usable torque. The camshaft's stock base circle permits the use of stock pushrods. However, we recommend S&S Quickee Adjustable pushrods for easy installation. Fits all 2009–2012 Harley-Davidson® Tri Glide® models. Bolt-in.

**MR103:** Designed as bolt-in cams for 103 CID engines with stock 9.7:1 compression ratio up to 10.5:1. Works well with stock, un-ported heads, but is great for S&S CNC ported heads. More power across the rpm range best results form 2500–5500 rpm. Bolt-in.

**570:** Designed for 88 to 103 CID engines with compression ratios between 9:1 and 10:1, this bolt-in cam will provide a nice power increase across the entire power band. 3200–5700 rpm. Excellent bolt-in for overall power on 103". Bolt-in overall.

**583:** Optimized for use in the Softail®/Dyna® lines, this bolt-in cam makes horsepower and torque that you can feel all the way through the rpm range, making the most power right where you need it: 1500–5000rpm. Bolt-in. 583 cams are not recommended for engines having compression ratios greater than 10.1:1.

**HP103:** Designed as bolt in cams for engines with 103 and stock 9.7:1 compression up to 10.5:1. Works well with stock, un-ported heads, but is great for S&S CNC ported heads. Best power in the higher rpm range, 3000–6000 rpm. Bolt-in.

**585:** Designed for 88 to 106 CID engines with compression ratios from 9.7:1 to 10.5:1 and 106 to 124 CID engines from 9:1 to 10:1 compression. This bolt-in cam provides massive horsepower and torque increases starting at 3000rpm and holds steady all the way to redline. 3500–6000 rpm for 88"–103" engines and 2500–5500 for larger engines.

**625:** Cam set designed for 95" or larger engines with compression ratios between 10.0 and 10.75:1. 3000–6000 rpm. High lift valve springs and adjustable pushrods required.

**635 H.O.:** High lift cam for modified engines with 106" or greater displacement and compression ratios between 10.0:1 and 11.0:1. Works well with stock, un-ported heads, but S&S CNC ported heads are recommended. Best power from 3000–6000 rpm. This is not a bolt-in cam set. High-lift valve springs, adjustable pushrods, and clearance checks are required.

**640:** Used in S&S T124 engines, this cam makes horsepower! Intended for engines of 95 CID or more w/compression ratios between 10.5:1 and 11.5:1. 3000–6000 rpm. High lift valve springs and adjustable pushrods required.

**675:** A high lift monster, this cam set is designed for 120" or larger engines with at least 11:1 compression ratio. 4500–6500 rpm. High lift valve springs and adjustable pushrods required.



## S&S EASY START CAMS

Start any engine regardless of displacement or compression ratio, with a stock starter. Easy Start Cams from S&S® Cycle make hard starting obsolete for 1999-'16 big twins. Available in economical chain drive and rock-solid gear

drive versions. Don't get caught "dead" without them!

## FEATURES AND BENEFITS

- Start any engine with a stock starter
- Save your starter and battery!
- Reliable—tested for 100,000 accumulative starts and over 150,000 road miles without breakage or compression release failure!
- Automatic—no buttons to push

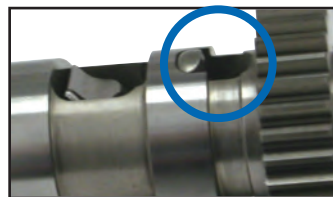
## OPTIONS

- Chain drive or gear drive (See the following pages for part numbers)

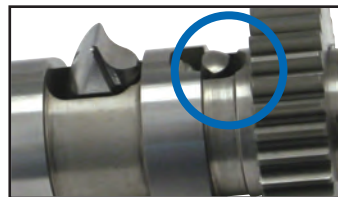
## HERE'S HOW IT WORKS

Each of the two exhaust cam lobes are equipped with a spring loaded compression release lobe on the "heel" of the cam at the point where the valve would normally be fully closed.

The lobe holds the exhaust valve open slightly at cranking speed. This releases some of the compression, making the engine much easier to crank. Once the engine starts, and rpm increases, the compression release lobe is centrifugally retracted and the engine runs normally, with full compression, and without any loss in performance. This allows a stock starter and battery to start nearly any engine.



The compression release lobe reduces compression until the engine starts.



Increased rpm causes the compression release lobe to be centrifugally retracted so the engine runs normally.

# CAMSHAFT OVERVIEW

## CONT

Milwaukee-Eight™

2007–2017 Twin Cam  
96°/103°/110°1999–2006  
Twin Cam 88°1986–2019  
Sportster® & Buell®2014–2019 Street® &  
Street Rod™

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Appendix

SPECIFICATIONS OF S&S® CHAIN DRIVE AND GEAR DRIVE CAMSHAFTS FOR 2007–17 BIG TWIN (EXCEPT 2017 TOURING MODELS)													
Cam Name	Bolt-In	Valve Timing (open/close)		Valve Duration		Valve Lift	Centerline		Lift @ TDC		APPLICATION CROSS REFERENCE CHART		
		Intake	Exhaust	Intake	Exhaust		Intake	Exhaust	Intake	Exhaust	HD® Screamin' Eagle®	Andrews®	Most Fitting Application
		Open BTDC/ Close ABDC	Open BBDC/ Close ATDC										
OES	●	-9°/25°	42°/-3°	196°	219°	.474"	107°	112.5°	.087"	.110"			
510	●	20°/38°	52°/20°	238°	252°	.510"	99°	106°	.187"	.178"			
551**	●	17°/19°	41°/17°	216°	238°	.550"	91°	102°	.178"	.170"	SE-203/255	21H/26H	Touring
557	●	6°/27°	39°/12°	212°	231°	.557"	100°	103°	.113"	.146"			Tri-Glide®
MR103	●	13°/33°	50°/22°	226°	252°	.585"	100°	104°	.172"	.177"			
570	●	20°/40°	55°/20°	240°	255°	.570"	100°	107.5°	.187"	.179"	–	54H	All big twin
583	●	5°/18°	58°/24°	203°	262°	.583"	96.5°	107°	.113"	.206"	SE-203/255	21H/26H	Softail®/ Dyna®
HP103	●	20°/49°	45°/26°	249°	251°	.575"	104.5°	99.5°	.199"	.206"			
585	●	20°/45°	60°/20°	245°	260°	.585"	102.5°	110°	.186"	.179"	SE-21 1/251/257	31H/32H/50H 55H/67H	All big twin
625		20°/55°	60°/20°	255°	260°	.625"	107.5°	110°	.189"	.184"	SE-258/260	60H	All big twin
635H.O.		19.5°/43.5°	58.5°/37.5°	243°	276°	.635"	102°	100.5°	.186"	.284"			
640		25°/60°	65°/25°	265°	270°	.640"	107.5°	110°	.228"	.214"	SE-264	59H	All big twin
675		25°/64°	70°/25°	269°	275°	.675"	109.5°	112.5°	.235"	.205"	–	64H	All big twin

\*\*551 cams are not recommended with compression ratio of 10:1 or higher.

## NOTE

Stock valve springs in 2005–up engines can accommodate valve lifts up to .590".

# GEAR DRIVE CAM KITS

## FITMENT

- 2006 Dyna® and 2007–'17 big twins, *except 2017 touring models*

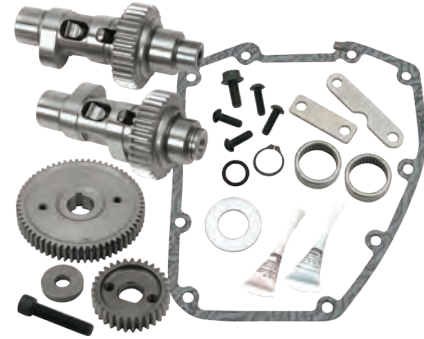
## FEATURES AND BENEFITS

- Improves valve timing accuracy by eliminating timing chain lash
- Easy Start cams allow stock starter to start any engine
- No tensioner shoes to wear out or fail

## OPTIONS

Which S&S Gear Drive Cam Kit to Order?

- If updating a stock chain drive system, it's easiest to order a complete kit. Includes:
  - Camshafts with inner gears
  - Outer cam drive gear kit
  - Camshaft installation kit
- If replacing cams in an engine already equipped with S&S gear drive cams, order cams with inner gears and reuse the existing outer gears. Camshaft installation kit for the appropriate model year is recommended.
- If installing a set of gear drive cams from another manufacturer, order S&S cam gear kits for the appropriate model year. Each kit provides the inner & outer cam gears. Camshaft installation kit for the appropriate model year is recommended.



106-5737

## GEAR DRIVE CAMS FOR 2007–'17 BIG TWIN MODELS (EXCEPT 2017 TOURING MODELS)

Cam Name	Easy Start Cams		Standard cams	
	Complete Kit**	Cams with Inner Gears <sup>†</sup>	Complete Kit**	Cams with Inner Gears <sup>†</sup>
	Stock Oil Pump	Stock Oil Pump	Stock Oil Pump	Stock Oil Pump
510	–	–	33-5266	33-5246
551	106-5737	106-5736	106-4868	106-4870
557*	330-0057	330-0056	330-0109	–
570	106-5221	106-5220	33-5267	–
583 <sup>††</sup>	106-5811	106-5810	330-0111	–
585	106-5225	106-5224	33-5268	33-5248
625	106-5229	106-5228	33-5269	33-5249
640	106-4850	106-4849	33-5270	–
675	106-5741	106-5740	330-0113	–
MR103	330-0303	330-0302	–	–
HP103	330-0354	330-0353	330-0350	330-0349
635 H.O.	330-0339	330-0338	330-0335	330-0334

2006 Dyna® uses 2007-up style cams.

\*For Harley-Davidson® Tri Glide® models.

<sup>†</sup>Installation kit not included but recommended.

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106-6068

### INSTALLATION KIT FOR S&S GEAR DRIVE CAM\*

Models	Part #
2006 Dyna® and 2007–'17 big twins, <i>except 2017 touring models</i>	106-6068

Includes a gearcover gasket, bearings, oil passage block-off kit, retaining ring, o-ring, and instructions. \*This kit is included with all Complete Gear Drive Cam Kits.



106-5723

### Oil passage block-off kit

Use this kit to block oil passages in cam plate when hydraulic cam chain tensioners are removed to install gear drive cams. Fits any cam plate designed for hydraulic tensioners. This oil passage block-off kit is included in the cam installation kit, part #106-6068, and our TC3 Cam Plates.

## NOTES

**<sup>††</sup>This cam kit is not for touring models and does not work with compression over 9.9 to 1.**

Fuel injection tuning required.

Pinion shaft run-out must be checked before installing S&S® gear drive cams.

A hydraulic press and other professional tools are required to install S&S gear drive cams. Additionally, material must be removed from the inner surface of the stock gearcover. The stock crankcase may require clearancing for S&S .625", .640", and .675" lift cams. S&S recommends that gear drive cams be installed by a professional mechanic.

Due to the inherent characteristics of gear drives, you may experience more valve train noise with gear driven cams. Oversized and undersized gears are available to help achieve correct gear lash. We have found that with 160 lb. of valve seat force, the S&S gear drive cams will perform well up to 6200 rpm. If higher rpm is anticipated, valve springs that provide higher seat force should be used.

S&S can do a special order cam. Contact your S&S Customer Service Representative for more information.



# CHAIN DRIVE CAM KITS

## FITMENT

- 2006 Dyna® and 2007–2017 big twins, *except 2017 touring models*

## FEATURES AND BENEFITS

- Great way to increase performance at an affordable price
- Quick installation—reuse many stock components
- Easy Start cams allow stock starter to start any engine



### S&S CHAIN DRIVE CAM KITS FOR 2007–'17 BIG TWIN MODELS

(EXCEPT 2017 TOURING MODELS)

Cam Name	Standard	Easy Start
OES	<b>330-0293</b>	–
510	<b>106-4380</b>	–
551	<b>106-4858</b>	<b>106-4947</b>
557*	<b>330-0105</b>	<b>330-0053</b>
570	<b>106-4381</b>	<b>106-5234</b>
583**	<b>330-0106</b>	<b>106-5807</b>
585	<b>106-4382</b>	<b>106-5233</b>
625	<b>106-4383</b>	<b>106-5239</b>
640	<b>106-4399</b>	<b>106-5235</b>
MR103	<b>330-0470</b>	<b>330-0299</b>
HP103	<b>330-0343</b>	<b>330-0346</b>
635 H.O.	<b>330-0328</b>	<b>330-0331</b>

Note: 2006 Dyna® uses 2007-up style cams. \*For Harley-Davidson® Tri Glide® models.

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## KIT CONTENTS

- Cams
- Installation Kit: gearcover gasket, bearings, retaining ring, o-ring, thread lock
- Instructions



106-6068

### REPLACEMENT INSTALLATION KIT FOR S&S CHAIN DRIVE CAM\*

Models	Part #
2006 Dyna® and 2007–'17, <i>except 2017 touring models</i>	<b>106-5929</b>

Includes a gearcover gasket, cam bearings, retaining ring, o-ring, and instructions.

\*This kit is included with all S&S Chain Drive Cam Kits.

## NOTES

\*\*This cam kit is not for touring models and does not work with compression over 9.9 to 1.

Fuel injection tuning required.

551, 557, & 583 cams are not recommended with compression ratio of 10:1 or higher.

OES & 510 cam recommended over 9.7:1

S&S can do a special order cam. Contact your S&S Customer Service Representative for more information.

# CAM RELATED REPAIR PARTS



### REPLACEMENT GEARS\* FOR 2006 DYNA® AND 2007–'17 MODELS

(EXCEPT 2017 TOURING MODELS)

Description	Part #
Outer cam drive gear only	<b>330-0621</b>
Front inner cam gear	<b>330-0593</b>
Rear inner cam gear	Standard <b>330-0593</b>
	Undersized <b>330-0594</b>
	Oversized <b>330-0595</b>
Pinion Gears	Standard <b>330-0622</b>
	Undersized <b>330-0626</b>
	Oversized <b>330-0627</b>

\*Due to machining variations in the stock cam plate, oversized or undersized gears may be needed to achieve correct gear lash.

### CAM GEAR DRIVE KIT

Fitment	Part #
2006 Dyna® and all 2007–'17 models, <i>except 2017 touring models</i>	<b>33-4285</b>

Includes front and rear inner cam gears, pinion gear, and outer cam gear

### OUTER CAM GEAR DRIVE KIT

Fitment	Part #
2006 Dyna® and all 2007–'17 models, <i>except 2017 touring models</i>	<b>33-4268</b>

Includes 2 outer gears and hardware

### REPLACEMENT HARDWARE FOR OUTER CAM GEAR DRIVE

Description	Part #
Hardware Kit for 2006 Dyna® and all 2007–'17 models, <i>except 2017 touring models</i>	<b>33-4271P</b>
Replacement Key for 2006 Dyna® and all 2007–'17 models, <i>except 2017 touring models</i>	<b>106-1348</b>

### CAM NEEDLE BEARINGS ASSEMBLIES

Description	Part #
Inner Cam Bearing	each <b>31-4199-S</b> 9215
	2 pack <b>31-4499</b> 9215

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.



Milwaukee-Eight™

2007–2017 Twin Cam 96°/103°/110°

1999–2006 Twin Cam 88°

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod™

Indian® Models

Tools & Shop Supplies

Warranty & Company Policy

Appendix

# CAM CHEST UPGRADE GEAR OR CHAIN DRIVE

## FITMENT

- 2007–'17 Harley-Davidson® big twins (except 2017 touring) & 2006 Dyna® models

## FEATURES

- Upgrade to S&S bolt-in performance chain drive or gear drive camshafts
- Improved engine performance—higher lift and optimized cam timing
- S&S Quickkee pushrods—easy installation, without removing rocker covers
- Replace stock oil pump, cam support plate, cams, chain tensioners, and tappets with all new premium U.S. made S&S components
- Better, more consistent oil pressure



### CHAIN DRIVE CAM CHEST UPGRADE KIT FOR 2007–'17 BIG TWIN (EXCEPT 2017 TOURING) & DYNA® MODELS

Fitment	Cam	Part #
2007–up bt and 2006 Dyna models	551CE Easy Start	<b>330-0544</b>
	583CE Easy Start	<b>330-0545<sup>**</sup></b>
	585CE Easy Start	<b>330-0546</b>
	585C Standard	<b>330-0553</b>

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

### GEAR DRIVE CAM CHEST UPGRADE KIT FOR 2007–'17 BIG TWIN (EXCEPT 2017 TOURING) & DYNA® MODELS

Fitment	Cam	Part #
2007–up bt and 2006 Dyna Models	510G Standard	<b>310-0814</b>
	551GE Easy Start	<b>310-0815</b>
	585GE Easy Start	<b>310-0816</b>

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## NOTES

**\*\*This cam kit is not for touring models and does not work with compression over 9.9 to 1.**

551 & 583 cams are not recommended with compression ratio of 10:1 or higher.

# HYDRAULIC CAM CHAIN TENSIONER KIT

## FITMENT

- 2007–'17 except 2017 touring & 2006 Dyna® models
- 1999–'06 models with hydraulic cam plate upgrade

## FEATURES

- Thicker shoe for longer wear
- Direct chain oiling
- Larger piston
- Tighter tolerance for improved stability
- Made in USA

### HYDRAULIC CAM CHAIN TENSIONER KIT

Fitment	Part #
2007–'17 except 2017 touring models	<b>330-0518</b>

### REPLACEMENT PARTS

Description	Part #
Tensioner, Asm, Inner, Body, Cam Chain	<b>330-0519</b>
Tensioner, Assembly, Outer, Body, Cam Chain	<b>330-0520</b>
Tensioner Shoe, Chain, Camshaft	<b>330-0521</b>



# PRECISION TAPPETS

High performance tappets are a cornerstone of the S&S line up and we are always looking to improve our products. After months of research and countless hours of testing we are excited to reveal the latest in performance tappets. The S&S Cycle Precision Tappets replace both our standard as well as premium tappets. Each Precision Tappet is hand assembled to exacting tolerances and designed for quiet operation and rapid pump up and all are made in the USA.

## FITMENT

- 1999–2017 big twins
- S&S-T-Series engines

## PRECISION TAPPETS

Set of 4 tappets

**330-0718**

## FEATURES

- Reduced valve train noise from start up to shut down
- Close tolerances for low leak down rates
- Fast pump up and superior high rpm performance



# TAPPET COVERS

## FITMENT

- 1999–'17 big twins, except 2017 touring models
- S&S crankcases

## KIT CONTENTS


- Covers
- Gaskets
- Installation hardware

**33-5601**

## FEATURES AND BENEFITS

- CNC billet aluminum provides extra strength and dimensional stability over a wide temperature range
- Simple to install upgrade that looks great

## TAPPET COVER KITS

Finish	Part #
Gloss Black	<b>330-0588</b>
Polished	<b>33-5601</b> 
Chrome	<b>106-3883</b> ±
Gloss Black 4 3/8" style	<b>330-0589</b>

±  WARNING: Cancer and Reproductive Harm –

## REPLACEMENT PARTS FOR TAPPET COVERS

Descriptions		Part #
Gasket	each	<b>33-5303-S</b> 18635-99B
	2 pack	<b>33-5303-2</b> 18635-99B
Tappet Cover Gasket 4 3/8" style	each	<b>330-0282</b>
Screw w/flat washer, Zinc	each	<b>50-0092-S</b> 4741A
	4 pack	<b>50-0092P</b> 4741A
Screw, Chrome	each	<b>50-0482</b> ±
Washer, Flat, Chrome	each	<b>50-7017</b> ±

±  WARNING: Cancer and Reproductive Harm

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.





# TIME-SAVER ADJUSTABLE PUSHRODS


## FITMENT

- 1999–'17 big twins, *except 2017 touring models*

## FEATURES AND BENEFITS

- No need to remove rocker arms to install
- Speeds up installation of cams and rocker arms
- Makes upper-engine work easy!
- Can be installed with stock pushrod tubes

## TIME-SAVER ADJUSTABLE PUSHRODS

Description	Part #
Pushrod Set	930-0053 

# QUICKEE ADJUSTABLE PUSHRODS

GLOSS BLACK ALSO AVAILABLE

## FITMENT

- 1999–'17 big twins (*except 2017 touring models*)  
w/stock engine height +/- .050"

## FEATURES AND BENEFITS

- Adjustable to accommodate all tappets and cam base circle diameters and engine heights
- Easy to install—removal of rocker arms not needed
- No threads on wrench flats
- Also available in gloss black

## KIT CONTENTS

- Pushrods, gloss black or chrome pushrod covers, o-rings, and cover keepers





When a Quickee adjustable pushrod is collapsed, it can easily be installed or removed from an assembled engine.



930-0143

## QUICKEE ADJUSTABLE PUSHRODS

Description	Part #
Gloss Black Pushrod Kit <i>(includes black pushrod covers, o-rings &amp; cover keepers)</i>	930-0143
Chrome Pushrod Kit <i>(includes chrome pushrod covers, o-rings &amp; cover keepers)</i>	106-6051 
Pushrods Only*	93-5122 

*Longer keepers are required for taller than stock engines. See page 109 of this catalog for pushrod cover keepers.*

*\*1984–99 style pushrod covers are required for access to the Quickee Adjustable Pushrod adjusters in 2007–'12 big twins. See page 109 for pushrod covers.*

±  WARNING: Cancer and Reproductive Harm

# STANDARD ADJUSTABLE PUSHRODS

## FITMENT

- 1999–'17 big twins, *except 2017 touring models*
- Lengths available for various displacements

## FEATURES AND BENEFITS

- Adjustable to accommodate all tappets & cam base circle diameters






## KIT CONTENTS

- Pushrods, chrome pushrod covers, tappet cover gaskets, o-rings, cover keepers




93-5095<sup>±</sup>

## STANDARD ADJUSTABLE PUSHRODS FOR HARLEY-DAVIDSON® TWIN CAM 96™/103™

Displacement	Engine Height	Cylinder Length	Pushrod Kit	Pushrods Only	Pushrod Covers	Cover Keepers
96", 103", 106"	Stock	4.937"	93-5095 <sup>±</sup> 	93-5096 	106-1340 <sup>±</sup> 	93-4100
124"	+ .096"	5.013"	—	93-5098	106-1340 <sup>±</sup> 	93-4115 
143"	+ .2875"	5.057"	—	930-0103	106-1340 <sup>±</sup>	93-4102

*\*Custom, extra long stainless steel 4.250", customer to cut to required length*

±  WARNING: Cancer and Reproductive Harm

# NON-ADJUSTABLE PUSHRODS

## FITMENT

- 2007–'17 Harley-Davidson® Twin Cam 96™ and 103™ big twin engines, *except 2017 touring models*
- S&ST111 Engines

## NON-ADJUSTABLE PUSHRODS

Description	Part #
Pushrods Only (stock replacement)	<b>930-0046</b>
Replacement Pushrods for S&ST111	<b>930-0144</b>

## FEATURES AND BENEFITS

- Replaces stock pushrods perfectly
- 7/16" high strength chromoly steel tubing for increased strength
- Pushrods are marked with stock color code and valve position for easy installation



# PUSHROD COVERS & RELATED PARTS

## PUSHROD REPLACEMENT PARTS

Description	Part #	
Pushrod Cover Kit (includes top & bottom covers, cover cap, cover spring, spring washer, & o-rings for four pushrods)	Chrome	<b>106-1340</b>
	Gloss Black	<b>930-0124</b>
Top Cover	<b>93-4016</b> 17935-66T, 17935-79B	
Bottom Cover	<b>93-4015</b> 17938-83	
Cover Cap	<b>93-4017</b> 17945-36B	
Cover Spring	<b>93-4018</b> 17947-36	
Cover Cap Washer	<b>50-7131</b> 6762B	
Pushrod O-ring Kit (includes top, middle, & bottom o-rings for four pushrods)	<b>93-4022</b> 11293, 11157, 11101, 11190	
Top O-ring	<b>50-8039</b>	
Middle O-ring	<b>50-8038</b> 11132A	
Bottom O-ring	<b>50-8037</b> 11145A	



93-4016



93-4015



93-4017



93-4018



50-7131



93-4101

## PUSHROD COVER KEEPER SETS FOR 2007–'17 BIG TWINS

Length / Finish	S&S Tubes	Part #
2.390" / Gloss Black		<b>930-0127</b>
2.400" / Chrome	All stock height TC 96/103	<b>93-4070</b> <sup>±</sup> 17950-48
2.500"	Chrome	96", 100", 117", 103", 106" HSU
	Gloss Black	
2.600"	Chrome	124"
	Gloss Black	
2.800" / Chrome		<b>93-4115</b> <sup>±</sup> 17950-86
2.900"	Chrome	143"
	Gloss Black	
3.000" / Chrome		<b>93-4103</b> <sup>±</sup>
3.100"	Chrome	
	Gloss Black	
3.200" / Chrome		<b>93-4105</b> <sup>±</sup>
3.330" / Chrome		<b>93-4106</b> <sup>±</sup> 17949-40, 17950-66
3.500" / Chrome		<b>93-4107</b> <sup>±</sup>
3.625" / Chrome		<b>93-4108</b> <sup>±</sup>
4.250"*		<b>93-4109</b>

\*Custom, extra long stainless steel 4.250", customer to cut to required length

<sup>±</sup> WARNING: Cancer and Reproductive Harm

All S&S pushrod keepers are chromed steel, except part #93-4109. Keeper part #93-4109 is intended for unusually tall engines. It is manufactured of unchromed stainless steel to prevent rust or peeling after it is trimmed to the required length.

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

# 660" & 720" VALVE SPRINGS KITS FOR B3 HEADS

## FITMENT

Modified Harley-Davidson® 1984-up big twin and 1986-'03 Sportster® Models For S&S® Super Stock®, Special Application, or other heads which can accept a larger than stock O.D. outer spring. Stock spring O.D. is approximately 1.400". See descriptions below for outer spring O.D. of specific spring kits. S&S racing valve springs are designed to be used with "no shoulder" style valve guides. Special keepers fit stock 5/16" diameter stemmed valves and S&S collars only. Pro Stock spring kits include keepers for valves with 1 1/2" or 5/8" stems.

## KIT CONTENTS

4 titanium top collars, 4 bottom collars, 4 outer, 4 middle, and 4 inner valve springs, 8 valve keepers, 4 each .015" shims and .030" shims.

### .660" LIFT TRIPLE VALVE SPRING KIT WITH TITANIUM TOP COLLARS

- Typically used with cast iron guides
- 1.900" installed height
- 1.550" O.D. outer spring, middle spring is flat style and serves as a harmonic dampener
- Valve spring seat pressure equals 210 lbs
- Open pressure @ .660" is about 520 lbs
- Coil bind @ 1.175"

### .720" LIFT TRIPLE VALVE SPRING KIT WITH TITANIUM TOP COLLARS

- Typically used with bronze guides
- 1.975" installed height
- 1.570" O.D. outer spring
- Valve spring seat pressure 216 lbs
- Valve spring open pressure @ .720" is 540 lbs
- Coil bind @ 1.130"

**VALVE SPRING REPLACEMENT PARTS:  
SEE PAGE 142**



90-2079

### .660" & 720" LIFT VALVE SPRING KIT FOR B3 HEADS

Description	Part #
.660" Lift Triple Valve Spring	90-2079
.720" Lift Triple Valve Spring	90-2080

### REPLACEMENT PARTS

Description	Part #
Top collar - titanium .660"/.720" lift	90-2155A
Bottom collar - .660"/.720" lift	each 90-2090
Valve keeper 5/16" valve stem SA	each 90-2153A
Shim - .015"	each 90-2086
	5 pack 50-7161
Shim - .030"	each 90-2087
	5 pack 90-2198

## NOTE

The .660" lift kit (90-2079) can be used to replace the S&S spring combination installed in early .630" lift S&S heads. Requires the use of S&S .085" longer intake valve 90-2004 and exhaust valve 90-2005.

# 650" VALVE SPRINGS KITS FOR B2 HEADS

## FITMENT

- S&S® B2 heads

## FEATURES AND BENEFITS

- Works well with cams up to .650" lift
- Manufactured from ultra clean high silicon Kobe alloy wire then micro shot peened and nitrided
- High performance conical single wire spring
- Chromoly forged retainers

## KIT CONTENTS

- Valve keepers, top & bottom collars, springs, shims



### .650" LIFT VALVE SPRING KIT FOR B2 HEADS

Description	Part #
Spring, Kit, Valve, Dual, .650", Chrome Silicone Steel, 1984-2004 bt, 1986-2003 xl	900-0050

S&S®.650" LIFT VALVE SPRING KIT FOR B2 HEADS				
Lift	Installed Height	Seat Force	Force @ Max Lift	Max RPM
.650"	1.860"	178 lb.	376 lb.	6500



# SIDEWINDER® .650" VALVE SPRINGS

## FITMENT

- Stock 2005–'17 Twin Cam 96™/103™ big twins (except 2017 touring models) with 7mm valve stems
- All S&S CNC ported heads

## FEATURES AND BENEFITS

- Works well with cams up to .650" lift
- Manufactured from ultra clean high silicon Kobe alloy wire then micro shot peened and nitrided
- CNC machined 9° locks
- High performance conical single wire spring
- Chromoly forged retainers

## KIT CONTENTS

- Valve keepers, Top & Bottom collars, Springs, Shims

### S&S® .650" LIFT VALVE SPRINGS SPECIFICATIONS

Lift	Installed Height	Seat Force	Force @ Max Lift	Max RPM
.650"	1.860"	178 lb.	376 lb.	6500



### .650" LIFT VALVE SPRING KIT

Description	Part #
2005–'17 big twins (7mm stems) except 2017 touring models	<b>106-5909</b>

## NOTE

S&S recommends roller rocker arms be used with lifts over .585"

# STREET PERFORMANCE .585" VALVE SPRINGS

## FITMENT

- 2005–'17 big twins with 7mm valve stemmed stock heads (except 2017 touring models)
- All S&S Super Stock Heads
- S&S CNC Ported Heads

## FEATURES AND BENEFITS

- Springs reduce the risk of valve float
- Suitable for high performance applications
- Accommodates camshaft lift to 0.585"

## KIT CONTENTS

- Valve Guide Seals, Springs, Top & Bottom Collars, Keepers, Shims

### STREET PERFORMANCE .585" VALVE SPRING KIT

Description	Part #
2005–'17 big twins (7mm stems) except 2017 touring models	<b>900-0594</b>
All S&S Super Stock Heads	<b>900-0595</b>
S&S CNC Ported Heads	<b>900-0596</b>

### S&S® STREET PERFORMANCE .585" VALVE SPRINGS SPECIFICATIONS

Lift	Installed Height	Seat Force	Force @ Max Lift
.585"	1.850"	135 lb.	325 lb.



VALVE SPRING REPLACEMENT PARTS:  
SEE PAGE 142



# FORGED ROCKER ARMS

## FITMENT

- 1999–2017 big twins (except 2017 touring models)

## FEATURES AND BENEFITS

- **Roller Rocker Arms:**
  - Extremely durable rollers reduce valve stem side thrusting with high lift cams
  - Superior wear and fatigue resistance even in the most demanding applications
  - ¾" long bushings provide 50% more bushing support area than ½" long bushings
  - Available in stock 1.625:1 ratio or performance 1.725:1 ratio
- **Standard Rocker Arms:**
  - ¾" long bronze bushings provide 50% more load bearing area than the ½" long bushings used in stock and other aftermarket rocker arms
  - Case carburized hard surface for longer life
  - Stock 1.625:1 ratio

## KIT CONTENTS

- 2 front and 2 rear rocker arms






900-4065A



900-4119A




### 1.625:1 RATIO FORGED ROLLER ROCKER ARMS

Description	Part #
1.625:1 Ratio Roller Rocker Arm Set 2 front & 2 Rear	900-4065A 
Front Exhaust/Rear Intake each	900-4065FA  1,2,3
Rear Exhaust/Front Intake each	900-4065RA  1,2,3

### 1.725:1 RATIO FORGED ROLLER ROCKER ARMS

1.725:1 Ratio Roller Rocker Arm Set 2 front & 2 Rear	900-4098A
Front Exhaust/Rear Intake each	900-4098FA
Rear Exhaust/Front Intake each	900-4098RA

### STANDARD FORGED ROCKER ARM KIT

1.625:1 Ratio Roller Rocker Arm Set 2 front & 2 Rear	900-4119A 
Front Exhaust/Rear Intake each	900-4119FA  17375-83A
Rear Exhaust/Front Intake each	900-4119RA  17360-83A






90-4036



90-4104

### REPLACEMENT PARTS FOR FORGED ROCKER ARMS

Description	Part #
Rocker Arm Shafts (Set of 4)	90-4036  17611-83B
Rocker Arm Shafts (each)	90-4006   1,2,3 17611-83B
Roller Rocker Arm Rebuild kits (rebuilds 4 rocker arms)	90-4104
Roller & Standard Rocker arm bushing (¾" long)	90-4014

## NOTES

- S&S roller rocker arms are recommended for use with cams having more than 0.585" of lift.
- Adjustable pushrods must be used with S&S roller rocker arms to obtain proper valve clearance.
- New rocker arm shafts are recommended for maximum performance and rocker life.
- The use of 1.725:1 ratio rocker arms will increase stress on cams, tappets, and pushrods. For this reason they are recommended for racing only and not for street applications.

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# B2 HEADS WITH STOCK BOLT PATTERN

Kits do not include gaskets, hardware, or intake and exhaust flanges. These parts must be purchased separately.

## FITMENT

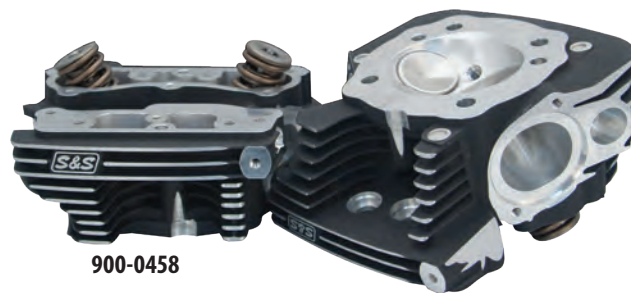
- 1999–'17 big twin engines (except 2017 touring models) 4½" bore, stock bolt pattern (in stock, off-the-shelf\*)
  - \*S&S only stocks the late model 4½" bore versions as off-the-shelf items, but heads for other applications and individual front or rear replacement heads are available by special order.
- 1999–'17 big twin engines (except 2017 touring models) 4½" bore and larger with S&S or other bolt pattern (special order only)
- 1984–'99 big twin engines 4½" bore and larger (special order only)
- Not compatible with Twin-Cooled™ models

## FEATURES AND BENEFITS

- 106cc combustion chambers
- Oval intake ports bolt up to S&S Throttle Hog 70mm throttle bodies (2008–up touring applications only)
- Stock style breather system—compatible with stock and aftermarket air cleaners
- Large 2.200" intake and 1.800" exhaust valves
- .660" lift S&S valve springs with titanium top collars
- Machined for stock sensors—EFI ready
- Available in Wrinkle Black or Silver powder coat

## OPTIONS BY SPECIAL ORDER

- CNC ported intake and exhaust ports—more air, more power!
- Two-bolt exhaust flanges—Can accommodate stock exhaust headers, existing 2" headers, or build your own 2" exhaust system
- Machined for 2008-later bagger front motor mount
- Select heads for 1984–'99 or 1999–'17 big twin style, or 1986–'03 XL
- 4½" to 4¾" bore sizes
- Stock 1999–'17, S&S, or other cylinder stud patterns—other patterns subject to approval
- Machined with or without S&S electric compression release
- Choose from a variety of pushrod geometry machining styles
- Choose from a variety of different chamber sizes
- Individual front or rear heads available by special order



## B2 HEADS WITH STOCK BOLT PATTERN

Finish	Part #
Silver Powder Coat	<b>900-0450</b>
Wrinkle Black Powder Coat	<b>900-0458</b>

\*Head Kits include valves and valve springs. Head sets w/o valves or springs individual front or rear heads are available by special order.

## ! ADDITIONAL PARTS REQUIRED

Product Description		Part #
Special 4½" Bore Pistons & Ring Set	Standard	<b>92-1580</b>
	+ .010"	<b>92-1581</b>
Special Length Pushrods (+.250")	For 124" engines	<b>93-5106</b>
	Stock height engines	<b>93-5098</b>
Intake Manifold Flange Kits	All B2 heads	<b>16-0250</b>

\*Download the Special Order Form

**REPLACEMENT PARTS: SEE PAGE 139**

## NOTES

Heads are .230" taller than stock—requires special pushrods and/or frame clearancing or motor mount modifications  
Exhaust pipe adaptor kits and other parts must be purchased separately. See "Additional Parts Required" chart, above.

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# SUPER STOCK® CYLINDER HEADS WITH STOCK BOLT PATTERN

## FITMENT

- 2006–2017 big twins, *except 2017 touring models*
- Not compatible with Twin-Cooled™ models

## FEATURES AND BENEFITS

- Heads can be decked up to .060" to increase compression
- 79cc heads 1.940" intake and 1.575" exhaust valves
- 89cc heads have 2.000" intake and 1.605" exhaust valves
- 91cc heads have 2.000" intake and 1.605" exhaust valves
- S&S 89cc heads have a whopping 264cfm flow rate (*compared to 182cfm for stock HD® heads*)
- S&S .585" or .650" lift valve springs
- Must use the included S&S valve cover gasket kit part #90-4120 with stock rocker covers
- 2006–'17 heads are machined for 2008–'17 FL top motor mount

- Includes 4 long headbolts for installation
- Compatible with stock rocker boxes, exhaust and intake manifolds

## OPTIONS

- Compression release machining or without compression release machining (*Compression release machining for S&S compression releases*)
- Silver, Wrinkle Black, or Stone Gray powder coat finish

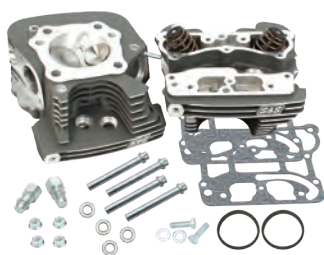
### COMPRESSION RATIOS FOR S&S® SUPER STOCK® CYLINDER HEADS FOR 2006–'17 BIG TWINS (EXCEPT 2017 TOURING MODELS)

Configuration	96"	103"	106" Big Bore	110"	111"	117"	124"
79cc	9.8	10.2/11.1*	10.6	10.8	–	–	–
89cc	8.9	9.3/10.1*	9.7	9.8	–	–	–
91cc	–	–	–	9.6	9.75	10.3	10.8

\*S&S pop-up piston



106-3233



900-0666

### SUPER STOCK® CYLINDER HEAD KITS FOR 2006–'17 BIG TWINS

Description	Chamber Volume	Manifold** Surface	Compression Release Machining	Springs	Finish	Part #
2006–'17 big twins <i>except 2017 touring models</i>	79cc		●	.650"	Silver	106-3227
			●	.650"	Wrinkle Black	106-3233
2006–'17 big twins <i>except 2017 touring models</i>	89cc		●	.650"	Silver	106-3255
	89cc		●	.650"	Wrinkle Black	106-3240
2006–'17 big twins, 2008–'16 touring models	91cc	+ .032"	●	.650"	Silver	106-4278
		Stock		.650"		900-0344
		+ .032"		.650"		900-4278
S&S 124" Hot Set Up Kits	91cc	-.064		.650"	Wrinkle Black	900-0993
		+ .032"	●	.650"	Wrinkle Black	106-3249
		Stock		.650"		900-0349
		+ .032"		.650"	Stone Gray	900-0666

\*\*In order to accommodate the change in engine height on S&S 124" engines and still use a stock length manifold, S&S added material to the surface for proper sealing of manifold to cylinder head.

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**All other Specifications and finishes are available through Special Order 90-1060\***

\*Special Order: Download the Special Order Form

### TOP END GASKET KITS FOR 1999–'17 BIG TWINS (EXCEPT 2017 TOURING MODELS)

3 7/8" & 3.927" Bore	MSRP	4" Bore	S&S 4 1/8" Bore (Graphite)	Stock 4 1/8" Bore (Layered Steel)
910-0465	\$90.95	90-1913	90-1910	90-1914

Includes a set of head and base gaskets, exhaust gaskets, and o-rings.

## NOTES

**79cc heads**

When 79cc stock compatible heads are used with stock HD® pistons, TDC lifts of up to .186" for intake and .179" for exhaust and can be used without additional valve pocket clearancing. This allows the use of S&S® 510, 570, and 585 camshafts. If cams with higher TDC lifts are used, or if the heads are decked, piston valve pocket machining will be required.

79cc heads may be decked as much as .060" to increase compression. If heads are decked, piston valve pockets must be re-machined.

Moderate valve spring force in S&S Super Stock® cylinder heads allows the use of camshafts designed for the stock style chain cam drive system. However, for maximum reliability and performance we recommend the S&S gear drive cams.

Must use S&S rocker base gasket kit part #90-4120 with stock rocker covers.

79cc Heads should not be used with any piston having a pop up dome.

**89cc heads**

If 89cc heads are used with stock pistons, valve reliefs must be machined in the pistons due to larger valve size.

89cc heads may be decked as much as .060" to increase compression. If heads are decked, valve-to-piston clearance must be checked. If stock pistons are used, valve pockets must be re-machined.

Moderate valve spring force in S&S Super Stock® cylinder heads allows the use of camshafts designed for the stock style chain cam drive system. However, for maximum reliability and performance we recommend the S&S gear drive cams.

A larger intake manifold is recommended to supplement the heads in order to let them flow to their full potential.

Must use S&S rocker base gasket kit part #90-4120 with stock rocker covers.

**91cc heads**

By changing the profile and shape of the cooling fins on our heads for 4½" bore engines, a large reduction in the transmission of mechanical noise was found. This not only benefits our TÜV certified engines and our EPA approved engines, but our performance engines as well!

Since April 1, 2007, these redesigned heads have been installed on all S&S 4½" bore engines and Hot Set Up Kits.

Replacement heads of the old style are available by special order.

Must use S&S valve cover gasket kit part #90-4120 with stock rocker covers.

**MANIFOLD RECOMMENDATIONS**

S&S single bore throttle body and manifold are recommended for engines with Magneti Marelli® fuel injection.

Due to the change in manifold flange mounting bolt pattern, stock flanges and S&S seal part #16-0235 must be used. The Screamin' Eagle® 58mm throttle body/manifold may also be used on 2006-'09 engines.

We recommend the stock 50 mm throttle body or S&S Throttle Hog 58mm throttle body/manifold for 2008-up touring models with Electronic Throttle Control (ETC).

**IMPORTANT MANIFOLD INFORMATION**

In 2006, Harley-Davidson® changed the bolt pattern of the flanges that connect the manifold to the cylinder heads for all big twin engines. The pattern was changed from an offset bolt pattern to a symmetrical bolt pattern, so flanges can fit either the front or rear cylinder head. In addition, the intake port was moved slightly toward the drive side of the engine, making the port-to-port distance of the intake manifold slightly shorter. S&S® heads for 2006-up big twins are machined with the symmetrical bolt pattern and relocated port to allow for the fitment of stock manifolds. In 2008, Harley-Davidson touring models were equipped with electronic throttle control (ETC). The throttle body and manifold used on these engines is a one-piece unit that contains a servomechanism to control the position of the throttle plate. S&S recommends the S&S Throttle Hog throttle body for this application, [See page 119](#). This limits the cylinder length of engines using an ETC manifold/throttle body to stock length because the ETC manifold/throttle body units are only available in stock length. However, S&S does supply specially machined cylinder heads for our 124" Hot Set Up Kit® for 2008 and later baggers, which allows the use of a stock length manifold on these longer-than-stock engines.

**REPLACEMENT PARTS: SEE PAGE 140**

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"1999–2006  
Twin Cam 88®1986–2019  
Sportster® & Buell®2014–2019 Street® &  
Street Rod™

Indian® Models

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Appendix

# CNC PORTED CYLINDER HEAD SERVICES

## FITMENT

- Available for 1999–2017 big twin engines, except 2017 touring models
- Ideal for 88"–124" engines (must use Screamin' Eagle® high flow injectors HD #27796-08 with stock throttle body, with kits over 107")
- Not compatible with Twin-Cooled™ models

## FEATURES AND BENEFITS

- CNC machined ports for a consistent performance increase from stock heads
- Great throttle response, high velocity port without losing low RPM torque
- Assembled with performance valves and springs ready to bolt-on
- Choice of .585" or .650" lift valve springs
- Combustion chambers are available in the following volumes:
  - 83cc—Generally used for stock 88" up to 106" engine displacements
  - 85cc—Same as stock Twin Cam 88® and 96™ engine displacements
  - 87cc—Recommended for up to 117" engine displacements
  - 90cc—Generally used for 124" and up engine displacements
- Available in factory black or silver



## S&S CNC PORTING SERVICE OPTIONS

### REWORK SERVICE

- Send your stock heads to S&S
- Get the same set of heads back with CNC machined ports
- The best option for heads with a special cosmetic treatment
- Allow 1 week turn-around (does not include shipping)

### CUSTOM CNC PORT DUPLICATION

- S&S can digitize your port design and machine it in your heads, ask an S&S customer service rep for details

### CNC PORTING SERVICE

Fitment	Part #
1999–2017 big twins (except Twin-Cooled™ & 2017 touring models)	106-5880

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S&S® CNC PORTING SERVICE SPECIFICATION COMPARISON								
Heads	VALVE SIZE		Max Valve Lift	MAX TDC LIFT		PORT FLOW		Chamber Volume
	Intake	Exhaust		Intake	Exhaust	Intake	Exhaust	
Stock	1.805"	1.575"	.585"	–	–	216.2 cfm	191.8 cfm	85cc
CNC Ported by S&S	1.900"	1.610"	.650"	.230"	.215"	248.6 cfm	209.7 cfm	83cc**

\*Flow testing performed on a SuperFlow® 1020 flow bench at 28" of water test pressure at .600" lift. Heads tested are 2006-'12 style.

Heads	COMPRESSION RATIO								
	88"	95"	96"	97"	103"	106" Stroker	106" Big Bore	117" DD Piston	124" DD Piston
Stock	9.0:1	9.2:1	9.2:1	9.7:1	10.1:1	10.1:1	10.0:1	10.0:1	10.7:1
CNC Ported by S&S	9.2:1	9.4:1	9.4:1	9.9:1	10.3:1	10.3:1	10.2:1	10.2:1	10.9:1

\*\*As a general rule of thumb, for every 1cc decrease in chamber volume equals a .1 increase in compression ratio.

## NOTES

CNC porting is not available for previously ported heads, heads that have been structurally damaged, or heads that are determined to be unserviceable during initial inspection. These heads will be returned to the customer without modification. In these cases, the customer will be notified and options will be reviewed. New, CNC ported stock heads or S&S heads are available for purchase.

Due to variations in stock cylinder head castings, all inside surfaces of the ports may not "clean up" during machining. As a result, the inside of one or more ports may not appear to be completely machined. This does not effect performance and is not considered a defect.

Fuel injection tuning required.

CNC porting is not currently available for Harley-Davidson® CV0 engines or Screamin' Eagle® cylinder heads.


Must use Screamin' Eagle® high flow injectors, HD #27796-08, with kits over 106" with stock throttle body

S&S recommends using a S&S Throttle Hog throttle body when installing S&S CNC ported heads to achieve full horsepower performance potential. See page 119.







# HEAD BOLTS WITH WASHERS

## HEAD BOLTS

Bolt Length w/Washer	Washer Thickness	Head Bolt w/Washer	Washer Only
1.690"	.250"	<b>93-3028</b>	<b>50-7091</b>
1.840"	.150"	<b>93-3027</b>	<b>50-0418-S</b>
1.920"	.250"	<b>93-3036</b>	<b>50-7091</b>
2.070"	.150"	<b>93-3031</b> 	<b>50-0418-S</b>
2.220"	.250"	<b>93-3038</b>	<b>50-7091</b>
2.370"	.150"	<b>93-3032</b>	<b>50-0418-S</b>
3.134"	.250"	<b>93-3029</b>	<b>50-7091</b>
3.284"	.150"	<b>93-3030</b>	<b>50-0418-S</b>
3.501"	.250"	<b>93-3037*</b>	<b>50-7091</b>
3.651"	.150"	<b>93-3033*</b>	<b>50-0418-S</b>
–	.150"	–	<b>50-0418-S</b>

\* Drilled & tapped deeper to allow shortening for custom lengths.

## HEAD BOLTS FOR HARLEY-DAVIDSON® TWIN CAM 96™ ENGINES

Engine Displacement	Stroke	Cylinder Length	Cylinder Head Type	Short Bolt w/Washer	MSRP	Long Bolt w/Washer	MSRP	Head Bolt Kit
Stock 96 and 103	4 $\frac{3}{8}$ "	4.937"	Stock HD®	<b>93-3031</b> 	\$17.95	<b>93-3030</b> 	\$17.95	<b>93-3014</b> 
117" Big Bore	4 $\frac{3}{8}$ "	4.878"	S&S®	–	–	<b>93-3030</b> 	\$17.95	<b>93-3070</b>
124" Big Bore Stroker	4 $\frac{5}{8}$ "	5.013" or 5.004"	Stock HD®	<b>93-3038</b>	\$17.95	<b>93-3037</b>	\$17.95	<b>93-3016</b>
			S&S®	–	–	<b>93-3037</b>	\$17.95	<b>93-3071</b>



93-3031

## CALCULATING CUSTOM HEAD BOLT LENGTH SEE INSTRUCTIONS IN THE APPENDIX: SEE PAGE 361

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown




### S&S® CHROME HEAD BOLT COVERS

Dress up your engine with these magnetic chrome head bolt covers. Easy installation, no tools, no messy adhesives. A powerful magnet holds cover in place, yet allows easy removal. Chrome plated steel looks great on any engine, but is a must for polished engines. For S&S head bolts only.



### CHROME HEAD BOLT COVERS<sup>‡</sup>

Description	Part #
Set of 4, for S&S Head Bolts only	<b>50-0333</b> 

<sup>‡</sup>  WARNING: Cancer and Reproductive Harm

# DIE-CAST ROCKER COVERS

## FITMENT

- 2007–'17 model big twins, except 2017 touring models


## FEATURES AND BENEFITS

- Special rocker arm supports are included
- S&S rocker covers are finished with show-quality chrome
- Installation on stock and most comparable sized engines can be performed without removing the engine from the frame
- Clearanced to permit valve lifts up to .640" using S&S valve spring packages and stock rocker arms or S&S roller rocker arms
- S&S rocker covers accept valve springs up to 1.660" O.D. without modification
- Exclusive one way valve built into the rocker cover gasket to control oil carry over

## KIT CONTENTS

- Front and rear covers
- All necessary gaskets and o-rings
- Mounting hardware

## DIE-CAST ROCKER COVER KIT

Description	Part #
Gloss Black	<b>900-0937</b>
Chrome <sup>‡</sup>	<b>90-4110</b> 

<sup>‡</sup>  WARNING: Cancer and Reproductive Harm



## NOTES

If using valve spring packages with taller than stock installed height, some minor clearancing may be required.

Cylinder heads must be set up correctly for high lift cams, and it remains the builder's responsibility to confirm all clearances.

In most instances, only minor clearancing is required to use S&S rocker covers with valve springs larger than 1.660" O.D.

S&S® rocker covers are required if S&S cylinder heads are used with S&S electric compression releases.

REPLACEMENT PARTS: SEE PAGE 143

ANY JOB IS EASY WITH THE RIGHT TOOLS  
S&S ROCKER COVER WRENCH SET, SEE PAGE 339



# THROTTLE HOG CABLE-OPERATED THROTTLE BODIES

S&S cable operated Throttle Hog Throttle bodies are available for 2002–'17 Harley-Davidson® big twins using cable operated throttles. Choose from 58mm for stock or mildly built engines, or the whopping 66mm Throttle Hog for big inch engines. More Air, More Power!

## FITMENT

- 2006–'17 Harley-Davidson EFI big twins with cable controlled throttles
- S&S EFI Hot Set Up Kit® installations and T-Series Long Block engines with cable controlled throttles

## FEATURES & BENEFITS

- More air flow for improved performance
- S&S Stealth air cleaners kit, with the proper bore sizes, are available
- Works with all air cleaner kits designed for throttle by wire engines with stock breather system
- One-piece design for easy installation and stock appearance
- Compatible with stock sensors, fuel rail, and throttle cables
- Black powder coat finish matches stock
- Sealed, stainless steel throttle shaft with dual roller bearings for smooth operation and no air leaks
- Kit includes hardened steel flanges and seals
- No stock throttle body exchange required!

## THROTTLE HOG CABLE OPERATED THROTTLE BODIES FOR 2006-2017 BT

Year	Size (mm)	Engine Fitment	Manifold Size	Part #
2006–2017 bt	58	96", 103", 106", 107", 110", S&S 117" Hot Set Up Kit®, and 124" Hot Set Up Kit® <i>(w/S&amp;S +.032" heads only)**</i> S&S T-Series Engines** <i>(Engines produced after 2013)</i>	405	<b>170-0346</b>
		S&S T-Series 111" Long Block Engines**	398	<b>170-0347</b>
		S&S T-Series 124" Engines with S&S bolt pattern, and 124" Hot Set Up Kit® <i>(w/stock or standard S&amp;S heads)** (Engines produced before 2013)</i>	417	<b>170-0345</b>
	66	96", 103", 106", 107", 110", S&S 117" Hot Set Up Kit®, and 124" Hot Set Up Kit® <i>(w/S&amp;S +.032" heads only)**</i> S&S T-Series Engines** <i>(Engines produced after 2013)</i>	405	<b>170-0349</b>
		S&S T-Series 111" Long Block Engines**	398	<b>170-0350</b>
		S&S T-Series 124" Engines with S&S bolt pattern, and 124" Hot Set Up Kit® <i>(w/stock or standard S&amp;S heads)**</i> S&S T-Series Engines** <i>(Engines produced before 2013)</i>	417	<b>170-0348</b>

\*\*Some S&S heads have additional material on the manifold surface to allow the use of a stock length manifold (405) on a 124" engine.

If you are not sure which manifold should be ordered, check fitment with the stock manifold first.

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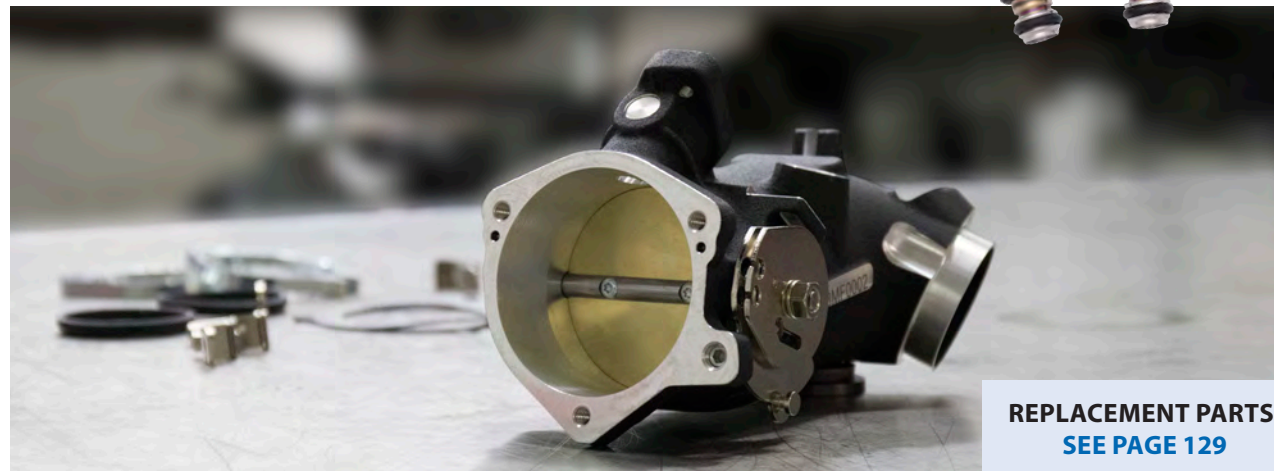
### MAKE MORE POWER!

S&S Air Cleaner Kits  
See page 75

REPLACEMENT FLANGE KITS  
2006–2017 bt 160-0168



6.2 g/s FUEL INJECTORS for  
2006–2017 Cable-operated Throttle Hogs 550-0749



REPLACEMENT PARTS:  
SEE PAGE 129

# THROTTLE HOG THROTTLE BODIES

## FITMENT

- 2008–2016 big twins w/throttle-by-wire  
(Except models equipped with the Twin-Cooled™ system)

## FEATURES AND BENEFITS

- Increase in airflow for additional performance gains
- Meets the breathing needs of even the largest of engines  
— choose from 58mm, 66mm, or 70mm
- Increased manifold port I.D. 1.780"
- Economically priced compared to competitors
- Utilizes stock sensors and fuel rail
- Kit includes hardened steel flanges and seals
- All throttle-by-wire 58 & 66mm throttle bodies are machined to stock length intake manifolds (S&S manifold size 405) only

**58MM** Recommended for engines up to 110". Perfect with a S&S® 106" Big Bore kit

**66MM** Perfect pairing with a S&S 124" Hot Set Up Kit® or a 124" engine  
(when running cylinder heads with stock style round intake ports)

**70MM** Recommended for engines up to 145" displacement. S&S B2 and B3  
cylinders heads are required to match the oval port configuration

## ADDITIONAL PARTS REQUIRED

- Air cleaner (see chart for recommended air cleaner kits)
- High flow injectors P/N 550-0747
- A performance motorcycle tuning module.



## SOLD ON EXCHANGE ONLY—HERE'S HOW IT WORKS

1. Your S&S® dealer sends your stock throttle body to S&S Cycle, Inc
2. S&S tests your incoming throttle body and its electrical components  
—a non-functional unit cannot be used and will be returned
3. S&S transfers your functional electrical components to your new S&S Throttle Hog
4. The complete Throttle Hog is tested and shipped to your S&S dealer  
(along with your original throttle body)
5. Your new Throttle Hog will typically be shipped within 2–3 days of receipt at S&S.

## THROTTLE HOG THROTTLE BODIES AND AIR CLEANER KITS

Size	Throttle Hog Throttle Body ±	Stealth Air Cleaner Kits***	MSRP	Backplate only*
58mm	<b>160-0034</b>	<b>170-0164</b>	\$180.95	<b>170-0167</b>
66mm	<b>160-0010</b>	<b>170-0165</b>	\$180.95	<b>170-0168</b>
70mm B2	<b>160-0112</b>	—	—	<b>170-0247**</b>

\*If you already have a Stealth air cleaner for a stock throttle body, all you need is the backplate.

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\*\*70mm B2 backplates do not have mounts to the cylinder head. A bracket must be fabricated to support the throttle body separately. Engine height determines if stock bracket can be used.

\*\*\* These kits do not include an air cleaner cover. See page 78 for S&S Stealth covers.

± WARNING: Cancer and Reproductive Harm

**6.2 g/s FUEL INJECTORS for  
2008–2017 Throttle-by-Wire Throttle Hogs 550-0747**



**B3 APPLICATIONS:  
SEE PAGE 91**

## WARRANTY: S&S THROTTLE HOG THROTTLE BODIES

S&S® Cycle, Incorporated warrants the S&S components of your S&S Throttle Hog throttle body to be free from defects in material and workmanship for a period of one year from the date of purchase by the original consumer customer. If parts become defective during the warranty coverage period, S&S will, at its option, repair or replace any, or all, defective parts. Repair or replacement of defective parts is the sole and exclusive remedy.

In the event that any OEM component re-utilized in the assembly of the throttle body fails, S&S may service the unit provided the OEM components are supplied to S&S at the time of service.

Milwaukee-Eight®

2C

96°

Cam

1999–2006  
Twin Cam 88®1986–2019  
Sportster® & Buell®2014–2019 Street® &  
Street Rod™

Indian® Models

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Appendix



# MANIFOLDS FOR SINGLE BORE EFI BIG TWIN ENGINES

## FITMENT

- Stock height or taller than stock 2006–'15 bt, except 2008–2015 touring models
- S&S 52mm or 58mm throttle bodies
- Stock or S&S heads
- S&S T-Series Long Block engines

## KIT CONTENTS

- Manifold
- O-ring intake seals
- VOES fitting cap

## MANIFOLDS FOR SINGLE BORE EFI 2007–'15 BIG TWIN ENGINES

Engine Displacement	Cylinder Length	Manifold Size	Part #
96", 103" & 106" (S&S engines with stock bolt pattern)	4.937"	405	<b>16-5134</b>
124" Hot Set Up Kit® (w/stock or standard S&S heads) **	5.004"	417	<b>16-5139</b>
124" Hot Set Up Kit® (w/S&S +.032" heads only)**	5.004"	405	<b>16-5134</b>
111" S&S T-Series Long Block Engines	4.754"	398	<b>16-5136</b>
117" Hot Set Up Kit®	4.878"	405	<b>16-5134</b>
124" S&S T-Series Engines, S&S bolt pattern	5.013"	417	<b>16-5139</b>

\*\*Some S&S heads have additional material on the manifold surface to allow the use of a stock length manifold (405) on a 124" engine. If you are not sure which manifold should be ordered, check fitment with the stock manifold first.



16-5139

## NOTES

S&S style o-rings must be used with these manifolds. S&S o-rings are slightly thinner to accommodate the larger S&S port diameter. Use of stock o-rings may cause damage.

2006–up models require separate purchase of HD® intake manifold flanges pn 26993-06 (1 pack).

# SINGLE BORE EFI THROTTLE BODIES

**52MM:** Offering a 30% larger cross sectional area than stock throttle bodies, the S&S 52mm bore throttle body flows more than enough air for all but the most demanding street engines.

**58MM:** In response to constant requests for something bigger, S&S also offers a huge 58mm bore throttle body! Strictly for large displacement competition engines, this throttle body allows your engine to breathe easily and make more power! Recommended for S&S 106" big bore kit.

## FITMENT

- 2006–'17 EFI big twins  
(except 2008–up touring & 2016–'17 Softail® models with electronic throttle control)

## FEATURES AND BENEFITS

- Excellent performance
- Recommended tuning products:
  - S&S VFI
- Cruise control compatible with no extra bracket

## OPTIONS

- 52mm
- 58mm

### MAKE MORE POWER!

**S&S® Stealth Air Cleaners:** See page 75  
**S&S Air Cleaner Kits:** See page 81

### NEW & IMPROVED!

**CABLE-OPERATED THROTTLE HOGS**  
SEE PAGE 118

**REPLACEMENT PARTS:**  
SEE PAGE 130

## KIT CONTENTS

- Throttle body assembly
- Fuel injectors
- Fuel rail
- Harness adaptors
- All necessary hardware, gaskets, and hoses

## SINGLE BORE EFI THROTTLE BODY KIT

Description	Part #
52mm Kit including Fuel Rail Kit	<b>17-5070</b>
58mm Kit including Fuel Rail Kit	<b>106-4408</b>

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## NOTES

If you plan to use another programmable fuel injection module, it is best to consult the manufacturer to be certain that it is compatible with the S&S single bore system and has enough tuning capability for your engine configuration.

Requires S&S manifold and air cleaner assembly (order separately)



Stock

S&S 52mm

S&S 58mm

# COMPRESSION RELEASES

## FITMENT

- S&S cylinder heads and rocker boxes for big twin with compression release machining
- Will not fit OEM heads

## ELECTRIC RELEASE:

Solenoid operated, this system automatically opens and closes when the starter button is pressed and released. Convenient and simple, this is the best setup for big displacement high compression bikes. Requires S&S die cast rocker covers, [See page 117](#)



### COMPRESSION RELEASE KITS

Description	Part #
Electric	90-4915

### TOOLS AND ACCESSORIES

Description	Part #
S&S Two-Piece Socket Kit: <i>Allows in-frame installation of S&amp;S compression releases and protects wiring from damage during installation.</i>	53-0045
S&S Compression Release Hole Plug	<i>each</i> 90-4916
	<i>2 pack</i> 90-4916-2

### REPLACEMENT PARTS

Description	Part #
Silicone Solenoid Caps	55-1009
Wiring Harness 	55-1010
Electric Compression Release Assembly 	90-4914



55-1009



90-4915



53-0045



90-4916

## NOTES

S&S rocker covers must be used with electric compression releases due to clearance requirements for the solenoids.

Rocker covers must be removed when installing S&S® compression releases. If lack of frame clearance prevents removal of rocker covers, engine must be removed from frame for compression release installation.

In most cases, S&S compression releases can be installed while the engine is in the frame with the special S&S two-piece socket kit, part #53-0045.

If cylinder heads are machined for S&S compression releases, but compression releases are not used, special plug part #90-4916 (two required) must be installed to seal the machined hole.

Stock cylinder heads cannot be machined for S&S compression releases because there is not enough material in critical areas.

Milwaukee-Eight®

2007–2017 Twin Cam  
96°/103°/110°

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

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Appendix

# VARIABLE FUEL INJECTION MODULES (VFI)

## DELPHI® STYLE S&S® VFI MODULE

### FITMENT

- 2001–'10 Harley-Davidson® EFI Softail® models
- 2002–'07 EFI touring models
- 2004–'11 EFI Dyna® models

### IMPROVED FEATURES:

- New state of the art components replace outdated materials
- Improved waterproof housing
- More durable USB-C connector
- Faster processor for increased communication speed
- Protune II 4.0, available to download
- EC-approved

### FEATURES AND BENEFITS

- Replaces stock Harley-Davidson® fuel injection modules—*plugs directly into stock wiring harness*
- ProTune II software is available for free download at:
- Three stage engine overheat protection helps prevent possible engine damage
- Altitude compensation automatically adjusts for altitude variations
- Live tuning allows manual changes to maps while the engine is running
- Self diagnostics and actuator test functions help tuning and verify proper installation/operation
- Engine light can be programmed to function as a shift light
- Closed loop capable
- Optional closed loop sensor kit and knock sensor kit extend module capabilities
- Speedometer calibration function for 2004–up Harley-Davidson® models (*does not require installation of separate speedometer calibrator*)

### CLOSED LOOP CAPABILITY

When equipped with a dual closed loop sensor kit and running in closed loop mode, VFI tuning becomes a breeze! S&S supplies base maps for several displacement groups, creating a starting point to get bikes up and running. Utilizing dual oxygen sensors (*sold separately*) placed in the exhaust, the S&S closed loop system modifies the base fuel map to meet the specific requirements of your engine!

- Automatic tuning on the street or on the dyno
- Each cylinder is tuned individually
- Fuel map changes are saved in the module & can be merged with the pre-loaded base map
- Works with stock oxygen sensors used on late model Harley-Davidson® motorcycles

Closed loop VFI can also automatically compensate fuel delivery for modifications creating up to a 20 hp gain, such as changes in:

- Displacement
- Cams
- Exhaust
- Head porting or installation of aftermarket heads

### KIT CONTENTS

- Delphi® style S&S VFI module
- USB port cover kit
- Installation instructions



55-5090



106-2066

### DELPHI® STYLE S&S VFI MODULE

Fitment/Description	Part #
VFI Module for 2001–'11 bt ( <i>except 2008–up touring and 2011 Softail®</i> )**	<b>55-5090*</b>
S&S Delphi Style VFI Closed Loop Sensor Kit	<b>106-2066</b>

\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

### REPLACEMENT PARTS FOR VFI MODULES

Description	Part #
Service Kit, O2 Sensor	<b>106-2061</b>
Service Kit, DTM Pin	<b>55-1521</b>
Service Kit, Oxygen Sensor Boss	<b>55-6071-S</b>
Service Kit, Subharness ( <i>Delphi Style</i> )	<b>55-1595</b>
Hardware Kit ( <i>USB Cover</i> )	<b>55-5091</b>

## NOTES

All current production S&S modules are closed loop compatible, and all older S&S modules can be updated with current calibration by simply downloading software from the S&S

Please note that maps created for older versions of the VFI software are not compatible with the new closed loop software, however they can be converted to closed loop if desired.

S&S VFI systems installed on 2004–up Harley-Davidson® models incorporate a speedometer calibration feature.

Due to the extreme range of control offered by the S&S VFI modules, we recommend that they be installed and tuned by S&S Certified VFI Tuning Centers.



# VARIABLE PRESSURE CLUTCH

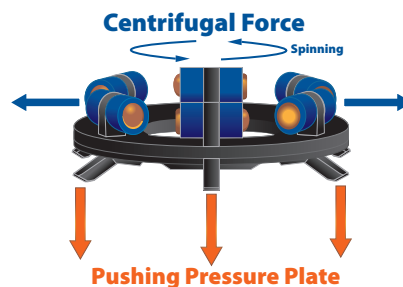
The VP clutch is the most cost effective kit for upgrading your HD® stock clutch. Up to 40% more pressure for stronger clutch engagement.

## FEATURES AND BENEFITS

- Works like a lock up clutch
- Increased torque capacity: strength of engagement increases with RPM
- 10 minute installation
- Fits behind most stock derby covers and primary covers—*No modification required*
- Can be used with cable and hydraulic clutch controls

Does not fit: 2013 and later CVO™ and Tri-Glide™, 2015 and later Ultra Limited Low and Electra Glide Classic Low Models with new HD® Assist and Slipper Clutch: 3 Stud Clutch Hub

Non-stock derby cover (including any special or 2003 anniversary cover) and 3 hole derby covers may require a derby



Centrifugal force makes more clamping force. Regular clutches have static pressure only with clutch springs. The Lock up clutch has two different types of pressure. One is a Static Pressure, and another is a Centrifugal Force by Lock-up as an additional pressure.

## VARIABLE PRESSURE CLUTCH

Description	Part #
1998–2017 big twins except M8	<b>560-0242</b>

# INNER PRIMARY BEARING RACE

The tendency of the stock inner primary bearing race on late model big twins to shift on the transmission mainshaft under high torque loads, also known as “walking” of the race, can cause destruction of the transmission mainshaft seal, and ultimately the mainshaft seal, output gear and output gear bearing. The S&S inner primary bearing race features an extra step on the inside diameter that acts as a stop on the transmission mainshaft. When the race is pressed on to the shaft, the step will not allow the race to move inward toward the mainshaft seal. The improved S&S bearing race is a must for any high performance application.

## FITS:

- 2017–2020 M8 models
- 2008–’17 big twin models with stock 6 speed Cruise Drive™ transmissions

## FEATURES AND BENEFITS

- Will not “walk” on transmission mainshaft
- Prevents costly damage to mainshaft seal, output gear & output gear bearing
- Simple to install



## INNER PRIMARY BEARING RACE

Description	Part #
2017–2020 M8 models	<b>560-0241</b>
2008–2017 big twin models	

# HEAVY DUTY DIAPHRAGM SPRING

## FITMENT

- 1998–2017 big twin models, *except 2017 touring models*

## FEATURES AND BENEFITS

- 380 lbs pressure, 25% stronger than stock
- Same pressure as Screamin’ Eagle® heavy-duty spring
- Compatible with S&SVP and stock clutches

## HEAVY DUTY DIAPHRAGM SPRING

Description	Part #
1998- up big twins	<b>560-0244</b>



Milwaukee-Eight®

2007–2017 Twin Cam  
96”/103”/110”

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

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# GATES® HIGH STRENGTH FINAL DRIVE BELTS

S&S final drive belts by Gates are available with 14mm pitch in 1½" and 1⅞" widths. See the chart and match the width and number of teeth required for your vehicle. You can find this information in the vehicle service manual.



## ATTENTION CUSTOM BIKE MANUFACTURERS! SPECIAL ORDER BELTS FROM S&S® AND GATES®

Special belt sizes, private brand labeling, and assistance with belt drive design, are available to custom performance OEM's and aftermarket bike builders, through S&S. These products and services are available for licensed motorcycle manufacturers only, and a minimum order quantity may be required.

Drive belts with your company name imprinted on them are a perfect way to show off your brand. Any belt size currently available in the S&S catalog, as well as the special ordered sizes, can be specially branded. Minimum order quantities would apply.

Whether you're designing a completely new chassis, or simply need a replacement belt, S&S can help you find the belt you're looking for. Through the combined efforts of Gates and S&S, S&S can now provide customers with the technical assistance they need for designing new secondary belt drive systems. In addition, S&S can help you determine required tooth count for your existing chassis design, based on the pulley center-to-center distances and pulley tooth counts.

All belts have a 14mm tooth pitch, and are made of the super strong Gates Carbon X3N material. Belts are available in three standard widths of 1.125", 1.5" and 1.181" (30mm), but can be special ordered in nearly any width for a nominal charge. If you want a belt with a special tooth count, they are also available (see the special order chart for availability).

Contact your S&S Customer Support Representative for more information.

## SECONDARY DRIVE BELTS (14MM PITCH)

Teeth	1⅞" Wide	MSRP	1½" Wide
125	<b>106-0357</b>	\$259.95	—
126	—	—	<b>106-0348</b>
127	—	—	<b>106-0349</b>
128	<b>106-0358</b>	\$259.95	<b>106-0350</b>
130	<b>106-0359</b>	\$259.95	<b>106-0351</b>
132	<b>106-0360</b>	\$259.95	<b>106-0352</b>
133	<b>106-0361</b>	\$259.95	<b>106-0353</b>
135	<b>106-0362</b>	\$259.95	<b>106-0354</b>
136	—	—	<b>106-0355</b>
139	<b>106-0363</b>	\$259.95	<b>106-0356</b>
149	<b>106-1338</b>	\$259.95	<b>106-2695</b>
156	—	—	<b>106-2827</b>

## BELTS AVAILABLE BY SPECIAL ORDER (14MM PITCH)

Tooth Count	1.181" (30mm) Width*	1.25" Width*
125	●	
126	●	●
127	●	●
128	●	
130	●	
131	●	●
132	●	
133	●	
135	●	
136	●	●
137	●	●
139	●	
140	●	●
149	●	
150	●	●
151	●	●
152	●	●
156	●	

\*Minimum order required: 1.181" (30mm) – 16 belts; 1.25" – 17 belts.

# GASKETS

## REBUILD GASKET KITS FOR S&S T-SERIES 1999–UP ENGINES AND HOT SET UP KIT®

1999–up 4 1/8", S&S base bolt pattern	<b>106-0976</b>
1999–up, 4 1/8", Stock base bolt pattern	<b>310-0335</b>
1999–up T143 4.425" bore	<b>310-0751</b>

## TOP END GASKET KIT FOR TWIN CAM 96°/103° AND S&S ENGINES

Bore	Part #
4 3/8"	<b>90-9511</b>
4 1/8" Stock Cases	<b>90-9510</b>
4" Stock Bolt Pattern	<b>90-9505</b>
3 7/8", 3.927", & 3.937" Stock Bolt Pattern	<b>90-9504</b>

*Kits include all gaskets and seals required to rebuild the top end of an S&S engine with S&S cylinders and cylinder heads. Rocker cover gaskets are not included in kits. See "S&S Rocker Cover Gasket Kit" chart to order separately.*

## CYLINDER HEAD GASKET KITS FOR T-SERIES 1999-UP

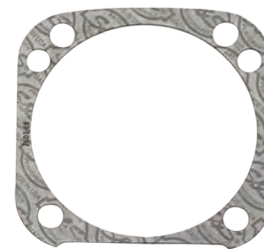
Bore	Part #
4 1/8" Stock Bolt Pattern	<b>90-1914</b>
4 3/8" bore	<b>900-0800</b>
4" Stock Bolt Pattern	<b>90-1913</b>
4" Stock Bolt Pattern, Twin-Cooled™	<b>930-0116*</b>
3 7/8", 3.927", & 3.937" Stock Bolt Pattern, including Twin-Cooled	<b>910-0465*</b>

*Kits contain head gaskets, base gaskets or o-rings, and exhaust pipe gaskets for two cylinder heads. Rocker cover gaskets are not included in kits. See "S&S Rocker Cover Gasket Kit" chart to order separately.*

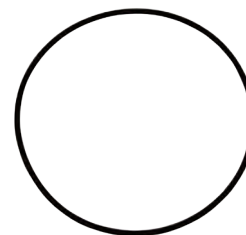
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## HEAD GASKETS FOR S&S® ENGINES

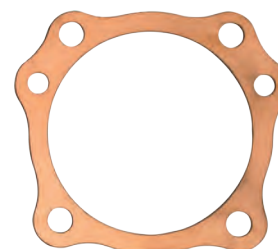
Bore Size	Thickness	Description	QTY	Part #
4 3/8"	.045"	Copper	2 pack	<b>93-1081</b>
4 1/8" Stock Bolt Pattern with Twin Cooled™ Heads	.045"	Layered Steel	each	<b>900-0608</b>
4 1/8" Stock Bolt Pattern	.043"	Layered Steel	each	<b>93-1091-S</b>
			2 pack	<b>930-0102</b>
4 1/8" Stock Bolt Pattern	.030"	Layered Steel	2 pack	<b>900-0217</b>
4 1/8" Stock Bolt Pattern with Twin Cooled™ Heads	.030"	Layered Steel	2 pack	<b>900-0609</b>
4" Stock Bolt Pattern	.043"	Graphite	each	<b>93-1043-S</b>
4" Stock Bolt Pattern	.045"	Layered Steel	2 pack	<b>900-0822</b>
4" Stock Bolt Pattern with Twin Cooled Heads	.045"	Layered Steel	each	<b>930-0115</b>
4" Stock Bolt Pattern	.030"	Layered Steel	2 pack	<b>900-0821</b>
3 7/8", 3.927", & 3.937" Stock Bolt Pattern with Twin Cooled Heads	.030"	Layered Steel	2 pack	<b>900-0605</b>
3 3/4" Stock Bolt Pattern	.043"	Graphite	each	<b>93-1045-S</b> 16775-99B
3 7/8", 3.927", & 3.937" including Twin-Cooled Heads	.045"	Layered Steel	2 pack	<b>900-0862</b>
4 7/16"	.045"	Layered Steel	2 pack	<b>900-0762</b>



Micropore



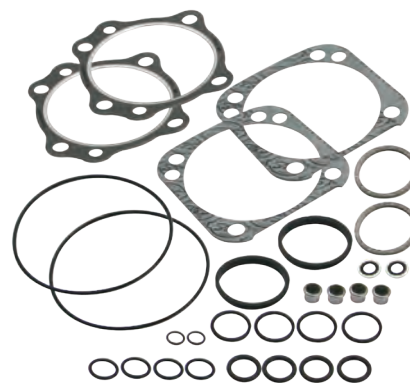
Viton® O-ring



Copper



Layered Steel



90-9505

Milwaukee-Eight®

2007–2017 Twin Cam  
96°/103°/110°

1999–2006  
Twin Cam 88°

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
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## CONTINUED- GASKETS

### BASE GASKETS AND O-RINGS S&S® T-SERIES 1999–UP

Bore Size	Thickness	Description	QTY	Part #
4"	.018"	Graphite	each	<b>93-1050-S</b>
4½" S&S Bolt Pattern	.018"		each	<b>93-1048-S</b>
			2 pack	<b>930-0101</b>
			10 pack	<b>93-1074</b>
4¾"	.018"	Micropore	2 pack	<b>93-1082</b>
4½" Stock Bolt Pattern	.018"		each	<b>93-1092-S</b>
			2 pack	<b>930-0101</b>
			10 pack	<b>93-1921</b>
4.425"	.018"		2 pack	<b>900-0783</b>
4"	.103"	Viton O-ring	each	<b>50-8049</b>
3¾", 3⅞", 3.927", 3.937"	.103"		each	<b>50-8048</b> 11256



**106-5029**



**106-5688**

### EXHAUST GASKETS

1984–'12 big twins	each	<b>106-5029</b> 65324-83B, 65324-83A
	10 pack	<b>93-1072</b>

### ROCKER COVER GASKET KITS

Rocker Cover Style	Head Type	Part #
S&S Die-cast	S&S Heads	<b>90-4111</b>
Stock 1999–2017, except 2017 touring models	Stock or S&S Heads	<b>90-4097*</b>
Stock 1999–2017, except 2017 touring models	Stock heads	<b>900-0534</b>


All kits include gaskets for two rocker covers.

\*Kit contains bottom rocker gaskets for stock, S&S 79cc, & S&S 89cc heads

### DIE CAST ROCKER BOXES

Gasket, bottom rocker cover, 4½", 1984–up	each	<b>90-4071-S</b>
	2 pack	<b>90-4071</b>
	10 pack	<b>90-4099</b>

### VALVE GUIDE SEALS

Valve Stem Oil Seal, Hat Style	each	<b>900-0590</b> 18094-02
Valve Guide Seal	each	<b>106-5688</b>
Valve, Umbrella	each	<b>900-0495</b> 26858-99
Filter, Breather 	each	<b>900-0496</b> 63815-99

## CONTINUED- GASKETS

### STOCK ROCKER BOXES

O-ring, (-114), .625" ID x .812" OD, Black, Viton®			<b>50-8033</b> 11270
Gasket, bottom rocker cover, 4 1/8", 1984-up		<i>each</i>	<b>90-4071-S</b> 16719-99B
		<i>2 pack</i>	<b>90-4071</b>
		<i>10 pack</i>	<b>90-4099</b>
Gasket, Breather Cover, Stock Pattern	1999–'10	<i>each</i>	<b>90-4077</b> 17591-99, 17162-03, 17592-99
	2011–'17	<i>each</i>	<b>900-0415</b>
Gasket, Breather Baffle, Stock Pattern	1999–'10	<i>each</i>	<b>90-4078</b> 17162-03, 17592-99
	2011–'17	<i>each</i>	<b>900-0416</b>
Gasket, Rocker Cover, Steel, 1999–up bt		<i>each</i>	<b>90-4096-S</b> 17386-99A
Gasket, Bottom, Rocker Cover, S&S® Heads w/Stock Rocker Box, 1999–up bt		<i>each</i>	<b>90-4124</b>
		<i>2 pack</i>	<b>90-4120</b>

### LOWER END GASKETS AND SEALS

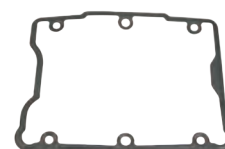
Gear Cover gasket	<i>each</i>	<b>31-2032-S</b> 25244-99A
Tappet Cover gasket	<i>each</i>	<b>33-5303-S</b> 18635-99B
	<i>2 pack</i>	<b>33-5303-2</b> 18635-99B

### PUSHROD O-RINGS

O-ring, Kit, Pushrod Cover, 1984–'99 bt		<b>93-4022</b>
Top O-ring	<i>each</i>	<b>50-8039</b> 11293, 11157, 11101, 11190
Middle O-ring	<i>each</i>	<b>50-8038</b> 11132A
Bottom O-ring	<i>each</i>	<b>50-8037</b> 11145A

### MISCELLANEOUS GASKETS

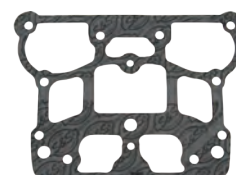
Sprocket Shaft seal		<b>31-4035</b> 12068
S&S Oil pump seal kit		<b>31-2097</b>
Oil Pump Scavenge o-ring	<i>each</i>	<b>50-8039</b> 11293, 11157, 11101, 11190
Case alignment dowel o-ring	<i>each</i>	<b>50-8034-S</b> 26432-76A
	<i>2 pack</i>	<b>50-8034</b> 26432-76A
Oil jet o-ring	<i>each</i>	<b>50-8270</b>
	<i>5 pack</i>	<b>50-8275</b>
Cam plate and oil line plate o-ring		<i>each</i> <b>50-8066-S</b> 11301



90-4096-S



90-4124



90-4071-S

Milwaukee-Eight®


2007–2017 Twin Cam  
96"/103"/110"1999–2006  
Twin Cam 88®1986–2019  
Sportster® & Buell®2014–2019 Street® &  
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## MANIFOLD SEALS

S&S Manifold O-Ring	<i>each</i>	<b>16-0235</b>
	<i>10 pack</i>	<b>16-0243</b>
Stock Manifold O-ring 	<i>each</i>	<b>16-0236</b> 26995-86B, 26995-86A, 26992-99
	<i>10 pack</i>	<b>16-0244</b> 26995-86A, 26992-99, 26995-86B
Cap, rubber, manifold, fitting	<i>each</i>	<b>50-8372</b>

## CLASSIC TEARDROP AIR CLEANER

Backplate gasket	<i>each</i>	<b>106-1724</b>	
	<i>10 pack</i>	<b>106-2328</b>	
Vent seal washers silicone coated steel	1/2"	<i>each</i>	<b>50-7055</b>
		<i>10 pack</i>	<b>50-7057</b>
	3/8"	<i>each</i>	<b>50-7055</b>
		<i>10 pack</i>	<b>50-7059</b>

## STEALTH AIR CLEANER

### Backplate gasket

Stock CV Carb & EFI Throttle Body, 1991-up xl/bt <i>(except Throttle by Wire)</i>		<b>106-6022</b> 29062-95B
Super E/G	<i>each</i>	<b>106-1724</b>
	<i>10 pack</i>	<b>106-2328</b>
For Muscle air cleaner <i>(includes lanyards)</i>		<b>170-0137</b>
Vent seal washers Nitrile Rubber Coated, .380" x .880" x .024"	<i>each</i>	<b>50-7055</b>
	<i>10 pack</i>	<b>50-7059</b>

## SINGLE BORE TUNED INDUCTION

### Backplate gasket

Gasket, Backplate - E/G/SBEFI	<i>each</i>	<b>106-1724</b>
	<i>10 pack</i>	<b>106-2328</b>
Gasket, S&S SBEFI 58mm		<b>106-4662</b>
Gasket, Stock carb/Throttle Body		<b>106-6022</b> 29062-95B
Adaptor plate gasket		<b>17-1022</b>
Adaptor plate bracket o-ring	<i>each</i>	<b>50-0446</b>

## SINGLE BORE EFI THROTTLE BODY

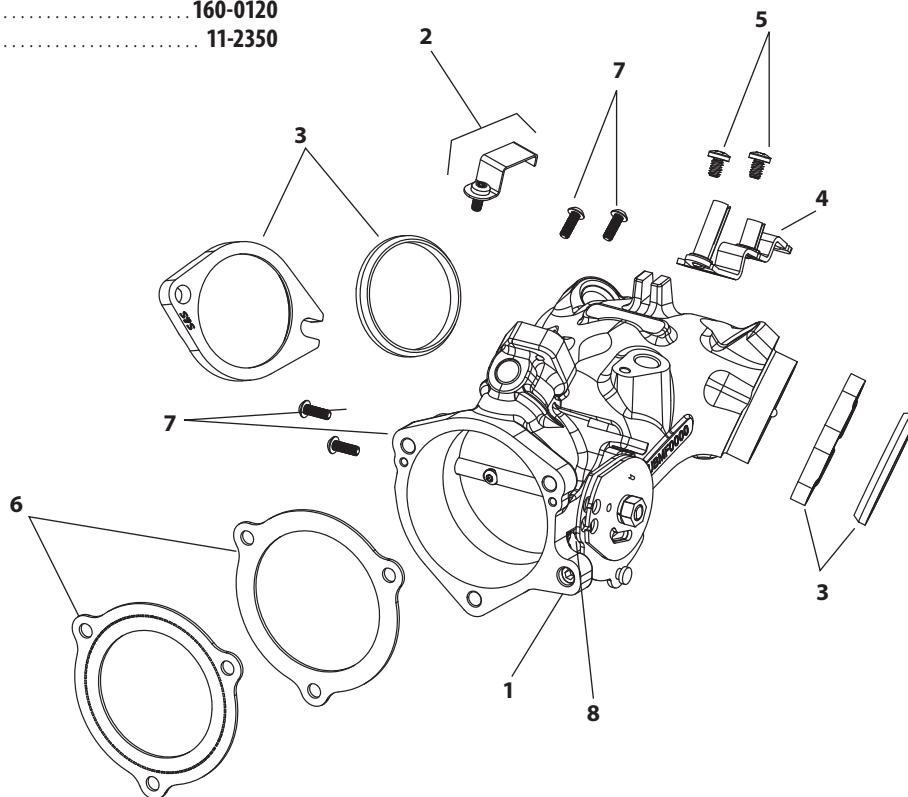
### Backplate gasket

52mm	<i>each</i>	<b>106-1724</b>
	<i>10 pack</i>	<b>106-2328</b>
58mm	<i>each</i>	<b>106-4662</b>
O-ring, throttle body to manifold		<b>50-7967-S</b>
Air Temp Sensor gasket		<b>16-5009-S</b>
IAC o-ring		<b>50-8149-S</b>
Fuel injector o-ring top		<b>50-8264-S</b>
Fuel injector o-ring bottom		<b>50-8265-S</b>
Fuel rail inlet o-ring	<i>each</i>	<b>50-8137-S</b> 27237-95



# THROTTLE HOG CABLE-OPERATED THROTTLE BODIES REPLACEMENT PARTS

- 1. Throttle Body, Assembly, Cable Operated ..... N/A
- 2. Clamp, Kit, Hold-Down, MAP Sensor ..... 160-0169
- 3. Flange, Set, Packaged, 2006-Up bt. .... 160-0168
- 4. Guide, Assembly, Throttle Cable ..... 160-0113
- 5. Screw, PH Panhead, 10–24 x 5/16", Zinc, Steel ..... 50-0093-S
- 6. Gasket, Throttle Body,  
58mm. .... 160-0050  
66mm. .... 160-0035
- 7. Screw, Torx, M4 x 12mm, Zinc, Steel ..... 50-0358-S
- 8. Throttle Return Spring ..... 160-0119
- 9. Throttle Cable Spool ..... 160-0120
- 10. Throttle Shaft Nut ..... 11-2350



**6.2 g/s FUEL INJECTORS for  
2006–2017 Cable-operated Throttle Hogs 550-0749**



Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

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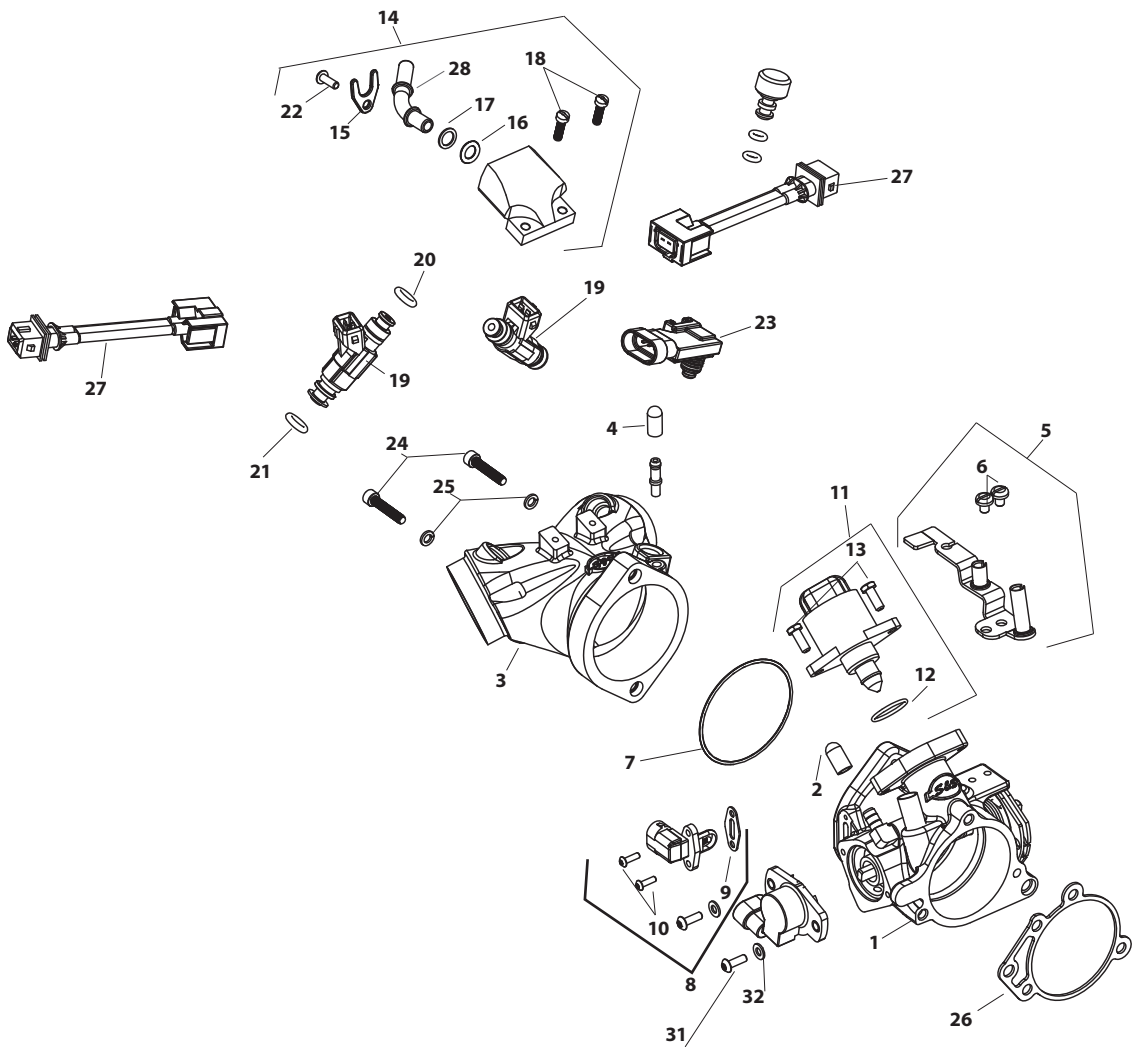
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# SINGLE BORE EFI THROTTLE BODY AND RELATED REPLACEMENT PARTS












1. Throttle body		
52mm, 2006-'16 bt (N/S) .....	16-5153	
58mm, 2006-'16 bt (N/S) .....	106-3957	
2. Cap, canister purge (each) .....	50-8266-S	
3. Manifold (See page 120)		
4. Cap, rubber, manifold, fitting .....	50-8372	
5. Throttle cable guide packet with hardware .....	55-5084	
6. Screw, cable guide & air cleaner backplate (each) .....	50-0041	
10 pack .....	50-0062	
7. O-ring, throttle body to manifold 27270-95 .....	50-7967-S	
8. Intake air temperature sensor with hardware 27270-95 .....	 55-5041±	
9. Gasket, IAT .....	16-5009-S	
10. Screw, M3, IAT .....	50-0357-S	
11. Idle air control motor SS EFI with hardware .....	N/A	
12. O-ring, IAC .....	N/A	
13. Screw, Idle air control motor		
2006-'16 (each) .....	50-0358-S	
14. Fuel rail kit		
2006-'16 (Fuel inlet tube not included.) .....	16-5202	
15. Tube clip, fuel rail inlet 2001-'16 (each) .....	50-0391-S	
16. O-ring, fuel rail inlet, 2001-'16 27237-95 (each) .....	50-8137-S	
17. Backing washer, fuel rail inlet, 2001-'15 .....	50-0349-S	
18. Screw, rail, 1995-'16 (each) .....	50-0039	
10 Pack .....	50-0146	
19. Fuel injector (each) .....	55-5052A	
2 Pack .....	55-5052	
20. O-ring, injector top, black .....	50-8264-S	
21. O-ring, injector bottom, orange .....	50-8265-S	
22. Screw, fuel rail (each) .....	50-0358-S	
23. MAP sensor 32424-98, 32416-10, 32417-10 .....	 55-1090	
24. Screw, throttle body to manifold (each) .....	50-0359-S	
25. Washer, lock, #10, throttle body to manifold .....	50-7000	
26. Gasket, backplate		
52mm (each) .....	106-1724	
10 pack .....	106-2328	
58mm (each) .....	106-4662	
27. Harness, injector adapter kit		
1995-'05 .....	55-5074	
2006-'16 (N/S) .....	55-5209	
28. Fuel inlet tube 45°, 2002-'16 27221-95 .....	 50-0485	
29. Spacer, throttle position – 2002-'16 (N/S) .....	55-5201	
31. Screw, Torx, M4 x 12mm, Zinc, Steel .....	50-0358-S	
32. Washer, Flat, 4mm x 9mm x .9mm, Stainless Steel .....	50-7145-S	

(N/S) = Not Shown  
N/A = Not Available



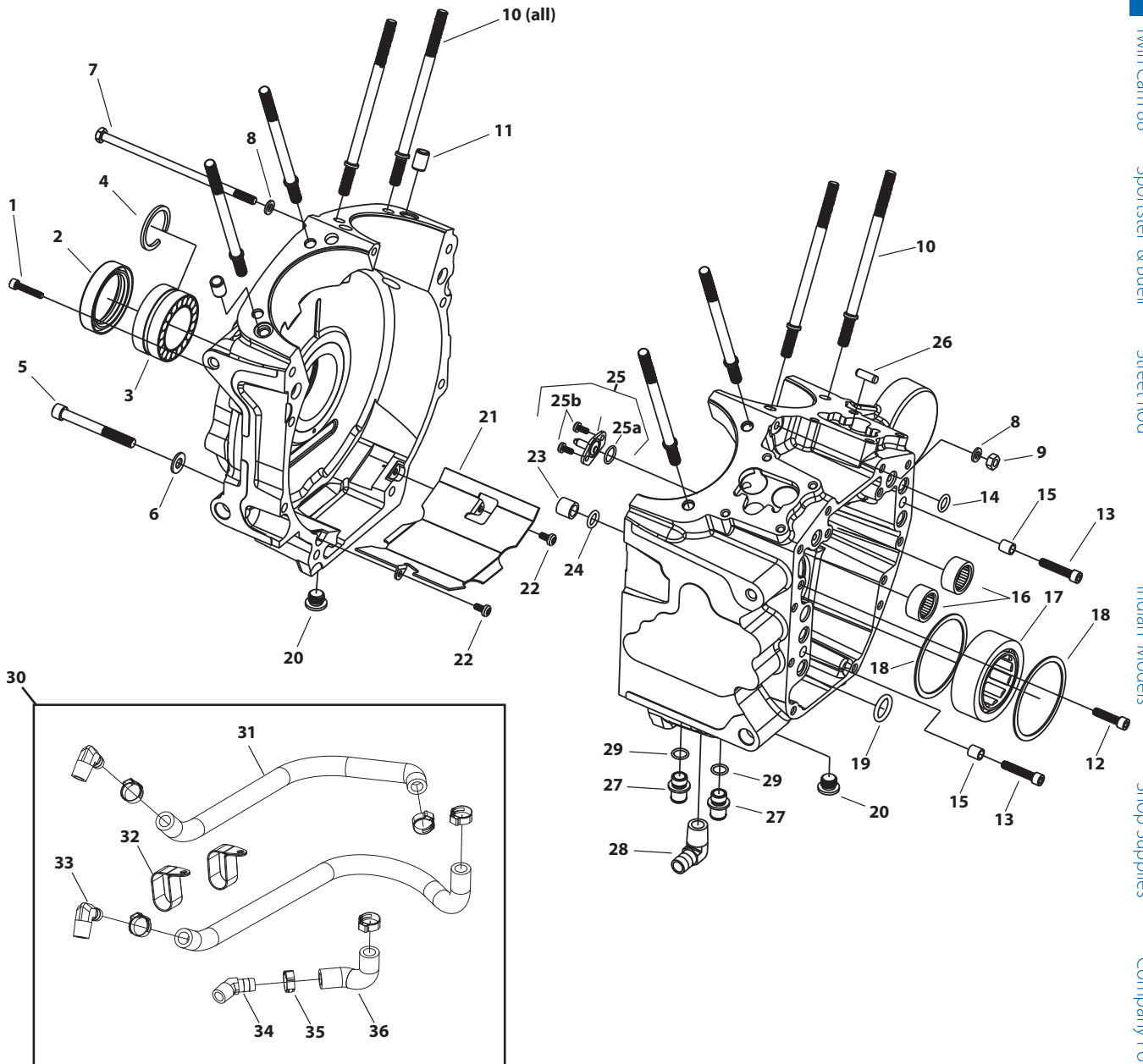


# SUPER STOCK T2 CRANKCASE REPLACEMENT PARTS

1. Bolt, stator 10-24 x 1" SHC - 4 required 2720 ..... **50-0044**
2. Seal, sprocket shaft 12068 ..... **31-4035**
3. Bearing, Timken® sprocket shaft 9028 .....  **31-4013**
4. Timken Main Bearing Spacers  
Fits 1 1/4" stock diameter shaft.
  - .0995" - .1005" 9124 .....  **31-4071**
  - .1015" - .1025" 9125 .....  **31-4072**
  - .1035" - .1045" 9126 .....  **31-4073**
  - .1055" - .1065" 9127 .....  **31-4074**
  - .1075" - .1085" 9128 .....  **31-4075**
  - .1195" - .1205" 9134 .....  **31-4076**
5. Bolt, case 5/16" - 18 x 3/12" HHC - 8 required  
Chrome (each) ..... **50-0254-S**  
Zinc 3427 (each) ..... **50-0117**
6. Washer, flat 5/16" x 1 1/16" x 1/16" - 8 required 6320, 70907-07, 6016, 6702  
each ..... **50-7034**
7. Bolt center case Screw, HHC, Gr8, 1/4-28 x 5-1/2", Zinc, Steel  
each ..... **50-0090**
8. Washer, flat, 1/4" x .474" x .050"  
each ..... **50-7020**
9. Nut 1/4"-28 Grade 8 - 1 required 7683 ..... **50-5011**
10. Cylinder stud, S&S® Bolt Pattern, 6.070" - 8 required  
(each) .....  **31-2325-S**  
8 pack .....  **31-2340**  
Cylinder stud, Stock Bolt Pattern, 6.312" - 8 required  
(each) ..... **310-0437**
11. Pin, Dowel, .4377" x .500", Steel ..... **500-0218**
12. Bolt, cam plate 1/4" - 20 x 1" SHC - 4 required 852  
each ..... **50-0084**
13. Bolt, cam plate 1/4" - 20 x 1 1/4" SHC - 2 required 4740A, 3482A  
each ..... **50-0008**
14. O-ring, cam plate - 9 required 11301 (each) ..... **50-8066-S**
15. Dowel, cam plate - 2 required 16589-99A ..... **50-8148-S**
16. Bearing, Inner, Needle, Cam, 1.0" x 1.25" x .50" 9215  
each .....  **31-4199-S**
17. Bearing, pinion shaft - Fits all S&S and OEM 2000-'02  
(Balanced models only) & all OEM 2003-up  
24604-00D ..... **31-4085**
18. Retaining Ring, Internal, 25/8", Black, Carbon Steel 2 required  
each ..... **310-0730**
19. O-ring, oil pump 1 1/16" I.D. x 15/16" O.D. x 1/8" CS 11293, 11157, 11101, 11190  
each ..... **50-8039**
20. Plug, magnetic drain ..... **50-8335**
21. Baffle plate ..... **31-0119-S**
22. Screw 10-24 x 3/8" pan head - 2 required  
each ..... **50-0050**
23. Dowel, case alignment - 2 required 16574-99A, 16573-83, 16573-83A  
each ..... **50-8023**  
10 pack ..... **50-8109**
24. O-ring, case alignment, - 2 required 26432-76A  
9/16" I.D. x 1 1/16" O.D. x 1/6" CS (each) ..... **50-8034-S**  
2 pack ..... **50-8034**
25. Jet, Assembly, Piston Cooling, Low Profile, for T143  
Piston Oiler Jet Kit .....  **310-0647**  
Piston Oiler Jet Kit includes:
  - a. O-ring, (-014), .500" ID x .625" OD 11140, 11273  
each ..... **50-8270**  
10 pack ..... **50-8130**
  - b. Screw, Torx Panhead, 8-32 x 3/8", Zinc, Steel 68042-99  
each ..... **50-0054-S**
26. Pin Dowel, 2 pack ..... **50-8195**
27. Fitting, crankcase vent, 2 pack ..... **50-0443**
28. Fitting Pipe, 90°, Bared Male Pipe 3/8 ..... **50-8288**
29. O-ring, -13, .437 ID, X .565 OD, Viton 11105, 11273 ..... **50-8008**
30. Installation Kit, Oil Line, 2007-'16 FL ..... **310-0435±**  
Installation Kit Includes:
  31. Hose, Oil Line, .500" x .750" x 24" ..... **500-0223**
  32. Clamp, Hose, Pinch Style, .812" OD Hose ..... **500-0241**
  33. Fitting Pipe, 90°, Bared Male Pipe 3/8 ..... **50-8288**
  34. Fitting, Pipe, 45°, Male, 3/8 NPT x .500", Brass ..... **500-0226±**
  35. Clamp, Hose, Pinch Style, 45/64" - 53/64" ..... **50-0378-S**
  36. Hose, Oil Line, Feed, Formed, .500" ID, 2007-up Touring ..... **310-0350**

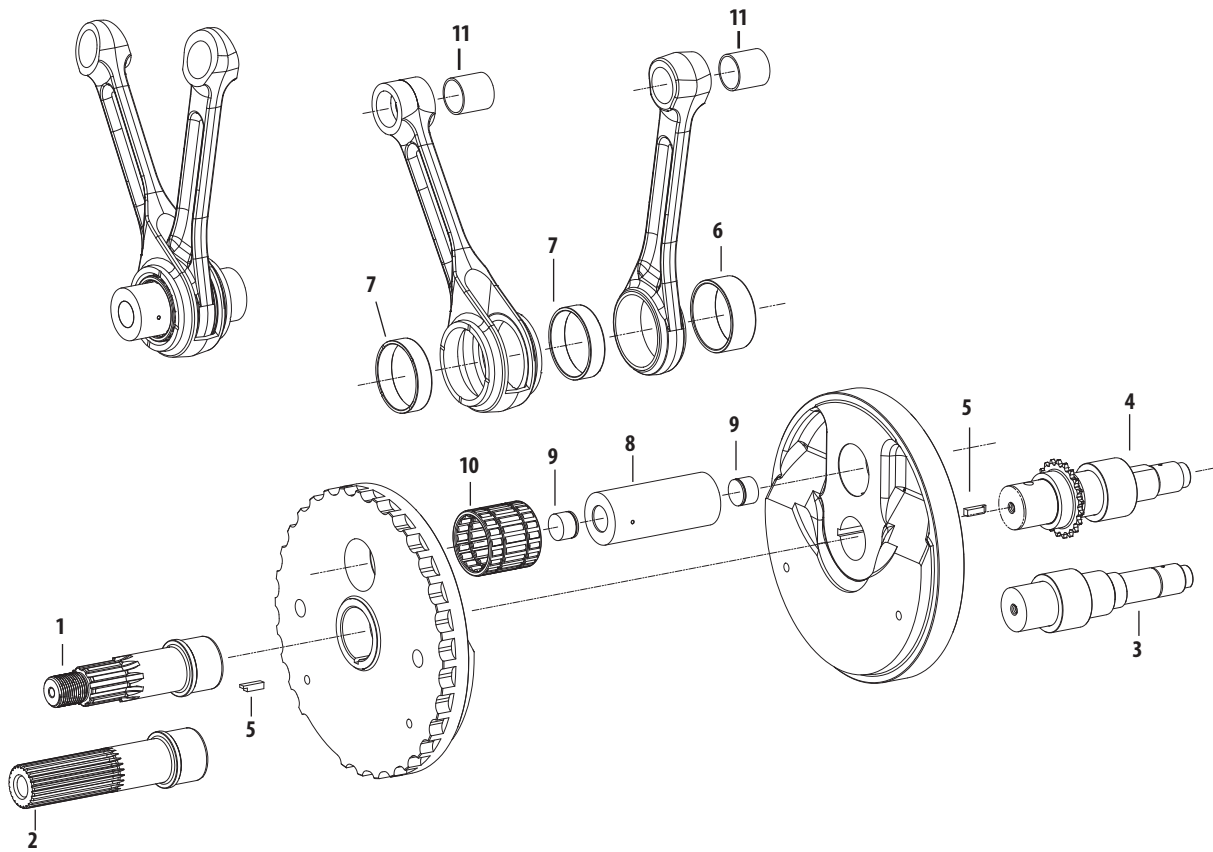
(N/S) = Not shown

±  WARNING: Cancer and Reproductive Harm



# 5-PIECE FLYWHEEL REPLACEMENT PARTS

- |   |                    |                                      |                    |
|---|--------------------|--------------------------------------|--------------------|
| 1. Sprocket Shaft, 1999-2006 bt (includes key #5).....        | N/A                | 9. Crankpin Plug (each) .....        | 106-5256           |
| 2. Sprocket Shaft, 2006 Dyna®, 2007-2012 bt .....             | 33-2011            | 2 pack.....                          | 50-8329-2          |
| 3. Pinion Shaft, 1999-2012 bt (includes key #5) .....         | N/A                | 10. Bearing Assembly.....            | 340-0028           |
| 4. Pinion Shaft, 2000-2012 w/balancer (includes key #5) ..... | N/A                | 11. Wristpin Bushing,                |                    |
| 5. Key (each) .....   | 50-8227            | 1999-2012 bt, straight bushing ..... | <b>USA</b> 34-4012 |
| 6. Front Rod Race, 1999-2012.....                             | <b>USA</b> 34-4008 |                                      |                    |
| 7. Rear Rod Race.....   | <b>USA</b> 34-4013 |                                      |                    |
| 8. Crankpin   |                    |                                      |                    |
| Standard .....  | 106-6239           |                                      |                    |
| + .001.....   | 340-0017           |                                      |                    |
| + .002.....   | 340-0018           |                                      |                    |



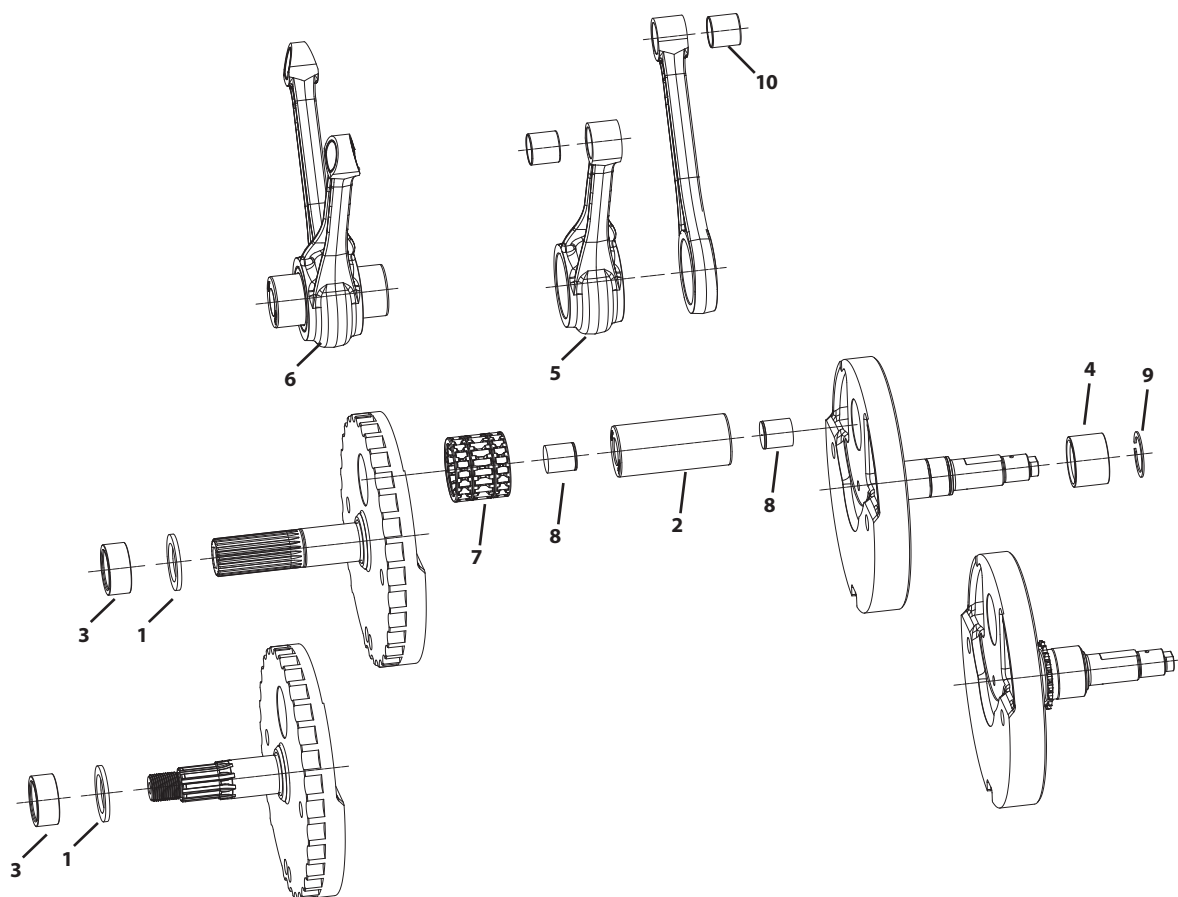
## NOTES

S&S flywheels for Harley-Davidson® Twin Cam 88® and Twin Cam 96™ engines are pressed together as opposed to using the traditional tapered shafts and crankpin. Assembly and truing requires special equipment.



# 3-PIECE FLYWHEEL REPLACEMENT PARTS

- |  |                 |   |                     |
|--|-----------------|---|---------------------|
| 1. Washer, Flywheel, Thrust, 1.25" x 1.83" x .136", Hardened Steel<br>.....            | <b>320-0198</b> | 6. Connecting Rod, Set, Tapered Wristpin, 7.659" .....  | <b>340-0061</b>     |
| 2. Crankpin, Press-In, Straight, 1.671", 1999-Up bt (includes plugs)<br>Standard ..... | <b>340-0069</b> | 7. Bearing, Set, Rod, Standard .....  | <b>USA 310-0752</b> |
| + .001 .....   | <b>340-0070</b> | 8. Plug, Drive, .8965" x .850", Steel, Fatigue Proof<br>2 pack .....  | <b>500-0187</b>     |
| + .002 .....   | <b>340-0071</b> | 9. Retaining Ring, External, Pinion Bearing, 1.160" x 1.480" x .046"<br>Carbon Steel, SAE 1060-1090 <i>11177A</i> ..... | <b>50-8057</b>      |
| 3. Race, Inner, Left Main Bearing,<br>1.25" x 1.65" x .713", Hardened Steel .....      | <b>340-0076</b> | 10. Bushing, Wristpin, .928", Bronze <i>each</i> .....  | <b>340-0024</b>     |
| 4. Race, Inner, Right Main Bearing,<br>1.25" x 1.65" x 1.120", Hardened Steel .....    | <b>340-0077</b> |   |                     |
| 5. Connecting Rod, Set, Full Width Wristpin, 7.575", 120R ..                           | <b>340-0062</b> |   |                     |
| Connecting Rod, Set, Full Width Wristpin, 7.659" .....                                 | <b>340-0074</b> |   |                     |
| Connecting Rod Set, Full Wristpin, 7.800", T143 .....                                  | <b>340-0128</b> |   |                     |



Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

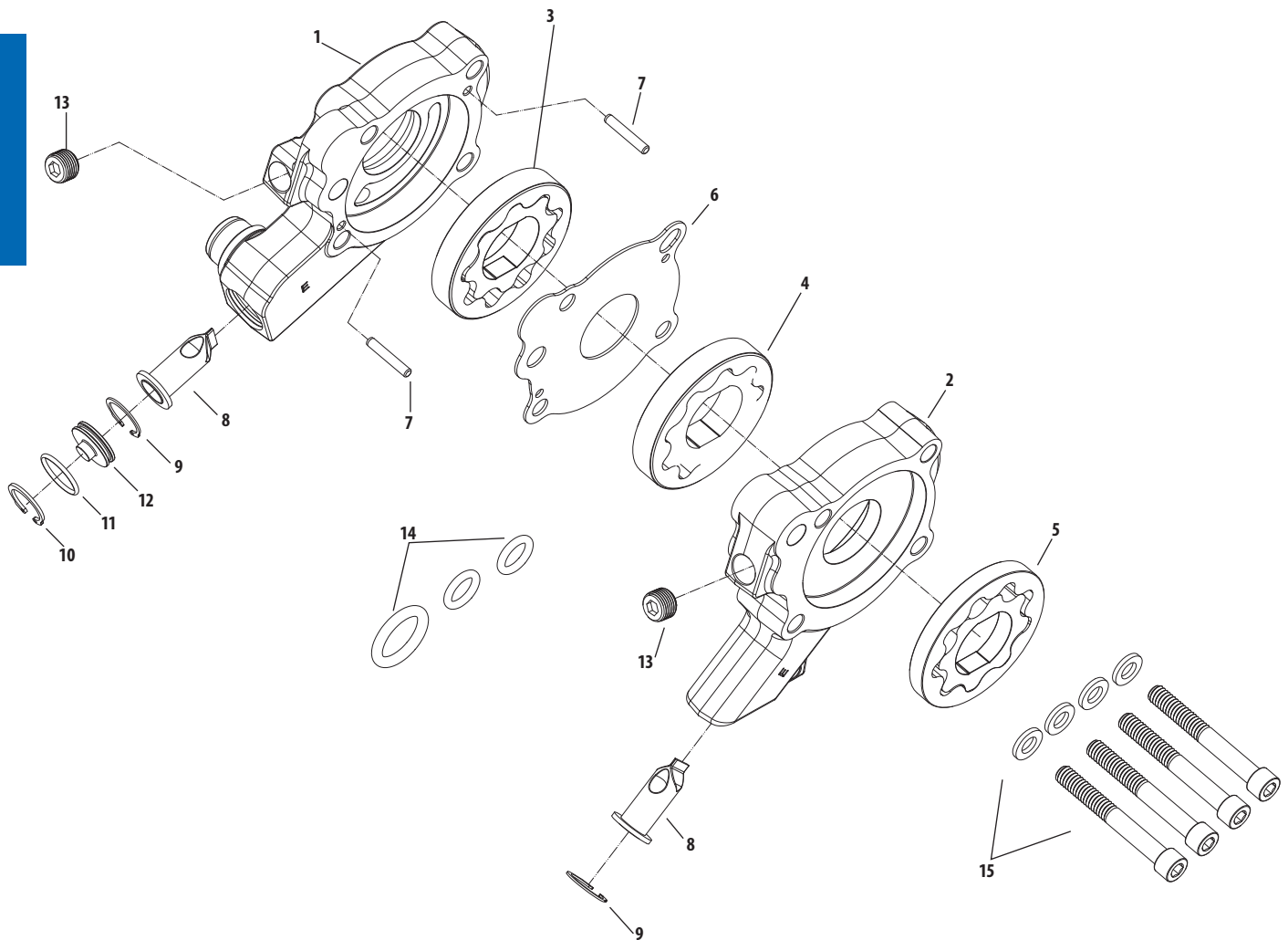
Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix



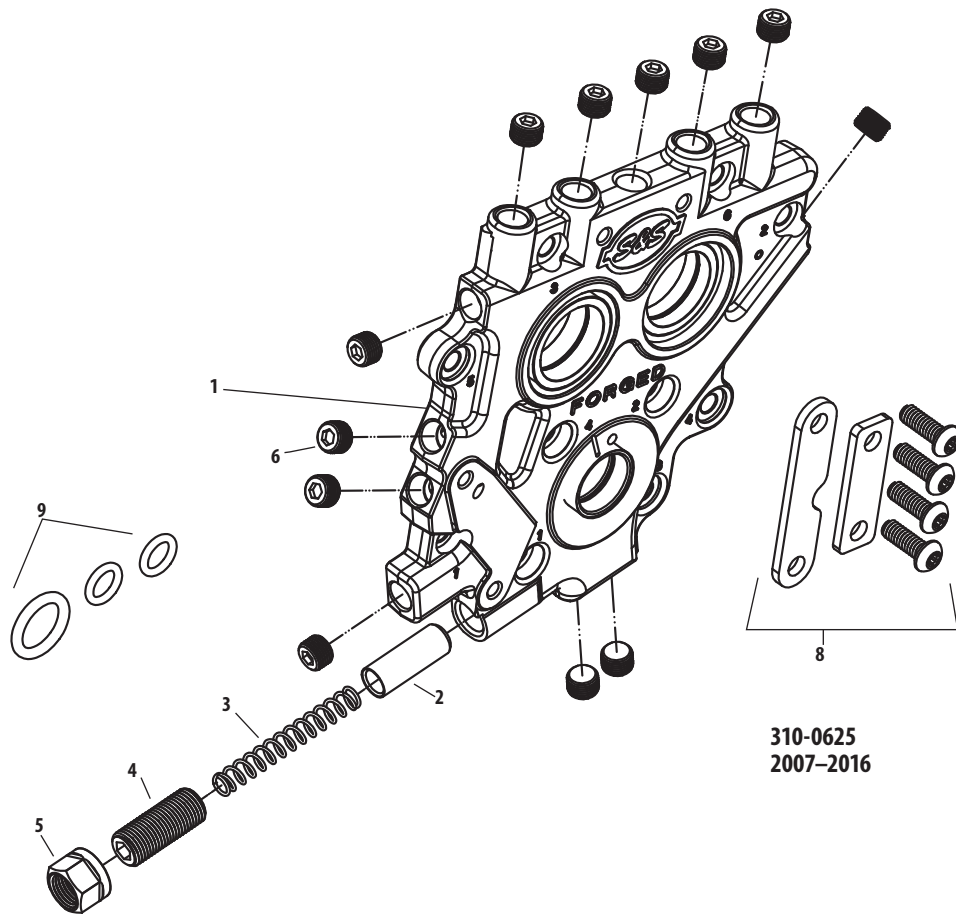
# TC3 OIL PUMP REPLACEMENT PARTS



1. Oil pump body case return section .....	NA
2. Oil pump body cam chest return / pressure feed .....	NA
3. Oil pump rotor set, flywheel cavity return .....	310-1092
4. Oil pump rotor set, cam chest cavity return .....	310-1048
5. Oil pump rotor set, supply .....	310-0561
6. Plate, divider .....	310-0516
7. Dowel Pin, .125 x .750 Hardened Steel .....	106-3794
8. Debris screen .....	310-0546
9. Internal Retaining Ring, .625 .....	500-0860
10. Internal Retaining Ring, 17mm .....	500-0859
11. O-ring, 1.5mm x 14mm, Viton (5 Pack) .....	500-0861
12. Oil pump return plug .....	310-0564
13. Plug, Pipe 1/8" 27 .....	50-8331A
14. O-ring kit .....	500-0326
15. Screw, Kit, Oil Pump, 1999-Up BT (1/4" 20 x 2" SHCS w/washers) .....	500-0327

# TC3 CAM PLATE REPLACEMENT PARTS

- 1. Cam support plate ..... N/A
- 2. Pressure relief valve ..... **31-6082-5**
- 3. Pressure relief spring ..... **31-6018**
- 4. Pressure relief adjusting screw ..... **170-0252**
- 5. Pressure relief adjusting screw lock nut ..... **170-0251**
- 6. 1/8" 27 taper pipe plug ..... **50-8331A**
- 7. Bearing retention plate kit ..... **330-0015**
- 8. Hydraulic tensioner block off kit ..... **106-5723**
- 9. O-ring kit ..... **500-0326**



**310-0625**  
**2007–2016**

Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

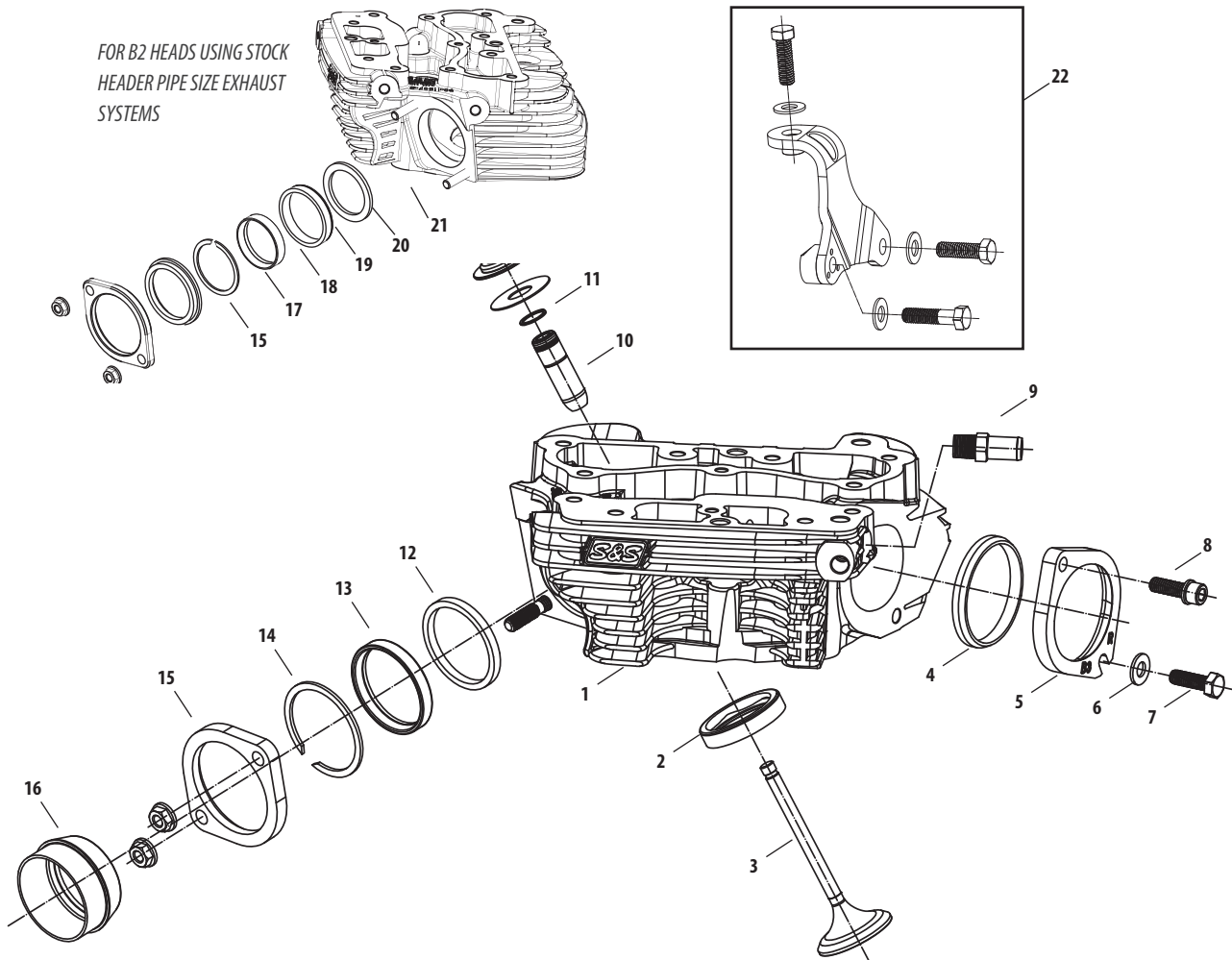
Warranty &  
Company Policy

Appendix

# B3 CYLINDER HEADS REPLACEMENT PARTS FOR S&S T143 ENGINES

- |  |                  |  |                  |
|--|------------------|--|------------------|
| 1. Cylinder Heads Set, B3<br>Black .....                                       | <b>900-0803</b>  | 11. Retaining Ring, External, Spiral, Heavy Duty, .525" x .035" x .050",<br>Carbon Steel ..... | <b>106-2164</b>  |
| Stone Gray .....   | <b>900-0806</b>  | 12. Exhaust Gasket Backing Washer,<br>2.18" x 1.885" x .200" .....                             | <b>550-0219</b>  |
| 2. Seat, Blank, B3 Heads, 2.300"<br>Intake .....                               | <b>900-0677</b>  | 13. Exhaust Gasket, Tapered, Stainless Steel .....   | <b>550-0221</b>  |
| Exhaust .....  | <b>90-2126-S</b> | 14. Exhaust Flange Retaining Ring, 2.125" x .078" .....  | <b>50-8159-S</b> |
| 3. Valve<br>Intake .....   | <b>900-0678</b>  | 15. Exhaust Flange .....   | <b>550-0223</b>  |
| Exhaust .....  | <b>900-0679</b>  | 16. Weld-On Exhaust Header Pipe .....  | <b>550-0222</b>  |
| 4. Seal, Manifold, B2 Heads, 2.250" x 2.520" x .290" .....                     | <b>16-0246-S</b> | 17. Exhaust Adapter Flange for Stock Header Pipe .....   | <b>550-0224</b>  |
| 5. Flange, Set .....   | <b>160-0091</b>  | 18. Exhaust Flange Retaining Ring, 1.759" x .062" .....  | <b>550-0226</b>  |
| Front .....  | <b>160-0087</b>  | 19. Exhaust Gasket, Tapered Stainless Steel .....  | <b>106-5029</b>  |
| Rear .....   | <b>160-0088</b>  | 20. Press-in Aluminum Retaining Ring, 1984-up .....  | <b>550-0225</b>  |
| 6. Washer, Flat, .344" x .688" x .065", Zinc, Steel .....                      | <b>50-7034</b>   | 21. Exhaust Gasket Backing Washer,<br>2.18" x 1.690" x .125" .....                             | <b>550-0220</b>  |
| 7. Bolt, Hex Head, Gr5, 5/16-18 x 1", Zinc .....                               | <b>50-0108</b>   | 22. Head Mount Bracket Kit<br>2008 T143 .....  | <b>900-0797</b>  |
| 8. Screw, SHCS, w/Flat Washer, 5/16-18 x 1", Zinc .....                        | <b>50-0125-S</b> | 2009-up T143 .....   | <b>900-0798</b>  |
| 9. Fitting, Pipe, Straight, 1/4-18 NPTF x 1.510" X .500", Zinc, Steel<br>..... | <b>50-8158-S</b> |  |                  |
| 10. Valve Guide, Intake, Powder Metal .....                                    | <b>900-0780</b>  |  |                  |

## VALVE SPRING REPLACEMENT PARTS: SEE PAGE 142



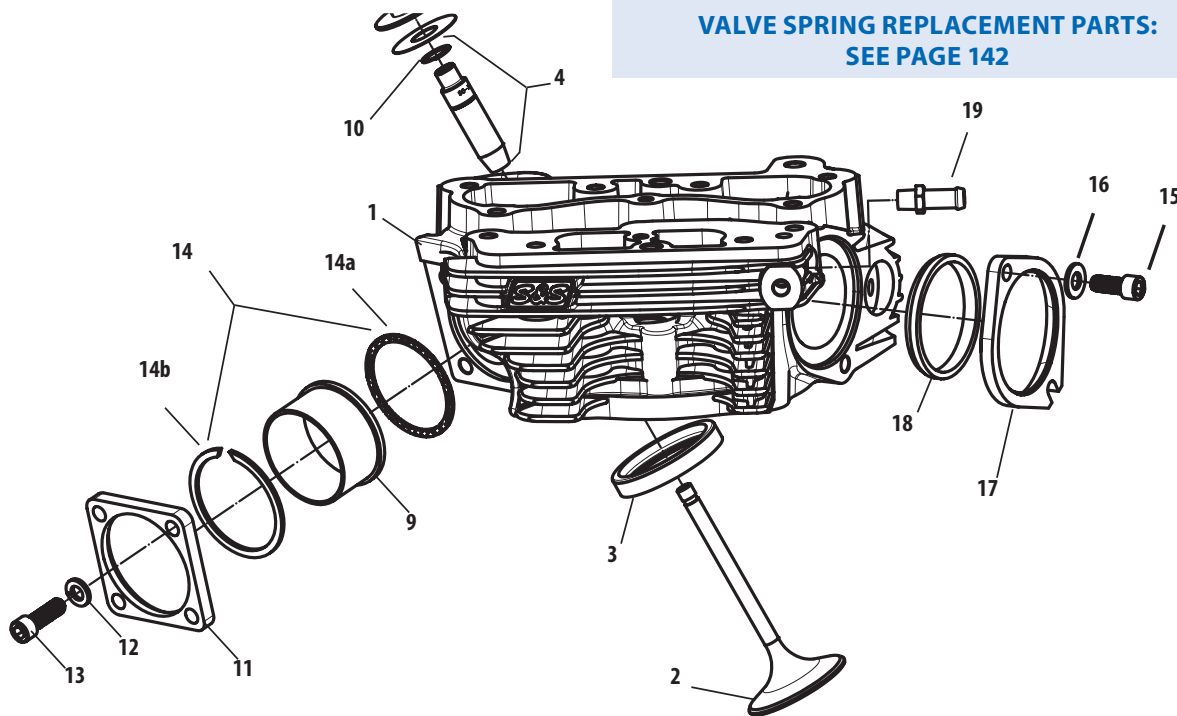
All reference to HD® Part # is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® Part # shown.



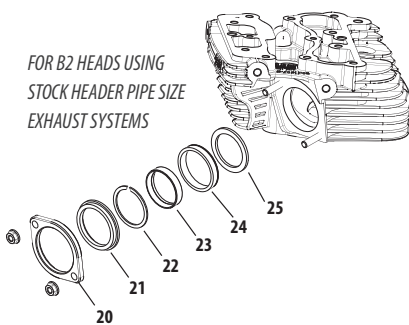
# B2 CYLINDER HEADS REPLACEMENT PARTS

- |  |                  |
|--|------------------|
| 1. Cylinder head – (See page 113)  |                  |
| 2. Valve   |                  |
| Intake, 2.200" Dia. ....   | <b>90-2127</b>   |
| Exhaust, 1.800" Dia. ....  | <b>90-2128</b>   |
| 3. Valve Seat  |                  |
| Exhaust, 1.800" Dia. ....  | <b>90-2126</b>   |
| Intake, 2.200" Dia. ....   | <b>90-2125</b>   |
| 4. Valve guide, intake/exhaust, cast   |                  |
| STD. ....  | <b>900-0553</b>  |
| + .030" ....   | <b>106-2170</b>  |
| 9. Adaptor, Exhaust Flange. ....   | <b>55-6022</b>   |
| 10. Snap ring (each) ....  | <b>106-2164</b>  |
| 11. Flange, exhaust, front/rear. ....  | <b>55-6021</b>   |
| 12. Washer, Lock, .332" x .583" x .078" ....   | <b>50-7032</b>   |
| 13. Screw, SH, 5/16" - 18 x 1" 3201WA, 2708 ....   | <b>50-0101</b>   |
| 14. Gasket, Kit, Exhaust, B2 Heads, SA. ....   | <b>90-1900</b>   |
| Kit includes two each:   |                  |
| a. Gasket, exhaust pipe (each) ....  | <b>93-1083-S</b> |
| 6 pack. ....   | <b>93-1083</b>   |
| b. Retaining Ring. ....  | <b>N/A</b>       |
| 15. Screw, SH, 5/16" - 18 x 3/4" 3275 each. ....   | <b>50-0302-S</b> |
| 16. Washer, 5/16" 6320, 70907-07, 6016, 6702) ....   | <b>50-7034</b>   |
| 17. Manifold mounting flange   |                  |
| Front. ....  | <b>16-0247</b>   |
| Rear. ....   | <b>16-0248</b>   |
| 18. O-ring, manifold (each) ....   | <b>16-0246-S</b> |
| 6 pack. ....   | <b>16-0246</b>   |
| 19. Fitting, vent hose, 1/8"-27 pipe ....  | <b>50-8115</b>   |
| 20. Exhaust Flange, 1984–up S&S® B2 Heads ....   | <b>550-0223</b>  |
| 21. Exhaust Adapter Flange for Stock Header Pipe,<br>1984–up S&S® B2 Heads ....                  | <b>550-0224</b>  |
| 22. Exhaust Flange Retaining Ring, 1.759" x .062" ....   | <b>550-0226</b>  |
| 23. Exhaust Gasket, Tapered Stainless Steel, 1984–up bt, 1986–up xl<br>65324-83B, 65324-83A .... | <b>106-5029</b>  |
| 24. Press-in Aluminum Retaining Ring, 1984–up<br>S&S® B2 Heads ....                              | <b>550-0225</b>  |
| 25. Exhaust Gasket Backing Washer<br>2.18" x 1.690" x .125" ....                                 | <b>550-0220</b>  |
| 26. Exhaust Flange Retaining Ring, 2.125" x .078" ....   | <b>50-8159-S</b> |
| 27. Exhaust Gasket, Tapered, Stainless Steel,<br>1984–up S&S® B2 Heads ....                      | <b>550-0221</b>  |
| 28. Exhaust Gasket Backing Washer<br>2.18" x 1.885" x .200" ....                                 | <b>550-0219</b>  |
| 29. Weld-On Exhaust Header Pipe ....   | <b>550-0222</b>  |

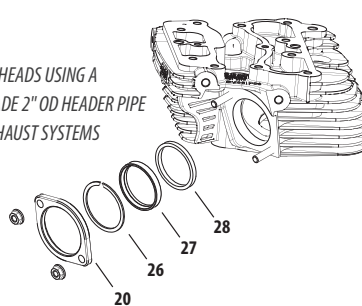
**VALVE SPRING REPLACEMENT PARTS:  
SEE PAGE 142**



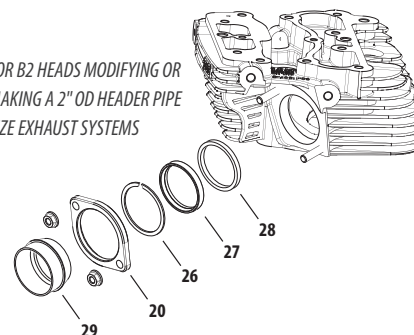
FOR B2 HEADS USING STOCK HEADER PIPE SIZE EXHAUST SYSTEMS



FOR B2 HEADS USING A PRE-MADE 2" OD HEADER PIPE SIZE EXHAUST SYSTEMS





















FOR B2 HEADS MODIFYING OR MAKING A 2" OD HEADER PIPE SIZE EXHAUST SYSTEMS



All reference to HD® Part # is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® Part # shown.

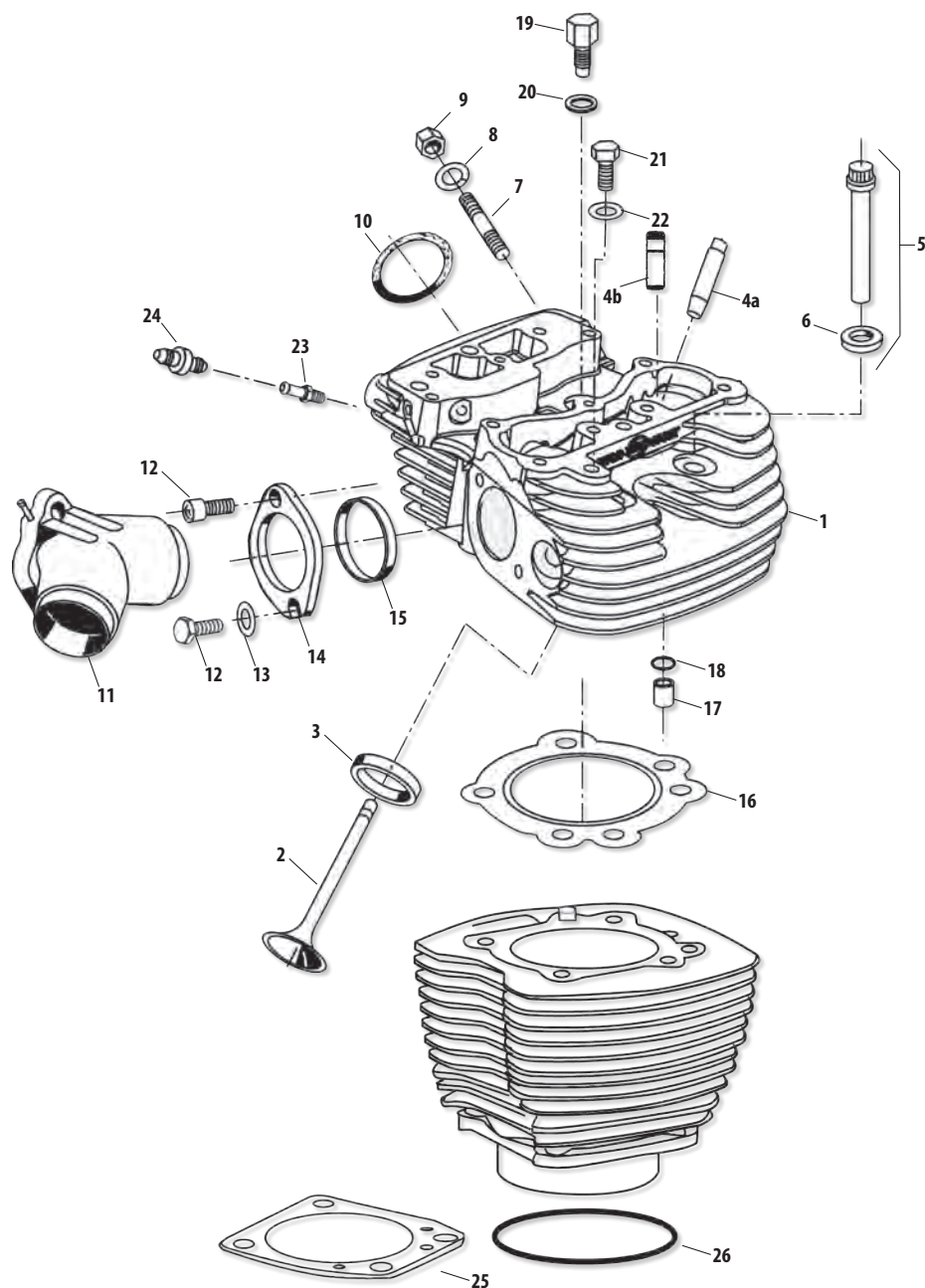
# SUPER STOCK® CYLINDER HEADS REPLACEMENT PARTS FOR 2007–2016 BIG TWIN ENGINES

1. Cylinder head (Starting [See page 114](#))
2. Valve
  - All S&S heads with 89cc or 91cc chamber
  - Intake
    - 2.000" diameter  **90-2000**
    - 2.000" diameter + .085" stem length **90-2004**
  - Exhaust
    - 1.605" diameter  **90-2001**
  - All S&S heads with 79cc chamber
    - Intake — 1.940" diameter **90-2025**
    - Exhaust — 1.575" diameter **90-2026**
3. Valve seat
  - All S&S heads with 89cc or 91cc chamber
    - Intake - 2.000" diameter  **90-2002**
    - Exhaust - 1.605" diameter  **90-2003**
  - All S&S heads with 79cc chamber
    - Intake - 1.940" diameter **90-2027**
    - Exhaust - 1.575" diameter **90-2028**
4.
  - a. Valve guide - Intake or Exhaust Cast
    - Standard 18112-92   **90-2210**
    - + .001" 18130-83C  **90-2211**
    - + .002" 18133-83A, 18133-83D  **90-2212**
    - + .003" 18131-83C  **90-2213**
    - + .030"  **90-2219**
  - b. Valve Guide - Intake or Exhaust Powder Metal (PM)
    - Standard **900-0553**
    - + .001 **900-0554**
    - + .002 **900-0555**
    - + .003 **900-0556**
5. Head bolt assembly — (8 Required) (Includes head bolt washer)
  - each **93-3037**
  - 4 pack **93-3037-4**
6. Head bolt washer, .250" (each) **50-7091**
7. Exhaust port stud 16715-83 (each)  **50-0493**
  - 5 pack  **50-1028**
8. Lock washer - 5/16" **50-7032**
9. Nut, flanged - 5/16" -24 7593
  - Zinc (each) **50-5025-S**
  - 2 pack **50-5025-2**
  - 5 pack **50-1001**
  - Chrome (each) **50-5030-S±**
10. Exhaust pipe gasket, tapered 65324-83B, 65324-83A
  - each **106-5029**
  - 10 pack **93-1072**
11. Intake manifold ([See page 120](#))
12. Manifold mounting screw
  - SH - 5/16" -18 x 3/4" 3275 (each) **50-0302-S**
  - SH - 5/16" -18 x 1" 3201WA, 2708 **50-0101**
  - HH - 5/16" -18 x 1" 3987 (each)  **50-0108**
13. Flat washer - 5/16" 6320, 70907-07, 6016, 6702 **50-7034**
14. Manifold mounting flange
  - Front 27009-86A (each)  **16-0232**
  - 5 pack  **16-0600**
- Rear 27010-86A (each)  **16-0233**
  - 5 pack  **16-0601**
- Set (Front & Rear) **106-3516**
15. Manifold o-ring
  - For S&S manifold (each) **16-0235**
  - 10 pack **16-0243**
  - For Stock manifold 26995-86B, 26995-86A, 26992-99
    - each  **16-0236**
    - 10 pack **16-0244**
16. Head gasket
  - For Stock Bolt Pattern
    - 3 3/4" x .043" Graphite (each) **93-1045-S**
    - 3 7/8" /3.927" x .030" Layered Steel (2 pack) **900-0605**
    - 3 7/8" /3.927" x .045" Layered Steel (each) **900-0606**
    - 4" x .043" Graphite (each) **93-1043-S**
    - 4 1/8" x .043" Layered Steel (each) **93-1091-S**
    - 4 1/8" x .030" Layered Steel (2 pack) **900-0217**
  - For S&S Bores
    - 4 1/8" x .043" Graphite (each) **93-1047-S**
    - 10 pack **93-1073**
    - 4 3/8" x .045" Copper (2 pack) **93-1081**
17. Alignment dowel, base and head 16595-99A (each) **50-8177**
  - 4 pack **50-8177-4**
18. Alignment dowel o-ring — Base (all bore sizes)
  - S&S heads 3 3/4" bore only 11105, 11273
    - each **50-8008**
    - 10 pack **50-8078**
19. Plug, HH - 14mm (each) **90-4916**
  - 2 pack **90-4916-2**
20. Washer, compression - 14mm
  - 507" x .705" x .047" (each) **50-7094**
21. Head mount bolt - 3/8" -16 x 1 1/4" 4716W
  - each **50-0168**
22. Flat washer - 3/8" (each) **50-7051**
23. Vent hose fitting, (For 4 1/8" Bore Only)
  - Front, 1/16" -27 pipe **50-8117**
  - Rear, 1/8" -27 pipe **50-8115**
24. Check Valve (For 4 1/8" Bore Only) **50-8122**
25. Base Gaskets
  - For S&S Bores
    - 4 3/8" x .018" Graphite (2 pack) **93-1082**
    - 4 1/8" x .018" Graphite (each) **93-1048-S**
    - 10 pack **93-1074**
    - 4" x .018" Graphite (each) **93-1050-S**
  - For Stock Bolt Pattern
    - 4 1/8" x .018" Graphite (each) **93-1092-S**
    - 10 pack **93-1921**
26. Base O-ring (Used for early S&S bores)
  - 4" x .103" (each) **50-8049**
  - 3 5/8" or 3 1/2" x .103" (each) 11256 **50-8048**

±  WARNING: Cancer and Reproductive Harm

**VALVE SPRING REPLACEMENT PARTS:  
SEE PAGE 142**

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.



**TOP END GASKET KIT FOR S&S ENGINES**

Bore	Part #
4 <sup>3</sup> / <sub>8</sub> "	<b>90-9511</b>
4 <sup>1</sup> / <sub>8</sub> " Stock Cases	<b>90-9510</b>
4" Stock Bolt Pattern	<b>90-9505</b>
3 <sup>7</sup> / <sub>8</sub> " Stock Bolt Pattern	<b>90-9504</b>



*Kits include all gaskets and seals required to rebuild the top end of an S&S engine with S&S cylinders and cylinder heads. Rocker cover gaskets are not included in kits. See "Rocker cover gasket kits" on See page 126 to order separately.*

**VALVE GUIDE DIAMETERS FOR S&S® T-SERIES ENGINES**

Oversize	Diameter	Part Number
Std.	.5625/.5620	<b>90-2210</b> 1,2,3
+0.01	.5635/.5630	<b>90-2211</b>
+0.02	.5645/.5640	<b>90-2212</b>
+0.03	.5655/.5650	<b>90-2213</b>
+0.030	.5925/.5920	<b>90-2219</b>

# VALVE SPRING REPLACEMENT PARTS

## .720" & .660" Lift Valve Springs (B3 Cylinder Heads)

1. Seal, valve guide, intake/exhaust 18001-83B (each)  **90-2008**  
8 pack  **90-2158**
2. Keeper, valve spring, SA **90-2153A**
3. Valve spring shim  
.015" (each) **90-2086**  
5 pack **50-7161**  
.030" (each) **90-2087**  
5 pack **90-2198**

## .650" Lift Valve Springs (B2 Cylinder Heads)

1. Seal, Valve Guide, fits .315" x .554" OD, Viton® (4 pack) **900-0737**
2. Keeper, valve spring, Standard, 9° **90-2094-S**

## .650" Lift Sidewinder® Valve Springs

### (Stock, Super Stock® & CNC Ported Cylinder Heads)

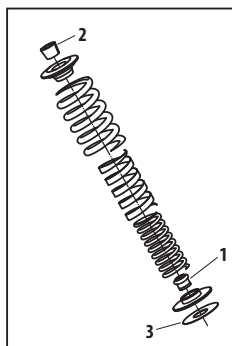
1. Spring, Valve .650" **106-5689**
2. Collar, Top, Steel **106-5690**
3. Collar, Bottom, Steel **106-5691**
4. Seal, Valve  
S&S CNC Ported Heads & 2005-up bt w/7mm valve stem **106-5688**  
S&S Super Stock Heads  
.420" Cast (each) **900-0338**  
.562" Powder Metal (4 pack) **900-0737**
5. Keeper, valve spring **106-5692**
6. Valve Spring Shim  
.015" (each) **500-0013**  
.030" (each) **500-0014**

## .585" Lift Valve Springs

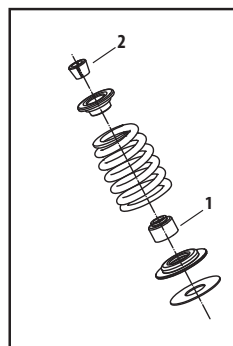
### (Stock, Super Stock® & CNC Ported Cylinder Heads)

1. Spring, Valve .585" **900-0444**
2. Collar, Top **900-0550**
3. Collar, Bottom  
For Stock Heads w/7mm valve stem (includes seal) **900-0590**  
For CNC Ported Heads w/7mm valve stem **900-0549**  
For Super Stock Heads **900-0600**
4. Seal, valve guide  
For Stock Heads w/7mm valve stem  
(includes bottom collar) **900-0590**  
For CNC Ported Heads w/7mm valve stem **106-5688**  
For Super Stock Heads  
.420" Cast (each) **900-0338**  
.562" Powder Metal (4 pack) **900-0737**
5. Keeper, valve spring  
For Stock and CNC Ported Heads **106-5692**  
For Super Stock Heads **90-2094-S**
6. Valve spring shim  
For Stock and CNC Ported Heads  
.015" **500-0013**  
.030" **500-0014**  
For Super Stock Heads  
.015" **90-2086**  
.030" **90-2087**

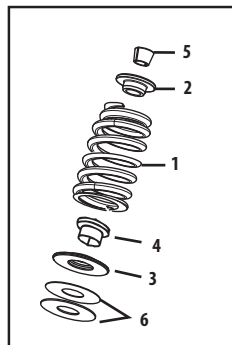
.720" & .660" Lift Valve Springs



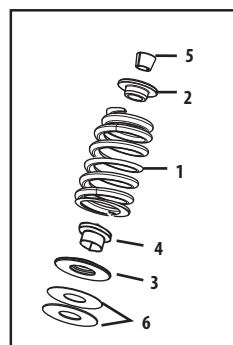
.650" Lift Valve Springs



.650" Lift Sidewinder® Valve Springs



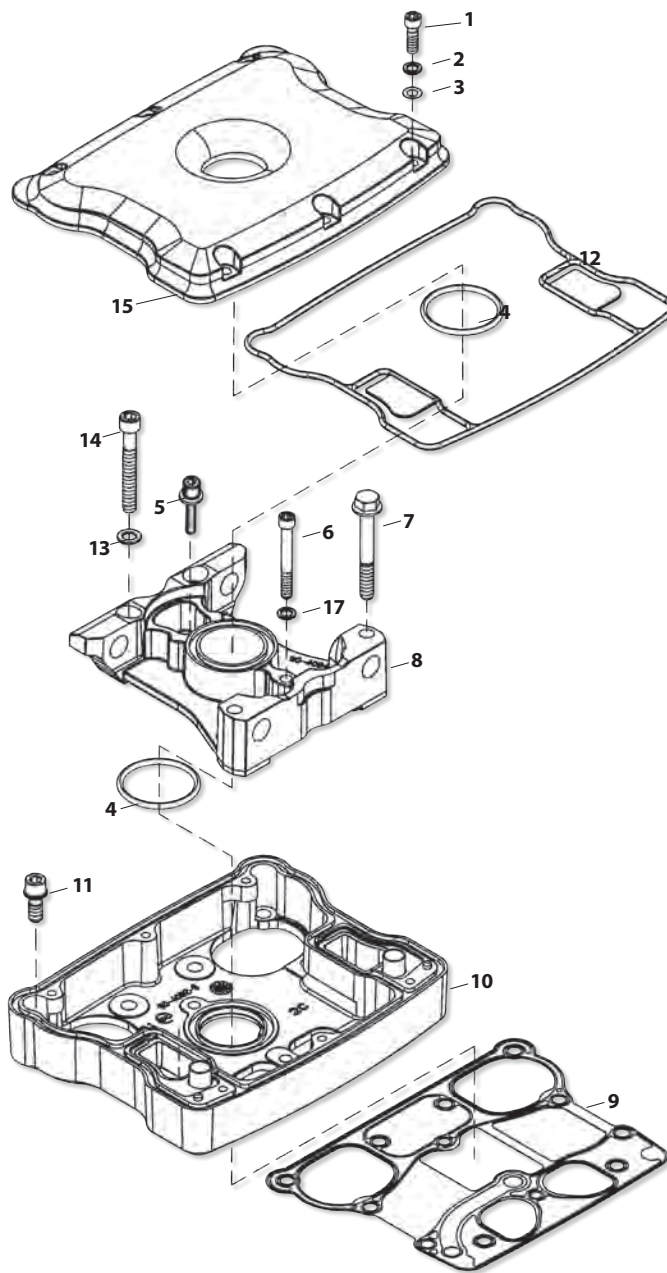
.585" Lift Valve Springs





# DIE-CAST ROCKER COVER REPLACEMENT PARTS FOR 2007–2015 BIG TWIN ENGINES

1. Screw, socket head 1/4"-20 x 3/4" 4069A (each)..... **50-0067**
2. Washer, flat 1/4" (each) ..... **50-7017**  
12 pack ..... **50-7013**
3. Washer, silicone coated 1/4" (each) ..... **50-7015**  
8 pack ..... **50-7015-8**  
12 pack ..... **50-7015-12**
4. Seal, o-ring  
(Included in gasket kit see #16 below.)
5. Screw, socket head, 1/4"-20 x 1" 4741A  
each ..... **50-0092-S**  
4 pack ..... **50-0092P**
6. Screw, socket head, 1/4"-20 x 2" 25794-36 ..... **50-0013**
7. Screw, hex flange head, 5/16"-18 x 2 1/2" 3501 ..... **50-0123**
8. Support, rocker arm ..... **90-4140**
9. Gasket, rocker cover, Graphite  
For Stock or S&S rocker covers on stock heads 16719-99B  
each ..... **90-4071-S**  
2 pack ..... **90-4071**  
10 pack ..... **90-4099**  
For Stock rocker covers on S&S heads (each) ..... **90-4124**  
2 pack ..... **90-4120**
10. Housing, rocker, Chrome ..... **USA 900-4283±**
11. Screw, socket head, 5/16"-18 x 1" ..... **50-0125-S**
12. Seal, rocker cover  
(Included in gasket kit see #16 below.)
13. Washer, flat 5/16" (each) ..... **50-7026**
14. Screw, socket head 5/16"-18 x 2 1/4"  
each ..... **50-0115-S**
15. Cover, rocker, chrome ..... **USA 900-0706±**
16. Gasket set - rocker cover, cast (Not Shown) ..... **90-4111**
17. Washer, 261" x .474" x .050", Annealed, Stainless Steel  
each ..... **50-7020**



Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

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Warranty &  
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Appendix

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

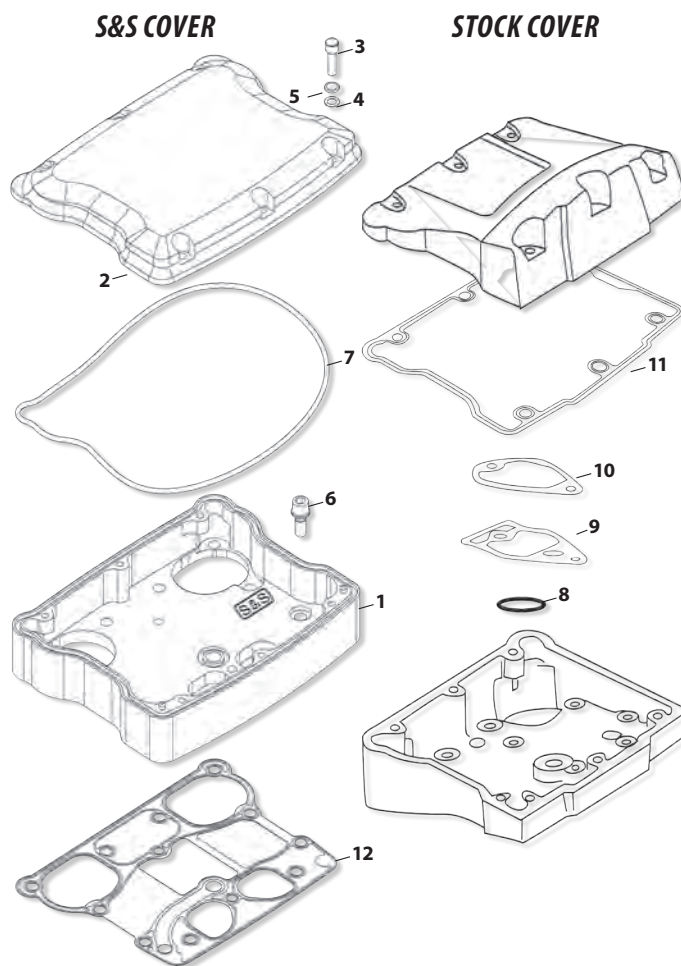
± WARNING: Cancer and Reproductive Harm

# BILLET ROCKER COVER REPLACEMENT PARTS

## FOR 1999–2017 BIG TWIN ENGINES (DISCONTINUED) EXCEPT 2017 TOURING MODELS

1. Base assembly, rocker ..... **N/A**
2. Top, rocker cover ..... **N/A**
3. SHCS, 1/4"-20 x 3/4" 4069A (each) ..... **50-0067**
4. Washer, flat, chrome, 260" x .425" x .060"  
each ..... **50-7017<sup>±</sup>**  
12 pack ..... **50-7013<sup>±</sup>**
5. Washer, flat, rubber coated, 1/4" x 7/16" x .020"  
each ..... **50-7015**  
8 pack ..... **50-7015-8**  
12 pack ..... **50-7015-12**
6. SHCS, 5/16"-18 x 1" with flatwasher ..... **50-0125-5**
7. O-ring, rocker cover seal, Viton®  
(Included in gasket kit #90-4073. See below)
8. O-ring, (-114), .625" ID x .937" OD 11270 ..... **50-8033**
9. Gasket, Breather Baffle, Stock Pattern, Paper, 1999-'10 bt  
17162-03, 17592-99 each ..... **90-4078**
10. Gasket, Breather Cover, Stock Pattern, Paper, 1999-'10 bt  
17591-99, 17162-03, 17592-99 each ..... **90-4077**
11. Gasket, Rocker Cover, Steel, 1999-up bt 17386-99A ..... **90-4096-5**
12. Gasket, bottom rocker cover  
2 pack ..... **90-4071**  
10 pack ..... **90-4099**
13. Gasket kit, rocker cover (includes gaskets for 2 rocker covers) (Not Shown)  
For S&S billet rocker covers  
(includes #5,7,8,9,10,12) ..... **90-4073**  
For 1999-'10 bt  
(includes #8, 9,10,11,12) ..... **90-4097**

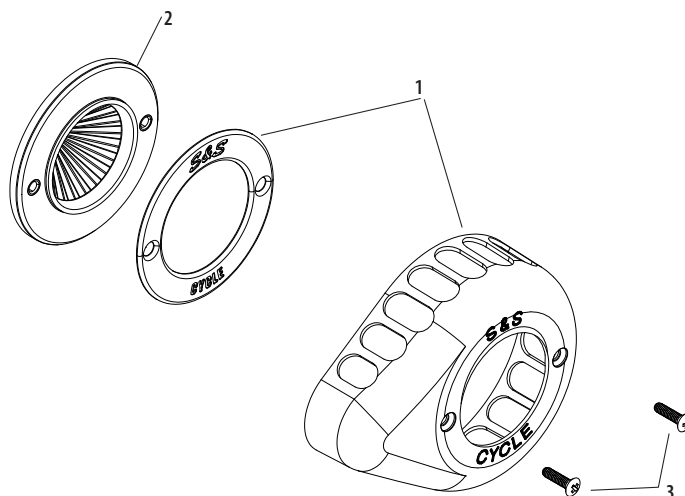
**N/A = No longer available**



# AIR STINGER STEALTH AIR CLEANER KIT

## REPLACEMENT PARTS

- 1. Cover
  - Gloss Black Teardrop ..... **170-0686**
  - Chrome Teardrop ..... **170-0687**
  - Billet S&S Script Ring ..... **170-0502**
- 2. Filter ..... **170-0723**
- 3. Screws
  - Bright Stainless Steel (2 pack) ..... **500-0657**
  - Black (2 pack) ..... **500-0711**



Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88"

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

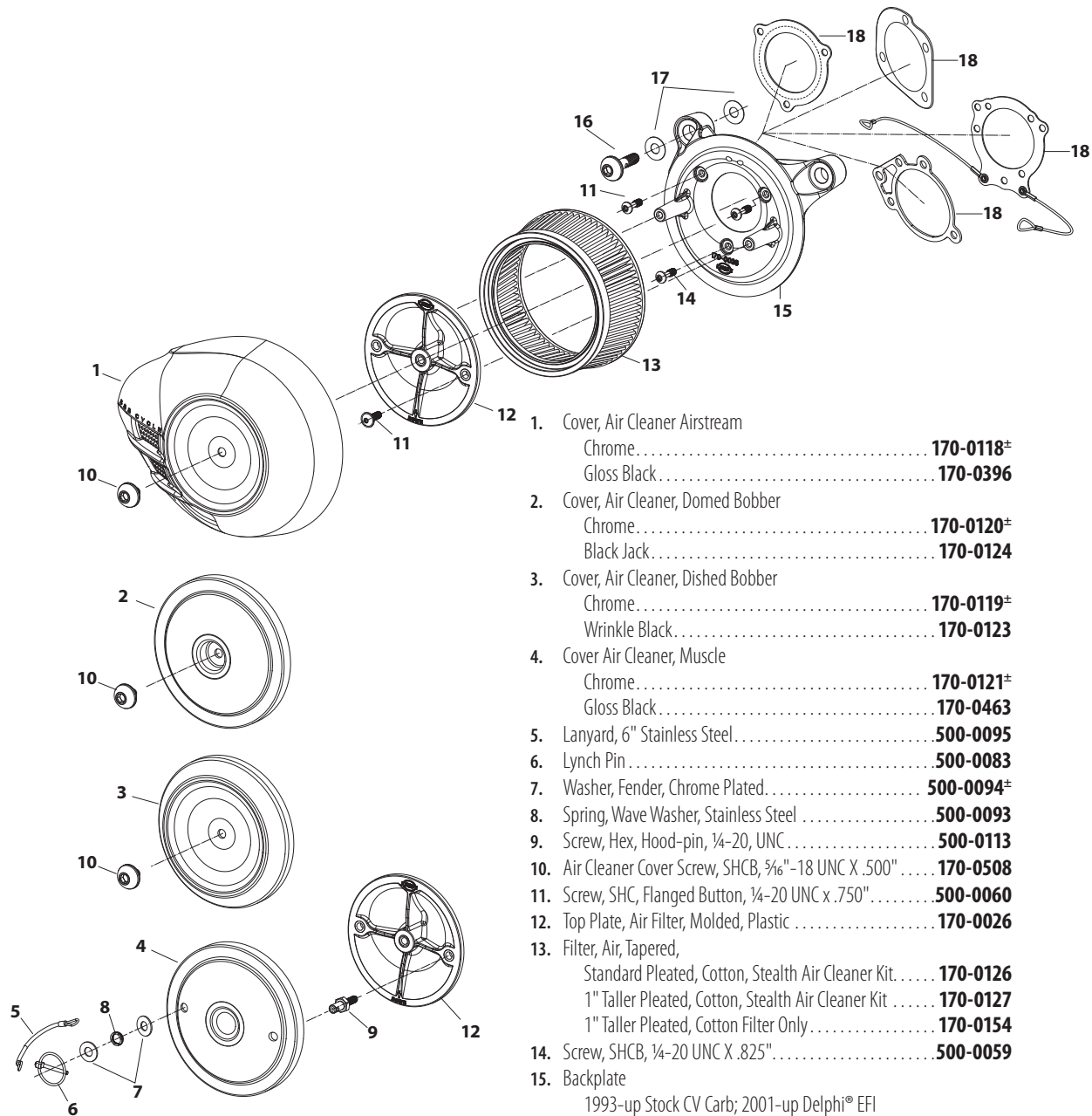
Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix

# STEALTH REPLACEMENT PARTS



- 1. Cover, Air Cleaner Airstream  
 Chrome ..... **170-0118±**  
 Gloss Black ..... **170-0396**
- 2. Cover, Air Cleaner, Domed Bobber  
 Chrome ..... **170-0120±**  
 Black Jack ..... **170-0124**
- 3. Cover, Air Cleaner, Dished Bobber  
 Chrome ..... **170-0119±**  
 Wrinkle Black ..... **170-0123**
- 4. Cover Air Cleaner, Muscle  
 Chrome ..... **170-0121±**  
 Gloss Black ..... **170-0463**
- 5. Lanyard, 6" Stainless Steel ..... **500-0095**
- 6. Lynch Pin ..... **500-0083**
- 7. Washer, Fender, Chrome Plated ..... **500-0094±**
- 8. Spring, Wave Washer, Stainless Steel ..... **500-0093**
- 9. Screw, Hex, Hood-pin, ¼-20, UNC ..... **500-0113**
- 10. Air Cleaner Cover Screw, SHCB, ⅜"-18 UNC X .500" ..... **170-0508**
- 11. Screw, SHC, Flanged Button, ¼-20 UNC X .750" ..... **500-0060**
- 12. Top Plate, Air Filter, Molded, Plastic ..... **170-0026**
- 13. Filter, Air, Tapered,  
 Standard Pleated, Cotton, Stealth Air Cleaner Kit ..... **170-0126**  
 1" Taller Pleated, Cotton, Stealth Air Cleaner Kit ..... **170-0127**  
 1" Taller Pleated, Cotton Filter Only ..... **170-0154**
- 14. Screw, SHCB, ¼-20 UNC X .825" ..... **500-0059**
- 15. Backplate  
 1993-up Stock CV Carb; 2001-up Delphi® EFI  
 (except Throttle by Wire) ..... **170-0021**  
 2008-up bt, Delphi® EFI w/Throttle by Wire ..... **170-0065**
- 16. Screw, Backplate Vent, SHCB, ⅜-16 x 1½", Polished Stainless  
 ..... **170-0506**
- 17. Washer, Flat, Nitrile Rubber Coated, .380" x .880" x .024"  
 each ..... **50-7055**  
 10 pack ..... **50-7057**
- 18. Gasket, Backplate  
 Stock CV Carb & EFI Throttle Body, 1991-up bt  
 (except Throttle by Wire) 29062-95B ..... **106-6022**  
 2008-up bt, Throttle by Wire ..... **160-0035**  
 Super E/G, CV Adapter ..... **106-1724**  
 w/lanyards for use with Muscle Cover ..... **170-0137**

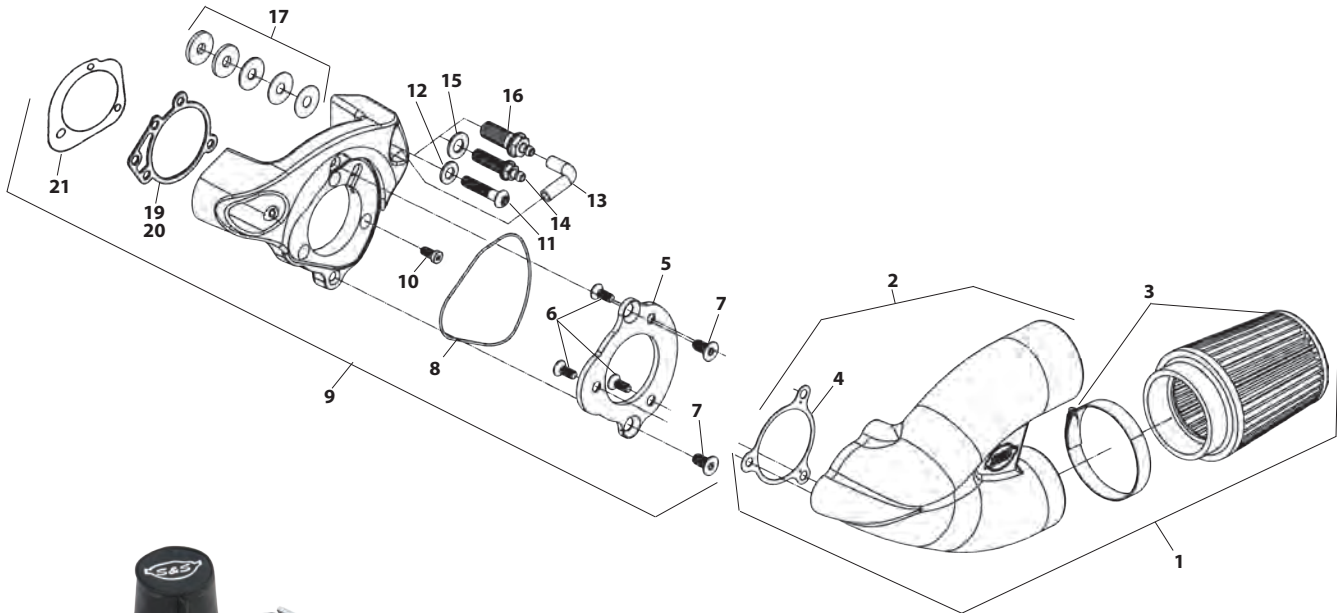




# SINGLE BORE TUNED INDUCTION SYSTEM REPLACEMENT PARTS

FOR S&S T-SERIES ENGINES AND 2007-'16 BIG TWINS, EXCEPT 2008-'16 TOURING MODELS

1. Tuned Intake Kit, 2.19" Single Bore with Red Filters . . . . . N/A
2. Tuned Intake Assembly, 2.19" Single Bore  
Chrome Plated . . . . . **106-4970**±
3. Air Filter, w/clamp, Stainless Cap — Conical — 2<sup>7</sup>/<sub>16</sub>" I.D. x 4"  
Red (each) . . . . . **17-1020**  
Blue (each) . . . . . **17-1023**
4. Gasket, Intake — Adapter Plate . . . . . **17-1022**
5. Plate, Adapter, 2.19" Single Bore Tuned Intake  
Chrome Steel . . . . . **17-1014**±
6. FHSC 1/4-20 x 5/8" (each) . . . . . **50-0433**
7. FHSC 5/16-18 x 5/8" (each) . . . . . **50-0432**
8. O-Ring, Adapter Plate Bracket 3<sup>5</sup>/<sub>8</sub>" O.D. x 3<sup>1</sup>/<sub>2</sub>" I.D. 1/16 CS, Viton  
each . . . . . **50-0446**
9. Bracket Kit, 2.19" Single Bore Tuned Intake, Chrome  
Single VFI, S&S T124 . . . . . **106-4976**±  
Single VFI, 1984-up BT . . . . . **106-4977**±  
Stock Carb, Delphi® EFI, 1984-up BT . . . . . **106-4978**±
10. Backplate Screw, SHC, w/Threadlock, 1/4-20 x 1/2" (each) . . . **106-2084**  
10 pack . . . . . **106-2105**
11. Screw, 5/16-18 x 1 1/4, BHC, Chrome (each) . . . . . **50-0309-S**±
12. Flat Washer 5/16" x 1/16" 6320, 70907-07, 6016, 6702 . . . . . **50-7034**
13. Hose, Breather, 1/4" I.D., 90° . . . . . **19-0178A**
14. Screw, Breather Fitting, 3/8-16 x 1 1/4" . . . . . **50-0436**
15. Washer, Flat, 3/8" x 1<sup>3</sup>/<sub>16</sub>" x 1/16", Chrome . . . . . **50-7106-S**±
16. Screw, Breather Fitting, 1/2-13 x 1.25 . . . . . **50-0435**
17. Shim Kit  
(a) 5/16" I.D. S&S 4<sup>1</sup>/<sub>8</sub>" engines . . . . . **17-0314**  
Includes:  
.325" x 1" x .018", Stainless Steel (each) . . . . . **50-7038**  
.325" x 1" x .030", Stainless Steel (each) . . . . . **50-7039**  
.325" x 1" x .048", Stainless Steel (each) . . . . . **50-7040**  
.325" x 1" x .105", Stainless Steel (each) . . . . . **50-7041**  
.325" x 1" x .125", Stainless Steel (each) . . . . . **50-7042**  
(b) 1/2" I.D. 1993-up BT . . . . . **17-0464**  
Includes:  
.515" x 1" x .018", Stainless Steel (each) . . . . . **50-7085**  
.515" x 1" x .030", Stainless Steel (each) . . . . . **50-7086**  
.515" x 1" x .048", Stainless Steel (each) . . . . . **50-7087**  
.515" x 1" x .105", Stainless Steel (each) . . . . . **50-7089**  
.515" x 1" x .125", Stainless Steel (each) . . . . . **50-7090**
19. Gasket, Backplate - E/G/SBEFI (each) . . . . . **106-1724**  
10 pack . . . . . **106-2328**
20. Gasket, Backplate, S&S SBEFI 58mm . . . . . **106-4662**
21. Gasket, Backplate, Stock carb/Throttle Body 29062-95B . . . . **106-6022**
22. Hardware Kit  
2007-'12 bt, except 2008-'12 Touring  
(includes #7, 8, 10, 11, 12, 13, 14, 15, 16, 17a, 17b, 19, 21) . . . . . **17-5098**  
S&S 4<sup>1</sup>/<sub>8</sub>" Bore Heads (includes #7, 8, 10, 11, 12, 13, 17a, 19) . . . . **500-0016**
23. Oil, Air Filter, 8 oz. (Not shown)  
Red . . . . . **106-1163**  
Blue . . . . . **106-1164**



## ACCESSORIES

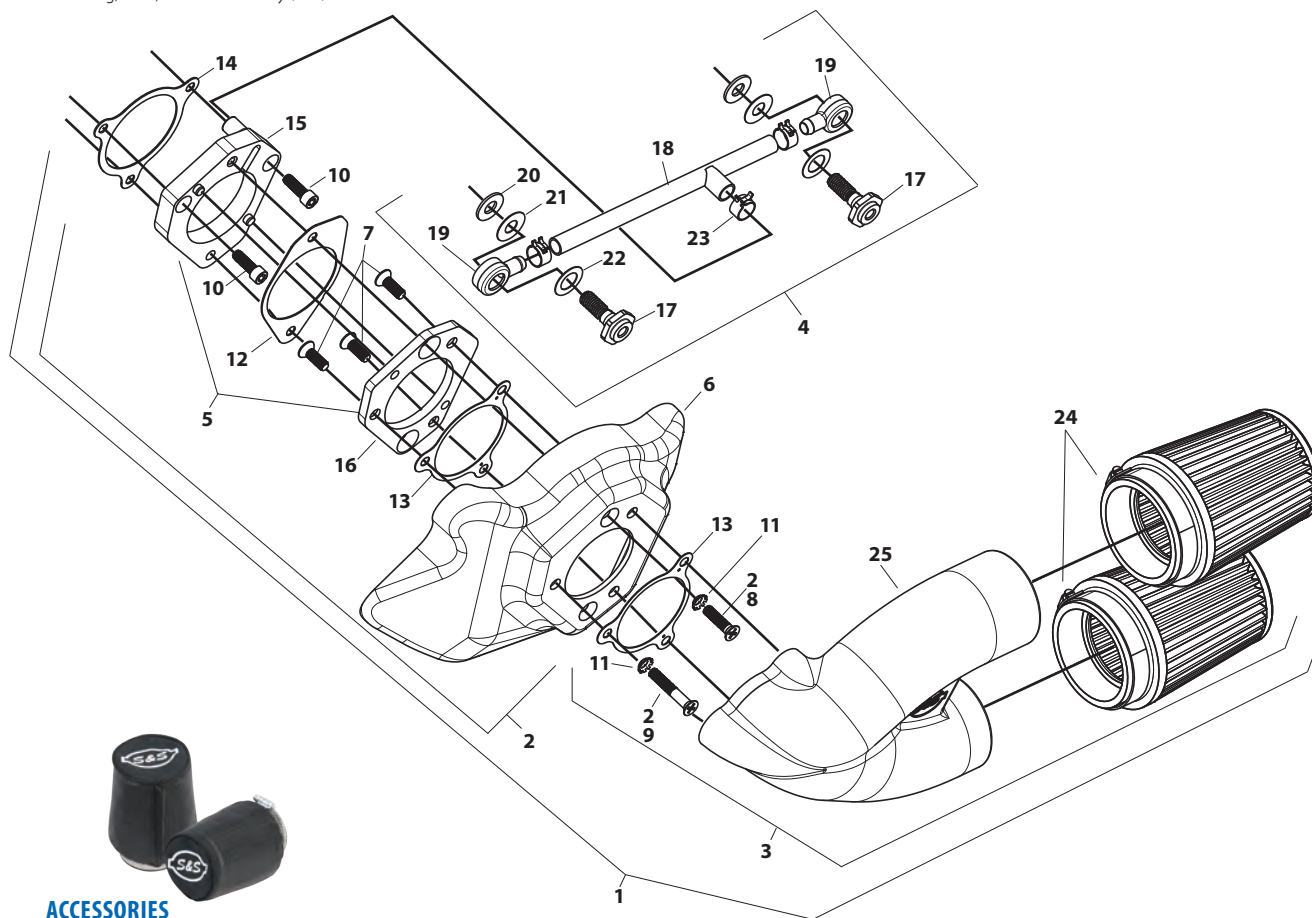
Description	Part #
Nylon Air Filter Cover	each <b>106-0247</b>
	2 pack <b>106-0248</b>

± ⚠️ WARNING: Cancer and Reproductive Harm

# THROTTLE BY WIRE SINGLE BORE TUNED INDUCTION REPLACEMENT PARTS FOR 2008–2016 TOURING MODELS

1. Intake Runner, Kit, Single Bore, 2.19", 2008-Up Touring (See page 80)
2. Installation Kit, Throttle by Wire, 2008-up bt. **106-4851**
3. Intake Runner, Single Bore, w/Gasket & Air Filter, 2.19" **N/A**
4. Breather, Kit, Throttle by Wire, 2008-up bt. **106-4827**
5. Mount, Kit, Spacer/Adapter, Throttle by Wire, 2008-up bt. **106-4824**
6. Cover, Induction Module, Throttle by Wire, Plastic, 2008-up **106-3612**
7. Screw, FHSC, ¼-20 x ¾", Zinc Plated **50-0491**
8. Screw, FHSC, ¼-20 x 1", Black Chrome **106-4828±**
9. Screw, FHSC, ¼-20 x 1½", Black Chrome **106-4829±**
10. Screw, SHC, ¼-20 x ¾", Chrome, ASTM A574-92A 4069A **50-0067±**
11. Washer, countersunk, external tooth, ¼" x ½", parkerized steel **106-4980**
12. Gasket, Intake Adapter, Throttle by Wire, 2008-up bt. **106-4428**
13. Gasket, Intake Adapter, .020", 2.19", Gray, Paper **17-1022**
14. Gasket, Throttle Body, Throttle by Wire, 2008-up bt 29645-08 **106-2643**  
each
- Gasket, S&S Throttle Hog, 58mm **160-0050**
- Gasket, S&S Throttle Hog, 66mm & 70mm **160-0035**
15. Spacer, Plate, Throttle By Wire, Intake Runner, 2008-up bt **106-4826**
16. Adapter, Plate, Throttle by Wire, Intake Runner **106-3607**
17. Screw, Breather, ⅜-16 UNC, +.250, 2008 Touring (each) **106-2667**
18. Hose, Vent, Breather **USA 17-0339**
19. Fitting, Vent, Aluminum Alloy (each) **17-0350**

20. Washer, Flat, .375" x .813" x .063", Zinc, Steel **17-0355**  
2 pack
- each **50-7051**
21. Washer, Flat, .520" x .880" x .024", Nitrile Rubber Coated, Cold Rolled Steel **50-7055**  
each
22. Washer, Flat, .520" x .880" x .024", Nitrile Rubber Coated, Cold Rolled Steel **50-7057**  
10 pack
- each **50-7055**
23. Clamp, Spring, 9/16" **50-8001**
24. Air Filter, with Clamp, Stainless Cap, Conical, 2⅞" I.D. x 4" **17-1020**  
Red (each)
- Blue (each) **17-1023**
25. Intake Runner, Single Bore, 2.19" + Gasket Chrome Plated **106-4970±**
26. Oil, Air Filter, 8 oz. (Not shown) **106-1163**  
Red
- Blue **106-1164**



## ACCESSORIES

Description		Part #
Nylon Air Filter Cover	each	<b>106-0247</b>
	2 pack	<b>106-0248</b>

± WARNING: Cancer and Reproductive Harm

Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
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Appendix

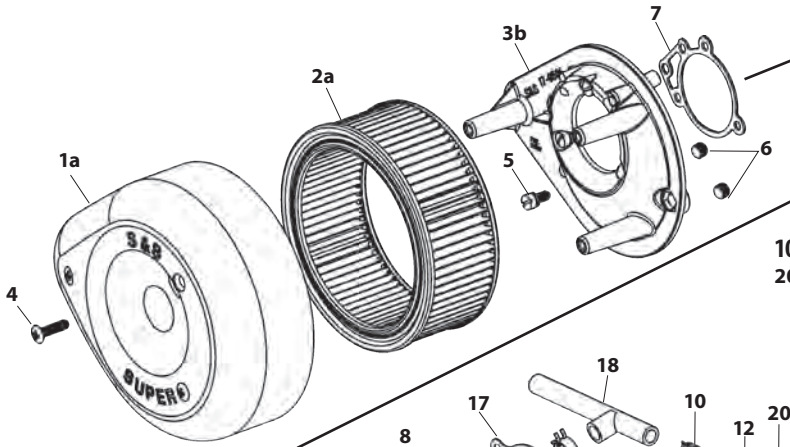


# CLASSIC TEARDROP AIR CLEANER REPLACEMENT PARTS FOR STOCK FUEL SYSTEMS

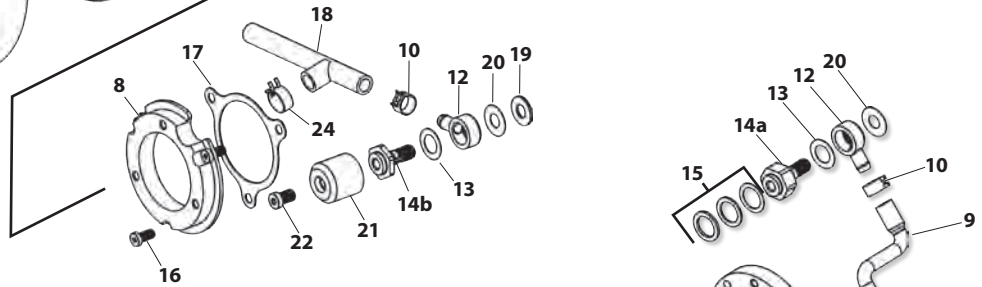
- |  |       |                        |
|--|-------|------------------------|
| <b>1. Air cleaner cover</b>  |       |                        |
| Chrome   | ..... | <b>17-0378±</b>        |
| Gloss Black (includes black screws)  | ..... | <b>170-0384A</b>       |
| Slasher  | ..... | <b>17-0004±</b>        |
| <b>2. Filter Element</b>   |       |                        |
| a. Pleated   | ..... | <b>106-4722</b>        |
| b. Foam (for 17-0444 kit only)   | ..... | <b>17-0079</b>         |
| <b>3. Backplate</b>  |       |                        |
| a. 2006-'16 bt (except 2008-'16 touring models)  | ..... | <b>106-0907</b>        |
| b. 2008-'16 touring models   | ..... | <b>106-2092</b>        |
| c. 2006-up Dyna® models & all 2007 bt with stock EFI   | ..... | <b>N/A</b>             |
| <b>4. Cover screw, 1305</b>  |       |                        |
| Chrome (each)  | ..... | <b>50-0072±</b>        |
| 3 pack   | ..... | <b>50-1052±</b>        |
| 10 pack  | ..... | <b>50-0094±</b>        |
| Black (each)   | ..... | <b>50-0310-S</b>       |
| 3 pack   | ..... | <b>50-0310</b>         |
| <b>5. Backplate screw, Zinc Plated (each)</b>  | ..... | <b>106-2084</b>        |
| 10 pack  | ..... | <b>106-2105</b>        |
| <b>6. Backplate plug 1/8"-27 (each)</b>  | ..... | <b>50-8331A</b>        |
| 10 pack  | ..... | <b>50-1015</b>         |
| Backplate plug .285" x .170"   | ..... | <b>50-8306</b>         |
| <b>7. Gasket, backplate</b>  |       |                        |
| CV Adaptor, .0625" (each)  | ..... | <b>106-1724</b>        |
| 10 pack  | ..... | <b>106-2328</b>        |
| 2006-'12 bt 29062-95B  | ..... | <b>106-6022</b>        |
| <b>8. Adaptor assembly</b>   |       |                        |
| 2006-'12 bt (except 2008-'12 touring models)   | ..... | <b>106-0881±</b>       |
| 2008-'12 touring models  | ..... | <b>106-1716</b>        |
| <b>9. Hose, vent, breather, .250" x .375" x 1.825" (each)</b>                                | ..... | <b>17-0364A</b>        |
| <b>10. Clamp, spring, 9/16"</b>  | ..... | <b>50-8001</b>         |
| <b>11. Screw, w/lockwasher SLTD FH, 1/4-20 x 3/4", Zinc, Steel</b>                           | ..... | <b>50-0073</b>         |
| <b>12. Banjo fitting (each)</b>  | ..... | <b>17-0350</b>         |
| 2 pack   | ..... | <b>17-0355</b>         |
| <b>13. Washer, silicone coated steel, 3/8" (each)</b>  | ..... | <b>50-7055</b>         |
| 10 pack  | ..... | <b>50-7057</b>         |
| <b>14. Breather screw</b>  |       |                        |
| a. +.250", 2006-'12 bt (except 2008-'12 touring models)                                      | ..... | <b>17-0348</b>         |
| b. 3/8-16 UNC, +.250, 2008-'12 Touring (each)  | ..... | <b>106-2667</b>        |
| c. 3/8-16 NC, 2006-up Dyna models & all 2007 bt  | ..... | <b>17-0345</b>         |
| <b>15. Replacement shims</b>   |       |                        |
| 5/8" x .025" (each)  | ..... | <b>50-7113</b>         |
| 10 pack  | ..... | <b>50-7110</b>         |
| 5/8" x .050" (each)  | ..... | <b>50-7114</b>         |
| 10 pack  | ..... | <b>50-7111</b>         |
| 5/8" x .075" (each)  | ..... | <b>50-7115</b>         |
| 10 pack  | ..... | <b>50-7112</b>         |
| <b>16. Screw, LSHC, 1/4-20 x 1/2", zinc plated (each)</b>                                    | ..... | <b>106-2037</b>        |
| 10 pack  | ..... | <b>106-2125</b>        |
| <b>17. Gasket, throttle body, throttle by wire, 2008-up BT 29645-08</b>                      |       |                        |
| each   | ..... | <b>106-2643</b>        |
| <b>18. Hose, vent, breather</b>  | ..... | <b>USA 1,2 17-0339</b> |
| <b>19. Washer, flat, .375" x .813" x .063", zinc, steel</b>                                  |       |                        |
| each   | ..... | <b>50-7051</b>         |
| <b>20. Washer, silicone coated steel 1/2" (each)</b>   | ..... | <b>50-7055</b>         |
| 10 pack  | ..... | <b>50-7057</b>         |
| <b>21. Cover, breather screw, chrome, aluminum</b>   | ..... | <b>106-2022±</b>       |
| <b>22. Screw, LSHC, 5/16-24 x 1/2", stainless steel</b>                                      | ..... | <b>106-2023</b>        |
| <b>23. Screw, Backplate Vent, Special Socket Panhead, 5/16-24 x .360", Zinc, Alloy Steel</b> | ..... | <b>17-0346</b>         |
| <b>24. Clamp, Spring, .660"</b>  | ..... | <b>50-8076-S</b>       |
| <b>25. Nut, HH, 1/4-28 UNC-2B x .328", Zinc, Steel</b>                                       | ..... | <b>50-5010</b>         |
| <b>26. Vent hose, with angle cut</b>   | ..... | <b>17-0365</b>         |
| <b>27. Hose fitting</b>  | ..... | <b>17-0336C-S</b>      |
| <b>28. Flatwasher, 1/4" 6194, 6245, 6703, 6736, 6228W, 6192 (each)</b>                       | ..... | <b>50-7021</b>         |
| <b>29. Carb support bracket</b>  | ..... | <b>N/A</b>             |
| <b>30. Shim - 1/4" x 3/4" x .200"</b>  | ..... | <b>50-7024</b>         |
| <b>31. Mounting Hardware Kit</b>   |       |                        |
| 2006-'12 bt (except 2008-'12 touring models)   | ..... | <b>106-0838</b>        |
| (includes 7,5,25,11,9,19,14,12,10,26,33)   |       |                        |
| 2008-'12 touring models  | ..... | <b>106-2102</b>        |
| (includes 7,23,24,15,5,16,22,17,11,18,12,19,10,27,33)  |       |                        |
| <b>32. Cable Tie (N/S)</b>   | ..... | <b>50-8003</b>         |
| <b>33. Screw, PH, 1/4-20 x 1", Nickel, Stainless Steel 1305 (N/S)</b>                        | ..... | <b>50-0072</b>         |

(N/S) = Not Shown

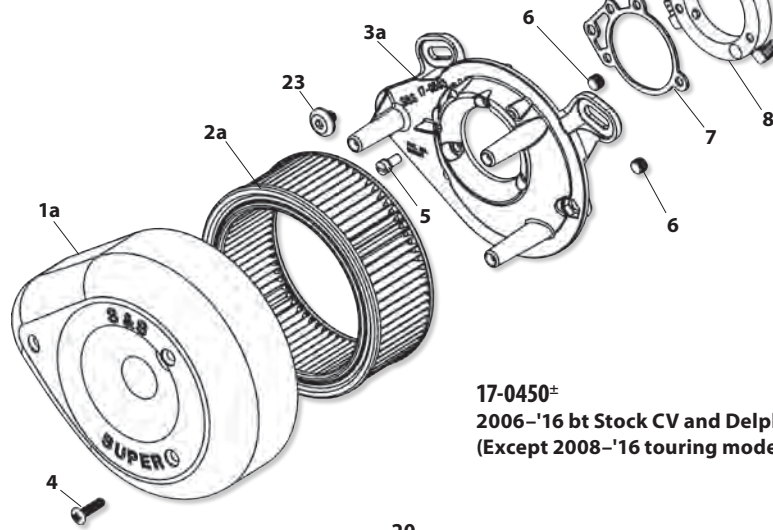




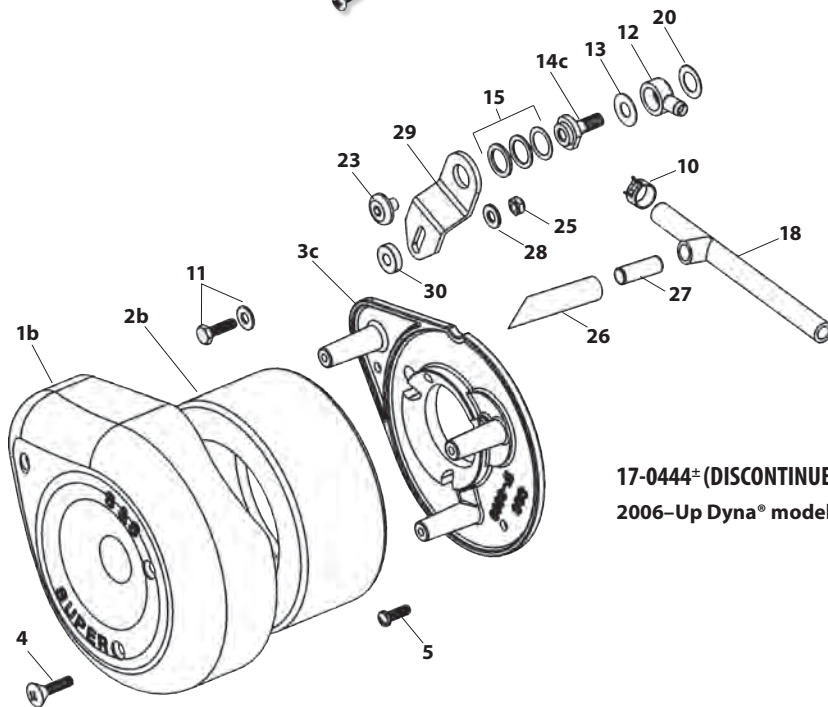
**106-2091±**  
2008-'16 touring models with stock EFI throttle body



**17-0450±**  
2006-'16 bt Stock CV and Delphi® Single Bore EFI  
(Except 2008-'16 touring models)



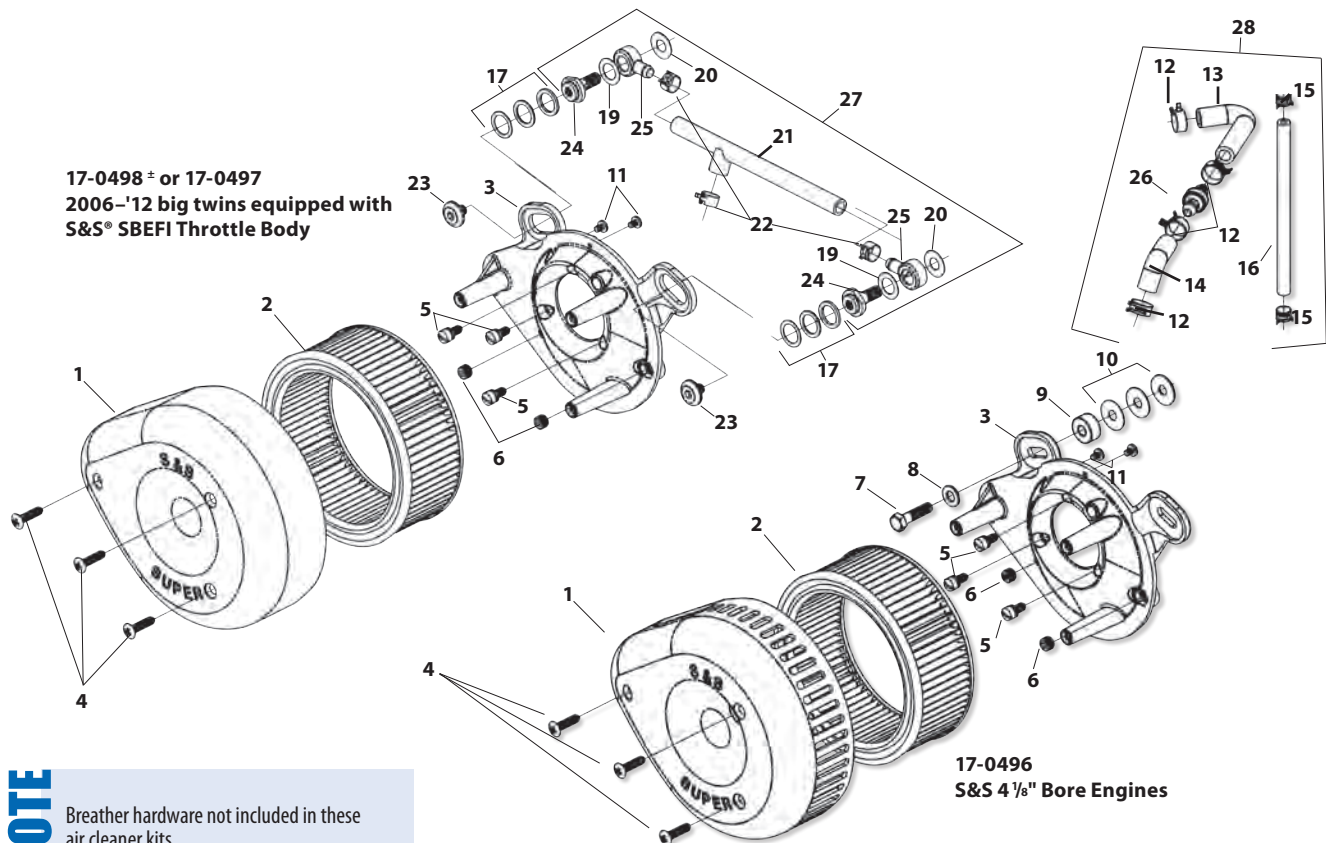
**17-0444± (DISCONTINUED)**  
2006-Up Dyna® models & All 2007 big twin models with stock EFI



# CLASSIC TEARDROP AIR CLEANER REPLACEMENT PARTS FOR S&S® SINGLE BORE EFI

- |   |                        |  |
|---|------------------------|--|
| <b>1.</b> Air Cleaner Cover   |                        |  |
| Slasher (slotted chrome) .....  | <b>17-0004</b> ±       |  |
| Chrome .....  | <b>17-0378</b> ±       |  |
| Gloss Black (includes black screws) .....                               | <b>170-0384A</b>       |  |
| <b>2.</b> Element, pleated .....  | <b>106-4722</b>        |  |
| <b>3.</b> Backplate SBEFI   |                        |  |
| 2006-16 bt .....  | <b>17-0120</b>         |  |
| S&S 4 1/8" bore engines .....   | <b>17-0380</b>         |  |
| <b>4.</b> Screw, Cover, oval 1/4-20 x 1                                 |                        |  |
| Chrome 1305 (each) .....  | <b>50-0072</b> ±       |  |
| 3 pack .....  | <b>50-1052</b> ±       |  |
| 10 pack .....   | <b>50-0094</b> ±       |  |
| Black 902 (each) .....  | <b>50-0310-S</b>       |  |
| 3 pack .....  | <b>50-0310</b>         |  |
| <b>5.</b> Backplate screw   |                        |  |
| Zinc Plated (each) .....  | <b>106-2084</b>        |  |
| 10 pack .....   | <b>106-2105</b>        |  |
| <b>6.</b> Pipe plug, 1/8, air cleaner backplate (each) .....            | <b>50-8331A</b>        |  |
| 10 pack .....   | <b>50-1015</b>         |  |
| <b>7.</b> Mounting bracket bolt, hex 5/16-18 x 1 1/4 .....              | <b>50-0110</b>         |  |
| <b>8.</b> Flat washer, 5/16" x 1/16" 6320, 70907-07, 6016, 6702 .....   | <b>50-7034</b>         |  |
| <b>9.</b> Shim, .850" x .325" x .400" .....                             | <b>50-7027</b>         |  |
| <b>10.</b> Shim kit for 4 1/8" bore .....                               | <b>17-0314</b>         |  |
| Individual shims:   |                        |  |
| 5/16" x .018" (each) .....  | <b>50-7038</b>         |  |
| 5/16" x .030" (each) .....  | <b>50-7039</b>         |  |
| 5/16" x .048" (each) .....  | <b>50-7040</b>         |  |
| 5/16" x .105" (each) .....  | <b>50-7041</b>         |  |
| <b>11.</b> Screw, PH, 10-24 x 1/4", Zinc, Steel (each) .....            | <b>50-0041</b>         |  |
| 10 pack .....   | <b>50-0062</b>         |  |
| <b>12.</b> Clamp, Spring, .660" .....                                   | <b>50-8076-S</b>       |  |
| <b>13.</b> Hose, Rear, Vent, Breather, Formed, Section 1, SAE J30 ..... | <b>50-8262-S</b>       |  |
| <b>14.</b> Hose, Rear, Vent, Breather, Formed, Section 2, SAE J30 ..... | <b>50-8263-S</b>       |  |
| <b>15.</b> Clamp, Spring, .440" .....                                   | <b>50-8143-S</b>       |  |
| <b>16.</b> Hose, Cut To Size, .1875" x 6", Black, Rubber .....          | <b>50-8142AS</b>       |  |
| <b>17.</b> Shims, individual  |                        |  |
| 5/8 x 7/8 x .025 (each) .....   | <b>50-7113</b>         |  |
| 10 pack .....   | <b>50-7110</b>         |  |
| 5/8 x 7/8 x .050 (each) .....   | <b>50-7114</b>         |  |
| 10 pack .....   | <b>50-7111</b>         |  |
| 5/8 x 7/8 x .075 (each) .....   | <b>50-7115</b>         |  |
| 10 pack .....   | <b>50-7112</b>         |  |
| <b>18.</b> Air cleaner hardware kit                                     |                        |  |
| 2006-16 bt (includes #4, 5, 6, 11, 17, 23) .....                        | <b>17-0482</b>         |  |
| S&S 4 1/8" bore (includes #4, 5, 6, 7, 8, 9, 10, 11) .....              | <b>17-0481</b>         |  |
| <b>19.</b> Silicone washer, 1/2" ID (each) .....                        | <b>50-7055</b>         |  |
| 10 pack .....   | <b>50-7057</b>         |  |
| <b>20.</b> Silicone washer, 3/8" ID (each) .....                        | <b>50-7055</b>         |  |
| 10 pack .....   | <b>50-7057</b>         |  |
| <b>21.</b> Hose, Vent, Breather, Epichlorohydrin Polymer .....          | <b>USA 1,2 17-0339</b> |  |
| <b>22.</b> Clamp, Spring, 3/16" .....                                   | <b>50-8001</b>         |  |
| <b>23.</b> Screw, wide head, 5/16-24 x 36 .....                         | <b>17-0346</b>         |  |
| <b>24.</b> Breather vent fitting  |                        |  |
| 2006-16 bt .....  | <b>17-0345</b>         |  |
| <b>25.</b> Breather fitting (each) .....                                | <b>17-0350</b>         |  |
| 2 pack .....  | <b>17-0355</b>         |  |
| <b>26.</b> Check Valve .....  | <b>50-8122</b>         |  |
| <b>27.</b> Breather hardware for 2006-16 bt* .....                      | <b>17-0455</b>         |  |
| <b>28.</b> Breather hardware for 4 1/8" bore* .....                     | <b>31-2104</b>         |  |

(\*Not included in air cleaner kit)

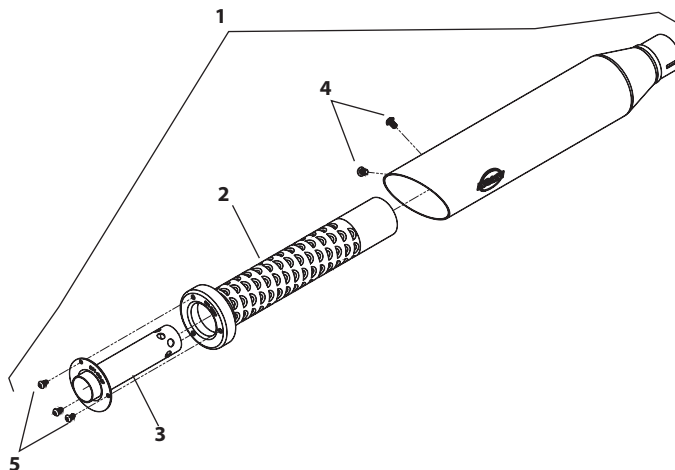


± ⚠ WARNING: Cancer and Reproductive Harm

# SLASH CUT SLIP-ONS FOR DYNA® MODELS REPLACEMENT PARTS

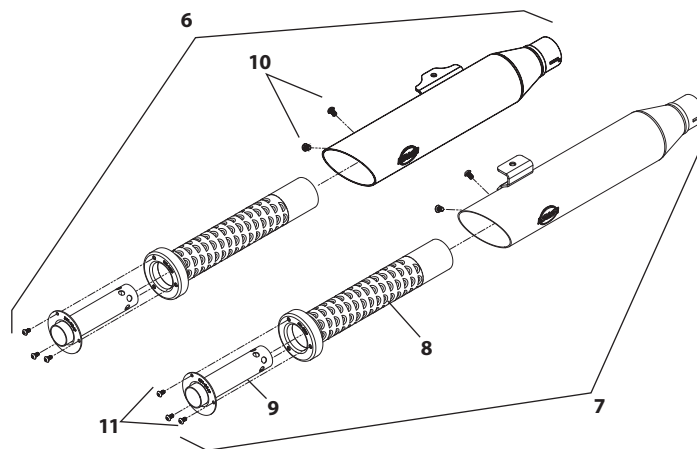
## Kit Part #s: 550-0718 and 550-0720

- 1. Slash Cut Muffler Assembly, Front or Rear
  - Chrome ..... **551-0308**
  - Black ..... **551-0311**
- 2. Main Baffle Assembly ..... **551-0301**
- 3. dB Reducer Baffle ..... **551-0350**
- 4. Button head cap screw, Stainless, ¼"–20x3/8"1  
(Hold Main baffle assy to muffler shell) ..... **500-0441**
- 5. Socket head cap screw, Stainless, 10–32x3/8"  
(Hold db reducer baffle to main baffle assy) ..... **500-0570**



## Kit Part #s: 550-0722 and 550-0724

- 6. Top Muffler Assembly Slash Cut
  - Chrome ..... **551-0320**
  - Black ..... **551-0323**
- 7. Bottom Muffler Assembly, Slash Cut
  - Chrome ..... **551-0326±**
  - Black ..... **551-0329**
- 8. Main Baffle Assembly ..... **551-0301**
- 9. dB Reducer Baffle ..... **551-0350**
- 10. Button head cap screw, Stainless, ¼"–20x3/8"  
(Hold Main baffle assy to muffler shell) ..... **500-0441**
- 11. Socket head cap screw, Stainless, 10–32x3/8"  
(Hold db reducer baffle to main baffle assy) ..... **500-0570**



Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

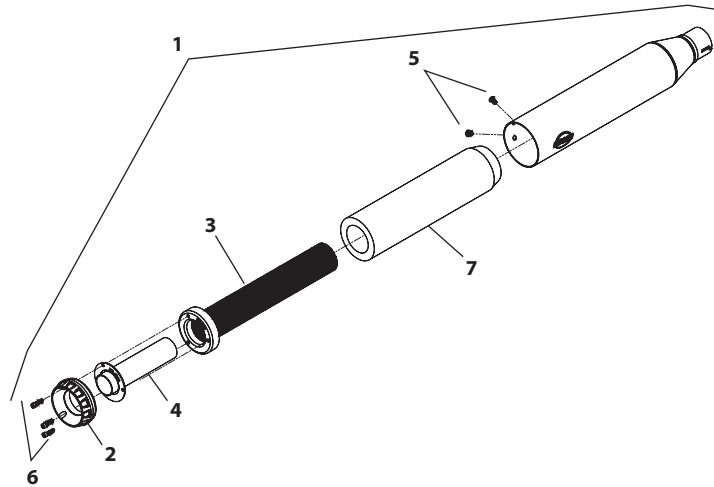
Warranty &  
Company Policy

Appendix

# GRAND NATIONAL® SLIP-ONS FOR DYNA® MODELS REPLACEMENT PARTS

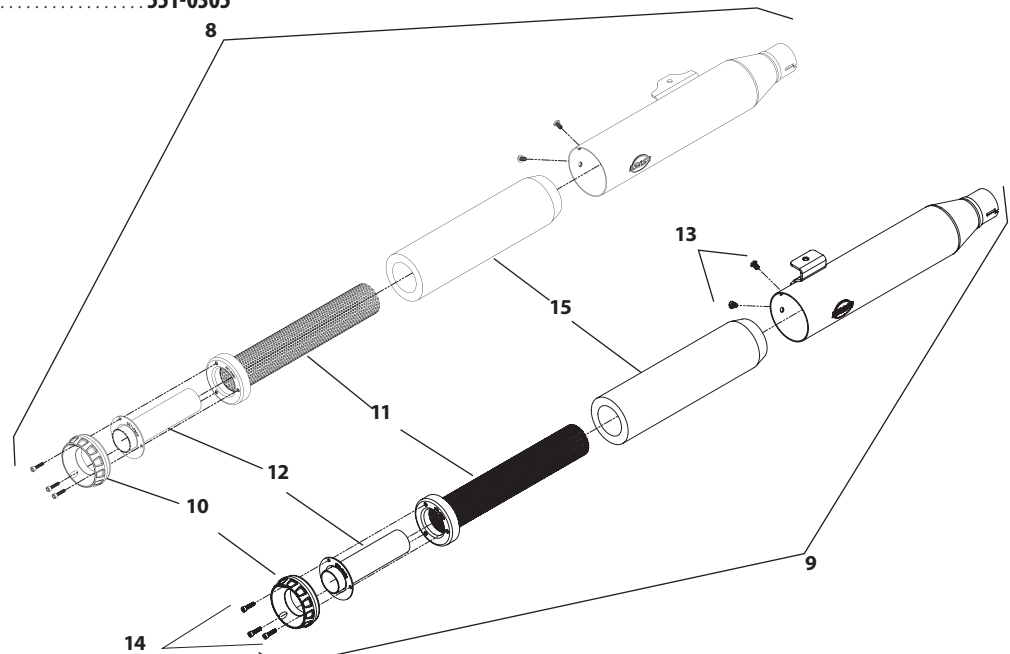
## Kit Part #: 550-0719 and 550-0721

1. Grand National Muffler Assembly Front or Rear  
 Chrome ..... **551-0314±**  
 Black..... **551-0317**
2. End cap ..... **551-0292**
3. Main Baffle Assembly ..... **551-0299**
4. dB Reducer Baffle ..... **551-0304**
5. Button head cap screw, Stainless, 1/4"-20x3/8"  
 (Hold Main baffle assy to muffler shell) ..... **500-0441**
6. Socket head cap screw, Stainless, 10-32x3/4"  
 (Hold end cap to main baffle assy) ..... **500-0569**
7. Insulation, Muffler, Pillow Pack ..... **551-0305**



## Kit Part #: 550-0723 and 550-0725

8. Muffler Assembly, Grand National, Top  
 Chrome ..... **551-0332±**  
 Black..... **551-0335**
9. Muffler Assembly, Grand National, Bottom  
 Chrome ..... **551-0338±**  
 Black..... **551-0341**
10. End cap ..... **551-0292**
11. Main Baffle Assembly ..... **551-0299**
12. dB Reducer Baffle ..... **551-0304**
13. Button head cap screw, Stainless, 1/4"-20x3/8"  
 (Hold Main baffle assy to muffler shell) ..... **500-0441**
14. Socket head cap screw, Stainless, 10-32x3/4"  
 (Hold end cap to main baffle assy) ..... **500-0569**
15. Insulation, Muffler, Pillow Pack ..... **551-0305**

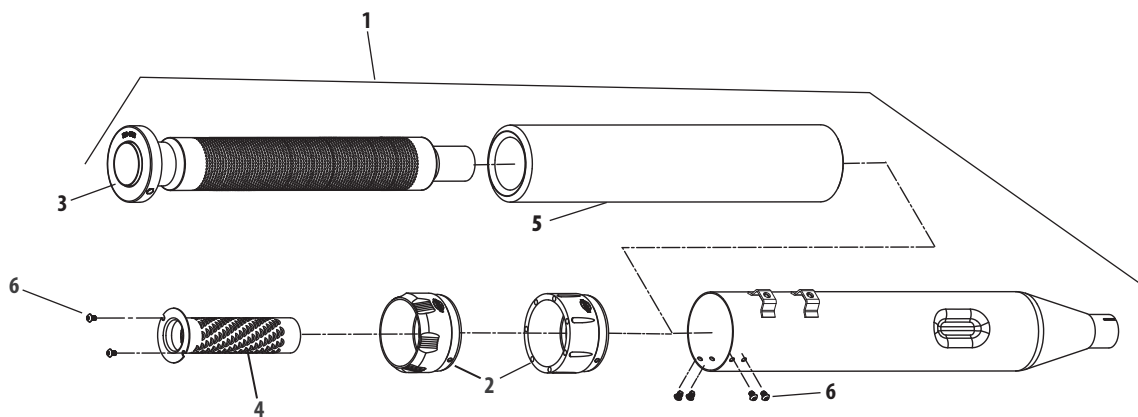


± WARNING: Cancer and Reproductive Harm



# Mk45 4.5" MUFFLER REPLACEMENT PARTS

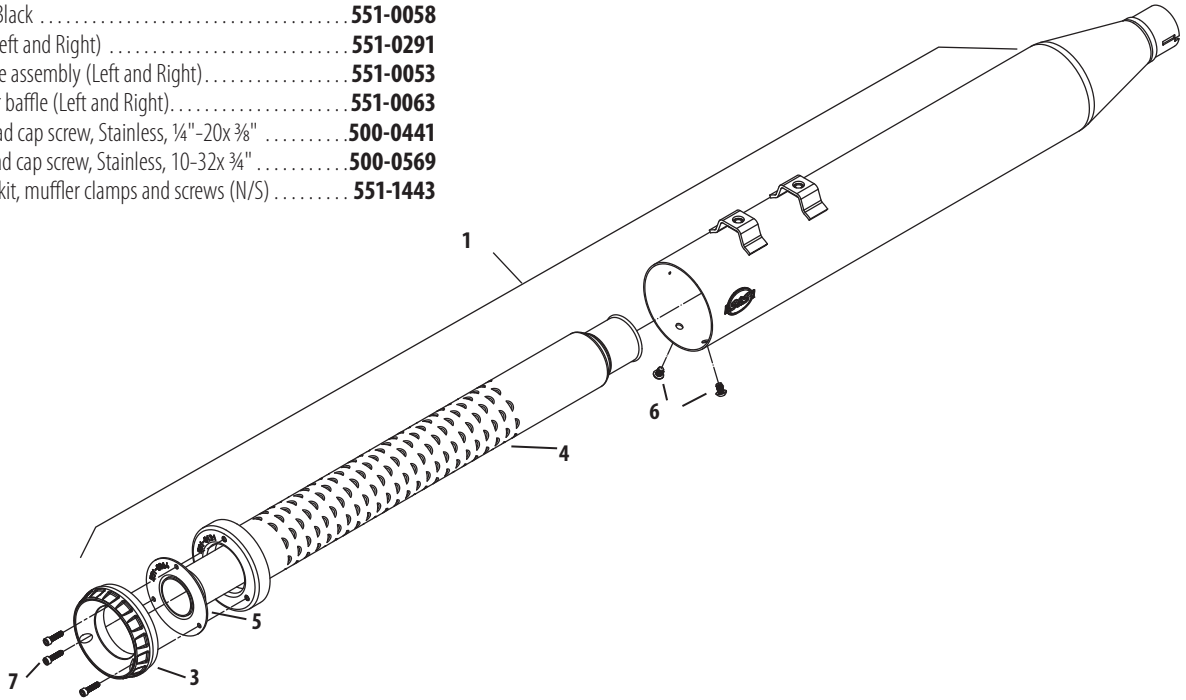
1. 4.5" Muffler Assembly
  - Left, Chrome ..... **551-0020±**
  - Right, Chrome ..... **551-0021±**
  - Left, Black ..... **551-0022**
  - Right, Black ..... **551-0023**
2. End cap
  - Thruster, Chrome ..... **550-0634A±**
  - Thruster, Highlighted Machined ..... **550-0629A**
  - Tracer, Chrome ..... **550-0636A±**
  - Tracer, Highlighted Machined ..... **550-0632A**
3. Main Baffle Assembly, 4.5" Muffler ..... **551-0007**
4. dB reducer ..... **551-0026**
5. Insulation, 4.5" Muffler ..... **551-0003**
6. Button Head Cap Screw, Stainless, ¼"-20 X ¾" ..... **500-0441**
7. Hardware Kit, Muffler Clamps And Screws (N/S) ..... **551-1443**



± WARNING: Cancer and Reproductive Harm

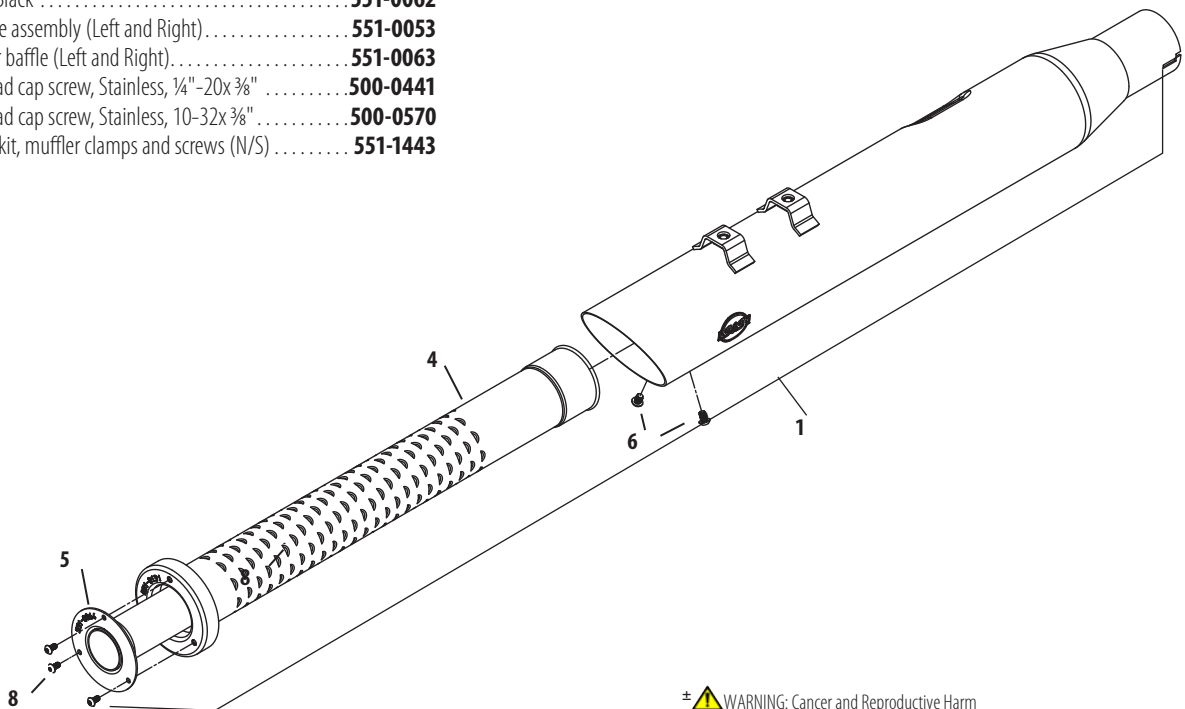
# GRAND NATIONAL® 4" REPLACEMENT PARTS

1. 4" Muffler assembly with Grand National end cap
  - Left, Chrome..... **551-0055±**
  - Right, Chrome..... **551-0056±**
  - Left, Black..... **551-0057**
  - Right, Black..... **551-0058**
3. End cap (Left and Right)..... **551-0291**
4. Main baffle assembly (Left and Right)..... **551-0053**
5. dB reducer baffle (Left and Right)..... **551-0063**
6. Button head cap screw, Stainless, 1/4"-20x 3/8"..... **500-0441**
7. Socket head cap screw, Stainless, 10-32x 3/4"..... **500-0569**
9. Hardware kit, muffler clamps and screws (N/S)..... **551-1443**



# SLASH CUT 4" REPLACEMENT PARTS

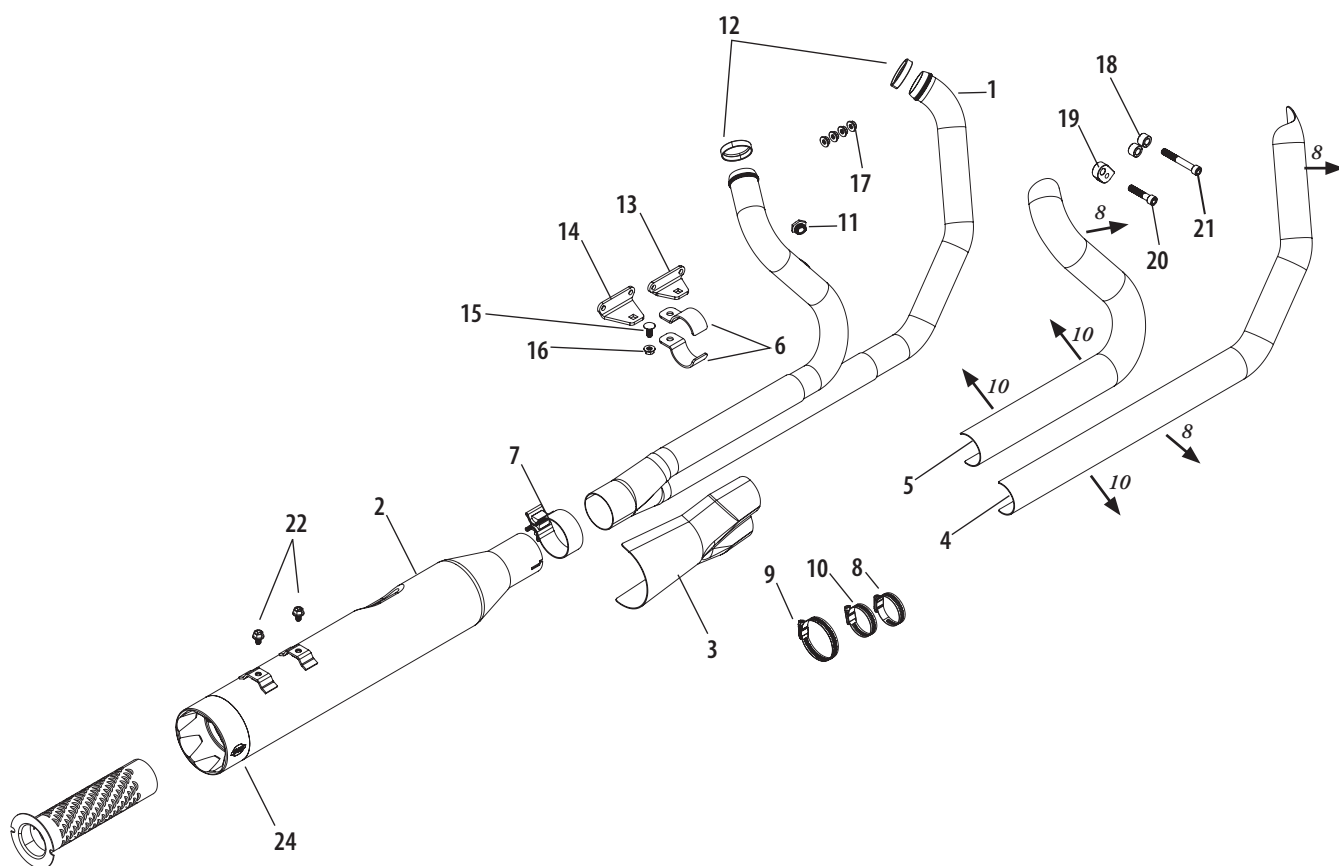
1. 4" Muffler assembly Slash Down
  - Left, Chrome..... **551-0059±**
  - Right, Chrome..... **551-0060±**
  - Left, Black..... **551-0061**
  - Right, Black..... **551-0062**
4. Main baffle assembly (Left and Right)..... **551-0053**
5. dB reducer baffle (Left and Right)..... **551-0063**
6. Button head cap screw, Stainless, 1/4"-20x 3/8"..... **500-0441**
8. Button head cap screw, Stainless, 10-32x 3/8"..... **500-0570**
9. Hardware kit, muffler clamps and screws (N/S)..... **551-1443**



±  WARNING: Cancer and Reproductive Harm

# SIDEWINDER® 2:1 EXHAUST REPLACEMENT PARTS

- |  |           |  |           |
|--|-----------|--|-----------|
| 1. Header, Assembly, 2 into 1, Sidewinder®, Weldment, 1995-'16 Touring Models              | 551-0705  | 13. Bracket, header mount, 2:1, powdercoated, black, 2007-'16 touring models | 551-0719  |
| 2. Muffler, Street Legal   |           | 14. Bracket, header mount, 2:1, powdercoated, black, 1995-'06 touring        | 551-0786  |
| Chrome   | 551-0529± | 15. Bolt, Carriage, 3/8-16 x 1-1/4"  | 500-0553  |
| Black  | 551-0530± | 16. Nut, Flanged, Serrated, 3/8-16   | 500-0554  |
| 3. Collector, heat shield  |           | 17. Nut, HSFH, 5/16-24 unf-2b x .283", Zinc, steel 7593                      | 50-5025-S |
| Chrome   | 551-0379± | 18. Washer, spacer, floor board  | 551-0401  |
| Black  | 551-0381  | 19. Spacer, floor board, powdercoated, black                                 | 551-0399  |
| 4. Heat shield, front, 2:1, Sidewinder®, chrome, 1995-'16 touring models                   |           | 20. Screw, shc, 3/8-16 x 1-3/4", zinc, steel                                 | 500-0789  |
| Chrome   | 551-0709± | 21. Screw, shc, 3/8-16 x 2-3/4", zinc, steel                                 | 500-0790  |
| Black  | 551-0715  | 22. Screw, hh, flg, serrated, 5/16-18 x 1/2"                                 | 500-0744  |
| 5. Heat shield, rear, 2:1, Sidewinder®, chrome, 1995-2016 touring models                   |           | 23. dB reducer   | 551-0026  |
| Chrome   | 551-0712± | 24. end cap  | 551-0395  |
| Black  | 551-0717  |  |           |
| 6. Clamp, header mount, 2:1, chrome plate, mild steel, 11 gauge, M8 2017 touring           | 551-0361  |  |           |
| 7. Clamp, muffler, band style, 2.5"  | 551-0135  |  |           |
| 8. Clamp, hose, worm drive, SAE #20 (qty. 3)   | 551-0527  |  |           |
| 9. Clamp, hose, worm drive, SAE #40  | 551-0402  |  |           |
| 10. Clamp, hose, worm drive, SAE #24 (qty. 3)  | 500-0791  |  |           |
| 11. Adapter, oxygen sensor, 12mm to 18mm, stainless steel                                  | 550-0375  |  |           |
| 12. Gasket, exhaust, tapered, stainless steel, 1984-up bt, 1986-up xl 65324-83B, 65324-83A | 106-5029  |  |           |



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Company Policy

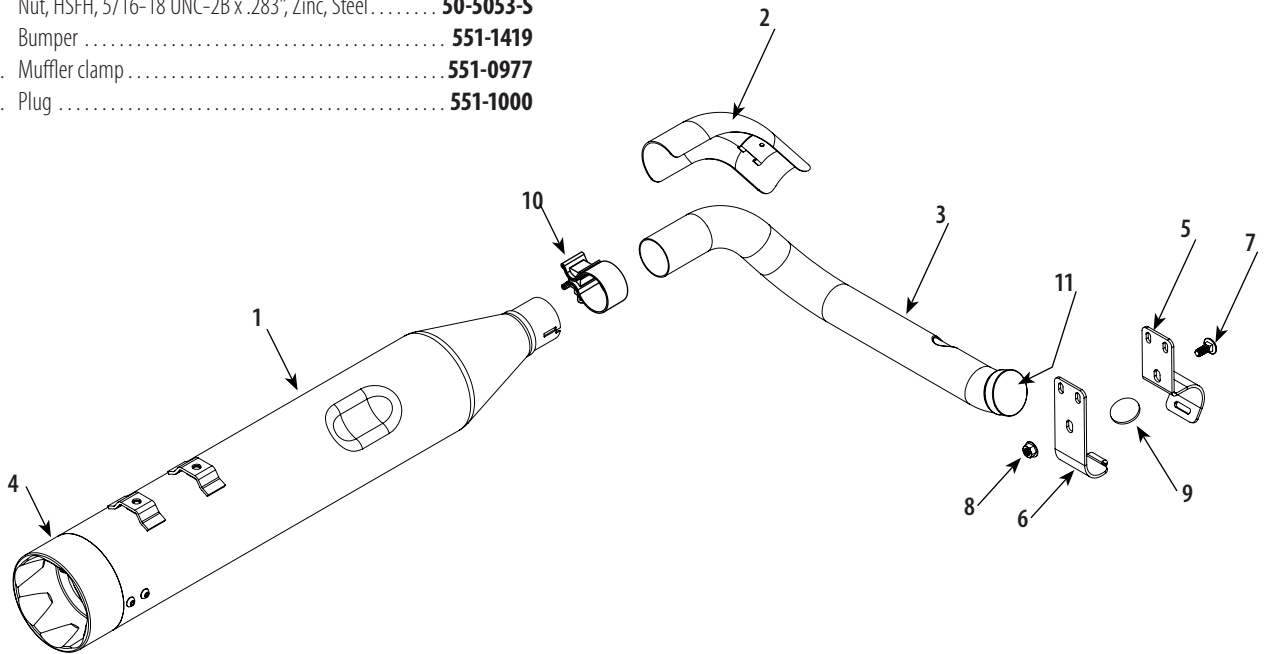
Appendix

± ⚠ WARNING: Cancer and Reproductive Harm



# SHADOW PIPE REPLACEMENT PARTS FOR 2009–2020 MODELS

- 1. Muffler shell  
 Chrome ..... **551-0992**  
 Black..... **551-0993**
- 2. Heat Shield  
 Chrome ..... **551-0115**  
 Black..... **551-0116**
- 3. Crossover ..... **551-0080**
- 4. End Cap ..... **551-0994**
- Hardware Kit, Includes #5–9 ..... **551-1005**
- 5. Female clamp half ..... **551-0568**
- 6. Male clamp half ..... **551-0567**
- 7. Bolt, Carriage, 5/16-18 x 3/4" ..... **500-0555**
- 8. Nut, HSFH, 5/16-18 UNC-2B x .283", Zinc, Steel ..... **50-5053-S**
- 9. Bumper ..... **551-1419**
- 10. Muffler clamp ..... **551-0977**
- 11. Plug ..... **551-1000**



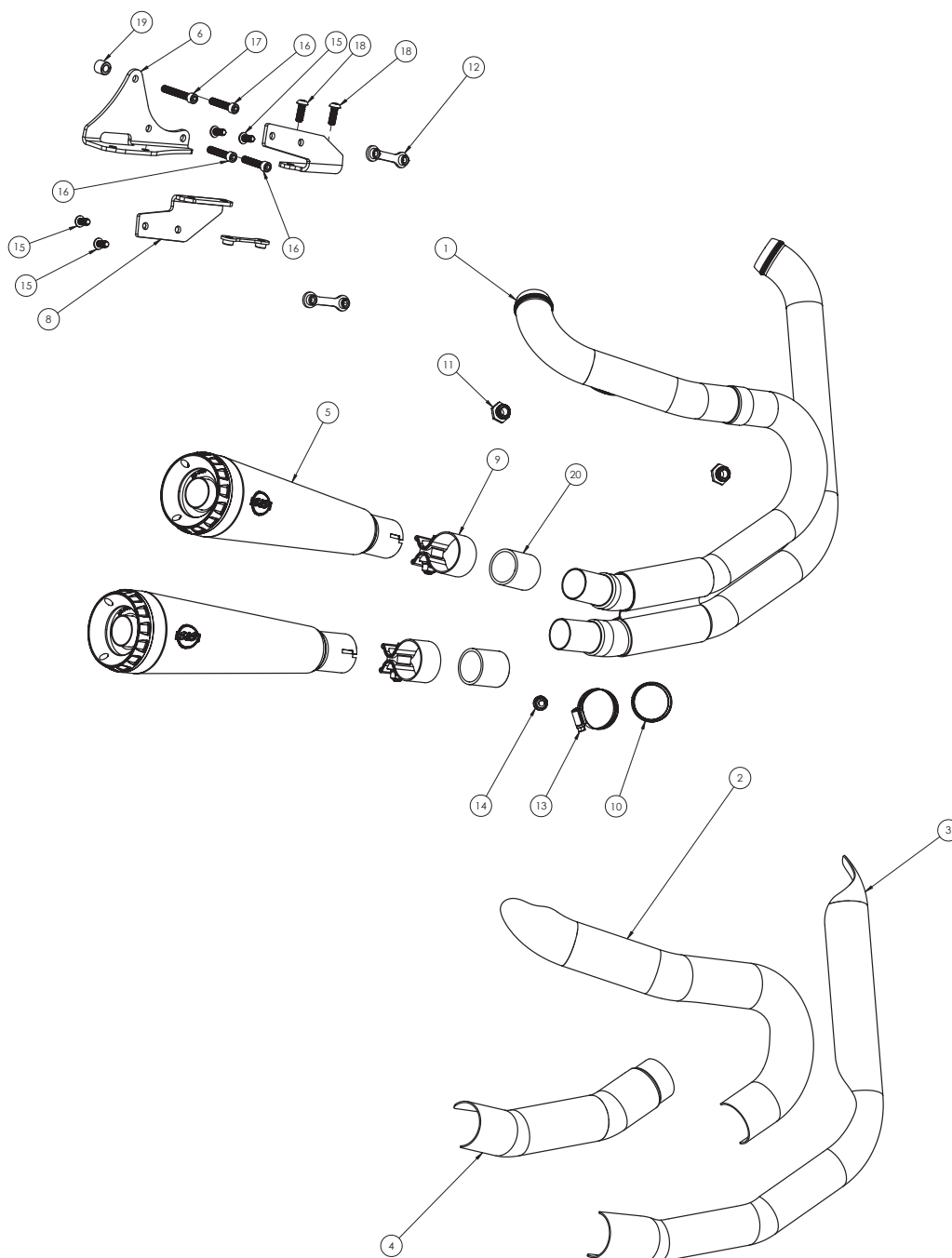
## FOR 1995–2008 MODELS:

See page 256



# GRAND NATIONAL® 2:2 EXHAUST REPLACEMENT PARTS

- |   |                 |   |                  |
|---|-----------------|---|------------------|
| 1. Pipe, Header, 2 Into 2, Weldment, 2006-'17 Dyna® . . . . .                                     | <b>551-0496</b> | 9. Clamp, Muffler, Band Style, 1.75" Diameter,<br>3/8-16 X 1.57" Bolt . . . . .           | <b>551-0569</b>  |
| 2. Shield, Rear, Upper, 2 Into 2, Outside Process, Black,<br>2006-'17 Dyna® . . . . .             | <b>551-0506</b> | 10. Gasket, Exhaust, Tapered, Stainless Steel, 1984-up bt, 1986-up xl65324-83B, 65324-83A | <b>106-5029</b>  |
| 3. Shield, Front, 2 Into 2, Outside Process, Black,<br>2006-'17 Dyna® . . . . .                   | <b>551-0500</b> | 11. Adapter, Oxygen Sensor, 12mm To 18mm, Stainless Steel                                 | <b>550-0375</b>  |
| 4. Shield, Rear, Lower, 2 Into 2, Outside Process, Black,<br>2006-'17 Dyna® . . . . .             | <b>551-0512</b> | 12. Plate, Nut, 5/16-18 X 2", Zinc Clear . . . . .  | <b>551-0469</b>  |
| 5. Muffler, Assembly, Grand National, 2 Into 2, Cone Body,<br>Black . . . . .                     | <b>551-0474</b> | 13. Clamp, Hose, Worm Drive, SAE #20 . . . . .  | <b>551-0527</b>  |
| 6. Bracket, Mounting, 2 Into 2, Black, 2006-'17 Dyna® . . . . .                                   | <b>551-0482</b> | 14. Nut, hsfh, 5/16-24 Unf-2B X .283", Zinc, Steel 75993 . . . . .                        | <b>50-5025-S</b> |
| 7. Bracket, Top, Mounting, Muffler, 2 Into 2, Powdercoated, Black,<br>2006-'17 Dyna® . . . . .    | <b>551-0571</b> | 15. Screw, bhc, 5/16-18 X 5/8", Zinc Plated . . . . .                                     | <b>500-0763</b>  |
| 8. Bracket, Bottom, Mounting, Muffler, 2 Into 2, Powdercoated, Black,<br>2006-'17 Dyna® . . . . . | <b>551-0572</b> | 16. Screw, shcs, 5/16-18 X 1-1/2", Zinc Plated . . . . .                                  | <b>106-4401</b>  |
|   |                 | 17. Screw, shcs, 5/16-18 X 2", Zinc Plated . . . . .                                      | <b>500-0781</b>  |
|   |                 | 18. Screw, bhc, 5/16-18 X 7/8", Zinc Plated . . . . .                                     | <b>500-0801</b>  |
|   |                 | 19. Spacer, Powdercoated, .625"X.332"X.55", Black . . . . .                               | <b>551-0570</b>  |
|   |                 | 20. Gasket, Muffler, 3.25", 2018 M8 Softail® . . . . .                                    | <b>551-0360</b>  |



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

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Appendix



# POWER TUNE® DUAL HEADER REPLACEMENTS

## POWER TUNE® DUAL HEADERS

Fitment	Finish	Part #
1995-'08† big twins	Chrome ±	<b>550-0003A**</b>
	Black	<b>550-0142A**</b>
2009-'16 non-catalyst equipped touring and 2009-'18 Tri Glide†† models	Chrome ±	<b>550-0004B***</b>
	Black	<b>550-0143B***</b>

†Has 18mm sensor fittings in the stock locations for 2007-'08 bikes. If not equipped with oxygen sensors, the ports can be used for tuning. Plugs are included if ports are not used.

††Requires the Trike Adaptor Kit part # 550-0799. See page 73

\*\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on EPA pollution controlled vehicles originally equipped with catalyst.

\*Qualified manufacturer declared emissions replacement part on FL touring models listed below.

California Models: FL Touring Fuel Injected MY 1995-2003, and 2007; CVO FL Touring MY 2000-2003.

49 State Models: FL Touring Carbureted MY 1995-2005; FL Touring Fuel Injected MY 1995-2005 and 2007-2008; CVO FL Touring MY 2000-2005

\*\*\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with a catalyst exhaust

\*Qualified Manufacturer Declared Emissions Compliant Part for 2009 Harley-Davidson 49-State Non-CVO FL Touring Models Only

± WARNING: Cancer and Reproductive Harm

# POWER TUNE® DUAL HEADER REPLACEMENT PARTS

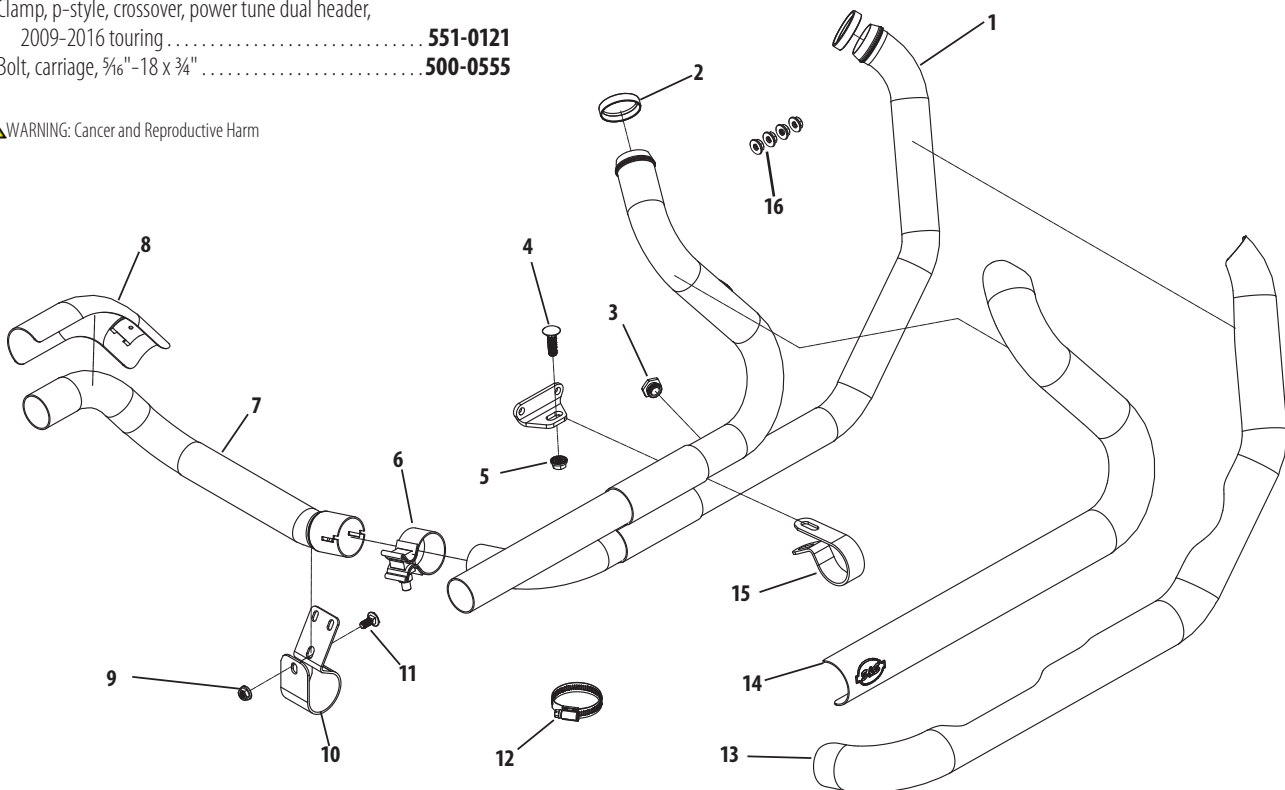
- |   |                  |   |                  |
|---|------------------|---|------------------|
| 1. Pipe, header, power tune dual, weldment, 2009-2016 touring . . . . .                                     | <b>551-0084</b>  | 12. Clamp, hose (8 Req) . . . . .                                       | <b>551-0527</b>  |
| 2. Gasket, exhaust, tapered, stainless steel, 1984-up bt, 1986-up xl (2 Req) 65324-83B, 65324-83A . . . . . | <b>106-5029</b>  | 13. Shield, front, power tune dual, Chrome, 2009-2016 touring . . . . . | <b>551-0097±</b> |
| 3. Adapter, oxygen sensor, 12mm to 18mm, stainless steel (2 Req) . . . . .                                  | <b>550-0375</b>  | Black, 2009-2016 touring . . . . .                                      | <b>551-0098</b>  |
| 4. Bolt, carriage, 3/8"-16 x 1-3/4" . . . . .   | <b>500-0553</b>  | 14. Shield, rear, power tune dual, Chrome, 2009-2016 touring . . . . .  | <b>551-0103</b>  |
| 5. Nut, flanged, serrated, 3/8"-16 . . . . .  | <b>500-0554</b>  | Black, 2009-2016 touring . . . . .                                      | <b>551-0104</b>  |
| 6. Clamp, muffler, band style . . . . .   | <b>551-0569</b>  | 15. Clamp, p-style, power tune dual, side, 1995-2016 touring . . . . .  | <b>551-0119</b>  |
| 7. Tube, crossover, power tune dual, formed, 2009-2016 touring . . . . .                                    | <b>551-0080</b>  | 16. Nut, HSFH, 5/16-24 . . . . .  | <b>50-5025-S</b> |
| 8. Shield, left, power tune dual, Chrome, 2009-2016 touring . . . . .                                       | <b>551-0115±</b> |   |                  |
| Black, 2009-2016 touring . . . . .  | <b>551-0116</b>  |   |                  |
| 9. Nut, HSFH, 5/16-18 UNC-2b x .283", Zinc, steel . . . . .   | <b>50-5053-S</b> |   |                  |
| 10. Clamp, p-style, crossover, power tune dual header, 2009-2016 touring . . . . .                          | <b>551-0121</b>  |   |                  |
| 11. Bolt, carriage, 5/16"-18 x 3/4" . . . . .   | <b>500-0555</b>  |   |                  |

### Not Shown

Hardware kit, power tune dual, header, 2009-2016 touring

Includes items 2-6, 9-12, 15, and 16 . . . . . **551-0155**

± WARNING: Cancer and Reproductive Harm





# 1999–2006 BIG TWINS

## **Performance Kits**

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## **Replacement Parts.....226**



# SIDEWINDER® 2:1 EXHAUST FOR 1995-'16 TOURING MODELS

- 2:1 styling for high-performance baggers
- Increased power and torque
- Available in show chrome or ceramic black finish
- Machined aluminum end cap
- Includes adapters that allow use of wide band or stock O2 sensors
- Stainless steel header construction
- Removable dB reducer included
- Made in the USA!



## SIDEWINDER® 2:1 EXHAUST SYSTEM FOR 1995-'09 FL MODELS — 1995-'03, 2007 FL MODELS — CA EMISSIONS LEGAL††

Finish	Part #
Chrome with Black Highlighted Machined end cap	550-0776
Black with Black Highlighted Machined end cap	550-0777

††DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on EPA pollution controlled vehicles originally equipped with catalyst.

\*Qualified manufacturer declared emissions replacement part on FL touring models listed below.

California Models:

Fuel Injected Non-CVO FL Touring Model Years: 1995-2003 and 2007

CVO FL Touring Model Years: 2000-2003

49 State Models:

Fuel Injected Non-CVO FL Touring Model Years: 1995-2005 and 2007-2009

CVO FL Touring Model Years: 2000-2005

⚠️WARNING: Cancer and Reproductive Harm

See next page for Left Side Shadow Pipe

**NOTE:**

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.



REPLACEMENT PARTS: SEE PAGE 255



# SHADOW PIPE

## FOR 1995–2020 TOURING MODELS WITH S&S SIDEWINDER® 2:1 EXHAUST

### FEATURES AND BENEFITS

- Available in show chrome and ceramic black finish
- Shadow muffler fills left side cutout in extended bags when running Sidewinder 2:1
- Matching end cap for left side is a mirror image of right side Sidewinder 2:1 Cap (not available on any of our slip-on or El Dorado products)
- 4.5" design
- All hardware included
- Made in USA!



### 1995–2008 TOURING MODELS EQUIPPED WITH S&S® SIDEWINDER® 2:1 EXHAUST

Chrome	<b>550-0828</b>
Black	<b>550-0830</b>

If you have...			...you'll need
BIKE	FINISH	SIDEWINDER PART #	SHADOW PIPE PART #
1995–2008 touring model	Chrome	550-0776	550-0828
		550-0771B	
	Black	550-0777	550-0830
		550-0772A	



**REPLACEMENT PARTS: SEE PAGE 256**

Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88"

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
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# SLASH CUT SLIP-ON MUFFLERS FOR DYNA® MODELS

## FITMENT

- 1995–2009 Dyna® models with staggered exhaust

## FEATURES AND BENEFITS

- Up to 16% more horsepower and 10% more torque (*when used with Stealth Air Cleaner Kit*)
- Wake up your bike without breaking your budget
- Classic slash cut styling
- Show chrome or ceramic black finish
- SAE J2825 sound level compliant
- 50-state legal
- Removable dB reducer
- Made in USA!



Removable dB reducer



### SLASH CUT MUFFLERS FOR 1995–2009 DYNA® MODELS WITH STAGGERED EXHAUST


Finish	Part #
Chrome	550-0718

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified Manufacturer Declared Emissions Replacement Part on the Dyna Models Listed Below.

California Models: MY 2006–2007, Except CVO models

49 State Models: MY 1995–2009, Except CVO models

 WARNING: Cancer and Reproductive Harm

# GRAND NATIONAL® SLIP-ON MUFFLERS FOR DYNA® MODELS

## FITMENT

- 1995–2009 Dyna® models with staggered exhaust

## FEATURES AND BENEFITS

- Up to 17% more horsepower and 9% more torque (when used with Stealth Air Cleaner Kit)
- Race inspired Grand National end caps
- Show chrome or ceramic black finish
- Deep performance rumble
- SAE J2825 sound level compliant
- 50-state legal
- Removable dB reducer
- Made in USA!



Removable dB reducer



## GRAND NATIONAL® MUFFLERS FOR 1995–2009 DYNA® MODELS WITH STAGGERED EXHAUST

Finish	Part #
Chrome	550-0719
Black	550-0721

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified Manufacturer Declared Emissions Replacement Part on the Dyna Models Listed Below.

California Models: MY 2006–2007, Except CVO models

49 State Models: MY 1995–2009, Except CVO models

WARNING: Cancer and Reproductive Harm

REPLACEMENT PARTS: SEE PAGE 254

Milwaukee-Eight®

2007–2017 Twin Cam  
96°/103°/110°

1999–2006  
Twin Cam 88°

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
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# SLASH CUT 4" SLIP-ON MUFFLERS

## FITMENT

- 1995–2016 Harley-Davidson® touring models with non-catalyst mufflers

## FEATURES AND BENEFITS

- Available in show chrome or ceramic black finish
- Show quality chrome or ceramic black finish
- Economical price
- High flow baffle
- Aggressive sound & excellent HP
- Excellent clearance on trike models
- SAE J2825 sound level compliant
- Removable dB reducer
- Made in USA!



Removable dB reducer

## SLASH CUT 4" TOURING MUFFLERS FOR 1995–2016 BIG TWINS

Finish	Part #
Chrome	550-0691
Black	550-0692

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified manufacturer declared emissions replacement part on the FL touring models listed below.

California FL Touring Models:

Fuel Injected MY 1995–2003, 2007, and 2009–2016

CVO MY 2000–2003, and 2009–2016

49 State FL touring Models:

Carbureted MY 1995–2005

Fuel Injected MY 1995–2005, 2007–2016

CVO MY 2000–2005, and 2009–2016

⚠ WARNING: Cancer and Reproductive Harm

**REPLACEMENT PARTS: SEE PAGE 253**



# GRAND NATIONAL® 4" SLIP-ON MUFFLERS

## FITMENT

- 1995–2016 Harley-Davidson® touring models with non-catalyst mufflers

## FEATURES AND BENEFITS

- Available in show chrome or ceramic black finish
- Show quality chrome or ceramic black finish
- Economical price
- High flow baffle
- Aggressive sound & excellent HP
- Excellent clearance on trike models
- SAE J2825 sound level compliant
- Removable dB reducer
- Made in USA!



Milwa

2014–2019  
Street Rod™



Removable dB reducer



## GRAND NATIONAL® 4" MUFFLERS FOR 1995–2016 BIG TWINS

Finish	Part #
Chrome	550-0689
Black	550-0690

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. Not legal for sale or use on EPA pollution controlled motorcycles originally equipped with mufflers containing catalyst.

\*Qualified manufacturer declared emissions replacement part on the FL touring models listed below.

California FL Touring Models: Fuel Injected MY 1995–2003, 2007, and 2009–2016

CVO MY 2000–2003, and 2009–2016

49 State FL touring Models:

Carbureted MY 1995–2005

Fuel Injected MY 1995–2005, 2007–2016

CVO MY 2000–2005, and 2009–2016



WARNING: Cancer and Reproductive Harm

# Grand National

REPLACEMENT PARTS: SEE PAGE 253

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# Mk45 TOURING MUFFLERS

Mk45 4.5" Touring Mufflers are the result of decades of riding, racing and tuning. Combining both a stainless steel baffle and fiberglass packing, they create a deep rumble and improved horsepower and torque, all while adding a unique look with styled aluminum end caps.

## FITMENT

- 1995–2016 touring models

## FEATURES AND BENEFITS

- 7 horsepower gain\*
- Bold 4.5" design — with stainless steel baffle and RaceTEX cartridge packing
- Available in show quality chrome or ceramic black finish
- Choose from S&S® Thruster or Tracer end cap designs in chrome or black
- SAE J2825 sound level compliant
- 50-state legal
- Removable dB reducer
- Made in USA!

\*Tested with S&S Power Tune® Dual Header and Stealth Air Cleaner Kit



Removable dB reducer

### MK45 4.5" TOURING MUFFLERS W/END CAPS

Muffler Body Finish	end cap Finish & Style	Part #
Chrome	Chrome Thruster	550-0620
	Black Highlight Machined Thruster	550-0619
	Chrome Tracer	550-0624
	Black Highlight Machined Tracer	550-0623
Ceramic black	Chrome Thruster	550-0622
	Black Highlight Machined Thruster	550-0621
	Chrome Tracer	550-0626
	Black Highlight Machined Tracer	550-0625

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLES. NOT LEGAL FOR SALE OR USE ON EPA POLLUTION CONTROLLED MOTORCYCLES ORIGINALLY EQUIPPED WITH MUFFLERS CONTAINING CATALYST.

\*QUALIFIED MANUFACTURER DECLARED EMISSIONS REPLACEMENT PART ON THE FL TOURING MODELS LISTED BELOW.

CALIFORNIA FL TOURING MODELS:

FUEL INJECTED MY 1995-2003, 2007, AND 2009-2016

CVO MY 2000-2003, AND 2009-2016

49 STATE FL TOURING MODELS:

CARBURETED MY 1995-2005

FUEL INJECTED MY 1995-2005, 2007-2016

CVO MY 2000-2005, AND 2009-2016

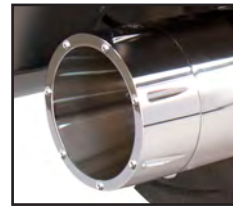
WARNING: Cancer and Reproductive Harm



550-0620±



550-0619±



550-0624±



550-0623±



550-0622±



550-0621



550-0626±



550-0625

## NOTE:

Not recommended for Tri Glide® or other three wheel models including conversion due to ground clearance.

**REPLACEMENT PARTS: SEE PAGE 252**

# POWER TUNE® DUAL HEADERS

## FITMENT

- Non-catalyst equipped Harley-Davidson® touring models†
- 1995–'08 touring big twins

## FEATURES AND BENEFITS

- Adds 8 horsepower over stock header pipes
- Independent dual look with hidden crossover
- Exclusive design moves the rear cylinder header away from the passenger to reduce radiated heat
- Full chrome or ceramic black heat shielding with 220° coverage
- Updated styling to give the bike a modern look
- Oxygen sensor bungs\*
- Spherical inlet design for improved sealing and exhaust gasket durability
- Hardware included to mount crossover pipe
- Exhaust port gaskets included
- Made in the U.S.A.

**REPLACEMENT PARTS: SEE PAGE 257**



550-0003A



550-0142A

## POWER TUNE® DUAL HEADERS

Fitment	Finish	Part #
1995–'08* big twins	Chrome	550-0003A
	Black	550-0142A

\*Has 18mm sensor fittings in the stock locations for 2007–'08 bikes. If not equipped with oxygen sensors, the ports can be used for tuning. Plugs are included if ports are not used.

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on EPA pollution controlled vehicles originally equipped with catalyst.

\*Qualified manufacturer declared emissions replacement part on FL touring models listed below.

California Models:

FL Touring Fuel Injected MY 1995–2003, and 2007

CVO FL Touring MY 2000–2003

49 State Models:

FL Touring Carbureted MY 1995–2005

FL Touring Fuel Injected MY 1995–2005 and 2007–2008

CVO FL Touring MY 2000–2005

**⚠️ WARNING: Cancer and Reproductive Harm**

## SPECIAL NOTES

It may be necessary to re-jet the carburetor or recalibrate the fuel injection system for best performance when a change is made in the exhaust system. Dyno results are from tests performed at the S&S® Research and Development facility in Viola, Wisconsin.

Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88"

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
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# AIR STINGER STEALTH AIR CLEANER KITS



The Air Stinger takes the existing high flow Stealth air cleaner and replaces the air smoothing stinger with a similarly shaped filter element. More filter surface equals a 55% gain over a factory filter.

Also available with the classic Mini Teardrop cover in black or chrome or as a replacement cover plate to update your existing Stealth system. The Air Stinger filter element is washable just like the Stealth filters and designed to last for years.

<b>FITMENT</b>	<b>TEARDROP FINISH</b>	<b>PART #</b>
2001-'17 big twin <i>except Throttle by Wire</i>	Gloss Black	<b>170-0722</b>
2001-'17 big twin <i>except Throttle by Wire</i>	Chrome	<b>170-0721</b>
<b>FITMENT</b>	<b>WITH S&amp;S RING</b>	<b>PART #</b>
2001-'17 big twin <i>except Throttle by Wire</i>	Brushed Ring	<b>170-0716</b>
<b>AIR STINGER FILTER ONLY</b>		<b>170-0723</b>

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE

\*Qualified Manufacturer Declared 49-State Federal Emissions Compliant Part



**REPLACEMENT PARTS: SEE PAGE 239**



# STEALTH AIR CLEANER KITS

**AIR STINGER KITS**  
SEE PAGE 170



**FITMENT**

- 1999–2006 big twins

**FEATURES AND BENEFITS**

- Air directional stinger cone in the filter
- Use with any of several S&S designed covers. See page 173
- High flow (1" taller) filter kit available

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
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**STEALTH TRIBUTE COVER AIR CLEANER KITS**

Kit includes Stealth Air Cleaner 170-0300B which is exempt from emissions tampering regulations under CARB EO# D-355-30

Fitment	Finish	Part #
2001–'17 big twin (except Throttle by Wire)	Chrome	170-0596±
	Gloss Black	170-0599

± WARNING: Cancer and Reproductive Harm



**STEALTH TEARDROP AIR CLEANER KITS**

KIT INCLUDES STEALTH AIR CLEANER 170-0300B WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Fitment	Fuel System	Finish	Part #
2001–'17 big twin (except 2017 touring models & Throttle by Wire)	Stock EFI, Delphi® EFI	Chrome	170-0528±
		Gloss Black	170-0529

± WARNING: Cancer and Reproductive Harm



**CARBON FIBER TEARDROP KIT**

KIT INCLUDES STEALTH AIR CLEANER 170-0300B WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Fitment	Part #
2001–'17 bt (except Throttle by Wire)	170-0499

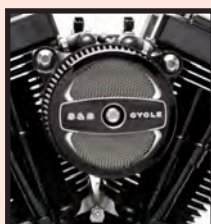


**MINI TEARDROP AIR CLEANER KITS**

KIT INCLUDES STEALTH AIR CLEANER 170-0300B WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Fitment	Fuel System	Finish	Part #
2001–'17 big twin (except 2017 touring models & Throttle By Wire)	Stock EFI, Delphi® EFI	Chrome	170-0441±
		Gloss Black	170-0442

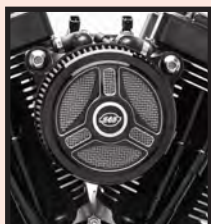
± WARNING: Cancer and Reproductive Harm



**AIR 1 COVER AIR CLEANER KIT**

KIT INCLUDES STEALTH AIR CLEANER 170-0300B WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Part #
2001–'17 big twin (except 2017 touring models & Throttle By Wire)	Stock EFI Delphi®	170-0478



**TRI-SPOKE COVER AIR CLEANER KIT**

KIT INCLUDES STEALTH AIR CLEANER 170-0300B WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Part #
2001–'17 big twin (except 2017 touring models & Throttle By Wire)	Stock EFI Delphi®	170-0476



# CON'T STEALTH AIR CLEANER KITS



## TORKER COVER AIR CLEANER KIT

KIT INCLUDES STEALTH AIR CLEANER 170-0300B WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Part #
2001-'17 big twin (except 2017 touring models & Throttle By Wire) Includes Stealth AC Kit 170-0300B	Stock EFI Delphi®	170-0477



## AIRSTREAM COVER CLEANER KIT

KIT INCLUDES STEALTH AIR CLEANER 170-0300B WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Finish	Part #
2001-'17 big twin (except 2017 touring models & Throttle By Wire) Includes Stealth AC Kit 170-0300B	Stock EFI Delphi®	Chrome	170-0479±
		Gloss Black	170-0480

± ⚠️ WARNING: Cancer and Reproductive Harm



## STEALTH AIR CLEANER KITS\*—NO COVER

KIT INCLUDES STEALTH AIR CLEANER 170-0300B WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Part #
2001-'17 big twin (except 2017 touring models, Throttle By Wire, & CVO® Models) Choose an S&S Cover (See page 173)	Stock EFI Delphi®	170-0300B

## NOTES

Fuel injection tuning is not required with this product but is highly recommended for best results.

REPLACEMENT PARTS: SEE PAGE 240



## AIRSTREAM COVER IN CHROME PLUS STEALTH AIR CLEANER KIT

Application	Fuel System	Part #
1999-'06 big twins (except '99 Softail® carb & Throttle by Wire)	Stock CV/EFI Delphi®	170-0056
1999-'06 big twins	S&S Super E & G Carbs	170-0063

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⚠️ WARNING: Cancer and Reproductive Harm

## STEALTH AIR CLEANER KITS\* — NO COVER

Application	Fuel System	Part #
1999-'06 big twins (except '99 Softail® carb & Throttle by Wire)	Stock CV/EFI Delphi®	170-0060
1999-'06 big twins	S&S Super E & G Carbs	170-0058

\*These kits do not contain covers—Choose an S&S Cover (See page 173)

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# STEALTH AIR CLEANER KITS FOR S&S ENGINES

## STEALTH AIR CLEANER KITS FOR S&S ENGINES

Fitment	Fuel System	Part #
2003–'17 HD® Models (except '17 touring models)	S&S 66mm Throttle Hog	<b>170-0165</b>
2003–'17 HD® Models (except '17 touring models)	S&S 58mm Throttle Hog	<b>170-0164</b>
1995–1999 S&S Super Stock Engines	S&S Single Bore VFI 52mm Throttle Bodies	<b>170-0287</b>
1995–1999 EFI big twins	S&S Single Bore VFI 58mm Throttle Bodies	<b>170-0283</b>
1999–2017 EFI big twins	S&S Single Bore VFI 58mm Throttle Bodies	<b>170-0284</b>
T124 1999–'06 bt (except '06 Dyna®) (Engines produced after 2013)	S&S E or G Carburetor	<b>170-0058</b>
T124 1999–'06 bt (except '06 Dyna®) (Engines produced after 2013)	Stock CV/EFI Delphi®	<b>170-0060</b>
T111 1999–'06 bt (except '06 Dyna®) (Engines produced after 2013)	S&S E or G Carburetor	<b>170-0058</b>
T111 1999–'06 bt (except '06 Dyna®) (Engines produced after 2013)	Stock CV/EFI Delphi®	<b>170-0060</b>

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## STEALTH AIR CLEANER KIT COVERS (ONLY)



Tribute in Gloss Black



Carbon Fiber



Mini in Chrome



Mini in Gloss Black



Tri-Spoke



Torker



Air 1



Airstream in Chrome



Airstream in Gloss Black



111



124



143

### STEALTH COVERS

Tribute		Teardrop		Teardrop—Slasher		Carbon Fiber	Mini	
Chrome	Gloss Black	Chrome	Gloss Black	Chrome	Gloss Black	Black	Chrome	Gloss Black
<b>170-0592</b>	<b>170-0593</b>	<b>170-0530</b>	<b>170-0531</b>	<b>170-0532</b>	<b>170-0533</b>	<b>170-0501</b>	<b>170-0367</b>	<b>170-0366</b>

Tri-Spoke	Torker	Air 1	Airstream		Displacement		
Gloss Black w/Highlights	Gloss Black w/Highlights	Gloss Black w/Highlights	Chrome	Gloss Black	111	124	143
<b>170-0210</b>	<b>170-0206</b>	<b>170-0214</b>	<b>170-0118</b>	<b>170-0396</b>	<b>170-0319</b>	<b>170-0321</b>	<b>170-0323</b>

⚠ WARNING: Cancer and Reproductive Harm



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
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# SINGLE BORE TUNED INDUCTION SYSTEM

## FITMENT

- 1999–'06 stock CV carbureted big twins (except 1999–'06 FXDWG/FXD35)
- 2001–'06 Delphi® EFI big twins

## FEATURES AND BENEFITS

- Bolt-on performance—over twice the filtering area over stock intake system
- Increases horsepower and torque across the rpm range using air column inertia and carefully timed gas dynamic pressure waves
- Smooth intake tract of carefully selected tuned lengths increases performance
- High flow washable and reusable cotton media provides performance, protection, and economy



### SINGLE BORE TUNED INDUCTION SYSTEM KITS

EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS



Fitment	Fuel System	Finish	Part #
2001–'17 big twin (except 2017 touring models, Throttle By Wire, & CVO® Models)	Stock EFI Delphi®	Chrome/Red Filters	<b>170-0308B</b>

WARNING: Cancer and Reproductive Harm

### SINGLE BORE TUNED INDUCTION SYSTEM KITS

Fitment	Fuel Delivery	Finish	Part #
1999–'06 big twin models (except 1999–'06 FXDWG/FXD35) and S&S engines w/stock head breathing	S&S Super E/G	Chrome Runner and Red Filters	<b>170-0086</b>
1984–'06 Carbureted big twin models	Stock	Chrome Runner and Red Filters	<b>170-0087</b>
4 1/8" bore S&S T-Series (S&S bolt pattern w/vaccum breathing)	S&S Super E/G	Chrome Runner and Red Filters	<b>170-0084</b>

Use the Configure to Order (CTO) part number to order different finish and filter color.

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WARNING: Cancer and Reproductive Harm

## NOTES

Single bore tuned induction will not fit on motorcycles equipped with fairing lower glove boxes.

Fuel injection tuning is not required with this product but is highly recommended for best results.

**REPLACEMENT PARTS: SEE PAGE 241**



# CLASSIC TEARDROP AIR CLEANER KIT

## FEATURES AND BENEFITS

- Efficient and free flowing intake that can add two to five horsepower
- Uniquely designed backplate has air horn style radiused entryway to reduce turbulence
- Dimpled cover with directional air cone on inside creates smooth path for air
- Great addition to performance exhaust or cams

## KIT CONTENTS

- Filter
- Backing plate and cover
- All mounting hardware
- Instructions



Milwaukee-Eight®  
2007–2017 Twin Cam  
96°/103°/110°

1999–2006  
Twin Cam 88°

1986–2019  
Sportster® & Buell®


2014–2019 Street® &  
Street Rod®

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### CLASSIC TEARDROP AIR CLEANER KITS FOR STOCK EFI

EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS

Fitment	Fuel System	Finish	Stock EFI, With 96 & 103 Engines
2001–'17 big twin (except 2017 touring models, Throttle By Wire, & CVO® Models)	Stock EFI Delphi®	Chrome	<b>170-0303B±</b>
		Gloss Black	<b>170-0304B</b>

± ⚠️ WARNING: Cancer and Reproductive Harm

## CLASSIC TEARDROP AIR CLEANER KITS

Fitment	Finish	Stock Carb	S&S® Super E/G
S&S 4 1/8" Bore engines with vaccum breathing	Slasher/Chrome	–	<b>17-0416±</b>
1993–'06 carbureted big twins (& 2007–'10 Softail® CVO® Models)	Chrome	<b>17-0450±</b>	<b>17-0403±</b>
	Gloss Black	<b>170-0181A</b>	–

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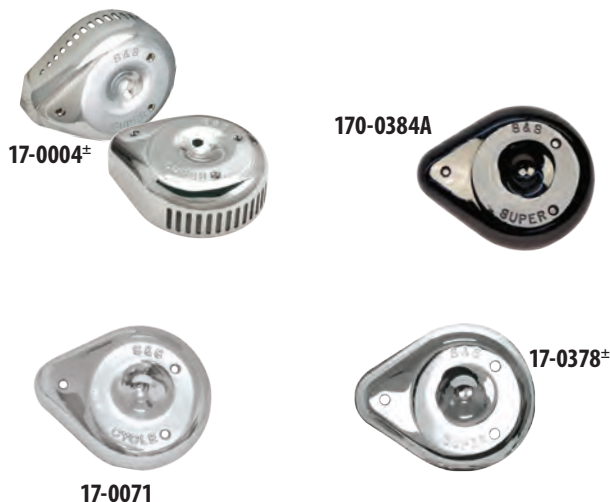
± ⚠️ WARNING: Cancer and Reproductive Harm

## CLASSIC TEARDROP AIR CLEANER KITS FOR S&S SINGLE BORE EFI THROTTLE BODIES±

Fitment	Style/Finish	52mm
Stock Harley-Davidson® heads or S&S Heads for stock or 4" bore head breathing	Teardrop/Chrome	<b>17-0498</b>

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± ⚠️ WARNING: Cancer and Reproductive Harm



## CLASSIC TEARDROP AIR CLEANER COVERS

Style	Finish	Part #
Classic Teardrop	Chrome	<b>17-0378±</b>
	Gloss Black	<b>170-0384A</b>
Slasher Teardrop	Chrome	<b>17-0004±</b>
	Gloss Black	<b>170-0419</b>
Nostalgic Teardrop	Polished	<b>17-0071</b>

± ⚠️ WARNING: Cancer and Reproductive Harm

REPLACEMENT PARTS STARTING ON PAGE SEE  
PAGE 242



# PRE-FILTERS

## FITMENT

- S&S® Stealth Air Filters

## FEATURES AND BENEFITS

- Water resistant
- Prevents large debris from prematurely clogging filter
- Washable Nylon
- Promotes longer filter life
- Reduces the risk of water entering air intake system

## PRE-FILTERS

Application	Part #
Standard	<b>170-0193</b>
1" Tall	<b>170-0197</b>



# HIGH FLOW AIR FILTER KITS

## FITMENT

- S&S air cleaners for Super E & G carbs and S&S EFI throttle bodies

## FEATURES AND BENEFITS

- Low restriction filter element comes pre-oiled for true plug and play installation
- 1" wider filtration area provides up to 37% more airflow over standard S&S filters
- Resulting band of exposed filter material imparts a high performance look

## KIT CONTENTS

- Wide filter
- Filter spacers

## HIGH FLOW AIR FILTERS

Description	Fitment	Part #
High Flow Air Filter Kit <i>(includes spacers)</i>	Classic Teardrop	<b>17-0045</b>
	Stealth	<b>170-0127 *</b>
1" Taller Filter Only	Classic Teardrop	<b>106-4724</b>
	Stealth	<b>170-0154</b>
Spacer	Classic Teardrop & Stealth, 1" Taller	<b>50-5009-S</b>

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170-0127



17-0045

# STANDARD REPLACEMENT FILTERS

## STANDARD REPLACEMENT AIR FILTERS

Description	Fitment	Part #
Standard Filter Only	Classic Teardrop	<b>106-4722</b>
	Stealth	<b>170-0126</b>

# PERFORMANCE KIT OVERVIEW FOR HARLEY-DAVIDSON® TWIN CAM 88®



## 4" BORE BOLT-IN SIDEWINDER® BIG BORE KIT

S&S 4" big bore cylinder and piston kits boost 88 and 96/103" Harley-Davidson® big twin engines to 100" and 110" respectively. These bolt-in kits don't require any machining, rebalancing or engine removal, and include just about everything you'll need to complete the installation. The biggest cylinder bore that can be installed in a stock crankcase without machining! See page 178



## 124" HOT SET UP KIT

Move to the ultimate in performance packages! Increase your bore to 4½" and stroke to 4½" to realize a massive 124 cubic inches of pure performance. This kit includes flywheel assembly, cylinders and pistons, S&S Easy Start 640 lift chain drive camshafts, hydraulic lifters, pushrods, covers, valve springs and rocker arms. Comes complete with all gaskets and instructions. CTO options give you even more choices. Crankcases require boring to accept the larger cylinder spigots. See page 179



## 106" STROKER KIT

Stroke it! This performance package gives big displacement. The kit's flywheel assembly increases your stroke from 4¾" to a hefty 4½" and bumps your 88" to 106". Oversize your stock cylinder bore from 3¾" to 3⅞". No crankcase machining needed. Maintains stock engine height for easy installation. See page 180



## 98 & 97" BIG BORE KIT

Up the displacement of your Twin Cam® 88 to a whopping 98". This bolt-on cylinder kit adds significant displacement without any machining required to your engine. Stroke stays the same at 4.00". Bore increases from 3.750 to 3.937". This kit contains pistons, cylinders and all related parts, gaskets and instructions. See page 181



## 95" HOT SET UP KIT

Looking to go further? Consider the Hot Set Up Kits. These kits will put some stride in your glide. Pushrods, covers and hydraulic lifters are all included. Select from a variety of cylinder heads to achieve the compression ratio you desire or keep your stock heads. Kits include S&S Easy Start 570 or 585 chain drive camshafts. See page 182

PERFORMANCE KIT SPECIFICATIONS FOR HARLEY-DAVIDSON® TWIN CAM 88®													
KIT DESCRIPTION	BORE	STROKE	COMPRESSION RATIO								CAMSHAFT	HORSEPOWER	TORQUE
			Stock Heads	79cc	89cc	91cc	CNC Heads						
							83cc	85cc	87cc	90cc		(CNC Heads)	
124" Hot Set Up Kit	4 ½"	4 ½"	10.9:1	11.4:1*	11.1	10.8:1	11.6:1	11.4:1	11.2:1	10.9:1	640	127	130
106" Stroker Kit	3 ⅞"	4 ½"	10.1:1	10.7:1	9.7:1	9.6:1	10.3:1	10.1:1	9.9:1	9.7:1	585	109	115
98" Big Bore Kit	3.937"	4"	10.4:1	11.1:1	9.9:1	9.7:1	10.6:1	10.3:1	10.1:1	9.8:1	–		
97" Big Bore Kit	3.927"	4"	9.7:1	10.3:1	9.3:1	9.1:1	9.8:1	9.6:1	9.5:1	9.2:1	–	103	107
95" Hot Set Up Kit	3 ⅞"	4"	9.7:1	10.3:1	9.4:1	9.2:1	9.9:1	9.7:1	9.5:1	9.3:1	570	103	107

\*Not Recommended

PERFORMANCE KIT CONTENTS, OPTIONS AND REQUIREMENTS FOR HARLEY-DAVIDSON® TWIN CAM 88®													
KIT DESCRIPTION	PACKAGE CONTENTS										MACHINING REQUIRED	CTO OPTIONS	REJETTING OR CALIBRATION CHANGE
	Flywheels	Cylinders	Pistons w/rings	Rocker Arms	Pushrods w/covers	Lifters	Cams	Valve Springs	Heads w/springs	Gaskets			
124" Hot Set Up Kit	●	●	●	●	●	●	●		●	●	3 4	5 6 7	●
106" Stroker Kit	●		1								2		●
98" Big Bore Kit		●	●							●			●
97" Big Bore Kit		●	●							●			●
95" Hot Set Up Kit		0	0 1		●	●	●		0	●	2	5 6 7	●

0 = Optional  
 1 = Order separately  
 2 = Bore & hone cylinders  
 3 = Crankcase machining for center stud  
 4 = Crankcase machining for cylinder spigots  
 5 = Camshaft selection  
 6 = CNC heads  
 7 = Combustion chamber size selection  
 8 = Cylinder & piston set available

\*The CTO option column lists only the major items offered. Virtually any option can be selected from our product offerings through the Configure To Order (CTO) program.

Milwaukee-Eight®  
 2007–2017 Twin Cam  
 96"/103"/110"  
 1999–2006  
 Twin Cam 88®  
 1986–2019  
 Sportster® & Buell®  
 2014–2019 Street® &  
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# 4" BORE BOLT-IN SIDEWINDER® BIG BORE KITS



S&S 4" big bore cylinder and piston kits boost 88" Harley-Davidson® big twin engines to 100". These bolt-in kits don't require any machining, rebalancing or engine removal, and include just about everything you'll need to complete the installation. The biggest cylinder bore that can be installed in a stock crankcase without machining!

## FEATURES & BENEFITS

- Bolts in. No machining, balancing, or splitting the crankcases
- 88 engines end up at 100"
- Complete kits include cylinders, pistons, gaskets, and instructions
- Choose from wrinkle black or silver powder coat cylinders – matches stock finish

## FITMENT

- 1999–2006 big twins

### SPECS FOR S&S 4" BORE BOLT-IN CYLINDER & PISTON KITS

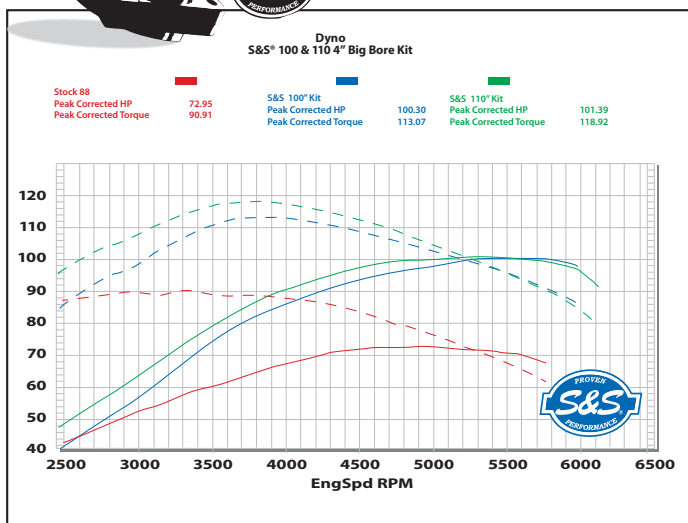
Year	Stroke	Bore	Cylinder Length	Piston Type	Dome Volume	Compression Ratio		
						83cc CNC Heads	85cc Stock Heads	89cc S&S Heads
1999–2006	4"	4.00"	4.937"	Forged	8.75 pop up	10.8:1	10.5:1	10.1:1



### 4" BORE BOLT-IN SIDEWINDER® BIG BORE KITS

Displacement	Year	Stroke	Finish	Part #	MSRP
100	1999–2006 big twin	4"	Silver	<b>910-0642</b>	\$1,237.95
	1999–2006 big twin	4"	Wrinkle Black	<b>910-0646</b>	\$1,237.95

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These dyno results from our DynoJet® 250i chassis dynamometer clearly show the performance increases available with the S&S bolt-in 4 inch bore kits. The lowest (red) set of curves represents a stock 88 cid engine in a 2004 Harley-Davidson® FLHR Road King®. The next curves above the stock baseline (blue) shows the performance of the S&S 100" bolt-in big bore kit. The highest set of curves show the results from an S&S 110" big bore kit installed in a 96 cid engine. The engines with the S&S 100" and 110" kits were also set up with S&S S85 cams, Power Tune® headers, Mk45 muffler, and the stock EFI throttle body with an S&S Stealth air cleaner.

## NOTES

When using on a carbureted model, an adjustable performance ignition **must** be used.

Not for use with S&S 79cc Cylinder Heads.

Not for use on trike models.



# 124" HOT SET UP KIT®

## FITMENT

- All big twin models

## FEATURES AND BENEFITS

- Huge displacement increase means huge power increase
- Stock crankcases, cylinder heads, oil pump, and cam cover can be reused, saving hundreds of dollars
- Original engine serial numbers are retained
- Gear drive S&S 640 Easy Start Cams included!
- Wrinkle black powder coat finish heads match factory finish, giving bike a "sleeper" advantage
- .045" MLS (multi-layered steel) head gaskets
- Adds .096" to engine height
- Kits with S&S heads use stock length manifolds (S&S size 410)

## OPTIONS

- Silver finish available through CTO



Milwaukee-Eight®

2007–2017 Twin Cam 96"/103"/110"

1999–2006 Twin Cam 88"

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod™

Indian® Models

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### S&S® 124" HOT SET UP KIT® SPECIFICATIONS

Year	Stroke	Displacement	Bore	Cylinder Length	PISTON TYPE/COMPRESSION RATIO		
					91cc S&S Heads	89cc S&S Heads	85cc Stock Heads
1999–'06	4 5/8"	124"	4 1/8"	5.013"	Flat top forged/10.8:1	Flat top forged/11:1	Forged, 10.9cc dish/10.4:1

*Cylinder w/piston kits include fitted pistons and cylinders that require no boring or honing.*



### 124" HOT SET UP KITS® FOR HARLEY-DAVIDSON® TWIN CAM 88®/88B™ ENGINES

(Kits include S&S® Super Stock® 91cc Cylinder Heads) (10.8:1 Compression)

Model or Engine Type	Finish	Part #
1999–2006 Twin Cam 88 touring and Dyna® (except 2006 Dyna® models)*	Wrinkle Black	900-0564
2000–2006 Twin Cam 88B Softail® w/Balancer	Wrinkle Black	900-0565

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\*For 2006 Dyna® 124" Kits, see Section 2.

## NOTES

Requires recalibration.

S&S Easy Start Cams save you money—no need to buy compression releases or S&S rocker covers. Note when using 1999–'06 chain drive cams: For lifts over .510", S&S strongly recommends that the stock chain drive be upgraded to the S&S gear drive or S&S TC3 oil pump and cam plate. This kit updates the problematic spring loaded chain tensioners to more reliable hydraulic tensioners and also upgrades the oil pump.

**Main Bearing Note:** S&S flywheel assemblies included in a 124" S&S Hot Set Up Kit® for 1999–'15 big twin engines are designed for use with Timken® sprocket shaft bearings. They will fit directly in stock 1999–'02 Harley-Davidson® crankcases and in all S&S crankcases for 1999–'15 big twin engines, with no modifications. However, stock 2003 and later engines use a roller type bearing for the sprocket shaft, and will require modification.

Due to the amount of power these engines produce with an S&S Hot Set Up Kit, S&S strongly recommends retrofitting 2003–'15 model crankcases to accept a Timken sprocket shaft bearing. A Timken conversion sleeve such as Screamin' Eagle® #34822-08 or Jim's® #956 may be used. A charging system spacer for 1999–'02 model year is also required.

This kit will require that the case be bored to accept the larger cylinders.

If you choose not to convert your crankcases to a Timken sprocket shaft bearing, S&S flywheels may be used in 2003 and later engines with the installation of the Harley-Davidson® bearing kit #24004-03B. This bearing kit adapts the S&S sprocket shaft to be compatible with stock roller type bearings. Verify that the bearing kit contains the 24604-00D or 24607-07 sprocket shaft bearing. Do not use a 24604-00, 24604-00A, 24604-00B or 24604-00C bearing. Please be advised that if this type of bearing is used, sprocket shaft bearing failure WILL NOT be covered under warranty.

Kits with S&S heads are machined special to compensate for engine height change to accommodate a stock length manifold. When using a kit with stock cylinder heads, S&S recommends using the appropriate length manifold. For a 124" with stock OEM cylinder heads, the standard manifold length is 417.

Center case bolt between cylinders will use waisted bolt kit 900-0807



# 106" STROKER KITS FOR USE WITH STOCK CYLINDERS

## FITMENT

- 1999–'06 big twins

## FEATURES AND BENEFITS

- Installation of the kit does not require any special machining, other than fitting the pistons
- S&S stroker pistons, which are sold separately, are available in all standard oversizes
- Stock 88" cylinders can be bored from 3¾" bore to 3⅞" to accommodate the S&S pistons, or a pre-fit S&S cylinder and piston kit may be installed
- Engines with factory 95" kits require piston fitting only—stock or S&S cylinder heads can be used
- Fuel injected engines will require recalibration of the fuel injection system—the S&S VFI modules and closed loop sensor kits are highly recommended
- Piston jets (p/n 31-2026) included
- Maintains stock engine height



320-0460

### S&S® 106" STOCK BORE STROKER KITS FOR HARLEY-DAVIDSON® TWIN CAM 88® AND TWIN CAM 88B™ ENGINES SPECIFICATION CHART

Displacement	Stroke	Bore	Compression Ratio*	Piston Type	Piston Deck Height	Cylinder Length
106"	4½"	3⅞"	10.1:1	Flat Top	1.020"	4.937"

\*Compression ratio with stock heads. Compression ratio with S&S 89cc heads 9.8:1. For additional compression use .030" MLS head gaskets- part #900-0605  
Includes S&S piston oiling jets

### 106" STROKER KITS FOR HARLEY-DAVIDSON® TWIN CAM 88® ENGINES WITH STOCK CYLINDERS

Engine Displacement	Stroke	Sprocket Bearing Race	1999–2006 HD® big twin models (except 2006 Dyna® models)		2006 HD® Dyna® models	
			TC 88®	TC 88B™		
S&S 106 Stroker	4 ½"	Yes	320-0459	320-0453	320-0449	
		No	320-0460	320-0454	320-0450	
Special Order	Specify	Specify	329-0002	329-0002	329-0002	

Note - All S&S flywheel assemblies for 1999-06 engines have connecting rods with 7.667" length and full width straight wristpin ends.

**! THESE KITS REQUIRE SPECIAL S&S PISTONS:** Order the required 92-1210 Series pistons. See chart.

### 92-1210 SERIES PISTONS FOR S&S® 106" STROKER KIT

### CYLINDER & PISTON KIT\*

Standard	MSRP	+ .005"	+ .010"	+ .020"	Silver	Black
92-1210	\$472.95	92-1214	92-1211	92-1212	910-0199	910-0203

Piston Deck Height 1.020" \*Cylinder w/piston kits include fitted pistons and cylinders that require no boring or honing.



# 98" BIG BORE KITS

## FITMENT

- 1999–2006 big twin

## FEATURES AND BENEFITS

- 3.937" bore
- Cylinder and piston kits make going to larger bore sizes easy—*no machining required*
- Stock engine height is maintained
- 11 fin cylinder design closely resembles OEM shape and come prefinished—*ready to install*
- Increased fin area for better heat dissipation
- Centrifugal cast, gray iron liner features 40,000 psi tensile strength—*superior wear and performance*
- CP Pistons are recognized as industry leaders, and provide exceptional wear, performance and noise characteristics

## KIT CONTENTS

- S&S cylinders with gaskets
- Piston set with rings, wristpins and wristpin clips

S&S® 98" BIG BORE KIT SPECIFICATION CHART							
Displacement	Stroke	Bore	Cylinder Length	Forged Piston Type	COMPRESSION RATIO (with provided .045" head gasket)		
					83cc CNC Ported Stock Heads	85cc Stock Heads	89cc S&S Heads
98"	4"	3.937"	4.937"	10cc Dome	10.6:1	10.4:1	9.9:1

*Cylinder w/piston kits include pistons and cylinders that require no boring or honing.*



910-0481

### 98" BIG BORE KITS

Cylinder Finish	Part #	MSRP
Silver powder coat	910-0482	\$1,182.95
Wrinkle Black powder coat	910-0481	\$1,182.95

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## NOTES

Not for use with S&S 79cc Cylinder Heads

# 97" BIG BORE KITS

## FITMENT

- 1999–'06 big twins

## FEATURES AND BENEFITS

- No case machining required
- Bolt-on 9 to 10 cubic inches—cylinders do not require crankcase machining to install
- Piston weight for 97" kits are the same as stock, requiring no flywheel rebalancing
- Forged coated pistons are compatible with stock or S&S Super Stock® 79cc & 89cc heads
- Valve pocket recessed in S&S pistons are enlarged for oversize valves and higher lift cams
- Maintains stock engine height
- 11 fins and full fin pattern on cam side closely resembles OEM shape

## OPTIONS

- Oversize pistons available — See page 193

## KIT CONTENTS

- S&S cylinders with gaskets
- Piston set with rings

S&S® 97" BIG BORE KITS SPECIFICATION CHART								
Displacement	Stroke	Bore	Cylinder Length	Forged Piston Type	Compression Ratio			
					79cc S&S Heads	83cc CNC Ported Stock Heads	85cc Stock Heads	89cc S&S Heads
97"	4"	3.927"	4.937"	3cc Dome	10.3:1	9.9:1	9.7:1	9.3:1

*Cylinder w/piston kits include fitted pistons and cylinders that require no boring or honing.*



910-0205

### 97" BIG BORE KITS

Cylinder Finish	Part #
Silver powder coat	910-0201
Wrinkle Black powder coat	910-0205

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## NOTES

S&S® highly recommends installing a performance cam for easier starting and better engine performance. S&S high flow cylinder heads will provide further horsepower gains. For an additional .2 bump in compression, order .030" thick head gaskets #900-0605 (2 pack). Remember to check your clearances. These kits require tuning.

Milwaukee-Eight®

2007–2017 Twin Cam 96"/103"/110"

1999–2006 Twin Cam 88"

1986–2019 Sportster® & Buell®

2014–2019 Street® & Street Rod®

Indian® Models

Tools & Shop Supplies

Warranty & Company Policy

Appendix



# 95" HOT SET UP KITS

## FITMENT

- 1999–'06 big twins

## FEATURES AND BENEFITS

- .045" MLS head gaskets
- Up to a 40 HP increase
- True bolt on kit, no machining required
- Maintains stock engine height
- Kits include S&S 585 gear drive cams
- S&S pushrods are made of high strength chrome-moly tubing
- Valve pocket recesses in S&S pistons are enlarged for oversize valves and high lift cams



S&S® 95" HOT SET UP KIT® SPECIFICATIONS					
Displacement	Stock Stroke	Bore	Cylinder Length	Forged Piston Type	Compression Ratio 79cc S&S Heads
95"	4"	37/8"	4.937"	5.3cc pop-up dome	10.4:1

*Cylinder w/piston kits include fitted pistons and cylinders that require no boring or honing.*

## 95" SUPER STOCK® HOT SET UP KITS® FOR 88" ENGINES

Includes S&S 37/8" bore cylinders and pistons, 585 gear drive cams and 79cc heads

Application	Wrinkle Black
1999–'06 (except 2006 Dyna® Models*)	106-0214

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**⚠️ WARNING: Cancer and Reproductive Harm**

## REPLACEMENT PARTS FOR PISTONS: SEE PAGE 193

## NOTES

Fuel injected engines will require recalibration of the fuel injection system. The S&S VFI modules and closed loop sensor kits are highly recommended.

Stock cylinders must either be bored to 37/8" or replaced with S&S 37/8" bore cylinders.

S&S recommends either CNC porting stock cylinder heads or purchasing Super Stock® heads to maximize the effect of higher lift cams. Stock cylinder heads will produce significantly less power. S&S can CNC port your heads, for an economical increase in power.

For 95" kits ordered without cylinders, pistons must be measured and cylinders bored/honed accordingly. Recommended piston fitment:

Close: 0.0020" – 0.0025"    Loose: 0.0032" – 0.0045"

92-1200 series pistons have a 1.270" deck height.

.030" MLS head gaskets optional: Part #900-0606

S&S Easy Start Cams can save you money—no need to buy compression releases or S&S rocker covers. Note when using 1999–'06 chain drive cams: For lifts over .510", S&S strongly recommends that the stock chain drive be upgraded to the S&S gear drive or S&S TC3 oil pump and cam plate. This kit updates the problematic spring loaded chain tensioners to more reliable hydraulic tensioners and also upgrades the oil pump.



# ENGINE OVERVIEW

S&S performance engines for 1999–'06 Harley-Davidson® big twins are available as long blocks which do not include fuel or ignition systems. Emissions compliant engines are complete. Engines are protected by super tough powder coat finishes. Available in silver and chrome, wrinkle black and chrome, Stone Grey and chrome, and Black Edition color schemes. Stone Grey matches the engine finish on CVO models. Black Edition is a wrinkle black engine with gloss black covers.

## **BLACK EDITION**

S&S Cycle's new Black Edition engines combine classic wrinkle black with high gloss black powder coated covers for a subtle contrast and elegant look while still producing the power and reliability you've come to expect.

## **T143 (143 cid)**

Now available for 1999–2006 chassis, the T143 long block engine is the largest (143 cid) S&S engine that will fit in a stock chassis. Available in silver, wrinkle black, or black edition finishes. Long blocks come without fuel or ignition systems (available separately) and an oil line installation kit is required. The 160 rear wheel horsepower also requires performance drive train upgrades. Not for the faint of heart!

## **T124 (124 cid)**

The S&S T124 long block engine has been our daily rider hot rod since 2004. The combination of day in and day out reliability and brutal power make it the perfect choice. Available in silver, wrinkle black, or black edition finishes. Long blocks come without fuel or ignition systems (available separately) and an oil line installation kit is required. Our Super G carburetors and Throttle Hog EFI throttle bodies are highly recommended.

## **T111 (111 cid)**

The S&S T111 long block is the ultimate sport touring engine. The shorter stroke provides a perfect combination of performance, engine life, quiet operation, and reduced vibration. Available in silver, wrinkle black, or black edition finishes. Long blocks come without fuel or ignition systems (available separately) and an oil line installation kit is required. Our Super E and G carburetors and Throttle Hog EFI throttle bodies are available to complete the package.



# T143 ENGINES

## The **BIGGEST, BADDEST, BOLT-IN** for a Stock Frame.

The S&ST143 Long Block engine is the largest S&S engine that will fit in a stock Harley-Davidson® chassis. At double the HP of a stock motor the power of the T143 requires technical expertise for the installation and tuning along with an experienced rider. This is an ultra performance/race engine. Longevity, engine noise, vibration and throttle sensitivity have all been compromised to reach this level of performance while fitting in a stock chassis and as such is not suitable for every situation. It is the purchaser's responsibility to consider the suitability for their application. Engine noise and damage from abuse is not covered under warranty.

### FITMENT

- 1999–2006 Harley-Davidson® touring models
- 1999–2005 Harley-Davidson® Dyna® models

### FEATURES AND BENEFITS

- Fits in stock chassis – no cutting or frame modifications
- S&S B3 cylinder heads CNC machined with 2 bolt exhaust flanges
- 3 Piece Flywheels
- TC3 Oil Pump and Cam Plate
- S&S 635 Easy Start Gear Drive Cams and S&S 1.725:1 rocker arms for .674" total lift.
- S&S Precision Tappets

### SUGGESTED ACCESSORIES

- Stealth Air Cleaner Kit 143 Cover

See page 173



110-0120



110-0119



170-0288

### T143 ENGINES WITHOUT FUEL AND IGNITION SYSTEMS

Chassis Style	Displacement	Bore	Stroke	Cam	Piston Type	Compression Ratio	Warranty Period	Finish	Part #
1999–'06 touring models 1999–'05 Dyna® models	143"	4.425"	4.625"	635	S&S Forged Flat Top	10.47:1	1 year	Wrinkle Black	310-0737A
Silver								310-0738A	
Black Edition								310-0833A	
1999–2006 bt (except '06 Dyna®)									

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### OIL LINE INSTALLATION KIT. See chart.

#### INSTALLATION PARTS

Description	Part #	
Oil Line Kit	Touring models	31-0425
	Dyna® models	31-0424
Super G Carburetor Kit w/air cleaner*	110-0120	
Super D Carburetor Kit w/air cleaner*	110-0119	

\*Air cleaner assemblies included with these carburetor kits do not include air cleaner covers. Stock 1999-later air cleaner or any S&S Stealth air cleaner covers may be used.

Description	Part #	
70mm Induction Kit	2002–'05 Dyna® & touring models	170-0289
	2006–'07 touring models	170-0288

### NOTES

T-Series engines are not compatible with HD® Softail® models.

No fuel system available for 1999–2001 Magnetti Morelli EFI models



# T-SERIES LONG BLOCK ENGINES FOR 1999-'06 HARLEY-DAVIDSON® BIG TWINS EXCEPT 2006 DYNA® MODELS

## FEATURES

- No fuel system or ignition systems included — Use what you already have
- Special Head machining — Fits stock length intake manifolds (S&S manifold size 410)
- Stock style breathing system — stock breather spacing and function is compatible with stock and most performance air cleaners
- Same quality components and performance as our complete T-Series engines
  - New S&S cylinders that look more like stock
  - Super Stock heads and crankcases
  - TC3 Oil Pump and Cam Plate
  - S&S Easy Start cams

## OPTIONS

- T111 — 111 cubic inches, perfect sport-touring engine
- T124 — 124 cubic inches, hot-rod performance, 640 Easy Start Cams
- T124LC — 124 cubic inches with slightly lower compression, 585 Easy Start Cams

## SUGGESTED ACCESSORIES

- Stealth Air Cleaner Kits. See

page 171

## NOTES

T-Series engines are not compatible with HD® Softail® models.

No fuel system available for 1999–2001 Magnetti Morelli EFI models

### T124 ENGINES WITHOUT FUEL AND IGNITION SYSTEMS

Chassis Style	Displacement	Bore	Stroke	Cam	Piston Type	Compression Ratio	Warranty Period	Finish	Part #
1999–'06 bt (except '06 Dyna®)	124"	4 1/8"	4 5/8"	640	S&S Forged Flat Top	10.8:1	2 Years	Silver	<b>310-0281A</b>
								Wrinkle Black	<b>310-0282A</b>
								Black Edition	<b>310-0831A</b>
	124"	4 1/8"	4 5/8"	585	S&S Forged Dished	10.2:1	2 Years	Silver	<b>310-0327A</b>
								Wrinkle Black	<b>310-0326A</b>
								Black Edition	<b>310-0832A</b>

### T111 ENGINES WITHOUT FUEL AND IGNITION SYSTEMS

Chassis Style	Displacement	Bore	Stroke	Cam	Piston Type	Compression Ratio	Warranty Period	Finish	Part #
1999–'06 bt, (except '06 Dyna®)	111"	4 1/8"	4 1/8"	585	S&S Forged	9.8:1	2 Years	Silver	<b>310-0279A</b>
								Wrinkle Black	<b>310-0770A</b>
								Black Edition	<b>310-0830A</b>

## ! OIL LINE INSTALLATION KIT. See chart.



### OIL LINE INSTALLATION KIT

Fitment	Part #
1999–'06 FLT Models	<b>31-0425</b>
1995–'05 Dyna® Models	<b>31-0424</b>

### COMPLETE ENGINE REBUILD GASKET KITS

S&S Engine Family	Year Group	Bore Size	Part #
T-Series	1999–'06	4 1/8"	<b>310-0335</b>

## NOTES ENGINE MANAGEMENT AND FUEL SYSTEMS

Cylinder heads on T-Series long block engines are 1999–'05 style. Owners of 2006 models will need to purchase a set of 1999–'05 style, offset intake flanges such as S&S #106-3516.

Cylinder heads on these engines are specially machined to compensate for the non-stock cylinder length. As a result, they are compatible with manifolds and throttle bodies with stock length intake runners. In addition, the breather vent bolt locations have been adjusted so they are in the stock location, so stock style air cleaner Backplates will bolt up to these engines.

2002–'06 EFI engines equipped with Delphi® fuel injection will require a performance tuner such as the Harley-Davidson® Race Tuner. The stock single bore throttle body can not supply adequate air for these large displacement engines. An S&S 58mm throttle body is highly recommended for maximum performance.

Carbureted engines will require a performance ignition module that allows adjustments to the advance curves. The stock ignition module is not adjustable, and use of the stock module will likely result in engine damage due to knock from incorrect ignition timing.

Performance carburetors are recommended to achieve maximum performance. S&S Super E carbs are ideal for T111 engines in touring applications, but a Super G will produce more top end horsepower. S&S Super G carbs are recommended for T111 engines in performance applications, and for T124 engines in all applications.

The Oil Line Installation Kits are not required for the updated S&S T-series engines. If the part number of the engine ends in "A," it DOES NOT need an installation kit.

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# CRANKCASES

## FITMENT

- 1999–'06 Harley-Davidson® Twin Cam 88° A Engines (except 2006 Dyna®)

## FEATURES AND BENEFITS

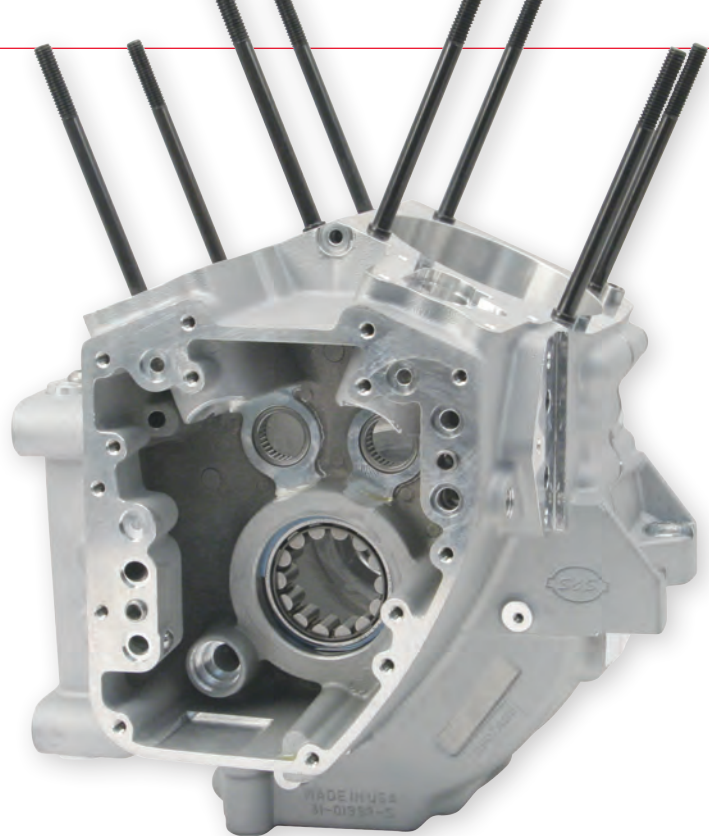
- Much stronger than stock crankcases in every aspect, extra large front motor mount for increased strength
- Large cam chest allows cam lift up to .675" without clearancing
- Timken® style sprocket shaft bearings withstand the most demanding applications
- Includes S&S crankcase breather reed valve to eliminate oil carry-over and oil scavenging problems
- Cleared for strokes up to 5"
- All passages between the crankcase and the cam support plate are o-ring sealed
- Includes pinion and Timken® bearing

## OPTIONS

- Available in stock bore, 4" bore, and 4½" bore versions

## KIT CONTENTS

- S&S crankcase
- S&S breather reed valve
- Bearings and hardware



## CRANKCASE FOR 1999–'06 BIG TWIN ENGINES (EXCEPT 2006 DYNA® MODELS)

Crankcase Bore Size	Silver	Wrinkle Black	Polished
Stock Bore (Stock Stud Pattern)	<b>106-4039A</b>	<b>31-0172A</b>	—
4½" Bore (Stock Stud Pattern)	<b>106-4057A</b>	<b>31-0181A</b>	—
4½" Bore (S&S Stud Pattern)	<b>106-4043A</b>	<b>31-0178A</b>	<b>31-0179A</b>
4.425" Bore (S&S® T143)	—	<b>310-0721A</b>	—

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31-0424



## OIL LINE INSTALLATION KIT

Fitment	Part #
1999–'06 FLT models	<b>31-0425</b>
1999–'05 Dyna® models	<b>31-0424</b>

**REPLACEMENT PARTS: SEE PAGE 226**

## NOTES

Oil line installation kit part #31-0424 is required for installation in 1999–'05 Dyna® models. This kit includes a special transmission top cover and oil lines.

Oil line installation kit part #31-0425 is required for installation in 2000–'06 FLT models. Stock transmission top cover may be used.

The oil line installation kits are not required for the updated S&S T-series engines. If the part number of the engine ends in "A," it does not need an installation kit.



# CRANKCASE BREATHER REED VALVES

## FITMENT

- Twin Cam 88<sup>®</sup>/96<sup>™</sup> (except "B" engines)
- S&S-T-Series engines

## FEATURES AND BENEFITS

- Improved oil scavenging and reduced oil carryover



31-2070

## CRANKCASE BREATHER REED VALVES

Oil Pump Fitment	Year Application	Part #
For Engines with Stock or S&S TC3 Oil Pump	1999–'02	31-2070
	2003–'10	310-0742
	S&S special application crankcases*	310-0742
For Engines with S&S gear oil pump	2003–'10 stock crankcases & 1999–'06 S&S crankcases	310-0742

\*Spring adaptor required to accommodate the extra .375" case width of S&S Special Application big bore crankcases.

## SPRING ADAPTER AND SPACER

Fitment	Part #
Spacer (for S&S SA crankcases)*	31-2103



\*Required to accommodate the extra .375" case width of S&S Special Application big bore crankcases.

**REPLACEMENT PARTS: SEE PAGE 252**

## NOTES

The crankcases breather valve for Twin Cam 88<sup>®</sup> engines was designed and developed for use with stock Harley-Davidson<sup>®</sup> or S&S gear oil pumps and tappets, and may not be compatible with some aftermarket components.  
 Not available for Twin Cam 88B<sup>™</sup> or Twin Cam 96B<sup>™</sup> engines with internal balancers.  
 Does not fit with Screamin' Eagle<sup>®</sup> oil pumps.

Milwaukee-Eight<sup>™</sup>

2007–2017 Twin Cam 96<sup>™</sup>/103<sup>™</sup>/110<sup>™</sup>

1999–2006 Twin Cam 88<sup>®</sup>

1986–2019 Sportster<sup>®</sup> & Buell<sup>®</sup>

2014–2019 Street<sup>®</sup> & Street Rod<sup>™</sup>

Indian<sup>®</sup> Models

Tools & Shop Supplies

Warranty & Company Policy

Appendix



# 3 PIECE FLYWHEEL ASSEMBLIES



## FITMENT

- 1999-'06 Harley-Davidson® big twins—Balanced and unbalanced models
- S&S T-Series Engine and Hot Set Up Kit® replacement flywheels

## FEATURES AND BENEFITS

- Heat-treated 4140 material is harder and 114% stronger than stock
- Harder material, no thrust washers required—*Where stock flywheels have thrust washers, S&S flywheels have steel gripping the crankpin*
- Larger 1.671" diameter crankpin—*increased contact area and tighter press fit for a stronger joint. No welding required!*
- Integral mainshafts —*eliminates two potential points of weakness*
- Consistent balance and precision machining—*Truer flywheels and less vibration*
- Reduced mainshaft deflection at high rpm—*less vibration, reduced piston and rod side thrusting, prevents oil pump damage, fully compatible with gear drive cams*
- Capable of higher rpm—*More available power!*



320-0460

## FLYWHEEL ASSEMBLIES

Engine Displacement	Stroke	Sprocket Bearing Race	1999–2006 HD® big twin models (except 2006 Dyna® models)			2006 HD® Dyna® models	
			Total Piston Weight	TC 88®	TC 88B™	Total Piston Weight	Part #
88, 95, 97, 100 w/ Stock or S&S® Pistons	4"	Yes*	1230	<b>320-0402</b>	<b>320-0396</b>	1230	<b>320-0392</b>
		No	1230	<b>320-0403</b>	<b>320-0397</b>	1230	<b>320-0393</b>
96, 103, CVO 103, 106 big bore, 110, 117 w/ Stock or S&S® Pistons	4 3/8"	Yes*	1035	<b>320-0360</b>	<b>320-0354</b>	1035	<b>320-0350</b>
		No	1035	<b>320-0361</b>	<b>320-0355</b>	1035	<b>320-0351</b>
S&S® 106 Stroker**	4 1/2"	No	1108	<b>320-0460</b>	<b>320-0454</b>	1108	<b>320-0450</b>
S&S® 111	4 1/8"	No	1035	<b>320-0417</b>	–	1035	<b>320-0407</b>
SE 120R (uses 7.575" length rods)†	4 5/8"	No	1035	<b>320-0525</b>	<b>320-0527</b>	1035	<b>320-0523</b>
S&S® 124	4 5/8"	No	1035	<b>320-0475</b>	<b>320-0469</b>	1035	<b>320-0464</b>
S&S® T143	4 5/8"	No	1290	<b>320-0552</b>	–	–	–
Special Order	Specify	Specify	Specify	<b>329-0002</b>	<b>329-0002</b>	Specify	<b>329-0002</b>

Note: All S&S flywheel assemblies for 1999–'06 engines have connecting rods with 7.667" length and full width straight wristpin ends.

\*Flywheel assemblies supplied with sprocket shaft bearing race installed are compatible with stock roller style sprocket shaft bearings. Assemblies with no race require a Timken® sprocket shaft bearing.

\*\*4 1/2" stroke flywheels for 2006 Dyna® include 7.667" long connecting rods.

## NOTES

† These flywheels are replacement flywheels for the SE 120R. When installing these flywheels in a Harley-Davidson® case, they need to run the HD piston oiling jets—not the S&S® piston oiling jets.

Engines with strokes over 4" may require S&S® piston oiling jets (p/n 31-2026) and piston to jet clearance notches in the piston skirt to avoid contact.

**Main Bearing Note:** Most S&S flywheel assemblies for 1999–'16 big twin engines are designed for use with Timken® sprocket shaft bearings. They will fit directly in stock 1999–'02 Harley-Davidson® crankcases and in all S&S crankcases for 1999–'15 big twin engines, with no modifications. However, stock 2003 and later engines use a roller type bearing for the sprocket shaft. S&S does offer flywheel assemblies that are compatible with late roller style stock sprocket shaft bearings, but they are not recommended for very large, high performance engines.

S&S strongly recommends retrofitting 2003–'16 model crankcases to accept a Timken sprocket shaft bearing. A Timken conversion sleeve such as Screamin' Eagle® #34822-08 or Jim's® #956 may be used. A charging system spacer for 1999–'02 model year is also required.

If you choose not to convert your crankcases to a Timken sprocket shaft bearing, S&S flywheels may be used in 2003 and later engines by either purchasing the stock compatible flywheels or by installing Harley-Davidson® bearing kit #24004-03B when using S&S flywheels designed for Timken bearings. This bearing kit adapts the S&S sprocket shaft so it is compatible with stock roller type bearings. Verify that the bearing kit contains the 24604-00D or 24607-07 sprocket shaft bearing. Do not use a 24604-00, 24604-00A, 24604-00B or 24604-00C bearing. Please be advised that if this type of bearing is used, sprocket shaft bearing failure WILL NOT be covered under warranty.

REPLACEMENT PARTS: SEE PAGE 228

TRYING TO IDENTIFY AN S&S® FLYWHEEL?  
SEE PAGE 358

# TC3 CAM PLATE

S&S cam support plates are just what the doctor ordered when repairing a damaged engine or installing new camshafts. CNC machined from forged aluminum for excellent strength and dimensional accuracy. S&S cam support plates are available to fit 1999–2006 and 2007–later Harley-Davidson® big twin engines. We don't want to encourage bad habits so plates for 1999–2006 are not compatible with stock spring-loaded chain tensioners, and require late style hydraulic tensioners and oil pump. We suggest the S&S TC3 oil pumps be installed with S&S TC3 Cam Plate.

## FITMENT

- 1999–'06 big twins *except 2006 Dyna® models\**

## FEATURES AND BENEFITS

- Precision CNC machined forged aluminum
- Adjustable oil pressure regulator — adjust without removing plate from engine
- Passage plugs are removable for service
- Rebuildable — bronze pinion shaft bushing in all models and bronze cam bushings in 2007–later style
- Made in the USA!

\*Not compatible with stock spring-loaded chain tensioners or stock 1999–2006 oil pumps.

A 2007–later style oil pump is required for all applications. 2007–later style hydraulic tensioners are required for chain drive cams.



## TC3 CAM PLATE

Fitment	Part #
1999–2006 bt ( <i>except 2006 Dyna® models</i> )	<b>310-0623</b>

# TC3 OIL PUMP

If motor oil is the lifeblood of an engine, then the oil pump is its heart. If your engine needs a transplant, the S&S TC3 Oil Pumps are a great solution for worn out or destroyed stock units. Common causes of stock pump failure are debris and excessive pinion shaft run out. The new S&S oil pumps are much less likely to be damaged by either. Oh, and by the way, the S&S TC3 Oil Pumps pump and scavenge way more oil than stock. While you've got that motor apart, it would be a good time to install a forged S&S TC3 Cam Plate.

## FITMENT

- 1999–'06 Harley-Davidson® big twin engines\*
- 2007–'16 Harley-Davidson big twin engines

## FEATURES AND BENEFITS

- Consistent pressure and reliable scavenging
- Separate scavenge sections for flywheel cavity and cam chest — *no interference*
- Screens and magnetic traps help protect the scavenge rotors from debris
- Special design allows S&S pumps to tolerate more pinion shaft run out without damage
- Made in the USA!

\*S&S oil pumps for 1999–'06 are not compatible with S&S cam support plates for 1999–'06 engines. All S&S cam support plates are machined for 2007–later style oil pumps.



## TC3 OIL PUMP

Fitment	Part #
1999–2006 bt ( <i>except 2006 Dyna® models</i> )	<b>310-0640</b>

# TC3 OIL PUMP & CAM PLATE KITS



## TC3 OIL PUMP AND CAM PLATE KITS

Fitment	Part #
1999–2006 bt ( <i>except 2006 Dyna® models</i> )	<b>310-0731</b>

**REPLACEMENT PARTS: SEE PAGE 230  
& SEE PAGE 231**



# DIE CAST GEARCOVER

## FITMENT

- 1999–'17 Twin Cam 88<sup>®</sup>, 96<sup>™</sup> and 103<sup>™</sup> (except '17 touring)



## DIE CAST GEARCOVER

Finish		Part #
Gloss Black	143"	<b>310-1084</b>
	124"	<b>310-1085</b>
	111"	<b>310-1086</b>
Chrome <sup>±</sup>	143"	<b>310-1087</b>
	124"	<b>310-1088</b>
	111"	<b>310-1089</b>

± WARNING: Cancer and Reproductive Harm

# BILLET OIL FILTER BRACKET

## FITMENT

- 1999–'06 big twin (except 2006 Dyna<sup>®</sup> models)

## BILLET OIL FILTER BRACKET

Finish	Part #
Polished 26261-99	<b>31-6510</b>
Chrome	<b>106-3884</b>



**31-6510**

± WARNING: Cancer and Reproductive Harm

# CYLINDERS WITH PISTONS KIT

- Cylinder w/piston kits include fitted pistons and cylinders, head gaskets, base, and exhaust gaskets
- Cylinder kits with pistons are honed to fit the pistons included.



## S&S<sup>®</sup> 4 1/8" BORE CYLINDERS WITH PISTONS SPECIFICATIONS

Displacement	Stroke	Cylinder Length	Forged Piston type	Compression Ratio			
				85cc Stock heads	89cc S&S heads	91cc S&S heads	SE 95cc heads
124"	4.625	5.013	Flat Top	11.4:1	11.0:1	10.8:1	10.5:1
124" Dish	4.625	5.013	10.9 cc dish	10.5:1	10.2:1	10.0:1	9.7:1
117"	4.375	4.888	Flat Top	10.9:1	10.5:1	10.3:1	10.0:1
117" Dish	4.375	4.888	10.9 cc dish	10.0:1	9.7:1	9.6:1	9.3:1
111"	4.125	4.763	Flat Top	10.3:1	9.9:1	9.8:1	9.4:1

## 4 1/8" BORE CYLINDERS WITH PISTONS FOR 124", 117", & 111" KIT

Displacement	Bolt Pattern	Silver		Wrinkle Black
124" Hot Set Up - Stock Heads	Stock	<b>910-0215</b>		<b>910-0223</b>
124" Hot Set Up - S&S 89cc/91cc Heads	Stock	<b>910-0214</b>		<b>910-0222</b>
124"	S&S	<b>910-0216</b>		<b>910-0226</b>
117"	S&S	<b>910-0217</b>		<b>910-0227</b>
111"	Stock	<b>910-0017</b>		<b>910-0025</b>
111"	S&S	<b>910-0218</b>		<b>910-0277</b>

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## CYLINDERS WITH PISTONS KIT CON'T

S&S® 4" BORE BOLT-IN SIDEWINDER® KITS SPECIFICATION CHART								
Displacement	Bore	Stroke	Cylinder Length	Piston Type	Dome Volume	Compression Ratio		
						83cc CNC Heads	85cc Stock Heads	89cc S&S Heads
100"	4.00"	4.00"	4.937"	Forged	8.75 pop up	10.8:1	10.5:1	10.1:1

## 4" BORE BOLT-IN SIDEWINDER® BIG BORE KITS\*

Displacement	Silver	Wrinkle Black
100	<b>910-0642</b>	<b>910-0646</b>

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## \*NOTES

When using on a carbureted model, an adjustable performance ignition **must** be used.

Not for use with S&S 79cc Cylinder Heads.

Not for use on trike models.

**REPLACEMENT PARTS FOR PISTONS: SEE PAGE 193**

S&S® 98" & 97" BIG BORE KIT SPECIFICATION CHART											
Displacement	Bore	Stroke	Cylinder Length	Forged Piston Type	Bolt Pattern	Compression Ratio (with provided .045" head gasket)					
						83cc Heads	79cc S&S Heads	85cc Heads	87cc Heads	89cc S&S Heads	90cc Heads
98"	3.937"	4.00"	4.937"	10cc Dome	Stock	10.5:1	n/a	10.3:1	10.1:1	n/a	9.8:1
97"*	3.927"	4.00"	4.937"	3cc Dome	Stock	n/a	9.7:1	10.3:1	n/a	9.4:1	n/a

\*For an additional .2 bump in compression, order .030" thick head gaskets #900-0605 (2 pack). Remember to check your clearances.

## BIG BORE KIT

Displacement	Bolt Pattern	Silver	Wrinkle Black
98" Big Bore Kits	Stock	<b>910-0482</b>	<b>910-0481</b>
97" Big Bore Kits	Stock	<b>910-0201</b>	<b>910-0205</b>

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S&S® 3 7/8" BORE CYLINDERS WITH PISTONS SPECIFICATION CHART							
Displacement	Stroke	Cylinder Length	Forged Piston Type	Bolt Pattern	COMPRESSION RATIO		
					85cc Stock Heads	79cc S&S Heads	89cc S&S Heads
106" Stroker	4 1/2"	4.937"	Forged	Stock	10.1:1	10.8:1	9.8:1
95"	4"	4.937"	Forged	Stock	9.7:1	10.3:1	9.9:1

## 3 7/8" BORE CYLINDERS WITH PISTONS FOR 106" &amp; 95" KIT

Displacement	Bolt Pattern	Silver	Wrinkle Black
106" Stroker	Stock	<b>910-0199</b>	<b>910-0203</b>
95"	Stock	<b>910-0200</b> 	<b>910-0204</b> 

**ALL OTHER BORES AND FINISHES ARE AVAILABLE THROUGH SPECIAL ORDER**

**91-7506\***

\*Special Order: Download the Special Order For

## NOTES

S&S® highly recommends installing a performance cam for easier starting and better engine performance.

S&S high flow cylinder heads will provide further horsepower gains.

These kits require tuning.

**REPLACEMENT PARTS FOR PISTONS: SEE PAGE 193**

# CYLINDERS

- Individual cylinders and cylinder sets without pistons are bored slightly under nominal size and are not honed.

## 4.425" BORE CYLINDERS WITHOUT PISTONS FOR T143

Displacement		Silver	Black
143"	Set	910-0568	910-0565

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## 4 1/8" BORE CYLINDERS

Displacement		Silver	Wrinkle Black	Polished
124" Hot Set Up	Set	910-0234	910-0255*	—
124"	Set	910-0237	910-0264	910-0249
117"	Set	910-0240	—	—
111"	Set	910-0243	910-0281	—

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## 3.937" BORE CYLINDERS

Displacement		Silver	Wrinkle Black
98"	Front or Rear	910-0478	910-0477

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## 3.927" BORE CYLINDERS

Displacement		Silver	Wrinkle Black
97"	Front or Rear	910-0210	910-0212



**ALL OTHER BORES AND FINISHES ARE AVAILABLE THROUGH SPECIAL ORDER 91-7506\***

\*Special Order: Download the Special Order Form

**CYLINDER REPLACEMENT PARTS: SEE PAGE 234**

# PISTON KITS

• Piston kits include set of pistons, rings, wristpins, and clips



**920-0046**  
Dish topped



**106-3491A**  
Flat topped

## 4.425" BORE FORGED PISTON KITS FOR T143

Displacement	Deck Height	Stroke	Standard	+ .020"
T143	1.167"	4 5/8"	<b>920-0106</b>	<b>920-0111</b>

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## 4 1/8" BORE FORGED PISTON KITS FOR HOT SET UP KITS®

Displacement	Deck Height	Stroke	Standard	+ .010"	+ .020"	+ .030"
124" & 117" Stock Heads 10cc Dished	1.050"	Up To 4 5/8"	<b>920-0046</b>	<b>920-0047</b>	<b>920-0050</b>	<b>920-0053</b>
124", 117" & 111" -Stock or S&S Heads Flat Top	1.050"	Up To 4 5/8"	<b>106-3491A</b>	<b>106-3872A</b>	<b>106-3964A</b>	<b>920-0094</b>

## 4" BORE FORGED PISTON KIT

Displacement	Deck Height	Dome Height	Stroke	Standard
100	1.270	8.75cc	4"	<b>920-0129</b>



**92-1210**  
106" Stroker



**92-1200**  
95"

## 3.937" BORE FORGED PISTON KIT

Displacement	Deck Height	Dome Height	Stroke	Standard
98"	1.270"	10cc	4"	<b>920-0101</b>

## 3.927" BORE FORGED PISTON KITS

Displacement	Deck Height	Dome Height	Stroke	Standard	+ .010"
97"	1.270"	3cc	4"	<b>106-3688</b>	<b>106-4414</b>

## 3 7/8" BORE FORGED PISTON KITS

Displacement	Deck Height	Stroke	Standard	+ .005"	+ .010"	+ .020"
106" Stroker	1.020"	4 1/2"	<b>92-1210</b>	<b>92-1214</b>	<b>92-1211</b>	<b>92-1212</b>
95"	1.270"	4"	<b>92-1200</b>	<b>92-1204</b>	<b>92-1201</b>	<b>92-1202</b>

**NOTE** S&S' 3 7/8" pistons for 95" kits and 4 1/8" pistons are machined to such close tolerances that it is not necessary to measure the piston. Additionally, the low friction coating on the piston skirt makes taking measurements very difficult. Therefore, hone cylinders to nominal diameter +/- 0.0005" for correct clearance.

S&S' 3.937" & 3.927" pistons are machined to such close tolerances that it is not necessary to measure the piston. Additionally, the low friction coating on the piston skirt of early production pistons with out micrometer window makes taking measurements very difficult. Therefore, hone cylinders to nominal diameter +/- 0.0001" for correct clearance. Current production pistons have micrometer windows in the coating on the piston skirts that allow accurate measurements to be taken. These pistons may be installed by honing cylinder to nominal diameter +/- 0.0001" or by measuring piston and honing cylinder to achieve .002"-.0025" close clearance for street applications or .0032"-.0045" loose clearance for immediate competition use.

# REPLACEMENT PARTS FOR PISTONS

## PISTON RINGS, CHROMOLY FACED

Bore	Standard	+ .005"	MSRP	+ .010"	+ .020"	+ .030"
4.425"	<b>940-0043</b>				<b>940-0044</b>	
4 1/8"	<b>940-0014</b>			<b>940-0012</b>	<b>940-0013</b>	<b>940-0017</b>
3.937"	<b>940-0032*</b>					
3.927"	<b>106-3709A</b>			<b>106-4422A</b>		
3 7/8" for 106" Stroker	<b>94-1295X</b>	<b>94-1299X</b>	\$57.95	<b>94-1296X</b>	<b>94-1297X</b>	
3 7/8" for 95" Kit	<b>94-1290X</b>	<b>94-1294X</b>	\$45.95	<b>94-1291X</b>	<b>94-1292X</b>	
4"	<b>940-0056†</b>					

\*Only includes one set of rings.

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## REPLACEMENT PISTON WRISTPINS

Description	Part #
Wristpin	
For 4.425" Pistons	<b>940-0037</b>
For 4 1/8" Pistons (92-1550 Series)	<b>94-9277</b>
For 4 1/8", 3 7/8", 3.927" Pistons	<b>106-1052</b>
For 3.937" Pistons	<b>940-0033</b>

## REPLACEMENT PISTON KEEPERS

Description	Part #
Keeper	
each	<b>94-9278-S</b>
2 pack	<b>94-9278-2</b>
4 pack	<b>106-2304</b>
Keeper for 4.425"	<b>94-9278-S</b>
Keeper For 3.937" & 4"	<b>940-0034</b>

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod®

Indian® Models

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# POWER PACK

Bump 1999–'06 engines from 88ci to 100ci and 2007–'17 engines from 96ci or 103ci to 110ci with the new S&S 4" big bore kit. The kit also includes matched cams, cam plate, oil pump and everything else a high performance big inch engine needs to reliably make serious power.

## FITMENT

- 1999–'06 big twin except 2006 Dyna® models

## FEATURES AND BENEFITS

- Largest big bore kit available without doing crankcase mods
- Upgrade Twin Cam 88 to 100 cu inches
- Cylinders fit to pistons—No machining required
- All parts required to upgrade to gear drive cam or hydraulic tensioners
- Engineered package to deliver the best bolt-in performance available



## POWER PACKAGE KIT

Fitment	Finish	Cam	Drive	Part #
1999–'06 except '06 Dyna®	Silver	585CE	Chain	<b>330-0662</b>
1999–'06 except '06 Dyna®	Silver	585GE	Gear	<b>330-0663</b>
1999–'06 except '06 Dyna®	Black	585CE	Chain	<b>330-0664</b>
1999–'06 except '06 Dyna®	Black	585GE	Gear	<b>330-0665</b>

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## NOTES

- 1999–'04 engines will require the additional purchase of valve springs pn 900-0593.
- Pinion shaft runout must be less than .003" to use gear drive cams.
- Kit not available to fit '06 Dyna® models but parts may be purchased separately.
- Not for use with S&S 79cc Cylinder Heads.
- Not for use on trike models.





# CAMSHAFT OVERVIEW

**OES:** Original Equipment Specification (OES). A bolt-in replacement cam with stock cam timing is designed for riders with stock engines. Does not require tuning. Bolt-in stock. Equivalent to HD® A-Grind

**505C:** Bolt-in cam, low-end torque and mid-range horsepower. Good for heavy bikes. Stock comp. ratio. Compatible with stock valve springs. Range: Idle to 5,000 rpm

**509:** Designed as a bolt-in, high torque cam for 1999–'06 models. 180 psi cranking compression, no need for compression releases. For 88 CID engines with stock compression ratio. Idle–4500 rpm. Bolt-in torque.

**510:** Designed as a bolt-in cam for 88, 95, and 96 CID engines with compression ratios below 9.7:1, it is primarily intended for use with stock, un-ported heads. 3000–5500 rpm. Bolt-in overall.

**551:** Designed for engines with 96 to 106 CID and 9:1 to 9:9 compression this cam set designed for stock or mildly modified touring bikes. 551 cams are not recommended for compression ratios of 10:1 or greater. Greatly improves low-end and midrange torque, strongest from idle–4000rpm.

**570:** Designed for 88 to 103 CID engines with compression ratios between 9:1 and 10:1 this cam will provide a nice power increase across the entire power band. 3200–5700 rpm. Excellent bolt-in for overall power on 103".

**583:** Optimized for use in the Softail®/Dyna® lines, this cam makes horsepower and torque that you can feel all the way through the rpm range, making the most power right where you need it: 1500–5000rpm. 583 cams are not recommended for engines having compression ratios greater than 10.1:1

**585:** Designed for 88 to 95 CID engines with compression ratios from 9.7:1 to 10.5:1 and 100 to 124 CID engines from 9:1 to 10:1 compression. Provides massive horsepower and torque increases starting at 3000rpm and holds steady all the way to redline. 3500–6000 rpm for 88"–103" engines and 2500–5500 for larger engines.

**625:** Cam set designed for 95" or larger engines with compression ratios between 10.0 and 10.75:1. 3000–6000 rpm.

**MR103:** Designed as bolt-in cams for 103 CID engines with stock 9.7:1 compression ratio up to 10.5:1. Works well with stock, un-ported heads, but is great for S&S CNC ported heads. More power across the rpm range best results form 2500–5500 rpm. Bolt-in.

**HP103:** Designed as bolt in cams for engines with 103 and stock 9.7:1 compression up to 10.5:1. Works well with stock, un-ported heads, but is great for S&S CNC ported heads. Best power in the higher rpm range, 3000–6000 rpm. Bolt-in.

**635 H.O.:** High lift cam for modified engines with 106" or greater displacement and compression ratios between 10.0:1 and 11.0:1. Works well with stock, un-ported heads, but S&S CNC ported heads are recommended. Best power from 3000–6000 rpm. This is not a bolt-in cam set. High-lift springs and clearance checks are required.

**640:** Used in S&S T124 engines, this cam makes horsepower! Intended for engines of 95 CID or more w/compression ratios between 10.5:1 and 11.5:1. 3000–6000 rpm.

**675:** A high lift monster, this cam set is designed for 120" or larger engines with at least 11:1 compression ratio. 4500–6500 rpm.



**NOTE**

Stock valve springs in 1999–'04 big twin models can handle cams with valve lifts as high as .515". Stock valve springs in 2005–up engines can accommodate valve lifts up to .590".

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
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Appendix



# CAMSHAFT OVERVIEW CONT

SPECIFICATIONS OF S&S® CHAIN & GEAR DRIVE CAMSHAFTS FOR 1999-UP BIG TWINS													
Cam Name	Bolt-In	Valve Timing (open/close)		Valve Duration		Valve Lift	Centerline		Lift @ TDC		APPLICATION CROSS REFERENCE		
		Intake	Exhaust	Intake	Exhaust		Intake	Exhaust	Intake	Exhaust	HD® Screamin' Eagle®	Andrews®	Most Fitting
		Open BTDC/Close ABDC	Open BBDC/Close ATDC	Intake	Exhaust		Intake	Exhaust	Intake	Exhaust			
OES	●	2°/34°	36°/4°	216°	220°	.475"	106°	106°	.060"	.060"	A-Grind		
505C	●	20°/36°	47°/15°	236°	242°	.505"	98°	106°	.185"	.157"			
509	●	18°/18°	46°/11°	216°	237°	.509"	90°	107.5°	.174"	.140"			
510	●	20°/38°	52°/20°	238°	252°	.510"	99°	106°	.187"	.178"			
551**		17°/19°	41°/17°	216°	238°	.550"	91°	102°	.178"	.170"	SE-203/255	21H/26H	Touring
570		20°/40°	55°/20°	240°	255°	.570"	100°	107.5°	.187"	.179"	—	54H	All Big Twin
583		5°/18°	58°/24°	203°	262°	.583"	96.5°	107°	.113"	.206"	SE-203/255	21H/26H	Softail®/Dyna®
585		20°/45°	60°/20°	245°	260°	.585"	102.5°	110°	.186"	.179"	SE-211/251/257	31H/32H/50H/55H/67H	All Big Twin
625		20°/55°	60°/20°	255°	260°	.625"	107.5°	110°	.189"	.184"	SE-258/260	60H	All Big Twin
635		19.5°/43.5°	58.5°/37.5°	243°	276°	.635"	102°	100.5°	.186"	.284"			
MR103		13°/33°	50°/22°	226°	252°	.585"	104°	104°	.172"	.177"			
HP103		20°/49°	45°/26°	249°	251°	.575"	102.7°	101.5°	.199"	.206"			
640		25°/60°	65°/25°	265°	270°	.640"	107.5°	110°	.228"	.214"	SE-264	59H	All Big Twin
675		25°/64°	70°/25°	269°	275°	.675"	109.5°	112.5°	.235"	.205"	—	64H	Race

\*Note: Although several cam grinds were used in stock engines from 1999-'06, the timing specs of the 475G cams is most similar to cams used in 1999-'03 EFI engines.  
 \*\*551 cams are not recommended with compression ratio of 10:1 or higher.

All reference to HD® and Andrews® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown. Use of brand names such as Harley-Davidson® Sportster® are also for reference only.

## S&S EASY START CAMS

Start any engine regardless of displacement or compression ratio, with a stock starter. Easy Start Cams from S&S® Cycle make hard starting obsolete for 1999-'12 big twins. Available in economical chain drive and rock-solid gear drive versions. Don't get caught "dead" without them!

### FEATURES AND BENEFITS

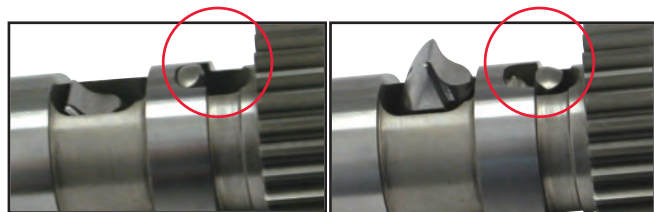
- Start any engine with a stock starter
- Save your starter and battery!
- Reliable – tested for 100,000 accumulative starts and over 150,000 road miles without breakage or compression release failure!
- Automatic – no buttons to push

### OPTIONS

- Chain drive or gear drive (See the following pages for part numbers)

## HERE'S HOW IT WORKS

Each of the two exhaust cam lobes are equipped with a spring loaded compression release lobe on the "heel" of the cam at the point where the valve would normally be fully closed. The lobe holds the exhaust valve open slightly at cranking speed. This releases some of the compression, making the engine much easier to crank. Once the engine starts, and rpm increases, the compression release lobe is centrifugally retracted and the engine runs normally, with full compression, and without any loss in performance. This allows a stock starter and battery to start nearly any engine.



The compression release lobe reduces compression until the engine starts.

Increased rpm causes the compression release lobe to be centrifugally retracted so the engine runs normally.

# GEAR DRIVE CAM KITS

## FEATURES AND BENEFITS

- Improves valve timing accuracy by eliminating timing chain lash
- Easy Start Cams allow stock starter to start any engine
- No tensioner shoes to wear out or fail

## OPTIONS

### WHICH S&S GEAR DRIVE CAM KIT TO ORDER?

- If updating a stock chain drive system, it's easiest to order a complete kit. Includes:
  - Camshafts with inner gears
  - Outer cam drive gear kit
  - Camshaft installation kit
- If replacing cams in an engine already equipped with S&S gear drive cams, order cams with inner gears and reuse the existing outer gears. Camshaft installation kit for the appropriate model year is recommended.
- If installing a set of gear drive cams from another manufacturer, order S&S cam gear kits for the appropriate model year. Each kit provides the inner cam gear as well as an outer cam gear. Camshaft installation kit for the appropriate model year is recommended.



### GEAR DRIVE CAMS FOR 1999–'06 MODELS (EXCEPT 2006 DYNA®)\*

Cam Name	Easy Start		Standard	
	Complete Kit	Cams w/Inner Gears	Complete Kit	Cams w/Inner Gears
	Stock Oil Pump	Stock Oil Pump	Stock Oil Pump	Stock Oil Pump
OES	–	–	<b>106-4033<sup>†</sup></b>	<b>106-4385<sup>†</sup></b>
509	–	–	<b>330-0017</b>	<b>330-0018</b>
510	–	–	<b>33-5177</b>	<b>33-5174</b>
551	<b>106-5442</b>	<b>106-5441</b>	<b>330-0100</b>	<b>330-0099</b>
570	<b>106-5243</b>	<b>106-5242</b>	<b>33-5178</b>	<b>33-5166</b>
583 <sup>††</sup>	<b>106-5859</b>	<b>106-5858</b>	<b>330-0107</b>	–
585	<b>106-5247</b>	<b>106-5246</b>	<b>33-5179</b>	<b>33-5168</b>
625	<b>106-5251</b>	<b>106-5250</b>	<b>33-5180</b>	<b>33-5170</b>
MR103	<b>330-0466</b>	<b>330-0467</b>	<b>330-0462</b>	<b>330-0463</b>
HP103	<b>330-0452</b>	<b>330-0453</b>	<b>330-0448</b>	<b>330-0449</b>
635 H.O.	<b>330-0438</b>	<b>330-0439</b>	<b>330-0432</b>	<b>330-0435</b>
640	<b>106-4840</b>	<b>106-4839</b>	<b>33-5181</b>	<b>33-5172</b>
675	<b>106-5255</b>	<b>106-5254</b>	–	–

\*2006 Dyna® install kit is in Section 2.

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<sup>†</sup>Exempt from emissions tampering regulations in 1999–2006 applications originally equipped with H-D? "A" grind camshafts under CARB EO# D-355-14

## NOTES

**<sup>††</sup>This cam kit is not for touring models and does not work with compression over 9.9 to 1**

Pinion shaft run-out must be checked before installing S&S® gear drive cams. Gear Drive cams should only be used in engines with pinion shaft runout of no more than .003"

A hydraulic press and other professional tools are required to install S&S gear drive cams. Additionally, material must be removed from the inner surface of the stock gearcover. The stock crankcase will require clearancing for S&S .625", .640", and .675" lift cams. S&S recommends that gear drive cams be installed by a professional mechanic.

New cam bearings and a new gearcover gasket are required to complete cam installation. Gear drive cams for 1999–'06 models require the use of ball bearing style cam bearing rather than the stock roller bearing. Roller bearings have more internal clearance which can cause excessive gear lash and increased noise. The correct parts are provided in S&S Camshaft Installation Kit, part #106-5896.

Due to the inherent characteristics of gear drives, you may experience more valve train noise with gear driven cams. Oversized and undersized gears are available to help achieve correct gear lash. We have found that with 160 lb. of valve seat force, the S&S gear drive cams will perform well up to 6200 rpm. If higher rpm is anticipated, valve springs that provide higher seat force should be used.

S&S can do a special order cam. Contact your S&S Customer Service Representative for more information.

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
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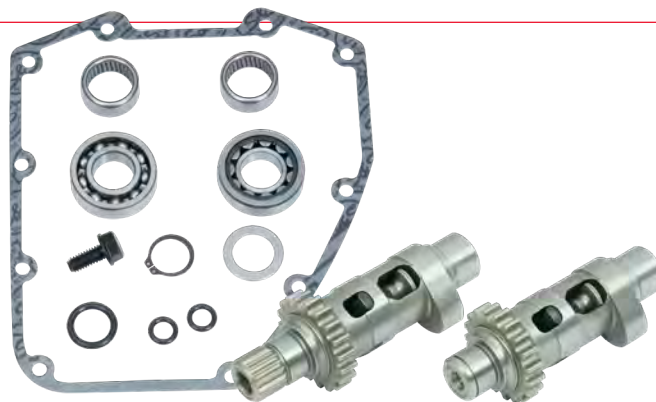
# CHAIN DRIVE CAM KITS

## FEATURES AND BENEFITS

- Increase performance at an affordable price
- Quick installation—reuse many stock components
- Easy Start Cams allow stock starter to start any engine

## KIT CONTENTS

- Cams
- Installation Kit: gearcover gasket, bearings, retaining ring, o-ring, thread lock
- Instructions



## NOTES

**\*\*This cam kit is not for touring models and does not work with compression over 9.9 to 1.**

If OES, 509 or 510C cams are used with the stock chain drive system in Twin Cam 88® engines, it is recommended to use cylinder heads with stock valve springs or performance valve springs with no more than 160 lb. of seat force. For more demanding applications, we recommend the S&S gear drive cams.

When using 1999–'06 chain drive cams for lifts over .510", S&S strongly recommends that the stock chain drive be upgraded to the S&S gear drive or to the HD® #25284-08 or #25284-11 hybrid plate. This kit updates the problematic spring loaded chain tensioners to reliable hydraulic tensioners and also upgrades the oil pump.

551 and 583 cams are not recommended with compression ratio of 10:1 or higher.

S&S can do a special order cam. Contact your S&S Customer Service Representative for more information.

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## CHAIN DRIVE CAM KITS FOR 1999–'06 MODELS (EXCEPT 2006 DYNA®)

Cam	Standard	Easy Start
OES	<b>330-0400</b>	—
505	<b>330-0374</b>	—
509	<b>330-0016</b>	—
510	<b>33-5182A</b>	—
551	<b>330-0002</b>	<b>106-5293</b>
570	<b>330-0003</b>	<b>106-5296</b>
583 <sup>††</sup>	<b>330-0004</b>	<b>106-5289</b>
585	<b>330-0005</b>	<b>106-5299</b>
625	<b>330-0006</b>	<b>106-5302</b>
MR103	<b>330-0456</b>	<b>330-0459</b>
HP103	<b>330-0442</b>	<b>330-0445</b>
635 H.O.	<b>330-0426</b>	<b>330-0429</b>
640	<b>330-0007</b>	<b>106-5305</b>

<sup>††</sup>2006 Dyna® cams are in Section 2.

# CAM RELATED PARTS



**33-4275**

## CAM GEAR DRIVE KITS

Fitment	Part #
1999–'06 bt	<b>33-4275</b>

*(Includes front and rear inner cam gears, pinion gear, and outer cam gear)*



**33-4276**

## OUTER CAM DRIVE GEAR KIT

Fitment	Part #
Fits 1999–'06 bt	<b>33-4276</b>



**33-4271P**

## HARDWARE PACK FOR OUTER CAM GEAR

Description	Part #
Hardware Pack, Fits 1999–up bt	<b>33-4271P</b>
Replacement Key	<b>106-1348</b>



**31-4080**

## HEAVY DUTY CAM BEARING PLATE

Fitment	Part #
Fits 1999–'06 bt	<b>33-5212</b>

## CAM NEEDLE BEARINGS ASSEMBLIES

Fitment	Part #
Inner Cam Bearing 1999–'06 bt <i>(except 2006 Dyna®)</i> 9198	<b>31-4080</b>

## REPLACEMENT GEARS, OVERSIZED & UNDERSIZED

Description	Fitment	Part #	
Outer Rear Cam Drive Gear Only	1999–'06 <i>(except '06 Dyna)</i>	<b>106-4882</b>	
Inner cam gear, Front or Rear	1999–'06 <i>(except '06 Dyna)</i>	<b>330-0550</b>	
Rear Inner Cam Gear, Undersized	1999–'06 <i>(except '06 Dyna)</i>	<b>330-0551</b>	
Rear Inner Cam Gear, Oversized	1999–'06 <i>(except '06 Dyna)</i>	<b>330-0552</b>	
Pinion Gears	Standard Size	<b>33-4160</b>	
	Undersized	<b>33-4160X</b>	
	Double Under	1999–up	<b>33-4160XX</b>
	Oversized	<b>33-4160Z</b>	
	Double Over	<b>33-4160ZZ</b>	

*Due to machining variations in the stock cam plate, oversized or undersized gears may be needed to achieve correct gear lash.*

## REPLACEMENT INSTALLATION KITS

Description	Standard
For S&S Chain Drive Cams	<b>33-5175</b>
For S&S Gear Drive Cams	<b>106-5896</b>

*Includes a gearcover gasket, cam bearings, retaining ring, o-ring, thread lock and instructions.*



# CAM CHEST UPGRADE

## GEAR OR CHAIN DRIVE

### FITMENT

- 1999–'06 Harley-Davidson® big twins & 2006 Dyna® models (except 2006 Dyna® models)

### FEATURES

- Upgrade to S&S bolt-in performance chain drive or gear drive camshafts
- Upgrade 1999–'06 models to 2007–'16 style oil pump
- Improved engine performance — higher lift and optimized cam timing
- S&S Quickee pushrods — easy installation, without removing rocker covers
- Replace stock oil pump, cam support plate, cams, chain tensioners, and tappets with all new premium U.S. made S&S components
- Better, more consistent oil pressure



### CHAIN DRIVE CAM CHEST UPGRADE KIT FOR 1999–'06 BIG TWINS (EXCEPT 2006 DYNA® MODELS)

Cam	Part #
509C Standard	<b>330-0540</b>
510C Standard	<b>330-0541</b>
551CE Easy Start	<b>330-0542</b>
585CE Easy Start	<b>330-0543</b>

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### GEAR DRIVE CAM CHEST UPGRADE KIT FOR 1999–'06 BIG TWINS (EXCEPT 2006 DYNA® MODELS)

Cam	Part #
509G Standard	<b>310-0810</b>
510G Standard	<b>310-0811</b>
551GE Easy Start	<b>310-0812</b>
585GE Easy Start	<b>310-0813</b>

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## NOTE

Stock valve springs in 1999–'04 big twin models can handle cams with valve lifts as high as .515". Stock valve springs in 2005–up engines can accommodate valve lifts up to .590".

# HYDRAULIC CAM CHAIN TENSIONER KIT

### FITMENT

- 2007–2016 big twin & 2006 Dyna® models
- 1999–'06 models with hydraulic cam plate upgrade

### FEATURES

- Thicker shoe for longer wear
- Direct chain oiling
- Larger piston
- Tighter tolerance for improved stability
- Made in USA

### HYDRAULIC CAM CHAIN TENSIONER KIT

Fitment	Part #
1999–'06 models with hydraulic cam plate upgrade	<b>330-0518</b>

### REPLACEMENT PARTS

Description	Part #
Tensioner, Asm, Inner, Body, Cam Chain	<b>330-0519</b>
Tensioner, Assembly, Outer, Body, Cam Chain	<b>330-0520</b>
Tensioner Shoe, Chain, Camshaft	<b>330-0521</b>



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"1999–2006  
Twin Cam 88®1986–2019  
Sportster® & Buell®2014–2019 Street® &  
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# PRECISION TAPPETS

High performance tappets are a cornerstone of the S&S line up and we are always looking to improve our products. After months of research and countless hours of testing we are excited to reveal the latest in performance lifters. The S&S Cycle Precision Tappets replace both our standard as well as premium lifters. Each Precision Lifter is hand assembled to exacting tolerances and designed for quiet operation and rapid pump up and all are made in the USA.

## FITMENT

- 1999–2017 big twins
- S&S T-Series engines

## FEATURES

- Reduced valve train noise from start up to shut down
- Close tolerances for low leak down rates
- Fast pump up and superior high rpm performance

## PRECISION TAPPETS

Set of 4 tappets	<b>330-0718</b>
------------------	-----------------



# TAPPET COVERS

## FITMENT

- 1999–'16 big twin
- S&S crankcases

## FEATURES AND BENEFITS

- CNC billet aluminum provides extra strength and dimensional stability over a wide temperature range
- Simple to install upgrade that looks great

## KIT CONTENTS

- Covers
- Gaskets
- Installation hardware



33-5601

## TAPPET COVER KITS

Finish	Part #
Gloss Black	<b>330-0588</b>
Polished	<b>33-5601</b>
Chrome	<b>106-3883</b> ‡

‡ WARNING: Cancer and Reproductive Harm

## REPLACEMENT PARTS FOR TAPPET COVERS

Descriptions	Part #
Gasket	<i>each</i> <b>33-5303-S</b> 18635-99B
	<i>2 pack</i> <b>33-5303-2</b> 18635-99B
Screw w/flat washer, Zinc	<i>each</i> <b>50-0092-S</b> 4741A
	<i>4 pack</i> <b>50-0092P</b> 4741A
Screw, Chrome	<i>each</i> <b>50-0482</b> ‡
Washer, Flat, Chrome	<i>each</i> <b>50-7017</b> ‡

‡ WARNING: Cancer and Reproductive Harm

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

# QUICKEE ADJUSTABLE PUSHRODS

GLOSS BLACK ALSO AVAILABLE

### FITMENT

- 1999–'17 big twins (except 2017 touring models) w/stock engine height +/- .050"

### FEATURES AND BENEFITS

- Adjustable to accommodate all tappets and cam base circle diameters and engine heights
- Easy to install—removal of rocker box not needed
- No threads on wrench flats
- Also available in gloss black

### KIT CONTENTS

- Pushrods, chrome pushrod covers, o-rings, and cover keepers



When a Quickee adjustable pushrod is collapsed, it can easily be installed or removed from an assembled engine.



### QUICKEE ADJUSTABLE PUSHRODS

Description	Part #
Gloss Black Pushrod Kit <i>(includes black pushrod covers, o-rings &amp; cover keepers)</i>	930-0143
Chrome Pushrod Kit <i>(includes chrome pushrod covers, o-rings &amp; cover keepers)</i>	106-6051
Pushrods Only*	93-5122

Longer keepers are required for taller than stock engines. See page 202 for pushrod cover keepers.  
 \*1984–99 style pushrod covers are required for access to the Quickee Adjustable Pushrod adjusters in 2007–'12 big twins. See page 202 for pushrod covers.  
 ‡ WARNING: Cancer and Reproductive Harm

# STANDARD ADJUSTABLE PUSHRODS

### FITMENT

- 1999–'17 (except '17 touring)
- Lengths available for various displacements

### FEATURES AND BENEFITS

- Adjustable to accommodate all tappets & cam base circle diameters

### KIT CONTENTS

- Pushrods, chrome pushrod covers, tappet cover gaskets, o-rings, cover keepers



### STANDARD ADJUSTABLE PUSHRODS FOR HARLEY-DAVIDSON® TWIN CAM 88®

Displacement	Engine Height	Cylinder Length	Pushrod Kit‡	Pushrods Only	Pushrod Covers‡	Cover Keepers‡
88", 95", 96", 103", 106"	Stock	4.937"	93-5095	93-5096	106-1340	93-4100
124"	+ .096"	5.013"	–	93-5098	106-1340	93-4115
T143	+ .2875"	5.057"	–	930-0103	106-1340	93-4102
Special Order	Specify	Specify	–	–	–	93-4109*

\*Custom, extra long stainless steel 4.250", customer to cut to required length\*\*Special Order: Download the Special Order Form  
 ‡ WARNING: Cancer and Reproductive Harm

# NON-ADJUSTABLE PUSHRODS

### FITMENT

- 1999–'06 Harley-Davidson® Twin Cam 88® big twin engines
- S&S T111

### FEATURES AND BENEFITS

- Replaces stock pushrods perfectly
- 7/16" high strength chromoly steel tubing for increased strength
- Pushrods are marked with stock color code and valve position for easy installation

### NON-ADJUSTABLE PUSHRODS—PUSHRODS ONLY

Fitment	Part #
1999–up	930-0046
T111	930-0144



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2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

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# PUSHROD COVERS & RELATED PARTS

## FITMENT

- 1999–'17 big twins

### PUSHROD REPLACEMENT PARTS

Description		Part #
Pushrod Cover Kit (includes top & bottom covers, cover cap, cover spring, spring washer, & o-rings for four pushrods)	Chrome	<b>106-1340</b>
	Gloss Black	<b>930-0124</b>
Top Cover	each	<b>93-4016</b> 17935-66T, 17935-79B
Bottom Cover	each	<b>93-4015</b> 17938-83
Cover Cap	each	<b>93-4017</b> 17945-36B
Cover Spring	each	<b>93-4018</b> 17947-36
Cover Cap Washer	each	<b>50-7131</b> 6762B
Pushrod O-ring kit (includes top, middle, and bottom o-rings for four pushrods)		<b>93-4022</b>
Top O-ring	each	<b>50-8039</b> 11293, 11157, 11101, 11190
Middle O-ring	each	<b>50-8038</b> 11132A
Bottom O-ring	each	<b>50-8037</b> 11145A



### PUSHROD COVER KEEPER SETS FOR 2007–'17 BIG TWINS

Length / Finish	S&S Tubes	Part #
2.390" / Gloss Black		<b>930-0127</b>
2.400" / Chrome	All stock height TC 96/103	<b>93-4070</b> <sup>±</sup> 17950-48
2.500"	Chrome	96", 100", 117", <b>93-4100</b> <sup>±</sup>
	Gloss Black	103", 106" HSU <b>930-0142</b>
2.600"	Chrome	124" <b>93-4101</b> <sup>±</sup>
	Gloss Black	<b>930-0128</b>
2.800" / Chrome		<b>93-4115</b> <sup>±</sup> 17950-86
2.900"	Chrome	143" <b>93-4102</b> <sup>±</sup>
	Gloss Black	<b>930-0126</b>
3.000" / Chrome		<b>93-4103</b> <sup>±</sup>
3.100"	Chrome	<b>93-4104</b> <sup>±</sup>
	Gloss Black	<b>930-0125</b>
3.200" / Chrome		<b>93-4105</b> <sup>±</sup>
3.330" / Chrome		<b>93-4106</b> <sup>±</sup> 17949-40, 17950-66
3.500" / Chrome		<b>93-4107</b> <sup>±</sup>
3.625" / Chrome		<b>93-4108</b> <sup>±</sup>
4.250" <sup>**</sup>		<b>93-4109</b>



All S&S pushrod keepers are chromed steel, except part #93-4109. Keeper part #93-4109 is intended for unusually tall engines. It is manufactured of unchromed stainless steel to prevent rust or peeling after it is trimmed to the required length.

<sup>\*\*</sup>Custom, extra long stainless steel 4.250", customer to cut to required length

<sup>±</sup> WARNING: Cancer and Reproductive Harm

All reference to HD<sup>®</sup> part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD<sup>®</sup> part number shown.



# SIDEWINDER® .650" VALVE SPRINGS

## FITMENT

- Twin Cam 88® big twins w/stock heads (both 7mm and 5/16" valve stems)
- All S&S Super Stock® heads (5/16" valve stems)

## FEATURES AND BENEFITS

- Works well with cams up to .650" lift
- Manufactured from ultra clean high silicon Kobe alloy wire then micro shot peened and nitrided
- CNC machined 9° locks
- High performance conical single wire spring
- Chromoly forged retainers

## KIT CONTENTS

- Valve keepers, Top & Bottom collars, Springs, Shims

### S&S® .SIDEWINDER .650" VALVE SPRINGS SPECIFICATIONS

Lift	Installed Height	Seat Force	Force @ Max Lift	Max RPM
.650"	1.860"	178 lb.	376 lb.	6500



106-5909

### SIDEWINDER .650" VALVE SPRING KITS

Description	Part #
1999–'04 (5/16" valve stems) *	900-0050
2005–'17 big twins (7mm stems) <i>except 2017 touring models</i>	106-5909

\*Does not include seals

**NOTE**

S&S recommends roller rocker arms be used with lifts over .585"

# STREET PERFORMANCE .585"

## FITMENT

- Twin Cam 88® big twins w/stock heads (both 7mm and 5/16" valve stems)
- All S&S Super Stock® heads (5/16" valve stems)

## FEATURES AND BENEFITS

- Single wire conical shape
- Suitable for high performance applications
- Accommodates camshaft lift to 0.585"

### STREET PERFORMANCE .585" SPRING KITS

Description	Part #
1999–'04 big twins (5/16" valve stems)	900-0593
2005–'17 big twins (7mm stems) <i>except 2017 touring models</i>	900-0594
All S&S Super Stock Heads	900-0595

### S&S® .STREET PERFORMANCE .585" VALVE SPRINGS SPECIFICATIONS

Lift	Installed Height	Seat Force	Force @ Max Lift
.585"	1.85"	135 lb.	325 lb.



900-0594

VALVE SPRING REPLACEMENT PARTS: SEE PAGE 236

# FORGED ROCKER ARMS

## FITMENT

- 1999-'17 big twins (except '17 touring)

## FEATURES AND BENEFITS

- **Roller Rocker Arms:**
  - Extremely durable rollers reduce valve stem side thrusting with high lift cams
  - Superior wear and fatigue resistance even in the most demanding applications
  - 3/4" long bushings provide 50% more bushing support area than 1/2" long bushings
  - Available in stock 1.625:1 ratio or performance 1.725:1 ratio
- **Standard Rocker Arms:**
  - 3/4" long bronze bushings provide 50% more load bearing area than the 1/2" long bushings used in stock and other aftermarket rocker arms
  - Case carburized hard surface for longer life
  - Stock 1.625:1 ratio




## KIT CONTENTS:

- 2 front and 2 rear rocker arms



900-4065A

### 1.625:1 RATIO FORGED ROLLER ROCKER ARMS

Description	Part #
1.625:1 Ratio Roller Rocker Arm Set 2 front & 2 Rear	900-4065A 
Front Exhaust/Rear Intake each	900-4065FA  1,2,3
Rear Exhaust/Front Intake each	900-4065RA  1,2,3




### 1.725:1 RATIO FORGED ROLLER ROCKER ARMS

1.725:1 Ratio Roller Rocker Arm Set 2 front & 2 Rear	900-4098A
Front Exhaust/Rear Intake each	900-4098FA
Rear Exhaust/Front Intake each	900-4098RA



900-4119A

### STANDARD FORGED ROCKER ARM KIT

1.625:1 Ratio Roller Rocker Arm Set 2 front & 2 Rear	900-4119A 
Front Exhaust/Rear Intake each	900-4119FA  17375-83A
Rear Exhaust/Front Intake each	900-4119RA  17360-83A






90-4036



90-4104

### REPLACEMENT PARTS FOR FORGED ROCKER ARMS

Description	Part #
Rocker Arm Shafts (Set of 4)	90-4036  17611-83B
Rocker Arm Shafts (each)	90-4006   1,2,3 17611-83B
Roller Rocker Arm Rebuild kits (rebuilds 4 rocker arms)	90-4104
Roller & Standard Rocker arm bushing (3/4" long)	90-4014

## NOTES

- S&S roller rocker arms are recommended for use with cams having more than 0.585" of lift.
- Adjustable pushrods must be used with S&S roller rocker arms to obtain proper valve clearance.
- New rocker arm shafts are recommended for maximum performance and rocker life.
- The use of 1.725:1 ratio rocker arms will increase stress on cams, tappets, and pushrods. For this reason they are recommended for racing only and not for street applications.

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

# CNC PORTED CYLINDER HEAD SERVICES

## FITMENT

- Available for 1999–2017 big twin engines (except Twin-Cooled™ models & '17 touring)
- Ideal for 88"–24" engines (must use Screamin' Eagle® high flow injectors, HD® #27796-08, with kits over 106")

## FEATURES AND BENEFITS

- CNC machined ports for a consistent performance increase from stock heads
- Great throttle response, high velocity port without losing low RPM torque
- Assembled with performance valves and springs ready to bolt-on
- Choice of .585" or .650" lift valve springs
- Combustion chambers are available in the following volumes:
  - 83cc—Generally used for stock 88" up to 106" engine displacements
  - 85cc—Same as stock Twin Cam 88® and 96™ engine displacements
  - 87cc—Recommended for up to 117" engine displacements
  - 90cc—Generally used for 124" and up engine displacements
- Available in factory black or silver



106-5880

## S&S CNC PORTING SERVICE OPTIONS

### REWORK SERVICE

- Send your stock heads to S&S
- Get the same set of heads back with CNC machined ports
- The best option for heads with a special cosmetic treatment
- Allow 1 week turn-around (does not include shipping)

### CUSTOM CNC PORT DUPLICATION

- S&S can digitize your port design and machine it in your heads, ask an S&S customer service rep for details

### CNC PORTING SERVICE

Fitment	Part #	MSRP
1999–2017 big twins (except for twin cooled models & '17 touring)	<b>106-5880</b>	Call for Pricing

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Heads	Valve Size		Max Valve Lift	Max TDC Lift		Port Flow		Chamber Volume
	Intake	Exhaust		Intake	Exhaust	Intake	Exhaust	
Stock	1.805"	1.575"	.585"	–	–	216.2 cfm	191.8 cfm	85cc
CNC Ported by S&S	1.900"	1.610"	.650"	.230"	.215"	248.6 cfm	209.7 cfm	83cc**

\*Flow testing performed on a SuperFlow® 1020 flow bench at 28" of water test pressure at .600" lift. Heads tested are 2006-'12 style.

Heads	COMPRESSION RATIO								
	88"	95"	96"	97"	103"	106" Stroker	106" Big Bore	117" DD Piston	124" DD Piston
Stock	9.0:1	9.2:1	9.2:1	9.7:1	10.1:1	10.1:1	10.0:1	10.0:1	10.7:1
CNC Ported by S&S	9.2:1	9.4:1	9.4:1	9.9:1	10.3:1	10.3:1	10.2:1	10.2:1	10.9:1

\*\*As a general rule of thumb, for every 1cc decrease in chamber volume equals a .1 increase in compression ratio.

## NOTES

CNC porting is not available for previously ported heads, heads that have been structurally damaged, or heads that are determined to be unserviceable during initial inspection. These heads will be returned to the customer without modification. In these cases, the customer will be notified and options will be reviewed. New, CNC ported stock heads or S&S heads are available for purchase.

Due to variations in stock cylinder head castings, all inside surfaces of the ports may not "clean up" during machining. As a result, the inside of one or more ports may not appear to be completely machined. This does not effect performance and is not considered a defect.

Fuel injection tuning required.

CNC porting is not currently available for Harley-Davidson® CVO engines or Screamin' Eagle® cylinder heads.

Must use Screamin' Eagle® high flow injectors, HD® #27796-08, with kits over 106"

S&S recommends using a S&S Throttle Hog throttle body when installing S&S CNC ported heads to achieve full horsepower performance potential.

Milwaukee-Eight™

2007–2017 Twin Cam 96™/103™/110™

1999–2006 Twin Cam 88®

1986–2019 Sportster® & Buell®

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# B2 HEADS WITH STOCK BOLT PATTERN

## CNC PORTED B2 SPECIAL APPLICATION

### CYLINDER HEADS

High performance just got a lot easier and more affordable. In the past, S&S B2 Special Application heads, that were used on the now legendary Tribute 145 engines, were often hailed as the best choice for very large displacement v-twin engines. S&S Cycle's B2 CNC ported heads are even better, providing added convenience, economy, and performance at the same time. Convenient because they now fit 2008-later bagger front motor mounts and the new two bolt exhaust-mounting flange is a lot easier to work with. Economical because riders can use stock exhaust pipes, or existing 2" header systems. The increased performance comes from the increased flow of the CNC ported intake and exhaust ports.

Kits do not include gaskets, hardware, or intake and exhaust flanges. These parts must be purchased separately. See next page.



900-0458

### FITMENT

- 1999–'16 big twin engines 4 $\frac{1}{8}$ " bore, stock bolt pattern (in stock, off-the-shelf\*)  
\*S&S only stocks the late model 4 $\frac{1}{8}$ " bore versions as off-the-shelf items, but heads for other applications and individual front of rear replacement heads are available by special order.
- 1999–'16 big twin engines 4 $\frac{1}{8}$ " bore and larger with S&S or other bolt pattern (special order only)
- 1984–'99 big twin engines 4 $\frac{1}{8}$ " bore and larger (special order only)
- S&S SB-Series 4 $\frac{1}{8}$ " bore and larger engines for 1986–'03 Sportster® models (special order only)
- Old style B2 replacement heads still available by special order

### FEATURES AND BENEFITS

- 106cc combustion chambers
- Oval intake ports bolt up to S&S Throttle Hog 70mm throttle bodies (08–up touring applications only)
- Stock style breather system—compatible with stock and aftermarket air cleaners
- Large 2.200" intake and 1.800" exhaust valves
- .660" lift S&S valve springs with titanium top collars
- Machined for stock sensors—EFI ready
- Available in Wrinkle Black or Silver powder coat

### OPTIONS BY SPECIAL ORDER

- CNC ported intake and exhaust ports—more air, more power!
- Two-bolt exhaust flanges—Can accommodate stock exhaust headers, existing 2" headers, or build your own 2" exhaust system
- Machined for 2008–later bagger front motor mount
- Select heads for 1984–'99 or 1999–'15 big twin style, or 1986–'03 xl 4 $\frac{1}{8}$ " to 4 $\frac{3}{8}$ " bore sizes
- Stock 1999–up, S&S, or other cylinder stud patterns—other patterns subject to approval
- Machined with or without S&S electric compression release
- Choose from a variety of pushrod geometry machining styles
- Choose from a variety of different chamber sizes
- Individual front of rear heads available by special order
- Available in Wrinkle Black, Gloss Black, Silver, or Natural

### B2 HEADS WITH STOCK BOLT PATTERN

Finish	Part #
Silver Powder Coat	900-0450
Wrinkle Black Powder Coat	900-0458

\*Head Kits include valves and valve springs. Head sets w/o valves or springs individual front or rear heads are available by special order.

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### ADDITIONAL PARTS REQUIRED

Product Description		Part #
Special 4 $\frac{1}{8}$ " Bore Pistons & Ring Set	Standard	92-1580
	+ .010"	92-1581
Special Length Pushrods (+.250")	For 124" engines	93-5106
	Stock height engines	93-5098
Intake Manifold Flange Kits	All B2 heads	16-0250

\*Download the Special Order Form

**REPLACEMENT PARTS: SEE PAGE 232**

## NOTES

Heads are .230" taller than stock—requires special pushrods and/or frame clearancing or motor mount modifications  
Exhaust pipe adaptor kits and other parts must be purchased separately. See "Additional Parts Required" chart.



# SUPER STOCK® CYLINDER HEADS

## FITMENT

- 1999–'05 big twins (2006 model year heads can be found in Section 2)

## FEATURES AND BENEFITS

- Heads can be decked up to .060" to increase compression
- 79cc heads have 1.940" intake and 1.575" exhaust valves
- 89cc heads have 2.000" intake and 1.605" exhaust valves
- 91cc heads have 2.000" intake and 1.605" exhaust valves
- S&S .585" or .650" lift valve springs

- Stock Harley-Davidson® rocker boxes can be retained if S&S manual compression release or S&S Easy Start cams are used. Must use S&S valve cover gasket kit part #90-4120 with stock rocker covers
- Stock bolt pattern heads include rocker base gaskets

## OPTIONS

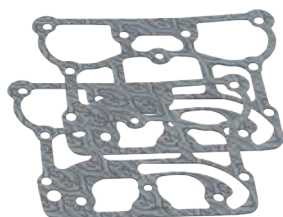
- With or with out compression release machining (Compression release machining is for S&S compression releases)
- Silver powder coat or wrinkle black powder coat finish

COMPRESSION RATIOS FOR S&S® SUPER STOCK® CYLINDER HEADS FOR 1999–'06 BIG TWINS									
Configuration	88"	95"	97" Big Bore	103"	106" Stroker	110"	111"	117"	124"
79cc	9.1	9.6/10.3*	10.3	10.2/11.1*	10.7	10.8	–	–	–
89cc	8.3	8.7/9.3*	9.4	9.3/10.1*	9.8	9.8	–	–	–
91cc	–	–	–	–	–	9.6	9.75	10.2	10.4

\*S&S pop-up piston



106-4277



90-4120

S&S valve cover gasket kit # 90-4120 must be used with stock rocker covers. Included with Stock Bolt Pattern Super Stock® Head Kits.

## STOCK BOLT PATTERN\* S&S® SUPER STOCK® CYLINDER HEAD KITS

Fitment	Chamber Volume	Manifold Surface	Compression Release Machining	Springs	Finish	Part #
1999–'05 bt	79cc		●	.650"	Silver	106-4277
				.585"		900-0254
			●	.650"	Wrinkle Black	90-1293
		.585"	900-0251			
	89cc		●	.650"	Silver	106-4270
			●	.650"	Wrinkle Black	90-1106
			.585"	Wrinkle Black	900-0410	
1999–'05 bt** 4 1/8" Bore	91cc		●	.650"	Silver	-
				.650"		900-4272
			●	.650"	Wrinkle Black	90-1163
				.650"		900-1163
S&S T124 Engines	91cc	+.032		.650"	Silver	900-0465
				.650"	Wrinkle Black	900-0470
S&S T111 Engines	91cc	-.064		.585"	Silver	900-0475
				.585"	Wrinkle Black	900-0480

\*All stock bolt pattern Super Stock® head kits include S&S valve cover gasket kit part #90-4120 for use with stock rocker covers.  
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## S&S® BOLT PATTERN S&S REPLACEMENT CYLINDER HEAD KITS FOR S&S T-SERIES ENGINES FOR 1999–'06 BIG TWINS

Description	Chamber Volume	Compression Release Machining	Springs	Finish	Part #
S&S® T-Series Engines 4 1/8" Bore	91cc	●	.650" lift	Silver	106-4275
		●	.650" lift	Wrinkle Black	90-1371

## TOP END GASKET KITS FOR 1999–'06 BIG TWINS

3 7/8" & 3.927" Bore	MSRP	4" Bore	S&S 4 1/8" Bore (Graphite)	Stock 4 1/8" Bore (Layered Steel)
910-0465	\$90.95	90-1913	90-1910	90-1914

Includes a set of head and base gaskets, exhaust gaskets and o-rings.

**REPLACEMENT PARTS:  
SEE PAGE 234**



**79cc heads**

When 79cc stock compatible heads are used with stock HD® pistons, TDC lifts of up to .186" for intake and .179" for exhaust and can be used without additional valve pocket clearancing. This allows the use of S&S® 510, 570, and 585 camshafts. If cams with higher TDC lifts are used, or if the heads are decked, piston valve pocket machining will be required.

79cc heads may be decked as much as .060" to increase compression. If heads are decked, piston valve pockets must be re-machined.

Moderate valve spring force in S&S Super Stock® cylinder heads allows the use of camshafts designed for the stock style chain cam drive system. However, for maximum reliability and performance we recommend the S&S gear drive cams.

Must use S&S valve cover gasket kit part #90-4120 with stock rocker covers.

79cc Heads should not be used with any piston having a pop up dome.

**89cc heads**

If 89cc heads are used with stock pistons, valve reliefs must be machined in the pistons due to larger valve size.

89cc heads may be decked as much as .060" to increase compression. If heads are decked, valve-to-piston clearance must be checked. If stock pistons are used, valve pockets must be re-machined.

Moderate valve spring force in S&S® Super Stock® cylinder heads allows the use of camshafts designed for the stock style chain cam drive system. However, for maximum reliability and performance we recommend the S&S gear drive cams.

A larger intake manifold is recommended to supplement the heads in order to let them flow to their full potential.

Must use S&S valve cover gasket kit part #90-4120 with stock rocker covers.

**91cc heads**

By changing the profile and shape of the cooling fins on our heads for 4½" bore engines, a large reduction in the transmission of mechanical noise was found. This not only benefits our TÜV certified engines and our EPA approved engines, but our performance engines as well!

Since April 1, 2007, these redesigned heads have been installed on all S&S 4½" bore engines and Hot Set Up Kits.

Replacement heads of the old style are available by special order.

Must use S&S valve cover gasket kit part #90-4120 with stock rocker covers.

**MANIFOLD RECOMMENDATIONS**

S&S® manifolds for 1999-'06 carbureted engines are available to fit stock CV carburetors and S&S Super E and G carbs. Note that 2006 models require a slightly shorter manifold. (See "Important Manifold Information")

S&S single bore throttle body and manifold are recommended for engines with Magneti Marelli® and Delphi® fuel injection.

S&S single bore throttle body and manifold are recommended for 2006-'12, except 2008-'12 touring models. Due to the change in manifold flange mounting bolt pattern, stock flanges and S&S seal part #16-0235 must be used. The Screamin' Eagle® 58mm throttle body/manifold may also be used on 2006-'09 engines.

We recommend the stock 50 mm throttle body or Screamin' Eagle 58mm throttle body/manifold for 2008-up touring models with Electronic Throttle Control (ETC). These engines can be tuned with the Harley-Davidson® Super Tuner package, Pro EFI Super Tuner, Power Commander® or an aftermarket EFI tuning module or software tuner.

**IMPORTANT MANIFOLD INFORMATION**

In 2006, Harley-Davidson® changed the bolt pattern of the flanges that connect the manifold to the cylinder heads for all big twin engines. The pattern was changed from an offset bolt pattern to a symmetrical bolt pattern, so flanges can fit either the front or rear cylinder head. In addition, the intake port was moved slightly toward the drive side of the engine, making the port-to-port distance of the intake manifold slightly shorter. S&S® heads for 2006-up big twins are machined with the symmetrical bolt pattern and relocated port to allow for the fitment of stock manifolds. In 2008, Harley-Davidson touring models were equipped with electronic throttle control (ETC). The throttle body and manifold used on these engines is a one-piece unit that contains a servomechanism to control the position of the throttle plate. S&S recommends the S&S Throttle Hog throttle body for this application. This limits the cylinder length of engines using an ETC manifold/throttle body to stock length because the ETC manifold/throttle body units are only available in stock length. However, S&S does supply specially machined cylinder heads for our 124" Hot Set Up Kit® for 2008 and later baggers, which allows the use of a stock length manifold on these longer-than-stock engines.



**ORDERING NOTES:**

- Select the cylinder head kit that is correct for your application.
- Select a gasket kit for the bore size of your engine. (Refer to "S&S Top End Gasket Kits" chart, [See page 207](#))
- Select an S&S manifold for your engine size or cylinder length and fuel system. (*Optional*)
- Select head bolt kit. ([See page 209](#))

**REPLACEMENT PARTS: SEE PAGE 234**

# HEAD BOLTS WITH WASHERS

## HEAD BOLT-INFORMATION CHART

Length w/Washer	Washer Thickness	Head Bolt w/Washer	Washers Only
1.690"	.250"	<b>93-3028</b>	<b>50-7091</b>
1.840"	.150"	<b>93-3027</b>	<b>50-0418-S</b>
1.920"	.250"	<b>93-3036</b>	<b>50-7091</b>
2.070"	.150"	<b>93-3031</b> 	<b>50-0418-S</b>
2.220"	.250"	<b>93-3038</b>	<b>50-7091</b>
2.370"	.150"	<b>93-3032</b>	<b>50-0418-S</b>
3.134"	.250"	<b>93-3029</b>	<b>50-7091</b>
3.284"	.150"	<b>93-3030</b> 	<b>50-0418-S</b>
3.501"	.250"	<b>93-3037*</b>	<b>50-7091</b>
3.651"	.150"	<b>93-3033*</b>	<b>50-0418-S</b>

\*Drilled & tapped deeper to allow shortening for custom lengths.





















93-3027

## HEAD BOLT WASHERS

Thickness	Part #
.150"	<b>50-0418-S</b>
.250"	<b>50-7091</b>

## HEAD BOLTS FOR HARLEY-DAVIDSON® TWIN CAM 88® AND TWIN CAM 96™ ENGINES

Engine Displacement	Stroke	Cylinder Length	Cylinder Head	Short Bolt w/Washer	Long Bolt w/Washer	Head Bolt Kit
88", 95"	4"	4.935"	Stock HD®	<b>93-3031</b> 	<b>93-3030</b> 	<b>93-3014</b> 
			S&S®	–	<b>93-3030</b> 	<b>93-3070</b>
100"	4"	4.850"	Stock HD®	<b>93-3036</b>	<b>93-3030</b> 	<b>93-3014</b> 
			S&S®	–	<b>93-3029</b>	–
106" Stroker	4½"	4.935"	Stock HD®	<b>93-3031</b> 	<b>93-3030</b> 	<b>93-3014</b> 
			S&S®	–	<b>93-3030</b> 	<b>93-3070</b>
107"	4¼"	4.975"	Stock HD®	<b>93-3031</b> 	<b>93-3037</b>	<b>93-3012</b>
			S&S®	–	<b>93-3030</b> 	<b>93-3070</b>
111"	4⅞"	4.763"	Stock HD®	<b>93-3027</b>	<b>93-3030</b> 	<b>93-3010</b> 
			S&S®	–	<b>93-3029</b>	–
116"	4⅞"	5.160"	Stock HD®	<b>93-3038</b>	<b>93-3037</b>	<b>93-3016</b>
			S&S®	–	<b>93-3037</b>	<b>93-3071</b>
117"	4⅞"	4.888"	Stock HD®	<b>93-3031</b> 	<b>93-3030</b> 	<b>93-3014</b> 
			S&S®	–	<b>93-3030</b> 	<b>93-3070</b>
124"	4⅞"	5.013"	Stock HD®	<b>93-3038</b>	<b>93-3037</b>	<b>93-3016</b>
			S&S®	–	<b>93-3037</b>	<b>93-3071</b>

## CALCULATING CUSTOM HEAD BOLT LENGTHS SEE INSTRUCTIONS ON PAGE SEE PAGE 361



Dress up your engine with these magnetic chrome head bolt covers. Easy installation, no tools, no messy adhesives. A powerful magnet holds cover in place, yet allows easy removal. Chrome plated steel looks great on any engine, but is a must for polished engines. For S&S head bolts only.

## CHROME HEAD BOLT COVERS

Set of 4	<b>50-0333</b>
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 WARNING: Cancer and Reproductive Harm

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110™

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix



# DIE-CAST ROCKER COVERS

## FITMENT

- All Twin Cam 88° big twins
- Sold as stock in 4 1/8" bore S&S engines

## FEATURES AND BENEFITS


- Special rocker arm supports are included
- S&S rocker covers are finished with show-quality chrome
- Installation on stock and most comparable sized engines can be performed without removing the engine from the frame
- Clearanced to permit valve lifts up to .640" using S&S valve spring packages and stock rocker arms or S&S roller rocker arms
- S&S rocker covers accept valve springs up to 1.660" O.D. without modification
- Exclusive one way valve built into the rocker cover gasket to control oil carry over

## KIT CONTENTS

- Front and rear covers
- All necessary gaskets and o-rings
- Mounting hardware



## DIE-CAST ROCKER COVER KIT

Description	Part #
Gloss Black	900-0937
Chrome 	90-4110

 WARNING: Cancer and Reproductive Harm

**ANY JOB IS EASY WITH THE RIGHT TOOLS**  
**S&S ROCKER COVER WRENCH SET, SEE PAGE 339**

**REPLACEMENT PARTS: SEE PAGE 237**

## NOTES

If using valve spring packages with taller than stock installed height, some minor clearancing may be required.

Cylinder heads must be set up correctly for high lift cams, and it remains the builder's responsibility to confirm all clearances.

In most instances, only minor clearancing is required to use S&S rocker covers with valve springs larger than 1.660" O.D.

S&S® rocker covers are required if S&S cylinder heads are used with S&S electric compression releases.



# MANIFOLDS FOR CARBURETED BIG TWIN ENGINES

## FITMENT

- 1999–'06 big twins

## FEATURES AND BENEFITS

- Fits stock or S&S heads
- Fits stock or engines with taller cylinders

## NOTES

S&S manifolds require S&S style manifold o-rings.

S&S style o-rings must be used with these manifolds. S&S o-rings are slightly thinner to accommodate the larger S&S port diameter. Use of stock o-rings may cause damage. See page 224.



Manifold for S&S carburetors



Manifold for CV carburetor

## MANIFOLDS FOR 1999–2005 BIG TWIN ENGINES (REQUIRING MAP SENSOR\* MACHINING)

Engine Style and Displacement	Cylinder Length	Manifold Size	Super E	Super G
**88", 95" & 106" & S&S T-Series Engines	4.937"	410	<b>160-1718</b>	<b>16-2588</b>
Stock 2006 models	4.937"	405	<b>160-1717</b>	<b>16-2587</b>
**111" & S&S T-Series 111" Engines	4.763"	398	<b>160-4487</b>	<b>16-2604</b>
117" & S&S117" Hot Set Up Kits	4.888"	408	–	<b>16-2603</b>
**124" & S&S T-Series 124" Engines	5.013"	417	–	<b>16-2598</b>

\*All S&S engines for 1984–'06 and 1999-up big twins equipped with S&S IST ignition system.

\*\*Some S&S heads have additional material on the manifold surface to allow the use of a stock length manifold (410) on a 99-06 111" and 124" engine. If you are not sure which manifold should be ordered, check fitment with the stock manifold first.

## CV MANIFOLDS — 1999–2005 BIG TWIN

Style/Displacement	(mm)	Manifold Size	Part #
88", 95", 106" Twin Cam 88	40-45mm	410	<b>160-1722</b>
96 stock	48mm	410	<b>160-0001A</b>

## CV MANIFOLDS — 2006 & UP BIG TWIN

Style/Displacement	(mm)	Manifold Size	Part #
96 stock	40-45mm	405	<b>160-1721</b>
96 stock	48mm	405	<b>160-0002A</b>




16-0241



16-0242

## U-RINGS FOR CONSTANT VELOCITY CARBS

Size	Part #
40-42mm	<b>16-0242</b>  27002-89
44-48mm	<b>16-0241</b>



16-0136-S



50-8372

## REPLACEMENT PARTS FOR MANIFOLDS

Description	Part #
Manifold Fitting VOES Rubber Cap 3/16" I.D. x 3/16" O.D. x 1/2"	<b>50-8372</b>
Manifold Vacuum Fitting	<b>16-0136-S</b>

# MANIFOLDS FOR SINGLE BORE EFI BIG TWIN ENGINES

## FITMENT

- Stock height or taller than stock 1999–'05 bt (See page 120 for 2006 models)
- S&S 52mm or 58mm throttle bodies
- Stock or S&S heads
- S&S T-Series Long Block engines

## NOTE

S&S style o-rings must be used with these manifolds. S&S o-rings are slightly thinner to accommodate the larger S&S port diameter. Use of stock o-rings may cause damage.



## MANIFOLDS FOR SINGLE BORE EFI 1999–'05 BIG TWINS

Engine Displacement	Cylinder Length	Manifold Size	Part #
**88", 95", 103", 106" & S&S T-Series Engines	4.937"	410	<b>16-5141</b>
124" Hot Set Up Kit (w/stock or S&S heads w/stock manifold geometry)	5.013"	417	<b>16-5139</b>
**S&S T-Series 111" Long Block engines	4.763"	398	<b>16-5136</b>
**S&S T-Series 124" Long Block engines	5.013"	417	<b>16-5139</b>

\*Some S&S heads have additional material on the manifold surface to allow the use of a stock length manifold (410) on a 99-06 111" and 124" engine. If you are not sure which manifold should be ordered, check fitment with the stock manifold first.

Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster™ & Buell™

2014–2019 Street™ &  
Street Rod™

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Appendix



# THROTTLE HOG CABLE OPERATED THROTTLE BODIES

S&S cable operated Throttle Hog Throttle bodies are available for 2002-'17 Harley-Davidson® big twins using cable operated throttles. Choose from 58mm, for stock or mildly built engines, or the whopping 66mm Throttle Hog for big inch engines. More Air, More Power!

## FITMENT

- 2002-'05 Harley-Davidson EFI big twins with cable controlled throttles
- S&S EFI Hot Set Up Kit® installations and T-Series Long Block engines with cable controlled throttles

## FEATURES & BENEFITS

- More air flow for improved performance
- S&S Stealth air cleaners kit, with the proper bore sizes, are available
- Works with all air cleaner kits designed for throttle by wire engines with stock breather system
- One-piece design for easy installation and stock appearance
- Compatible with stock sensors, fuel rail, and throttle cables
- Black powder coat finish matches stock
- Sealed, stainless steel throttle shaft with dual roller bearings for smooth operation and no air leaks
- Kit includes hardened steel flanges and seals
- No stock throttle body exchange required!

## THROTTLE HOG CABLE OPERATED THROTTLE BODIES FOR 2002-2005 BT

Year	Size (mm)	Engine Fitment	Manifold Size	Part #
2002-2005 bt	58	97", 98" & S&S T-Series Engines** (Engines produced after 2013)	410	<b>170-0337</b>
		S&S T-Series 111" Engines**	398	<b>170-0339</b>
		S&S 117" Hot Set Up Kits	408	<b>170-0340</b>
		S&S T-Series 124" Engines**	417	<b>170-0338</b>
	66	97", 98" & S&S T-Series Engines** (Engines produced after 2013)	410	<b>170-0342</b>
		S&S T-Series 111" Engines**	398	<b>170-0344</b>
		S&S 117" Hot Set Up Kits	408	<b>170-0343</b>
		S&S T-Series 124" Engines**	417	<b>170-0341</b>

\*\*Some S&S heads have additional material on the manifold surface to allow the use of a stock length manifold (405) on a 124" engine.

If you are not sure which manifold should be derided, check fitment with the stock manifold first.

Cylinder heads on T-Series long block engines are 1999-'05 style. Owners of 2006 models will need to purchase a set of 1999-'05 style, offset intake flanges such as S&S #106-3516.

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## MAKE MORE POWER!

### S&S AIR CLEANER KITS

See page 171

## REPLACEMENT FLANGE KITS

2002-2005 bt ..... **160-0175**



# SINGLE BORE EFI THROTTLE BODIES

**52MM:** Offering a 30% larger cross sectional area than stock throttle bodies, the S&S 52mm bore throttle body flows more than enough air for all but the most demanding street engines.

**58MM:** In response to constant requests for something bigger, S&S also offers a huge 58mm bore throttle body! Strictly for large displacement competition engines, this throttle body allows your engine to breathe easily and make more power!

## FITMENT

- 1999–'16 big twins (except 2008–up touring models with electronic throttle control)

## FEATURES AND BENEFITS

- Excellent performance
- Recommended tuning products:
  - S&S VFI
  - Cruise control compatible with no extra bracket

## KIT CONTENTS

- Throttle body assembly, Fuel injectors, Fuel rail, Harness adaptors, All necessary hardware, gaskets, and hoses

**REPLACEMENT PARTS: SEE PAGE 248**



## SINGLE BORE EFI THROTTLE BODY/FUEL RAIL KITS

Fitment	52mm	58mm
2002–'05 EFI big twin & 2001 Softtail models	<b>17-5067</b>	<b>106-4407</b>
2006–'16 EFI big twin*	<b>17-5070</b>	<b>106-4408</b>

\*except 2008–up touring models with electronic throttle control.

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If you plan to use another programmable fuel injection module, it is best to consult the manufacturer to be certain that it is compatible with the S&S single bore system and has enough tuning capability for your engine configuration.

Installation of S&S throttle body on 1995–'01 bikes requires S&S ECU. Single bore throttle bodies are not compatible with stock Magneti Marelli® ECU

# BLACK SUPER E & G CARBURETORS

## FEATURES AND BENEFITS

- Exclusive black coating — heat and chemical resistant
- Offered in standard venturi or increased venturi diameter — specially machined for 7% more flow

## BLACK CARBURETORS FOR 1984–2005 BIG TWINS

Fitment	Description	Part #
Increased venturi diameter (7% more flow)	Super E Carb	<b>110-0099</b>
	Super G Carb	<b>110-0100</b>
Standard venturi diameter	Super E Carb	<b>110-0133</b>
	Super G Carb	<b>110-0138</b>

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT



Seeing is believing. It's easy to see the differences in the bore sizes of a stock Harley-Davidson® throttle body and the S&S® 52mm or 58mm throttle bodies. How big do you want to go?

## NEW & IMPROVED!

**CABLE-OPERATED THROTTLE HOGS SEE PAGE 212**

## MAKE MORE POWER!

**S&S® STEALTH AIR CLEANERS SEE PAGE 171**

**S&S AIR CLEANER KITS SEE PAGE 174**



## NOTES

These black carb kits do not include air cleaners. Air cleaner options are available: [See page 171](#). Manifolds are required. [See page 211](#).

# SUPER E & G COMPLETE CARBURETOR KITS

## FITMENT

- 1999–'06 Twin Cam 88® engines
- S&S carbureted engines
- Custom v-twin applications

## FEATURES AND BENEFITS

- Four fuel delivery ports — Better throttle response
- O-ring sealed idle mixture screw
- Increased air flow for more power
- Adjustable accelerator pump for quick throttle response and easy starting
- Utilization of the factory dual cable system ensures safe operation
- Direct replacement and high quality fit and finish — less down time and better performance
- Variable position enrichment starting system

## KIT CONTENTS

- Super E or G carburetor
- S&S intake manifold
- Classic Teardrop air cleaner kit
- Mounting hardware
- Gaskets, seals and hoses
- Instructions



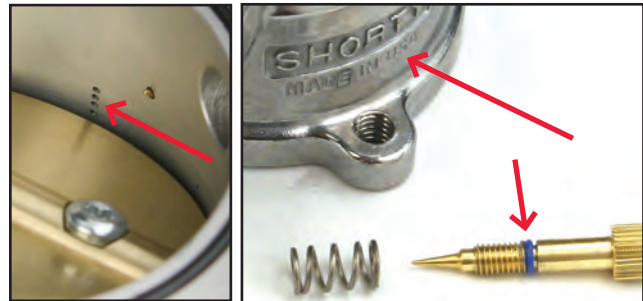
11-0450

## SUPER E & G COMPLETE CARBURETOR KITS

Fitment	Super E	Super G
1999–'05 big twin	<b>11-0450</b>	<b>11-0451</b>
2006 big twin	<b>106-0874</b>	<b>106-0875</b>

## SUPER E & G CARBURETOR ONLY

Fitment	Super E	Super G
All Years & Models	<b>11-0420</b>	<b>11-0421</b>



As the throttle plate opens, it exposes more of these holes to engine vacuum and delivers more fuel as rpm increases. This o-ring around the idle mixture screw not only eliminates potential air leaks, but helps keep the screw from vibrating out of adjustment. "Made in USA" cast into carb body identifies this as a new style carb.

## NOTES

S&S® does not recommend polishing or chrome plating Super E & G carbs. Our repair department has seen many carbs with plugged passages due to polishing compounds, and some carbs that have been destroyed because the polishing or chrome plating had altered critical machined surfaces.

Recommended for closed circuit use only—S&S Super E & G carbs shown are not approved for use on motor vehicles operated on California public highways, or in other states where similar pollution laws may apply. The user shall determine the suitability of the product for his or her use and shall assume all risk and liability in connection therewith.

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## REPLACEMENT PARTS: SEE PAGE 244



## OPTION

Optional cruise control adapter kits allows riders to keep factory cruise feature on 1998–'06 models

## CRUISE CONTROL ADAPTER KIT

Fitment	Part #
1998–'06 bt	<b>11-2927</b>



# TWO CABLE THROTTLE ASSEMBLIES

The S&S two cable throttle assemblies are high quality “pull open – pull close” type throttles designed for use on any two cable carburetor installations on bikes with 1" O.D. handlebars. A special soft plastic material used to mold the grips makes them look and feel exactly like stock grips. There are four different assemblies available to make installation on most chassis easy.

## TWO CABLE THROTTLE REQUIRED

S&S Super E and G carburetors require the use of a two cable, pull open–pull closed throttle assembly. Any chassis including 1980 and earlier stock models equipped with a single cable throttle mechanism requires conversion to a two cable, pull open–pull closed type. S&S offers high quality two cable throttle assemblies for this purpose. Stock big twin models from 1981 to present have a two cable throttle and should not require changing. Super E and G Carb kits for 1990 and later models come with the new longer throttle cable guide bracket which allows the use of the stock CV style throttle cables.



19-0440

## NOTE

The chart on this page is used only when using throttle cable bracket part #11-2339. This bracket is standard on all S&S Super E & G carburetor kits for big twins 1989 and earlier and all kits for Harley-Davidson® Sportster® models with the exception of the kit for 2004-'05 models. Carburetor kits for 1990 and later big twin models come with the longer cable bracket part #11-2338 for use with stock CV throttle cables. Super E and G carburetors ordered for big twin models 1981 and later are being shipped with the correct throttle cable bracket to fit the stock cables. Big twin carbs that are not year specific will be shipped with both cable brackets. All Sportster models 1988-'03 will still require conversion to butterfly style cables.

## THROTTLE CABLE APPLICATION CHART

Application	Fastening Method	Length Total Housing	Length Vinyl Housing	Open Side	Close Side
1996–Up Softai® I (FXSTS, FXSTC, FLSTC, FLSTF) 1996–Up Dyna®	Snap-in	39"	35"	<b>19-0438</b>	<b>19-0439</b>
1996–Up All FLT models	Snap-in	48"	44"	<b>19-0464</b>	<b>19-0465</b>
1996–Up custom application	Snap-in	42"	38"	<b>19-0440</b>	<b>19-0441</b>

\*1998 and later required Harley-Davidson® throttle assembly #71831-96

\*\*1980 and earlier must be converted to dual cable throttle assembly.

## REPLACEMENT PARTS

Description	Part #
S&S Universal Throttle Clamp	<b>106-3520</b>
Throttle Grip Clamp Set 1985–'95	<b>106-3519</b>
Top Throttle Grip Clamp only	<b>19-0222</b>
Bottom Throttle Grip Clamp only	<b>19-0220</b>
Throttle Grip Clamp Screw <i>(Fits S&amp;S throttle assemblies: Part #19-0448, #19-0449, #19-0482, #19-0450, #19-0229)</i>	<b>50-0043</b>
Throttle Grip Set	<b>106-3521</b>
Right Hand Grip only	<b>19-0225</b>
Left Hand Grip only	<b>19-0226</b>
Cable Adjuster <i>(Fits S&amp;S throttle assembly part #19-0229)</i>	<b>19-0223</b>
Cable Adjuster Jam Nut <i>(Fits S&amp;S throttle assembly part #19-0229)</i>	<b>19-0227</b>
Handlebar Spacing Sleeve 4" x 1" O.D.—converts 7/8" handlebars to 1" O.D.	<b>19-0235</b>



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod®

Indian® Models

Tools &  
Shop Supplies

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Company Policy

Appendix



# JETS & CARB REBUILD KITS FOR S&S SUPER E & G CARBURETORS

For those who need to rejet their carburetor because of engine modifications, exhaust modifications, or changes in altitude, we have extra jet kits available which are designed to cover most jetting situations.

## DEALER JET KITS

Description	Part #
S&S Jet Kit (Includes 3 each of all intermediate jets and 5 each of all main jets, plus a main jet tool)	11-3102

WARNING: Cancer and Reproductive Harm

## JET PACKS

Description	Part #
Low Range Jet Pack – For jetting most stock and moderate performance engines.	

Includes one each intermediate jets (.025", .0265", .028", .0295") one each main jets (.062", .064", .066", .068", .070", .072", .074").

11-7270

High Range Jet Pack – For jetting some stock and all performance engines.

Includes one each intermediate jets (.0295", .031", .032", .033") and one each main jets (.072", .074", .076", .078", .080", .082", .084").

11-7271

Master Jet Pack – For jetting all Super B, E, and G equipped engines.

Includes one each intermediate jets (.025", .0265", .028", .0295", .031", .032", .033") and one each main jets (.062", .064", .066", .068", .070", .072", .074", .076", .078", .080", .082", .084").

11-7272

WARNING: Cancer and Reproductive Harm



11-3102±



11-7272±



106-3517±

## INTERMEDIATE JETS - SERIES #94 INDIVIDUAL SELECTION

Size	QTY	Part #	MSRP	Size	QTY	Part #
.025	each	11-0250	\$12.95	.032	each	11-0320
	3 pack	11-7107	\$30.95		3 pack	11-7112
.0265	each	11-0265	\$12.95	.033	each	11-0330
	3 pack	11-7108	\$30.95		3 pack	11-7113
.028	each	11-0280	\$12.95	.036	each	11-0360
	3 pack	11-7109	\$30.95		3 pack	11-7114
.0295	each	11-0295	\$12.95	.040	each	11-0400
	3 pack	11-7110	\$30.95		3 pack	11-7115
.031	each	11-0310	\$12.95	Blank	each	11-0000
	3 pack	11-7111	\$30.95			

WARNING: Cancer and Reproductive Harm

Early Series #94 gas jets were stamped with single digit numbers. Conversions for these numbers are:

- |        |       |        |       |
|--------|-------|--------|-------|
| 1..... | .025" | 4..... | .033" |
| 2..... | .028" | 5..... | .036" |
| 3..... | .031" | 6..... | .040" |

## NOTES

No returns or exchanges on jets.

**MAIN JETS - SERIES #72 INDIVIDUAL SIZE SELECTION\***

Size	QTY	Part #	Size	QTY	Part #
.040	each	11-4040	.080	each	11-4080
	5 pack	11-7220		5 pack	11-7240
.042	each	11-4042	.082	each	11-4082
	5 pack	11-7221		5 pack	11-7241
.044	each	11-4044	.084	each	11-4084
	5 pack	11-7222		5 pack	11-7242
.046	each	11-4046	.086	each	11-4086
	5 pack	11-7223		5 pack	11-7243
.048	each	11-4048	.088	each	11-4088
	5 pack	11-7224		5 pack	11-7244
.050	each	11-4050	.090	each	11-4090
	5 pack	11-7225		5 pack	11-7245
.052	each	11-4052	.092	each	11-4092
	5 pack	11-7226		5 pack	11-7246
.054	each	11-4054	.094	each	11-4094
	5 pack	11-7227		5 pack	11-7247
.056	each	11-4056	.096	each	11-4096
	5 pack	11-7228		5 pack	11-7248
.058	each	11-4058	.098	each	11-4098
	5 pack	11-7229		5 pack	11-7249
.060	each	11-4060	.100	each	11-4100
	5 pack	11-7230		5 pack	11-7250
.062	each	11-4062	.102	each	11-4102
	5 pack	11-7231		5 pack	11-7251
.064	each	11-4064	.104	each	11-4104
	5 pack	11-7232		5 pack	11-7252
.066	each	11-4066	.106	each	11-4106
	5 pack	11-7233		5 pack	11-7253
.068	each	11-4068	.110	each	11-4110
	5 pack	11-7234		5 pack	11-7255
.070	each	11-4070	.115	each	11-4115
	5 pack	11-7235		5 pack	11-7256
.072	each	11-4072	.120	each	11-4120
	5 pack	11-7236		5 pack	11-7257
.074	each	11-4074			
	5 pack	11-7237			
.076	each	11-4076			
	5 pack	11-7238			
.078	each	11-4078			
	5 pack	11-7239			

⚠ WARNING: Cancer and Reproductive Harm

**MAIN JET AIR BLEED KIT (One Jet Each Size)**

Sizes	Part #
.042" - .060"	106-3517
.084" - .120"	106-3518

⚠ WARNING: Cancer and Reproductive Harm

**S&S® CARBURETOR REBUILD KITS**

To insure that you continue to get the utmost in performance from your S&S carburetor, we have put together a series of rebuild kits that are designed to provide the proper parts to return a worn carburetor to top shape. We have assembled different types of kits to cover the different degrees of rebuild necessary.

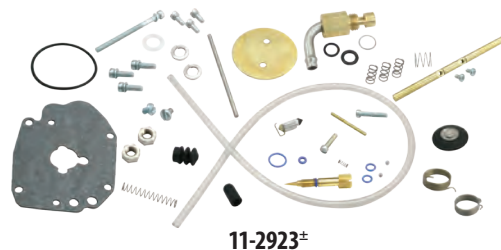
**MASTER REBUILD KITS**

Master rebuild kits contain a body rebuild kit, accelerator pump rebuild kit (Super E and G only), all new fasteners, springs, idle mixture screw, seat, and needle assembly. Everything needed to completely rebuild one carburetor.

**MASTER REBUILD KIT**

Description	Part #
Super E	11-2923
Super G	11-2924

⚠ WARNING: Cancer and Reproductive Harm



11-2923<sup>±</sup>

**BODY REBUILD KITS**

Body rebuild kits for Super E and G carbs also contain throttle shaft nuts, nylon washers, accelerator pump o-ring, and accelerator pump boot. Body rebuild kits for Super E and G carbs do not contain throttle shaft bushings since these carbs have stainless steel throttle shaft bushings already installed.

**BODY REBUILD KIT**

Description	Part #
Super E	11-2906
Super G	11-2907

⚠ WARNING: Cancer and Reproductive Harm –



11-2907

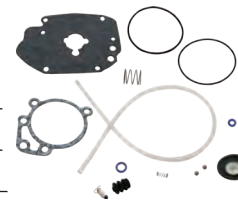
**BASIC REBUILD KIT**

A gasket and seal kit for low mileage Super E & G carbs. Perfect to reassemble carbs taken apart for inspection and cleaning.

**BASIC REBUILD KIT**

Description	Part #	MSRP
Super E & G	110-0067	\$41.95

⚠ WARNING: Cancer and Reproductive Harm



**ACCELERATOR PUMP REBUILD KITS**

Accelerator pump rebuild kits contain diaphragm, diaphragm spring, check balls, check ball spring, pump pushrod, and required hardware and o-rings.

**ACCELERATOR PUMP REBUILD KIT**

Description	Part #
Super E & G	11-2918



Milwaukee-Eight®

2007–2017 Twin Cam  
96°/103°/110°

1999–2006  
Twin Cam 88°

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod®

Indian® Models

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Appendix

# UNIVERSAL WIRING HARNESS FOR CUSTOM BIKES AND RACING APPLICATIONS

## FITMENT

- Custom and racing v-twin applications using Delphi® style EFI module
- Easy replacement for engine sub harness on 2002 through 2005 FL models
- 1995-'05 big twins – Useful for carb to Delphi EFI and Magneti Marelli® to Delphi EFI conversions
- Great for S&S X-Wedge® engines

## FEATURES AND BENEFITS

- Simple electrical hook up of all connections required to operate engines with Delphi® style EFI
- All cables are terminated with the correct factory crimped connectors
- Works the S&S, stock and most 36 pin aftermarket Delphi style EFI modules
- Compatible with S&S throttle bodies, as well as stock and most aftermarket throttle bodies
- Replaces stock engine sub-harness in 2002-'05 FL models, simplifies carb to EFI conversions



## UNIVERSAL WIRING HARNESS

Description	Part #
For Custom and Racing Applications	550-0264

# COMPRESSION RELEASES

## FITMENT

- S&S cylinder heads for big twin

## OPTIONS

### MANUAL RELEASE:

Activated by a cable similar to a choke control, this slick system can be used with any style rocker cover.

### ELECTRIC RELEASE:

Solenoid operated, this system automatically opens and closes when the starter button is pressed and released. Convenient and simple, this is the best setup for big displacement high compression bikes. Requires S&S die cast rocker covers.



## COMPRESSION RELEASE KITS

Description	Part #
Electric	90-4915

## TOOLS AND ACCESSORIES

Description	Part #
S&S Two-Piece Socket Kit: <i>Allows in-frame installation of S&amp;S compression releases and protects wiring from damage during installation.</i>	53-0045
S&S Compression Release Hole Plug	90-4916

## REPLACEMENT PARTS

Description	Part #
Silicone Solenoid Caps	55-1009
Wiring Harness 	55-1010
Electric Compression Release Assembly 	90-4914



## NOTES

S&S rocker covers must be used with electric compression releases due to clearance requirements for the solenoids.

Rocker covers must be removed when installing S&S® compression releases. If lack of frame clearance prevents removal of rocker covers, engine must be removed from frame for compression release installation.

In most cases, S&S compression releases can be installed while the engine is in the frame with the special S&S two-piece socket kit, part #53-0045.

If cylinder heads are machined for S&S compression releases, but compression releases are not used, special plug part #90-4916 (*two required*) must be installed to seal the machined hole.

Stock cylinder heads cannot be machined for S&S compression releases because there is not enough material in critical areas.



# VARIABLE FUEL INJECTION MODULES (VFI)

## FEATURES AND BENEFITS

- Directly replaces stock Harley-Davidson® fuel injection modules – plugs directly into stock wiring harness
- Includes ProTune II software and can be updated
- Three stage engine overheat protection helps prevent possible engine damage caused by improper modifications to fuel maps
- Altitude compensation automatically adjusts for altitude variations
- Live tuning allows manual changes to maps while the engine is running
- Self diagnostics and actuator test functions help tuning and verify proper installation/operation
- Engine light can be programmed to function as a shift light
- Closed loop capable
- Knock sensing ignition control (*USB Delphi® style unit only*)
- Optional closed loop sensor kit extend module capabilities
- Speedometer calibration function for 2004–up Harley-Davidson® models (*does not require installation of separate speedometer calibrator*)

## DELPHI® STYLE S&S VFI MODULE

### FITMENT

- Delphi® ECU equipped big twins


### KIT CONTENTS

- Delphi® style S&S VFI module
- ProTune II software
- USB port cover kit (part #55-5090 only)
- Installation instructions



55-5090

## DELPHI® STYLE S&S VFI MODULE

Fitment/Description	Part #
VFI Module for 2001–'11 bt ( <i>except 2008-up touring and 2011 Softail®</i> )	<b>55-5090*</b>
S&S Delphi Style VFI Closed Loop Sensor Kit 	<b>106-2066</b>

\*Special Order: Download the special order form

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## CLOSED LOOP CAPABILITY

When equipped with a dual closed loop sensor kit and running in closed loop mode, VFI tuning becomes a breeze! S&S supplies base maps for several displacement groups, creating a starting point to get bikes up and running. Utilizing dual oxygen sensors (*sold separately*) placed in the exhaust, the S&S closed loop system modifies the base fuel map to meet the specific requirements of your engine!

- Automatic tuning on the street or on the dyno
- Each cylinder is tuned individually
- Fuel map changes are saved in the module and can be merged with the pre-loaded base map
- Works with stock oxygen sensors used on late model Harley-Davidson® motorcycles

Closed loop VFI can also automatically compensate fuel delivery for modifications creating up to a 20 hp gain, such as changes in:

- Displacement
- Cams
- Exhaust
- Head porting or installation of aftermarket heads

## NOTES

All current production S&S modules are closed loop compatible, and all older S&S modules can be updated with current calibration by simply downloading software from the S&S

Please note that maps created for older versions of the VFI software are not compatible with the new closed loop software, however they can be converted to closed loop if desired.





S&S VFI systems installed on 2004–up Harley-Davidson® models incorporate a speedometer calibration feature.

## NOTE

Due to the extreme range of control offered by the S&S VFI modules, we recommend that they be installed and tuned by S&S Certified VFI Tuning Centers.

# REPLACEMENT PARTS FOR S&S® VFI MODULES

## REPLACEMENT PARTS FOR S&S® VFI MODULES


Description		Part #
S&S VFI Closed Loop Sensor Kit	Delphi® Style 	106-2066
Service Kit, O <sub>2</sub> Sensor 		106-2061
Service Kit, DTM Pin		55-1521
Service Kit, Oxygen Sensor Boss  		55-6071-S
Service Kit, Subharness	Delphi® Style	55-1595
Hardware Kit (USB Cover) (for 550-0001 & 55-5090 modules)		55-5091



106-2066

## HIGH OUTPUT COILS

### HIGH OUTPUT COILS

S&S High Output 3.0Ω Single Fire Coil	<p><i>The perfect complement for S&amp;S IST ignition systems. This single fire coil is actually two separate coils in a single package. Coil impedance is 3Ω per coil.</i></p>	55-1571
S&S High Output 0.5Ω Single Fire Coil 		
High output 0.5Ω single fire coil for S&S IST ignition.		55-1576



55-1571



55-1576

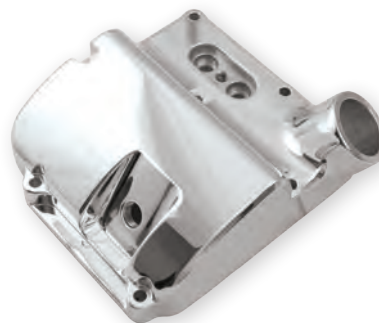
## TRANSMISSION TOP COVER

### CHROME TRANSMISSION TOP COVER<sup>±</sup>

Description	Part #
Billet for 1999-'05 Dyna® Models	106-3886

*This cover is required for proper oil line connection in 1999-'05 Dyna models when installing an S&S T124 engine or when installing S&S replacement crankcases. This top cover may also be used as stock replacement for 1999-'05 Dyna models.*

<sup>±</sup>  WARNING: Cancer and Reproductive Harm



## INNER PRIMARY BEARING RACE

### FITMENT

- All 1991-'06 big twins (except '06 Dyna®)



### FEATURES AND BENEFITS

- Will not "walk" on transmission mainshaft
- Simple to install
- Prevents costly damage to mainshaft seal, output gear & output gear bearing

### INNER PRIMARY BEARING RACE

Fitment	Part #
All 1991-'06 big twins (except '06 Dyna®)	56-5089 

ANY JOB IS EASY WITH THE RIGHT TOOLS: S&S INNER BEARING RACE PULLER, SEE PAGE 339

# VARIABLE PRESSURE CLUTCH

The VP clutch is the most cost effective kit for upgrading your HD® stock clutch without any modifications. Up to 40% more pressure for stronger clutch engagement.

## FEATURES AND BENEFITS

- Works like a lock up clutch
- Increased torque capacity: strength of engagement increases with RPM
- 10 minute installation
- Fits behind a stock derby cover and primary cover—No modification required
- Can be used with cable and hydraulic clutch controls

Does not fit: 2013 and later CVO™ and Tri Glide®, 2015 and later Ultra Limited Low and Electra Glide Classic Low Models with new HD® Assist and Slipper Clutch: 3 Stud Clutch Hub

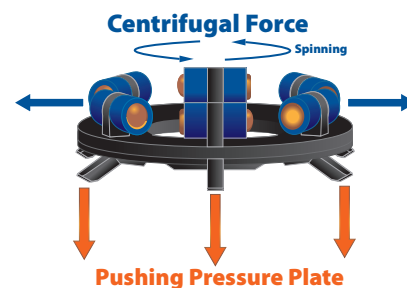
Non-stock derby cover (including any special or 2003 anniversary cover) and 3 hole derby covers may require a derby

### VARIABLE PRESSURE CLUTCH

Description	Part #	MSRP
1998–up big twins with 6 Stud Clutch Hub	<b>560-0242</b>	\$321.95



560-0242



Centrifugal force makes more clamping force. Regular clutches have static pressure only with clutch springs. The Lock up clutch has two different types of pressure. One is a Static Pressure, and another is a Centrifugal Force by Lock-up as an additional pressure.

# HEAVY DUTY DIAPHRAGM SPRING

## FITMENT

- 1998–up big twin models

## FEATURES AND BENEFITS

- 380 lbs pressure, 25% stronger than stock
- Same pressure as Screamin' Eagle® heavy-duty spring
- Compatible with S&S VP and stock clutches

### HEAVY DUTY DIAPHRAGM SPRING

Description	Part #
1998–up big twins	<b>560-0244</b>



560-0244

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

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Appendix

# GATES® HIGH STRENGTH FINAL DRIVE BELTS

S&S final drive belts by Gates are available with 14mm pitch in 1½" and 1⅞" widths. See the chart and match the width and number of teeth required for your vehicle. You can find this information in the vehicle service manual.



## SECONDARY DRIVE BELTS (14MM PITCH)

Teeth	1⅞" Wide	1½" Wide
125	<b>106-0357</b>	–
126	–	<b>106-0348</b>
127	–	<b>106-0349</b>
128	<b>106-0358</b>	<b>106-0350</b>
130	<b>106-0359</b>	<b>106-0351</b>
132	<b>106-0360</b>	<b>106-0352</b>
133	<b>106-0361</b>	<b>106-0353</b>
135	<b>106-0362</b>	<b>106-0354</b>
136	–	<b>106-0355</b>
139	<b>106-0363</b>	<b>106-0356</b>
149	<b>106-1338</b>	<b>106-2695</b>
156	–	<b>106-2827</b>

## ATTENTION CUSTOM BIKE MANUFACTURERS!

### SPECIAL ORDER BELTS FROM S&S® AND GATES®

Special belt sizes, private brand labeling, and assistance with belt drive design, are available to custom performance OEM's and aftermarket bike builders, through S&S. These products and services are available for licensed motorcycle manufacturers only, and a minimum order quantity may be required.

Drive belts with your company name imprinted on them are a perfect way to show off your brand. Any belt size currently available in the S&S catalog, as well as the special ordered sizes, can be specially branded. Minimum order quantities would apply.

Whether you're designing a completely new chassis, or simply need a replacement belt, S&S can help you find the belt you're looking for. Through the combined efforts of Gates and S&S, S&S can now provide customers with the technical assistance they need for designing new secondary belt drive systems. In addition, S&S can help you determine required tooth count for your existing chassis design, based on the pulley center-to-center distances and pulley tooth counts.

All belts have a 14mm tooth pitch, and are made of the super strong Gates Carbon X3N material. Belts are available in three standard widths of 1.125", 1.5" and 1.181" (30mm), but can be special ordered in nearly any width for a nominal charge. If you want a belt with a special tooth count, they are also available (*see the special order chart for availability*).

Contact your S&S Customer Support Representative for more information.

## BELTS AVAILABLE BY SPECIAL ORDER (14MM PITCH)

Tooth Count	1.181" (30mm) Width*	1.25" Width*
125	●	
126	●	●
127	●	●
128	●	
130	●	
131	●	●
132	●	
133	●	
135	●	
136	●	●
137	●	●
139	●	
140	●	●
149	●	
150	●	●
151	●	●
152	●	●
156	●	

\*Minimum order required: 1.181" (30mm) – 16 belts; 1.25" – 17 belts.



# GASKETS

## REBUILD GASKET KITS FOR S&S® T-SERIES 1999-UP ENGINES AND HOT SET UP KIT®

1999-'06, 4 1/8", S&S base bolt pattern	<b>106-0976</b>
1999-'15, 4 1/8", Stock base bolt pattern	<b>310-0335</b>
1999-up T143 4.425" bore	<b>310-0751</b>

## TOP END GASKET KIT FOR TWIN CAM 88® AND S&S ENGINES

3 7/8" Stock Bolt Pattern	<b>90-9504</b>
4 3/8"	<b>90-9511</b>
4 1/8" S&S® bolt pattern	<b>90-9506</b>
4 1/8" Stock Cases	<b>90-9510</b>
4"	<b>90-9505</b>

## CYLINDER HEAD GASKET KITS T-SERIES 1999-UP

4 3/8" bore	<b>900-0800</b>
4 1/8" S&S® bolt pattern	<b>90-1910</b>
4 1/8" Stock bolt pattern	<b>90-1914</b>
4" Stock bolt pattern	<b>90-1913</b>
4" Stock bolt pattern, Twin-Cooled™	<b>930-0116*</b>
3 7/8" & 3.927" Stock bolt pattern, including Twin-Cooled	<b>910-0465*</b>

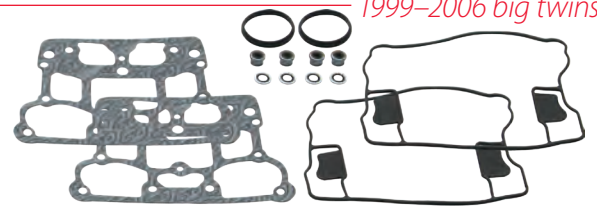
\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

## HEAD GASKETS T-SERIES 1999-UP

Bore Size	Thickness	Description	QTY	Part #
4 7/16"	.045"	Layered Steel	2 pack	<b>900-0762</b>
4 3/8"	.045"	Copper	2 pack	<b>93-1081</b>
4 1/8"	.043"	Graphite	each	<b>93-1047-5</b>
			10 pack	<b>93-1073</b>
4 1/8" Stock Bolt Pattern	.043"	Layered Steel	each	<b>93-1091-5</b>
			2 pack	<b>930-0102</b>
4 1/8" Stock Bolt Pattern	.030	Layered Steel	2 pack	<b>900-0217</b>
4"	.043"	Graphite	each	<b>93-1043-5</b>
4" Stock Bolt Pattern	0.45"	Layered Steel	2 pack	<b>900-0822</b>
4" Stock Bolt Pattern	.030"	Layered Steel	2 pack	<b>900-0821*</b>
4" Stock Bolt Pattern w/Twin Cooled™ Heads	0.45"	Layered Steel	each	<b>930-0115</b>
3 7/8" & 3.937"	.045"	Layered Steel	2 pack	<b>900-0862</b>
3 3/4" 16775-99B	.043"	Graphite	each	<b>93-1045-5</b>

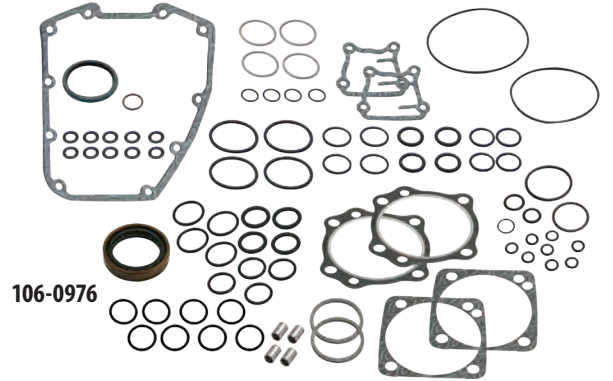
\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

1999-2006 big twins



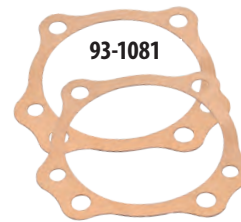
Milwaukee-Eight®

2007-2017 Twin Cam  
96"/103"/110"

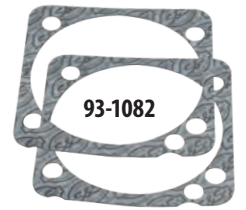


106-0976

1999-2006  
Twin Cam 88®



93-1081

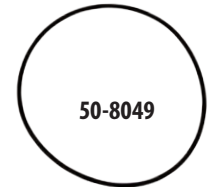


93-1082

1986-2019  
Sportster® & Buell®



900-0862



50-8049

2014-2019 Street® &  
Street Rod™

## BASE GASKETS AND O-RINGS T-SERIES 1999-UP

4"	.018"	Graphite	each	<b>93-1050-5</b>
4 1/8"	.018"	Graphite	each	<b>93-1048-5</b>
			2 pack	<b>930-0101</b>
4 3/8"	.018"	Micropore	10 pack	<b>93-1074</b>
			2 pack	<b>93-1082</b>
4 1/8" Stock Bolt Pattern	.018"	Micropore	each	<b>93-1092-5</b>
			2 pack	<b>930-0101</b>
4.425"	.018"	Micropore	10 pack	<b>93-1921</b>
			2 pack	<b>900-0783</b>
4"	.103"	Viton O-ring	each	<b>50-8049</b>

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106-5029



106-5688



900-0338

Appendix



## CONTINUED - GASKETS

3¾", 3⅞", 3.927"	.103"	Viton O-ring	each	<b>50-8048</b> 11256
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### EXHAUST GASKETS

1984—up big twins 65324-838, 65324-83A	each	<b>106-5029</b>
	10 pack	<b>93-1072</b>

### VALVE GUIDE SEALS

S&S® Heads with Powdered Metal Valve Guide	4 pack	<b>900-0737</b>
Valve Stem Oil Seal, Hat Style 18094-02	each	<b>900-0590</b>
Valve, Umbrella 26858-99	each	<b>900-0495</b>
For 1984-'02 big twin stock heads & S&S® prior to Jan. 2014	each	<b>900-0338</b>
	8 pack	<b>90-2158</b>
CNC Heads (2005—up bt)		<b>106-5688</b>

### ROCKER BOX GASKET KITS AND INDIVIDUAL GASKETS

#### S&S BILLET (OBSOLETE)


Gasket Kit		<b>90-4073</b>
O-ring, (-114), .625" ID x .812" OD, Black, Viton® 11270		<b>50-8033</b>
O-ring,(-268),9.483" ID x		<b>50-8050</b>
Gasket, Breather Cover, Stock Pattern,1999-'10 17591-99, 17162-03, 17592-99		<b>90-4077</b>
Gasket, Breather Baffle, Stock Pattern, 1999-'10 17162-03, 17592-99		<b>90-4078</b>
Gasket, bottom rocker cover, 4⅞" 1984—up	each	<b>90-4071-S</b>
	2 pack	<b>90-4071</b>
	10 pack	<b>90-4099</b>

#### DIE CAST ROCKER BOXES

Gasket set - rocker cover, cast		<b>90-4111</b>
O-ring,(-223),1.625" ID x 1.875" OD,Vito		<b>50-8044</b>
Gasket, bottom rocker cover, 4⅞", 1984—up	each	<b>90-4071-S</b>
	2 pack	<b>90-4071</b>
	10 pack	<b>90-4099</b>
Gasket,Rckr Cvr,S&S® DieC,O-ring,1984—up		<b>90-4079</b>

#### STOCK ROCKER BOXES

Gasket kit for 1999-'06 bt (use w/S&S heads)		<b>90-4097</b>
Gasket kit for 1999-'06 bt (use w/Stock heads)		<b>900-0534</b>
O-ring, (-114), .625" ID x .812" OD, Black, Viton® 11270		<b>50-8033</b>
Gasket, bottom rocker cover, 4⅞", 1984—up	each	<b>90-4071-S</b>
	2 pack	<b>90-4071</b>
	10 pack	<b>90-4099</b>
Gasket,Breather Cover,Stock Pattern, 1999-'10 17591-99, 17162-03, 17592-99		<b>90-4077</b>

Gasket,Breather Baffle,Stock Pattern, 1999-'10 17162-03, 17592-99		<b>90-4078</b>
Gasket,Rocker Cover,Steel, 1999—up bt	each	<b>90-4096-S</b>
Gasket,Rocker Cover,w/Stock Rocker Box, 1999—up bt	each	<b>90-4124</b>
	2 pack	<b>90-4120</b>
Filter, Breather  63815-99	each	<b>900-0496</b>

### LOWER END GASKETS AND SEALS


For S&S Heads/Stock boxes	each	<b>90-4124</b>
	2 pack	<b>90-4120</b>
Gear Cover gasket 25244-99A	each	<b>31-2032-S</b>
Tappet Cover gasket 18635-99B	each	<b>33-5303-S</b>
	2 pack	<b>33-5303-2</b>

### PUSHROD O-RINGS

O-ring,Kit,Pushrod Cover,1984-'99 bt		<b>93-4022</b>
Top O-ring 11293, 11157, 11101, 11190	each	<b>50-8039</b>
Middle O-ring 11132A	each	<b>50-8038</b>
Bottom O-ring 11145A	each	<b>50-8037</b>
Sprocket Shaft seal 12068		<b>31-4035</b>
S&S Oil pump seal kit		<b>31-2097</b>
Oil Pump Scavenge o-ring 11293, 11157, 11101, 11190	each	<b>50-8039</b>
Case alignment dowel o-ring 26432-76A	each	<b>50-8034-S</b>
	2 pack	<b>50-8034</b>
Oil jet o-ring	each	<b>50-8270</b>
	5 pack	<b>50-8275</b>
Cam plate and oil line plate o-ring 11301	each	<b>50-8066-S</b>

### FUEL SYSTEM GASKETS

#### Manifold Seals

S&S Manifold O-Ring	each	<b>16-0235</b>
	10 pack	<b>16-0243</b>
Stock Manifold O-ring  26995-86A, 26992-99, 26995-86B	each	<b>16-0236</b>
	10 pack	<b>16-0244</b>
Cap, rubber, manifold, fitting		<b>50-8372</b>

### CLASSIC TEARDROP AIR CLEANER

Backplate gasket	each	<b>106-1724</b>
	10 pack	<b>106-2328</b>



## CONTINUED - GASKETS

Vent seal washers silicone coated steel	1/2"	each	<b>50-7055</b>
		10 pack	<b>50-7057</b>
	3/8"	each	<b>50-7055</b>
		10 pack	<b>50-7057</b>

### STEALTH AIR CLEANER

#### Backplate gasket

Stock CV Carb & EFI Throttle Body, 1991–up xl/bt (except Throttle by Wire) 29062-95B		<b>106-6022</b>
Super E/G	each	<b>106-1724</b>
	10 pack	<b>106-2328</b>
For Muscle air cleaner (includes lanyards).		<b>170-0137</b>
Vent seal washers Nitrile Rubber Coated, .380" x .880" x .024"	each	<b>50-7055</b>
	10 pack	<b>50-7057</b>

### SINGLE BORE TUNED INDUCTION

#### Backplate gasket

Gasket, Backplate - E/G/SBEFI	each	<b>106-1724</b>
	10 pack	<b>106-2328</b>
Gasket, S&S SBEFI 58mm		<b>106-4662</b>
Gasket, Stock carb/Throttle Body 29062-95B		<b>106-6022</b>
Adaptor plate gasket		<b>17-1022</b>
Adaptor plate bracket o-ring	each	<b>50-0446</b>

### SINGLE BORE EFI THROTTLE BODY

#### Backplate gasket

52mm	each	<b>106-1724</b>
	10 pack	<b>106-2328</b>
58mm	each	<b>106-4662</b>
O-ring, throttle body to manifold		<b>50-7967-S</b>
Air Temp Sensor gasket		<b>16-5009-S</b>
IAC o-ring		<b>50-8149-S</b>
Fuel injector o-ring top		<b>50-8264-S</b>
Fuel injector o-ring bottom		<b>50-8265-S</b>
Fuel rail inlet o-ring 27237-95	each	<b>50-8137-S</b>



### CARBURETOR GASKETS (for Rebuild Kits, See page 217)

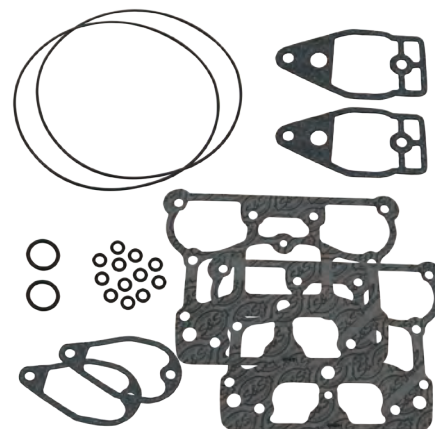
Bowl Gasket, Super E & G		<b>11-2386</b>	
Pump cap o-ring - (two required)	each	<b>50-8012</b>	
	10 pack	<b>50-8100</b>	
Idle Mixture Needle o-ring	each	<b>500-0036</b>	
	10 pack	<b>500-0148</b>	
Bellows Seal, Accelerator Pump		<b>11-2266</b>	
Accelerator pump diaphragm		<b>11-2282</b>	
Manifold to carb/throttle body o-rings	Super E	each	<b>50-8016</b>
		10 pack	<b>50-8094</b>
	Super G	each	<b>50-8015</b>
		10 pack	<b>50-8093</b>
Seat and bowl plug o-ring	each	<b>50-8009</b>	
	10 pack	<b>50-8095</b>	

### TRANSMISSION GASKETS

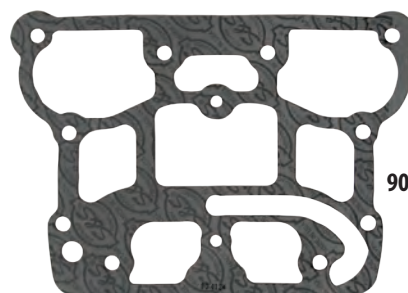
O-ring, (-114), .625" ID x .812" OD, Black, Viton® 11270	<b>50-8033</b>
O-ring, Quad Seal, (-031), 1.734" X 1.875" 11165	<b>50-8045</b>
Seal, Transmission Output Shaft 2.255" x 3.388" x .250, 1994–'99 bt 12067B	<b>56-3033</b>

### PRIMARY GASKETS

Gasket, Primary Cover, 1990–'05 Softail® and Dyna® models	each	<b>56-4049</b>
---	------	----------------



90-4073



90-4124

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™













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Appendix

# CRANKCASE REPLACEMENT PARTS FOR HARLEY-DAVIDSON® TWIN CAM 88® ENGINES

- |  |  |
|--|--|
| 1. Bolt, stator 10-24 x 1" SHC - 4 required 2720<br>each .....<br>4 pack .....   | 50-0044<br>31-0113   |
| 2. Seal, sprocket shaft 12068 .....  | 31-4035  |
| 3. Bearing, Timken® sprocket shaft 9028<br>                 | 31-4013  |
| 4. Timken Main Bearing Spacers<br>Fits 1 1/4" stock diameter shaft.  |  |
| .0995" - .1005" 9124 .....   |  31-4071    |
| .1015" - .1025" 9125 .....   |  31-4072    |
| .1035" - .1045" 9126 .....   |  31-4073    |
| .1055" - .1065" 9127 .....   |  31-4074    |
| .1075" - .1085" 9128 .....   |  31-4075    |
| .1195" - .1205" 9134 .....   |  31-4076    |
| 5. Bolt, case 3/16" - 18 x 3 1/2" HHC - 8 required<br>Chrome (each) .....  | 50-0254-S±   |
| Zinc 3427 (each) .....   | 50-0117  |
| 6. Washer, flat 5/16" x 1 1/16" x 1/16" - 8 required<br>Chrome (each) .....  | 50-7104-S±   |
| Zinc 6320, 70907-07, 6016, 6702 (each) .....   | 50-7034  |
| 7. Bolt center case 1/4" - 28 x 5 1/2" HHC Grade 8<br>Chrome (each) .....  | 50-0252-S±   |
| Zinc (each) .....  | 50-0090  |
| 8. Washer, flat, 1/4" x .474" x .050"<br>Chrome (each) .....   | 50-7105-S±   |
| Zinc (each) .....  | 50-7020  |
| 9. Nut 1/4"-28 Grade 8 - 1 required<br>Chrome (each) .....   | 50-5017-S±   |
| Zinc 7683 (each) .....   | 50-5011  |
| 10. Cylinder stud, S&S® Bolt Pattern - 8 required (each)  | 31-2325-S  |
| 8 pack .....   |  31-2340  |
| Cylinder stud, Stock Bolt Pattern - 8 required (each) .....  | 310-0437   |
| 11. Dowel, cylinder deck - 2 required (each) .....   | 500-0218   |
| 12. Bolt, cam plate 1/4" - 20 x 1" SHC - 4 required 852<br>each .....  | 50-0084  |
| 13. Bolt, cam plate 1/4" - 20 x 1 1/4" SHC - 2 required 4740A, 3482A<br>each .....   | 50-0008  |
| 14. Washer, flat 1/4" chrome (each) .....  | 50-7017±   |
| 12 pack .....  | 50-7013  |
| 15. O-ring, cam plate - 9 required 11301 (each) .....  | 50-8066-S  |
| 16. O-ring, oil pump 1 1/16" I.D. x 1 5/16" O.D. x 1/8" CS 11293, 11157, 11101, 11190<br>each .....  | 50-8039  |
| 17. O-ring, case alignment, - 2 required 3/16" I.D. x 1 1/16" O.D. x 1/16" CS 26432-76A<br>each .....  | 50-8034-S  |
| 2 pack .....   | 50-8034  |
| 18. Dowel, cam plate - 2 required 16589-99A .....  | 50-8148-S  |
| 19. Bearing, inner cam 9198 .....  |  31-4080  |
| 20. Bearing, pinion shaft - Fits all S&S & OEM 2000-'02 (Balanced models only)<br>& all OEM 2003-up 24604-00D .....                          | 31-4085  |
| 21. Retaining ring, internal, spiraloc - 2 required<br>35114-02 .....  | 50-8160-S  |
| 22. Plug, magnetic drain .....   |  50-8335  |
| 23. Baffle plate .....   | 31-0119-S  |
| 24. Screw 10-24 x 3/8" pan head - 2 required (each) .....  | 50-0050  |
| 25. Dowel, case alignment - 2 required 16574-99A, 16573-83, 16573-83A<br>each .....  | 50-8023  |
| 10 pack .....  | 50-8109  |
| 26. Piston Oiler Jet Kit includes #27 (1), & #29 (2) .....   |  310-0647 |
| 27. O-ring, (-014), .500" ID x .625" OD, Nitrile<br>each .....   | 50-8270  |
| 5 pack .....   | 50-8275  |
| 28. Jet, Assembly, Piston Cooling, 1999-up bt .....  | N/A  |
| 29. Screw, Torx Panhead, Tri-Lobe, 8-32 x 3/8", Zinc, Steel 68042-99<br>each .....   | 50-0054-S  |
| 30. Fitting, crankcase vent<br>1999-'00 .....  | 50-0454  |
| 2001-'06 (each) .....  | 50-0449  |
| 31. Plate, oil line cover .....  | 106-1184   |
| 32. BSHS CS 3/16" - 18 x 3/4" .....  | 50-0438  |
| 33. O-ring 11105, 11273 (each) .....   | 50-8008  |
| 10 pack .....  | 50-8078  |
| 34. Pin, dowel 18535-99 (each) .....   | 50-8195-S  |
| 2 pack .....   | 50-8195  |

These parts are for crankcases manufactured before 8-1-06:

- |   |   |
|---|---|
| 35. O-ring, 3/16" I.D. x 1 1/16" O.D. x 1/16" CS 26432-76A (each) .....           | 50-8034-S   |
| 2 pack .....  | 50-8034   |
| 36. Bolt, 1/4" - 20 x 3/4" SHCS 4069A (each) .....                                | 50-0067   |
| 37. Hose, oil, inlet/outlet .....   | 50-8157   |
| 38. Spring clips .....  | 50-8156-S   |
| 39. Oil line fittings, inlet/outlet - 2 required .....                            | N/A   |
| 40. Oil line fitting- vent .....  | N/A   |
| 41. Plug, sump 765 (each) .....   | 50-8330   |
| 42. Oil conduit block .....   | N/A   |
| 43. Sensor, Kit, Crank Position, 1984-2007 bt (N/S)<br>32707-01B, 32707-01C ..... |  55-1051 |

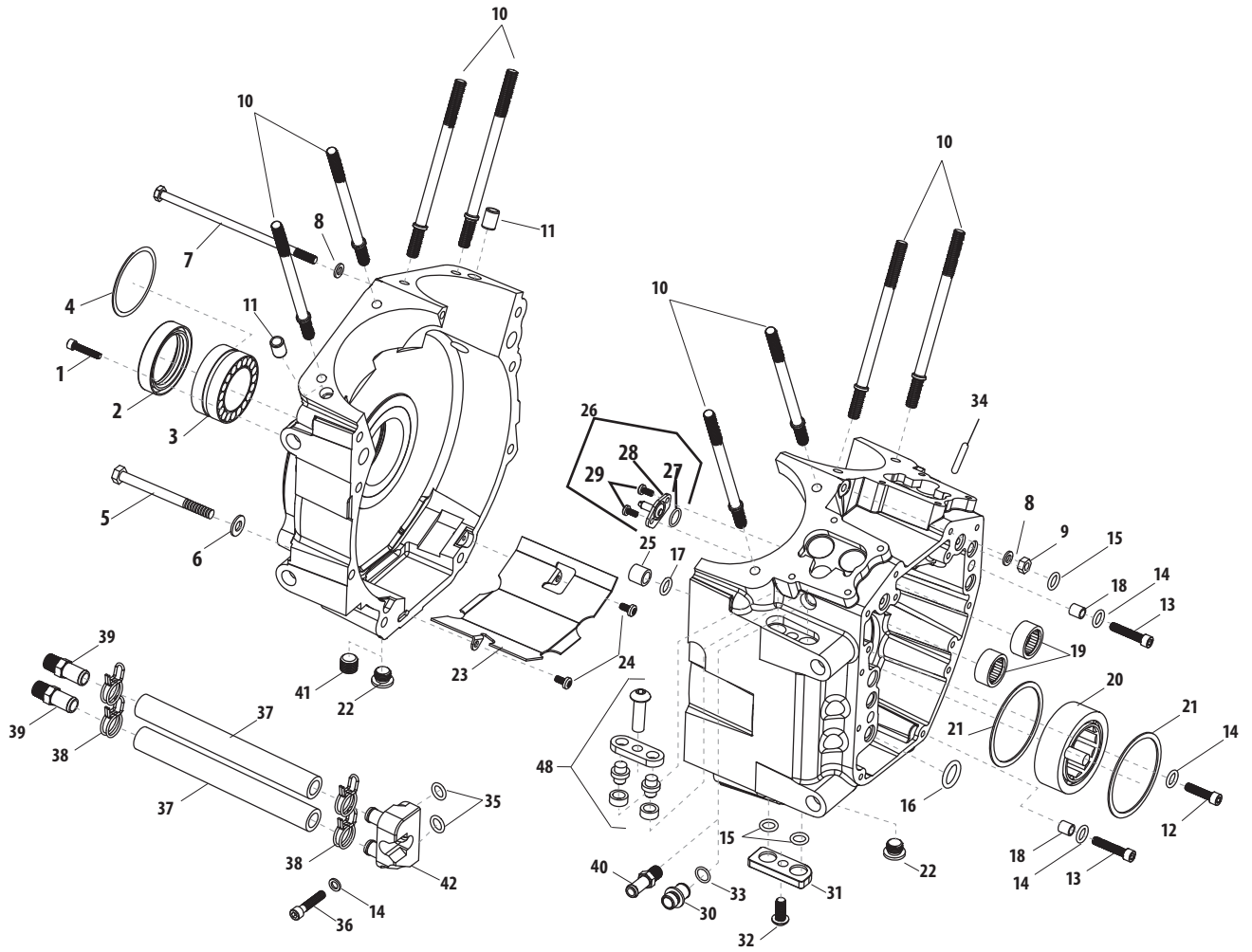
## HARDWARE KITS

- |  |         |
|--|---------|
| 45. Hardware Kit, Crankcase, Cam Plate Bolts, 1999-up bt<br>includes #12 (4), #13 (2), #14 (6) ..... | 31-0117 |
| 46. Hardware Kit, Crankcase, O-rings, 1999-up bt includes #15 (7), #16 (1), #17 (2)<br>.....         | 31-0111 |
| 47. Hardware Kit, Crankcase Baffle Plate, 1999-up bt includes #23 (1) and #24 (2)<br>.....           | 31-0122 |
| 48. Hardware kit, oil line plugs .....   | 50-1081 |

(N/S) = Not Shown  
(N/A) = Not Available

±  WARNING: Cancer and Reproductive Harm

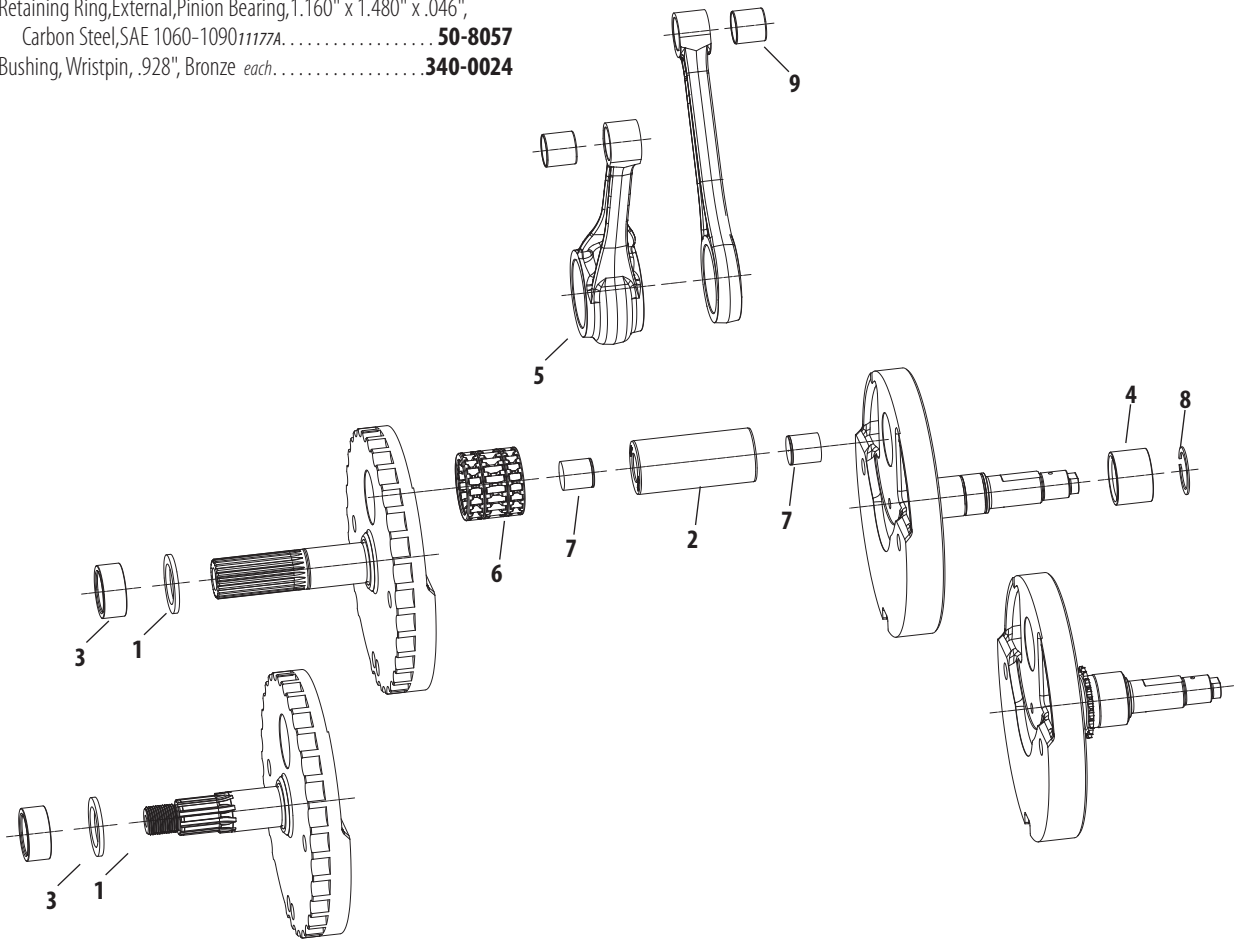




**CRANKCASE BREATHER REED VALVE  
REPLACEMENT PARTS: SEE PAGE 252**

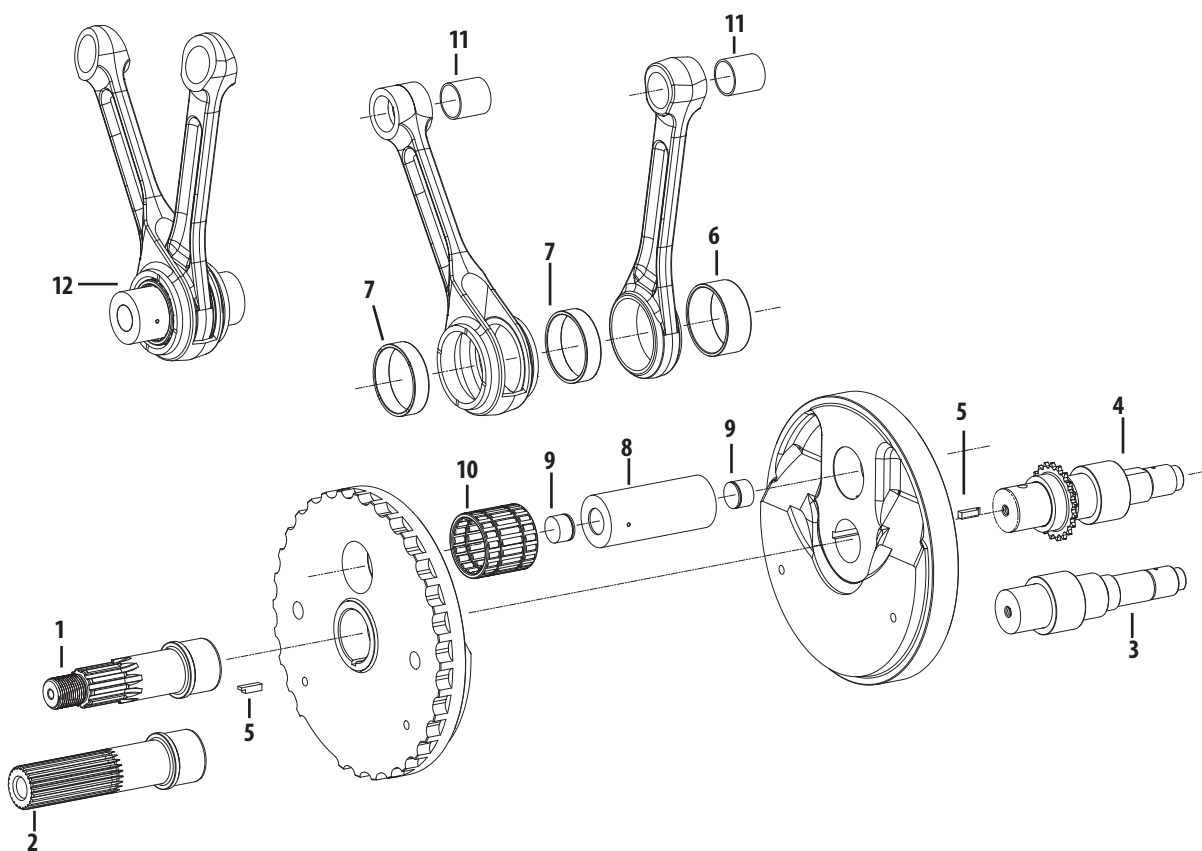
# 3-PIECE FLYWHEEL REPLACEMENT PARTS

1. Washer, Flywheel, Thrust, 1.25" x 1.83" x .136", Hardened Steel ..... **320-0198**
2. Crankpin, Press-In, Straight, 1.671", 1999-Up bt (includes plugs)  
 Standard ..... **340-0069**  
 +.001 ..... **340-0070**  
 +.002 ..... **340-0071**
3. Race, Inner, Left Main Bearing,  
 1.25" x 1.65" x .713", Hardened Steel ..... **340-0076**
4. Race, Inner, Right Main Bearing,  
 1.25" x 1.65" x 1.120", Hardened Steel ..... **340-0077**
5. Connecting Rod, Set, Full Width Wristpin, 7.575", 120R. . . **340-0062**  
 Connecting Rod, Set, Full Width Wristpin, 7.667" ..... **340-0060**  
 Connecting Rod, Set, Full Width Wristpin, 7.800", T143 . . **340-0128**
6. Bearing, Set, Rod, Standard ..... **310-0752**
7. Plug, Drive, .8965" x .850", Steel, Fatigue Proof  
 2 pack ..... **500-0187**
8. Retaining Ring, External, Pinion Bearing, 1.160" x 1.480" x .046",  
 Carbon Steel, SAE 1060-109011177A ..... **50-8057**
9. Bushing, Wristpin, .928", Bronze *each* ..... **340-0024**



# 5-PIECE FLYWHEEL REPLACEMENT PARTS

- 1. Sprocket Shaft, 1999–2006 bt (includes key #5) ..... N/A
- 2. Sprocket Shaft, 2006 Dyna®, 2007–2012 bt ..... **33-2011**
- 3. Pinion Shaft, 1999–2012 bt (includes key #5) ..... N/A
- 4. Pinion Shaft, 2000–2012 w/balancer (includes key #5) ..... N/A
- 5. Key (each) ..... **50-8227**
- 6. Front Rod Race, 1999–2012 ..... **USA 34-4008**
- 7. Rear Rod Race ..... **USA 34-4013**
- 8. Crankpin (std.) ..... **106-6239**  
 +.001 ..... **340-0017**  
 +.002 ..... **340-0018**  
 +.003 ..... **340-0019**
- 9. Crankpin Plug (each) ..... **106-5256**  
 2 pack ..... **50-8329-2**
- 10. Race/Bearing Set ..... **340-0028**
- 11. Wristpin Bushing, 1999–2012\*bt  
 Straight bushing ..... **USA 34-4012**
- 12. Connecting Rod Set, 7.668" length  
 1999–2006 bt, straight wristpin ends ..... N/A



## NOTES

S&S flywheels for Harley-Davidson® Twin Cam 88® and Twin Cam 96™ engines are pressed together as opposed to using the traditional tapered shafts and crankpin. Assembly and truing requires special equipment.

Milwaukee-Eight™

2007–2017 Twin Cam  
96™/103™/110™

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

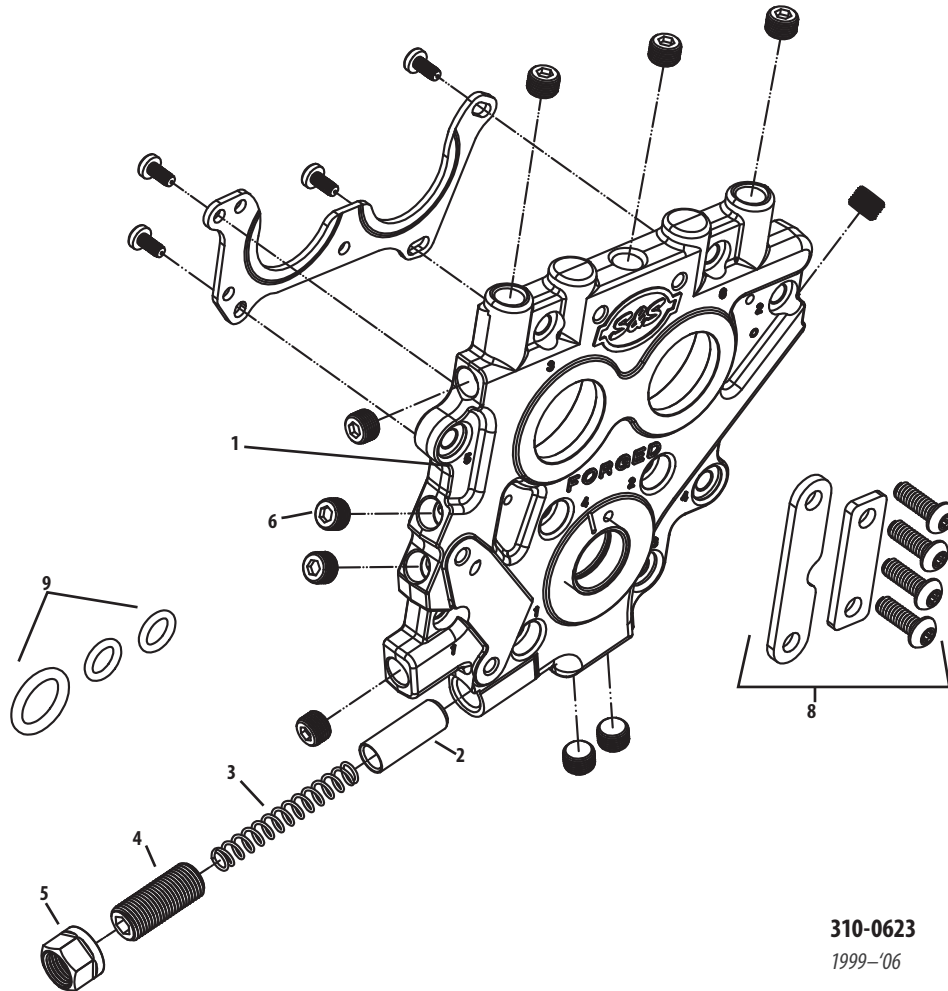
Warranty &  
Company Policy

Appendix



# TC3 CAM PLATE REPLACEMENT PARTS

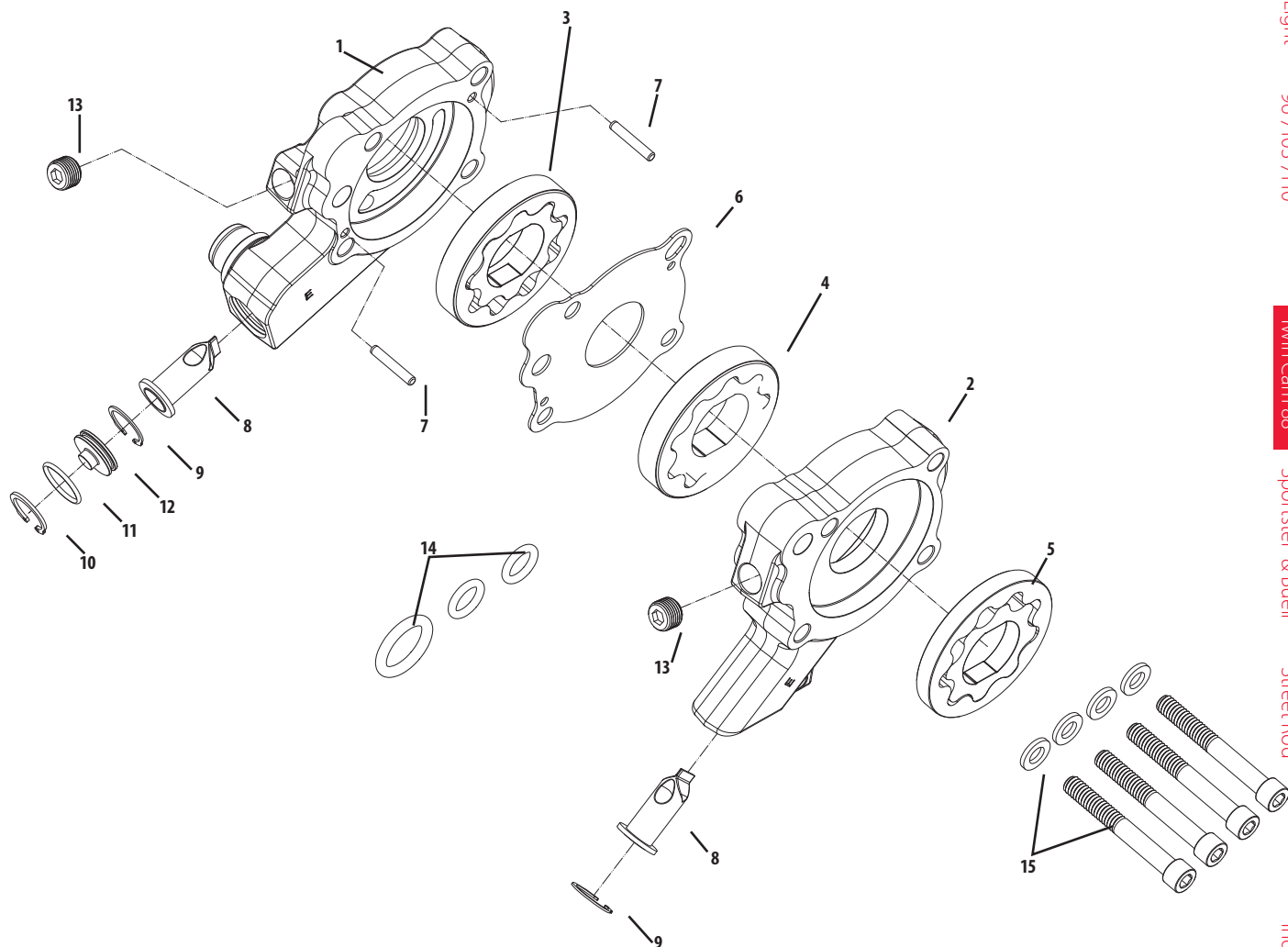
- 1. Cam support plate ..... NA
- 2. Pressure relief valve ..... 31-6082-5
- 3. Pressure relief spring ..... 31-6018
- 4. Pressure relief adjusting screw ..... 170-0252
- 5. Pressure relief adjusting screw lock nut ..... 170-0251
- 6. 1/8" 27 taper pipe plug ..... 50-8331A
- 7. Bearing retention plate kit ..... 330-0015
- 8. Hydraulic tensioner block off kit ..... 106-5723
- 9. O-ring kit ..... 500-0326



**310-0623**  
1999-06



# TC3 OIL PUMP REPLACEMENT PARTS



1. Oil pump body case return section .....	NA
2. Oil pump body cam chest return / pressure feed .....	NA
3. Oil pump rotor set, flywheel cavity return .....	310-1092
4. Oil pump rotor set, cam chest cavity return .....	310-1048
5. Oil pump rotor set, supply .....	310-0561
6. Plate, divider .....	310-0516
7. Dowel Pin, .125 x .750 Hardened Steel .....	106-3794
8. Debris screen .....	310-0546
9. Internal Retaining Ring, .625 .....	500-0860
10. Internal Retaining Ring, 17mm .....	500-0859
11. O-ring, 1.5mm x 14mm, Viton (5 pack) .....	500-0861
12. Oil pump return plug .....	310-0564
13. Plug, Pipe 1/8" 27 .....	50-8331A
14. O-ring kit .....	500-0326
15. Screw Kit, Oil Pump, 1999-Up BT (1/4" 20 x 2" SHCS w/washers) .....	500-0327

Milwaukee-Eight™

2007–2017 Twin Cam  
96°/103°/110°

1999–2006  
Twin Cam 88°

1986–2019  
Sportster™ & Buell®

2014–2019 Street™ &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

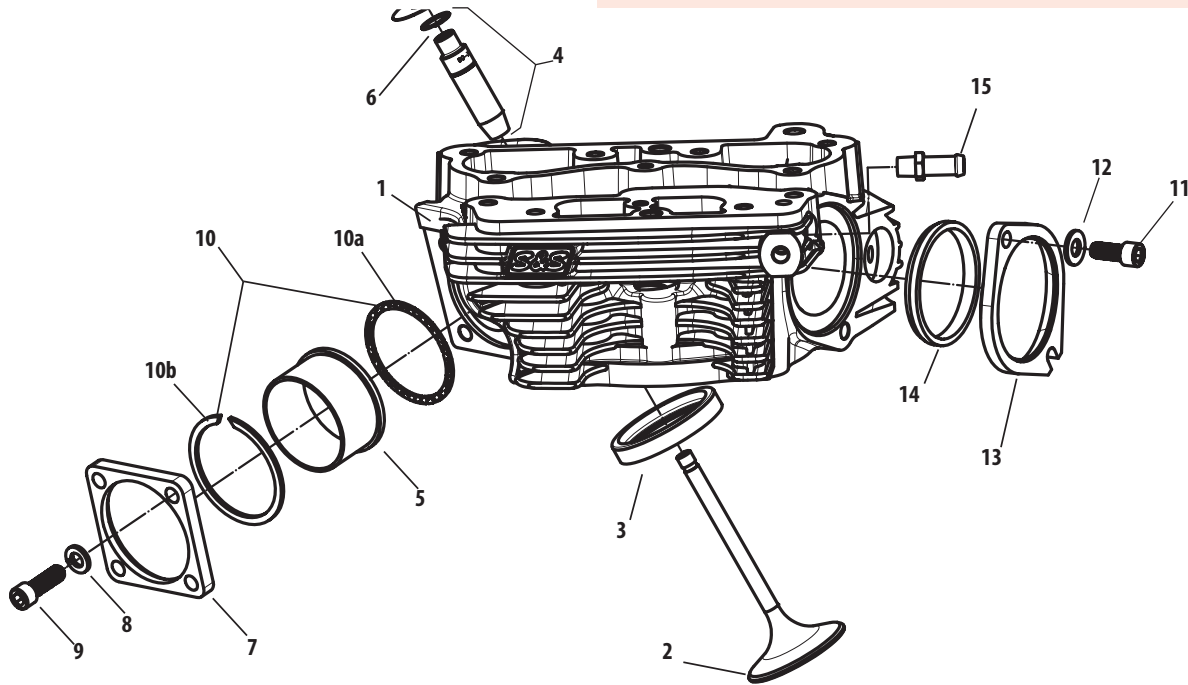
Warranty &  
Company Policy

Appendix

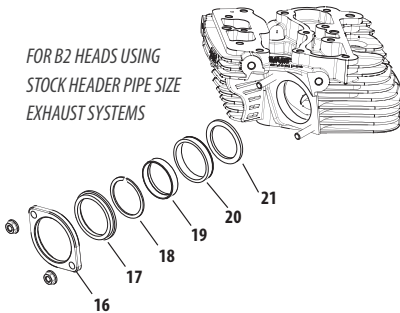
# B2 CYLINDER HEADS REPLACEMENT PARTS FOR 1984-'17 BIG TWIN ENGINES (EXCEPT 2017 TOURING MODELS)

- |  |                  |
|--|------------------|
| 1. Cylinder Head — (See page 206)  |                  |
| 2. Valve   |                  |
| Intake, 2.200" Dia.....  | <b>90-2127</b>   |
| Exhaust, 1.800" Dia.....   | <b>90-2128</b>   |
| 3. Valve Seat  |                  |
| Exhaust, 1.800" Dia.....   | <b>90-2126</b>   |
| Intake, 2.200" Dia.....  | <b>90-2125</b>   |
| 4. Valve Guide - Cast - Intake/Exhaust   |                  |
| Std.....   | <b>900-0553</b>  |
| +.030".....  | <b>106-2170</b>  |
| 5. Adaptor, Exhaust Flange.....  | <b>55-6022</b>   |
| 6. Snap Ring.....  | <b>106-2164</b>  |
| 7. Flange, Exhaust, Front/Rear.....  | <b>55-6021</b>   |
| 8. Washer, Lock, .332" X .583" X .078".....  | <b>50-7032</b>   |
| 9. Screw, Sh, 5/16" -18 X 1" 3201WA, 2708.....                                       | <b>50-0101</b>   |
| 10. Gasket, Kit, Exhaust, B2 Heads, SA.....  | <b>90-1900</b>   |
| Kit Includes Two Each:   |                  |
| A: Gasket, Exhaust Pipe (each).....  | <b>93-1083-S</b> |
| 6 pack.....  | <b>93-1083</b>   |
| B: Retaining Ring.....   | <b>50-8159-S</b> |
| 11. Screw, SH, 5/16"-18 X 3/4" 3275.....   | <b>50-0302-S</b> |
| 12. Washer, 5/16" 6320, 70907-07, 6016, 6702.....                                    | <b>50-7034</b>   |
| 13. Manifold Mounting Flange   |                  |
| Front.....   | <b>16-0247</b>   |
| Rear.....  | <b>16-0248</b>   |
| 14. O-Ring, Manifold.....  | <b>16-0246-S</b> |
| 6 pack.....  | <b>16-0246</b>   |
| 15. Fitting, Vent Hose, 1/8"-27 Pipe.....  | <b>50-8115</b>   |
| 16. Exhaust Flange, 1984-Up S&S® B2 Heads.....                                       | <b>550-0223</b>  |
| 17. Exhaust Adapter Flange For Stock Header Pipe,<br>1984-Up S&S® B2 Heads.....      | <b>550-0224</b>  |
| 18. Exhaust Flange Retaining Ring, 1.759" X .062".....                               | <b>550-0226</b>  |
| 19. Exhaust Gasket, Tapered Stainless Steel,<br>1984-Up bt 65324-83B, 65324-83A..... | <b>106-5029</b>  |
| 20. Press-In Aluminum Retaining Ring.....  | <b>550-0225</b>  |
| 21. Exhaust Gasket Backing Washer 2.18" X 1.690" X .125".....                        | <b>550-0220</b>  |
| 22. Exhaust Flange Retaining Ring, 2.125" X .078".....                               | <b>50-8159-S</b> |
| 23. Exhaust Gasket, Tapered, Stainless Steel.....                                    | <b>550-0221</b>  |
| 24. Exhaust Gasket Backing Washer 2.18" X 1.885" X .200".....                        | <b>550-0219</b>  |
| 25. Weld-On Exhaust Header Pipe.....   | <b>550-0222</b>  |

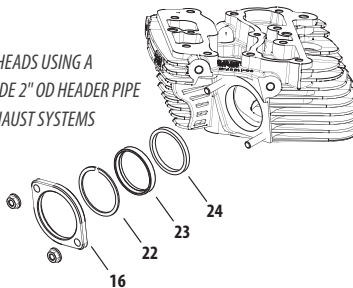
**VALVE SPRING REPLACEMENT PARTS SEE PAGE 236**



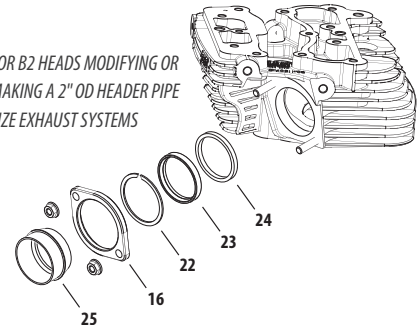
FOR B2 HEADS USING STOCK HEADER PIPE SIZE EXHAUST SYSTEMS



FOR B2 HEADS USING A PRE-MADE 2" OD HEADER PIPE SIZE EXHAUST SYSTEMS



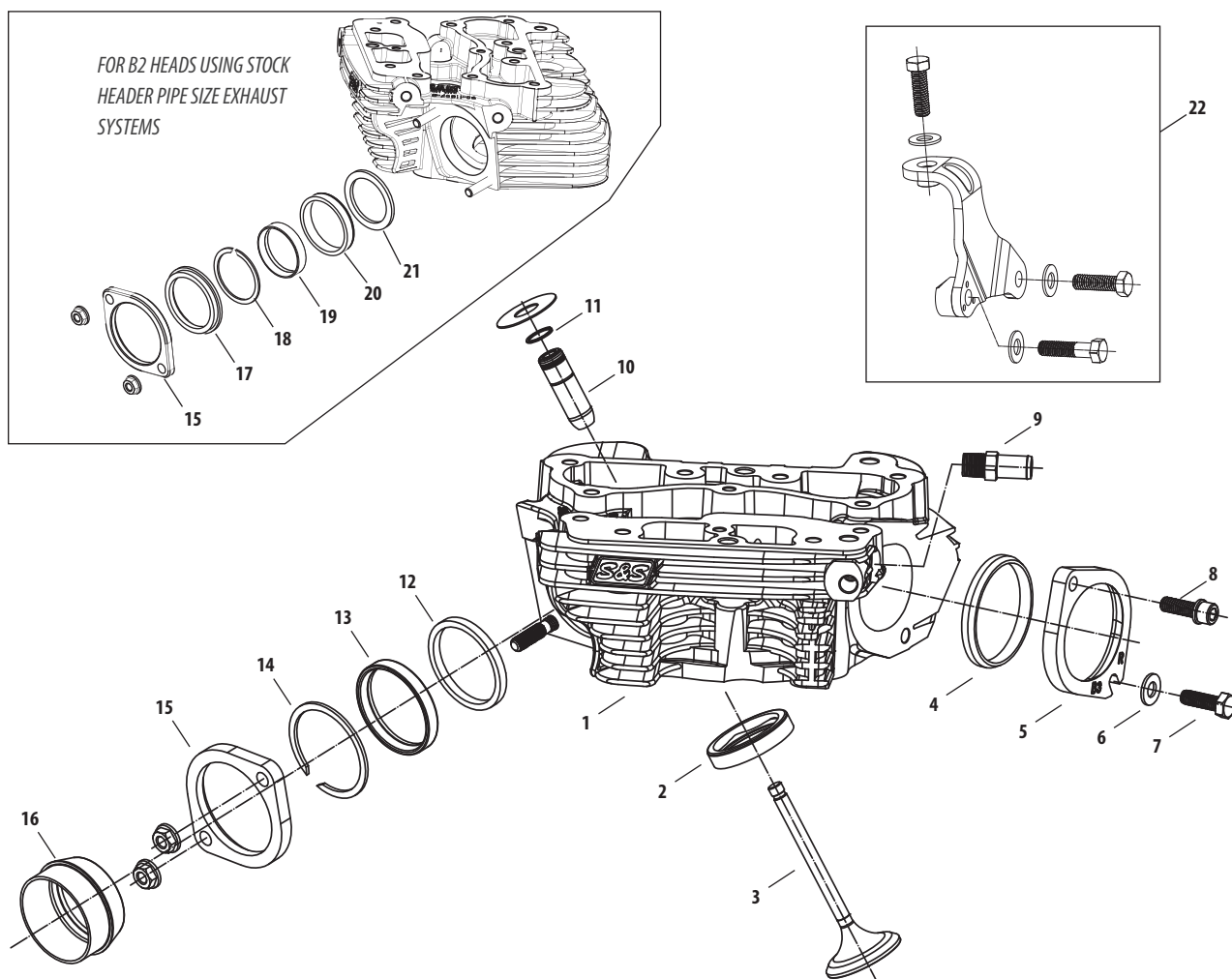
FOR B2 HEADS MODIFYING OR MAKING A 2" OD HEADER PIPE SIZE EXHAUST SYSTEMS



# B3 CYLINDER HEADS REPLACEMENT PARTS FOR S&S T143 ENGINES

- |   |                  |
|---|------------------|
| 1. Cylinder Heads Set, B3   |                  |
| Black.....  | <b>900-0803</b>  |
| Silver.....   | <b>900-0818</b>  |
| 2. Seat, Blank, B3 Heads, 2.300"  |                  |
| Intake.....   | <b>900-0677</b>  |
| Exhaust.....  | <b>90-2126-S</b> |
| 3. Valve  |                  |
| Intake.....   | <b>900-0678</b>  |
| Exhaust.....  | <b>900-0679</b>  |
| 4. Seal, Manifold, B2 Heads, 2.250" x 2.520" x .290"                                  | <b>16-0246-S</b> |
| 5. Flange   |                  |
| Front.....  | <b>160-0087</b>  |
| Rear.....   | <b>160-0088</b>  |
| Set.....  | <b>160-0091</b>  |
| 6. Washer, Flat, .344" x .688" x .065", Zinc, Steel                                   | <b>50-7034</b>   |
| 7. Bolt, Hex Head, Gr5, 5/16-18 x 1", Zinc  | <b>50-0108</b>   |
| 8. Screw, SHCS, w/Flat Washer, 5/16-18 x 1", Zinc                                     | <b>50-0125-S</b> |
| 9. Fitting, Pipe, Straight, 1/4-18 NPTF x 1.510" X .500", Zinc, Steel                 | <b>50-8158-S</b> |
| 10. Valve Guide, Intake, Powder Metal   | <b>900-0780</b>  |
| 11. Retaining Ring, External, Spiral, Heavy Duty, .525" x .035" x .050", Carbon Steel | <b>106-2164</b>  |
| 12. Exhaust Gasket Backing Washer, 2.18" x 1.885" x .200"                             | <b>550-0219</b>  |
| 13. Exhaust Gasket, Tapered, Stainless Steel  | <b>550-0221</b>  |
| 14. Exhaust Flange Retaining Ring, 2.125" x .078"                                     | <b>50-8159-S</b> |
| 15. Exhaust Flange  | <b>550-0223</b>  |
| 16. Weld-On Exhaust Header Pipe   | <b>550-0222</b>  |
| 17. Exhaust Adapter Flange for Stock Header Pipe                                      | <b>550-0224</b>  |
| 18. Exhaust Flange Retaining Ring, 1.759" x .062"                                     | <b>550-0226</b>  |
| 19. Exhaust Gasket, Tapered Stainless Steel   | <b>106-5029</b>  |
| 20. Press-in Aluminum Retaining Ring, 1984–up   | <b>550-0225</b>  |
| 21. Exhaust Gasket Backing Washer, 2.18" x 1.690" x .125"                             | <b>550-0220</b>  |
| 22. Head Mount Bracket Kit  |                  |
| 2008 T143   | <b>900-0797</b>  |
| 2009–up T143  | <b>900-0798</b>  |



















**VALVE SPRING REPLACEMENT PARTS SEE PAGE 236**



All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

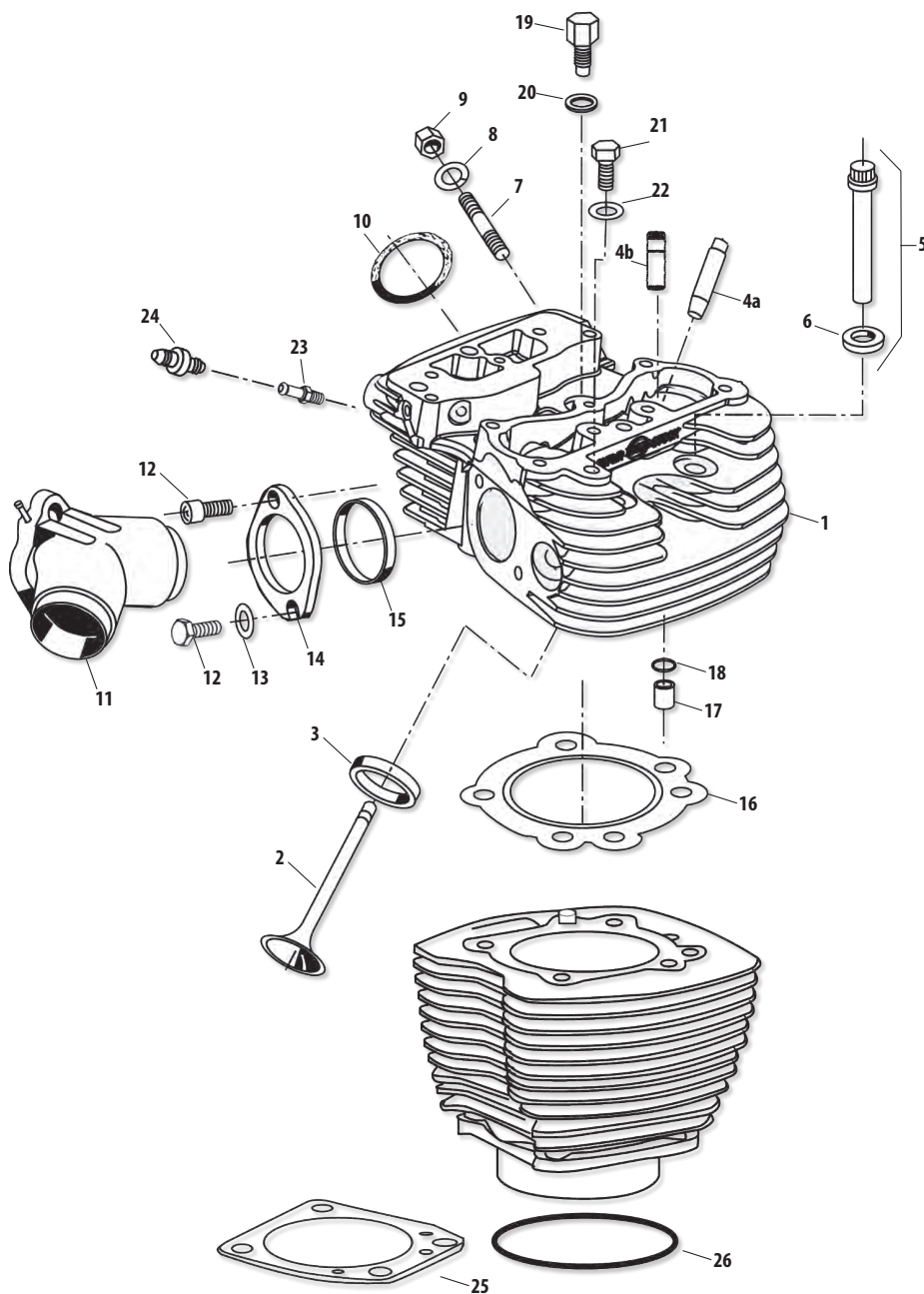
Milwaukee-Eight®  
 2007–2017 Twin Cam  
 96°/103°/110°  
 1999–2006  
 Twin Cam 88®  
 1986–2019  
 Sportster® & Buell®  
 2014–2019 Street® &  
 Street Rod®  
 Indian® Models  
 Tools &  
 Shop Supplies  
 Warranty &  
 Company Policy  
 Appendix

# SUPER STOCK® CYLINDER HEADS REPLACEMENT PARTS FOR 1999-UP BIG TWIN ENGINES

1. Cylinder head (See page 207)
2. Valve
  - All S&S heads with 89cc chamber
    - Intake
      - 2.000" diameter .....  **90-2000**
      - 2.000" diameter +.085" stem length ..... **90-2004**
    - Exhaust
      - 1.605" diameter .....  **90-2001**
  - All S&S heads with 79cc chamber
    - Intake - 1.940" diameter ..... **90-2025**
    - Exhaust - 1.575" diameter ..... **90-2026**
3. Valve seat
  - All S&S heads with 89cc chamber
    - Intake - 2.000" diameter .....  **90-2002**
    - Exhaust - 1.605" diameter .....  **90-2003**
  - All S&S heads with 79cc chamber
    - Intake - 1.940" diameter ..... **90-2027**
    - Exhaust - 1.575" diameter ..... **90-2028**
- 4a. Valve guide - Cast- Intake or Exhaust
  - Standard Diameter .5625/.5620 18112-92 .....  **90-2210**
  - + .001" Diameter .5635/.5630 18130-83C .....  **90-2211**
  - + .002" Diameter .5645/.5640 18133-83A, 18133-83D .....  **90-2212**
  - + .003" Diameter .5655/.5650 18131-83C .....  **90-2213**
  - + .030" Diameter .5925/.5920 .....  **90-2219**
- 4b. Valve guide - Powder Metal - Intake or Exhaust
  - Standard ..... **900-0553**
  - + .001" ..... **900-0554**
  - + .002" ..... **900-0555**
  - + .003" ..... **900-0556**
5. Head bolt assembly - (8 Required) (Includes head bolt washer)
  - 88", 95", 96", 100", 107" & 111" .....  **93-3030**
  - 4 pack ..... **93-3030-4**
  - 116", 117" ..... **93-3037**
  - 4 pack ..... **93-3037-4**
6. Head bolt washer
  - .150" (each) ..... **50-0418-5**
  - .250" (each) ..... **50-7091**
7. Exhaust port stud 16715-83 (each) .....  **50-0493**
- 5 pack .....  **50-1028**
8. Lock washer - 5/16" ..... **50-7032**
9. Nut, flanged - 5/16" -24
  - Zinc (each) ..... **50-5025-5**
  - 2 pack ..... **50-5025-2**
  - 5 pack ..... **50-1001**
  - Chrome (each) ..... **50-5030-S<sup>‡</sup>**
10. Exhaust pipe gasket, tapered 65324-83B, 65324-83A (each) ..... **106-5029**
- 10 pack ..... **93-1072**
11. Intake manifold (See page 211)
12. Manifold mounting screw
  - SH - 5/16" - 18 x 3/4" 3275 (each) ..... **50-0302-5**
  - SH - 5/16" - 18 x 1" 3201WA, 2708 ..... **50-0101**
  - HH - 5/16" - 18 x 1" 3987 (each) .....  **50-0108**
13. Flat washer - 5/16" 6320, 70907-07, 6016, 6702 ..... **50-7034**
14. Manifold mounting flange
  - a. Standard Profile Flange
    - Front 27009-86A (each) .....  **16-0232**
    - 5 pack .....  **16-0600**
    - Rear 27010-86A (each) .....  **16-0233**
    - 5 pack .....  **16-0601**
    - Set (Front & Rear) ..... **106-3516**
  - b. Low Profile Flange
    - Front ..... **106-1344**
    - Rear ..... **106-1345**
15. Manifold o-ring
  - For S&S heads (each) ..... **16-0235**
  - 10 pack ..... **16-0243**
  - For Stock heads 26995-86B, 26995-86A, 26992-99 (each) .....  **16-0236**
  - 10 pack ..... **16-0244**
16. Head gasket
  - For Stock Bolt Pattern
    - 3 3/4" x .043" Graphite 16775-99B (each) ..... **93-1045-S**
    - 3 7/8" / 3.927" x .030" Layered Steel (2 pack) ..... **900-0605**
    - 3 7/8" / 3.927" x .045" Layered Steel (each) ..... **900-0606**
    - 4" x .043" Graphite (each) ..... **93-1043-S**
    - 4 1/8" x .043" Layered Steel (each) ..... **93-1091-S**
    - 4 1/8" x .030" Layered Steel (2 pack) ..... **900-0217**
  - For S&S Bores
    - 4 1/8" x .043" Graphite (each) ..... **93-1047-S**
    - 10 pack ..... **93-1073**
    - 4 3/8" x .045" Copper (Set of Two) ..... **93-1081**
17. Alignment dowel, base and head 16595-99A
  - each ..... **50-8177**
  - 4 pack ..... **50-8177-4**
18. Alignment dowel o-ring - Base (all bore sizes)
  - S&S heads 3 3/4" bore only 11105, 11273
    - each ..... **50-8008**
    - 10 pack ..... **50-8078**
19. Plug, HH - 14mm (each) ..... **90-4916**
- 2 pack ..... **90-4916-2**
20. Washer, compression - 14mm, 507" x .705" x .047" (each) ..... **50-7094**
21. Head mount bolt - 3/8" - 16 x 1 1/4" 4716W (each) ..... **50-0168**
22. Flat washer - 3/8" (each) ..... **50-7051**
23. Vent hose fitting, (For 4 1/8" Bore Only)
  - Front, 1/16" - 27 pipe ..... **50-8117**
  - Rear, 1/8" - 27 pipe ..... **50-8115**
24. Check Valve (For 4 1/8" Bore Only) ..... **50-8122**
25. Base Gaskets
  - For S&S Bores
    - 4 3/8" x .018" Graphite (2 pack) ..... **93-1082**
    - 4 1/8" x .018" Graphite (each) ..... **93-1048-S**
    - 10 pack ..... **93-1074**
    - 4" x .018" Graphite (each) ..... **93-1050-S**
  - For Stock Bolt Pattern
    - 4 1/8" x .018" Graphite (each) ..... **93-1092-S**
    - 10 pack ..... **93-1921**
26. Base O-ring (Used for early S&S bores)
  - 4" x .103" (each) ..... **50-8049**
  - 3 5/8" or 3 1/2" x .103" 11256 (each) ..... **50-8048**

 WARNING: Cancer and Reproductive Harm





**TOP END REBUILD GASKET KITS FOR S&S® ENGINES FOR BIG TWINS**

Bore Size	Part #	MSRP
S&S 4 $\frac{3}{8}$ "	<b>90-9511*</b>	\$146.95
S&S 4 $\frac{1}{8}$ "	<b>90-9506</b>	\$96.95
4 $\frac{1}{8}$ " Stock Cases	<b>90-9510</b>	\$146.95
4"	<b>90-9505</b>	\$90.95
3 $\frac{7}{8}$ "	<b>90-9504</b>	\$113.95

*Kits include: Intake and exhaust seals, head & base gaskets, o-rings, pushrod o-rings, and valve guide seals.  
\*Does not include intake seals.*

Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
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Appendix

# VALVE SPRING REPLACEMENT PARTS

## .720" & .660" Lift Valve Springs (B3 Cylinder Heads)

- Seal, valve guide, intake/exhaust 18001-83B (each) .....  **90-2008**  
8 pack .....  **90-2158**
- Keeper, valve spring, SA ..... **90-2153A**
- Valve spring shim  
.015" (each) ..... **90-2086**  
5 pack ..... **50-7161**  
.030" (each) ..... **90-2087**  
5 pack ..... **90-2198**

## .650" Lift Valve Springs (B2 Cylinder Heads)

- Seal, Valve Guide, fits .315" x .554"OD, Viton® (4 pack) ..... **900-0737**
- Keeper, valve spring, Standard, 9° (each) ..... **90-2094-S**

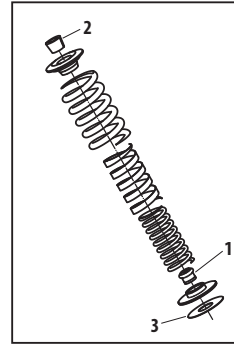
## .650" Lift Sidewinder® Valve Springs (Stock, Super Stock® & CNC Ported Cylinder Heads)

- Spring, Valve .650" ..... **106-5689**
- Collar, Top, Steel ..... **106-5690**
- Collar, Bottom, Steel ..... **106-5691**
- Seal, Valve  
S&S CNC Ported Heads & 2005-up bt w/7mm valve stem ..... **106-5688**  
S&S Super Stock Heads  
.420" Cast (each) ..... **900-0338**  
.562" Powder Metal (4 pack) ..... **900-0737**
- Keeper, valve spring ..... **106-5692**
- Valve Spring Shim  
.015" (each) ..... **500-0013**  
.030" (each) ..... **500-0014**

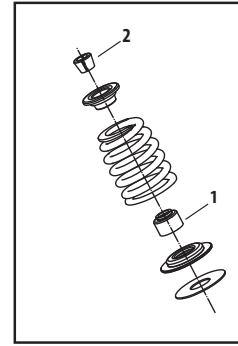
## .585" Lift Valve Springs (Stock, Super Stock® & CNC Ported Cylinder Heads)

- Spring, Valve .585" ..... **900-0444**
- Collar, Top ..... **900-0550**
- Collar, Bottom  
For Stock Heads w/7mm valve stem (includes seal) ..... **900-0590**  
For CNC Ported Heads w/7mm valve stem ..... **900-0549**  
For Super Stock Heads ..... **900-0600**
- Seal, valve guide  
For Stock Heads w/7mm valve stem (includes bottom collar) ..... **900-0590**  
For CNC Ported Heads w/7mm valve stem ..... **106-5688**  
For Super Stock Heads  
.420" Cast (each) ..... **900-0338**  
.562" Powdermetal (4 pack) ..... **900-0737**
- Keeper, valve spring  
For Stock and CNC Ported Heads ..... **106-5692**  
For Super Stock Heads ..... **90-2094-S**
- Valve spring shim  
For Stock and CNC Ported Heads  
.015" ..... **500-0013**  
.030" ..... **500-0014**  
For Super Stock Heads  
.015" ..... **90-2086**  
.030" ..... **90-2087**

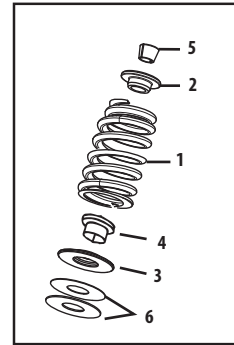
.720" & .660" Lift Valve Springs



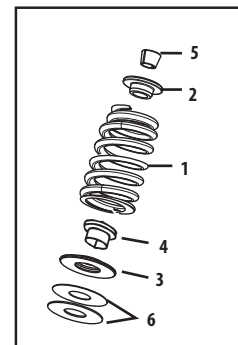
.650" Lift Valve Springs



.650" Lift Sidewinder® Valve Springs

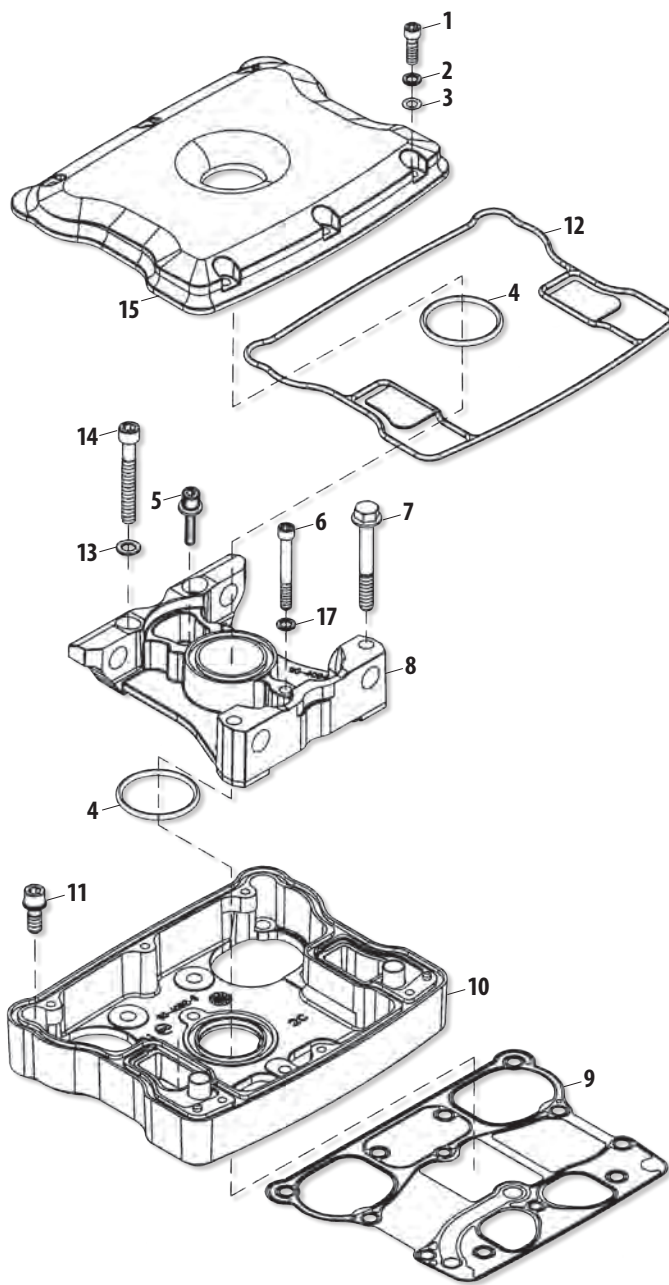


.585" Lift Valve Springs



# DIE-CAST ROCKER COVER REPLACEMENT PARTS FOR 1999–UP BIG TWIN ENGINES

- 1. Screw, socket head 1/4"-20 x 3/4" 4069A (each) ..... **50-0067**
- 2. Washer, flat 1/4" (each) ..... **50-7017**  
12 pack ..... **50-7013**
- 3. Washer, silicone coated 1/4" (each) ..... **50-7015**  
8 pack ..... **50-7015-8**  
12 pack ..... **50-7015-12**
- 4. Seal, o-ring  
(Included in gasket kit see #16 below.)
- 5. Screw, socket head, 1/4"-20 x 1" 4741A  
each ..... **50-0092-S**  
4 pack ..... **50-0092P**
- 6. Screw, socket head, 1/4"-20 x 2" 25794-36 ..... **50-0013**
- 7. Screw, hex flange head, 5/16"-18 x 2 1/2" 3501 ..... **50-0123**
- 8. Support, rocker arm ..... **90-4140**
- 9. Gasket, rocker cover, Graphite  
For Stock or S&S rocker covers on stock heads 16719-99B  
each ..... **90-4071-S**  
2 pack ..... **90-4071**  
10 pack ..... **90-4099**  
For Stock rocker covers on S&S heads (each) ..... **90-4124**  
2 pack ..... **90-4120**
- 10. Housing, rocker, Chrome ..... **900-4283±**
- 11. Screw, socket head, 5/16"-18 x 1" ..... **50-0125-S**
- 12. Seal, rocker cover  
(Included in gasket kit see #16 below.)
- 13. Washer, flat 5/16" (each) ..... **50-7026**
- 14. Screw, socket head 5/16"-18 x 2 1/4"  
each ..... **50-0115-S**
- 15. Cover, rocker, chrome ..... **900-0706±**
- 16. Gasket set - rocker cover, cast (Not Shown) ..... **90-4111**
- 17. Washer, .261" x .474" x .050", Annealed, Stainless Steel .... **50-7020**



Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88™

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

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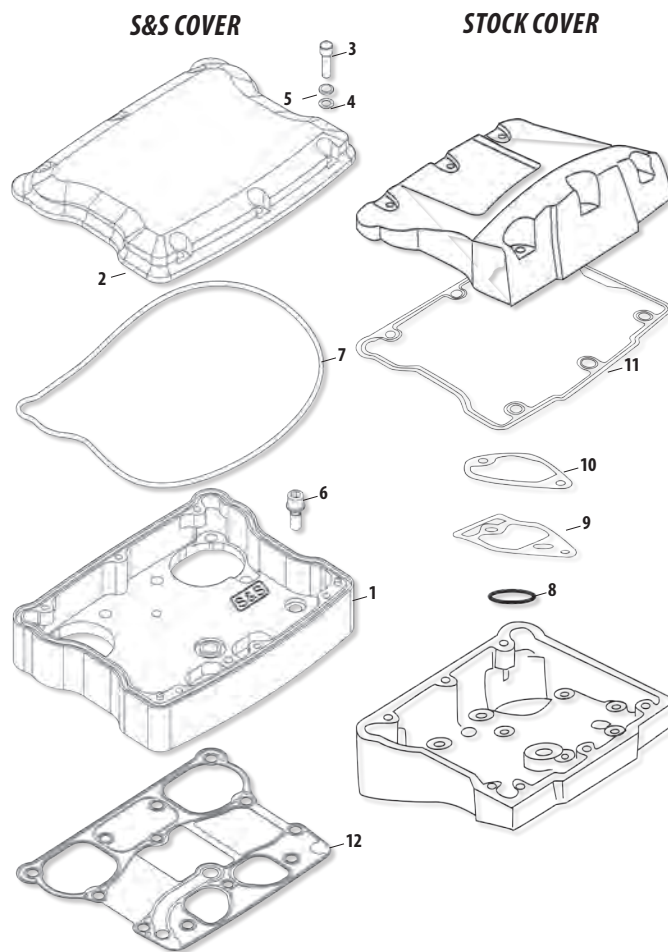
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± WARNING: Cancer and Reproductive Harm

# BILLET ROCKER COVER REPLACEMENT PARTS FOR 1999-UP BIG TWIN ENGINES (DISCONTINUED)

1. Base assembly, rocker ..... N/A
2. Top, rocker cover ..... N/A
3. Screw, SHCS, ¼"-20 x ¾" 4069A (each) ..... 50-0067
4. Washer, flat, chrome, 260" x .425" x .060"  
each ..... 50-7017±  
12 pack ..... 50-7013±
5. Washer, flat, rubber coated, ¼" x 7/16" x .020"  
each ..... 50-7015  
8 pack ..... 50-7015-8  
12 pack ..... 50-7015-12
6. SHCS, 5/16"-18 x 1" with flatwasher ..... 50-0125-S
7. O-ring, rocker cover seal, Viton® ..... 50-8050
8. O-ring, (-114), .625" ID x .937" OD 11270 ..... 50-8033
9. Gasket, Breather Baffle, Stock Pattern, Paper, 1999-'10 bt  
17162-03, 17592-99 each ..... 90-4078
10. Gasket, Breather Cover, Stock Pattern, Paper, 1999-'10 bt  
17591-99, 17162-03, 17592-99 each ..... 90-4077
11. Gasket, Rocker Cover, Steel, 1999-up bt 17386-99A  
each ..... 90-4096-S
12. Gasket, bottom rocker cover  
each ..... 90-4071-S  
2 pack ..... 90-4071  
10 pack ..... 90-4099
9. Gasket kit, rocker cover (includes gaskets for 2 rocker covers)  
For S&S billet rocker covers  
(includes #5,7,8,9,10,12) ..... 90-4073  
For 1999-'10 bt  
(includes #8,9,10,11,12) ..... 90-4097

**N/A = No longer available**

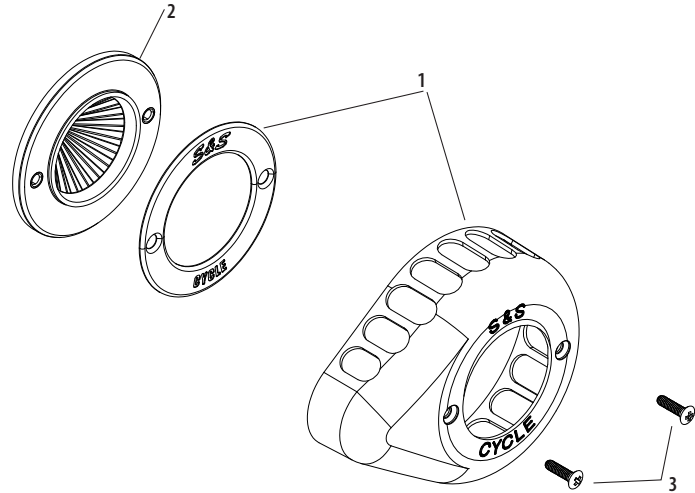




# AIR STINGER STEALTH AIR CLEANER KIT

## REPLACEMENT PARTS

- 1. Cover
  - Gloss Black Teardrop ..... **170-0686**
  - Chrome Teardrop ..... **170-0687**
  - Billet S&S Script Ring ..... **170-0502**
- 2. Filter ..... **170-0723**
- 3. Screws
  - Bright Stainless Steel (2 pack) ..... **500-0657**
  - Black (2 pack) ..... **500-0711**



Milwaukee-Eight™

2007–2017 Twin Cam  
96™/103™/110™

1999–2006  
Twin Cam 88™

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Sportster® & Buell®

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Street Rod™

Indian® Models

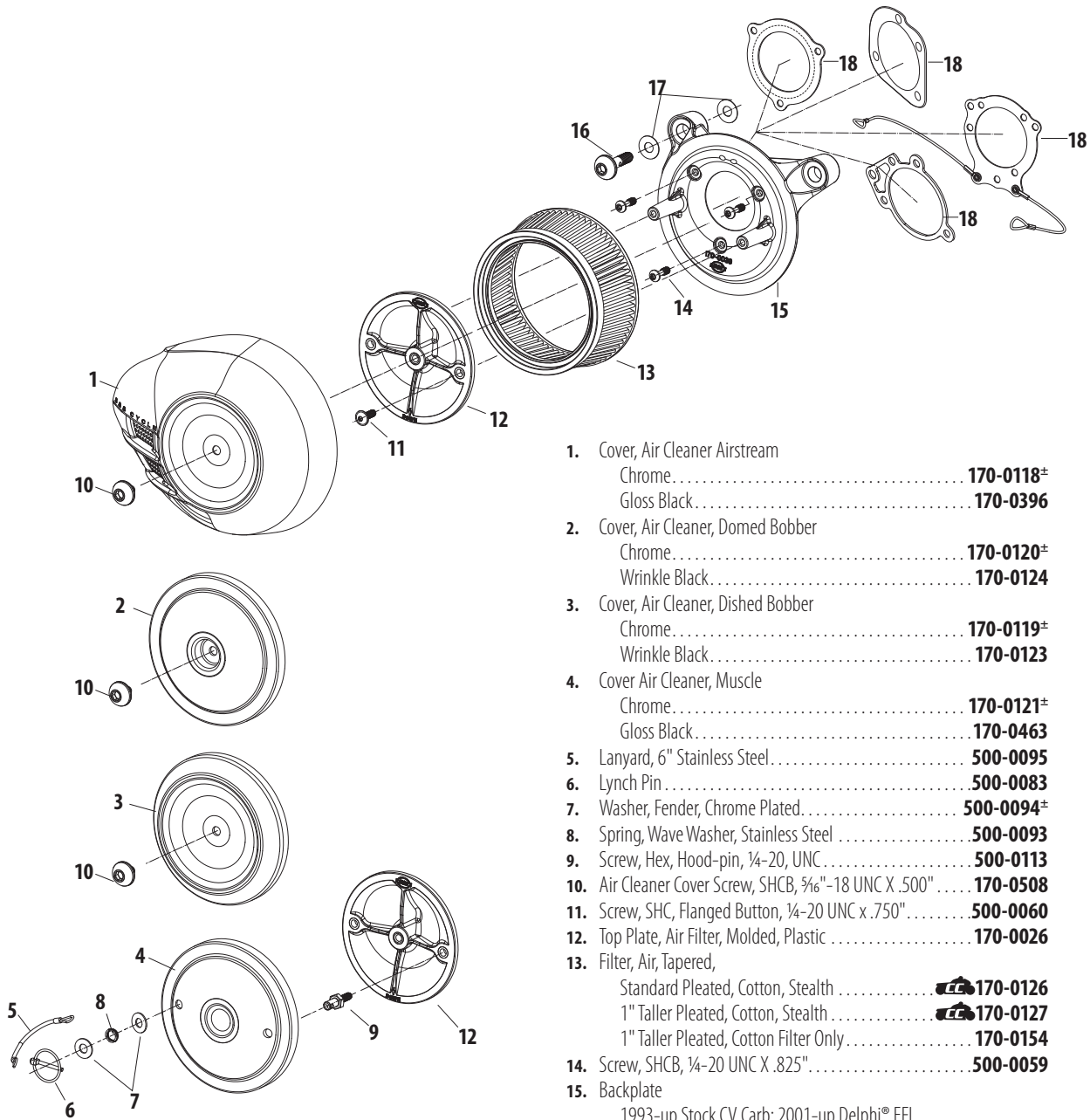
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# STEALTH AIR CLEANER REPLACEMENT PARTS



1. Cover, Air Cleaner Airstream  
 Chrome ..... **170-0118<sup>±</sup>**  
 Gloss Black ..... **170-0396**
2. Cover, Air Cleaner, Domed Bobber  
 Chrome ..... **170-0120<sup>±</sup>**  
 Wrinkle Black ..... **170-0124**
3. Cover, Air Cleaner, Dished Bobber  
 Chrome ..... **170-0119<sup>±</sup>**  
 Wrinkle Black ..... **170-0123**
4. Cover Air Cleaner, Muscle  
 Chrome ..... **170-0121<sup>±</sup>**  
 Gloss Black ..... **170-0463**
5. Lanyard, 6" Stainless Steel ..... **500-0095**
6. Lynch Pin ..... **500-0083**
7. Washer, Fender, Chrome Plated ..... **500-0094<sup>±</sup>**
8. Spring, Wave Washer, Stainless Steel ..... **500-0093**
9. Screw, Hex, Hood-pin, 1/4-20, UNC ..... **500-0113**
10. Air Cleaner Cover Screw, SHCB, 5/16"-18 UNC X .500" ..... **170-0508**
11. Screw, SHC, Flanged Button, 1/4-20 UNC x .750" ..... **500-0060**
12. Top Plate, Air Filter, Molded, Plastic ..... **170-0026**
13. Filter, Air, Tapered,  
 Standard Pleated, Cotton, Stealth ..... **170-0126**  
 1" Taller Pleated, Cotton, Stealth ..... **170-0127**  
 1" Taller Pleated, Cotton Filter Only ..... **170-0154**
14. Screw, SHCB, 1/4-20 UNC X .825" ..... **500-0059**
15. Backplate  
 1993-up Stock CV Carb; 2001-up Delphi® EFI  
 (except Throttle by Wire) ..... **170-0021**  
 Super E/G, Black, Die Cast, 1993-up bt. .... **170-0049**
16. Screw, Backplate Vent, SHCB, 3/8-16 x 1 1/2", Chrome Plated ..... **170-0506<sup>±</sup>**
17. Washer, Flat, Nitrile Rubber Coated, .380" x .880" x .024"  
 each ..... **50-7055**  
 10 pack ..... **50-7057**
18. Gasket, Backplate  
 Stock CV Carb & EFI Throttle Body, 1991-up bt. 29062-958  
 (except Throttle by Wire) ..... **106-6022**  
 Throttle by Wire, 58mm-72mm, .0625" Thick, 2008-up bt. . **160-0035**  
 Super E/G, CV Adapter, ..... **106-1724**  
 w/lanyards for use with Muscle Cover ..... **170-0137**

# SINGLE BORE TUNED INDUCTION SYSTEM REPLACEMENT PARTS

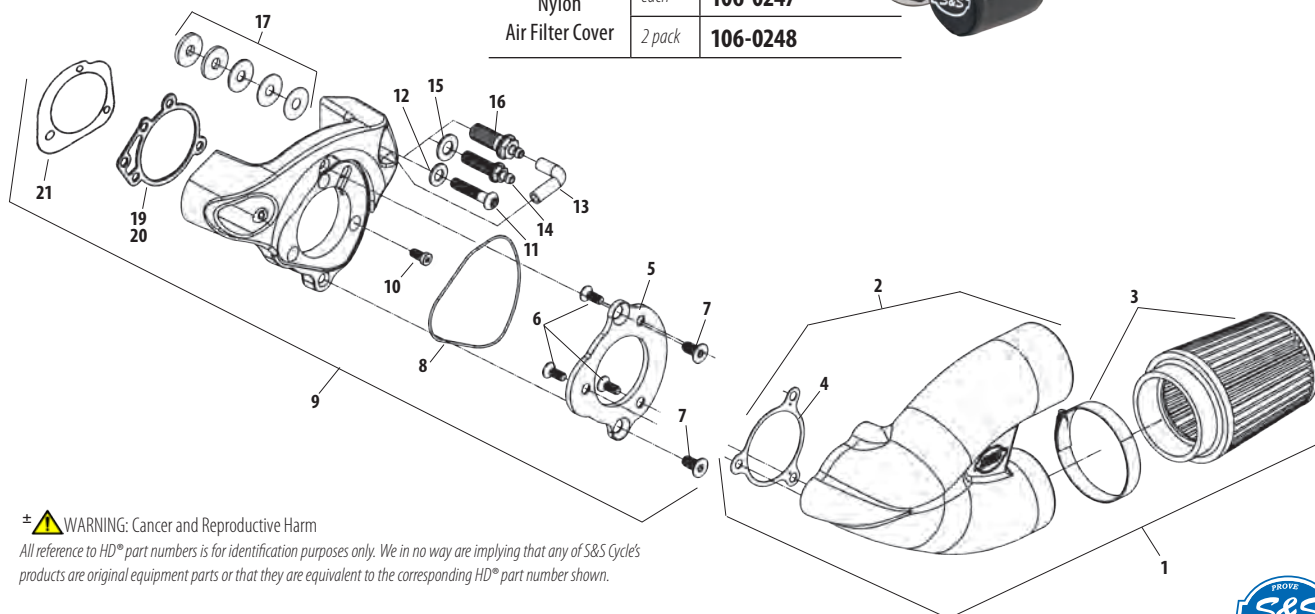
## FOR S&S T-SERIES ENGINES AND 1999–'06 BIG TWINS

1. Tuned Intake Kit, 2.19" Single Bore with Red Filters..... **N/A** -
2. Tuned Intake Assembly, 2.19" Single Bore  
 Chrome Plated..... **106-4970**±
3. Air Filter, w/clamp, Stainless Cap – Conical – 2 1/4" I.D. x 4"  
 Red (each)..... **17-1020**  
 Blue (each)..... **17-1023**
4. Gasket, Intake – Adapter Plate..... **17-1022**
5. Plate, Adapter, 2.19" Single Bore Tuned Intake  
 Chrome Steel..... **17-1014**
6. FHSC 1/4–20 x 5/8" (each)..... **50-0433**
7. FHSC 3/16–18 x 5/8" (each)..... **50-0432**
8. O-Ring, Adapter Plate Bracket 3 3/8" O.D. x 3 1/2" I.D. 1/16 CS, Viton  
 each..... **50-0446**
9. Bracket Kit, 2.19" Single Bore Tuned Intake, Chrome  
 Super E/G, S&S T124..... **106-4973**±  
 Super E/G, 1999-'06 BT..... **106-4974**±  
 Single VFI, S&S T124..... **106-4976**±  
 Single VFI, 1984–up BT..... **106-4977**±  
 Stock Carb, Delphi® EFI, 1984–up BT..... **106-4978**±
10. Backplate Screw, SHC, w/Threadlock, 1/4–20 x 1/2" (each).... **106-2084**  
 10 pack..... **106-2105**
11. Screw, 5/16–18 x 1 1/4, BHC, Chrome (each)..... **50-0309-S**±
12. Flat Washer 5/16" x 1/16" 6320, 70907-07, 6016, 6702..... **50-7034**
13. Hose, Breather, 1/4" I.D., 90°..... **19-0178A**
14. Screw, Breather Fitting, 3/8–16 x 1 1/4"..... **50-0436**
15. Washer, Flat, 3/8" x 13/16" x 1/16", Chrome..... **50-7106-S**±
16. Screw, Breather Fitting, 1/2–13 x 1.25..... **50-0435**
17. Shim Kit

- (a) 5/16" I.D. S&S 4 1/8" engines..... **17-0314**  
 Includes:  
 .325" x 1" x .018", Stainless Steel (each)..... **50-7038**  
 .325" x 1" x .030", Stainless Steel (each)..... **50-7039**  
 .325" x 1" x .048", Stainless Steel (each)..... **50-7040**  
 .325" x 1" x .105", Stainless Steel (each)..... **50-7041**  
 .325" x 1" x .125", Stainless Steel (each)..... **50-7042**
- (b) 1/2" I.D. 1993–up BT..... **17-0464**  
 Includes:  
 .515" x 1" x .018", Stainless Steel (each)..... **50-7085**  
 .515" x 1" x .030", Stainless Steel (each)..... **50-7086**  
 .515" x 1" x .048", Stainless Steel (each)..... **50-7087**  
 .515" x 1" x .105", Stainless Steel (each)..... **50-7089**  
 .515" x 1" x .125", Stainless Steel (each)..... **50-7090**
18. Enrichment Device\*, S&S Super E & G carbs..... **N/A**  
 (\*Use in place of enrichment device on air cleaner backplate)
19. Gasket, Backplate – E/G/SBEFI (each)..... **106-1724**  
 10 pack..... **106-2328**
20. Gasket, Backplate, S&S SBEFI 58mm..... **106-4662**
21. Gasket, Backplate, Stock carb/Throttle Body 29062-95B.... **106-6022**
22. Hardware Kit  
 1999-'06 bt, Stock CV & EFI Delphi®  
 (includes #7, 8, 10, 11, 12, 13, 14, 15, 16, 17a, 17b, 19, 21).... **17-5098**  
 1999-'06 bt, Super E/G  
 (includes #7, 8, 10, 11, 12, 13, 14, 15, 16, 17a, 17b, 18, 19, 21) **17-5099**±  
 S&S 4 1/8" Bore Heads (includes #7, 8, 10, 11, 12, 13, 17a, 19).... **500-0016**
23. Oil, Air Filter, 8 oz. (Not shown)  
 Red..... **106-1163**  
 Blue..... **106-1164**

### ACCESSORIES

Description		Part #
Nylon Air Filter Cover	each	<b>106-0247</b>
	2 pack	<b>106-0248</b>



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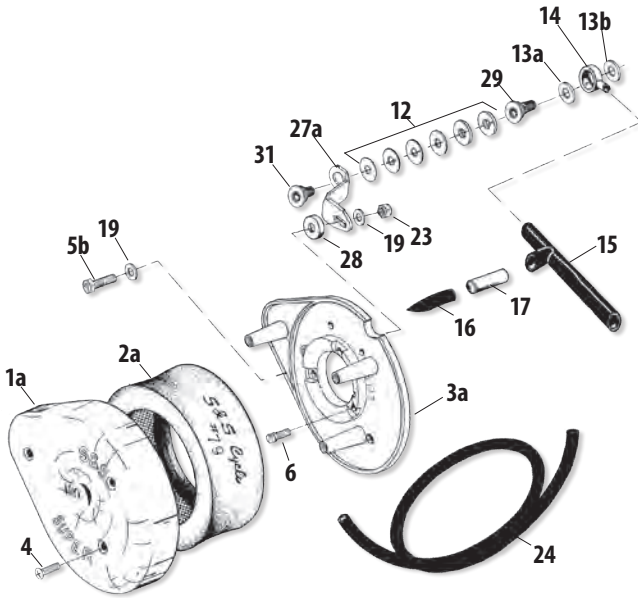


# AIR CLEANER REPLACEMENT PARTS FOR STOCK FUEL SYSTEMS

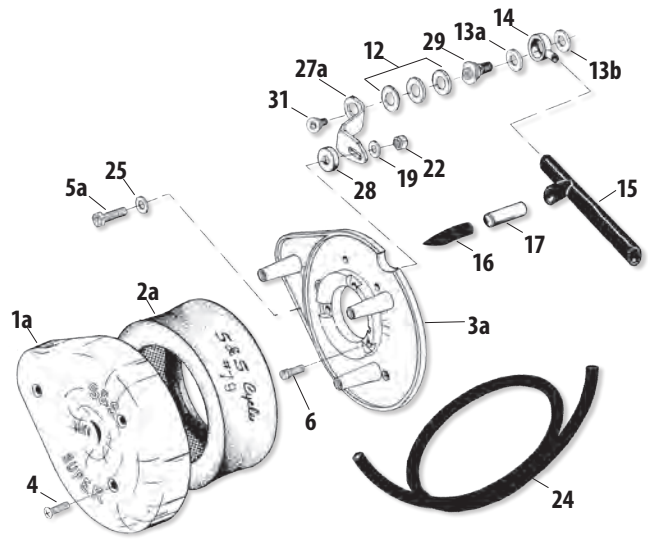
1. Air cleaner cover	
a. Chrome	17-0078 <sup>±</sup>
Black	17-0075
b. Chrome	17-0378 <sup>±</sup>
Gloss Black	170-0384A
Slasher	17-0004 <sup>±</sup>
2. Filter Element	
a. Foam	17-0079
b. Pleated	106-4722
3. Backplate	
1993-'06 bt, stock CV/Delphi® EFI	106-0907
4. Cover screw 1305 (each)	50-0072
3 pack	50-1052
10 pack	50-0094
Black 902 (each)	50-0310-S
3 pack	50-0310
5. Screw	
b. All others — HHCS ¼"-28 x 7/8"	50-0074
6. Backplate screw, BT 1999-up, All 2002-up EFI BT	
Zinc Plated (each)	106-2084
10 pack	106-2105
7. Backplate plug 1/8"-27 (each)	50-8331A
10 pack	50-1015
8. Spacer, 1/2" Hex, Threaded	N/A
9. Stud, Fully Threaded, 5/16-18 x 1.25", Zinc Plated, 1999-'01	N/A
10. SHCS, ¼-20 x 3/4 SEMS	50-0066
11. Screw, SHCS,	
1995-'98, ¼-20 x 3/4", SEMS	50-0066
1999-'01, 5/16-18 x 3/4" 3275 (each)	50-0302-S
12. Shims	
a. 5/8" x .025" (each)	50-7113
10 pack	50-7110
b. 5/8" x .050" (each)	50-7114
10 pack	50-7111
c. 5/8" x .075" (each)	50-7115
10 pack	50-7112
13. Breather screw seal	
a. BT 1993-'99, All 2002 EFI BT — Washer, .520 (each)	50-7055
10 pack	50-7057
b. BT 1999-up, All 2002 EFI BT — Washer, .380 (each)	50-7055
10 pack	50-7057
14. Breather fitting (each)	17-0350
2 pack	17-0355
15. Crankcase breather vent hose, BT 1999-up	 17-0339
16. Vent hose, with angle cut	17-0365
17. Hose fitting	17-0336C-S
18. Hose, vent, breather, formed,	
.250" x .375" x 1.825", 1993-2007 BT (each)	17-0364A
19. Flatwasher, 1/4" 6194, 6245, 6703, 6736, 6228W, 6192 (each)	50-7021
20. Washer, Lock, .250" 7035, 7036	50-7019
21. Screw, SHCS, ¼-20 x 1 1/4" (each)	50-0008
22. Support bracket locknut - ¼"-28 x 7/8" (each)	50-5010
23. Lockwasher, 5/16"	50-7032
24. Rubber tubing - ¼" x 5/8" x 3'	 N/A
25. Washer, flat - 3/8" x 7/8" x .146" (each)	50-7053
26. Washer, Flat, .375" x .875" x .146", Zinc, Steel (each)	50-7053
27. Support bracket	
a. 1999-up bt & EFI Softail® 2001	N/A
b. 1995-2001 bt, Air Cleaner To Head, Nickel Plated	106-1285
28. Shim - ¼" x 3/4" x .200"	50-7024
29. Screw vent fitting, BT 1999-up	17-0345
30. Screw, Breather, +.250" (Rear Head)	17-0348
31. Screw, Backplate (Rear Head), Socket Panhead	
5/16-24 x .360", Zinc, Alloy Steel	17-0346
32. Screw, Backplate Vent (Front Head)	
1999-'01, 5/16-18	17-0345
33. Screw, LSHC 5/16-24, x 1/2" Stainless Steel Front Head	106-2023
34. Cover, Breather Screw, Chrome, Aluminum, Front Head	106-2022 <sup>±</sup>
35. Gasket, backplate (each)	106-1724
10 pack	106-2328
36. Adaptor assembly, 1993-'06 bt	106-0881 <sup>±</sup>
37. Clamp, spring, 5/16"	50-8001
38. Clamp, Spring, .660" (each)	50-8076-S
39. Wire tie (N/S)	50-8003

(N/S) = Not Shown

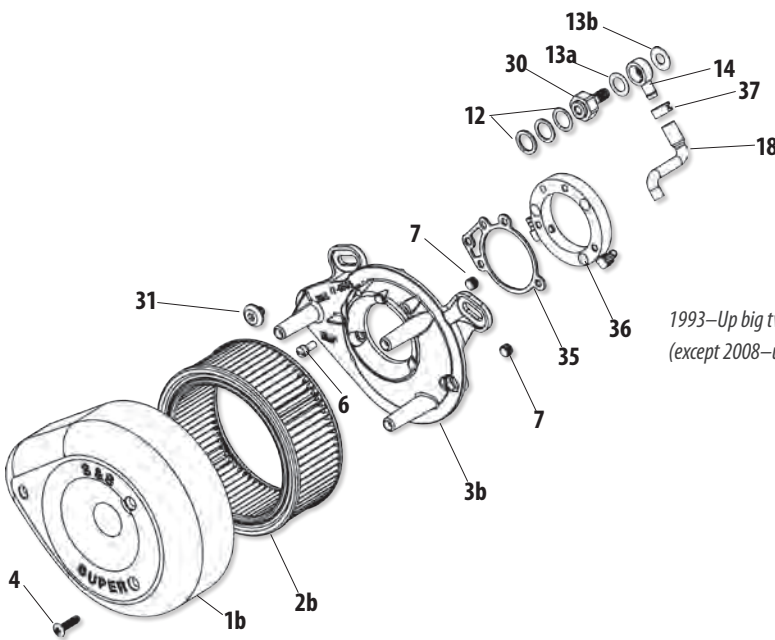




1999–Up big twin with CV Carburetor, 2001 Harley-Davidson® EFI Softail®, & All 2001–'06 EFI Models except Dyna® (Discontinued) **17-0101**







1993–'06 Carbureted big twin models, 2001 EFI Softail® Models, and 2002–Up All EFI Models (except 2006–Up Dyna®) (Discontinued) **17-0117**



1993–Up big twin stock cv and Delphi® Single Bore EFI (except 2008–up touring models) **17-0450±**

# SUPER E & G AIR CLEANER REPLACEMENT PARTS FOR 1999-'06 BIG TWINS

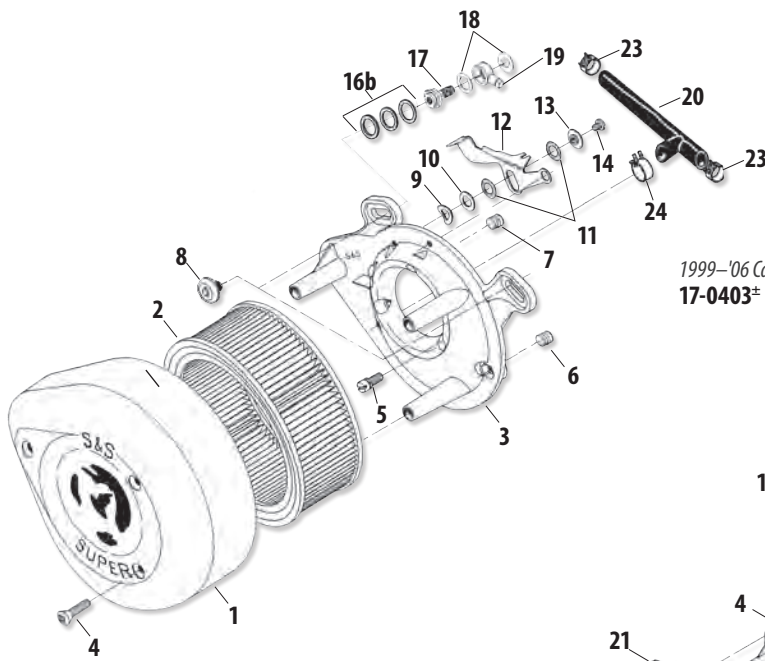
1. Air cleaner cover –		
Chrome .....	17-0378 <sup>±</sup>	
Gloss Black .....	170-0384A	
Slasher .....	17-0004 <sup>±</sup>	
2. Filter Element		
Pleated .....	106-4722	
3. Backplate		
1999-'06 bt .....	 17-0336	
4 1/8" Bore (Manufactured after 1-1-03) .....	 17-0387	
4. Cover screw		
Chrome (each) .....	50-0347-S <sup>±</sup>	
Stainless Steel 1305 (each) .....	50-0072	
10 pack .....	50-0094	
Black 902 (each) .....	50-0310-S	
3 pack .....	50-0310	
5. Backplate screw, Zinc Plated (each) .....	106-2084	
10 pack .....	106-2105	
6. Backplate plug 1/8"-27 (each) .....	50-8331A	
10 pack .....	50-1015	
7. Screw vent fitting – BT 1999-'06 except 06 Dyna® .....	17-0345	
8. Screw, air cleaner to head .....	17-0346	
9. Fast idle friction washer (each) .....	50-7035	
10 pack .....	50-7058	
10. Fast idle steel washer (each) .....	50-7037	
10 pack .....	50-7061	
11. Fast idle nylon washer (each) .....	50-7036	
10 pack .....	50-7060	
12. Fast idle lever .....	 17-0329	
13. Fast idle brass washer (each) .....	50-7007 <sup>±</sup>	
10 pack .....	50-7010 <sup>±</sup>	
14. Fast idle lever screw (one required for current backplate)		
each .....	50-0041	
10 pack .....	50-0062	
15. Shim, .850" x .325" x .400"		
S&S 4 1/8" Bore .....	50-7027	
16. Shims		
a. S&S 4 1/8" Bore, .325" x 1" x		
.018" (each) .....	50-7038	
.030" (each) .....	50-7039	
.048" (each) .....	50-7040	
b. BT 1993-'06, .625" x .880" x		
.025" (each) .....	50-7113	
10 pack .....	50-7110	
.050" (each) .....	50-7114	
10 pack .....	50-7111	
.075" (each) .....	50-7115	
10 pack .....	50-7112	
17. Screw vent fitting		
b. BT 1999-up .....	17-0345	
18. Washer, silicone coated steel		
BT 1999-up, .520" (each) .....	50-7055	
10 pack .....	50-7057	
BT 1999-up, .380" (each) .....	50-7055	
10 pack .....	50-7057	
19. Breather fitting (each) .....	17-0350	
2 pack .....	17-0355	
20. Crankcase breather hose, BT 1993-'99 .....	 17-0339	
21. Flatwasher – 5/16" x 1/16" 6320, 70907-07, 6016, 6702 .....	50-7034	
22. Mounting bracket bolt, S&S 4 1/8" Bore, 5/16"-18 x 1 1/4" .....	50-0110	
23. Spring clamps .....	50-8001	
24. Clamp, Hose, Bolt Style, 5/8" – 7/8" .....	50-8002	
25. Plate, air cleaner noise reducer .....	17-0389	
26. Plate, Restrictor, Super E/G TÜV, 1999-up bt .....	N/A	
27. Rubber isolator mounts (each) .....	50-8510-S	
28. Shim, spacers, 1/2" OD x 1/4" ID x .080" (each) .....	50-7971-S	

## HARDWARE KITS

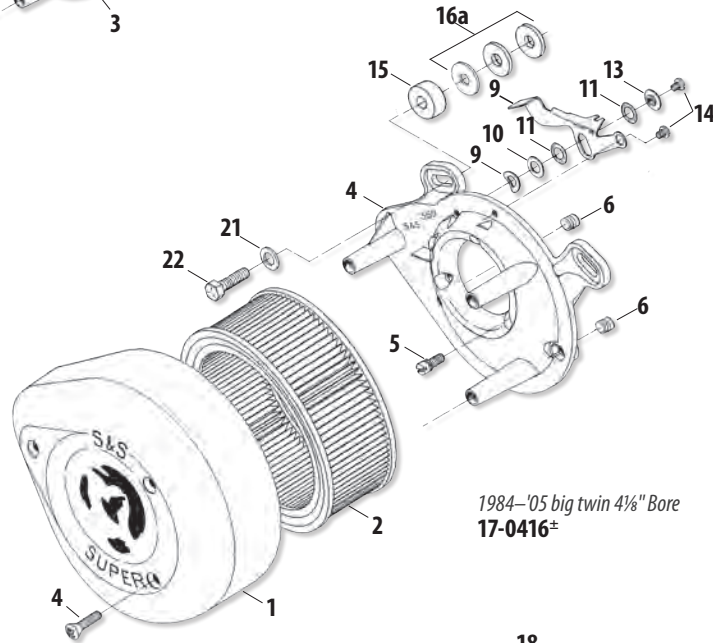
29. For Super E/G, 1999-up bt .....	17-0437 <sup>±</sup>
For Super E/G, 4-1/8", 1984-'99 bt .....	17-0460 <sup>±</sup>

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 WARNING: Cancer and Reproductive Harm



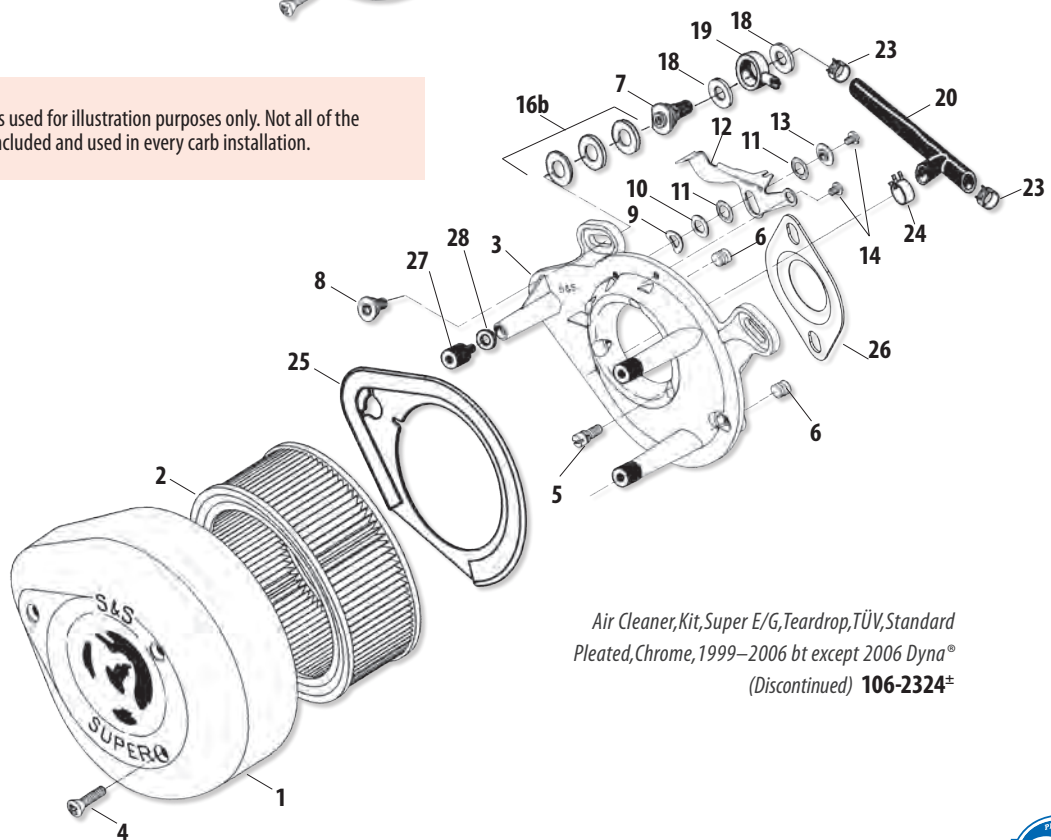
1999–'06 Carbureted Harley-Davidson® Twin Cam 88°  
17-0403±



1984–'05 big twin 4 1/8" Bore  
17-0416±

**NOTE**

The line drawing is used for illustration purposes only. Not all of the parts shown are included and used in every carb installation.



Air Cleaner, Kit, Super E/G, Teardrop, TÜV, Standard  
Pleated, Chrome, 1999–2006 bt except 2006 Dyna®  
(Discontinued) 106-2324±

# CLASSIC TEARDROP AIR CLEANER REPLACEMENT PARTS FOR S&S® SINGLE BORE EFI

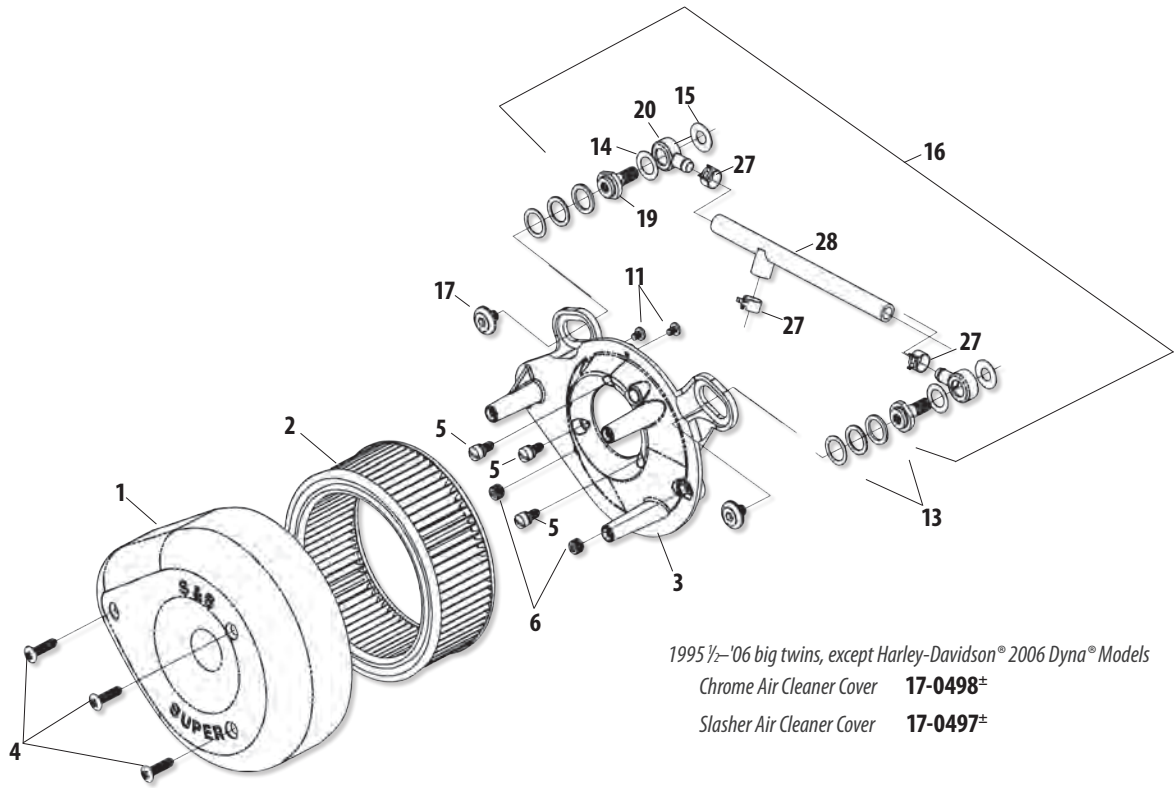
1. Air Cleaner Cover		
Slasher (slotted chrome) .....	17-0004±	
Chrome .....	17-0378±	
Gloss Black .....	170-0384A	
2. Element, pleated .....	106-4722	
3. Backplate SBFFI		
BT 1999-up .....	17-0120	
S&S 4½" bore engines .....	17-0380	
4. Screw, Cover, oval 1/4-20 x 1		
Chrome 1305 (each) .....	50-0072±	
3 pack .....	50-1052±	
10 pack .....	50-0094±	
Black 902 (each) .....	50-0310-S	
3 pack .....	50-0310	
5. Backplate screw		
Zinc Plated (each) .....	106-2084	
10 pack .....	106-2105	
6. Pipe plug, 1/8, air cleaner backplate (each) .....	50-8331A	
10 pack .....	50-1015	
7. Mounting bracket bolt, hex 5/16-18 x 1¼ .....	50-0110	
8. Flat washer, 5/16" x 1/16" 6320, 70907-07, 6016, 6702 .....	50-7034	
9. Shim, .850" x .325" x .400" .....	50-7027	
10. Shim kit for 4½" bore .....	17-0314	
Individual shims, .325" x 1" x		
.018" (each) .....	50-7038	
.030" (each) .....	50-7039	
.048" (each) .....	50-7040	
.105" (each) .....	50-7041	
.125" .....	50-7042	
2 pack .....	50-7042P	
11. Screw, cable guide & air cleaner backplate, 10-24 x ¼ (each) .....	50-0041	
10 pack .....	50-0062	
12. Breather hardware for 4½" bore (Not included in air cleaner kit)	31-2104	
13. Shims, individual		
5/8 x 7/8 x .025 (each) .....	50-7113	
10 pack .....	50-7110	
5/8 x 7/8 x .050 (each) .....	50-7114	
10 pack .....	50-7111	
5/8 x 7/8 x .075 (each) .....	50-7115	
10 pack .....	50-7112	
14. Silicone washer, 1/2" ID (each) .....	50-7055	
10 pack .....	50-7057	
15. Silicone washer, 3/8" ID (each) .....	50-7055	
10 pack .....	50-7057	
16. Breather hardware for 1999-up bt (Not included in air cleaner kit)	17-0455	
17. Screw, wide head, 5/16-24 x .36 .....	17-0346	
18. Air cleaner hardware kit (N/S)		
BT 1999-up .....	17-0482	
S&S 4½" bore .....	17-0481	
19. Breather vent fitting, BT 1999-up .....	17-0345	
20. Breather fitting (each) .....	17-0350	
2 pack .....	17-0355	
21. Check Valve .....	50-8122	
22. Clamp, Spring, .660" .....	50-8076-S	
23. Clamp, Spring, .440" .....	50-8143-S	
24. Hose, Cut To Size, 1875" x 6", Black, Rubber, SAE 30R2 .....	50-8142AS	
25. Hose, Rear, Vent, Breather, Formed, Section 1, SAE J30 .....	50-8262-S	
26. Hose, Rear, Vent, Breather, Formed, Section 2, SAE J30 .....	50-8263-S	
27. Clamp, Spring, 9/16" .....	50-8001	
28. Hose, Vent, Breather, Epichlorohydrin Polymer .....	USA 17-0339	

(N/S) = Not shown

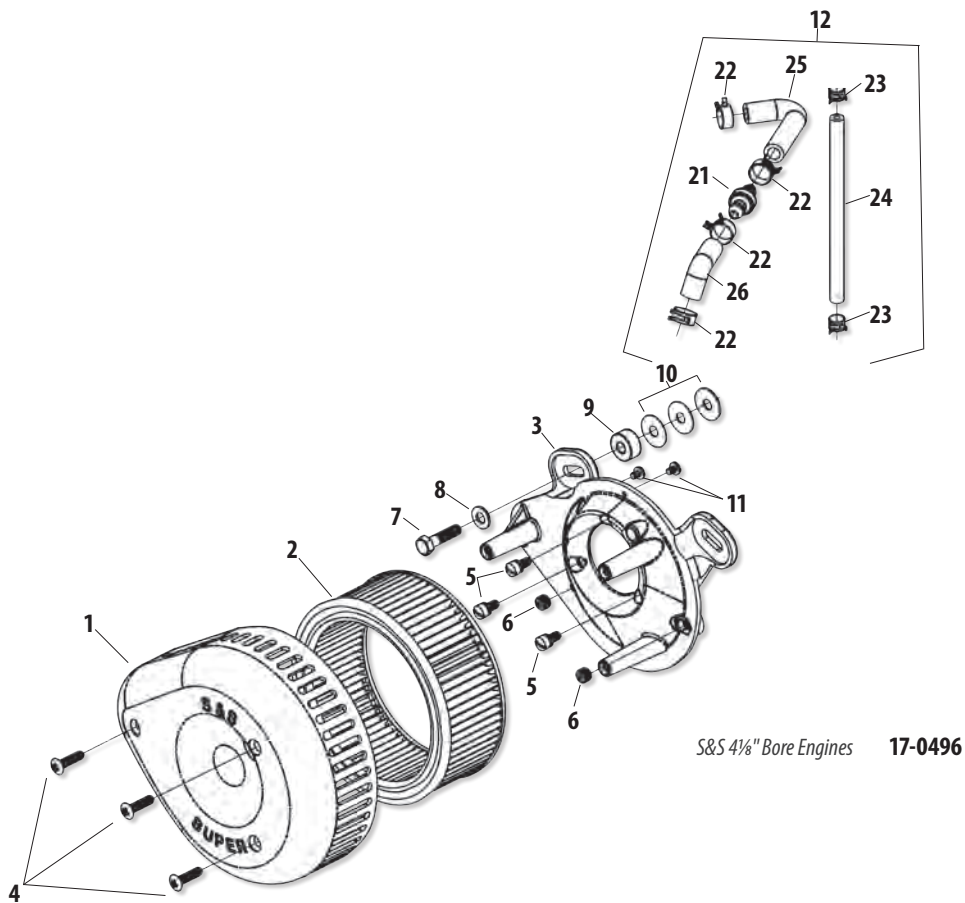
**NOTE**

Breather hardware not included in these air cleaner kits.












1995 1/2–'06 big twins, except Harley-Davidson® 2006 Dyna® Models  
 Chrome Air Cleaner Cover **17-0498**±  
 Slasher Air Cleaner Cover **17-0497**±

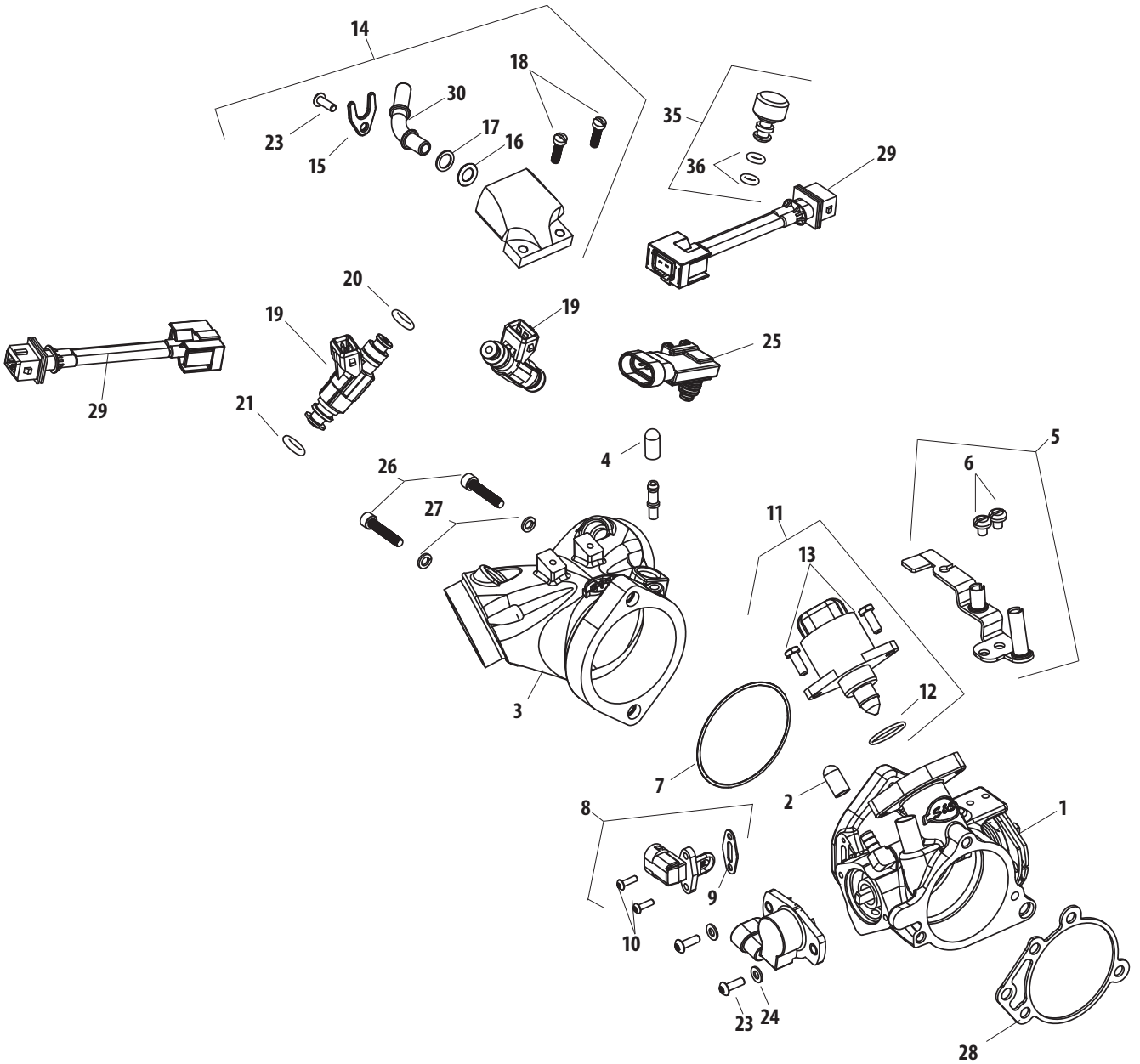


S&S 4 1/8" Bore Engines **17-0496**

# SINGLE BORE EFI THROTTLE BODY AND RELATED REPLACEMENT PARTS

1. Throttle body	
52mm 1995-'05	16-5101
52mm 2006-Up	 16-5153
58mm 1995-'05	 106-3954
58mm 2006-Up	 106-3957
2. Cap, canister purge (each)	50-8266-S
3. Manifold (See page 211)	
4. Cap, rubber, manifold, fitting	50-8372
5. Throttle cable guide packet with hardware	55-5084
6. Screw, cable guide & air cleaner backplate (each)	50-0041
10 pack	50-0062
7. O-ring, throttle body to manifold	50-7967-S
8. Intake air temperature sensor with hardware 27270-95	
	 55-5041±
9. Gasket, IAT	16-5009-S
10. Screw, M3, IAT	50-0357-S
11. Idle air control motor SS EFI with hardware, 1995-'05	
27628-01, 27628-01A	 55-5085±
12. O-ring, IAC	50-8149-S
13. Screw, 10-24, IAC	
1995-'05 (each)	50-0356-S
2006-Up (each)	50-0358-S
14. Fuel rail kit	
2006-'16 (Fuel inlet tube included)	16-5202
2002-'05 (Fuel inlet tube not included)	16-5203
1995-'01	16-5207
15. Tube clip, fuel rail inlet 2001-'07	
each	50-0391-S
16. O-ring, fuel rail inlet, 2001-'07 27237-95	
each	50-8137-S
17. Backing washer, fuel rail inlet	
2001-'07	50-0349-S
18. Screw, rail, 1995-Up	
each	50-0039
10 pack	50-0146
19. Fuel injector	
each	55-5052A
2 pack	55-5052
20. O-ring, injector top, black	50-8264-S
21. O-ring, injector bottom, orange	50-8265-S
22. Throttle position sensor	N/A
23. Screw, TP sensor & fuel rail	
each	50-0358-S
25. MAP sensor 32424-98, 32416-10, 32417-10	 55-1090
26. Screw, throttle body to manifold	
each	50-0359-S
27. Washer, lock, #10, throttle body to manifold	50-7000
28. Gasket, backplate	
52mm (each)	106-1724
10 pack	106-2328
58mm (each)	106-4662
29. Harness, injector adapter kit	
1995-'05	55-5074
2006-Up	55-5209
30. Fuel inlet tube 45°, 2002-up 27221-95	 50-0485
31. Spacer, throttle position – 2002-up	55-5201
32. Pressure regulator, 1995-'01	16-5297
33. Screw, pressure regulator, 6-32 x 3/16", 1995-'01	50-0279-S
34. Clamps, Hose, 1/2" diameter, smooth, 1995-'01	
each	50-8352
35. Plug, assembly, MAP sensor hole, 1995-'01	50-8350
36. O-ring, MAP plug, 1995-'01	
each	50-8133-S

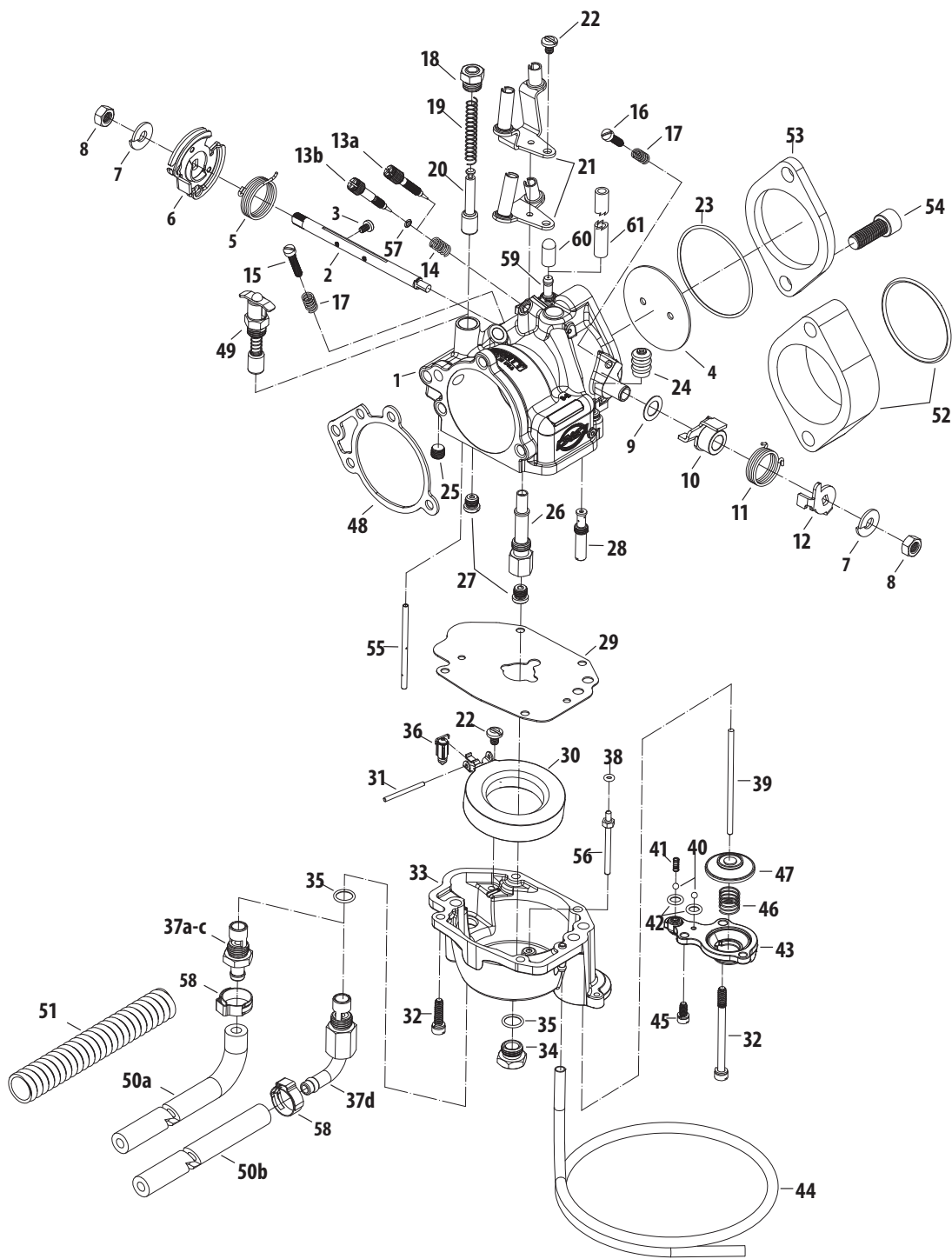
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# SUPER E & G CARBURETOR REPLACEMENT PARTS

1. Carb body assembly		
1 7/8" Super E	USA	11-2381±
2 1/4" Super G		11-2391±
2. Throttle shaft		
1 7/8" Super E — Includes two plate screws		11-2383
2 1/4" Super G — Includes two plate screws		11-2483
3. Throttle plate screw 11-2045- (two required) (each)		50-0055-S
10 pack		50-0064
4. Throttle plate		
1 7/8" Super E		11-2055
2 1/4" Super G		11-2355
5. Throttle return spring (each)		11-2382
5 Pack	USA	1,2,3 11-3502
6. Throttle spool	USA	1,2,3 11-2385
7. Throttle shaft lock washer (two required)		50-7031
8. Throttle shaft nut (two required) (each)		11-2350
5 pack		11-2363
9. Throttle shaft nylon washer (each)		50-7050
10 pack		50-7072
10. Pump actuator lever		11-2376
11. Actuator spring (each)		11-2375-S
5 pack	USA	1,2,3 11-3501
12. Pump actuator arm		11-2377
13. Idle mixture screw		
a. Idle mixture screw, brass (each)		11-2354±
5 pack		11-2378±
b. Idle mixture screw only		
each		110-0003
5 pack		110-0069±
Idle mixture screw w/500-0036 o-ring		
each		110-0068±
14. Idle mixture screw spring (each)		11-2052
10 Pack	USA	1,2,3 11-2060
15. Idle speed screw (each)		50-0038
10 Pack		50-0150
16. Pump adjustment screw (each)		50-0039
10 Pack		50-0146
17. Idle speed/pump adjuster spring (each)		11-2048
10 pack	USA	1,2,3 11-2053
18. Plunger nut (each)		11-2344±
5 Pack		11-2372±
19. Plunger spring (each)		11-2340
10 Pack	USA	1,2,3 11-2359
20. Fast idle plunger		11-2343
21. Cable guide assembly with screw		
Use with butterfly style cables		11-2339P
Use with constant velocity style cables		11-2338P
22. Cable clamp/float pin screw (each)		50-0041
10 Pack		50-0062
23. O-ring		
1 7/8" Super E (each)		50-8016
10 Pack		50-8094
2 1/4" Super G (each)		50-8015
10 pack		50-8093
24. Bellows seal (each)		11-2266
5 Pack		11-2279
25. Bowl vent plug (each)		50-0105
10 pack		50-0151
26. Main discharge tube		11-2085±
27. Main jet — See Chart on See page 217		
28. Intermediate Jets — See Chart on See page 216		
Series #94 fits all Super 1 7/8", 2 1/4", 2 1/4" gas carburetors.		
29. Bowl gasket (each)		11-2386
10 pack		11-2387
30. Float		11-2187
31. Float pin (each)		11-2369±
5 Pack		11-2370±
32. Bowl screw		
10-24 x 3/4" — Three required (each)		50-0034
10 Pack		50-0063
10-24 x 2 3/8" — One required (each)		50-0040
10 Pack		50-0061
33. Carb bowl only	USA	1,2,3 11-2388±
Carb bowl assembly	USA	1,2,3 11-2388P
34. Bowl plug (each)		11-2090
5 pack		11-2092±
35. Seat o-ring* (required with part #11-2465 only when replaces 360° style fuel inlet)		
each		50-8009
10 pack		50-8095
36. Needle		
1 7/8" Super E & 2 1/4" Super G	USA	1,2,3 11-2195±
Racing only		11-2197±
37. Seat — Includes O-ring #35		
(Replaces obsolete seats 11-2347 and 11-2348)		
a. 1 7/8" E & 2 1/4" G (Uses part #11-2195± needle)		11-2465
b. Racing only (Uses part #11-2197± needle)		N/A
c. Racing only — threaded fuel inlet (6AN .157" ID)		
(Uses part #11-2195± needle)		11-2395
d. Permeation Compliant fuel inlet seat Super E or G		
(Uses part #11-2195± needle)	USA	1,2,3 106-2011
38. Ejector nozzle o-ring (each)		50-8011
10 Pack		50-8096
39. Pump pushrod (each)		11-2373
5 Pack	USA	1,2,3 11-2393
40. Check ball — (two required) (each)		50-8090
10 pack		50-8125
41. Check ball spring (each)		11-2374
5 Pack	USA	1,2,3 11-2392
42. Pump cap o-ring — (two required) (each)		50-8012
10 Pack		50-8100
43. Pump cap assembly	USA	1,2,3 11-2389
44. Overflow hose per 24" 27369-76 (each)	USA	19-0262-S
5 Pack	USA	19-0263
45. Pump cap screw 8-32 — (two required) (each)		50-0042
10 Pack		50-0098
46. Diaphragm spring (each)		11-2275
10 pack	USA	1,2,3 11-2278
47. Diaphragm		11-2282
48. Gasket, backplate (each)		106-1724
10 pack		106-2328
49. Enrichment device (Use with air horn only)		11-2084±
50. Fuel line		
a. With 90° bend*19"		N/A
b. Permeation Compliant Straight, 311" x .563" x 17.5"		
(Use with part #106-2011, 90° seat)		190-0001
51. Fuel line insulator — 12"	USA	1,2,3 19-0172
52. Spacer, Kit, w/O-ring		
1 7/8" x 1"		16-0057*
2 1/4" x 1"		16-0357*
2 1/4" x 1"		16-0157*
*Use with 1" Spacer Block		16-0058
53. Insulator Block, Manifold, w/O-ring		
1 7/8" x 1/4" Super E		16-0491
1 7/8" x 3/8" Super E		16-0497
2 1/4" x 1/4" Super G		16-0492
2 1/4" x 3/8" Super G		16-0498
2 1/4" x 1/4" Super D		16-0499





- 54.** Screw
  - 1" x 3/8" -16 (each) ..... **50-0161**
  - 1 1/4" x 3/8" -16 (each) ..... **50-0162**
  - 10 pack ..... **50-0177**
  - 1 3/8" x 3/8" -16 (each) ..... **50-0163**
  - 5 pack ..... **50-0178**
  - 2" x 3/8" -16 (each) ..... **50-0164**
  - 5 pack ..... **50-0185**
  - 1 1/4" x 1/4" -20 4740A, 3482A (each) ..... **50-0008**
  - 1 1/2" x 1/4" -20 4718A ..... **50-0079**
  - 2 1/4" x 1/4" -20 4717A ..... **50-0078**
- 55.** Tube, Fast Idle Pick-Up, Super E/G, 1.25" x 2.350", Brass ..... **0381F±**
- 56.** Tube, Ejector Nozzle, Super E/G, Flared, Brass ..... **106-6124±**

- 57.** O-ring, 3mm x 5mm x 1mm (each) ..... **500-0036**
- 10 pack ..... **500-0148**
- 58.** Clamp, 5/8" - 7/8" ..... **50-8002**
- 59.** Hose, Fitting straight, .040" ..... **16-0134**
- 60.** VOES Fitting Cap ..... **50-8372**
- 61.** VOES/Oil Return Hose ..... **19-0395**

\*360° banjo style fuel inlet fitting used on early S&S E&G carbs is no longer available. Replace with one of the inlet/seat fittings listed under #37 on this page. We highly recommend inlet/seat #106-2011.

± WARNING: Cancer and Reproductive Harm

**CARBURETOR REBUILD KITS**  
**SEE PAGE 217**

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod®

Indian® Models



Tools &  
Shop Supplies

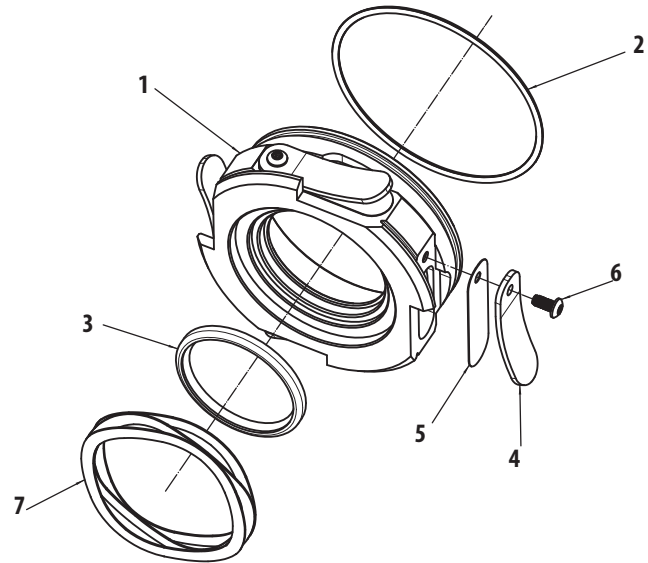
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Appendix



# CRANKCASE BREATHER REED VALVE REPLACEMENT PARTS

1. Valve, Assembly, Breather Reed  
Engines with Stock Oil Pumps  
1999-'02 bt with stock or S&S Super Stock crankcases  
.....  **31-2070**  
2003-'10 bt with stock or S&S Super Stock crankcases  
.....  **310-0742**  
S&S SA Crankcases ..... **310-0742**  
Engines with S&S gear oil pumps  
2003-up bt w/stock crankcases and all S&S crankcases  
..... **310-0742**
2. O-ring  
1999-'02 bt (-038), 2.614" ID x 2.750" OD, Viton® ... **50-8154-S**  
2003-up bt (-036), 2.364" ID x 2.500" OD, Viton® ... **50-8155-S**
3. Seal, Breather Reed Valve, 1999-up bt. .... **31-4086**
4. Stop, Breather Reed Valve, Packaged, 1984-up bt. .... **N/A**
5. Reed, Breather Valve, bt (each) ..... **31-2072-S**
6. Screw, Torx BH, 4-40 x 1/4", Black, Alloy Steel (each) ..... **50-0305-S**
7. Wave Spring, 2"OD X 1.6"ID X .375" ..... **N/A**
8. Spring Adaptor (for S&S SA Crankcases) (N/S) ..... **31-2103\***

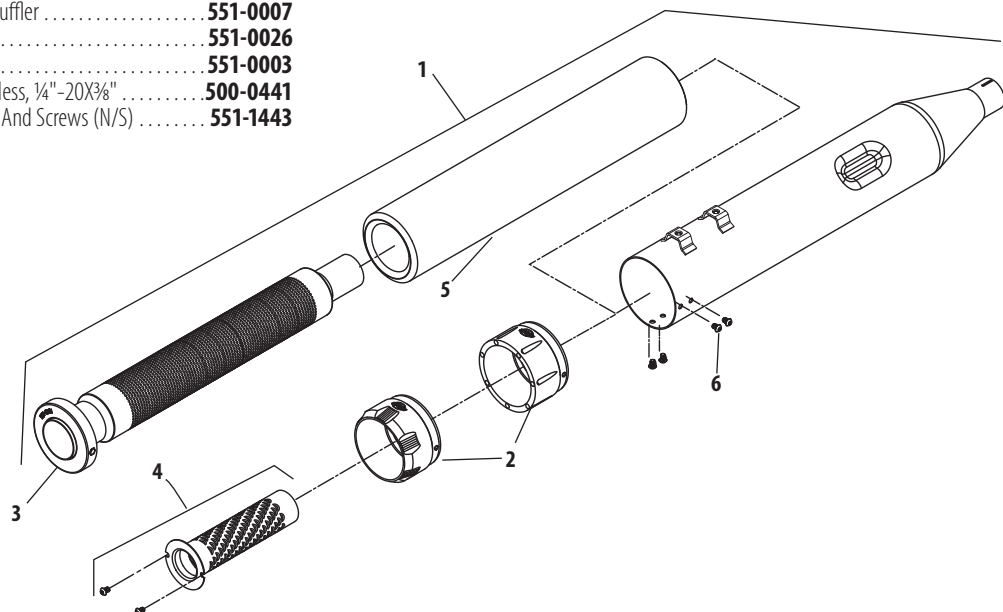


\*Required to accommodate the extra .375" case width of S&S Special Application big bore crankcases.

(N/S) = Not Shown

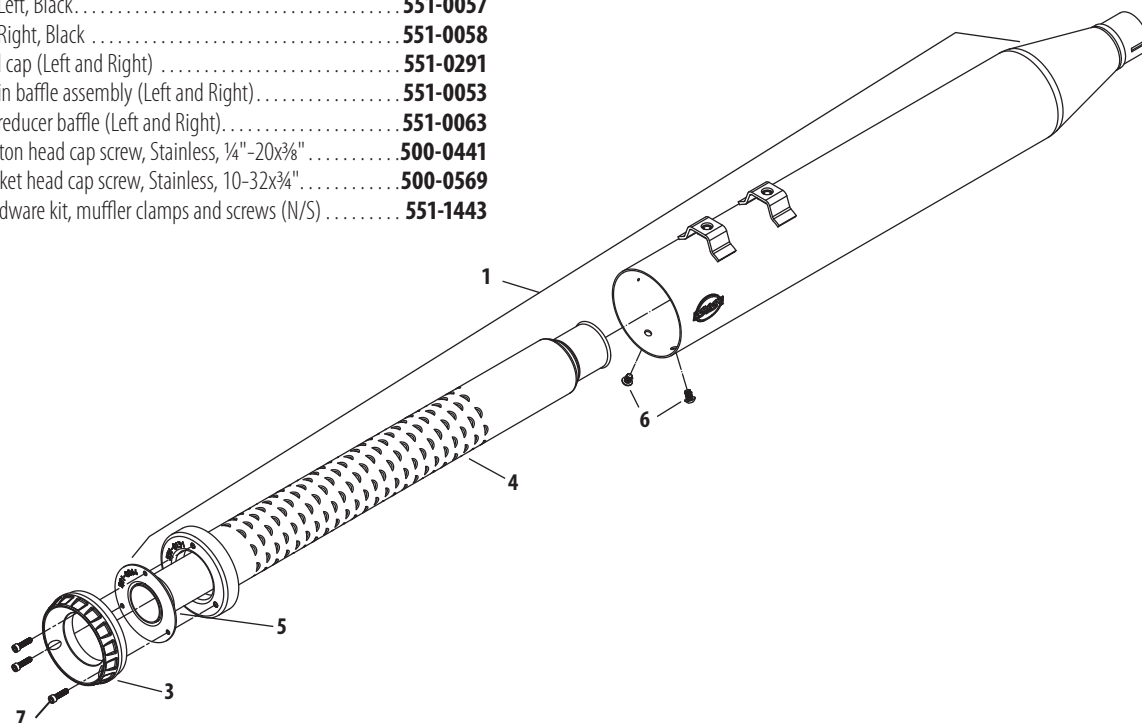
# Mk45 4.5" MUFFLER REPLACEMENT PARTS

1. 4.5" Muffler Assembly  
Left, Chrome ..... **551-0020±**  
Right, Chrome ..... **551-0021±**  
Left, Black ..... **551-0022**  
Right, Black ..... **551-0023**
2. End cap  
Thruster, Chrome ..... **550-0634A±**  
Thruster, Highlighted Machined ..... **550-0629A**  
Tracer, Chrome ..... **550-0636A±**  
Tracer, Highlighted Machined ..... **550-0632A**
3. Main Baffle Assembly, 4.5" Muffler ..... **551-0007**
4. dB reducer ..... **551-0026**
5. Insulation, 4.5" Muffler ..... **551-0003**
6. Button Head Cap Screw, Stainless, 1/4"-20X3/8" ..... **500-0441**
7. Hardware Kit, Muffler Clamps And Screws (N/S) ..... **551-1443**



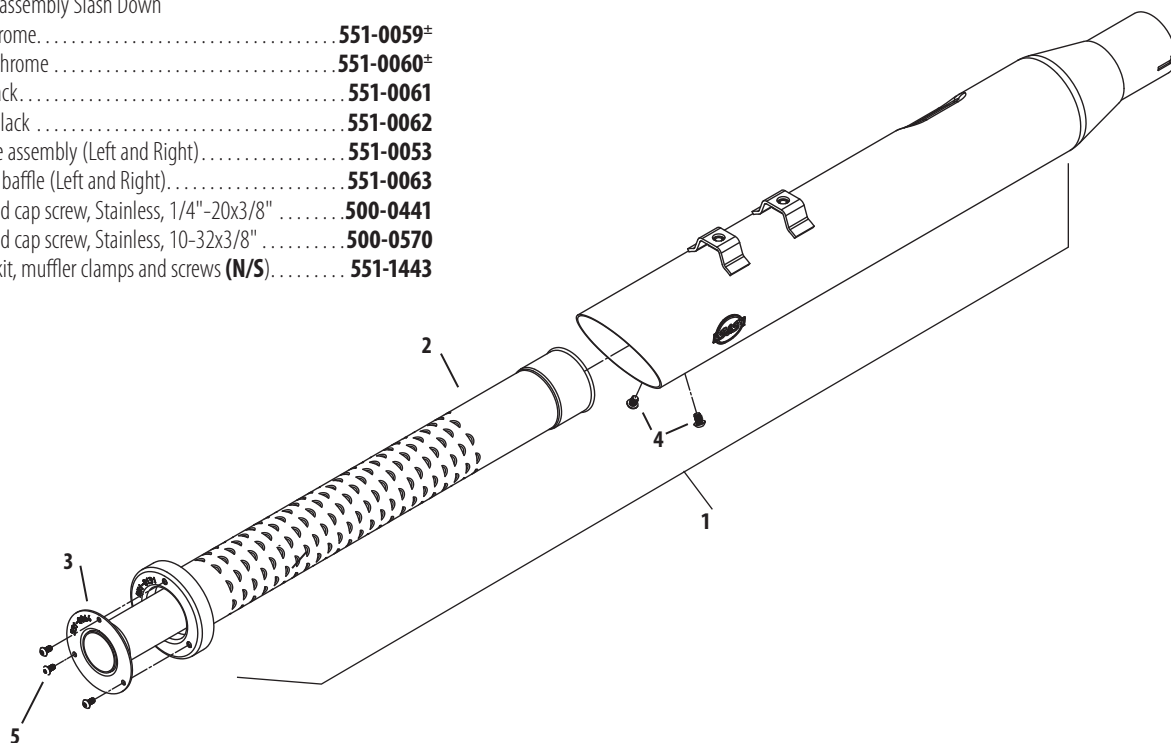
# GRAND NATIONAL® 4" REPLACEMENT PARTS

- 1. 4" Muffler assembly with Grand National end cap
  - Left, Chrome ..... 551-0055±
  - Right, Chrome ..... 551-0056±
  - Left, Black ..... 551-0057
  - Right, Black ..... 551-0058
- 3. End cap (Left and Right) ..... 551-0291
- 4. Main baffle assembly (Left and Right) ..... 551-0053
- 5. dB reducer baffle (Left and Right) ..... 551-0063
- 6. Button head cap screw, Stainless, 1/4"-20x3/8" ..... 500-0441
- 7. Socket head cap screw, Stainless, 10-32x3/4" ..... 500-0569
- 9. Hardware kit, muffler clamps and screws (N/S) ..... 551-1443



# SLASH CUT 4" REPLACEMENT PARTS

- 1. 4" Muffler assembly Slash Down
  - Left, Chrome ..... 551-0059±
  - Right, Chrome ..... 551-0060±
  - Left, Black ..... 551-0061
  - Right, Black ..... 551-0062
- 2. Main baffle assembly (Left and Right) ..... 551-0053
- 3. dB reducer baffle (Left and Right) ..... 551-0063
- 4. Button head cap screw, Stainless, 1/4"-20x3/8" ..... 500-0441
- 5. Button head cap screw, Stainless, 10-32x3/8" ..... 500-0570
- 6. Hardware kit, muffler clamps and screws (N/S) ..... 551-1443



± WARNING: Cancer and Reproductive Harm

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod®

Indian® Models

Tools &  
Shop Supplies

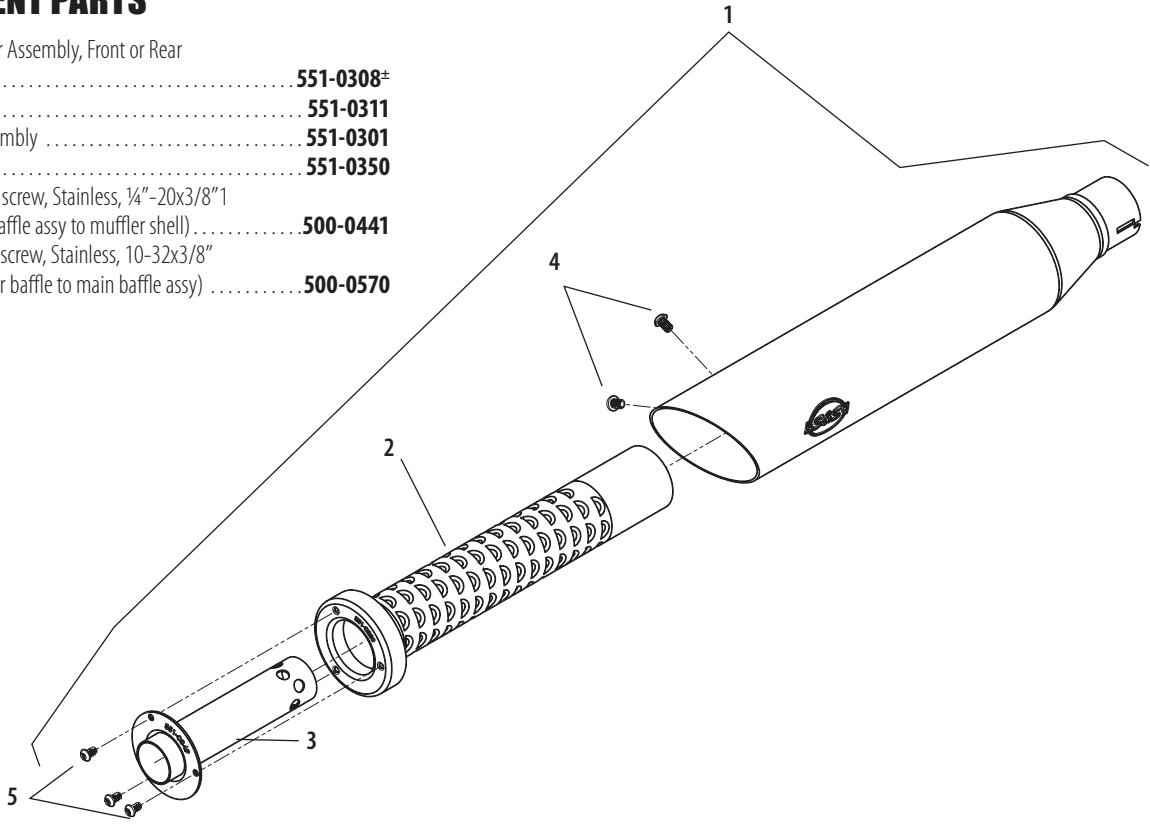
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Appendix

# SLASH CUT SLIP-ON MUFFLERS FOR DYNA® MODELS

## REPLACEMENT PARTS

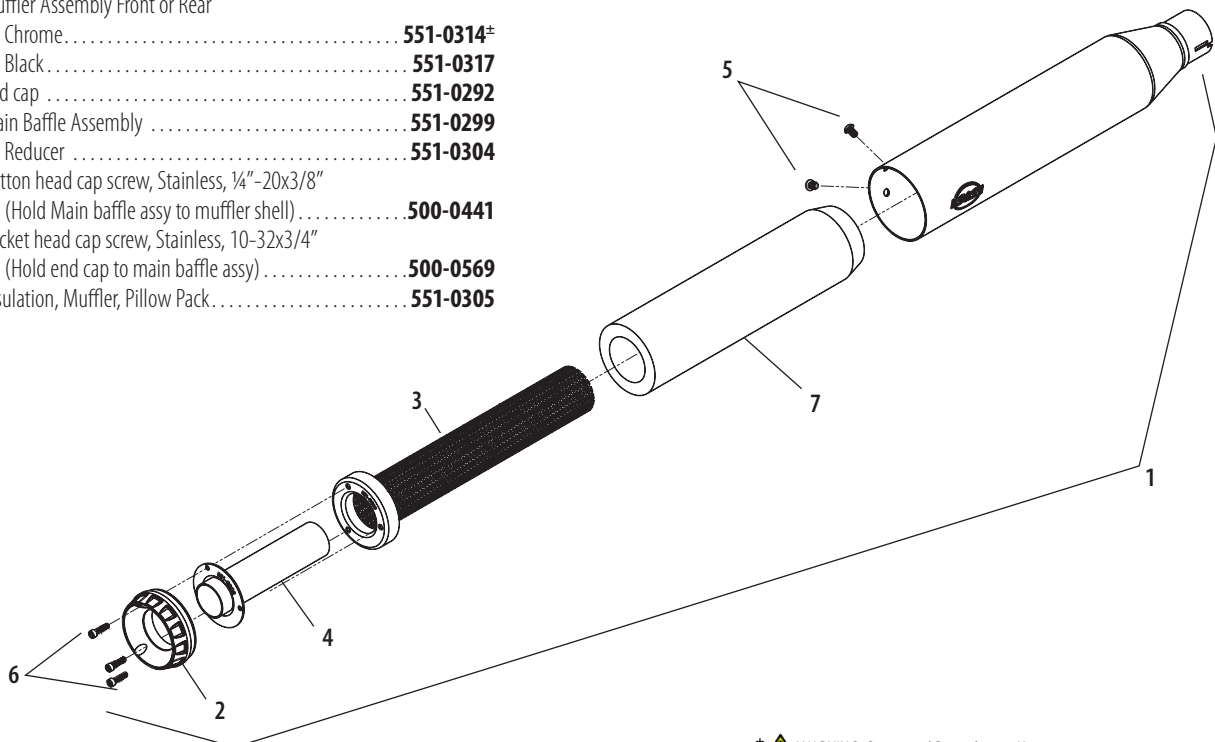
1. Slash Cut Muffler Assembly, Front or Rear
  - Chrome ..... **551-0308**±
  - Black ..... **551-0311**
2. Main Baffle Assembly ..... **551-0301**
3. dB Reducer ..... **551-0350**
4. Button head cap screw, Stainless, 1/4"-20x3/8"1  
(Hold Main baffle assy to muffler shell) ..... **500-0441**
5. Socket head cap screw, Stainless, 10-32x3/8"  
(Hold db killer baffle to main baffle assy) ..... **500-0570**



# GRAND NATIONAL® SLIP-ON MUFFLERS FOR DYNA® MODELS

## REPLACEMENT PARTS

1. Muffler Assembly Front or Rear
  - Chrome ..... **551-0314**±
  - Black ..... **551-0317**
2. End cap ..... **551-0292**
3. Main Baffle Assembly ..... **551-0299**
4. dB Reducer ..... **551-0304**
5. Button head cap screw, Stainless, 1/4"-20x3/8"  
(Hold Main baffle assy to muffler shell) ..... **500-0441**
6. Socket head cap screw, Stainless, 10-32x3/4"  
(Hold end cap to main baffle assy) ..... **500-0569**
7. Insulation, Muffler, Pillow Pack ..... **551-0305**

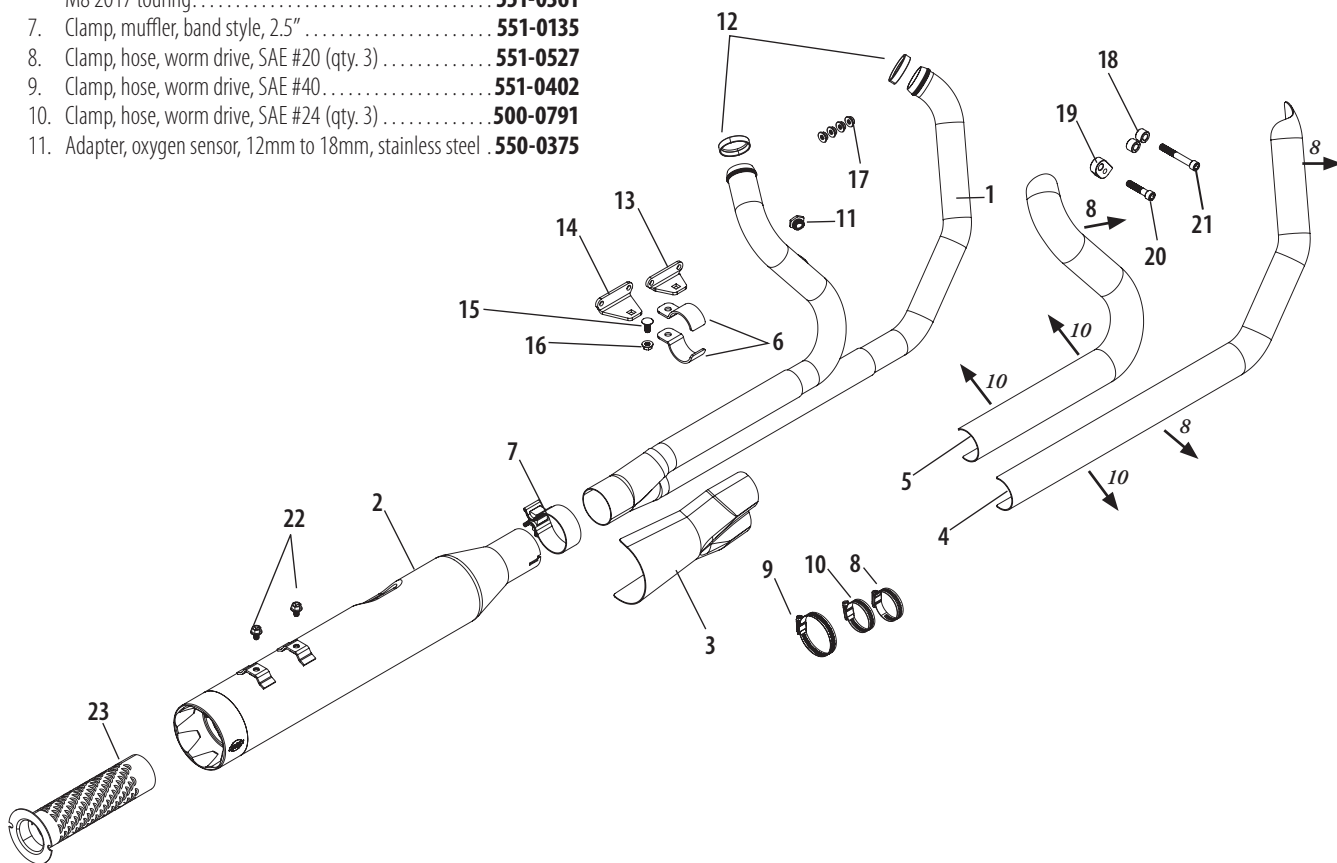


± WARNING: Cancer and Reproductive Harm



# SIDEWINDER® 2:1 EXHAUST REPLACEMENT PARTS

- |  |                   |  |                  |
|--|-------------------|--|------------------|
| 1. Header, Assembly, 2 into 1, Sidewinder™, Weldment, 1995-'16 Touring Models    | <b>551-0705</b>   | 12. Gasket, exhaust, tapered, stainless steel, 1984-up bt, 1986-up xl 65324-838, 65324-83A | <b>106-5029</b>  |
| 2. Muffler, Street Legal   |                   | 13. Bracket, header mount, 2:1, powdercoated, black, 2007-'16 touring models.              | <b>551-0719</b>  |
| Chrome   | <b>551-0529C±</b> | 14. Bracket, header mount, 2:1, powdercoated, black, 1995-'06 touring                      | <b>551-0786</b>  |
| Black  | <b>551-0530C±</b> | 15. Bolt, carriage, 5/16-18 x 3/4"   | <b>500-0555</b>  |
| 3. Collector, heat shield,   |                   | 16. Nut, HSFH, 5/16-18 unc-2b x .283", Zinc, steel   | <b>50-5053-S</b> |
| Chrome   | <b>551-0379±</b>  | 17. Nut, HSFH, 5/16-24 unf-2b x .283", Zinc, steel z593                                    | <b>50-5025-S</b> |
| Black  | <b>551-0381±</b>  | 18. Washer, Spacer, Floor Board  | <b>551-0401</b>  |
| 4. Heat shield, front, 2:1, Sidewinder®, chrome, 1995-'16 touring models         |                   | 19. Spacer, floor board, powdercoated, black   | <b>551-0399</b>  |
| Chrome   | <b>551-0709±</b>  | 20. Screw, shc, 3/8-16 x 1-3/4", zinc, steel   | <b>500-0789</b>  |
| Black  | <b>551-0715±</b>  | 21. Screw, shc, 3/8-16 x 2-3/4", zinc, steel   | <b>500-0790</b>  |
| 5. Heat shield, rear, 2:1, Sidewinder®, chrome, 1995-2016 touring models         |                   | 22. Screw, hh, flg, serrated, 5/16-18 x 1/2"   | <b>500-0744</b>  |
| Chrome   | <b>551-0712±</b>  | 23. dB reducer   | <b>551-0026</b>  |
| Black  | <b>551-0717±</b>  |  |                  |
| 6. Clamp, header mount, 2:1, chrome plate, mild steel, 11 gauge, M8 2017 touring | <b>551-0361</b>   |  |                  |
| 7. Clamp, muffler, band style, 2.5"  | <b>551-0135</b>   |  |                  |
| 8. Clamp, hose, worm drive, SAE #20 (qty. 3)                                     | <b>551-0527</b>   |  |                  |
| 9. Clamp, hose, worm drive, SAE #40  | <b>551-0402</b>   |  |                  |
| 10. Clamp, hose, worm drive, SAE #24 (qty. 3)                                    | <b>500-0791</b>   |  |                  |
| 11. Adapter, oxygen sensor, 12mm to 18mm, stainless steel                        | <b>550-0375</b>   |  |                  |



Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
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Indian® Models

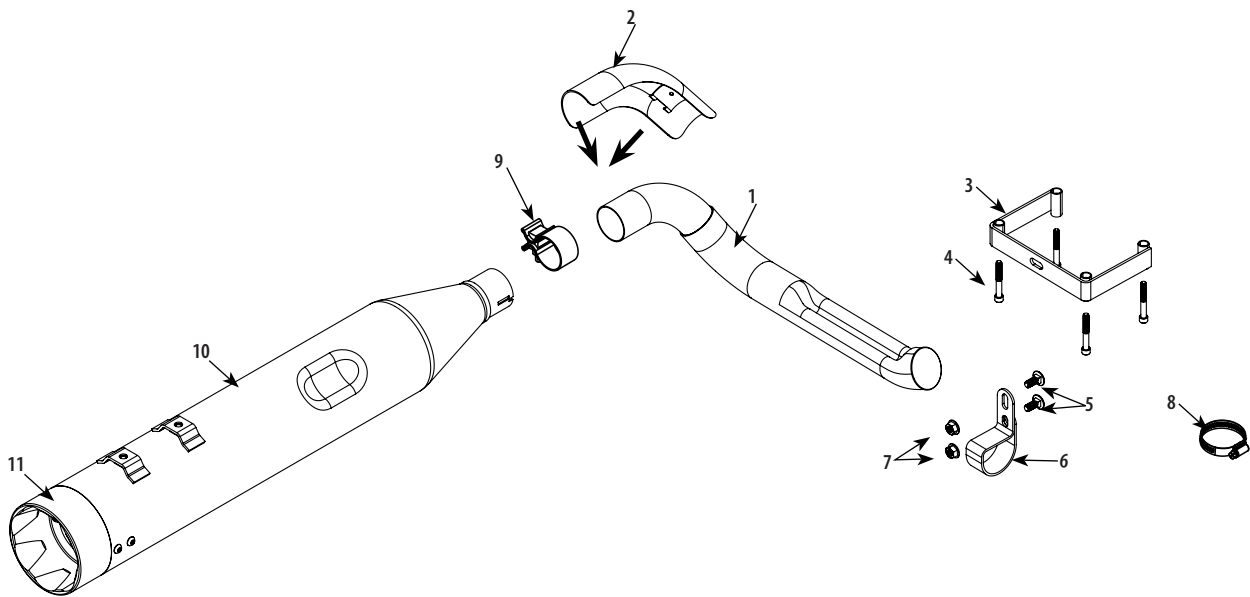
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Appendix

# SHADOW PIPE REPLACEMENT PARTS FOR 1995–2008 MODELS

1. Tube, crossover, power tune dual, Weldment,  
1995-2008 Touring (1 Req) ..... **551-0996**
2. Shield, left, power tune dual, 1995-2016 Touring (1 Req)  
Chrome ..... **551-0115**  
Black..... **551-0116**
3. Bracket, Assembly, Transmission, Pan, Power Tune Dual,  
1995-2008 Touring (1 Req) ..... **551-0126**
4. Screw, SHC, 1/4-20 x 17/8", Zinc Plated (4 Req) ..... **500-0641**
5. Bolt, carriage, 5/16"-18 x 3/4" ..... **500-0555**
6. Clamp, P-Style, Crossover, Power Tune Dual Header,  
1995-2008 Touring (1 Req) ..... **551-0120**
7. Nut, Flanged, Serrated, 5/16"-18 (2 Req) ..... **50-5053-S**
8. Clamp, Hose, Worm Drive, #20 (2 Req) ..... **551-0527**
9. Band style clamp ..... **551-0977**
10. Muffler shell  
Chrome ..... **551-0992**  
Black..... **551-0993**
11. End Cap ..... **551-0994**



# POWER TUNE® DUAL HEADER REPLACEMENTS

## POWER TUNE® DUAL HEADERS

Fitment	Finish	Part #	MSRP
1995–'08* big twins	Chrome	<b>550-0003A</b>	\$559.95
	Black	<b>550-0142A</b>	\$669.95

\*Has 18mm sensor fittings in the stock locations for 2007-'08 bikes. If not equipped with oxygen sensors, the ports can be used for tuning. Plugs are included if ports are not used.

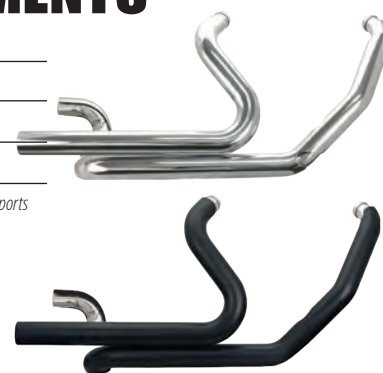
DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. Not legal for sale or use on EPA pollution controlled vehicles originally equipped with catalyst.

\*Qualified manufacturer declared emissions replacement part on FL touring models listed below.

California Models: FL Touring Fuel Injected MY 1995–2003, and 2007 CVO FL Touring MY 2000–2003

49 State Models: FL Touring Carbureted MY 1995–2005 FL Touring Fuel Injected MY 1995–2005 and 2007–2008 CVO FL Touring MY 2000–2005

**⚠️** WARNING: Cancer and Reproductive Harm



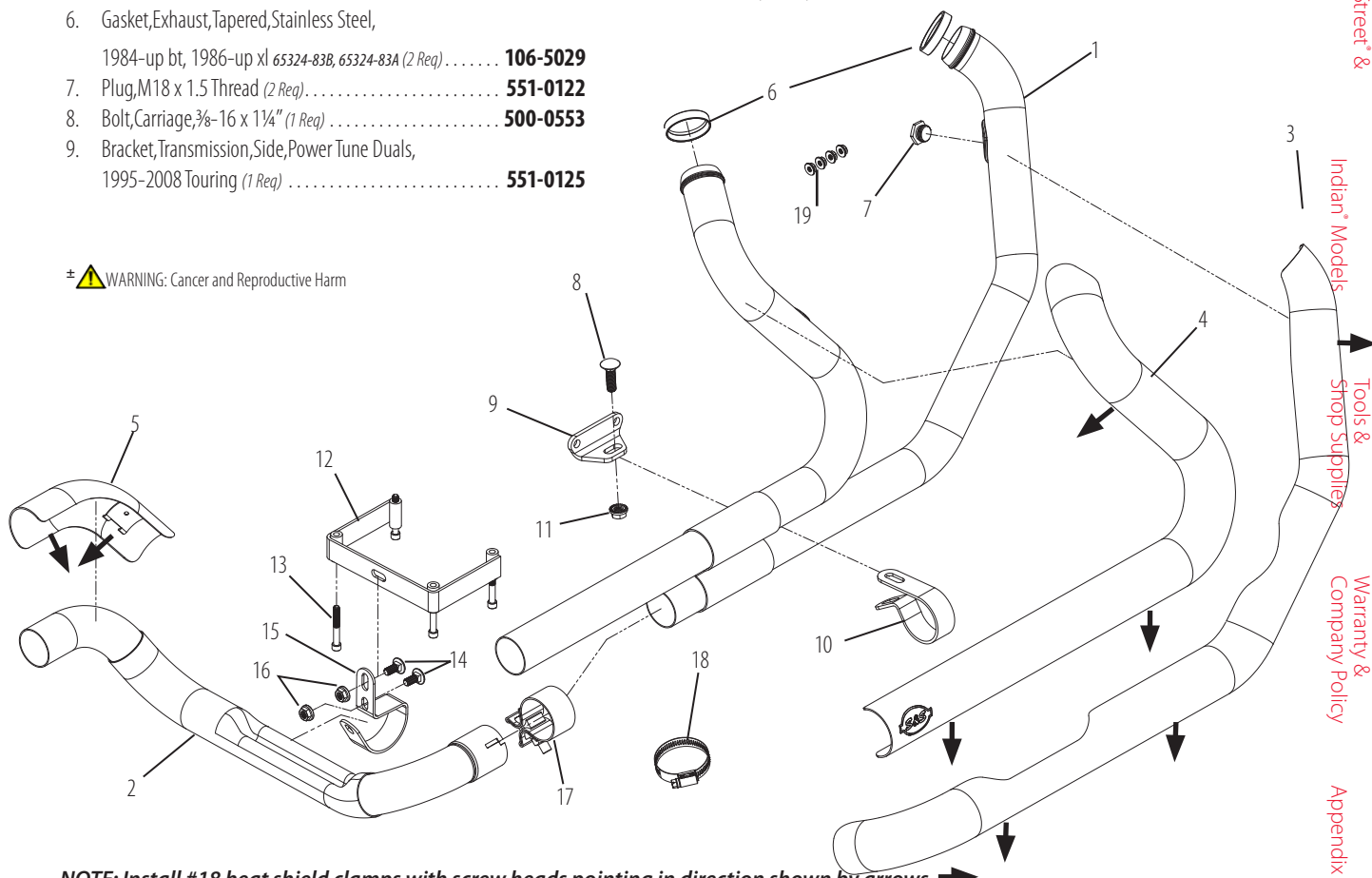
Milwaukee-Eight™

2007–2017 Twin Cam  
96"/103"/110™

# POWER TUNE® DUAL HEADER REPLACEMENT PARTS

- Pipe, Header, Power Tune Dual, Weldment, 1999–2008 Touring (1 Req) ..... **551-0083**
- Tube, Crossover, Power Tune Dual, Weldment, 1995–2008 Touring (1 Req) ..... **551-0077**
- Shield, Front, Power Tune Dual, 1995–2008 Touring (1 Req)  
Chrome ..... **551-0091±**  
Black ..... **551-0092**
- Shield, Rear, Power Tune Dual, 1995–2016 Touring (1 Req)  
Chrome ..... **551-0103±**  
Black ..... **551-0104**
- Shield, Left, Power Tune Dual, 1995–2016 Touring (1 Req)  
Chrome ..... **551-0115±**  
Black ..... **551-0116**
- Gasket, Exhaust, Tapered, Stainless Steel, 1984–up bt, 1986–up xl 65324-838, 65324-83A (2 Req) ..... **106-5029**
- Plug, M18 x 1.5 Thread (2 Req) ..... **551-0122**
- Bolt, Carriage, 3/8–16 x 1 1/4" (1 Req) ..... **500-0553**
- Bracket, Transmission, Side, Power Tune Duals, 1995–2008 Touring (1 Req) ..... **551-0125**
- Clamp, P-Style, Power Tune Dual, Side, 1995–2016 Touring (1 Req) ..... **551-0119**
- Nut, Flanged, Serrated, 3/8–16 (1 Req) ..... **500-0554**
- Bracket, Assembly, Transmission, Pan, Power Tune Dual, 1995–2008 Touring (1 Req) ..... **551-0126**
- Screw, SHC, 1/4–20 x 1 7/8", Zinc Plated (4 Req) ..... **500-0641**
- Bolt, Carriage, 5/16–18 x 3/4" (2 Req) ..... **500-0555**
- Clamp, P-Style, Crossover, Power Tune Dual Header, 1995–2008 Touring (1 Req) ..... **551-0120**
- Nut, Flanged, Serrated, 5/16–18 (2 Req) ..... **50-5053-S**
- Clamp, Muffler, Band Style (1 Req) ..... **551-0569**
- Clamp, Hose, Worm Drive, SAE #28 (8 Req) ..... **551-0527**
- Nut, HSFH, 5/16–24 7593 ..... **50-5025-S**

± **⚠️** WARNING: Cancer and Reproductive Harm



**NOTE:** Install #18 heat shield clamps with screw heads pointing in direction shown by arrows. →

1999–2006  
Twin Cam 88™

1986–2019  
Sportster® & Buell®

2014–2019 Street® & Street Rod™

Indian® Models

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# SPORTSTER® & BUELL®

## **Performance Kits**

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## **Performance Parts**

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## **Replacement Parts.....300**





# SUPERSTREET 2:1 EXHAUST SYSTEM



## FITMENT

- 2007–'13 Sportster® models with forward or mid controls (*does not fit XR models*)
- 2014–'20 Sportster models with forward or mid controls

## FEATURES AND BENEFITS

- Classic 2:1 styling with world famous S&S performance!
- Fits forward and mid controls
- 50 State legal! CARB EO# K-010-12 for 2014–2020 Sportster models
- Durable high temperature black finish
- Full heat shields on both front and rear headers
- Stainless steel stepped header construction
- Multi-faceted endcap design
- Oxygen sensor ports allow use of wide band or stock O2 sensors
- SAE J2825 Sound Level Compliant
- Made in USA!

## SUPERSTREET 2:1 EXHAUST SYSTEM

Year/Fitment	Part #
2014–'20 Sportster® models with forward or mid controls	<b>550-0952A</b>
2007–'13 Sportster models with forward or mid controls ( <i>does not fit XR models</i> )	<b>550-0951<sup>††</sup></b>

<sup>†</sup>Exempt from emissions tampering regulations under CARB EO# K-010-12 for all 2014–2020 Sportster Models

<sup>††</sup>\*Qualified manufacturer declared U.S. 50-State legal emissions replacement part on all MY 2007–2013 Sportster models

**WARNING:** Cancer and Reproductive Harm



**REPLACEMENT PARTS: SEE PAGE 300**

# AIR STINGER—STEALTH AIR CLEANER KIT FOR 2007–2021 MODELS



The Air Stinger takes the existing high flow Stealth air cleaner and replaces the air smoothing stinger with a similarly shaped filter element. More filter surface equals 55% gain over a factory filter.

Also available with the classic Mini Teardrop cover in black or chrome or as a replacement cover plate to update your existing Stealth system. The Air Stinger filter element is washable just like the Stealth filters and designed to last for years.

### AIR STINGER FOR 2007–2021 XL MODELS

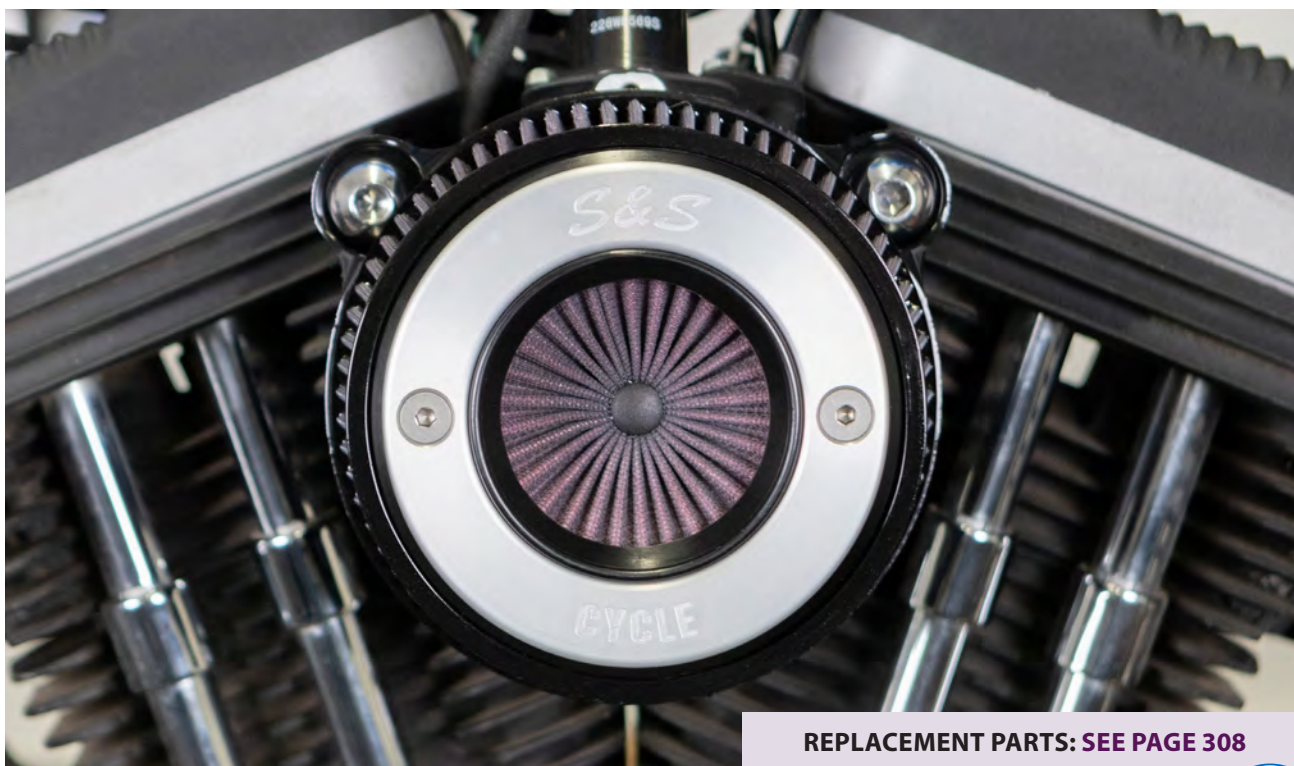
Description	PART #	
Gloss Black	170-0726	
Chrome	170-0725	
Brushed Ring	170-0724	
<b>AIR STINGER FILTER ONLY</b>	<b>170-0723</b>	

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE

\*Qualified Manufacturer Declared 49-State Federal Emissions Compliant Part



WARNING: Cancer and Reproductive Harm



REPLACEMENT PARTS: SEE PAGE 308

Milwaukee-Eight®

2007–2017 Twin Cam  
96™/103™/110™

1999–2006  
Twin Cam 88®

1986–2021  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

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Shop Supplies

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Company Policy

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# STEALTH AIR CLEANER KITS



## FITMENT

- 1991–2020 Harley-Davidson® Sportster® models

## FEATURES AND BENEFITS

- Pre-filter available — See page 267
- Air directional stinger cone in the filter
- Use with any of several S&S designed covers
- High flow (1" taller) filter kit available — See page 267



### STEALTH TEARDROP AIR CLEANER KIT

KIT INCLUDES STEALTH AIR CLEANER 170-0302E WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Finish	Part #
2007–'20 xl	Stock EFI	Chrome	<b>170-0526B</b>
		Gloss Black	<b>170-0527B</b>

± WARNING: Cancer and Reproductive Harm



### MINI TEARDROP AIR CLEANER KIT

KIT INCLUDES STEALTH AIR CLEANER 170-0302E WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Finish	Part #
2007–'20 xl	Stock Bore Throttle Body	Chrome	<b>170-0439C±</b>
		Gloss Black	<b>170-0440C</b>

± WARNING: Cancer and Reproductive Harm



### AIR 1 AIR CLEANER KIT

KIT INCLUDES STEALTH AIR CLEANER 170-0302E WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

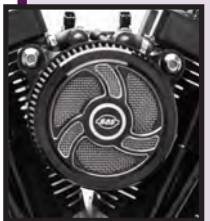
Application	Fuel System	Part #
2007–'20 xl	Stock EFI	<b>170-0492C</b>



### TRI-SPOKE AIR CLEANER KIT

KIT INCLUDES STEALTH AIR CLEANER 170-0302E WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Part #
2007–'20 xl	Stock EFI	<b>170-0490C</b>



### TORKER AIR CLEANER KIT

KIT INCLUDES STEALTH AIR CLEANER 170-0302E WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Part #
2007–'20 xl	Stock EFI	<b>170-0491C</b>

### AIRSTREAM AIR CLEANER KIT

KIT INCLUDES STEALTH AIR CLEANER 170-0302E WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30

Application	Fuel System	Finish	Part #
2007–'20 xl	Stock EFI	Chrome	<b>170-0493C</b>
		Gloss Black	<b>170-0494C</b>

± WARNING: Cancer and Reproductive Harm



### STEALTH AIR CLEANER KIT\*

EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS

Application	Fuel System	Part #
2007–'20 xl	Stock EFI	<b>170-0302E</b>

\*These kits do not contain covers — Use an S&S cover, see page 264.



# CON'T STEALTH AIR CLEANER KITS



## MINI TEARDROP AIR CLEANER KIT

Fitment	Fuel System	Finish	Part #	MSRP
1991–2006 xl	Stock CV Carb	Chrome	<b>170-0449</b> ±	\$327.95
		Gloss Black	<b>170-0450</b>	\$327.95

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT ⚠️ WARNING: Cancer and Reproductive Ha



## AIRSTREAM IN CHROME AIR CLEANER KIT±

Application	Fuel System	Part #
1991–'06 xl	Stock CV/EFI	<b>170-0053</b>

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT ⚠️ ± WARNING: Cancer and Reproductive Harm



## STEALTH AIR CLEANER KITS\* — NO COVER

Application	Fuel System	Part #
1991–'06 xl	Stock CV	<b>170-0093</b>

\*These kits do not contain covers—Use an S&S cover, see page 264.

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

## NOTES

Fuel injection tuning is not required with this product.

REPLACEMENT PARTS: SEE PAGE 308

# EC STEALTH AIR CLEANER KITS

- 2007–2019 883 Harley-Davidson Sportster® Models with EFI (e9 11003G)
- 2007–2019 1200 Harley-Davidson Sportster Models with EFI (e9 11002G)

## EC STEALTH AC KITS

Year/Fitment	Part #
2007–2019 / EFI xl 883	<b>170-0329</b>
2007–2019 / EFI xl 1200	<b>170-0330</b>



Milwaukee-Eight®  
2007–2017 Twin Cam  
96™/103™/110™  
1999–2006  
Twin Cam 88®  
1986–2021  
Sportster® & Buell®  
2014–2019 Street® &  
Street Rod™  
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# STEALTH AIR CLEANER KIT COVERS



Stealth Tribute



Carbon Fiber



Mini in Gloss Black



Tri-Spoke



Torker



Air 1



Airstream in Chrome

## STEALTH COVERS

Tribute		Teardrop		Teardrop—Slasher		Carbon Fiber	Mini	
Chrome	Gloss Black	Chrome	Gloss Black	Chrome	Gloss Black	Black	Chrome	Gloss Black
170-0592	170-0593	170-0530	170-0531	170-0532	170-0533	170-0501	170-0367	170-0366

Tri-Spoke	Torker	Air 1	Airstream		Displacement		
Gloss Black w/Highlights	Gloss Black w/Highlights	Gloss Black w/Highlights	Chrome	Gloss Black	111	124	143
170-0210	170-0206	170-0214	170-0118	170-0396	170-0319	170-0321	170-0323

# SINGLE BORE TUNED INDUCTION SYSTEM


## FITMENT

- 2007–'20 Harley-Davidson® Sportster®

## FEATURES AND BENEFITS

- Bolt-on performance—over twice the filtering area over stock intake system
- Increases horsepower and torque across the rpm range using air column inertia and carefully timed gas dynamic pressure waves
- Smooth intake tract of carefully selected tuned lengths increases performance
- High flow washable and reusable cotton media provides performance, protection, and economy





**SINGLE BORE TUNED INDUCTION SYSTEM KITS**

EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS

Fitment	Fuel System	Finish	Part #
2007–'20 xl	Stock EFI	Chrome Runner and Red Filters	<b>170-0311E</b>

⚠️ WARNING: Cancer and Reproductive Harm



*Billet adaptor brackets make single bore tuned induction compatible with many engines and motorcycles.*

**REPLACEMENT PARTS: SEE PAGE 309**

Milwaukee-Eight®  
 2007–2017 Twin Cam  
 96™/103™/110™  
 1999–2006  
 Twin Cam 88®  
 1986–2021  
 Sportster® & Buell®  
 2014–2019 Street® &  
 Street Rod™  
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# CLASSIC TEARDROP AIR CLEANER KIT

## FITMENT

- 1986-'20 Harley-Davidson® Sportster®
- 1994-'02 Buell®

## FEATURES AND BENEFITS

- Uniquely designed back plate has air horn style radiused entryway to reduce turbulence
- Dimpled cover with directional air cone on inside creates smooth path for air
- Great addition to performance exhaust or cams

## KIT CONTENTS

- Teardrop Air Cleaner Cover in Chrome or Gloss Black
- Filter
- Backing plate
- All mounting hardware



REPLACEMENT PARTS STARTING ON PAGE 310

## CLASSIC TEARDROP AIR CLEANER KITS FOR SPORTSTER® MODELS

EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-30 FOR ALL FUEL INJECTED MODELS



Model	Finish	FUEL SYSTEM	
		Stock EFI	
2007-'20 xl	Chrome	<b>170-0306E±</b>	
	Gloss Black	<b>170-0307E</b>	

± ⚠️ WARNING: Cancer and Reproductive Harm

## CLASSIC TEARDROP AIR CLEANER KITS FOR SPORTSTER® AND BUELL® MODELS

Model	Finish	FUEL DELIVERY TYPE	
		Stock CV	Super E & G
2004-2017 xl	Chrome	<b>170-0448±</b>	<b>17-0428±</b>
	Gloss Black	<b>170-0182A</b>	-
1991-'06 HD® Carbureted xl	Chrome	<b>170-0448±</b>	<b>17-0404±</b>
	Gloss Black	<b>170-0182A</b>	-
1988-'90 xl	Chrome	-	<b>17-0399±</b>
1986-'87 xl	Chrome	-	<b>17-0399±</b>

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± ⚠️ WARNING: Cancer and Reproductive Harm

**NOTE** Fuel delivery (carbureted or EFI) may need to be modified to maintain the correct air and fuel mixture

## CLASSIC TEARDROP AIR CLEANER COVERS

Style	Finish	Part #
Classic Teardrop	Chrome	<b>17-0378±</b>
	Gloss Black	<b>170-0384A</b>
Slasher Teardrop	Chrome	<b>17-0004±</b>
	Gloss Black	<b>170-0419</b>
Nostalgic Teardrop	Polished	<b>17-0071</b>

± ⚠️ WARNING: Cancer and Reproductive Harm





# PRE-FILTERS

## FITMENT

- S&S® Stealth Air Filters

## FEATURES AND BENEFITS

- Water resistant
- Prevents large debris from prematurely clogging filter
- Washable Nylon
- Promotes longer filter life
- Reduces the risk of water entering air intake system

## PRE-FILTERS

Application	Part #
Standard Stealth Air Filter	<b>170-0193</b>
1" Tall Stealth Air Filter	<b>170-0197</b>



170-0197

# HIGH FLOW AIR FILTER KITS

## FITMENT

- S&S Classic Teardrop air cleaners for Super E & G carbs and S&S EFI throttle bodies

## FEATURES AND BENEFITS

- Low restriction filter element comes pre-oiled for true plug and play installation
- 1" wider filtration area provides up to 37% more airflow over standard S&S filters
- Resulting band of exposed filter material imparts a high performance look

## KIT CONTENTS

- Wide filter
- Filter spacers



170-0127



17-0045

## HIGH FLOW AIR FILTERS

Description	Fitment	Part #
High Flow Air Filter Kit (includes spacers)	Classic Teardrop	<b>17-0045</b>
	Stealth, 1" Taller	<b>170-0127*</b>
1" Taller Filter Only	Classic Teardrop	<b>106-4724</b>
	Stealth	<b>170-0154</b>
Spacer	Classic Teardrop & Stealth, 1" Taller	<b>50-5009-S</b>

\*DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

# STANDARD REPLACEMENT FILTERS

## STANDARD REPLACEMENT AIR FILTERS

Description	Fitment	Part #
Standard Filter Only	Classic Teardrop	<b>106-4722</b>
	Stealth	<b>170-0126</b>

# PERFORMANCE KIT OVERVIEW

## FOR HARLEY-DAVIDSON® SPORTSTER® & BUELL® MODELS



### **1250CC CONVERSION KIT**

This is the largest big bore kit S&S offers for Harley-Davidson® Sportster® models, that can be bolted directly to stock crankcases. Quick and easy to install. Fast on the strip. Over 90 hp typical with S&S exhaust, cams, and CNC ported heads – Using the stock fuel system! (See page 270)



### **883 TO 1200CC CONVERSION KIT**

Boost any 883cc Harley-Davidson® Sportster® to 1200cc. No machine shop? No problem, no machining is needed. Don't want to rebalance your stock 883cc flywheels? You don't need to since these pistons weigh the same as stock 883 pistons. Cylinder head modification is also not needed. The dished piston dome keeps compression down to a streetable 9.4:1 with stock 883cc heads. Installing this kit takes the same time as replacing a stock top end. It's just more fun when you're done. (See page 271)



### **HOOLIGAN KIT**

Whether you're racing Hooligan flat-track or just want more power, the S&S Hooligan kits for 2000-'20 Harley-Davidson® Sportster® models will give you an edge on the competition. Boost that 883 to 1200cc. Already running a 1200? Bring it up to 1250cc. Bolt on big bore kits mean easy installation with no machining and no rebalancing. S&S bolt-in cams and premium tappets make the most of the added displacement. (See page 269)

# HOOLOGAN KITS FOR 2000–2021 HARLEY-DAVIDSON® SPORTSTER® MODELS

## FITMENT

- 2000–’21 Harley-Davidson® Sportster® models

## FEATURES & BENEFITS

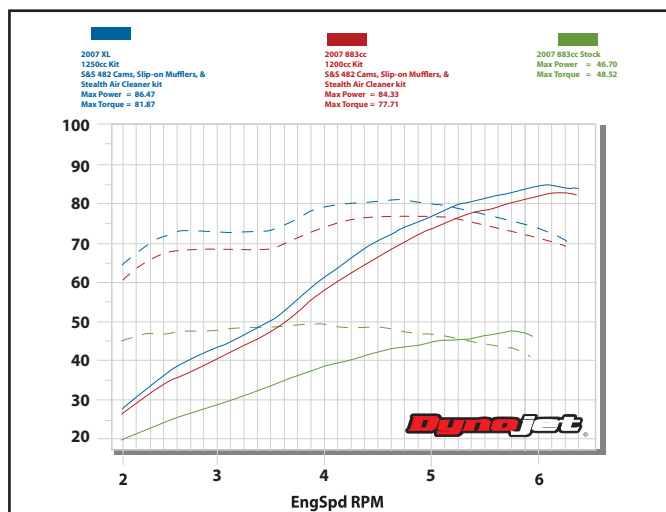
- Easy installation—Bolt-on parts—no machining, no rebalancing
- S&S 482 Cams
- Increase 883cc engines to 1200cc
- Increase 1200cc engines to 1250cc
- Use stock heads, pushrods, and fuel system\*
- Available in wrinkle black or silver powder coat that matches stock finish

\*For maximum performance gains use with S&S Stealth air cleaner and S&S Slip-on mufflers.

## HOOLOGAN KITS

Kit	Finish	Part #
883cc to 1200cc	Wrinkle Black	<b>910-0699</b>
883cc to 1200cc	Silver	<b>910-0700</b>
1200cc to 1250cc	Wrinkle Black	<b>910-0701</b>
1200cc to 1250cc	Silver	<b>910-0702</b>

DISCLAIMER: FOR CLOSED COURSE COMPETITION USE ONLY. NOT INTENDED FOR STREET USE. LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES WHICH MAY NEVER BE USED, OR REGISTERED OR LICENSED FOR USE, UPON A HIGHWAY. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT.



This dyno chart from our DynoJet® 250i chassis dyno, makes it easy to see why S&S Hooligan kits raise the fun factor and give you a competitive edge. The S&S 1200cc kit with stock 883 heads increases horsepower by 80% over the original stock 883cc engine. The 1250cc kit shown here had 1200 heads. Stock 883 heads cannot be used on the 1250cc kit. Even more power is available with the S&S CNC cylinder head porting service. Do you want to win, or are you just along for the ride?

## NOTES

This kit is not compatible with the stock ignition.



Milwaukee-Eight®

2007–2017 Twin Cam  
96™/103™/110™

1999–2006  
Twin Cam 88®

1986–2021  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

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# 883 TO 1200cc CONVERSION KIT

## FOR 1986–2020 883CC HARLEY-DAVIDSON® SPORTSTER® MODELS

### FITMENT

- 1986–2021\* 883cc Harley-Davidson® Sportster® models (\*See photos)

### FEATURES & BENEFITS

- Increase displacement from 883cc to 1200cc
- Save time because pistons are already fit to the cylinders—Ready to assemble out of the box!
- No machining
- No rebalancing of 883cc flywheels
- No cylinder head modifications
- Durable powder coat finish
- 9.6:1 Compression ratio
- Must be used with 883 heads

### OPTIONS

- Silver powder coat finish
- Wrinkle black powder coat finish

### KIT CONTENTS

- S&S 883–1200cc conversion pistons w/rings and wristpins
- S&S 106-5548 piston kit—11.2cc dish volume
- S&S 3½" Bore Cylinders
- Cylinder head, base, and exhaust gaskets
- Assembly lube
- Instructions

### 883cc TO 1200cc CYLINDER AND PISTON CONVERSION KITS

Fitment	Finish	Part #
1986–2021 883cc Sportster®	Silver Powder Coat	<b>910-0688</b>
	Wrinkle Black Powder Coat	<b>910-0687</b>

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910-0687



S&S cylinders match the fin profile on 1986–03 cylinder heads. Although there is a slight difference in the fin profiles of S&S cylinders and stock 2004–20 cylinder heads (shown above), the look is generally not considered to be objectionable. You decide!

# CRANKCASES

## FOR 1986-'03 SPORTSTER® AND BUELL® MODELS

### FITMENT

- 1986-'03 Harley-Davidson® Sportster® and Buell®
- S&S SB-Series engines

### FEATURES AND BENEFITS

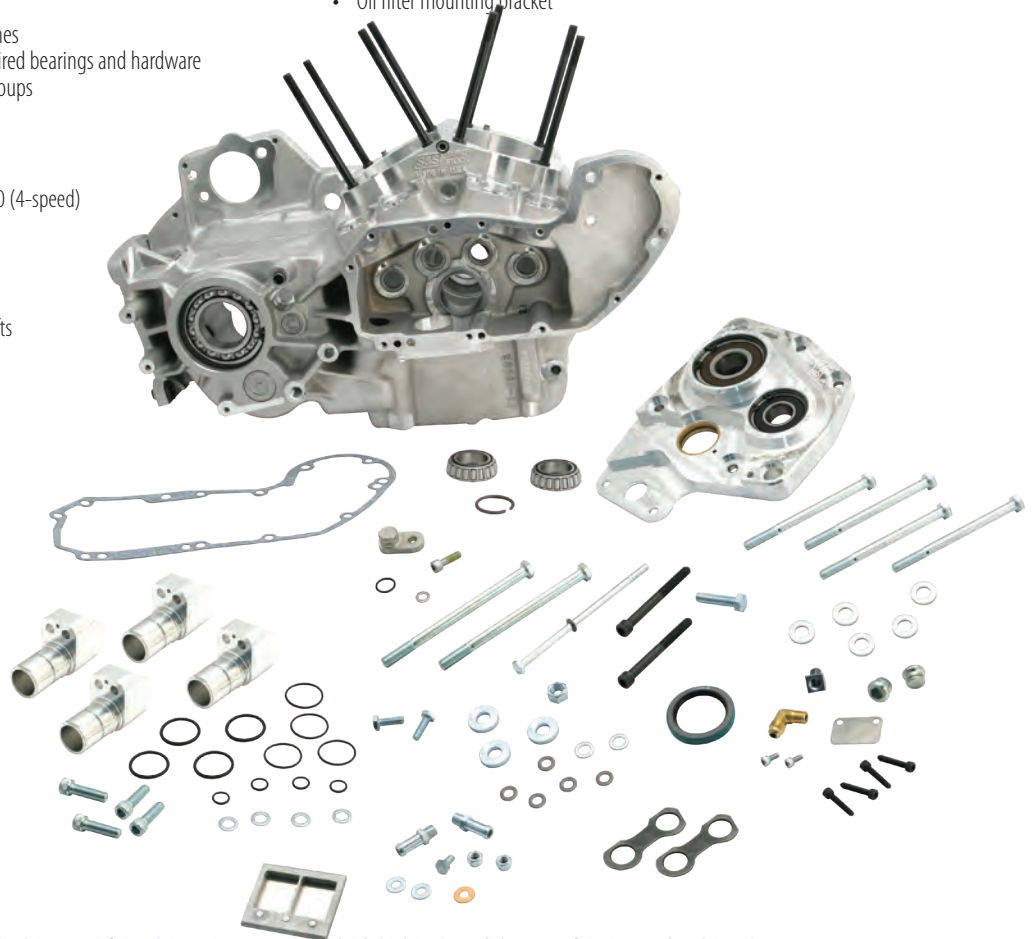
- Super strong for high performance engines
- Crankcases come complete with all required bearings and hardware
- Replaceable tappet guides for all year groups

### OPTIONS

- Special Application (SA) Cases
  - Choice of cam geometry—1986-'90 (4-speed) or 1991-'99 (5-speed)
  - 3 $\frac{3}{8}$ " bore to 4 $\frac{1}{2}$ " bore
  - Up to 1" taller cylinder deck height
  - Machined for stock, big twin, or S&S 1.500" diameter sprocket shafts

### KIT CONTENTS

- Crankcase assembly
- Billet tappet guides
- Bearings and hardware
- Transmission trapdoor
- Oil filter mounting bracket



### SPECIAL APPLICATION CRANKCASES FOR 1986-'03 FOR HARLEY-DAVIDSON® SPORTSTER® & 1994-'02 BUELL® MODELS

Engine	Cam Geometry	4" Bore
Sportster/Buell	1986-'90	<b>31-1012</b> 31-1012NS

- All S&S crankcases use 5-speed transmission and primary components.
  - These cases will not accept 4-speed transmission.
  - Not compatible with stock flywheel assemblies.
- Since S&S Special Application crankcases are .500" wider than stock, they require part #33-2329 +.500" pinion shaft and S&S Special Application tappet guides.
- Requires use of S&S cam cover gasket. (Part #31-2099).
  - 1991-'03 cases require 1991-'96 gearcovers.

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT

## NOTES

If transmission and primary do not share the same lubricant, it is vital to ensure that both the primary and the transmission are filled with the correct lubricants.

ANY JOB IS EASY WITH THE RIGHT TOOLS  
S&S DEGREE WHEEL, SEE PAGE 342

REPLACEMENT PARTS: SEE PAGE 304

# FLYWHEELS

## FOR 1986–'99 HARLEY-DAVIDSON® SPORTSTER® AND 1994–'97 BUELL® MODELS

### FITMENT

- 1986–'99 Harley-Davidson® Sportster®
- 1994–'97 Buell®
- S&S SB-Series engines

### FEATURES AND BENEFITS

- CNC machined from heat-treated, closed die, steel forging
- Stronger than cast iron or late style steel flywheels
- 5-piece design—easily rebuilt with standard flywheel fixtures and tools
- Unassembled balanced flywheels are balanced by the static method

### FLYWHEEL ASSEMBLIES FOR 1994–'97 BUELL® MODELS

S&S flywheels for two-cylinder 1994–'97 Buell models. Although similar to flywheels for Sportster® models, these flywheels are knife edged and lightened. This design offers these advantages:

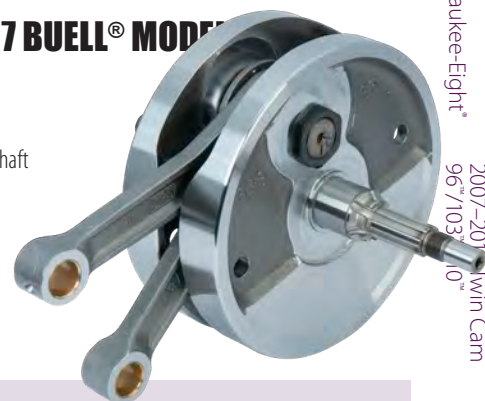
- Knife edging is a proven design used in race motors to make the flywheels "shed" oil more quickly to reduce drag at high rpm.
- Knife edging and lightening increases effective crankcase volume and reduces the flywheel assembly weight by 2–4 lbs. Increased crankcase volume results in better oil control, effectively reducing friction and heat, as well as helping to control oil carry over. Reduced weight results in faster revving and higher top rpm capability.
- All S&S flywheels for Sportster and Buell models feature removable mainshafts for easy rebuilding. In addition, the S&S pinion shaft is the 1986–'87 splined design, which is much stronger than the stock pinion shaft, allowing the use of higher lift cams and stronger valve springs.

### OPTIONS

- Stock replacement or stroker flywheels for high performance upgrade
- Available in a wide variety of styles and strokes
- Available balanced or unbalanced
- Available assembled or unassembled by special order

### KIT CONTENTS

- Flywheels
- Pinion shaft and sprocket shaft
- Optional connecting rods



**TRYING TO IDENTIFY AN S&S® FLYWHEEL?  
SEE FLYWHEEL I.D. CHART IN THE APPENDIX:  
PAGE 358**

**REPLACEMENT PARTS: SEE PAGE 301**

### NOTES

Lightened flywheels are not recommended for Sportster models with solid mounted engines due to increased vibration and loss of low rpm torque.

S&S pinion shafts for 1986–'03 Sportster® models are the splined 1986–'87 style.

Pinion and oil pump drive gears in 1988–'03 models must be replaced with early style gears. See page 279

Complete S&S Flywheel assemblies will fit up to 1999 model year engines. However, the flywheels are compatible with stock crankpins up to 1999 only.

Stock stroke flywheels are balanced to stock weight pistons

These flywheels will not fit 1998–up Buell® models.

### REPLACEMENT FLYWHEEL ASSEMBLIES FOR HARLEY-DAVIDSON® SPORTSTER® MODELS

Year Group	Displacement	Stroke	Flywheel Diameter	Part #
1986–'90	1200cc (Stock)	3 <sup>13</sup> / <sub>16</sub> " (Stock)	7 <sup>7</sup> / <sub>8</sub> " (Stock)	<b>320-0052</b>
	S&S 89" SW Kit	4 <sup>1</sup> / <sub>2</sub> "	7 <sup>7</sup> / <sub>8</sub> " (Stock)	<b>32-3061</b>
1991–'99	1200cc (Stock)	3 <sup>13</sup> / <sub>16</sub> " (Stock)	7 <sup>7</sup> / <sub>8</sub> " (Stock)	<b>320-0053</b>
Special Order*	Specify	Specify	Specify	<b>32-3014*</b>

\*Special Order Notes: Download the Special Order Form

Application	Stroke	Flywheel Diameter	Part #
Special Order For Buell*	Specify	Specify	<b>32-3014*</b>

\*Special Order: Download the Special Order Form

# BILLET FILTER MOUNT

### FITMENT

- 1986–'87 Harley-Davidson® Sportster® models
- S&S SB-Series engines
- S&S crankcases for Sportster and Buell® models

### FEATURES AND BENEFITS

- Accepts stock oil pressure sending switch
- Machined for easy routing of an oil cooler
- Seals off cam chest, providing a convenient place to spin on an oil filter



### BILLET FILTER MOUNT±

Fitment	Part #
1986–'87 Harley-Davidson® Sportster® S&S SB-Series engines S&S crankcases for Sportster and Buell®	<b>106-3134</b>

± WARNING: Cancer and Reproductive Harm

Milwaukee-Eight®  
96°/103°/10°  
2007–201 Twin Cam

1999–2006  
Twin Cam 88°

1986–2021  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix

# CYLINDERS WITH PISTONS KIT

- Cylinders with piston kits include fitted pistons and cylinders, head gaskets, base gaskets, and exhaust gaskets
- Cylinder kits with pistons are honed to fit the pistons included



910-0689

## S&S® 3 1/16" BORE CYLINDERS WITH PISTONS KIT SPECIFICATION CHART

Displacement	Stroke	Cylinder Length	Dome Volume	Piston Deck Height	Compression Ratio S&S Heads
1250cc	3 1/16"	4.650"	Flat Top	1.208"	10.3:1
			5.5cc		11.2:1

### 3 1/16" BORE CYLINDERS WITH PISTONS FOR 1250CC KIT

Displacement	Piston Type	Silver	Wrinkle Black
1250cc	S&S Forged Flat Top	<b>910-0689</b>	<b>910-0691</b>
	S&S Forged 5.5cc Domed	<b>910-0690</b>	<b>910-0692</b>

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910-0688

**S&S® 3 1/2" BORE CYLINDERS WITH PISTONS KIT SPECIFICATION CHART**

Displacement	Stroke	Cylinder Length	Piston Deck Height	COMPRESSION RATIO	
				S&S Heads	Stock Heads
1200cc	3 13/16"	4.650"	1.208"	10.5:1	9.6:1

**3 1/2" BORE CYLINDERS WITH PISTONS FOR 1200CC & 883CC KITS**

Displacement	Silver	Wrinkle Black
1200cc, 1986-2003 Sportster®, 1994-'02 Buell® Models with S&S® Heads	<b>910-0694</b>	<b>910-0696</b>
883cc (conversion to 1200cc), 1986-2020* Sportster® models	<b>910-0688</b>	<b>910-0687</b>

\*The cylinder fin profile does not perfectly match the fins on 2004 and later stock heads, but the difference is not considered to be objectionable. See Photos on page 271

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**ALL OTHER SPECIFICATIONS AND FINISHES ARE AVAILABLE THROUGH SPECIAL ORDER**

**91-3604\***

\*Special Order: Download the Special Order Form

**NOTE**

- Stock crankcases must be machined to accommodate the larger spigot diameter.
- Combustion chamber modifications must be made to stock cylinder heads to reduce compression.



# CYLINDERS

- Cylinder sets without pistons are bored slightly under normal size and are not honed.
- Include dowel pins

## 3<sup>5</sup>/<sub>16</sub>" BORE CYLINDERS

Displacement		Silver	Wrinkle Black
1200cc	Set	<b>910-0693</b>	<b>910-0697</b>

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## 3<sup>1</sup>/<sub>2</sub>" BORE CYLINDERS

Displacement		Silver	Wrinkle Black
1200cc	Set	<b>910-0698</b>	<b>910-0695</b>



**ALL OTHER SPECIFICATIONS AND FINISHES ARE AVAILABLE THROUGH SPECIAL ORDER 91-3604\***  
*\*Special Order: Download the Special Order Form*

# NOTES

- Stock crankcases must be machined to accommodate the larger spigot diameter.
- Combustion chamber modifications must be made to stock cylinder heads to reduce compression.

# PISTON KITS

- Piston kits include set of pistons, rings, wristpins, and clips

## 4" BORE FORGED PISTON KITS

Displacement	Deck Height	Stroke	+.010"	+.020"
100"	1.200"	4"	<b>92-1421</b>	<b>92-1422</b>

*Recommended piston fitment: Close: .0020"-.0025" Loose: .0032"-.0045"*

## 3<sup>5</sup>/<sub>16</sub>" BORE FORGED PISTON KITS FOR STOCK HEADS

Displacement	Deck Height	Stroke	+.010"	+.030"
1458cc (89")	1.200"	4 <sup>5</sup> / <sub>16</sub> "	<b>92-1941</b>	<b>92-1943</b>
1688cc (103")	1.200"	5"		

*Recommended piston fitment: Close: 0.0015"-0.0020" Loose: 0.0030"-0.0040"*



## PISTON KITS con't

### 3<sup>9</sup>/<sub>16</sub>" BORE FORGED PISTON KITS

Displacement	Dome Volume	Deck Height	Stroke	Standard
1250cc	Flat Top	1.207"	3 <sup>13</sup> / <sub>16</sub> "	<b>920-0070</b>
	5.5cc	1.207"	3 <sup>13</sup> / <sub>16</sub> "	<b>920-0071</b>

DISCLAIMER: FOR CLOSED COURSE COMPETITION USE ONLY. NOT INTENDED FOR STREET USE. LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES WHICH MAY NEVER BE USED, OR REGISTERED OR LICENSED FOR USE, UPON A HIGHWAY. NOT LEGAL FOR SALE OR USE NATIONWIDE ON ANY FEDERAL POLLUTION CONTROLLED MOTOR VEHICLE UNDER THE CLEAN AIR ACT.
















### 3<sup>1</sup>/<sub>2</sub>" BORE FORGED PISTON KITS

Cylinder Heads	Deck Height	Stroke	Standard		+ .010"	+ .020"
S&S® Super Stock®	1.1875"	3 <sup>13</sup> / <sub>16</sub> "	<b>92-2016</b>		<b>92-2017</b>	<b>92-2018</b>
Stock 883cc	1.207"		<b>106-5548</b>		<b>106-5549</b>	<b>106-5550</b>

Recommended piston fitment: Close: 0.0025"–0.003" Loose: 0.0030"–0.0040"


# REPLACEMENT PARTS FOR PISTONS

### PISTON RINGS, CHROMOLY FACED

Bore	4"	3 <sup>5</sup> / <sub>8</sub> "	3 <sup>9</sup> / <sub>16</sub> "	3 <sup>1</sup> / <sub>2</sub> "	
				S&S® Heads	Stock 883cc Heads
Deck Height	1.200	1.200	-	1.1875"	1.207"
Standard	<b>94-1300X</b> 	<b>94-1210X</b> 	<b>940-0042*</b>	<b>94-2216X</b>  21921-83	<b>94-2206X</b>  22334-78A, 22334-78B, 21920-83
+ .005"	-	-	-	<b>94-22165X</b>  21921-83	-
+ .010"	<b>94-1301X</b> 	<b>94-1211X</b> 	-	<b>94-2217X</b> 	<b>94-2207X</b>  22334-78A, 22334-78B, 21920-83
+ .020"	<b>94-1302X</b> 	<b>94-1212X</b> 	-	<b>94-2218X</b> 	<b>94-2208X</b>  22336-78B, 21923-83
+ .030"	-	<b>94-1213X</b>	-	<b>94-2219X</b> 	<b>94-2209X</b>  22336-78B, 21923-83
+ .040"	-	<b>94-1214X</b>	-	-	-
+ .060"	-	<b>94-1216X</b>	-	-	-

\*Clips and pins not available.

### WRISTPINS

Bore	Description	Part #
4"	Wristpin .792" x 2.825"	<b>94-9256</b> 
3 <sup>5</sup> / <sub>8</sub> "		
3 <sup>1</sup> / <sub>2</sub> "		

### KEEPERS

Bore	Description	Part #
4"	Keeper 22589-83A	each <b>94-9254-S</b>
3 <sup>5</sup> / <sub>8</sub> "		2 pack <b>94-9254-2</b>
3 <sup>1</sup> / <sub>2</sub> "		4 pack <b>94-9254</b>

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

# CAMSHAFTS

## FITMENT

- 1986–'21 Harley-Davidson® Sportster® models
- 1994–'02 Buell® models

## APPLICATIONS

**S&S 482:** Bolt-in cam for 2004–'19 models only. Recommended for S&S 883 to 1250 conversion kits. Best performance gains 3500–6500 rpm. Compatible with stock valve springs and stock non-adjustable pushrods.

**S&S 500:** Bolt-in cams that provide excellent torque with stock or ported heads. Recommended for modified engines up to 89" displacement and 9.0:1 to 10.5:1 compression ratio. Will work in 89" to 100" engines with less than 9.0:1 compression. Normal clearancing checks recommended. 2000–6000 rpm. Works with stock valve springs and stock non-adjustable pushrods.

**S&S 555:** Recommended for 89"–100" engines with 9.5:1 to 11.5:1 compression ratio. Provides best performance from 3500–6500 rpm using ported stock heads or S&S heads. Requires adjustable pushrods, spring spacing or high lift valve springs, and normal clearance checks.

**S&S 600:** The standard cam included in 4" bore S&S engines. For engines larger than 89" with 9.5:1 to 10.5:1 compression ratio and S&S heads. Great addition to a S&S 103" Sidewinder® kit. Requires adjustable pushrods, crankcase clearancing and high lift valve springs. 3500–6500 rpm.



33-5082

With the exception of the "bolt-in" 500 camshafts, S&S cams are high lift and are designed to take advantage of the extra flow of ported stock heads or S&S Super Stock® heads. Due to the high lift of these cams, high lift valve springs and minor clearancing is required for proper installation.

### S&S® CAMS SPECIFICATIONS FOR 1986–'21 SPORTSTER® AND 1994–'02 BUELL® MODELS

Cam	Valve Timing <sup>1</sup>		Valve Duration (°)		Valve Lift	Lift @ TDC <sup>2</sup>		Spring Spacing Required	Tappet <sup>3</sup> Type Required
	Intake	Exhaust	Intake	Exhaust		Intake	Exhaust		
	Open BTDC/Close ABDC	Open BBDC/Close ATDC							
S&S 482	22°/38°	43°/11°	240°	234°	.482"	.181"	.134"	No	Hydraulic
S&S 500	34°/50°	56°/28°	264°	264°	.500"	.241"	.212"	No	Solid or Hydraulic
S&S 555	33°/53°	53°/33°	266°	266°	.555"	.240"	.240"	Yes	Solid or Hydraulic
S&S 600	20°/55°	60°/20°	255°	260°	.600"	.194"	.184"	Yes	Solid or Hydraulic

<sup>1</sup>Timing designations is a function of zero lash @ 0.053" off base circle.

<sup>2</sup>TDC lifts are measured at the valve and are for reference only. Overlap valve lifts must be checked on assembled motor.

<sup>3</sup>Requires cam lobe clearancing when used in stock crankcases.

### CAMS FOR 1986–'21 SPORTSTER® AND 1994–'02 BUELL® MODELS

Cam Name	Application	Part #
S&S 482	2000–'21	330-0189
S&S 500	1991–'21*	33-5082
	1986–'90	33-5081
S&S 555	1991–'21*	33-5084
S&S 600	1991–'21*	33-5126
	1986–'90	33-5125

\*See Notes regarding pinion gears

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## NOTES

1991–'99 style pinion gear must be used with S&S® cams (except for 482) in 2000–'19 Sportster® models and 2000–'02 Buell® models with stock flywheels. See page 279.

2000–'03 Sportster models and 2000–'02 Buell models using S&S flywheels or pinion shafts require the use of '91–'99 style cams and S&S '86–'87 pinion gear and oil pump drive gear.



# PINION GEARS

## FITMENT

- 1986–'99 Sportster® models
- 1994–'02 Buell® models



33-4153



33-4163



33-4228

## PINION GEARS FOR 1986–'87 SPORTSTER® MODELS REQUIRED FOR ALL S&S FLYWHEEL ASSEMBLIES FOR 1986–'99 SPORTSTER AND 1991–'99 BUELL MODELS

Color Code	Size	HD® Part #	S&S® Part #
Blue	Biggest	24056-86	<b>33-4152</b> <b>33-4152</b>
Red	Average	24057-86	<b>33-4153</b>
White	Average	24058-86	<b>33-4154</b>

## PINION GEARS FOR 1991–'99 SPORTSTER® WITH STOCK FLYWHEEL ASSEMBLY

Color Code	Size	HD® Part #	S&S® Part #
Red	Average	24057-91	<b>33-4163</b>
White	Average	24058-91	<b>33-4164</b>
Green	Average	24059-91	<b>33-4165</b>
Yellow	Smallest	24060-91	<b>33-4166</b>

Note: Can be used to install S&S cams in 2000–2013 Sportster® engines

## PINION SHAFT COMPONENTS FOR 1986–'03 SPORTSTER® MODELS

Item Description	HD® Part # <sup>1</sup>	S&S® Part #
1986–'87 Style Pinion Gear Nut	7913	<b>33-4254</b>
1986–'87 Style Pinion Shaft Oil Pump Drive Gear	26318-75	<b>33-4228</b>

<sup>1</sup>Note: No longer available from Harley-Davidson®

**NOTE** If the stock gear is unmarked and the size is unknown or you are scratch building an engine and have no gear, we recommend that you order a gear in the middle of the size range. These sizes were used more often and should provide adequate gear clearance under most circumstances. When in doubt, use a gear from the middle to the small side of the range because a combination of looser fitting smaller gears is less likely to cause binding and premature wear. Consult the chart for the size and appropriate part number required. If you wish to achieve optimum cam gear to pinion gear fit, consult your factory service manual for instructions on fitting these gears before making a selection. Some sizes, particularly those on and near the ends of each range, are available on a limited basis because they are the extremes.

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

# PRECISION TAPPETS

High performance tappets are a cornerstone of the S&S line up and we are always looking to improve our products. After months of research and countless hours of testing we are excited to reveal the latest in performance tappets. The S&S Cycle Precision Tappets replace both our standard as well as premium tappets. Each Precision Tappet is hand assembled to exacting tolerances and designed for quiet operation and rapid pump up and all are made in the USA.

## FITMENT

- 2000–'21 HD® Sportster® models
- 2000–'02 Buell® models
- 1986–'90 Sportster® models

## FEATURES

- Reduced valve train noise from start up to shut down
- Close tolerances for low leak down rates
- Fast pump up and superior high rpm performance



## PRECISION TAPPETS

Fitment	Part #
2000–'21 Sportster® models & 2000–'02 Buell® models	<b>330-0718</b>
1991–'99 Sportster models	<b>330-0288</b>

# STANDARD TAPPETS

## FITMENT

- 1986–'90 HD® Sportster® models

## FEATURES AND BENEFITS

- Redesigned plunger assembly better withstands forces associated with heavy-duty valve springs and cams typically used in high-performance applications
- Revised metering device precisely controls oil delivery to top end, ensuring rapid lifter pump-up and reducing possibility of oil starvation to bottom end
- Each lifter body and plunger assembly is selective-fit and tested to ensure correct operation
- 1986–'90 (4-speed)
  - Larger inner bearing race reduces stresses to increase axle, bearing and roller life. The S&S inner bearing race is .123" larger in diameter than the "raceless" roller axles currently used by some manufacturers.
  - Improved inner race-roller design allows use of more and larger bearings to increase load—carrying surface area, further reducing stress and wear in the critical roller area.



33-5352

## HIGH PERFORMANCE HYDRAULIC TAPPETS

Fitment	Description	Part #
1986–'90 Sportster®	S&S Standard Tappet (HL <sub>2</sub> T kit not installed)	<b>33-5352</b>
	S&S Standard Tappet (With HL <sub>2</sub> T kit installed)	<b>33-5353</b>

## OPTIONS

- Tappets for 1986–'90 four speed Sportster® models are available with the HL<sub>2</sub>T Limited Travel Kit for improved cold starts and high rpm valve timing accuracy.

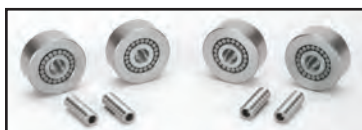
## KIT CONTENTS

- Four hydraulic tappets

## NOTE

S&S tappets with HL<sub>2</sub>T Kit require the use of adjustable pushrods. See page 282 for S&S adjustable pushrod options

# HIGH QUALITY TAPPET ROLLER & AXLE REPLACEMENT



High quality tappet roller and axle replacement kit for 1984–99 HD® big twin and 1986–90 Sportster® models. Kit includes rollers to rebuild 4 tappets.

## HIGH QUALITY TAPPET ROLLER AND AXLE REPLACEMENT KIT

Fitment	Part #
Kit includes rollers to rebuild 4 tappets.	<b>330-0378</b>

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

# HYDRAULIC LIFTER LIMITED TRAVEL SPACER (HL<sub>2</sub>T)

## FITMENT

- 1986–'03 Harley-Davidson® Sportster® models
- 1994–'02 Buell® models

## FEATURES AND BENEFITS

- Positive valve train activation!
- More horsepower at higher RPMs
- Easier starting

## KIT CONTENTS

- Set of four spacers



## HYDRAULIC LIFTER LIMITED TRAVEL SPACER (HL<sub>2</sub>T)

Fitment	Part #
1986–'03 Sportster® with stock or S&S® tappets (fits tappets with .612" I.D.)	<b>33-5338</b>

# TAPPET GUIDES

## FITMENT

- 1986–'90 Harley-Davidson® Sportster®
- S&S Super Stock® crankcase
- S&S Special Application crankcase

## FEATURES AND BENEFITS

- Unlike cast aluminum, billet has no internal voids or impurities
- No residual strain from thermal contraction or expansion means no cracking or changes in shape
- Simple to install upgrade that looks great
- Tappet guides for special application cases have correct pushrod angles for ½" camchest offset

## KIT CONTENTS

- Guides
- O-rings
- Installation hardware



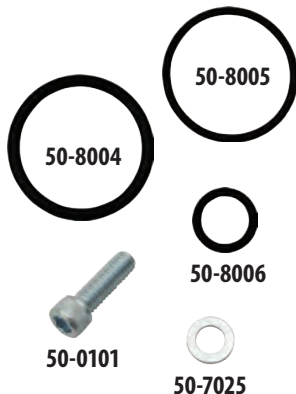
33-5375

## TAPPET GUIDE SETS FOR SPORTSTER®, SUPER STOCK®, AND SPECIAL APPLICATION CRANKCASES

Application	Set
1986–'90 Stock/S&S® Super Stock	<b>33-5375</b>
1986–'90 S&S Special Application	<b>33-5365</b>
1991–'99 S&S Super Stock	<b>33-5389</b>

## NOTE

2000 and later Sportster models use the same tappet as 1999–up big twin engines. However, these tappets will not fit the S&S tappet guides for 1991–'99 models.



## REPLACEMENT PARTS FOR TAPPET GUIDES

Description	Part #
Tappet Guide O-ring Kit <i>Fits 1986–'90 Sportster models with stock or S&amp;S crankcases and 1991–'99 Sportster models with S&amp;S crankcases 1167A</i>	<b>50-8153</b>
Upper O-ring, 1" I.D. x 1 3/16" O.D. x 3/32" CS Viton® 11167	each <b>50-8004</b>
Lower O-ring, 1" I.D. x 1 1/8" O.D. x 1/16" CS Viton 11168A	each <b>50-8005</b>
Oil Passage O-ring, 3/8" I.D. x 1/2" O.D. x 1/16" CS 70 Buna 11110	each <b>50-8006</b>
	10 pack <b>50-8077</b>
Screw, SHC, 3/16-18 x 1", Zinc 3201WA, 2708	each <b>50-0101</b>
Washer, Flat, .325" x .548" x .062", Zinc, Low Carbon Steel 6771	each <b>50-7025</b>

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.



# QUICKEE ADJUSTABLE PUSHRODS

## FITMENT

- 1991-'21 Harley-Davidson® Sportster® models
- 1994-'02 Buell® models

## FEATURES AND BENEFITS

- Easy to install
- Adjustable to ensure consistent valve train operation under all conditions

## KIT CONTENTS

- Pushrods
- Pushrod covers and keepers
- O-rings



930-0023

## NOTES

Quickee pushrods cannot be used in the S&S® SB-100 engine. 33-5355 adaptors, 93-4039 cover kit and 93-4101 keepers are needed when used on 1991–2003 applications.

REPLACEMENT PARTS: SEE PAGE 283

## QUICKEE ADJUSTABLE PUSHRODS FOR 1991-'20 HARLEY-DAVIDSON® SPORTSTER® MODELS

Description	Part #
Complete Kit, for 2004-'20 xl	930-0023
Pushrod Set only, for 1991-'20 xl	93-5122

# STANDARD ADJUSTABLE PUSHRODS

## FITMENT

- 1986-'21 Harley-Davidson® Sportster® models
- 1994-'02 Buell® models

## FEATURES AND BENEFITS

- Made out of 7/16" O.D. chromoly steel tubing for strength and durability
- Adjustable to ensure accurate valve train operation under all conditions
- Compatible with solid and hydraulic lifters
- Kit includes all pushrods, covers, keeper and o-rings

## KIT CONTENTS

- Pushrods
- Pushrod covers and keepers
- O-rings



930-0024

## NOTES

S&S pushrod sets are available separately for those who wish to use an aftermarket pushrod cover other than S&S. 33-5355 pushrod cover adaptors are required for 1991-'03 applications. See page 283

REPLACEMENT PARTS: SEE PAGE 283

## STANDARD ADJUSTABLE PUSHRODS FOR 2004-'20 HARLEY-DAVIDSON® SPORTSTER® MODELS

Description	Part #
Complete Kit	930-0024
Pushrod Set only	93-5022

## PUSHROD SETS

### FOR 1991-'03 SPORTSTER® AND 1994-'02 BUELL® MODELS

Displacement	Cylinder Length	Part #
883cc, 1200cc, 79"	4.650" (Stock)	93-5022
89"	5.087" (+0.437)	93-5089

### PUSHROD SETS FOR 1986-'90 SPORTSTER® MODELS

Displacement	Cylinder Length	Part #
883cc, 1200cc, 79"	4.650" (Stock)	93-5033
89"	5.087" (+0.437)	93-5022













# PUSHROD COVERS AND RELATED PARTS

## FITMENT

- 1986–'21 Harley-Davidson® Sportster®
- 1994–'02 Buell®

## PUSHROD REPLACEMENT PARTS

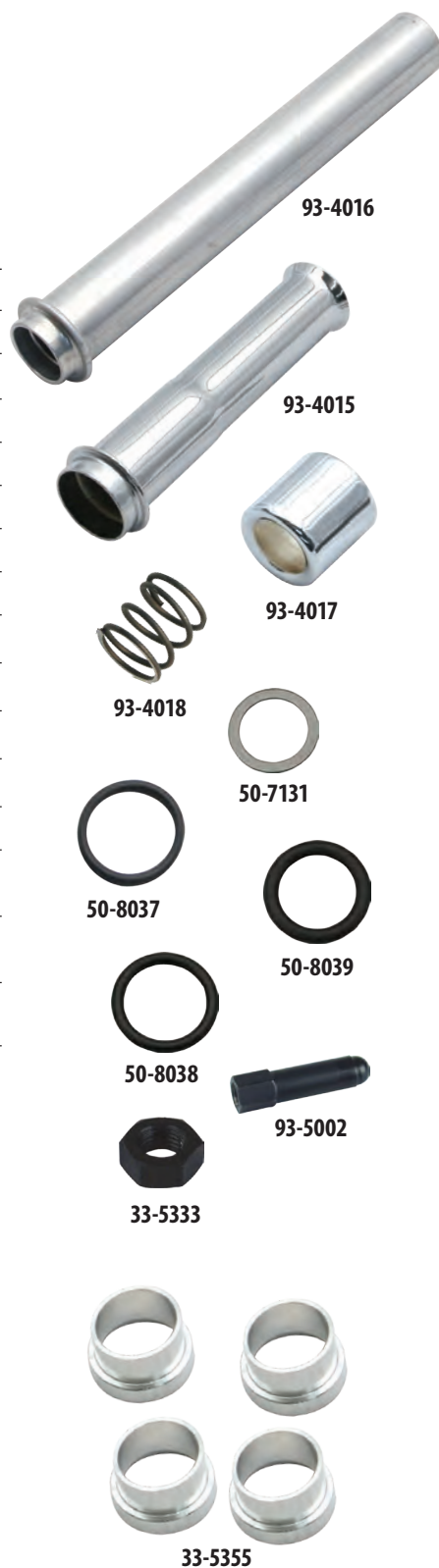
Item Description		Part #
S&S Pushrod Cover Kit* (includes Top and bottom covers, Cover cap, Cover spring, Spring washers, and o-rings)	Stock Height 	93-4039*
	1" or more taller than stock	93-4038*
Cover Cap Washer 67628		50-7131
Bottom Cover Washer		50-7150
Top O-ring 11132A		50-8039
Middle O-ring		50-8038
Bottom O-ring		50-8037
Top Cover  		93-4016
Bottom Cover  		93-4015
Cover Cap  		93-4017
Cover Spring  		93-4018
Pushrod O-ring Kit		93-4022
Ball End 	Fits S&S adjustable with 5/16"-32 threads. (Manufactured after 2-1-1996)	93-5002
Adjusting Unit Locknut	Fits S&S adjustable pushrods with early stock 9/32"-32 threads	33-5333
	Fits S&S adjustable pushrods with 5/16"-32 threads. (Manufactured after 2-1-1996)	93-5003-S

\*1991-'03 Sportster and 1994-'02 Buell models require S&S pushrod cover adaptor kit part #33-5355 to use two-piece pushrod covers.

S&S pushrod cover adapters for five-speed Sportster models are designed to convert stock 1991-'03 crankcases to accept 1986-'90 style pushrod cover assemblies in order to allow access to adjustable pushrods. 2004-up Sportster models do not require these adapters.

## PUSHROD COVER ADAPTER

Set of four	33-5355
-------------	---------



Milwaukee-Eight™

2007–2017 Twin Cam  
96™/103™/110™

1999–2006  
Twin Cam 88™

1986–2021  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™



Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix

## PUSHROD COVER KEEPER SETS<sup>±</sup>

Application		Length	Part #
2004-'21 Sportster® Pushrod covers	883cc & 1200cc	(2.600")	<b>93-4101</b>
1991-'03 Sportster and 1994-'02 Buell® with Stock Cases and S&S Adaptors	883cc & 1200cc	(2.600")	<b>93-4101</b>
	79"	(2.600")	<b>93-4101</b>
	89"	(3.000")	<b>93-4103</b>
1986-'90 Sportster with Stock or S&S Cases	883cc & 1200cc	(2.800")	<b>93-4115</b>  17950-86
	79"	(2.800")	<b>93-4115</b>  17950-86
	89"	(3.100")	<b>93-4104</b>
	100"	(3.000")	<b>93-4103</b>




<sup>±</sup>  WARNING: Cancer and Reproductive Harm




### 93-4101

All S&S pushrod keepers are chromed steel except part #93-4109. Keeper #93-4109 is intended for unusually tall engines. It is manufactured of unchromed stainless steel to prevent rust or peeling after it is trimmed to the required length. Keepers are sold in sets of four.

## PUSHROD COVER KEEPER SET

Length / Finish	Part #	
2.390" / Gloss Black	<b>930-0127</b>	
2.400" / Chrome 	<b>93-4070</b> <sup>±</sup> 17950-48	
2.500"	Chrome	<b>93-4100</b> <sup>±</sup>
	Gloss Black	<b>930-0142</b>
2.600"	Chrome	<b>93-4101</b> <sup>±</sup>
	Gloss Black	<b>930-0128</b>
2.800" / Chrome 	<b>93-4115</b> <sup>±</sup> 17950-86	
2.900"	Chrome	<b>93-4102</b> <sup>±</sup>
	Gloss Black	<b>930-0126</b>
3.000" / Chrome	<b>93-4103</b> <sup>±</sup>	
3.100"	Chrome	<b>93-4104</b> <sup>±</sup>
	Gloss Black	<b>930-0125</b>
3.200" / Chrome	<b>93-4105</b> <sup>±</sup>	
3.330" / Chrome 	<b>93-4106</b> <sup>±</sup> 17949-40, 17950-66	
3.500" / Chrome	<b>93-4107</b> <sup>±</sup>	
3.625" / Chrome	<b>93-4108</b> <sup>±</sup>	
4.250"*	<b>93-4109</b>	

\*Custom, extra long stainless steel 4.250", customer to cut to required length

<sup>±</sup>  WARNING: Cancer and Reproductive Harm

# SIDEWINDER® .650" LIFT VALVE SPRINGS

## FITMENT

- 1986–'21 Harley-Davidson® Sportster® models with stock heads

## FEATURES AND BENEFITS

- Works well with cams up to .650" lift
- Manufactured from ultra clean high silicon Kobe alloy wire then micro shot peened and nitrided
- CNC machined 9° locks
- High performance conical single wire spring
- Chromoly forged retainers

## KIT CONTENTS

- Valve keepers, top & bottom collars, springs, shims
- Valve guide seals (*not included in kit for 1999–'04 xl*)

### .650" LIFT SPRING KIT

Description	Part #
1986–2003 (5/16" valve stems)	<b>900-0050</b>
2004–2021 (7mm stems)	<b>106-5909</b>

## NOTE

S&S recommends roller rocker arms be used with lifts over .585"

### S&S® .650" LIFT SPRINGS SPECIFICATIONS

Lift	Installed Height	Seat Force	Force @ Max Lift	Max RPM
.650"	1.860"	178 lb.	376 lb.	6500



# STREET PERFORMANCE .585" VALVE SPRINGS

## FITMENT

- 1986–'21 Harley-Davidson® Sportster® models / 1995–'02 Buell models

## FEATURES AND BENEFITS

- Dual springs reduce the risk of valve float
- Suitable for high performance applications
- Accommodates camshaft lift to 0.585"

## KIT CONTENTS

- Valve Guide Seals, Springs, Top & Bottom Collars, Keepers, Shims

### STREET PERFORMANCE .585" VALVE SPRING KIT

Description	Part #
1986–'03 Sportster® & 1995–'02 Buell® (5/16" valve stems)	<b>900-0593</b>
2004–'21 Sportsters® (7mm stems)	<b>900-0594</b>
S&S Super Stock Heads	<b>900-0595</b>

### S&S® .585" LIFT SPRINGS SPECIFICATIONS

Lift	Installed Height	Seat Force	Force @ Max Lift
.585"	1.850"	135 lb.	325 lb.



VALVE SPRING REPLACEMENT PARTS: SEE PAGE 318

# FORGED ROCKER ARMS

## FITMENT

- 1986-'21 Harley-Davidson® Sportster® models
- 1994-'02 Buell® models

## FEATURES AND BENEFITS

### ROLLER ROCKER ARMS

- Extremely durable rollers reduce valve stem side thrusting with high lift cams
- Superior wear and fatigue resistance even in the most demanding applications
- ¾" long bushings provide 50% more bushing support area than ½" long bushings
- Ideal for cams of any lift

### STANDARD ROCKER ARMS

- ¾" long bushings provide 50% more bushing support area than ½" long bushings
- An economical alternative for cams up to .585" lift

## KIT CONTENTS

- 2 front and 2 rear rocker arms



### 1.625:1 RATIO FORGED ROLLER ROCKER ARMS

Description	Part #
1.625:1 Ratio Roller Rocker Arm <i>Set 2 front &amp; 2 Rear</i>	<b>900-4065A</b>
Front Exhaust/Rear Intake <i>each</i>	<b>900-4065FA</b> 1,2,3
Rear Exhaust/Front Intake <i>each</i>	<b>900-4065RA</b> 1,2,3

### 1.725:1 RATIO FORGED ROLLER ROCKER ARMS 1986-2003 XL

1.725:1 Ratio Roller Rocker Arm <i>Set 2 front &amp; 2 Rear</i>	<b>900-4098A</b>
Front Exhaust/Rear Intake <i>each</i>	<b>900-4098FA</b>
Rear Exhaust/Front Intake <i>each</i>	<b>900-4098RA</b>

### STANDARD FORGED ROCKER ARM KIT

1.625:1 Ratio Roller Rocker Arm <i>Set 2 front &amp; 2 Rear</i>	<b>900-4119A</b>
Front Exhaust/Rear Intake <i>each</i>	<b>900-4119FA</b> 17375-83A
Rear Exhaust/Front Intake <i>each</i>	<b>900-4119RA</b> 17360-83A



### REPLACEMENT PARTS FOR FORGED ROCKER ARMS

Description	Part #
Rocker Arm Shafts ( <i>Set of 4</i> )	<b>90-4036</b> 17611-83B
Rocker Arm Shafts ( <i>each</i> )	<b>90-4006</b> 1,2,3 17611-83B
Roller Rocker Arm Rebuild kits ( <i>rebuilds 4 rocker arms</i> )	<b>90-4104</b>
Roller & Standard Rocker arm bushing ( <i>¾" long</i> )	<b>90-4014</b>

## NOTES

- S&S roller rocker arms are recommended for use with cams having more than 0.585" of lift.
- Adjustable pushrods must be used with S&S roller rocker arms to obtain proper valve clearance.
- New rocker arm shafts are recommended for maximum performance and rocker life.
- The use of 1.725:1 ratio rocker arms will increase stress on cams, tappets, and pushrods. For this reason they are recommended for racing only and not for street applications.

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.



# SUPER STOCK® CYLINDER HEADS FOR 4" BORE S&S ENGINES

## FITMENT

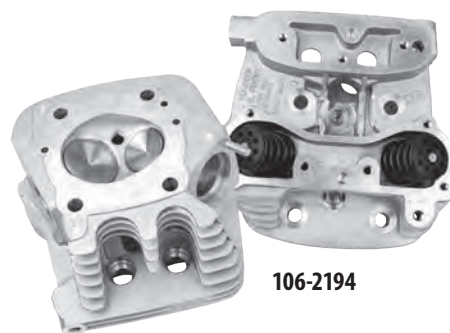
- SB-Series for Harley-Davidson® Sportster® 1986–'03
- SB-Series for Buell® 1994–'02

## FEATURES AND BENEFITS

- Machined for S&S manual or electric compression releases
- 2.000" intake valves and 1.605" exhaust valves
- Special "cast-to-shape" intake ports with a special directional fin for improved air flow
- Precision CNC machined from heat treated aircraft quality aluminum castings
- Machined with S&S 4" cylinder stud pattern and '86–90 S&S SA pushrod hole locations

## KIT CONTENTS

- 2 fully assembled cylinder heads in Natural or Wrinkle Black with S&S .650" lift springs
- Threaded plugs to seal compression release holes if no compression releases are used



106-2194

## SUPER STOCK® HEAD KITS FOR 4" BORE S&S ENGINES

Application	Natural
1986–'03 Sportster® models	106-2194
1994–'02 Buell® models	106-2297

**!** THESE KITS REQUIRES SPECIAL S&S PISTONS AND GASKETS. Order the required piston oversize and gaskets from the charts below.



## 4" PISTON KITS FOR 1986–'03 HARLEY-DAVIDSON® SPORTSTER® MODELS

Oversize	Part #
+0.010"	92-1421
+0.020"	92-1422

*Kits include a set of pistons, rings, wristpins and keepers.*



90-1909

## 4" BORE GASKET KIT FOR 1986–'03 HARLEY-DAVIDSON® SPORTSTER® MODELS

Description	Part #
Head, Base, and Exhaust Gaskets	90-1909

**REPLACEMENT PARTS: SEE PAGE 306**

**NOTE**

Due to expanded stud pattern, these heads will not fit on stock Sportster® Evolution® engines.

# 3-1/2" AND 3-5/8" SUPER STOCK® CYLINDER HEADS

## FITMENT

- 1986-'03 Harley-Davidson® Sportster®
- 1994-'02 Buell® (heads require S&S Super stock pistons)

## FEATURES AND BENEFITS

- Machined with a stock bolt pattern
- Larger, more open combustion chamber presents less resistance to air flow around the valves
- 2.000" intake valves and 1.605" exhaust valves
- Special "cast-to-shape" intake ports with a special directional fin for improved air flow
- Precision CNC machined from heat treated aircraft quality aluminum castings



## KIT CONTENTS

- Complete head assembly in Natural or Wrinkle Black with valves and S&S .650" lift springs

**REPLACEMENT PARTS: SEE PAGE 306**

## ASSEMBLED S&S® SUPER STOCK® HEAD KITS

Application	Natural	Wrinkle Black
1991-'03 Sportster® models	<b>90-1310</b>	<b>90-1810</b>

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**! THESE KITS REQUIRES SPECIAL S&S PISTONS AND GASKETS.** Order the required piston oversize and gaskets from the charts below.

## 3 5/8" FORGED PISTON KITS FOR S&S® SUPER STOCK® HEADS



Oversize	Low Compression
+0.010"	<b>92-1081</b>

Piston kits include set of pistons, rings, wristpins, and clips.  
Recommended piston fit: Close: 0.0023"- 0.0025" Loose: 0.0035"- 0.0045"

## FOR COMPRESSION RATIOS AND CYLINDER KITS SEE PAGE 274

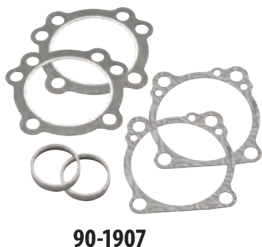
## 3 1/2" BORE FORGED PISTON KITS FOR S&S® SUPER STOCK® HEADS (10.5:1 COMPRESSION)

Oversize	Deck Height	Part #
Standard	1.1875"	<b>92-2016</b>
+0.010"		<b>92-2017</b>
+0.020"		<b>92-2018</b>

Piston kits include set of pistons, rings, wristpins, and clips. Recommended piston fit: Close: 0.0025"-0.003" Loose: 0.0030"-0.0040"

## GASKET KITS FOR S&S® SUPER STOCK® CYLINDER HEADS

Bore Size	Part #
3 1/2"	<b>90-1907</b>
3 5/8"	<b>90-1908</b>



**90-1907**

# CYLINDER HEAD AND MOTOR MOUNTS

## HEAD MOUNTS FOR SPORTSTER® MODELS

Two head mounts are required for 1986–'03 Harley-Davidson® Sportster® models. The center mount is a two-piece design for maximum flexibility. The front mount is one piece and available in two versions according to cylinder length. Machined from ¼" thick steel and provided in a semi-gloss black finish.

1986–'03 Sportster® Chassis



93-4055

### CENTER MOUNT

Fits All Engines	<b>93-4055</b>
------------------	----------------

### FRONT MOUNT

Stock to 5.087" Long Cylinders 16214-86, 16222-86	<b>93-4056</b>
--	----------------

# HEAD BOLTS WITH WASHERS

## HEAD BOLT INFORMATION CHART

Length w/Washer	Washer Thickness	Head Bolt w/Washer	Washers Only
1.690"	.250"	<b>93-3028</b>	<b>50-7091</b>
1.840"	.150"	<b>93-3027</b>	<b>50-0418-S</b>
1.920"	.250"	<b>93-3036</b>	<b>50-7091</b>
2.070"	.150"	<b>93-3031</b>	<b>50-0418-S</b>
2.220"	.250"	<b>93-3038</b>	<b>50-7091</b>
2.370"	.150"	<b>93-3032</b>	<b>50-0418-S</b>
3.134"	.250"	<b>93-3029</b>	<b>50-7091</b>
3.284"	.150"	<b>93-3030</b>	<b>50-0418-S</b>
3.501"	.250"	<b>93-3037*</b>	<b>50-7091</b>
3.651"	.150"	<b>93-3033*</b>	<b>50-0418-S</b>

\*Drilled & tapped deeper to allow shortening for custom lengths.



93-3028

## HEAD BOLT WASHERS

Thickness	Part #
.150"	<b>50-0418-S</b>
.250"	<b>50-7091</b>

## HEAD BOLTS FOR 1986–2003 HARLEY-DAVIDSON® SPORTSTER® MODELS

Engine Displacement	Stroke	Cylinder Length	Cylinder Head Type	Short Bolt w/Washer	Long Bolt w/Washer	Head Bolt Kit
883/1100/1200cc S&S 79"	3 <sup>13</sup> / <sub>16</sub> "	4.650"	S&S 1986–'90 HD®	<b>93-3027</b>	<b>93-3030</b>	<b>93-3010</b>
			1991–up HD	<b>93-3027</b>	<b>93-3030</b>	<b>93-3010</b>
S&S 89"	4 <sup>5</sup> / <sub>16</sub> "	5.087"	S&S 1986–'90 HD	<b>93-3038</b>	<b>93-3033</b>	<b>93-3013</b>
			1991–up HD	<b>93-3032</b>	<b>93-3033</b>	<b>93-3013</b>
S&S 91"	3 <sup>3</sup> / <sub>8</sub> "	4.230"	S&S®	<b>93-3028</b>	<b>93-3029</b>	<b>93-3011</b>
S&S 100"	4"	4.420"	S&S®	<b>93-3028</b>	<b>93-3029</b>	<b>93-3011</b>

## CALCULATING CUSTOM HEAD BOLT LENGTHS SEE INSTRUCTIONS ON PAGE 361

Dress up your engine with these magnetic chrome head bolt covers. Easy installation, no tools, no messy adhesives. A powerful magnet holds cover in place, yet allows easy removal. Chrome plated steel looks great on any engine, but is a must for polished engines. For S&S head bolts only.



## CHROME HEAD BOLT COVERS

Set of 4	<b>50-0333</b>
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± WARNING: Cancer and Reproductive Harm

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

# BILLET ROCKER COVERS

## FITMENT

- 1986–'03 Harley-Davidson® Sportster® models
- 1994–'02 Buell® models

## FEATURES AND BENEFITS

- OEM-style "umbrella" fittings are included with billet rocker boxes for 1993–'99 big twin engines with cylinder head venting
- S&S billet rocker covers are available in three finishes: show-quality chrome, or unfinished. Unfinished is ideal for powder coating and other custom cosmetic treatments
- Installation on stock and most comparable sized engines can be performed without removing the engine from the frame

## KIT CONTENTS

- Covers
- Gaskets
- O-rings
- Mounting hardware

## NOTES

The performance-oriented design of the billet rocker boxes permits valve lifts up to .710" with stock or S&S Super Stock® heads, and up to .810" with S&S Special Application heads. S&S roller rocker arms are recommended for high lift cams.



S&S billet rocker covers accept valve springs up to 1.660" O.D. without modification. Cylinder heads must be set up correctly for high-lift cams, and it remains the builder's responsibility to confirm all clearances.

Kits include front and rear cover assemblies with base and top cover, rocker shaft supports, gaskets and o-rings, and instructions

**REPLACEMENT PARTS: SEE PAGE 302**

**ANY JOB IS EASY WITH THE RIGHT TOOLS  
S&S ROCKER COVER WRENCH SET, PAGE 339**

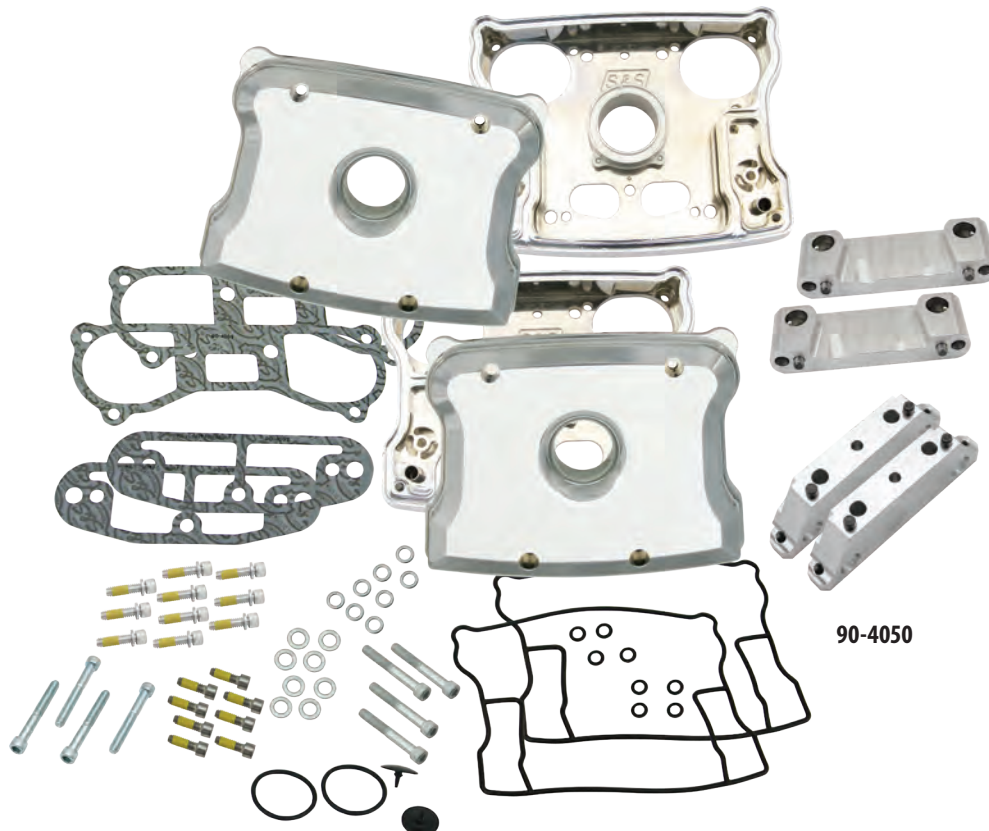
## BILLET ROCKER COVER KITS

Finish	Part #
Chrome	90-4050 <sup>±</sup> 
Unfinished	90-4055 

<sup>±</sup>  WARNING: Cancer and Reproductive Harm

## REPLACEMENT GASKET KIT

Description	Part #
Includes gaskets for two rocker covers	90-4049





# SUPER E & G COMPLETE CARBURETOR KITS

## FITMENT

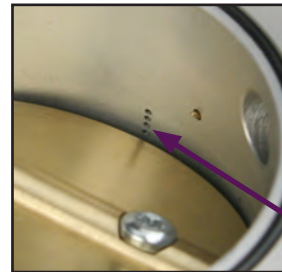
- 1986–'06 Harley-Davidson® Sportster® models
- 1994–'02 Buell® models

## FEATURES AND BENEFITS

- Four fuel delivery ports — Better throttle response
- O-ring sealed idle mixture screw
- Increased air flow for more power
- Adjustable accelerator pump for quick throttle response and easy starting
- Utilization of the factory dual cable system ensures safe operation
- Direct replacement and high quality fit and finish — less down time and better performance
- Variable position enrichment starting system

## KIT CONTENTS

- FULL KIT (For engines with stock length cylinders)
  - Super E carburetor
  - S&S intake manifold (stock length)
  - Classic Teardrop air cleaner kit
  - Mounting hardware and gaskets
  - Instructions
- PARTIAL KIT
  - Super E carburetor
  - Classic Teardrop air cleaner
  - Mounting hardware
  - Gaskets
  - Instructions



As the throttle plate opens, it exposes more of these holes to engine vacuum and delivers more fuel as rpm increases. When you run out of holes in the intermediate system, the main jet comes in and handles fuel delivery for the higher rpm.

**REPLACEMENT PARTS: SEE PAGE 316**

## SUPER E COMPLETE CARBURETOR KITS

Models	Super E
2004–'06 Sportster® models	<b>11-0470</b>
1991–'03 Sportster models	<b>11-0409</b>
1986–90 Sportster models	<b>11-0408</b>

## SUPER E PARTIAL KIT (NO MANIFOLD)

Models	Part #
1991–'03 Sportster® models	<b>11-0443</b>
1986–'90 Sportster models	<b>11-0440</b>

## SUPER E & G CARBURETOR ONLY

Fitment	Super E	Super G
All Years & Models	<b>11-0420</b>	<b>11-0421</b>

## NOTES

Due to inadequate frame clearance, the taller throttle bracket cannot be used on 1986–'03 Harley-Davidson® Sportster® chassis. Therefore, these Sportster models require the installation of earlier butterfly style throttle cables. Kits for 2004–'06 Sportster models are compatible with stock throttle cables.

S&S® does not recommend polishing or chrome plating Super E & G carburetors. Our repair department has seen many carbs with plugged passages due to polishing compounds, and some carbs have been destroyed because the polishing or chrome plating had altered critical machined surfaces.

Recommended for closed circuit use only—S&S Super E & G carburetors shown in this catalog section are not approved for use on motor vehicles operated on California public highways, or in other states where similar pollution laws may apply. The user shall determine the suitability of the product for his or her use and shall assume all risk and liability in connection therewith.

1998–up Buell® models require the use of 1996–'97 throttle assembly.

S&S throttle cables must be used for all Buell applications.

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# BLACK SUPER E & G CARBURETORS

## FEATURES AND BENEFITS

- Exclusive black coating – heat and chemical resistant
- Offered in standard venturi or increased venturi diameter – specially machined for 7% more flow



## BLACK CARBURETORS FOR 1986-2006 XL MODELS

	Description	Part #
Increased venturi diameter <i>(7% more flow)</i>	Super E Carb	<b>110-0099</b>
	Super G Carb	<b>110-0100</b>
Standard venturi diameter	Super E Carb	<b>110-0133</b>
	Super G Carb	<b>110-0138</b>

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## NOTE

These black carb kits do not include air cleaners. Air cleaner options are on page 309

# RIGID CARB SUPPORT BRACKETS

## FITMENT

- 1986-'03 Harley-Davidson® Sportster® models, 1994-'02 Buell® models

## SUPPORT BRACKET, AIR CLEANER TO HEAD

Application	Stock Carb and S&S Air Cleaner
	Part #
1986-'03 Sportster® & 1994-'02 Buell® models	<b>17-0311</b>



# BREATHER CONVERSION KIT

## FITMENT

- 1991-'03 Harley-Davidson® Sportster®

## FEATURES AND BENEFITS

- Instead of o-rings, banjo fittings are sealed with durable silicon coated washers

## BREATHER CONVERSION KIT

Fitment	Part #
Super E 1 7/8" Carb	<b>17-0487</b>



**17-0487**

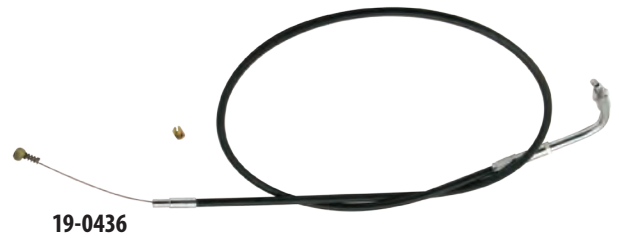
Breather conversion kit for xl engines updates earlier S&S® air cleaner kits for 1991-'03 Sportster® models to the latest breather hardware.

# TWO CABLE THROTTLE ASSEMBLIES

Harley-Davidson® Sportster® models 1987–'03 originally fitted with a constant velocity (CV) carb require conversion to butterfly style throttle cables to work with the S&S butterfly type carburetor. The throttle cables shown in the chart below are designed for this application. S&S Super E carb kits for 2004–'06 Sportster models are designed to accept the stock throttle cables.

## FITMENT

- 1986–'03 Harley-Davidson® Sportster® models
- 1996–'02 Buell® models



## S&S® THROTTLE CABLE APPLICATION CHART

Application	Fastening Method	Length Total Housing	Length Vinyl Housing	Open Side	Close Side
1996–'03	Snap-in	36"	32"	<b>19-0436</b>	<b>19-0437</b>
1986–'95	Threaded	36"	32"	<b>19-0432</b>	<b>19-0433</b>
1996–up Custom	Snap-in	42"	38"	<b>19-0440</b>	<b>19-0441</b>
1986–'95	Threaded	42"	38"	<b>19-0446</b>	<b>19-0447</b>

\*1998 and later required Harley-Davidson® throttle assembly #71831-96

## REPLACEMENT PARTS

Description	Part #
S&S Universal Throttle Clamp	<b>106-3520</b>
Throttle Grip Clamp Set 1985–'95	<b>106-3519</b>
Top Throttle Grip Clamp only	<b>19-0222</b>
Bottom Throttle Grip Clamp only	<b>19-0220</b>
Throttle Grip Clamp Screw <i>(Fits S&amp;S throttle assemblies: Part #19-0448, #19-0449, #19-0482, #19-0450, and #19-0229)</i>	<b>50-0043</b>
Throttle Grip Set	<b>106-3521</b>
Right Hand Grip only	<b>19-0225</b>
Left Hand Grip only	<b>19-0226</b>
Cable Adjuster Fits S&S throttle assembly part #19-0229.	<b>19-0223</b>
Cable Adjuster Jam Nut Fits S&S throttle assembly part #19-0229	<b>19-0227</b>
Handlebar Spacing Sleeve 4" x 1" O.D. – converts 7/8" handlebars to 1" O.D.	<b>19-0235</b>



## NOTES

The chart on this page is used only when using throttle cable bracket part #11-2339. This bracket is standard on all S&S® Super E & G carburetor kits for Harley-Davidson® Sportster® models with the exception of the kit for 2004–'06 models.

1987–'03 Sportster models originally fitted with a constant velocity (CV) carb require conversion to butterfly style throttle cables to work with the S&S butterfly type carburetor. S&S Super E carb kits for 2004–'06 Sportster models are designed to accept the stock throttle cables.

# JETS & CARB REBUILD KITS FOR S&S SUPER E & G CARBURETORS

For those who need to rejet their carburetor because of engine modifications, exhaust modifications, or changes in altitude, we have extra jet kits available which are designed to cover most jetting situations.

## DEALER JET KITS

Description	Part #
S&S Jet Kit (Includes 3 each of all intermediate jets and 5 each of all main jets, plus a main jet tool)	<b>11-3102</b>

WARNING: Cancer and Reproductive Harm

## JET PACKS

Description	Part #
Low Range Jet Pack – For jetting most stock and moderate performance engines.	

Includes one each intermediate jets (.025", .0265", .028", .0295") one each main jets (.062", .064", .066", .068", .070", .072", .074")	<b>11-7270</b>
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High Range Jet Pack – For jetting some stock and all performance engines	
--	--

Includes one each intermediate jets (.0295", .031", .032", .033") and one each main jets (.072", .074", .076", .078", .080", .082", .084")	<b>11-7271</b>
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Master Jet Pack – For jetting all Super B, E, and G equipped engines	
--	--

Includes one each intermediate jets (.025", .0265", .028", .0295", .031", .032", .033") and one each main jets (.062", .064", .066", .068", .070", .072", .074", .076", .078", .080", .082", .084")	<b>11-7272</b>
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WARNING: Cancer and Reproductive Harm



## INTERMEDIATE JETS - SERIES #94 INDIVIDUAL SELECTION

Size	QTY	Part #	MSRP	Size	QTY	Part #
.025	each	<b>11-0250</b>	\$12.95	.032	each	<b>11-0320</b>
	3 pack	<b>11-7107</b>	\$30.95		3 pack	<b>11-7112</b>
.0265	each	<b>11-0265</b>	\$12.95	.033	each	<b>11-0330</b>
	3 pack	<b>11-7108</b>	\$30.95		3 pack	<b>11-7113</b>
.028	each	<b>11-0280</b>	\$12.95	.036	each	<b>11-0360</b>
	3 pack	<b>11-7109</b>	\$30.95		3 pack	<b>11-7114</b>
.0295	each	<b>11-0295</b>	\$12.95	.040	each	<b>11-0400</b>
	3 pack	<b>11-7110</b>	\$30.95		3 pack	<b>11-7115</b>
.031	each	<b>11-0310</b>	\$12.95	Blank	each	<b>11-0000</b>
	3 pack	<b>11-7111</b>	\$30.95			

WARNING: Cancer and Reproductive Harm

Early Series #94 gas jets were stamped with single digit numbers. Conversions for these numbers are:

1.....	.025"	4.....	.033"
2.....	.028"	5.....	.036"
3.....	.031"	6.....	.040"

## NOTES

No returns or exchanges on jets.



**MAIN JETS - SERIES #72 INDIVIDUAL SIZE SELECTION**

Size	QTY	Part #	MSRP	Size	QTY	Part #	
.040	each	11-4040	\$11.95	.080	each	11-4080	
	5 pack	11-7220	\$41.95		5 pack	11-7240	
.042	each	11-4042	\$11.95	.082	each	11-4082	
	5 pack	11-7221	\$41.95		5 pack	11-7241	
.044	each	11-4044	\$11.95	.084	each	11-4084	
	5 pack	11-7222	\$41.95		5 pack	11-7242	
.046	each	11-4046	\$11.95	.086	each	11-4086	
	5 pack	11-7223	\$41.95		5 pack	11-7243	
.048	each	11-4048	\$11.95	.088	each	11-4088	
	5 pack	11-7224	\$41.95		5 pack	11-7244	
.050	each	11-4050	\$11.95	.090	each	11-4090	
	5 pack	11-7225	\$41.95		5 pack	11-7245	
.052	each	11-4052	\$11.95	.092	each	11-4092	
	5 pack	11-7226	\$41.95		5 pack	11-7246	
.054	each	11-4054	\$11.95	.094	each	11-4094	
	5 pack	11-7227	\$41.95		5 pack	11-7247	
.056	each	11-4056	\$11.95	.096	each	11-4096	
	5 pack	11-7228	\$41.95		5 pack	11-7248	
.058	each	11-4058	\$11.95	.098	each	11-4098	
	5 pack	11-7229	\$41.95		5 pack	11-7249	
.060	each	11-4060	\$11.95	.100	each	11-4100	
	5 pack	11-7230	\$41.95		5 pack	11-7250	
.062	each	11-4062	\$11.95	.102	each	11-4102	
	5 pack	11-7231	\$41.95		5 pack	11-7251	
.064	each	11-4064	\$11.95	.104	each	11-4104	\$11.95
	5 pack	11-7232	\$41.95		5 pack	11-7252	\$41.95
.066	each	11-4066	\$11.95	.106	each	11-4106	\$11.95
	5 pack	11-7233	\$41.95				
.068	each	11-4068	\$11.95	.110	each	11-4110	\$11.95
	5 pack	11-7234	\$41.95		5 pack	11-7255	\$41.95
.070	each	11-4070	\$11.95	.115	each	11-4115	\$11.95
	5 pack	11-7235	\$41.95		5 pack	11-7256	\$41.95
.072	each	11-4072	\$11.95	.120	each	11-4120	\$11.95
	5 pack	11-7236	\$41.95		5 pack	11-7257	\$41.95
.074	each	11-4074	\$11.95				
	5 pack	11-7237	\$41.95				
.076	each	11-4076	\$11.95				
	5 pack	11-7238	\$41.95				
.078	each	11-4078	\$11.95				
	5 pack	11-7239	\$41.95				

**WARNING:** Cancer and Reproductive Harm

**MAIN JET AIR BLEED KIT (One Jet Each Size)**

Sizes	Part #
.042" – .060"	106-3517
.084" – .120"	106-3518

**WARNING:** Cancer and Reproductive Harm

**S&S® CARBURETOR REBUILD KITS**

To insure that you continue to get the utmost in performance from your S&S carburetor, we have put together a series of rebuild kits that are designed to provide the proper parts to return a worn carburetor to top shape. We have assembled different types of kits to cover the different degrees of rebuild necessary.

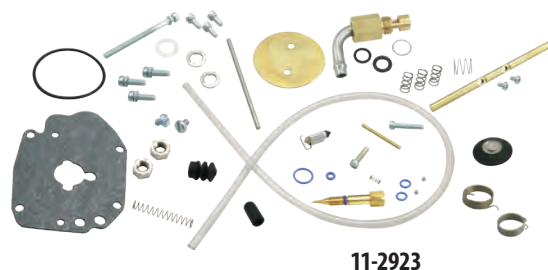
**MASTER REBUILD KITS**

Master rebuild kits contain a body rebuild kit, accelerator pump rebuild kit (Super E and G only), all new fasteners, springs, idle mixture screw, seat, and needle assembly. Everything needed to completely rebuild one carburetor.

**MASTER REBUILD KIT**

Description	Part #
Super E	11-2923
Super G	11-2924

**WARNING:** Cancer and Reproductive Harm



**BODY REBUILD KITS**

Body rebuild kits for Super E and G carbs also contain throttle shaft nuts, nylon washers, accelerator pump o-ring, and accelerator pump boot. Body rebuild kits for Super E and G carbs do not contain throttle shaft bushings since these carbs have stainless steel throttle shaft bushings already installed.

**BODY REBUILD KIT**

Description	Part #
Super E	11-2906
Super G	11-2907

**WARNING:** Cancer and Reproductive Harm



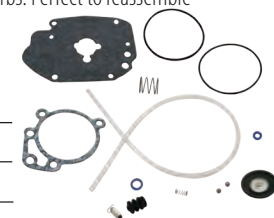
**BASIC REBUILD KIT**

A gasket and seal kit for low mileage Super E & G carbs. Perfect to reassemble carbs taken apart for inspection and cleaning.

**BASIC REBUILD KIT**

Description	Part #
Super E & G	110-0067

**WARNING:** Cancer and Reproductive Harm



**ACCELERATOR PUMP REBUILD KITS**

Accelerator pump rebuild kits contain diaphragm, diaphragm spring, check balls, check ball spring, pump pushrod, and required hardware and o-rings.

**ACCELERATOR PUMP REBUILD KIT**

Description	Part #	Price
Super E & G	11-2918	\$24.95



Milwaukee-Eight®

2007–2017 Twin Cam  
96™/103™/110™

1999–2006  
Twin Cam 88®

1986–2021  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shim Supplies

Warranty &  
Company Policy

Appendix

# MANIFOLD CONVERSION KITS

## FITMENT

- 1986–'03 Harley-Davidson® Sportster® models
- Can be used with S&S Super B and Super E carburetors, as well as stock carburetors with a two-bolt mounting pattern

## FEATURES AND BENEFITS

- Increased airflow
- Eliminates the possibility of severe engine damage due to extreme lean conditions created by cracks in stock rubber manifolds

## KIT CONTENTS

- Manifold
- Front and rear mounting flanges
- Manifold o-rings
- Aluminum spacer shims



16-1650

## MANIFOLD CONVERSION KITS FOR SPORTSTER® MODELS

Year	Cylinder Length	Size No.	Part #
1986–'03	4.650"	341	16-1650*

\*Fits S&S ES, LS, Super B, Super E, Tillotson®, Bendix®, Keihin®

## NOTES

These manifolds may change the way a stock carburetor and air cleaner assembly fit. This means that these components may require shimming and/or a slight change in mount bracketing.

S&S style o-rings must be used with these manifolds. S&S o-rings are slightly thinner to accommodate the larger S&S port diameter. Use of stock o-rings may damage the manifold.

## REPLACEMENT PARTS MANIFOLD CONVERSION KIT

Description	Part #	
Manifold	16-1620	
Flanges	Front 27009-86A <i>each</i>	16-0232
	<i>5 pack</i>	16-0600
	Rear 27010-86A <i>each</i>	16-0233
	<i>5 pack</i>	16-0601
Set (Front & Rear)	106-3516	
O-rings	<i>each</i>	16-0235
	<i>10 pack</i>	16-0243
0.350" Spacers	50-7044	

# INTAKE MANIFOLDS

## FITMENT

- 1986–'06 Harley-Davidson® Sportster® models
- S&S carburetors and other carbs with the same mounting bolt pattern

## FEATURES AND BENEFITS

- Increases airflow

## MANIFOLDS FOR 2004–'06 HARLEY-DAVIDSON® SPORTSTER® MODELS

Displacement	Cylinder Length	Size No.	S&S Super E
1200cc	Stock (4.650")	335	16-1519*

\*Replacement for manifold supplied in S&S part #11-0470 Super E carb kit. 1 7/8" bore.



16-1620



16-1519

## REPLACEMENT PARTS FOR MANIFOLDS

Description	Part #
Manifold Fitting VOES Rubber Cap, 3/16" I.D. x 3/16" O.D. x 1/2"	50-8372
Manifold Vacuum Fitting	16-0136-S



16-0136-S



50-8372

## MANIFOLDS FOR 1986–'03 HARLEY-DAVIDSON® SPORTSTER® MODELS

S&S Engine Kit Displacement	Cylinder Length	Size No.	Carburetor Type	
			S&S ES, LS, Super A, B, E, Tillotson®, Bendix®, Keihin®	Super G
883cc, 1100cc, 1200cc, 79"	Stock (4.650")	341	16-1620	16-2520
100"	4.420"	357	–	16-2559
103"	5.750"	426	–	16-2532
Special Order*	Specify	–	–	–

Manifolds available in 1 7/8", 2 1/8", or 2 1/4" bore.

# MANIFOLDS FOR 1994–'02 BUELL® MODELS

## MANIFOLDS FOR 1994–'02 HARLEY-DAVIDSON® BUELL® MODELS

Engine Displacement	Cylinder Length	Size Number	Super E Part #
1200cc, 79"	Stock - 4.650"	341	<b>16-1520</b>



16-1520

### NOTES

S&S manifolds for Buell models are not interchangeable with manifolds for Harley-Davidson® Sportster® models as they position the carburetor about ¼" higher. This change in position will cause misalignment of mounting hardware.

S&S style o-rings must be used with these manifolds. S&S o-rings are slightly thinner to accommodate the larger S&S port diameter. Use of stock o-rings may damage the manifold.

## HIGH OUTPUT COILS




55-1576



55-1571

### HIGH OUTPUT COILS

S&S High Output 3.0Ω Single Fire Coil	Part #
<i>The perfect complement for S&amp;S IST ignition systems. This single fire coil is actually two separate coils in a single package. Coil impedance is 3Ω per coil.</i>	<b>55-1571</b>
S&S High Output 0.5Ω Single Fire Coil 	Part #
<i>High output 0.5Ω single fire coil for S&amp;S IST ignition. 55-1571</i>	<b>55-1576</b>

# GASKETS

## TOP END GASKET KITS FOR S&S SB-SERIES ENGINES 1986-'03

4"	<b>90-9503</b>
3 5/8"	<b>90-9509</b>

## CYLINDER HEAD, BASE & EXHAUST GASKET KITS FOR S&S SB-SERIES ENGINES 1986-'03

4"	.043" Micropore	<b>90-1909</b>
3 5/8"	.045" Micropore	<b>90-1908</b>
3 1/2"	.045" Micropore	<b>90-1907</b>
	.030" Layered Steel	<b>900-0532</b>

## HEAD GASKETS

4"	.043" Micropore	each	<b>93-1040-S</b>
		2 pack	<b>930-0087</b>
		10 pack	<b>93-1071</b>
3 5/8"	.045" Micropore	each	<b>93-1037-S</b>
		2 pack	<b>930-0091</b>
		10 pack	<b>93-1052</b>
	.0625" Micropore	each	<b>93-1016-S</b>
		2 pack	<b>930-0097</b>
		10 pack	<b>93-1053</b>
3 1/2"	.045" Micropore 16770-84D, 16770-84F	each	<b>93-1011-S</b>
		2 pack	<b>930-0098</b>
		10 pack	<b>93-1024</b>
	.0625" Micropore 16770-84D, 16770-84F, 10773-85	each	<b>93-1313-S</b>
		each	<b>900-0530</b>
	.030" Layered Steel	each	<b>900-0530</b>

## BASE GASKETS AND O-RINGS

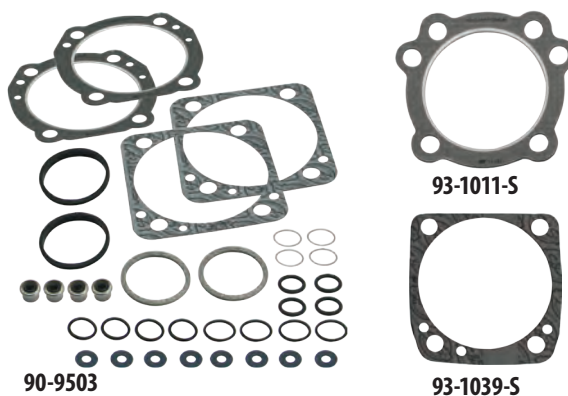
4"	.018" Micropore	each	<b>93-1031-S</b>
		2 pack	<b>930-0094</b>
		10 pack	<b>93-1067</b>
3 5/8"	.018" Micropore	each	<b>93-1039-S</b>
3 1/2"	.018" Micropore 16777-83A, 16774-86D	each	<b>93-1038-S</b>

## EXHAUST GASKETS

1986-2003 Sportster Models 65324-83B, 65324-83A	each	<b>106-5029</b>
	10 pack	<b>93-1072</b>


## VALVE GUIDE SEALS

1986-2003 Sportster Models	each	<b>900-0338</b>
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## ROCKER BOX GASKET KITS AND INDIVIDUAL GASKETS

### S&S Billet

Gasket Kit		<b>90-4049</b>
O-ring, (-223), 1.625" ID x 1.875" OD, Viton®	each	<b>50-8044</b>
Seal, Umbrella Valve Cover 26856-89, 26856-89A		<b>90-4030</b>
Gasket, Rocker Cover, S&S® Billet, O-ring, 1986-2003 xl		<b>90-4048</b>
Gasket, Bottom, Rocker Cover, 1986-2003 xl	each	<b>900-0538</b>
	2 pack	<b>900-0592</b>
Gasket, Kit, Rocker Box, 1986-'90 xl 17026-91A		<b>900-0773</b>
Gasket, Kit, Rocker Box, 1991-2003 xl 17026-91A		<b>900-0774</b>
Gasket, Kit, Rocker Box, 2004-'06 xl		<b>900-0775</b>
Gasket, Kit, Rocker Box, 2007-up xl		<b>900-0776</b>

## LOWER END GASKETS AND SEALS

Gearcover gasket	each	<b>31-2052</b>
Camshaft Oil Seals, 1971 - up 11124		<b>31-4051</b>



**TAPPET GUIDE O-RINGS**

1" I.D. x 1 <sup>3</sup> / <sub>16</sub> " O.D. x 3 <sup>3</sup> / <sub>32</sub> " CS (upper) 11167	each	<b>50-8004</b>
1" I.D. x 1 <sup>1</sup> / <sub>8</sub> " O.D. x 1 <sup>1</sup> / <sub>16</sub> " CS (lower) 11168A	each	<b>50-8005</b>
3 <sup>3</sup> / <sub>8</sub> " I.D. x 1 <sup>1</sup> / <sub>2</sub> " O.D. x 1 <sup>1</sup> / <sub>16</sub> " CS (oil hole) 11110	each	<b>50-8006</b>
	10 pack	<b>50-8077</b>

**PUSHROD O-RINGS**


O-ring, Kit, Pushrod Cover, 1986–2003 xl		<b>93-4022</b>
Top O-ring 11293, 11157, 11101, 11190	each	<b>50-8039</b>
Middle O-ring 11132A	each	<b>50-8038</b>
Bottom O-ring 11145A	each	<b>50-8037</b>

**SPROCKET SHAFT SEAL**

1991–'03 35151-74A		<b>31-4060</b>
1991–'03 S&S SA cases, BT style 12026B		<b>31-4010</b>

**FUEL SYSTEM GASKETS**

**Manifold Seals**

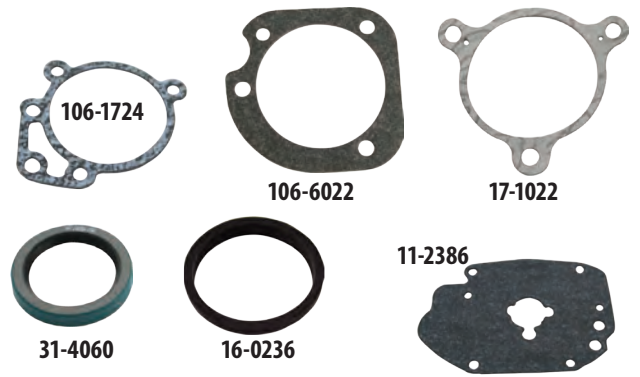
S&S Manifold O-ring	each	<b>16-0235</b>
	10 pack	<b>16-0243</b>
Stock Manifold O-ring  26995-86B, 26995-86A, 26992-99	each	<b>16-0236</b>
	10 pack	<b>16-0244</b>
Cap, rubber, manifold, fitting		<b>50-8372</b>

**CLASSIC TEARDROP AIR CLEANER**

Back Plate gasket	each	<b>106-1724</b>
	10 pack	<b>106-2328</b>
Vent seal washers silicone coated steel 1/2"	(each)	<b>50-7055</b>
	10 pack	<b>50-7057</b>

**STEALTH AIR CLEANER**

Back Plate gasket		
Stock CV Carb & EFI Throttle Body, 1991–up xl 29062-95B		<b>106-6022</b>
Super E/G.	each	<b>106-1724</b>
	10 pack	<b>106-2328</b>
For Muscle air cleaner (includes lanyards)		<b>170-0137</b>
Vent seal washers Nitrile Rubber Coated, 520" x .880" x .024" xl 1991–'06	each	<b>50-7055</b>
	10 pack	<b>50-7057</b>



**SINGLE BORE TUNED INDUCTION SYSTEM**

<b>Back Plate gasket</b>		
Gasket, Backplate - E/G/SBEFI	each	<b>106-1724</b>
	10 pack	<b>106-2328</b>
Gasket, S&S SBEFI 58mm		<b>106-4662</b>
Gasket, Stock carb/Throttle Body 29062-95B		<b>106-6022</b>
Adaptor plate gasket		<b>17-1022</b>
Adaptor plate bracket o-ring	each	<b>50-0446</b>

**CARBURETOR GASKETS**

Bowl Gasket, Super E & G		<b>11-2386</b>	
Pump cap o-ring - (two required)	each	<b>50-8012</b>	
	10 Pack	<b>50-8100</b>	
Idle Mixture Needle o-ring	each	<b>500-0036</b>	
	10 pack	<b>500-0148</b>	
Bellows Seal, Accelerator Pump		<b>11-2266</b>	
Accelerator pump diaphragm		<b>11-2282</b>	
Manifold to carb orings various sizes	Super E	each	<b>50-8016</b>
		10 pack	<b>50-8094</b>
	Super G	each	<b>50-8015</b>
		10 pack	<b>50-8093</b>
Seat and bowl plug o-ring	each	<b>50-8009</b>	
	10 pack	<b>50-8095</b>	

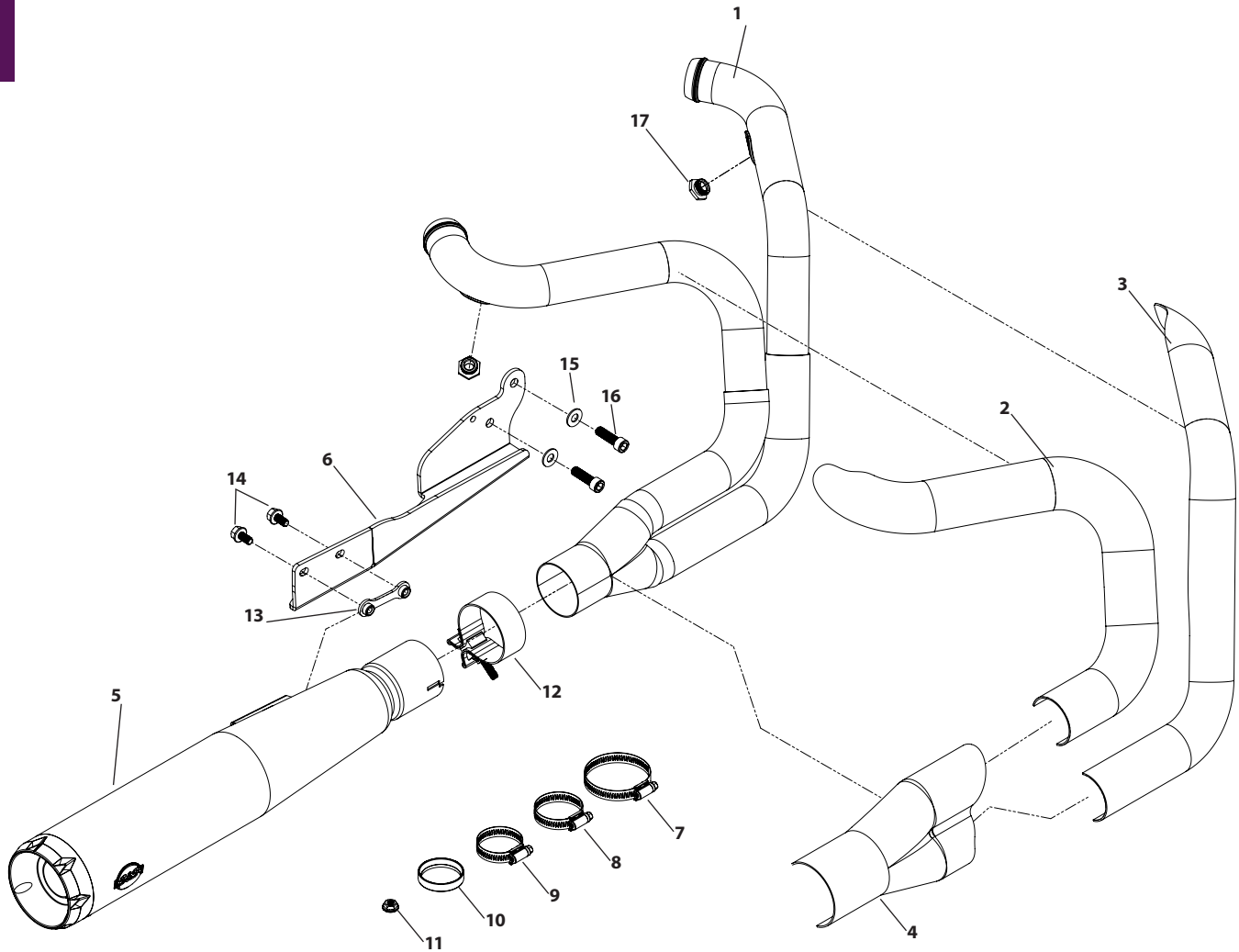


Milwaukee-Eight®  
2007–2017 Twin Cam  
96°/103°/110°  
1999–2006  
Twin Cam 88°  
1986–2021  
Sportster® & Buell®  
2014–2019 Street® &  
Street Rod™  
Indian® Models  
Tools &  
Shop Supplies  
Warranty &  
Company Policy  
Appendix

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S® Cycle's products are original equipment parts or that they are equivalent to the corresponding H-D part number shown.

# SUPERSTREET 2:1 REPLACEMENT PARTS

- 1. Header ..... 551-1138
- 2. Heat Shield, Rear ..... 551-1144
- 3. Heat Shield, Front ..... 551-1141
- 4. Heat Shield, Collector ..... 551-1139
- 5. Muffler, 2007-'13 ..... 551-1148  
Muffler, 2014-'20 ..... 551-1149A
- 6. Bracket ..... 551-1153
- 7. Clamp, Hose, Worm Drive, SAE #40 ..... 551-0402
- 8. Clamp, Hose, Worm Drive, SAE #24 ..... 500-0791
- 9. Clamp, Hose, Worm Drive, SAE #20 ..... 551-0527
- 10. Gasket, Exhaust, Tapered, Stainless Steel ..... 106-5029
- 11. Nut, HSFH, 5/16-24 UNF-2B x .283", Zinc, Steel, 2 Pack ... 50-5025-2
- 12. Clamp, Muffler, Band Style, 2.5" ..... 551-0135
- 13. Plate, Nut, 5/16-18 x 2", Clear, Zinc ..... 551-0469
- 14. Screw, Flanged, 5/16-18 x 5/8", Zinc Plated ..... 500-0984
- 15. Washer, Flat, .375" x .813" x .063", Zinc, Steel ..... 50-7051
- 16. Screw, SHCS, 3/8-16 x 1-1/4", Zinc, Steel ..... 50-0162
- 17. Adapter, Oxygen Sensor, 12mm to 18mm, Stainless Steel 550-0375

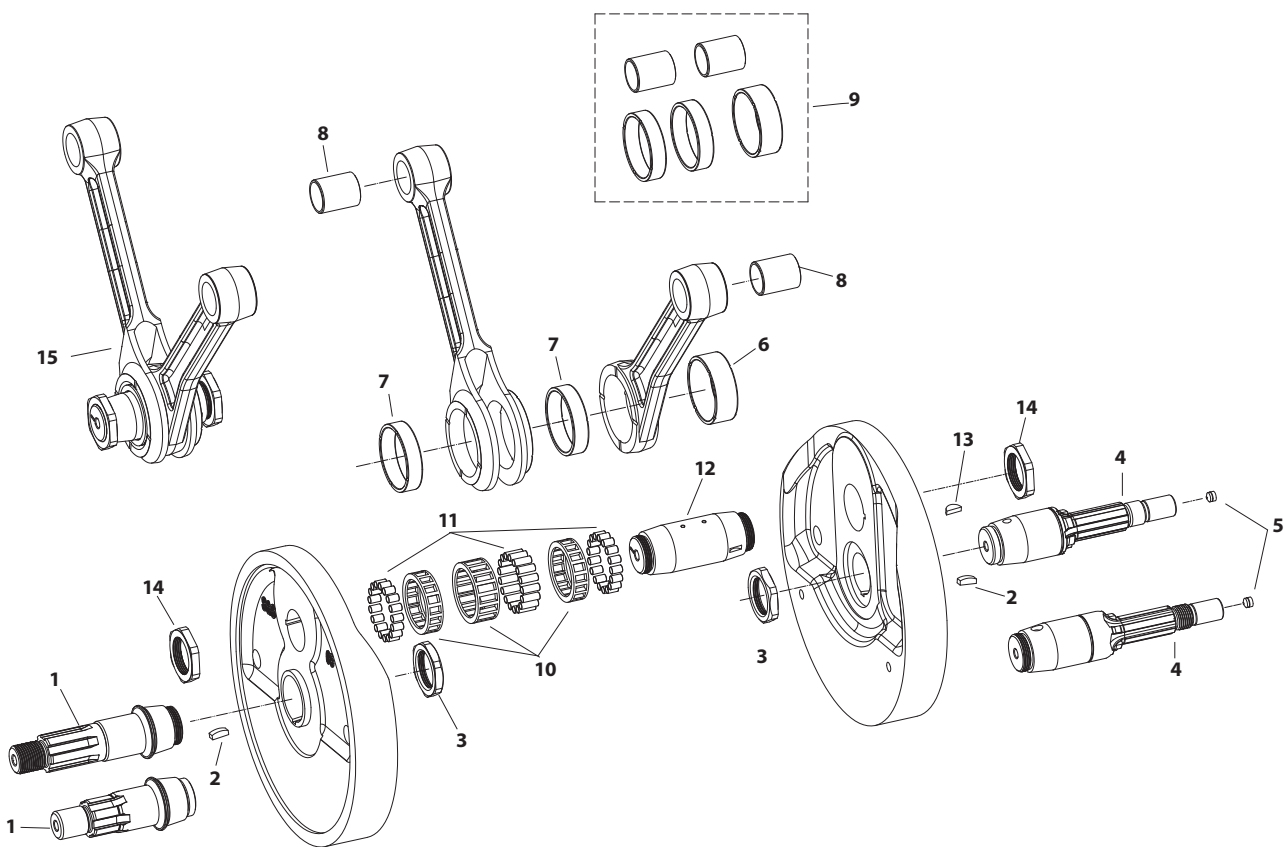


# FLYWHEEL REPLACEMENT PARTS

1. Sprocket Shaft (includes #2 & 3)  
1986-1990 xl w/ S&S D/SB/SBD/SC/SCD/SCDR/SCR flywheels . . . . . **33-2302**  
1991-2003 xl w/ S&S D flywheels & 1994-1999 Buell  
..... **33-2303**
2. Key (each)..... **50-8224**
3. Nut ..... **33-2331**
4. Pinion Shaft 1986-2003 xl (includes #2, 3, 5)  
w/S&S D/DR flywheels / 1994-1999 Buell ..... **33-2325**  
w/S&S D/DR/DF flywheels - Special Application, +.500" ..... **33-2329**
5. Meter Plug-  
.0625" hole ..... **50-8316±**  
no hole - Special application ..... **50-8314±**
6. Front Rod Race 24352-52A. .... **34-4505**
7. Rear Rod Race 24341-52A ..... **34-4506**
8. Wrist Pin Bushing  
.767" x .895" x .950" 24331-36  
(for use with Heavy Duty Rods)..... **34-4507**  
.767" x .895" x 1.077" 24334-36  
(for use with Supreme Rods) ..... **34-4007**
9. Race and Bushing Set (includes #6, 7, 8)  
(for use with Heavy Duty Rods)..... **34-4540**
10. Alloy Bearing Cage Set..... **34-4520**

11. Bearing Set  
Standard 24354-87A ..... **34-4521**
12. Crankpin (includes #13 & 14) Late 1981-1999 Sportster  
Standard 23960-80A ..... **34-2602**  
.001" OS 23948-87 ..... **34-2603**  
.002" OS 23949-87 ..... **34-2605**
13. Crankpin Key late 1981-1999 Sportster / 1994-1999 Buell 11218  
each ..... **50-8222-5**  
5 pack ..... **50-1009**
14. Crankpin Nut ..... **34-2504**
15. Connecting Rod Assembly- 1986-1999 Sportster / 1994-1999 Buell  
(includes #9, 10, 11, 12, 13, 14)  
Heavy Duty/6.926" rod length- for stock stroke engines  
24275-86A ..... **34-7800**

**ANY JOB IS EASY WITH THE RIGHT TOOLS**  
**COMPLETE S&S FLYWHEEL REBALANCING KIT PAGE 338**



± WARNING: Cancer and Reproductive Harm

## NOTES


S&S® connecting rods, with their beefier than stock construction, are slightly heavier than stock connecting rods. Therefore, rebalancing the flywheels is recommended when S&S connecting rods are used in stock replacement applications. We realize that rebalancing is an inconvenience, but we did not want to sacrifice rod strength for convenience's sake. In addition, given the variations in stock and aftermarket components available to engine builders, flywheel rebalancing is a desirable step in any major engine overhaul. In some cases, stock flywheels will need to be relieved to clear the rods.

All S&S mainshafts for Harley-Davidson® Sportster® models are designed for use in flywheels with tapered mainshaft holes. 1986-later stock flywheels have mainshafts which are manufactured as an integral part of the flywheel.

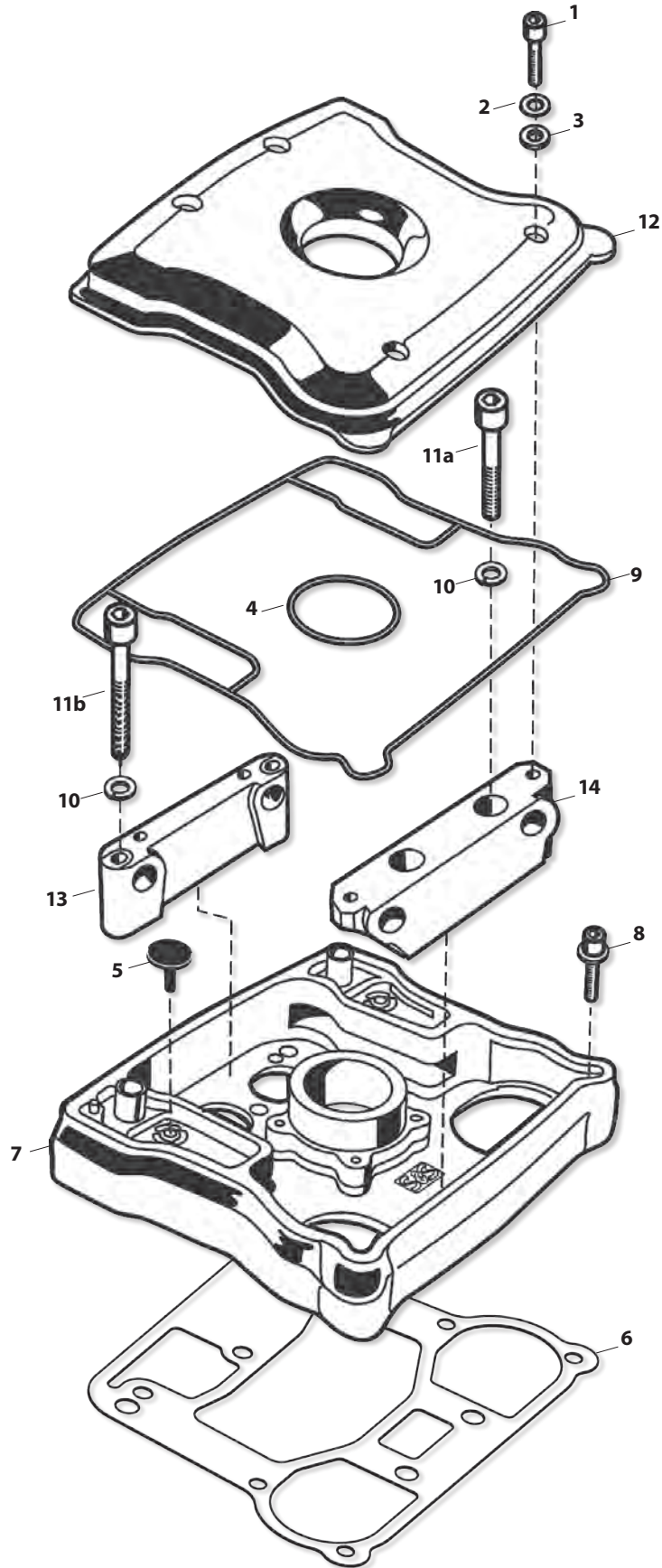
S&S pinion shafts for 1986-'03 Sportster models are the splined 1986-'87 style. Pinion and oil pump drive gears in 1988-'03 models must be replaced with early style gears.

Milwaukee-Eight®  
2007-2017 Twin Cam  
1999-2006 Twin Cam 88®  
1986-2021 Sportster® & Buell®  
2014-2019 Street® & Street Rod®  
Indian® Models  
Tools & Shop Supplies  
Warranty & Company Policy  
Appendix

# BILLET ROCKER COVER REPLACEMENT PARTS FOR 1986-'03 HARLEY-DAVIDSON® SPORTSTER® & BUELL® MODELS

1. Screw, SH - ¼" - 20 x ¾" 4069A (each) ..... **50-0067**
2. Washer, flat - ¼" (each) ..... **50-7017**  
12 pack ..... **50-7013**
3. Washer, flat - ¼" rubber covered (each) ..... **50-7015**  
8 pack ..... **50-7015-8**  
12 pack ..... **50-7015-12**
4. O-ring - 1⅝" I.D. x 1⅞" O.D. x ⅛" CS Viton®
5. Rocker cover umbrella valve 26856-89, 26856-89A  
1990-up xl .....  **90-4030**
6. Gasket, Bottom, Rocker Cover, 1986-2003  
each ..... **900-0538**  
2 pack ..... **900-0592**
7. Rocker cover base - billet  
Chrome ..... **90-4051±**  
Natural ..... **90-4056**
8. Screw, SH w/washer - ¼" - 20 x 1" 4741A  
(each) ..... **50-0092-S**  
4 pack ..... **50-0092P**
9. Rocker cover o-ring gasket - S&S billet rocker cover  
(Included in gasket set. See #16 below.)
10. Washer, flat - ⅝" (each) ..... **50-7026**
11. Bolt, rocker support - socket head  
11a. ⅝"-18 x 2¼" (left support) (each) ..... **50-0115-S**  
11b. ⅝"-18 x 2½" (right support) 876A (each) ..... **50-0118**
12. Rocker cover top - Billet Chrome ..... **90-4054±**
13. Right rocker shaft support - billet ..... **90-4053**
14. Left rocker shaft support - billet ..... **90-4052**
15. Rocker cover gasket set - S&S billet rocker cover  
(Not shown) ..... **90-4049**

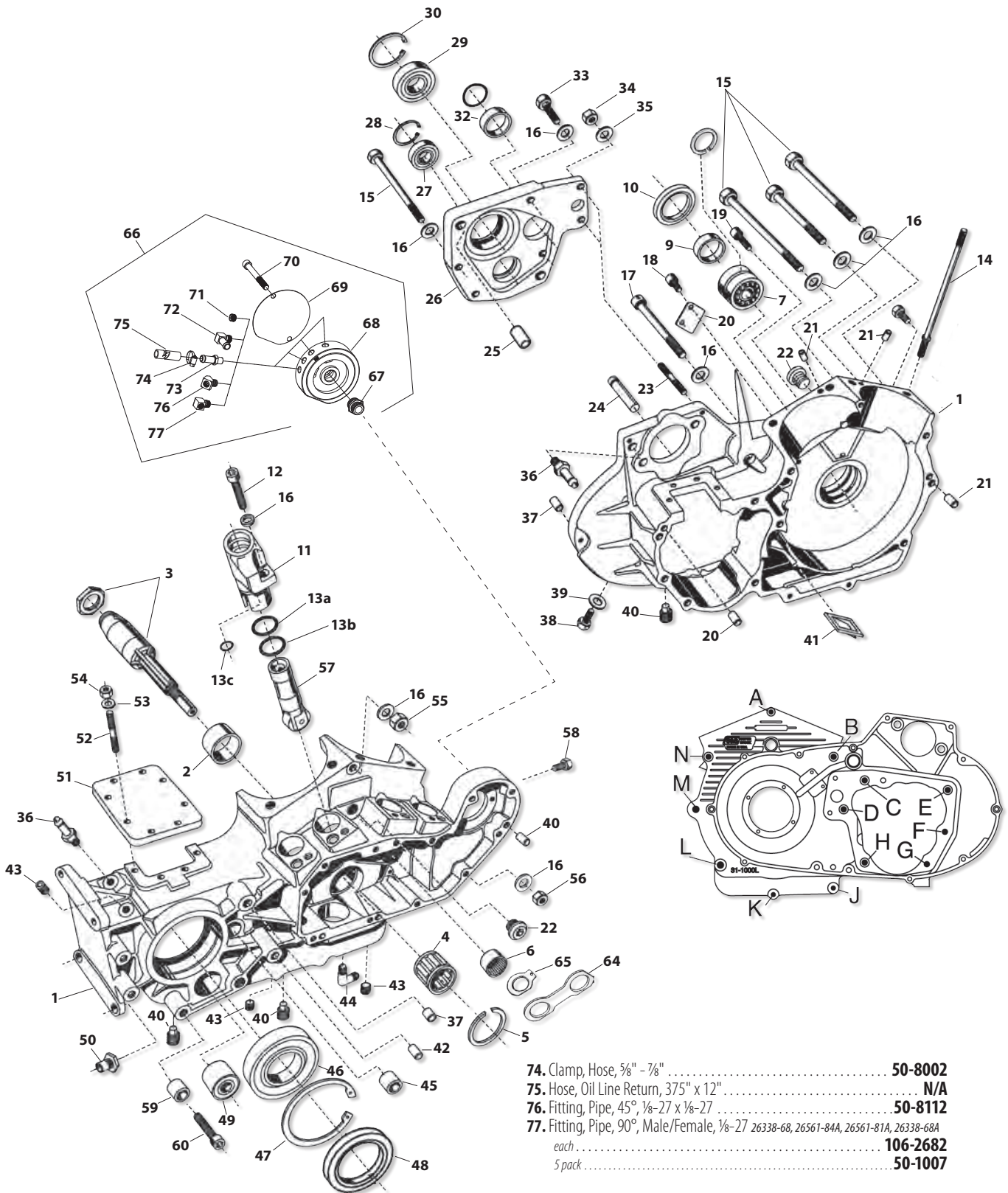




# CRANKCASE REPLACEMENT PARTS

## FOR SB100, 1986-'03 SPORTSTER® & 1994-'02 BUELL® MODELS

1. Crankcase assembly, half	N/A
2. Race, right main bearing - Standard 1991-'03	31-4050
3. Pinion shaft assembly - Standard	
1986-'03 xl/1994-'02 Buell	33-2325
1986-up S&S SA only	33-2329
4. Right main bearing assembly 1986-'03	
Blue 24647-87	31-4055
Red 24650-87	31-4056
White 24659-87	31-4057
Green 24660-87	31-4058
5. Ring, main bearing retainer 1986-'03 11177A	50-8057
5 pack	50-1004
6. Cam needle bearing assembly - 1986-'03 9057	31-4061
7. Left Timken® main bearing assembly, 1991-'03 24729-74, 48302-85)	31-4059
8. Spacer, Left Main Bearing - 1974-'03 xl Fits stock diameter shaft.	
.098"	31-4062
.1015" - .1025" 9143	31-4064
.1035" - .1045"	31-4065
.1055" - .1065" 9145	31-4066
.1075" - .1085" 9146	31-4067
.110" 9147	31-4068
.114"	31-4070
9. Seal spacer, 1991-'03 xl	31-4034
10. Seal, sprocket shaft oil, 1991-'03 xl 35151-74A	31-4060
11. Tappet guide assembly (See page 281)	
12. Screw, SHC - 3/16" - 18 x 1" 3201WA, 2708	50-0101
13. O-ring	
13a. 1" I.D. x 3/16" O.D. x 3/32" CS (upper) 11167	50-8004
13b. 1" I.D. x 1/8" O.D. x 1/16" CS (lower) 11168A	50-8005
13c. 3/8" I.D. x 1/2" O.D. x 1/16" CS (oil hole) 11110	50-8006
10 pack	50-8077
14. Cylinder stud 1991-'03 style 16832-86C	31-2331-5
8 pack	31-2331
15. Bolt, case HH - See "Bolt Position Diagram"	
(Position A)	
S&S xl 1/4" - 28 x 5 1/2" (each)	50-0090
S&S SA xl 1/4" - 28 x 6" (each)	50-0020
(Position E, F, G, H)	
S&S xl HHC 3/16" - 18 x 4"	50-0102
(Position J, K)	
S&S xl 1/4" - 20 x 3/4"	50-0022
(Position L, M)	
S&S xl 3/8" - 24 x 5 1/2" (5 pack)	50-0170
(Position N)	
5/16" - 18 x 3 1/2" 3427	50-0117
16. Washer, flat - See "Bolt Position Diagram"	
(Position A, J, K)	
1/4" x .474" x .050" (each)	50-7020
(Position B, C, D, N) & Tappet guide	
5/16" x .548" x 1/16" (each)	50-7025
(Position E, F, G, H)	
5/16" x 1/16" x 1/8"	50-7033
(Position L, M)	
3/8" x 7/8" x .146" (each)	50-7053
17. Screw, SHC - 5/16" - 18 x 3"	
See "Bolt Location Diagram"	
(Positions B, C, D, H)	50-0021
18. Screw, SHC - 10-24 x 3/8" (Stator wires cover) 4091	50-0023
19. 10-24 x 1" (Stator) 2720 (each)	50-0044
20. Cover, stator wires 29950-91	31-2050
21. Dowel pin - .250" diameter x 1/2" 358, 366	50-8022
2 pack	50-8022-2
5 pack	50-8105
22. Plug, timing hole - 1991-'03 720	31-2005
23. Stud - 1/4" - 20, 1/4" - 28 x 1 1/4" 1991-up (shifter shaft)	50-8080
24. Spring pin - 1991-'03 (Shifter spring)	N/A
25. Dowel pin - 1991-'03 (transmission door)	
1/8" diameter x 1/2"	50-8020
.390" I.D. x .558" O.D. x 1/2" 16574-99A, 16573-83, 16573-83A	50-8023
10 pack	50-8109
26. Transmission access door assembly	56-3025
(Includes 1 ea. transmission access door, 50-8007, 56-3030.)	
27. Bearing, transmission countershaft (LH) 1991-'03 8992A, 8998	56-3026
28. Ring, transmission countershaft bearing retainer, 1991-'03	
35021-89	50-8053
29. Bearing, transmission mainshaft (LH) 1991-'03	
35030-89, 35030-89A	56-3027
30. Ring, transmission mainshaft bearing retainer, 1991-'03	
35038-84, 35038-89	50-8052
31. O-ring - 32mm x 1.5mm CS, Shifter drum bushing	50-8007
32. Bushing, shifter drum - unfinished - 1991-'03 9187	56-3030
33. Screw, HHC 3/16" - 18 x 1 1/4" (10 pack)	50-0110
34. Lock nut, hex 1/4" - 28 (each)	50-5010
35. Washer, flat 1/4" x 5/8" x 1/16" 6194, 6245, 6703, 6736, 6228W, 6192	
each	50-7021
36. Fitting, hose - 1/8" - 27 pipe male transmission vent	50-8115
37. Dowel pin - .309" I.D. x .430" O.D. x 1/2"	
24754-75, 24754-75A	50-8018
38. Screw, HHC - 1/4" - 20 x 1/2", primary oil level 3728	50-0014
39. Washer, flat 1/4" x 3/8" x 1/32" copper, primary oil level 6114	50-7018
40. Plug, drain	
3/8" - 18 NPT Manufactured before 5-1-2000	31-2006
1/2" - 20 thread - (Includes o-ring.) Manufactured after 5-1-2000	50-8335
41. Reed valve assembly, 1991-'03 (Optional)	31-2051
42. Dowel pin - 3/16" dia. x 1/2"	N/A
43. Plug, SH pipe, 1/4"-27 (each)	50-8331A
10 pack	50-1015
44. Fitting, 90° - 1/8" - 27 pipe male x 3/16" flared tube	50-8119
45. Bearing, transmission shifter drum (RH) 1991-'03	56-3032
46. Bearing, transmission output shaft 1991-up 8996A	56-1280
47. Ring, transmission output shaft bearing retainer,	
109" x 3.734" tru-arc 11161, 11599	50-8051
48. Seal, Transmission Output Shaft	
2.255" x 3.388" x .250, 1995-'03 xl 12067B	56-3033
49. Bearing, transmission countershaft (RH) 1991-'03	56-3031
50. Nut, press-in, 3/16" - 24 - All 1991-'03	31-2048
51. Cover, transmission inspection window 1991-up S&S SA cases only	31-2055
52. Stud - 5/16" - 18, 5/16" - 24 x 1.370" 1991-up S&S SA cases only	50-8081
53. Washer, flat - 5/16" x 1/16" x 1/16" 6320, 70907-07, 6016, 6702	50-7034
54. Nut, hex - 5/16" - 24 7833, 7883	50-5023
55. Nut, hex - 1/4" - 28 7683	50-5011
56. Nut, hex - 3/8" - 24 7861	50-5037
57. Hydraulic tappet assembly (See page 280)	
58. 3/8" - 16 x 1/2" BHCS	N/A
59. 5/16" x 3/4" .35 Shim	50-7044
60. 1/4" - 20 x 2" SHCS 25794-36	50-0013
61. Gasket, gearcover, S&S (N/S)	31-2052
62. 45° hose fitting - 1/8" pipe male/female (Oil pump) (N/S)	50-8112
63. Oil Pump, Assembly, Stock, 1991-up xl (N/S)	
26488-98, 26204-91A	106-5368
64. Washer, Cam, Thrust, Double, .043", 1958-'90 xl, .043"	N/A
1985-'90 xl, .062" 25551-58	33-5210
65. Washer, Cam, Thrust, For S&S Cam Covers only, .062"	33-5211
66. Bracket Kit, Oil Filter 1986-'90 xl	106-3134±
67. Fitting, Straight, 3/4-16 UNF 2A x 1" 26352-95A	50-8197-S
68. Bracket, Oil Filter	N/A
69. Gasket, Oil Filter Mount	106-4423
70. Screw, SHC, 5/16" - 24 x 2-3/4"	50-0017
71. Plug, Pipe, 3/4" x 1/8" - 27 x .188"	50-8331A
10 pack	50-1015
72. Fitting, Pipe, 90°, 1/8" - 27 x .375"	50-8110
73. Fitting, Hose, Straight, 1/8" - 27 x .500"	50-8115



74. Clamp, Hose, 3/8" - 7/8" .....	<b>50-8002</b>
75. Hose, Oil Line Return, 375" x 12" .....	<b>N/A</b>
76. Fitting, Pipe, 45°, 1/8-27 x 1/8-27 .....	<b>50-8112</b>
77. Fitting, Pipe, 90°, Male/Female, 1/8-27 26338-68, 26561-84A, 26561-81A, 26338-68A	
each .....	<b>106-2682</b>
5 pack .....	<b>50-1007</b>

















(N/S) = Not Shown

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.

± WARNING: Cancer and Reproductive Harm

# SUPER STOCK® CYLINDER HEAD REPLACEMENT PARTS

## SPORTSTER® MODELS 3-5/8" TO 4" BORE

1. Cylinder head (See cylinders on page 306)
2. Valves
  - Intake
    - 2.000" diameter.....  **90-2000**
    - 2.000" diameter + .085" stem length ..... **90-2004**
  - Exhaust
    - 1.605" diameter.....  **90-2001**
3. Valve seats
  - Intake - 2.000" diameter.....  **90-2002**
  - Exhaust - 1.605" diameter.....  **90-2003**
- 4a. Valve guide - Cast- Intake or Exhaust
  - Standard Diameter .5625/.5620 18112-92.....  **90-2210**
  - + .001" Diameter .5635/.5630 18130-83C.....  **90-2211**
  - + .002" Diameter .5645/.5640 18133-83A, 18133-83D.....  **90-2212**
  - + .003" Diameter .5655/.5650 18131-83C.....  **90-2213**
  - + .030" Diameter .5925/.5920.....  **90-2219**
- 4b. Valve guide - Powder Metal - Intake or Exhaust
  - Standard ..... **900-0553**
  - + .001"..... **900-0554**
  - + .002"..... **900-0555**
  - + .003"..... **900-0556**
5. Head mount bolt - 3/8"-16 x 1 1/4" 4716W
  - each ..... **50-0168**
6. Flat washer - 3/8" ..... **50-7051**
7. Head bolt assembly - Includes head bolt washer  
(See headbolts on page 289)
8. Head bolt washer
  - .150" (each)..... **50-0418-S**
  - .250" (each)..... **50-7091**
9. Exhaust port stud 16715-83 (each) .....  **50-0493**
  - 5 pack.....  **50-1028**
10. Lock washer - 5/16" ..... **50-7032**
11. Nut, HH - 5/16" -24 7833, 7883 ..... **50-5023**
12. Exhaust pipe gasket 65324-83B, 65324-83A
  - each ..... **106-5029**
  - 10 pack..... **93-1072**
13. Thread conversion insert 1/2"-13 to 5/16"-18..... **50-8151**
14. Intake manifold (See manifolds on page 296)
15. Screw, manifold mounting
  - SH - 5/16" -18 x 1" 3201WA, 2708..... **50-0101**
  - HH - 5/16" -18 x 1" 3987 (each).....  **50-0108**
16. Washer, flat - 5/16" 6320, 70907-07, 6016, 6702 ..... **50-7034**
17. Flange, manifold mounting
  - Front 27009-86A (each) .....  **16-0232**
  - 5 pack.....  **16-0600**
  - Rear 27010-86A (each).....  **516-0233**
  - 5 pack.....  **16-0601**
  - Set (Front & Rear)..... **106-3516**
18. O-ring, manifold (each) ..... **16-0235**
  - 10 pack..... **16-0243**
19. Head gasket
  - 3 1/2" Bore
    - .045" thick - (no o-rings required) 16770-84D, 16770-84F
      - each ..... **93-1011-S**
      - 10 pack..... **93-1024**
    - .0625" thick - (No o-rings required) 16770-84D, 16770-84F, 10773-85
      - each ..... **93-1313-S**
  - 3 5/8" Bore
    - .045" thick - (no o-rings required) (each) ..... **93-1037-S**
    - 10 pack..... **93-1052**
    - .062" thick - (no o-rings required) (each) ..... **93-1016-S**
    - 10 pack..... **93-1053**
  - 4" Bore
    - .045" thick (each) ..... **93-1040-S**
    - 10 pack..... **93-1071**
20. Alignment dowel 16574-99A, 16573-83, 16573-83A
  - each ..... **50-8023**
  - 10 pack..... **50-8109**
- Dowel pin - 1/4" diameter x 1/2" - 4" bore 358, 366
  - each ..... **50-8022**
  - 2 pack..... **50-8022-2**
  - 5 pack..... **50-8105**
21. Plug, HH - 14mm (each) ..... **90-4916**
  - 2 pack..... **90-4916-2**
22. Washer, compression release- 14mm .507" x .705" x .047"
  - each ..... **50-7094**

### GASKET KITS

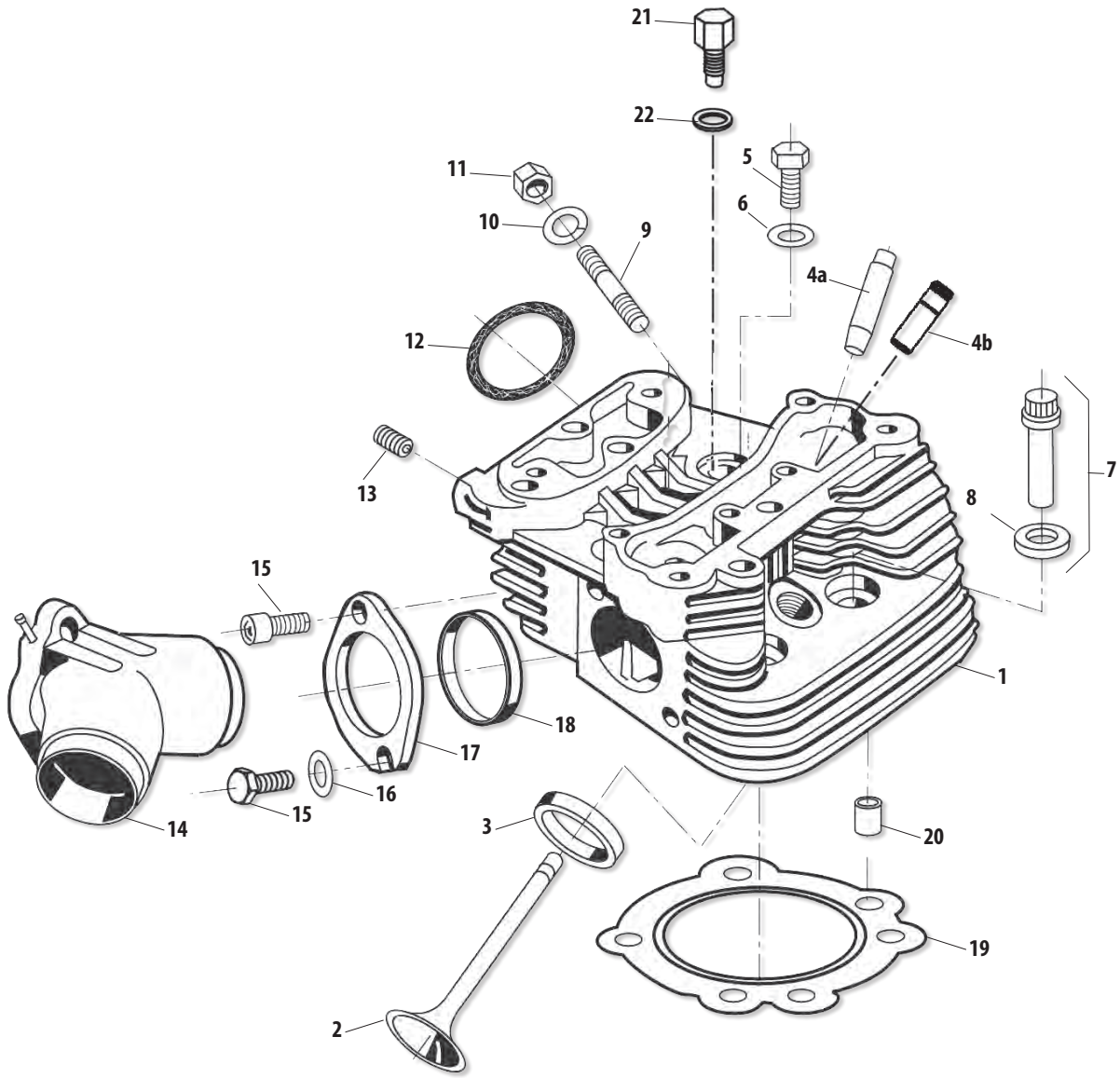
23. Rocker cover gasket kits, 1986-'03 xl
  - S&S Billet rocker cover, Rubber (N/S) ..... **90-4049**
  - S&S Cast rocker cover, Rubber (N/S) ..... **90-4091**
24. Pushrod cover o-ring kit (N/S)
  - 1986-'90 xl ..... **93-4022**
  - Includes 4 each:
    - Bottom 11145A (each) ..... **50-8037**
    - Middle 11132A (each)..... **50-8038**
    - Top 11293, 11157, 11101, 11190 (each)..... **50-8039**
25. Flat washer, bottom pushrod tube (N/S) ..... **50-7150**
26. Top End Rebuild Kits for SB-Series Engines (N/S)
  - 4" Bore ..... **90-9503**
  - 3 5/8" Bore ..... **90-9509**

(N/S) = Not Shown

### NOTE

S&S heads for Harley-Davidson® Sportster® and Buell® models are similar but have different diameter front motor mount holes.

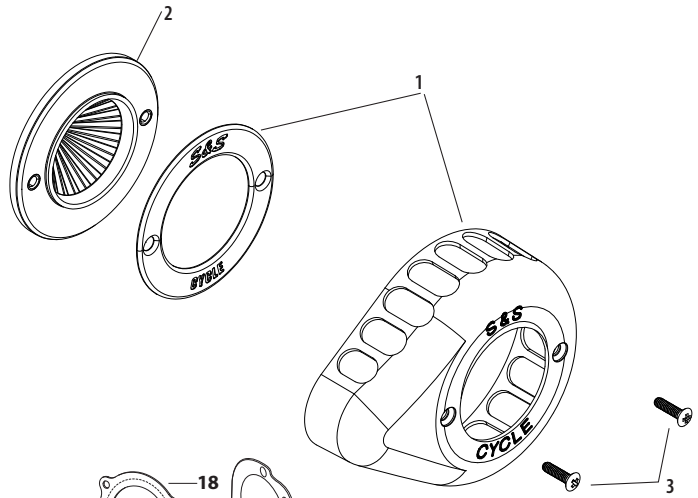




# AIR STINGER STEALTH AIR CLEANER KIT

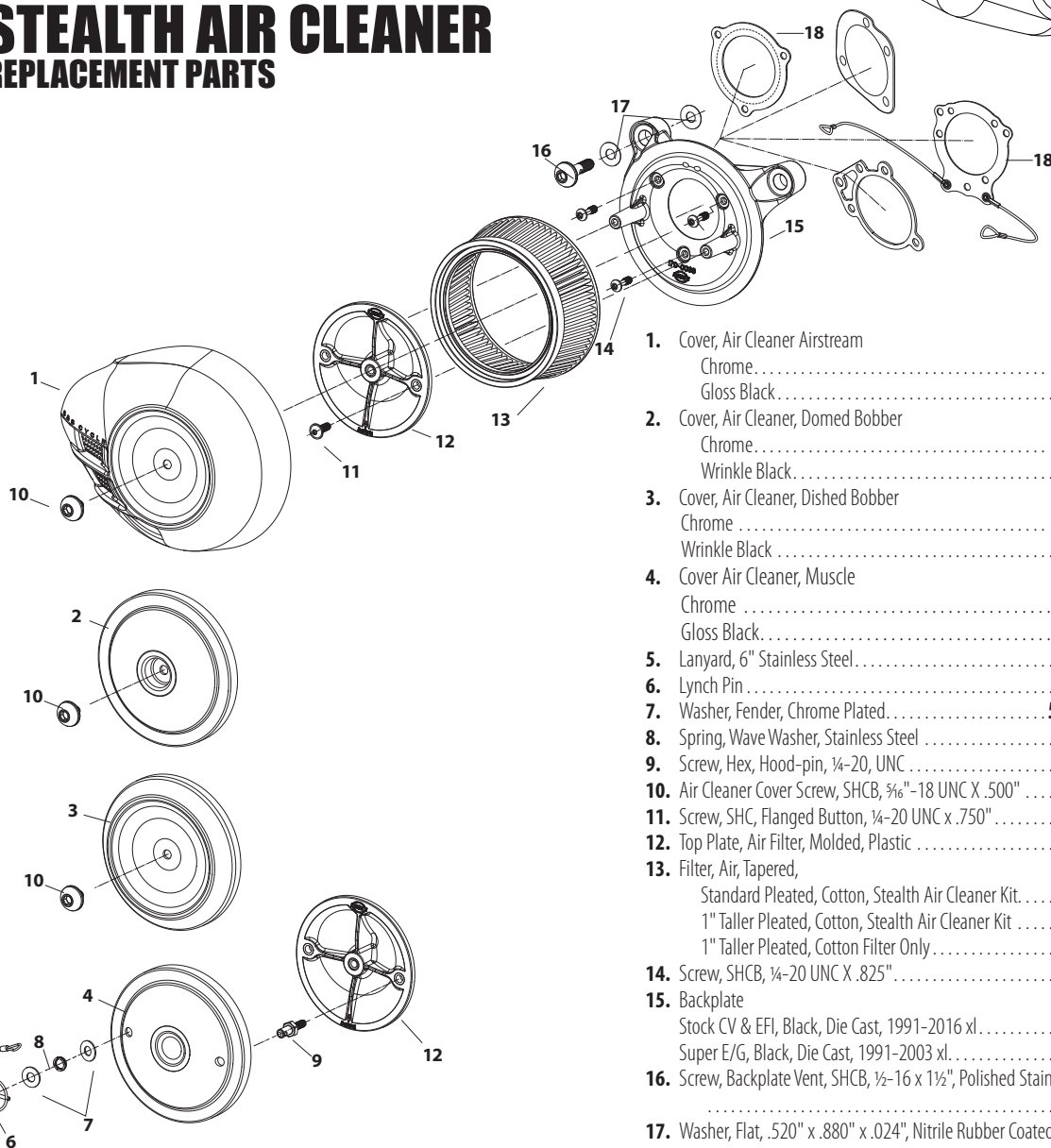
## REPLACEMENT PARTS

1. Cover
  - Gloss Black Teardrop ..... **170-0686**
  - Chrome Teardrop ..... **170-0687**
  - Billet S&S Script Ring ..... **170-0502**
2. Filter ..... **170-0723**
3. Screws
  - Bright Stainless Steel (2 pack) ..... **500-0657**
  - Black (2 pack) ..... **500-0711**



# STEALTH AIR CLEANER

## REPLACEMENT PARTS



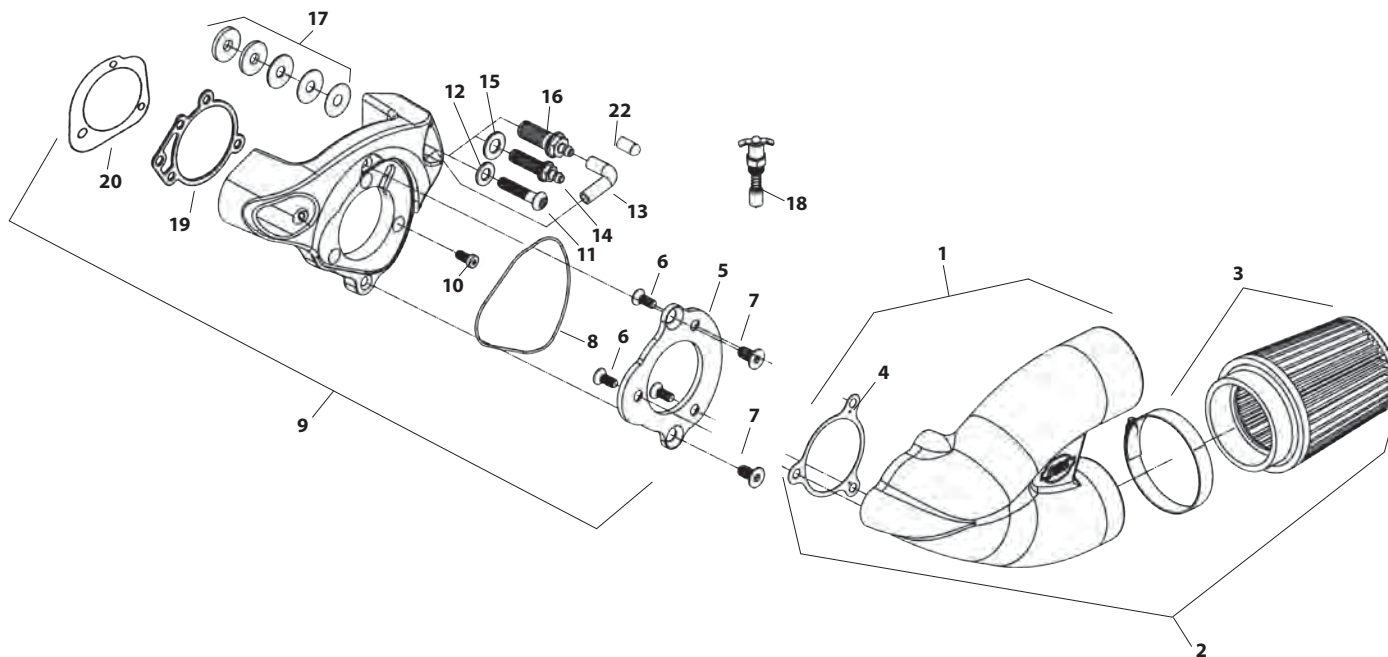
1. Cover, Air Cleaner Airstream
  - Chrome ..... **170-0118±**
  - Gloss Black ..... **170-0396**
2. Cover, Air Cleaner, Domed Bobber
  - Chrome ..... **170-0120±**
  - Wrinkle Black ..... **170-0124**
3. Cover, Air Cleaner, Dished Bobber
  - Chrome ..... **170-0119±**
  - Wrinkle Black ..... **170-0123**
4. Cover Air Cleaner, Muscle
  - Chrome ..... **170-0121±**
  - Gloss Black ..... **170-0463**
5. Lanyard, 6" Stainless Steel ..... **500-0095**
6. Lynch Pin ..... **500-0083**
7. Washer, Fender, Chrome Plated ..... **500-0094±**
8. Spring, Wave Washer, Stainless Steel ..... **500-0093**
9. Screw, Hex, Hood-pin, ¼-20, UNC ..... **500-0113**
10. Air Cleaner Cover Screw, SHCB, ⅝"-18 UNC X .500" ..... **170-0508**
11. Screw, SHC, Flanged Button, ¼-20 UNC x .750" ..... **500-0060**
12. Top Plate, Air Filter, Molded, Plastic ..... **170-0026**
13. Filter, Air, Tapered,
  - Standard Pleated, Cotton, Stealth Air Cleaner Kit ..... **170-0126**
  - 1" Taller Pleated, Cotton, Stealth Air Cleaner Kit ..... **170-0127**
  - 1" Taller Pleated, Cotton Filter Only ..... **170-0154**
14. Screw, SHCB, ¼-20 UNC X .825" ..... **500-0059**
15. Backplate
  - Stock CV & EFI, Black, Die Cast, 1991-2016 xl ..... **170-0048**
  - Super E/G, Black, Die Cast, 1991-2003 xl ..... **170-0050**
16. Screw, Backplate Vent, SHCB, ½-16 x 1½", Polished Stainless ..... **170-0507**
17. Washer, Flat, .520" x .880" x .024", Nitrile Rubber Coated, Cold Rolled Steel
  - each ..... **50-7055**
  - 10 pack ..... **50-7057**
18. Gasket, Backplate
  - Stock CV Carb & EFI Throttle Body, 1991-2016 xl  
(except Throttle by Wire) ..... **106-6022**
  - Super E/G ..... **106-1724**
  - w/ lanyards for use with Muscle Cover ..... **170-0137**

# SINGLE BORE TUNED INDUCTION SYSTEM REPLACEMENT PARTS

1. Tuned Intake Kit, 2.19" Single Bore  
Chrome Plated ..... **106-4970±**
2. Tuned Intake Assembly, 2.19" Single Bore ..... **N/A**
3. Air Filter, w/clamp, Stainless Cap – Conical – 2<sup>7</sup>/<sub>16</sub>" I.D. x 4"  
Red (each) ..... **17-1020**  
Blue (each) ..... **17-1023**
4. Gasket, Intake – Adapter Plate ..... **17-1022**
5. Plate, Adapter, 2.19" Single Bore Tuned Intake  
Chrome Steel ..... **17-1014±**
6. FHSC ¼-20 x 5/8" (each) ..... **50-0433**
7. FHSC 5/16-18 x 5/8" (each) ..... **50-0432**
8. O-Ring, Adapter Plate Bracket  
3<sup>5</sup>/<sub>8</sub>" O.D. x 3<sup>1</sup>/<sub>2</sub>" I.D. ¼ CS, Viton (each) ..... **50-0446**
9. Bracket Kit, 2.19" Single Bore Tuned Intake, Chrome  
Super E/G, 1986-'03 xl ..... **106-4975±**  
Stock CV & EFI, 1991-up xl ..... **106-6026±**
10. Backplate Screw  
Screw, SHC, w/Threadlock, ¼-20 x ½" ..... **106-2084**  
10 pack ..... **106-2105**
11. Screw, 5/16-18 x 1¼, BHC, Chrome (each) ..... **50-0309-S±**
12. Flat Washer 5/16" x ¼" 6320, 70907-07, 6016, 6702 ..... **50-7034**
13. Hose, Breather, ¼" I.D., 90° ..... **19-0178A**
14. Screw, Breather Fitting, 3/8-16 x 1¼" ..... **50-0436**
15. Washer, Flat, 3/8" x 13/16" x 1/16", Chrome ..... **50-7106-S±**
16. Screw, Breather Fitting, ½-13 x 1.25 ..... **50-0435**
17. Shim Kit  
(a) 5/16" I.D. 1986-'90 xl ..... **17-0314**  
(b) ½" I.D. 1991-up xl ..... **17-0464**
18. Enrichment Device, S&S Super E & G carbs ..... **USA 11-2084±**  
(Use in place of enrichment device on air cleaner backplate)
19. Gasket, Backplate - E/G/SBEFI (each) ..... **106-1724**  
10 pack ..... **106-2328**
20. Gasket, Stock carb/Throttle Body 29062-95B ..... **106-6022**
21. Hardware Kit, 1986-'03 (N/S)  
Stock CV & EFI ..... **500-0018**  
S&S Super E or G carb ..... **17-5099±**
22. Cap, Canister Purge Fitting ..... **50-8266-S**
23. Hose, Vent, Breather, Cut To Size, 313" x .438" x 24" (N/S) **106-4982**

(N/S) = Not Shown

± WARNING: Cancer and Reproductive Harm



## ACCESSORIES

Description	Part #
Air Filter Oil, 8 oz. Bottle	Red <b>106-1163</b>
	Blue <b>106-1164</b>
Nylon Air Filter Cover	each <b>106-0247</b>
	2 pack <b>106-0248</b>



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Milwaukee-Eight®  
 2007–2017 Twin Cam  
 96"/103"/110"  
 1999–2006  
 Twin Cam 88®  
 1986–2021  
 Sportster® & Buell®  
 2014–2019 Street® &  
 Street Rod®  
 Indian® Models  
 Tools &  
 Shop Supplies  
 Warranty &  
 Company Policy  
 Appendix

# CLASSIC TEARDROP AIR CLEANER REPLACEMENT PARTS FOR BUELL® MOTORCYCLES WITH STOCK OR S&S CARB

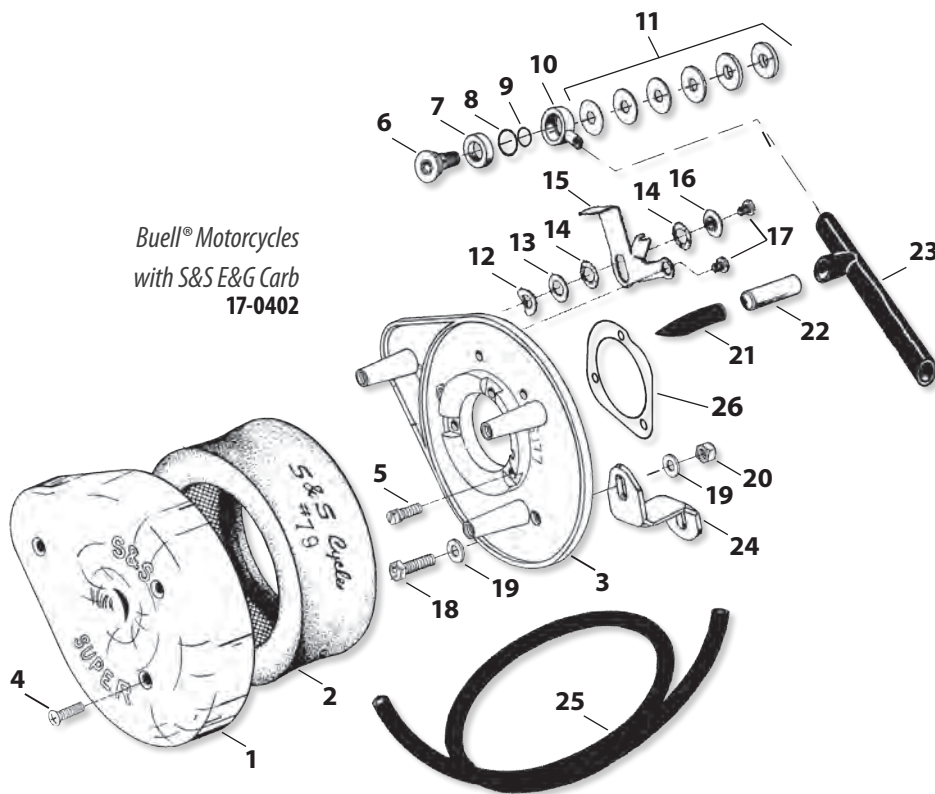
1. Air cleaner cover	
Chrome.....	<b>17-0078<sup>±</sup></b>
2. Air cleaner element .....	<b>17-0079</b>
3. Air cleaner backing plate	
Super E & G carburetors .....	<b>17-0000</b>
4. Cover screw	
Chrome 1305 (each).....	<b>50-0072<sup>±</sup></b>
3 pack.....	<b>50-1052<sup>±</sup></b>
10 pack.....	<b>50-0094<sup>±</sup></b>
Black 902 (each).....	<b>50-0310-S</b>
3 pack.....	<b>50-0310</b>
5. Air cleaner backplate screw	
For S&S Super E&G	
Zinc Plated (each).....	<b>106-2084</b>
10 pack.....	<b>106-2105</b>
6. Cap screw, breather & air cleaner mount.....	<b>17-0338</b>
7. Shim, .620" I.D. x .800" O.D. x .185" (each).....	<b>N/A</b>
8. O-ring ½" O.D. x ⅝" I.D. x ⅛" CS (each).....	<b>50-8270</b>
5 pack.....	<b>50-8130</b>
9. O-ring ⅜" O.D. x ½" I.D. x ⅛" CS 11110 (each).....	<b>50-8006</b>
10 pack.....	<b>50-8077</b>
10. Breather fitting (each).....	<b>17-0350</b>
2 pack.....	<b>17-0355</b>
11. Shim kit air cleaner backplate (includes 4 each of .018", .030", .048").....	<b>17-0464</b>
Replacement Shims	
½" x 1" x .018 (each).....	<b>50-7085</b>
½" x 1" x .030 (each).....	<b>50-7086</b>
½" x 1" x .048 (each).....	<b>50-7087</b>
½" x 1" x .105 (each).....	<b>50-7089</b>
½" x 1" x .125 (each).....	<b>50-7090</b>
12. Washer, friction, spring (each).....	<b>50-7035</b>
10 pack.....	<b>50-7058</b>
13. Washer, flat .323" x ⅝" x ½" (each).....	<b>50-7037</b>
10 pack.....	<b>50-7061</b>
14. Washer, flat, nylon .323" x ⅝" x .020" (each).....	<b>50-7036</b>
10 pack.....	<b>50-7060</b>
15. Lever, fast idle, .....	<b>17-0327</b>
16. Washer, flat w/step, brass (each).....	<b>50-7007<sup>±</sup></b>
10 pack.....	<b>50-7010<sup>±</sup></b>
17. Screw, PH slotted 10-24 x ¼" (each).....	<b>50-0041</b>
10 pack.....	<b>50-0062</b>
18. Screw, HH, cap, ¼"-28 x ⅞".....	<b>50-0074</b>
19. Washer, flat, .281" x .625" x .080" 6194, 6245, 6703, 6736, 6228W, 6192	
each.....	<b>50-7021</b>
20. Locknut - ¼" -28 (each).....	<b>50-5010</b>
21. Hose, breather vent.....	<b>17-0365</b>
22. Fitting, hose, Buell air cleaner.....	<b>17-0336C-S</b>
23. Hose, breather.....	<b>USA 17-0339</b>
24. Bracket, carb support, air cleaner.....	<b>N/A</b>
25. Tubing, rubber - ⅜" x ⅜" x 3'.....	<b>USA N/A</b>
26. Gasket, Backplate, 1991-up xl/bt 29062-958.....	<b>106-6022</b>

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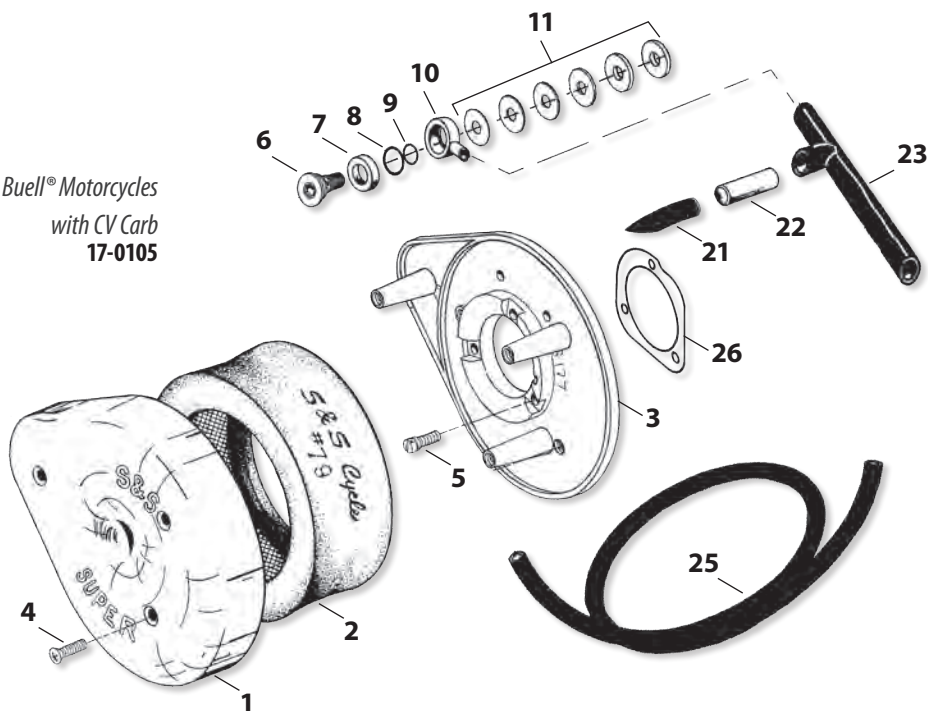
<sup>±</sup>  WARNING: Cancer and Reproductive Harm



Buell® Motorcycles  
with S&S E&G Carb  
17-0402



Buell® Motorcycles  
with CV Carb  
17-0105



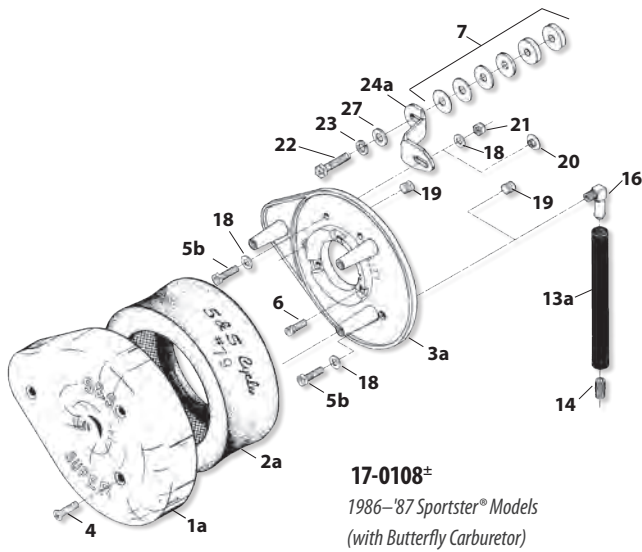
# CLASSIC TEARDROP AIR CLEANER REPLACEMENT PARTS FOR STOCK FUEL SYSTEMS

1. Air cleaner cover		
<b>1a.</b> Chrome	17-0078 <sup>±</sup>	
<b>1b.</b> Chrome	17-0378 <sup>±</sup>	
Black	170-0384A	
Slasher	17-0004 <sup>±</sup>	
2. Element		
<b>2a.</b> Foam	17-0079	
<b>2b.</b> Pleated	106-4722	
3. Backplate		
1991-2007 xl	106-0950	
4. Cover screw		
Chrome 1305 (each)	50-0072 <sup>±</sup>	
3 pack	50-1052 <sup>±</sup>	
10 pack	50-0094 <sup>±</sup>	
Black 902 (each)	50-0310-S	
3 pack	50-0310	
5. Screw		
<b>5a.</b> 1999-03 xl, HHCS ¼"-28 x 1-¼"	N/A	
<b>5b.</b> All Others, HHCS ¼"-28 x 7/8"	50-0074	
6. Backplate screw, Zinc Plated (each)	106-2084	
10 pack	106-2105	
7. Shim kit, xl 1966-'87	17-0314	
<i>(Includes 2 each 5/16" x .018", 5/16" x .030", 5/16" x .048", 5/16" x .105" and 4 each 5/16" x .125")</i>		
Replacement shims		
a. 5/16" x .018" (each)	50-7038	
b. 5/16" x .030" (each)	50-7039	
c. 5/16" x .048" (each)	50-7040	
d. 5/16" x .105" (each)	50-7041	
e. 5/16" x .125" (each)	50-7042	
2 pack	50-7042P	
8. Replacement Shims		
<b>8a.</b> 1991-up xl, & Buell® 1994-up		
½" x .018 (each)	50-7085	
½" x .030" (each)	50-7086	
½" x .048" (each)	50-7087	
½" x .105" (each)	50-7089	
½" x .125" (each)	50-7090	
<b>8b.</b> 1999-03 xl		
5/8" x .025" (each)	50-7113	
10 pack	50-7110	
5/8" x .050" (each)	50-7114	
10 pack	50-7111	
5/8" x .075" (each)	50-7115	
10 pack	50-7112	
9. Breather Cap Screw	17-0338	
10. Shim, head vent - .62" I.D. x .80" O.D. x .175" (each)	N/A	
11. Breather screw seal xl 1991-'03 Washer, .520 (each)	50-7055	
10 pack	50-7057	
12. Breather fitting (each)	17-0350	
2 pack	17-0355	
13. Crankcase breather vent hose		
a. xl 1986-'90	17-0113	
b. xl 1991-'93	USA 17-0339	
14. Vent hose connector, xl 1986-'90	50-8111	
15. Vent hose, with angle cut	17-0365	
16. 90° Elbow fitting (each)	50-8110	
17. Hose fitting	17-0336C-S	
18. Flatwasher, ¼" 6194, 6245, 6703, 6736, 6228W, 6192 (each)	50-7021	
19. Backplate plug, ⅜" -27 NPT (each)	50-8331A	
10 pack	50-1015	
20. Plug, press-in clear plastic	50-8313	
21. Support bracket locknut - ¼"-28 x 7/8" (each)	50-5010	
22. Support bracket screw, 5/16"-18 x 1¼"	50-0110	
23. Lockwasher, 5/16"	50-7032	
24. Support Bracket		
<b>24a.</b> Air Cleaner to head 1986-90 xl	17-0311	
<b>24b.</b> Air Cleaner to head 1991-03 xl	N/A	
25. Rubber tubing - ¼" x 5/8" x 3'	USA N/A	
26. Wire tie (N/S)	50-8003	
27. Washer, flat - 3/8" x 7/8" x .146" (each)	50-7053	
28. Shim - ¼" x 3/4" x .200"	50-7024	
29. Screw Vent Fitting		
xl 1993-2006	17-0347	
30. Screw air cleaner backplate	17-0346	
31. Spring clamps	50-8001	
32. O-ring		
<b>32a.</b> (-014) .500"ID x .625" OD (each)	50-8270	
5 pack	50-8130	
<b>32b.</b> (-012) .375"ID x .500" OD 11110 (each)	50-8006	
10 pack	50-8077	
33. Gasket, backplate (each)	106-1724	
10 pack	106-2328	
34. Adaptor assembly, 1991-up xl	106-1982 <sup>±</sup>	
35. Hose, vent, breather, formed, .250" x .375" x 1.330", 1991-2007 xl		
each	106-0161A	
36. Breather screw, 1991 xl	106-0845	
37. Washer, flat 5/16" x 11/16" x 1/8"	50-7033	
38. Nut, lock, HH, 5/16"-18	50-5021	
39. Bracket, support, air cleaner to head, xl, 1991-up		
Front	17-0305	
Rear	106-1285	

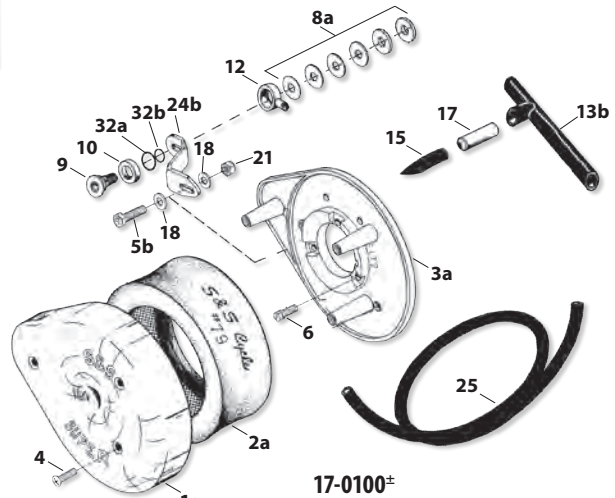
N/S = Not Shown

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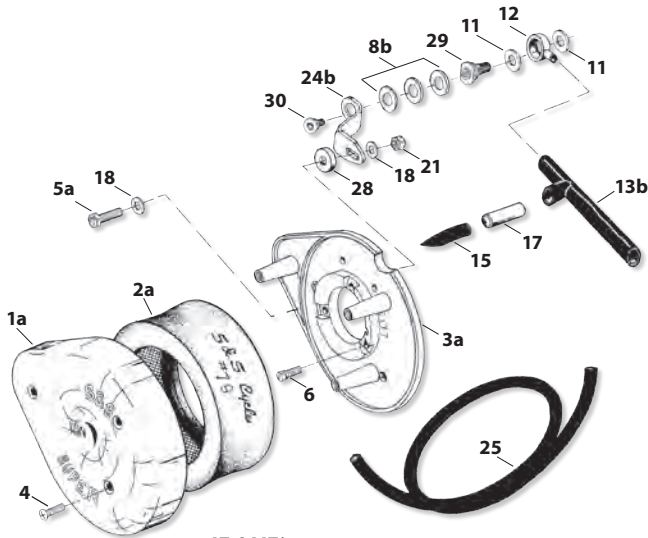
±  WARNING: Cancer and Reproductive Harm



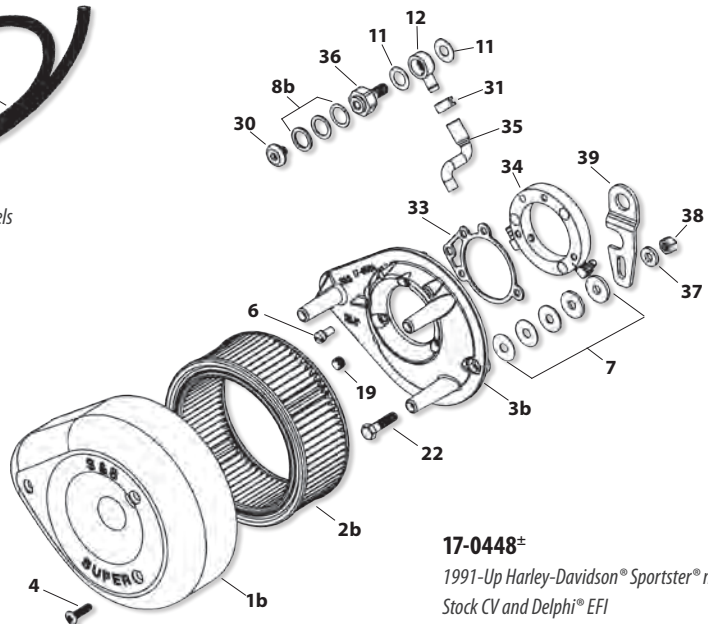
**17-0108±**  
1986–87 Sportster® Models  
(with Butterfly Carburetor)



**17-0100±**  
1991-up Harley-davidson® sportster® Models  
(with CV carburetor) (Discontinued)







**17-0117±**  
1991-'03 Harley-Davidson® Sportster® Models  
(Discontinued)



**17-0448±**  
1991-Up Harley-Davidson® Sportster® models  
Stock CV and Delphi® EFI

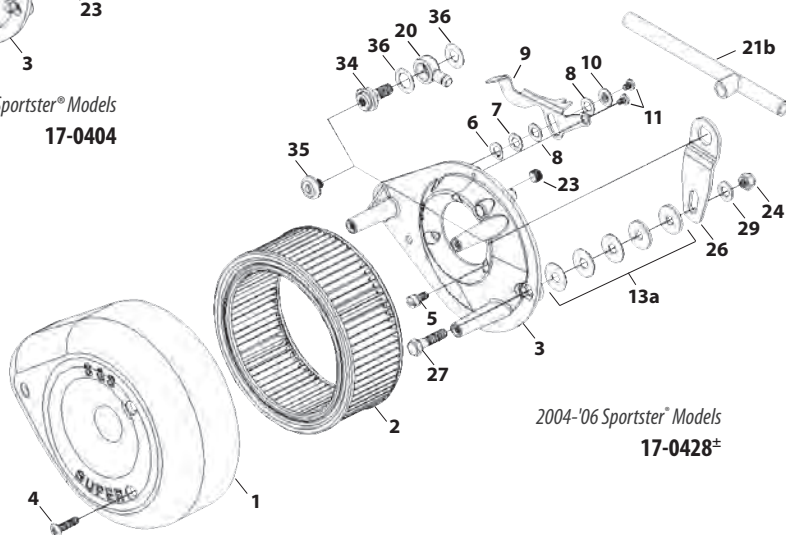
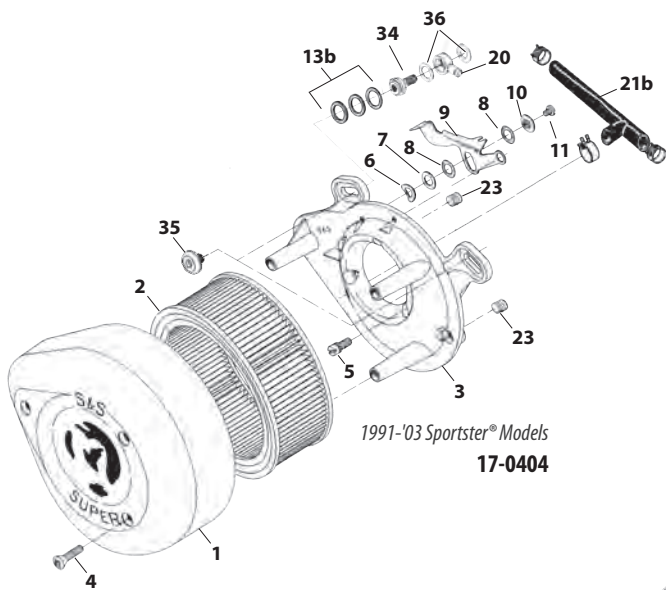
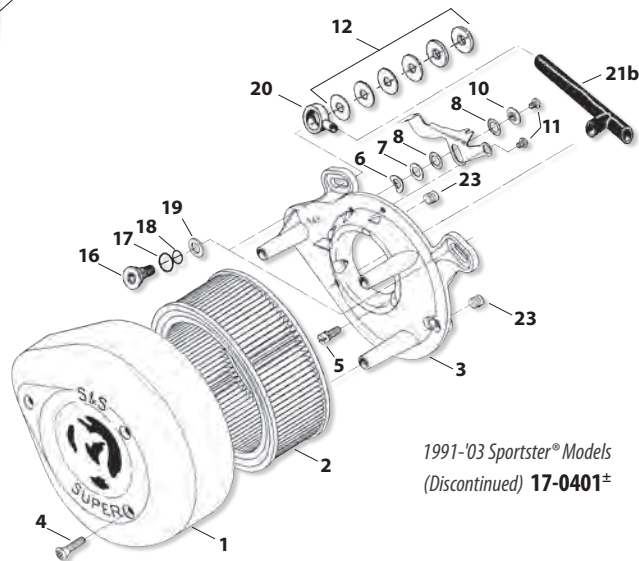
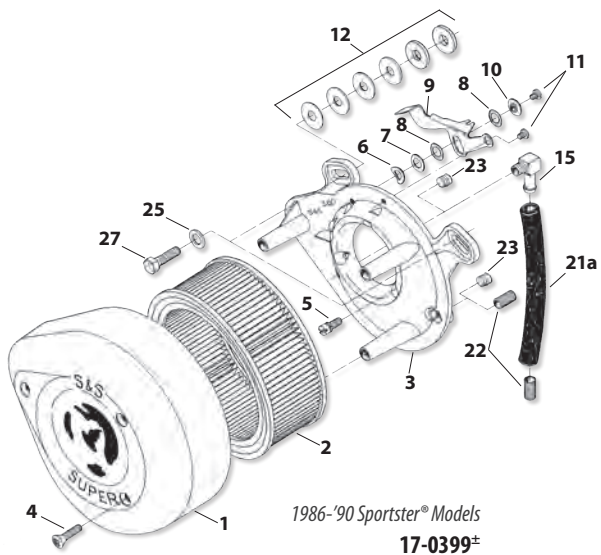
# SUPER E AND G AIR CLEANERS REPLACEMENT PARTS FOR 1986-UP HARLEY-DAVIDSON® SPORTSTER® MODELS

1. Air cleaner cover		
Chrome	17-0378±	
Black	170-0384A	
Slasher	17-0004±	
2. Element, pleated	106-4722	
3. Backplate		
xl 1957-'85	17-0330	
xl 1991-'03	 17-0336	
xl 1986-'90 <i>Manufactured prior to 1-1-03</i>	17-0380	
xl 2004-'06	17-0361	
4. Cover screw		
Chrome 1305 (each)	50-0072±	
3 pack	50-1052±	
10 pack	50-0094±	
Black 902 (each)	50-0310-S	
3 pack	50-0310	
5. Backplate screw, Zinc Plated (each)	106-2084	
10 pack	106-2105	
6. Fast idle friction washer (each)	50-7037	
10 pack	50-7061	
8. Fast idle nylon washer (each)	50-7036	
10 pack	50-7060	
9. Fast idle lever	 17-0329	
10. Fast idle brass washer (each)	50-7007±	
10 pack	50-7010±	
11. Fast idle lever screw (one required)	50-0041	
10 pack	50-0062	
12. Shim kit		
xl 1986-'90	17-0314	
<i>(Includes two each 5/16" x .018", .030", .048", .105", and four each .125")</i>		
xl 1991-2016	17-0464	
<i>(Includes two each 1/2" x .018", .030", .048", .105", and four each .125")</i>		
13. Shims,		
a. xl 1986-'90		
5/16" x .018" (each)	50-7038	
5/16" x .030" (each)	50-7039	
5/16" x .048" (each)	50-7040	
5/16" x .105" (each)	50-7041	
5/16" x .125" <i>(Use on BT 1936-'84 and xl 1957-'85 when insulator block is installed.)</i>		
each	50-7042	
2 pack	50-7042P	
b. xl 1991-2016		
5/8" x .025" (each)	50-7113	
10 pack	50-7110	
5/8" x .050" (each)	50-7114	
10 pack	50-7111	
5/8" x .075" (each)	50-7115	
10 pack	50-7112	
Shim, .515" x 1" x .125" (each)	50-7090	
14. Backplate mounting bolt – xl 1957-'85		
5/16"-18 x 1" 3987 (each)	 50-0108	
5/16"-24 x 3/4" (Discontinued)	N/A	
15. Elbow fitting (each)	50-8110	
16. Breather screw		
Standard length	17-0338	
17. Breather screw o-ring – 5/8" O.D. (each) 11140, 11273	50-8270	
5 pack	50-8130	
18. Breather screw o-ring – 1/2" O.D. 11110 (each)	50-8006	
10 pack	50-8077	
19. Breather screw washer	50-7119	
20. Breather fitting (each)	17-0350	
2 pack	17-0355	
21. Crankcase breather hose		
a. xl 1978-'90	17-0113	
b. xl 1991-'06	 17-0339	
22. Vent hose connector	50-8111	
23. Backplate plug 1/8"-27 (each)	50-8331A	
10 pack	50-1015	
24. Locknut – 5/16"-18 <i>(Use with support bracket - see #26)</i>	50-5021	
25. Flatwasher – 5/16" x 1/16" 6320, 70907-07, 6016, 6702	50-7034	
26. Support bracket		
xl 1957-'85	17-0393	
xl 2004-2016	17-0305	
27. Mounting bracket bolt – xl 1957-'90 and 2004-'06	50-0110	
28. Lockwasher – 5/8"	50-7032	
29. Flatwasher – 5/16" x 1/8"	50-7033	
30. Wire tie (N/S)	50-8003	
31. Hose clamp (N/S)	50-8002	
32. Air cleaner assembly <i>(Includes: Chrome cover, backplate, filter element, and hardware kit)</i>		
xl 1957-'85	17-0400±	
xl 1986-'90	17-0399±	
xl 1991-'03	17-0404±	
33. Mounting hardware package (N/S) <i>Includes all parts needed to install air cleaners:</i>		
xl 1957-'85	17-0441±	
xl 1986-'90	17-0458±	
34. Screw vent fitting		
1993-2006	17-0347	
35. Screw, air cleaner to head	17-0346	
36. Washer, silicone coated steel, xl 1991-'06, .520" (each)	50-7055	
10 pack	50-7057	
37. Spring clamps (N/S)	50-8001	
38. Breather conversion kit, xl 1 7/8" carbs (N/S)	17-0487	
<i>Convert early S&amp;S air cleaners for 1991-'03 xl with o-ring breather fittings to new style breather hardware. xl kits include special insulator block, and manifold screws.</i>		
<b>(N/S) = Not Shown</b>		






















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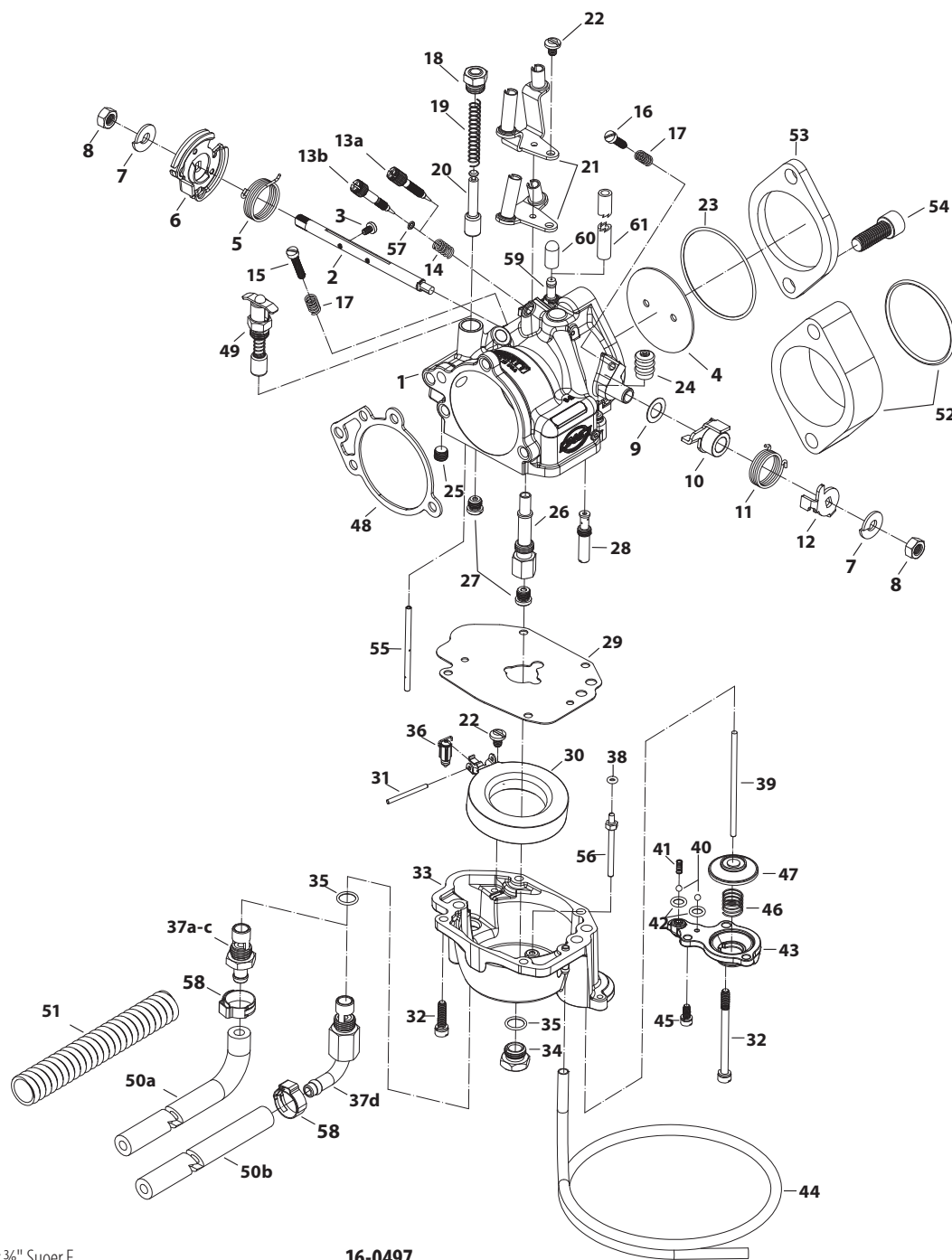




# SUPER E & G CARBURETOR REPLACEMENT PARTS

1. Carb body assembly		
1 7/8" Super E		11-2381±
2 1/4" Super G		11-2391±
2. Throttle shaft		
1 7/8" Super E — Includes two plate screws		11-2383
2 1/4" Super G — Includes two plate screws		11-2483
3. Throttle plate screw 11-2045— (two required) (each)		50-0055-S
10 pack		50-0064
4. Throttle plate		
1 7/8" Super E		11-2055
2 1/4" Super G		11-2355
5. Throttle return spring (each)		11-2382
5 Pack		11-3502
6. Throttle spool		11-2385
7. Throttle shaft lock washer (two required)		50-7031
8. Throttle shaft nut (two required) (each)		11-2350
5 pack		11-2363
9. Throttle shaft nylon washer (each)		50-7050
10 pack		50-7072
10. Pump actuator lever		11-2376
11. Actuator spring (each)		11-2375-S
5 pack		11-3501
12. Pump actuator arm		11-2377
13. Idle mixture screw		
a. Idle mixture screw, brass (each)		11-2354±
5 pack		11-2378±
b. Idle mixture screw only		
each		110-0003
Idle mixture screw w/ 500-0036 o-ring		
each		110-0068±
5 pack		110-0069±
14. Idle mixture screw spring (each)		11-2052
10 Pack		11-2060
15. Idle speed screw (each)		50-0038
10 Pack		50-0150
16. Pump adjustment screw (each)		50-0039
10 Pack		50-0146
17. Idle speed/pump adjuster spring (each)		11-2048
10 pack		11-2053
18. Plunger nut (each)		11-2344±
5 Pack		11-2372±
19. Plunger spring (each)		11-2340
10 Pack		11-2359
20. Fast idle plunger		11-2343
21. Cable guide assembly with screw		
Use with butterfly style cables		11-2339P
Use with constant velocity style cables		11-2338P
22. Cable clamp/float pin screw (each)		50-0041
10 Pack		50-0062
23. O-ring		
1 7/8" Super E (each)		50-8016
10 Pack		50-8094
2 1/4" Super G (each)		50-8015
10 pack		50-8093
24. Bellows seal (each)		11-2266
5 Pack		11-2279
25. Bowl vent plug (each)		50-0105
10 pack		50-0151
26. Main discharge tube		11-2085±
27. Main jet — See Chart on page 295		
28. Intermediate Jets — See Chart on page 294		
Series #94 fits all Super 1 7/8", 2 1/4", 2 1/4" gas carburetors.		
29. Bowl gasket (each)		11-2386
10 pack		11-2387
30. Float		11-2187
31. Float pin (each)		11-2369
5 Pack		11-2370±
32. Bowl screw		
10-24 x 3/4" — Three required (each)		50-0034
10 Pack		50-0063
10-24 x 2 3/8" — One required (each)		50-0040
10 Pack		50-0061
33. Carb bowl (only)		11-2388±
Carb bowl complete assembly		11-2388P
34. Bowl plug (each)		11-2090
5 pack		11-2092±
35. Seat o-ring*		
(required with part #11-2465 only when replaces 360° style fuel inlet.)		
each		50-8009
10 pack		50-8095
36. Needle		
1 7/8" Super E & 2 1/4" Super G		11-2195±
Racing only		11-2197±
37. Seat — Includes O-ring #35		
(Replaces obsolete seats 11-2347 and 11-2348)		
a. 1 7/8" E & 2 1/4" G (Uses part #11-2195± needle)		11-2465
b. Racing only (Uses part #11-2197± needle)		N/A
c. Racing only — threaded fuel inlet (6AN .157" ID)		
(Uses part #11-2195± needle)		11-2395
d. Permeation Compliant fuel inlet seat Super E or G		106-2011
(Uses part #11-2195± needle)		
38. Ejector nozzle o-ring (each)		50-8011
10 Pack		50-8096
39. Pump pushrod (each)		11-2373
5 Pack		11-2393
40. Check ball — (two required) (each)		50-8090
10 pack		50-8125
41. Check ball spring (each)		11-2374
5 Pack		11-2392
42. Pump cap o-ring — (two required) (each)		50-8012
10 Pack		50-8100
43. Pump cap assembly		11-2389
44. Overflow hose per 24" 27369-76		
(each)		19-0262-S
5 Pack		19-0263
45. Pump cap screw 8-32 — (two required) (each)		50-0042
10 Pack		50-0098
46. Diaphragm spring (each)		11-2275
10 pack		11-2278
47. Diaphragm		11-2282
48. Gasket, backplate (each)		106-1724
10 pack		106-2328
49. Enrichment device (Use with air horn only)		11-2084±
50. Fuel line		
a. Fuel line With 90° bend* 19" (Use with part #11-2465)		N/A
b. Permeation Compliant straight, 311" x .563" x 17.5"		190-0001
(Use with part #106-2011, 90° seat)		
51. Fuel line insulator—12"		19-0172
52. Spacer, Kit, w/ O-ring		
1 7/8" x 1"		16-0057*
2 1/4" x 1"		16-0357*
2 1/4" x 1"		16-0157
*Use with 1" Spacer Block		16-0058
53. Insulator Block, Manifold, w/ O-ring		
1 7/8" x 1/4" Super E		16-0491

All reference to HD® part numbers is for identification purposes only. We in no way are implying that any of S&S Cycle's products are original equipment parts or that they are equivalent to the corresponding HD® part number shown.



1 7/8" x 3/8" Suoer E .....	<b>16-0497</b>
2 1/16" x 1/4" Super G .....	<b>16-0492</b>
2 1/16" x 3/8" Super G .....	<b>16-0498</b>
2 1/4" x 1/4" Super D .....	<b>16-0499</b>
<b>54.</b> Screw	
1" x 3/8"-16 (each) .....	<b>50-0161</b>
1 1/4" x 3/8"-16 (each) .....	<b>50-0162</b>
10 pack .....	<b>50-0177</b>
1 3/8" x 3/8"-16 (each) .....	<b>50-0163</b>
5 pack .....	<b>50-0178</b>
2" x 3/8"-16 (each) .....	<b>50-0164</b>
5 pack .....	<b>50-0185</b>
2004-'06 Top Carb to Manifold	
1 1/2" x 3/8"-16 .....	<b>50-0354-S</b>
2004-'06 Low Carb to Manifold	
1 1/2" x 3/8"-16 .....	<b>50-0351-S</b>
<b>55.</b> Tube, Fast Idle Pick-Up, Super E/G, .125" x 2.350", Brass .....	<b>0381F±</b>
<b>56.</b> Tube, Ejector Nozzle, Super E/G, Flared, Brass .....	<b>106-6124±</b>

<b>57.</b> O-ring, 3mm x 5mm x 1mm (each) .....	<b>500-0036</b>
10 pack .....	<b>500-0148</b>
<b>58.</b> Clamp, 5/8" - 7/8" .....	<b>50-8002</b>
<b>59.</b> Hose, Fitting straight, .040" .....	<b>16-0134</b>
<b>60.</b> VOES Fitting Cap .....	<b>50-8372</b>
<b>61.</b> VOES/Oil Return Hose .....	<b>19-0395</b>

\*360° banjo style fuel inlet fitting used on early S&S E&G carbs is no longer available. Replace with one of the inlet/seat fittings listed under #37 on this page. We highly recommend inlet/seat #106-2011.

± WARNING: Cancer and Reproductive Harm

**CARBURETOR REBUILD KITS**  
**SEE PAGE 295**

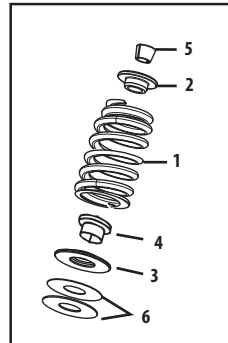


# VALVE SPRING REPLACEMENT PARTS

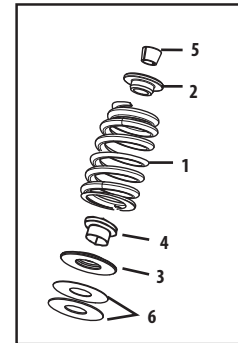
## .650" Lift Sidewinder® Valve Springs (Stock, Super Stock® & CNC Ported Cylinder Heads)

- 1. SPRING, VALVE .650" ..... **106-5689**
- 2. Collar, Top, Steel ..... **106-5690**
- 3. Collar, Bottom, Steel ..... **106-5691**
- 4. Seal, Valve  
S&S CNC Ported Heads & Stock w/7mm valve stem ..... **106-5688**  
S&S Super Stock Heads Stock w/5/16 valve stem  
.420" Cast (each) ..... **900-0338**  
.562" Powder Metal (4 pack) ..... **900-0737**
- 5. Keeper, valve spring  
S&S CNC Ported Heads & Stock w/7mm valve stem ..... **106-5692**  
S&S Super Stock Heads & Stock w/5/16 valve stem ..... **90-2094-S**
- 6. Valve Spring Shim  
.015" (each) ..... **500-0013**  
.030" (each) ..... **500-0014**

**.650" Lift Sidewinder®  
Valve Springs**



**.585" Lift Valve Springs**



## .585" Lift Valve Springs (Stock, Super Stock® & CNC Ported Cylinder Heads)

- 1. Spring, Valve .585" ..... **900-0444**
- 2. Collar, Top ..... **900-0550**
- 3. Collar, Bottom  
For Stock Heads w/7mm valve stem (includes seal) ..... **900-0590**  
For CNC Ported Heads w/7mm valve stem ..... **900-0549**  
For Super Stock Heads ..... **900-0600**
- 4. Seal, valve guide  
For Stock Heads w/7mm valve stem (includes bottom collar) ..... **900-0590**  
For CNC Ported Heads w/7mm valve stem ..... **106-5688**  
For Super Stock Heads & Stock w/5/16 valve stem  
.420" Cast (each) ..... **900-0338**  
.562" Powdermetal (4 pack) ..... **900-0737**
- 5. Keeper, valve spring  
For Stock and CNC Ported Heads ..... **106-5692**  
For Super Stock Heads & Stock w/5/16 valve stem ..... **90-2094-S**
- 6. Valve spring shim  
For Stock and CNC Ported Heads  
.015" ..... **500-0013**  
.030" ..... **500-0014**  
For Super Stock Heads & Stock w/5/16 valve stem  
.015" ..... **90-2086**  
.030" ..... **90-2087**



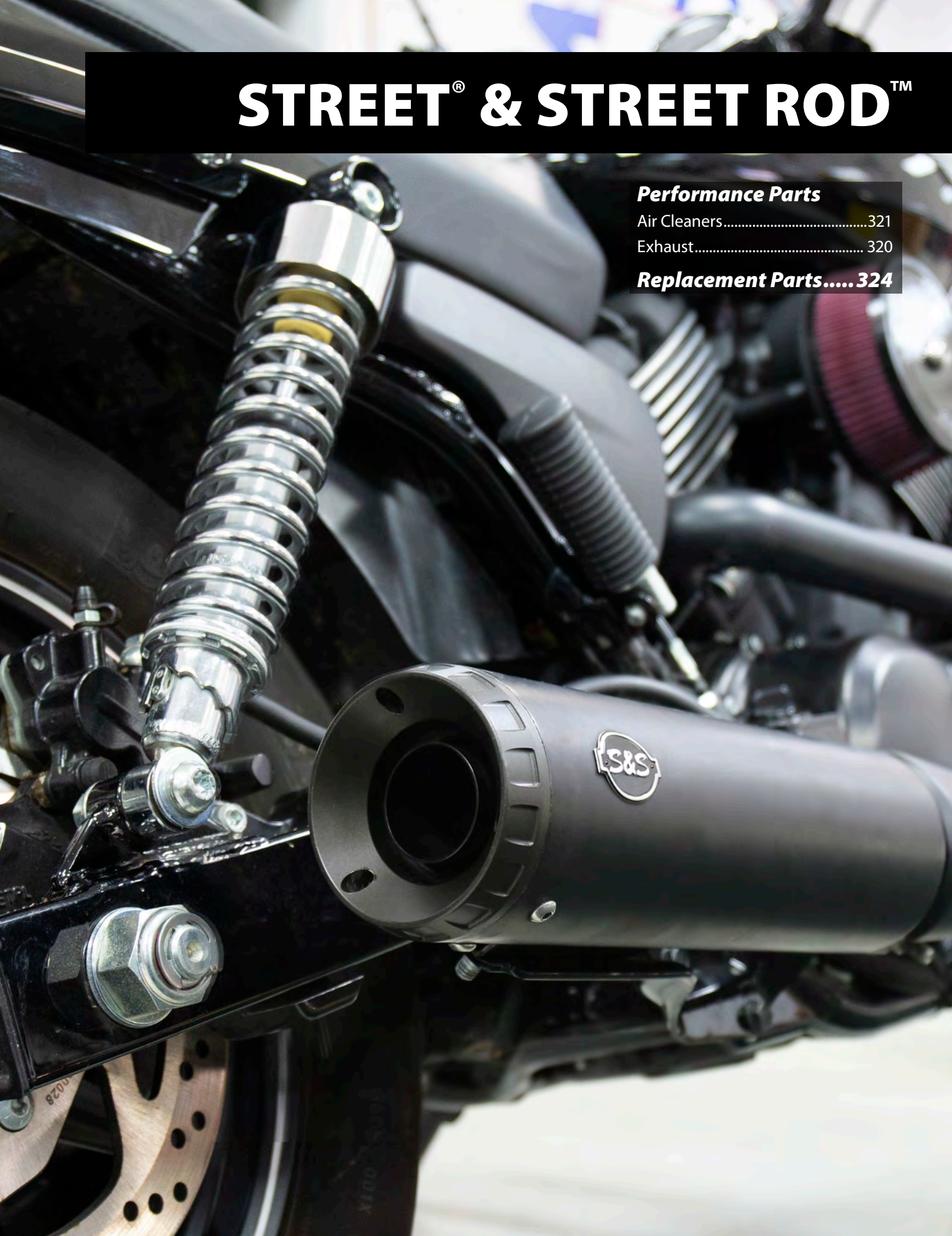
# STREET® & STREET ROD™

## *Performance Parts*

Air Cleaners.....321

Exhaust..... 320

***Replacement Parts.....324***



# GRAND NATIONAL® 4" SLIP-ON MUFFLER

## FITMENT

- 2014–'20 Harley-Davidson® Street XG750, XG500, & Street Rod™

## FEATURES AND BENEFITS

- 10% increase in HP & torque when coupled with S&S® Stealth Air Cleaner Kit
- Race inspired sound & stainless steel baffle
- Black ceramic finish matches stock header pipe
- SAE J2825 sound level compliant
- 50-state legal
- Removable dB reducer
- Made in USA!

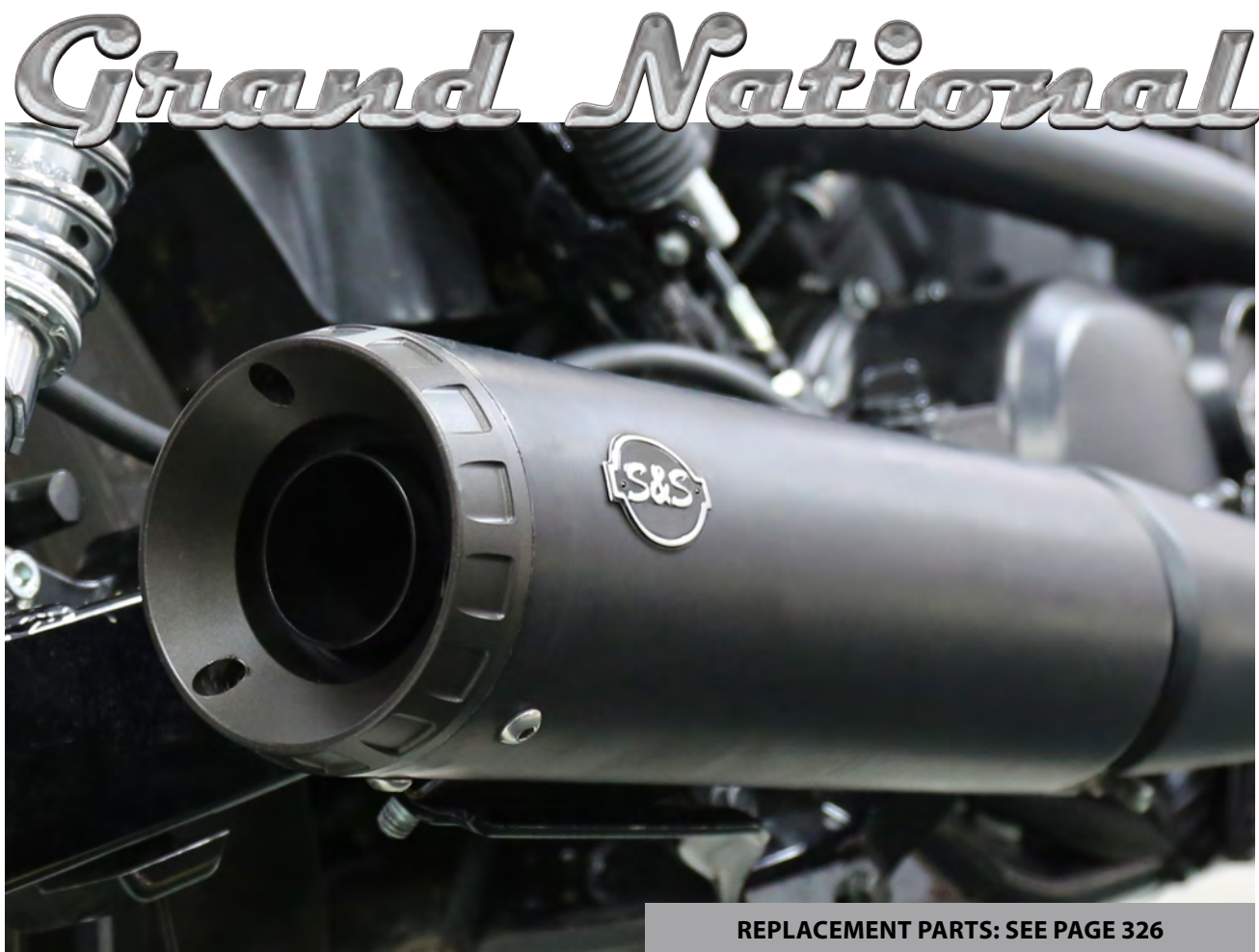


## GRAND NATIONAL 4" SLIP-ON MUFFLER FOR 2014–'20 HD® STREET® XG750, XG500 & STREET ROD™

Description	Part #
Black	550-0703

\*Qualified Manufacturer Declared Emissions Replacement Part on all 2014–2020 Street Models

⚠ WARNING: Cancer and Reproductive Harm



REPLACEMENT PARTS: SEE PAGE 326



# STEALTH AIR CLEANER KITS

## 2014–2020 STREET XG750 AND XG500

### FITMENT

- 2014–2020 Street XG750 and XG500

### FEATURES AND BENEFITS

- 6.7% more horsepower and 11.6% more torque (AC and Stock Muffler)
- Increased air flow 290 cfm vs. stock 110cfm
- Compatible with S&S Stealth air cleaner covers (except Airstream)



Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™


Indian® Models


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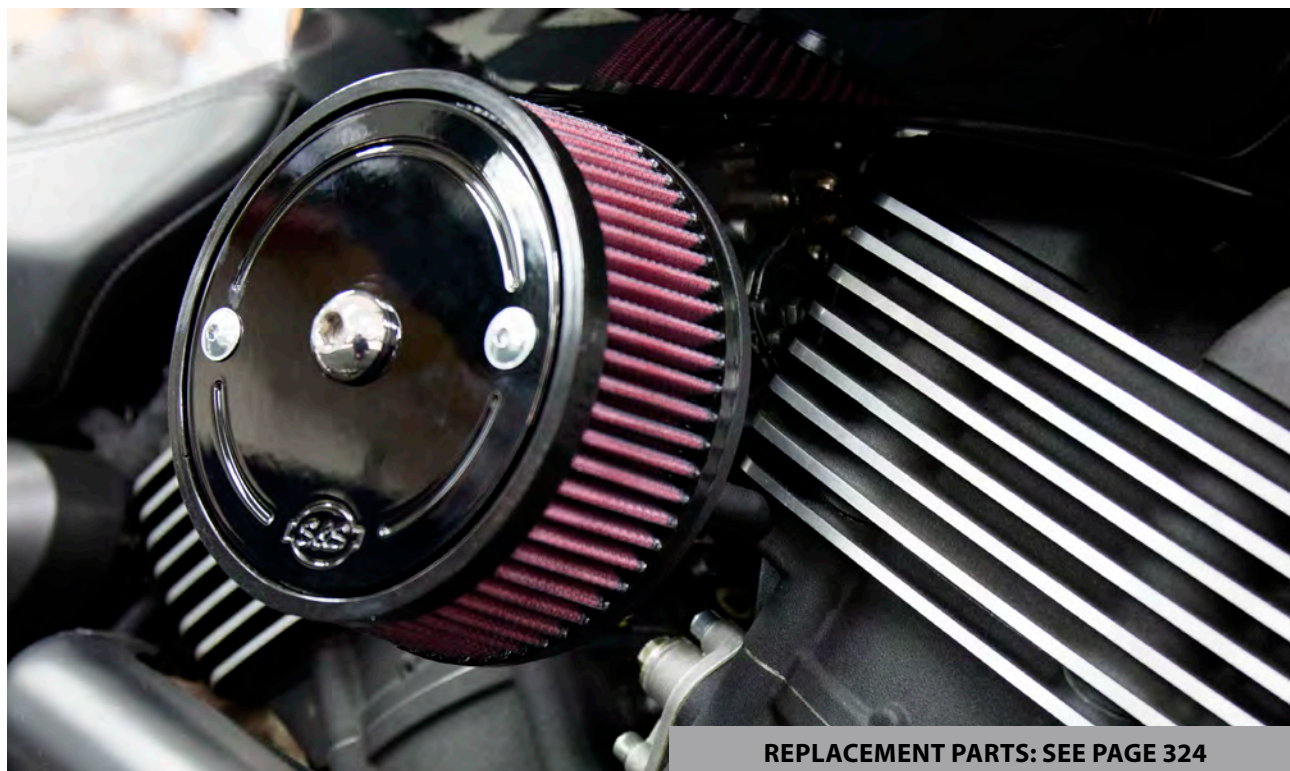
Appendix

MINI TEARDROP STEALTH AIR CLEANER KITS			
KIT INCLUDES STEALTH AIR CLEANER KIT 170-0374C WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-31			
Fitment	Fuel System	Finish	Part #
2014–2020 Street XG750 and XG500	Stock Bore	Chrome	170-0445C <sup>±</sup>
		Gloss Black	170-0446C



<sup>±</sup>  WARNING: Cancer and Reproductive Harm

STEALTH AIR CLEANER KIT FOR 2014–2020 STREET XG750 & XG500 EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-31	
Description	Part #
Stealth Air Cleaner Kit for Street	170-0374C



REPLACEMENT PARTS: SEE PAGE 324



# STEALTH AIR CLEANER KITS

## 2017-'20 HARLEY-DAVIDSON® STREET ROD™ MODELS

### FITMENT

- 2017-'20 Harley-Davidson® Street Rod™

### FEATURES AND BENEFITS

- High-strength synthetic polymer backplate — Designed to reduce heat transfer to intake air
- 210% increase in flow
- Pair with one of many covers (*cover not included; see next page for options*)
- Cooler, denser air allows for more efficient cylinder fill and better performance
- Pre-filters are available

#### MINI TEARDROP STEALTH AIR CLEANER KITS

KIT INCLUDES STEALTH AIR CLEANER KIT 170-0414C WHICH IS EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-31

Fitment	Fuel System	Finish	Part #
2017-'20 Harley-Davidson® Street Rod™ XG750A	Dual Bore	Chrome	<b>170-0443C<sup>±</sup></b>
		Gloss Black	<b>170-0444C</b>



<sup>±</sup> ⚠️ WARNING: Cancer and Reproductive Harm

#### STEALTH AC KIT FOR 2017-'20 HD® STREET ROD™ EXEMPT FROM EMISSIONS TAMPERING REGULATIONS UNDER CARB EO# D-355-31

Description	Part #
Stealth Air Cleaner Kit	<b>170-0414C</b>



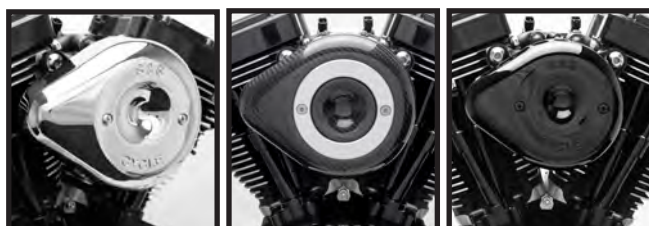
REPLACEMENT PARTS: SEE PAGE 325



# STEALTH AIR CLEANER KIT COVERS ONLY



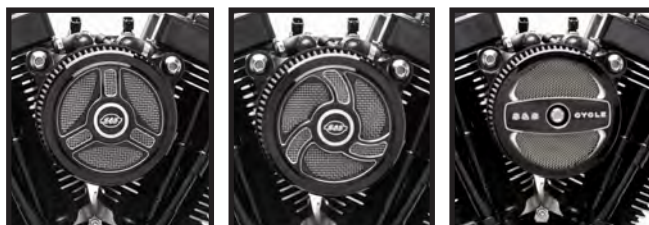
Stealth Tribute



Teardrop

Carbon Fiber

Mini in Gloss Black



Tri-Spoke

Torker

Air 1



Airstream in Chrome



Airstream in Gloss Black

## STEALTH COVERS

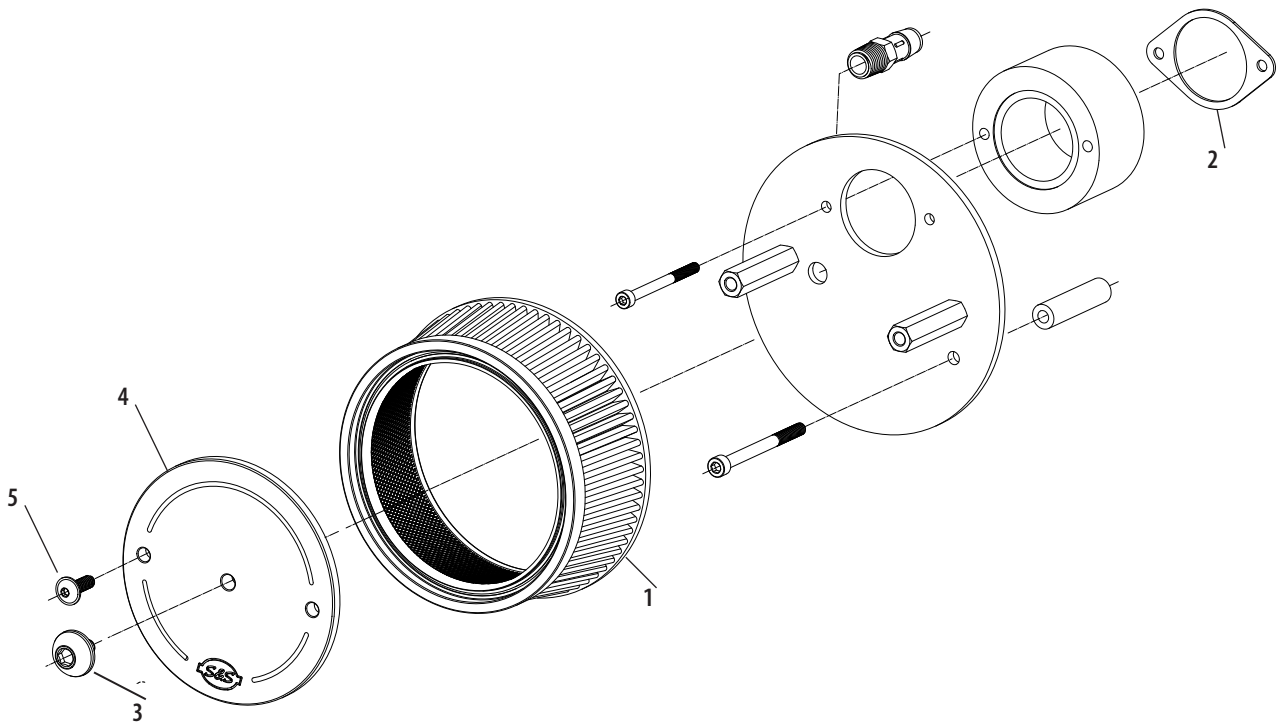
Tribute		Teardrop		Teardrop—Slasher		Carbon Fiber	Mini	
Chrome	Gloss Black	Chrome	Gloss Black	Chrome	Gloss Black	Black	Chrome	Gloss Black
170-0592	170-0593	170-0530	170-0531	170-0532	170-0533	170-0501	170-0367	170-0366

Tri-Spoke	Torker	Air 1	Airstream		Displacement		
Gloss Black w/Highlights	Gloss Black w/Highlights	Gloss Black w/Highlights	Chrome	Gloss Black	111	124	143
170-0210	170-0206	170-0214	170-0118	170-0396	170-0319	170-0321	170-0323

WARNING: Cancer and Reproductive Harm

# STEALTH AIR CLEANER KIT REPLACEMENT PARTS FOR STREET® MODELS

- 1. Filter,Air,Tprd,StdPlt,5.500" x 6.000" ..... **170-0126**
- 2. Gasket,Intake,1.720" ..... **170-0371**
- 3. Screw,SHCB,3/16-18 x .500",Pol,Stnls Stl ..... **170-0508**
- 4. Plate,Top,Air Filter,S&S® Logo,GI Blk ..... **170-0379**
- 5. Screw,SHC,Flng Btn,1/4-20 UNC x .750" (2 Req)..... **500-0060**

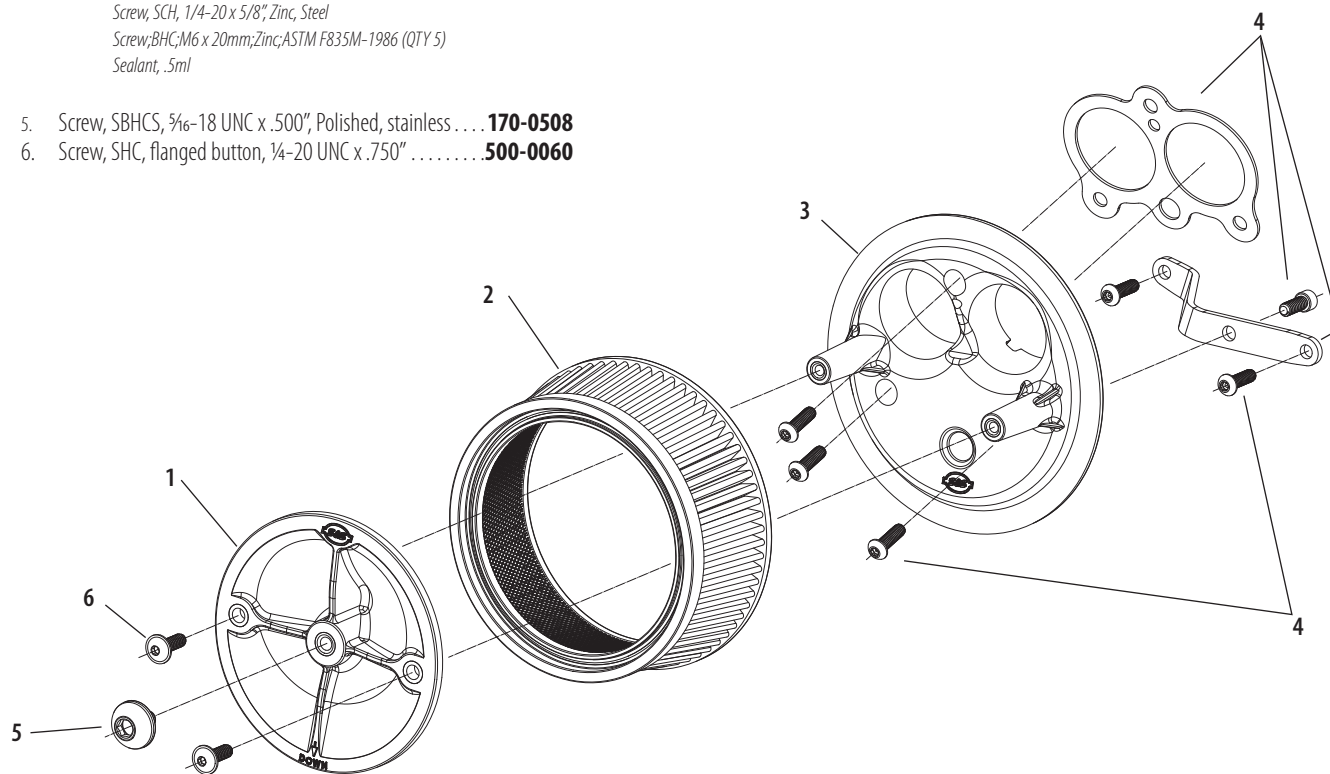


# STEALTH AIR CLEANER KIT REPLACEMENT PARTS FOR STREET ROD™ MODELS

- 1. Top plate, filter, air, molded, plastic ..... **170-0026**
- 2. Filter, air, tapered, standard, pleated, 5.50" X 6.00". ..... **170-0126**
- 3. Backplate, air cleaner, dual bore, injection molded ..... **170-0415**
- 4. Hardware Kit, Stealth, 2017 Street Rod™ ..... **500-0690**

*Includes: Gasket, Intake, Dual Bore 2017 Street Rod™  
Bracket, Backplate, PC, Blk, '17 Street Rod  
Screw, SCH, 1/4-20 x 5/8", Zinc, Steel  
Screw; BHC; M6 x 20mm; Zinc; ASTM F835M-1986 (QTY 5)  
Sealant, .5ml*

- 5. Screw, SBHCS, 5/16-18 UNC x .500", Polished, stainless ..... **170-0508**
- 6. Screw, SHC, flanged button, 1/4-20 UNC x .750" ..... **500-0060**



Milwaukee-Eight®

2007-2017 Twin Cam  
96"/103"/110"

1999-2006  
Twin Cam 88°

1986-2019  
Sportster® & Buell®

2014-2019 Street® &  
Street Rod™

Indian® Models

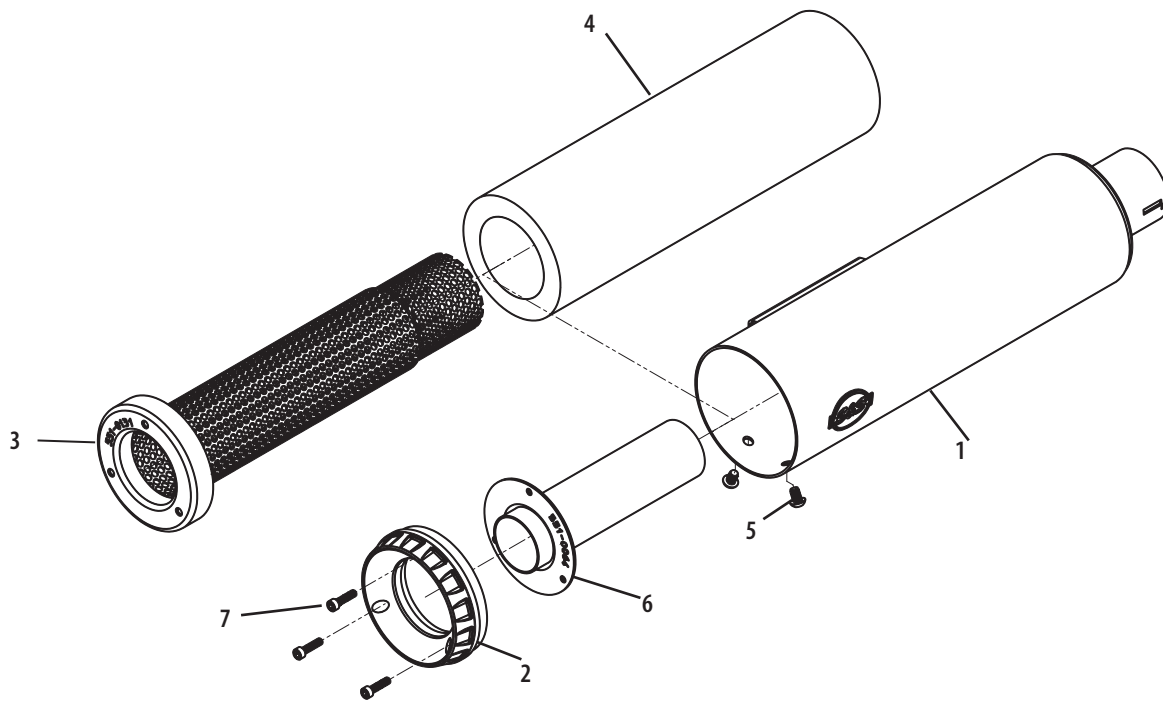
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# GRAND NATIONAL 4" MUFFLER REPLACEMENT PARTS

1. Muffler,Body (shown for placement only).....**N/A**
2. End cap,4".....**551-0291**
3. Baffle Assembly, 2014-2017 HD® Street®.....**551-0270**
4. Insulation,Muffler,Pillow Pack,13" x 11.5".....**551-0276**
5. Screw,BHC,High Temp Lock Patch,1/4-20 x 3/8",Stainless Steel  
(2 Req).....**500-0441**
6. Baffle, asm, muffler, 4".....**551-0063**
7. SHCS,10-32 x .75" (3 Req).....**500-0569**





# INDIAN® MODELS

## **Performance Parts**

Air Cleaner Kit for Indian® Models .....	332
Air Cleaner Kit for Indian® Scout®, Indian® Scout® Sixty, Indian® Scout® Bobber & Victory® Octane™ .....	331
Exhaust.....	328

## **Replacement Parts.....334**





# GRAND NATIONAL® SLIP-ON MUFFLER FOR INDIAN® FTR 1200®

## FEATURES AND BENEFITS

- Stainless steel can with exposed tig welds for factory race styling
- Carbon fiber heat shield
- Race inspired Grand National end cap
- Removable dB reducer
- Meets J2825 sound levels (with dB reducer)
- Made in USA!



## GRAND NATIONAL® SLIP-ON FOR 2019–2020 INDIAN® FTR 1200®

Stainless Steel

550-0854

\*Qualified manufacturer declared U.S. 50-State legal emissions replacement part on all MY 2019–2020 FTR1200 models



REPLACEMENT PARTS: SEE PAGE 335

# GRAND NATIONAL® 2:2 HIGH FOR INDIAN® FTR 1200®



## FEATURES AND BENEFITS

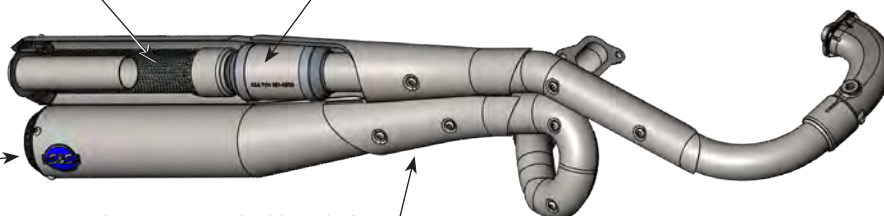
- S&S domination of American Flat Track series championship now available for FTR 1200
- True race replica system has same 3.5" can and Grand National end cap design styling as mighty FTR 750 racers
- 50 State legal CARB EO# K-010-18
- Features S&S engineered high flow catalytic converters that bring legal performance to the street!
- Header and muffler heat shields protect rider from excessive heat
- Meets SAE J2825 sound standard
- Made in the USA!



Stainless Steel perforated core baffle wrapped in fiberglass for a stealthy exhaust note

High Flow Cats Bring Legal Performance to the Street

Race style Grand National endcap design



Multi Layer Heat Shields including 6MM Ceramic Thermal Barrier to Protect Rider from exhaust heat

## GRAND NATIONAL® 2:2 HIGH FOR 2019-2020 INDIAN® FTR 1200® — STREET LEGAL

Stainless Steel

550-0950B

Exempt from emissions tampering regulations under CARB EO# K-010-18 for all 2019-2020 Indian FTR 1200 Models

# Grand National



REPLACEMENT PARTS: SEE PAGE 336



Milwaukee-Eight™

2007-2017 Twin Cam  
96"/103"/110"

1999-2006  
Twin Cam 88"

1986-2019  
Sportster® & Buell®

2014-2019 Street® &  
Street Rod™

Indian® Models

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# EC GRAND NATIONAL® SLIP-ON MUFFLER FOR INDIAN® FTR 1200® (FOR EUROPE)



## FEATURES & BENEFITS

- EC approved with S&S performance and style
- Race-inspired Grand National® end cap design
- All hardware and gaskets included
- Made in USA



## GRAND NATIONAL® EC SLIP-ON FOR 2019–2020 INDIAN® FTR 1200®

Stainless Steel

550-0962

EU Type-Approval: e9\*134/2014\*2018/295G\*11033\*00



REPLACEMENT PARTS: SEE PAGE 335



# STEALTHTWO AIR CLEANER KIT

FOR INDIAN® SCOUT®, INDIAN® SCOUT® SIXTY, INDIAN® SCOUT® BOBBER, AND VICTORY® OCTANE™

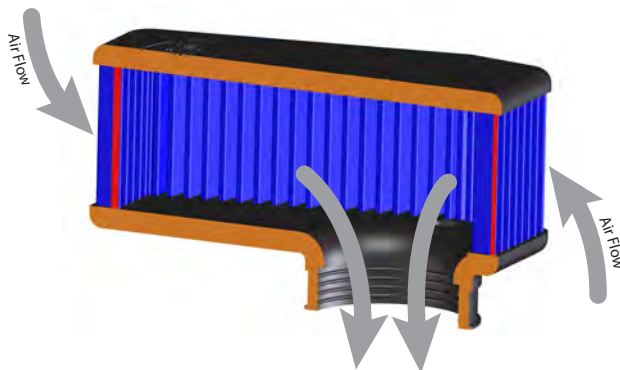
**FITMENT**

- 2015–2020 Indian Scout
- 2015–2020 Indian Scout Sixty
- 2015–2020 Indian Scout Bobber
- 2017 Victory Octane



**FEATURES AND BENEFITS**

- Bolt-on air cleaner assembly with high flow, washable filter media
- 127% increase in flow
- Simple one-piece construction
- Made in the USA
- Exempt from emissions tampering regulations under CARB EO# D-355-33



The S&S StealthTwo air cleaner features increased filter area and a radiused inlet. Together, they provide a smooth path for air to flow into the throttle body. Reduced turbulence! Increased flow! More power!

**STEALTHTWO AIR CLEANER KIT**

Fitment	Part #
2015–2020 Indian® Scout®, 2015–2020 Indian® Scout® Sixty, 2015–2020 Indian® Scout® Bobber & 2017 Victory® Octane™	<b>170-0298E</b>

Exempt from emissions tampering regulations under CARB EO# D-355-33



Milwaukee-Eight™

2007–2017 Twin Cam  
96™/103™/110™

1999–2006  
Twin Cam 88™

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

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# AIR CLEANER KIT FOR INDIAN® MODELS



## FITMENT

- 2014–2019 Indian® Chieftain®, Classic, Vintage, & Roadmaster Models

## FEATURES AND BENEFITS

- Increase of 5 hp when paired with performance mufflers and tuning
- High flow air filter provides:
  - 2x increase in surface area
  - 37% increase in airflow
  - High quality, washable cotton gauze filter
- Engineered to maintain leg clearance
- Billet aluminum for greater durability
- Show quality chrome billet cover options available

## AIR CLEANER KIT FOR INDIAN® MODELS

FITMENT	Part #
All 2014–2019 Indian Models originally equipped with TS111 Engines with S&S® Nostalgic Script Cover	<b>170-0294E</b> ±
All 2014–2019 Indian Models originally equipped with TS111 Engines with S&S® Cycle Logo Cover	<b>170-0295E</b> ±

Exempt from emissions tampering regulations under CARB EO# D-355-33

± WARNING: Cancer and Reproductive Harm



**170-0295D**

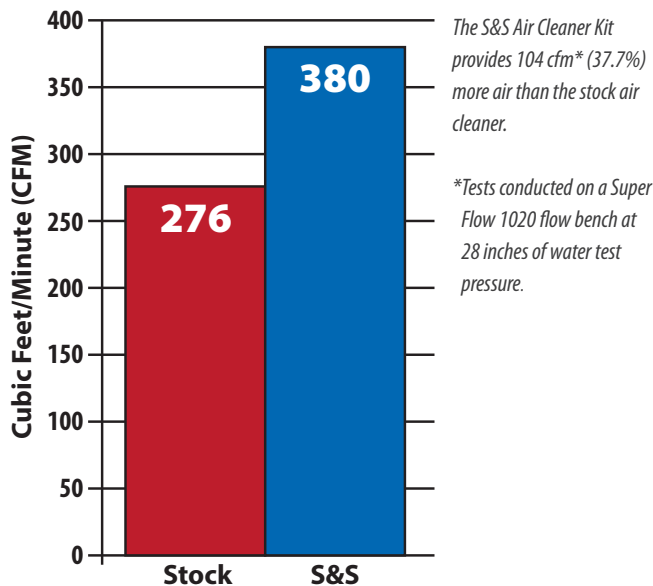


**170-0294D**



S&S High flow air filter provides 2x increase in surface area for a 37% increase in airflow.

**REPLACEMENT PARTS: SEE PAGE 334**



# ENGINE CONTROL MANAGER FOR INDIAN® FTR 1200® & FTR RALLY

Unlock the hidden modes on your Indian FTR 1200 and FTR Rally. These models ship with Rain and Sport modes and the S&S Cycle Engine Control Manager allows you to access them with the simple push of a button.

## FEATURES AND BENEFITS

- Plug & play installation
- Three ride modes
- Handlebar mount for convenient access
- Ride mode selected illuminates for visibility



**ENGINE CONTROL MANAGER FOR INDIAN® FTR 1200® & FTR RALLY | 570-0017**

**RAIN**  
Smoothed throttle response to help keep you in control in wet conditions.

**SPORT**  
Maximum throttle response and aggressive power delivery. Sport mode puts you in control of all of the fun.



**STANDARD**  
Well balanced throttle response helps you enjoy the power but keep it under control.

Milwaukee-Eight®

2007-2017 Twin Cam  
96"/103"/110"

1999-2006  
Twin Cam 88"

1986-2019  
Sportster® & Buell®

2014-2019 Street® &  
Street Rod™

Indian® Models

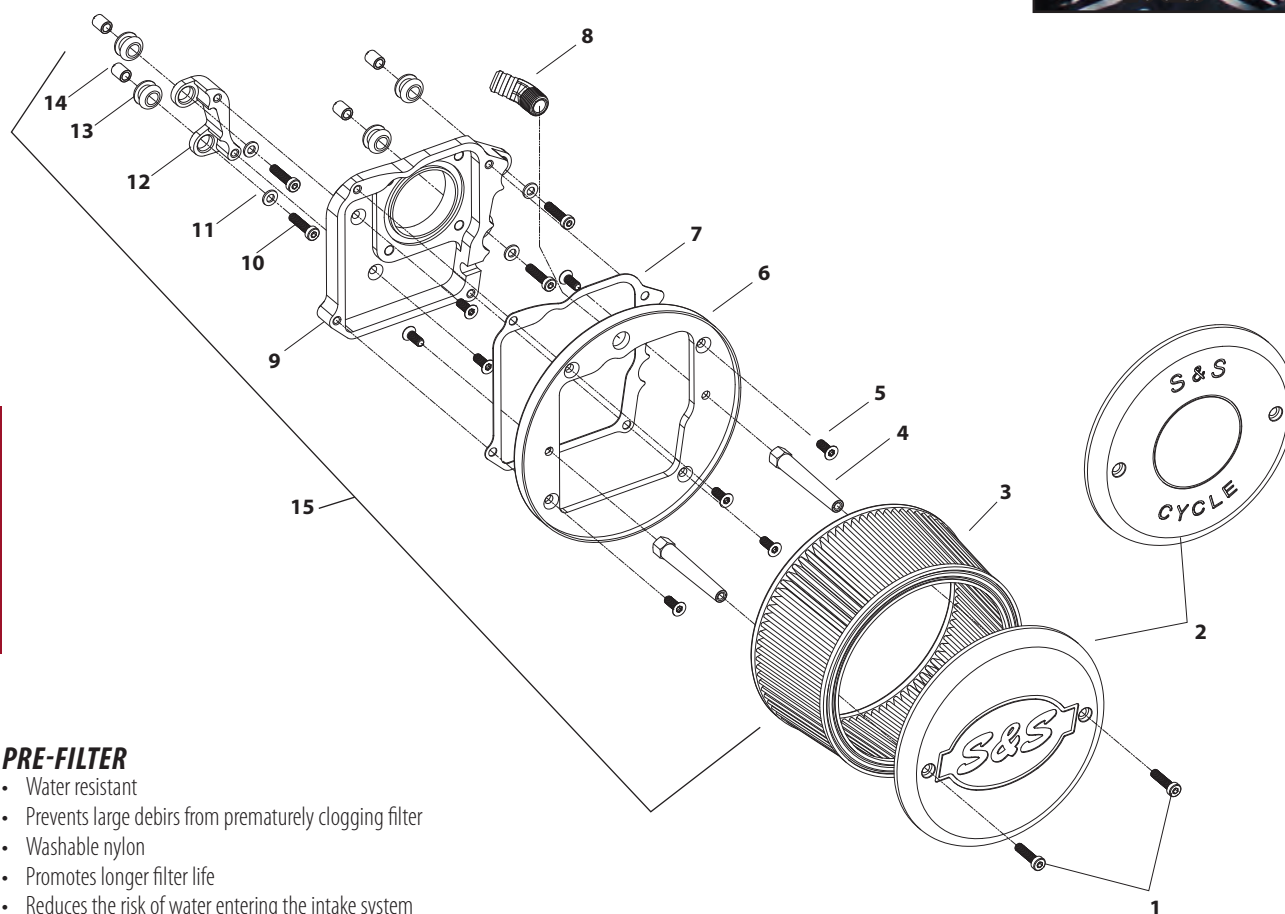
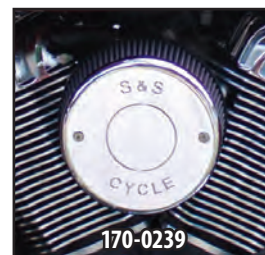
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# AIR CLEANER KIT REPLACEMENT PARTS FOR INDIAN® MODELS

1. Screw, SHC Low Profile, 25mm, M6 x 1, Chrome ..... N/A
2. Cover, Air Cleaner  
S&S Logo ..... 170-0242±  
S&S Nostalgic Script ..... 170-0239±
3. Filter, Air, Tapered, Standard Pleated Cotton ..... 170-0228
4. Standoff, Air Filter ..... 170-0232
5. Screw, SHC, Flat, 16mm, M6 x 1, Zinc ..... 500-0291
6. Backplate, Air Filter Element ..... 170-0230
7. Gasket, Backplate ..... 170-0233
8. Fitting, 45°, 3/8" NPT x 5/8" Barb, Zinc Plated ..... 500-0267
9. Backplate, Throttle Body ..... 170-0229
10. Screw, SHC Low Profile, 25mm, M6 x 1, Zinc ..... 500-0271
11. Washer, Flat, M6, Zinc ..... 500-0272
12. Bracket, Backplate ..... 170-0236
13. Grommet, Backplate, Rubber ..... 500-0269
14. Spacer, Zinc ..... 500-0270



## PRE-FILTER

- Water resistant
- Prevents large debris from prematurely clogging filter
- Washable nylon
- Promotes longer filter life
- Reduces the risk of water entering the intake system
- No tools required for installation

**PRE-FILTER** | 170-0255

⚠ WARNING: Cancer and Reproductive Harm



# GRAND NATIONAL® SLIP-ON MUFFLER

## REPLACEMENT PARTS FOR INDIAN® FTR 1200® (INCLUDING EC VERSION)

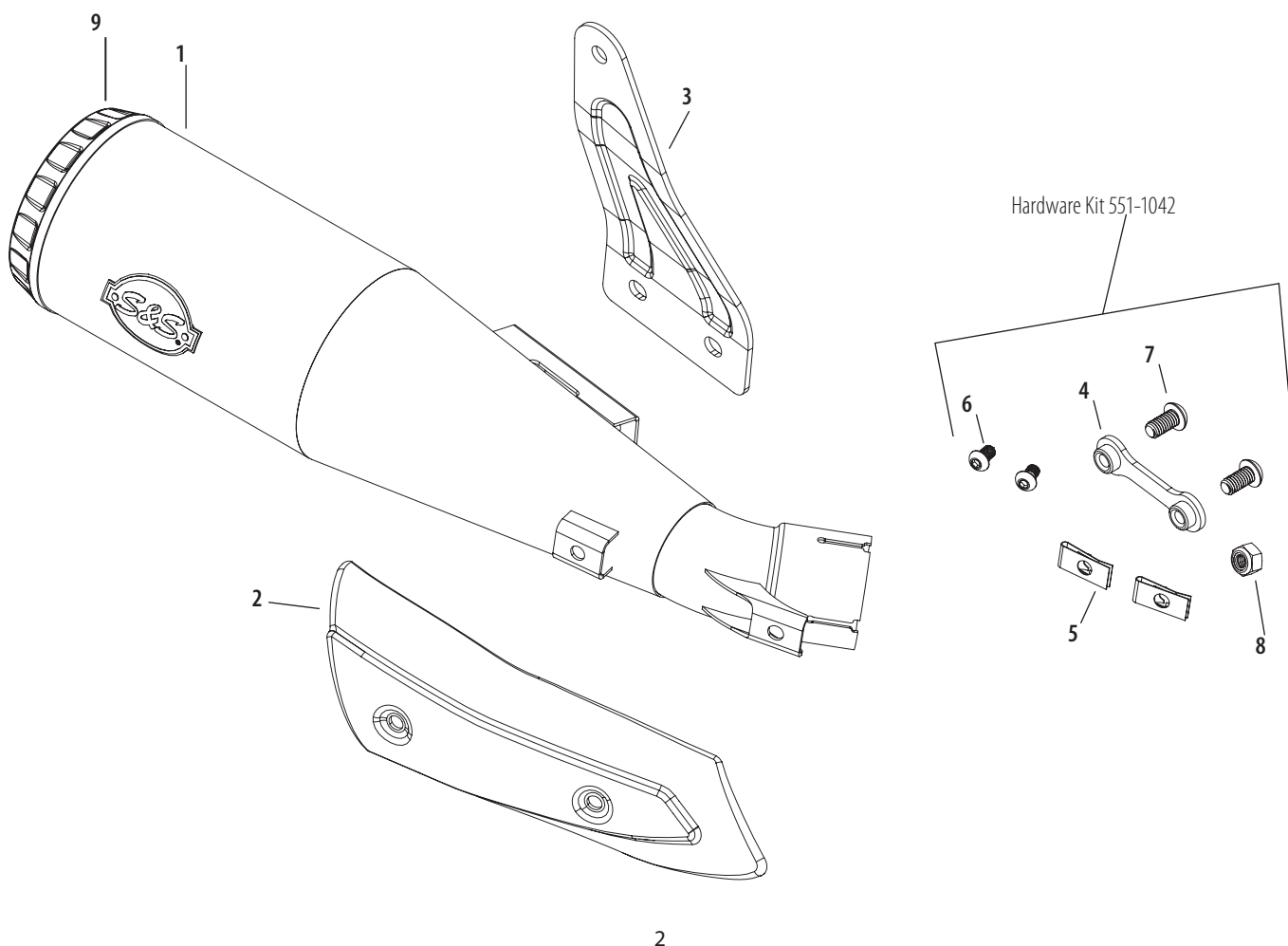
- 1. Muffler..... **551-1040** \$
- 2. Heat Shield ..... **551-0982**
- 3. Bracket..... **551-0987** \$

Hardware Kit (includes 4-8 below)..... **551-1042**

- 4. Plate, Nut, 5/16-18 x 2", Clear, Zinc ..... **551-0469**
- 5. Nut, Clip-On, 1/4-20, Zinc Plated ..... **500-0848**
- 6. Screw, BHC, 1/4-20 x 3/8", Stainless Steel..... **500-0846**
- 7. Screw, BHC, High Temp Lock Patch, 5/16-18 x 5/8", Stainless Steel...  
**500-1091**

- 8. Nut, Lock, Nylon Insert, M8 x 1.25mm x 13mm x 8mm, Stainless Steel  
**500-1100**

- 9. End cap ..... **551-0291**



Milwaukee-Eight®

2007-2017 Twin Cam  
96"/103"/110"

1999-2006  
Twin Cam 88®

1986-2019  
Sportster® & Buell®

2014-2019 Street® &  
Street Rod™

Indian® Models

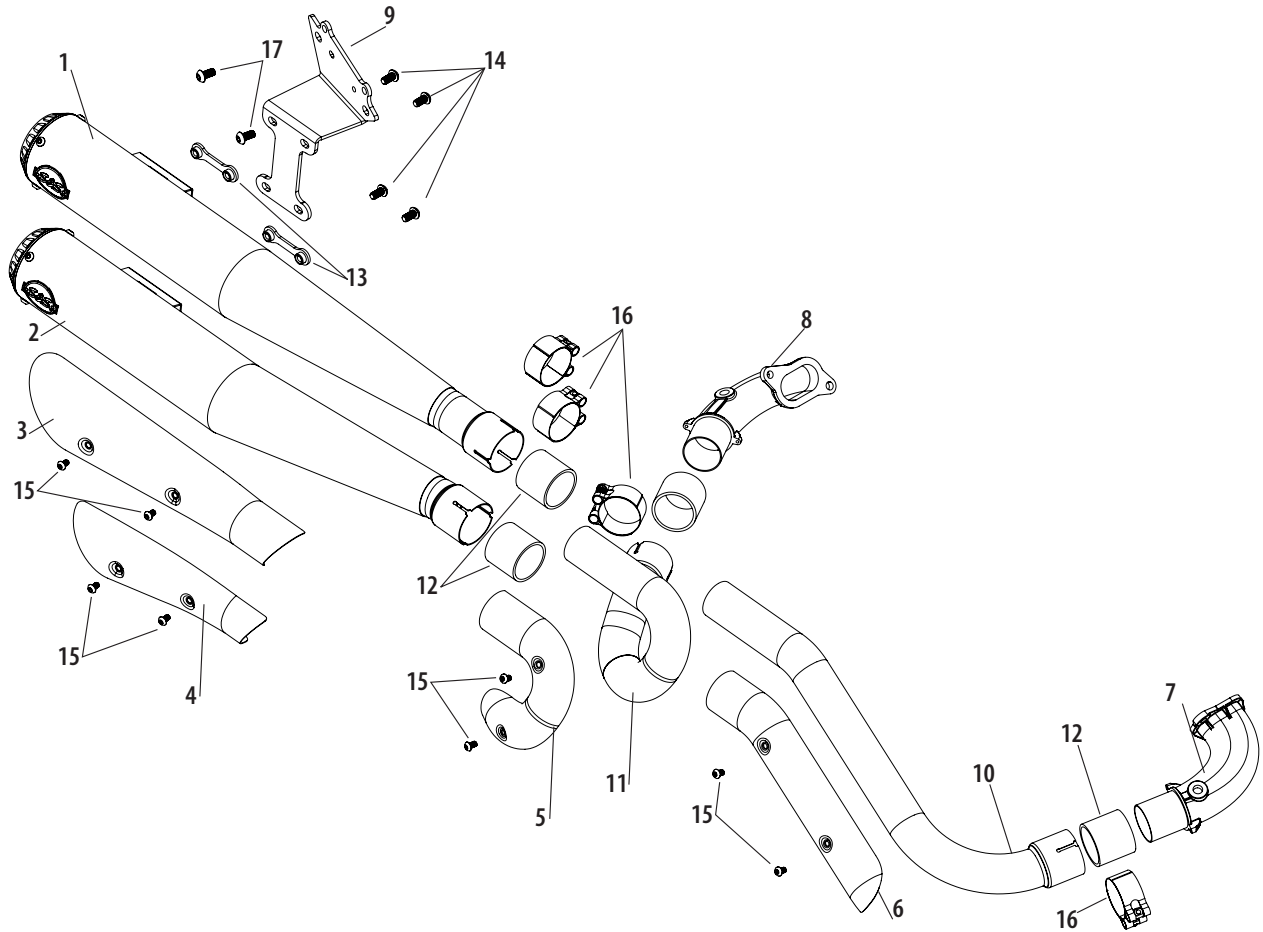
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# GRAND NATIONAL<sup>®</sup> 2:2 HIGH REPLACEMENT PARTS FOR INDIAN<sup>®</sup> FTR 1200<sup>®</sup>

- |  |                  |  |                 |
|--|------------------|--|-----------------|
| 1. Muffler Assembly, Top.....                  | <b>551-1165A</b> | 14. Screw, BHC, High Temp Lock Patch, 5/16-18 x 5/8",<br>Stainless Steel ..... | <b>500-1091</b> |
| 2. Muffler Assembly, Bottom .....              | <b>551-1166A</b> | 15. Screw, BHC, High Temp Lock Patch, M6 x 1 x 10mm,<br>Stainless Steel .....  | <b>500-1090</b> |
| 3. Heat Shield, Top .....                      | <b>551-1107A</b> | 16. Clamp, Band Style, 2.06" - 2.31" .....                                     | <b>551-1181</b> |
| 4. Heat Shield, Bottom.....                    | <b>551-1109A</b> | 17. Screw, BHC, M8 x 16mm, Stainless Steel.....                                | <b>500-1189</b> |
| 5. Heat Shield, Rear.....                      | <b>551-1111A</b> |  |                 |
| 6. Heat Shield, Front .....                    | <b>551-1113A</b> |  |                 |
| 7. Adapter, Front .....                        | <b>551-1068</b>  |  |                 |
| 8. Adapter, Rear.....                          | <b>551-1069</b>  |  |                 |
| 9. Mounting Bracket.....                       | <b>551-1114</b>  |  |                 |
| 10. Header, Front.....                         | <b>551-1119</b>  |  |                 |
| 11. Header, Rear.....                          | <b>551-1122</b>  |  |                 |
| 12. Gasket, Muffler.....                       | <b>551-1129</b>  |  |                 |
| 13. Plate, Nut, 5/16-18 x 2", Clear, Zinc..... | <b>551-0469</b>  |  |                 |





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# FLYWHEEL BALANCING KITS

## THE S&S® MASTER FLYWHEEL BALANCING KIT

Description	Part #
Designed to allow the average shop to rebalance stock and S&S flywheels accurately and quickly. Whether doing a stock rebuild or a performance upgrade using aftermarket parts, flywheel rebalancing is a desirable step in the engine building process. A complete set of detailed instructions is furnished with each kit. For flywheels with tapered crankpins only.	<b>53-0027</b>

### Replacement Parts

1. Balance, Triple Beam Platform	N/A
2. Replacement balance weight set, (1-500g 2-1000g)	<b>53-0021</b>
3. Balance shaft, 1936-'71 OHV bt and 1957-'71 xl	<b>53-0090</b>
4. Balance shaft nut (each)	<b>53-0092</b>
5. Balance stand (each)	<b>53-0088</b>
6. Rod support stand (each)	<b>53-0089</b>
7. Taper adapter, 1972-Early '81 bt (each)	<b>53-0086</b>
8. Taper adapter, Late 1981-'85 bt and S&S BL, SE, SL style (each)	<b>53-0087</b>
9. Shaft adapter, 1977-up xl driveside (screws on) (each)	<b>53-0093</b>
10. Shaft adapter, 1977-up xl camside (screws on) (each)	<b>53-0095</b>
11. Shaft adapter, 1955-'99 bt driveside (screws on) (each)	<b>53-0091</b>
12. Shaft adapter, 1958-'92 bt camside (LH, screws on) (each)	<b>53-0101</b>
13. Shaft adapter, 1993-'99 bt camside (RH, screws on) (each)	<b>53-0102</b>
14. Shaft adapter, counterweight (each)	<b>53-0099</b>
15. Collar spacer, 1970-'99 bt (each)	<b>53-0097</b>
16. Collar spacer, 1986-'90 driveside for xl - .280" (each)	<b>53-0098</b>
17. Collar spacer, 1991-up driveside for xl - .860" (each)	<b>53-0085</b>
18. Bob weight assembly, 1000 gram (each)	<b>53-0094</b>

### Repair parts for 53-0094

Screw SHC, 1/2" - 13 x 3/4"	Each	<b>50-0200</b>
Screw SHC, 1/2" - 13 x 1 1/4"	Each	<b>50-0201</b>

### 19. Shims

2.7 gram	Each	<b>53-0110</b>
5.4 gram	Each	<b>53-0105</b>
8.1 gram		<b>53-0115</b>
10.8 gram		<b>53-0120</b>
13.4 gram	Each	<b>53-0125</b>
50 gram		<b>53-0150</b>
100 gram 25566-06		<b>53-0100</b>

### 20. Shim Kit

Includes: Shims (2 each) 2.7, 5.4, 8.1, 10.8, and 13.4 grams & Shims (1 each) 50 grams and 100 grams	<b>53-0111</b>
--	----------------



## S&S® FLYWHEEL BALANCE KITS

<b>Master Balance Kit Without Balance Scale</b>	
Includes all parts in #53-0027, except balance & platform scales	<b>53-0028</b>
<b>Triple Beam Platform Balance Scale</b>	
(2610 grams\maximum) without weights	<b>53-0011</b>
<b>Flywheel Balance Kit For 5-Piece Cranks</b>	
For 5-Piece Crank	<b>53-0012</b>
Includes:	
3. Balance shaft	<b>53-0090</b>
4. Balance shaft nut	<b>53-0092</b>
5. Balance stand	<b>53-0088</b>
6. Rod support stand	<b>53-0089</b>
7. Taper adapter	<b>53-0086</b>
8. Taper adapter	<b>53-0087</b>
18. Bob weight 1000 gram	<b>53-0094</b>
19. Shims	



## NOTE

These balancing kits will not work with Harley-Davidson® Twin Cam 88® engines, 2000-up Sportster models, or any flywheel assemblies which use pressed-in crankpins.



# PRIMARY INNER BEARING RACE INSTALLATION TOOL

- Primary inner bearing race installation tool, with a roller thrust bearing that decreases the effort required to install a bearing race by 30%
- Attachment for the S&S Clutch Puller that allows easy removal of the primary inner bearing race
- All of these S&S tools are CNC machined from the finest 4140 tool steel and heat treated for maximum reliability and service life.



## PRIMARY INNER BEARING RACE INSTALLATION TOOL

Inner Primary Bearing Race Installer	<b>56-5145</b>
--------------------------------------	----------------

# TOP DEAD CENTER TOOL

- Easy to find the exact top dead center of any engine
- The best way to calibrate your degree wheel when dialing in cams or performing any number of checks and modifications based on the position of the crankshaft
- Available for engines with 14mm or 12mm spark plug holes.



### NOTE

Rocker covers must be removed when installing S&S compression releases. If lack of frame clearance prevents removal of rocker covers, engine must be removed from frame for compression release installation.

## S&S® TOP DEAD CENTER TOOL

Description	Part #
14mm	<b>53-0321</b>
12mm	<b>53-0322</b>

## S&S ROCKER COVER WRENCH SET

Helpful in areas where the motorcycle frame may prevent the use of conventional tools.

**53-0040**

## CONNECTING ROD CHECKING PINS

These pins are used to check alignment of connecting rods and wristpin bushings with crankcase cylinder decks.

.927" **53-0004**

## S&S COMPRESSION RELEASE SOCKET KIT

Allows in-frame installation of S&S compression releases and protects wiring from damage during installation.

**53-0045**

## MAIN JET TOOL

For changing main jets in all S&S carburetors using #72 series jets.

**53-0452**

Milwaukee-Eight®

2007–2017 Twin Cam  
96" / 103" / 110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

Tools &  
Shop Supplies

Warranty &  
Company Policy

Appendix

# BORING PLATE KITS FOR CYLINDER HEADS AND CRANKCASE

- Designed to simplify and reduce the time required to prepare crankcases and cylinder heads for S&S® Sidewinder® big bore kit installations
- Machined cast iron with precision ground working surfaces

## BORING PLATE KIT FOR 1936-'99 BIG TWIN AND 1986-'03 SPORTSTER® MODELS

Description	Part #
This boring plate kit has panhead and shovelhead head bolt patterns in one end. The other end is machined with the cylinder base patterns of 1936-'99 big twin engines, and 1986-'03 Harley-Davidson® Sportster models. Spacers are available for Evolution® engines which allow the cases to be bored without removing the cylinder studs (see below). Spacers are not included in this kit.	
Kit	<b>53-0006</b>
Boring plate (1)	<b>N/A</b>
Screw, 7/16" -20 x 1 1/4" Sockethead Cap	<b>50-0172</b>

## SPACERS FOR EVOLUTION CRANKCASES

Spacer part #53-0007 is required for 1986-'03 Sportster models. Spacers part #53-0007 and #53-0008 are both required for 1984-'99 big twin engines.

3 1/16" tall	<b>53-0007</b>
7/8" tall	<b>53-0008</b>

## BORING PLATE KIT FOR CRANKCASES & CYLINDERS FOR TWIN CAM 88° ENGINES

This boring plate kit is designed for boring stock crankcases of Harley-Davidson® Twin Cam 88° engines to accept S&S Super Sidewinder® 4" and 4 1/8" bore cylinders with stock cylinder stud pattern. A spacer is included with the kit which allows the cases to be bored without removing the cylinder studs.

Kit	<b>53-0035</b>
Boring plate	<b>53-0036</b>
Spacer, 3 3/4" tall	<b>53-0037</b>



**53-0006**



**53-0007**



**53-0008**



**53-0035**



# CYLINDER TORQUE PLATE KITS

## FITMENT

- 4.25 bore 2017–up touring models
- S&S 4 $\frac{1}{8}$ " bore
- 4" bore 1999–up big twin
- 3 $\frac{5}{8}$ " 1984–'99 big twin
- Harley-Davidson® Sportster® models in 3 $\frac{5}{8}$ " and 4" bore
- S&S X-Wedge® 4 $\frac{1}{8}$ " bore and 4 $\frac{1}{4}$ " bore\*

## FEATURES AND BENEFITS

- S&S torque plates can be used in conjunction with an S&S boring fixture and a conventional boring bar, and they can be readily adapted to a Sunnen® type honing machine.

## KIT CONTENTS

- Head end plate
- Base end plate
- Four long grade 8 socket head cap screws (holds the assembly together and supplies the pressure)
- Stop arm (keeps the cylinder and plates from turning while honing)

\*These torque plates are required to bore or hone X-Wedge cylinders. They have the X-Wedge five bolt pattern and are available for 4 $\frac{1}{8}$ " bore and 4 $\frac{1}{4}$ " bore cylinders.

## CYLINDER TORQUE PLATE REPLACEMENT PARTS

(See chart for specific part numbers.)

1. Base end torque plate
2. Head end torque plate
3. Stop arm
4. Torque bolts
5. Vise tab
6. Tab bolt



## S&S® CYLINDER TORQUE PLATE KITS AND REPLACEMENT PARTS

Bore Size	Case Bolt Pattern	Kit Part #	Head End Plate	Base End Plate	Stop Arm	Bolt 3/8"-24 x 6"	Bolt 7/16"-20 x 6"	Bolt 7/16"-20 x 7"	Bolt M10 x 1.5MM x 160MM	Vise Tab	Tab Bolt 5/16"-18 x 1"
4.25	2017– up M8	530-0038	530-0039	530-0044	53-0014	–	–	50-0192	–	53-0034	50-0108
4 $\frac{1}{8}$ " - 4 $\frac{1}{4}$ "	S&S® X-Wedge®	–	106-0837	106-0835	53-0014	106-0840	–	–	–	53-0034	50-0108
4 $\frac{3}{8}$ " - 4 $\frac{7}{16}$ "	S&S 4 $\frac{3}{8}$ " Pattern	53-0055	53-0056	53-0057	53-0014	–	–	50-0192	–	53-0034	50-0108
4 $\frac{1}{8}$ "	Stock 1999–up big twin	53-0054	106-3190	530-0060	53-0014	–	–	–	500-1053	53-0034	50-0108
4 $\frac{1}{8}$ "	S&S 4 $\frac{1}{8}$ " Pattern	53-0051	53-0052	53-0053	53-0014	–	50-0191	–	–	53-0034	50-0108
3.927" - 4"	Stock 1999–up big twin	–	–	53-0050	53-0014	–	–	50-0192	–	53-0034	50-0108
4"	S&S 4" Pattern	–	–	–	53-0014	–	50-0191	50-0192	–	53-0034	50-0108
3 $\frac{5}{8}$ "	1984–'99 big twin	53-0016	53-0017	53-0018	53-0014	–	–	50-0192	–	53-0034	50-0108
3 $\frac{5}{8}$ "	1984–'03 Sportster®	53-0016	53-0017	53-0018	53-0014	–	–	50-0192	–	53-0034	50-0108

S&S Cylinder torque plate kits are intended for aluminum cylinders including 1984–'99 Harley-Davidson® Evolution® big twin engines, 1986–'03 Sportster models, and 1999–up Twin Cam 88® engines.

## S&S® CYLINDER TORQUE PLATE KITS

Bore Size	Case Bolt Pattern	Part #
4.25	2017– up M8	530-0038
4 $\frac{3}{8}$ " - 4 $\frac{7}{16}$ "	S&S 4 $\frac{3}{8}$ " Pattern	53-0055
4 $\frac{1}{8}$ "	Stock 1999–up big twin	53-0054
4 $\frac{1}{8}$ "	S&S 4 $\frac{1}{8}$ " Pattern	53-0051
3 $\frac{5}{8}$ "	1984–'99 big twin	53-0016
3 $\frac{5}{8}$ "	1984–'03 Sportster®	53-0016

S&S Cylinder torque plate kits are intended for aluminum cylinders including 1984–'99 Harley-Davidson® Evolution® big twin engines, 1986–'03 Sportster models, and 1999–up big twin engines.

### HEAD END PLATE

Bore Size	Case Bolt Pattern	Part #	
4.25"	2017—up M8	<b>530-0039</b>	
4¼"	S&S® X-Wedge®	<b>106-0837</b>	
4¾"	S&S 4¾" Pattern	<b>53-0056</b>	
4½"	Stock 1999—up big twin	<b>106-3190</b>	
4½"	S&S 4½" Pattern	<b>53-0052</b>	
3½"	1984—'99 big twin	<b>53-0017</b>	
3½"	1984—'03 Sportster®	<b>53-0017</b>	

### BASE END PLATE

Bore Size	Case Bolt Pattern	Part #	
4.25"	2017—up M8	<b>530-0044</b>	
4¼"	S&S® X-Wedge®	<b>106-0835</b>	
4¾"	S&S 4¾" Pattern	<b>53-0057</b>	
4½"	Stock 1999—up big twin	<b>530-0060</b>	
4½"	S&S 4½" Pattern	<b>53-0053</b>	
4"	Stock 1999—up big twin	<b>53-0050</b>	
3½"	1984—'99 big twin	<b>53-0018</b>	
3½"	1984—'03 Sportster®	<b>53-0018</b>	

### STOP ARM

Bore Size	Case Bolt Pattern	Part #	
All	All	<b>53-0014</b>	

### BOLT ¾"-24 X 6"

Bore Size	Bore Size	Part #	
4¼"	S&S® X-Wedge®	<b>106-0840</b>	

### BOLT 7/16"-20 X 6"

Bore Size	Case Bolt Pattern	Part #	
4½"	S&S® 4½" Pattern	<i>Each</i>	<b>50-0191</b>
		<i>4 pack</i>	<b>50-0191P</b>
4"	S&S 4" Pattern	<i>Each</i>	<b>50-0191</b>
		<i>4 pack</i>	<b>50-0191P</b>

### BOLT 7/16"-20 X 7"

Bore Size	Case Bolt Pattern	Part #	
4.25"	2017—up M8	<i>Each</i>	<b>50-0192</b>
		<i>4 pack</i>	<b>50-0192P</b>
4¾"	S&S 4¾" Pattern	<i>Each</i>	<b>50-0192</b>
		<i>4 pack</i>	<b>50-0192P</b>
4"	Stock 1999—up big twin	<i>Each</i>	<b>50-0192</b>
		<i>4 pack</i>	<b>50-0192P</b>
4"	S&S 4" Pattern	<i>Each</i>	<b>50-0192</b>
		<i>4 pack</i>	<b>50-0192P</b>
3½"	1984—'99 big twin	<i>Each</i>	<b>50-0192</b>
		<i>4 pack</i>	<b>50-0192P</b>
3½"	1984—'03 Sportster®	<i>Each</i>	<b>50-0192</b>
		<i>4 pack</i>	<b>50-0192P</b>

### BOLT M10 x 1.5MM x 160MM

4½"	Stock 1999—up big twin	<i>Each</i>	<b>500-1053</b>
		<i>4 pack</i>	<b>500-1052</b>

### WISE TAB

Bore Size	Case Bolt Pattern	Part #
All	All	<b>53-0034</b>

### TAB BOLT 5/16"-18 X 1"

Bore	Case Bolt Pattern	Part #
All	All 3987	<i>Each</i> <b>50-0108</b>

## DEGREE WHEEL KIT

- Multipurpose S&S® degree wheel can be used to do ignition timing, crankcase breather timing, cam degreering, or you name it
- Designed to fit the sprocket shaft of any big twin or Harley-Davidson® Sportster® model simply by using the correct adapter provided
- Each kit also comes with a pointer which is held in place with the center crankcase bolt



**53-0020**

### S&S DEGREE WHEEL KIT

Description	Part #
Kit	<b>53-0020</b>
Adapter for Sportster® models (1 Each)	<b>53-0023</b>
Adapter for big twin (1 Each)	<b>53-0024</b>
Pointer (1 Each)	<b>53-0025</b>
Degree wheel and main adapter assembly (1 Each)	<b>53-0026</b>



# CRANKPIN NUT CLEARANCING GAUGES

- Designed to simplify and eliminate clearancing problems that may arise when installing stroker flywheels in stock big twin crankcases
- By painting the bosses to be clearanced and then placing the appropriate gauge on the main bearing race, the crankcases can be marked with a scribe in the proper hole for the stroke and style connecting rod crankpin nuts to be used—*quickly and precisely.*



## S&S® CRANKPIN NUT CLEARANCING GAUGES

Description	Part #
1958–'99 Big Twin Gauge	<b>53-0005</b>

# ANTI-ROTATION BRACKET

This handy bracket slides over the sprocket shaft splines of big twin engines and bolts to one of the primary bolt holes of the crankcase to keep the crank from rotating. It's like an extra set of hands while installing pistons and cylinders.



50-9870

Fitment	Part #
1970–2006 Big Twin (except '06 Dyna®)	<b>50-9870</b>
2007–up Big Twin, 2006 Dyna®	<b>530-0018</b>

# CRANKCASE OIL PASSAGE DRILLING JIG

## DRILL JIG IS USED TO DRILL...

- Primary chain oil supply passage from the breather valve gear cavity to the back side of the oil pump body on late generator and early alternator crankcases.
- Pressure relief passage from behind the main oil pressure valve to the gear cavity on alternator crankcases.
- Crankshaft and main bearings supply passage on generator crankcases.
- Crankshaft and main bearings supply passage on early alternator crankcases.

## S&S CRANKCASE OIL PASSAGE DRILLING JIG

Description	Part #
The S&S crankcase oil passage drilling jig is used to perform crankcase drilling modifications when installing an S&S oil pump assembly on early big twin crankcases. Made of hardened steel for durability, this fixture enables the builder to do four modifications.	<b>53-0013</b>



# TAPPET BLOCK ALIGNMENT TOOL

- Aligns tappet block so the tappet rollers run straight on the cam lobe to prevent camshaft wear



## S&S® TAPPET BLOCK ALIGNMENT TOOL

Description	Part #
Tool, Tappet Guide, Alignment	<b>530-0014</b>

# S&S® OIL

## FEATURES AND BENEFITS

- Ultimate protection
- Superior lubrication for reduced engine wear and lower oil temperatures
- Provides consistent viscosity, and resists thermal breakdown and oxidation at elevated temperatures
- Includes a oil drain plug oring for convenience

### S&S® OIL CHANGE KIT

Description	Part #
Harley-Davidson® big twin & Sportster® Models with Evolution® engines (using OEM filter #63796-77A, 63806-83, 63805-80A) 4 quarts of SAE 20W-50 Synthetic Engine Oil with chrome oil filter	<b>3601-0412</b>
Harley-Davidson® Twin Cam 88°/96™/103™/110™ engines (using OEM filter #63798-99, 63731-99A) 4 quarts of SAE 20W-50 Synthetic Engine Oil with chrome oil filter	<b>3601-0413</b>
2017-2019 Harley-Davidson® Models with Milwaukee-Eight® engine 5 quarts of SAE 20W-50 Synthetic Engine Oil with chrome oil filter	<b>3601-0492</b>



### S&S® OIL

Description	Part #
20W50 Synthetic, 1 quart	<b>3601-0407</b>
20W50 Synthetic, 2.5 Gallon	<b>3601-0408</b>
Primary, Synthetic, 1 quart	<b>3603-0044</b>
80W140 Gear, Synthetic, 1 quart	<b>3604-0007</b>
Chain/Gear, Synthetic, 1 quart	<b>3604-0008</b>

## OIL FILTERS

### FEATURES AND BENEFITS

- Captures smaller particles than stock filters
- Low restriction to oil flow
- Direct bypass —bypass oil does not pass over dirty filter media
- Smaller diameter for easier installation
- Black or chrome finish



### S&S® OIL FILTERS

Year Application	Micron Rating	QTY	Chrome	Black
1984-'99 Evolution®, 1986-'17 XL and 1991-'02 Buell®	30μ	each	<b>31-4102A</b> 63796-77A	<b>31-4101A</b> 63805-80A
		12 pack	<b>310-0240</b>	<b>310-0239</b>
1999-'17* Twin Cam 88°/96™/103™ and all X-Wedge®	10μ	each	<b>31-4104A</b> 63798-99A	<b>31-4103A</b> 63731-99A
		12 pack	<b>310-0242</b>	<b>310-0241</b>

\*Contains an anti-drain back valve

## CHAMPION® SPARK PLUGS



**55-1322**

### CHAMPION® SPARK PLUGS

Application	Size	QTY	Part #
Twin Cam 88°/96™/103™, Sportster®, X-Wedge® & S&S 4 1/8" bore engines Champion® #RA8HC	12mm Long Reach	each	<b>55-1320</b> 32317-86A, 32362-04
		2 pack	<b>55-1322</b> 32317-86A, 32362-04
Evolution®, Vintage Models (SH-Series, Iron XL, KN-Series, P-Series) & S&S 3 3/8" & 4" bore engines Champion® #RN12YC	14mm Long Reach	each	<b>55-1321</b> 32342-04, 32311-83
		2 pack	<b>55-1323</b> 32342-04, 32311-83

# JETS & CARB REBUILD KITS FOR S&S SUPER E & G CARBURETORS

For those who need to rejet their carburetor because of engine modifications, exhaust modifications, or changes in altitude, we have extra jet kits available which are designed to cover most jetting situations.

## DEALER JET KITS

Description	Part #
S&S Jet Kit (Includes 3 each of all intermediate jets and 5 each of all main jets, plus a main jet tool)	<b>11-3102</b>

WARNING: Cancer and Reproductive Harm –

## JET PACKS

Description	Part #
Low Range Jet Pack – For jetting most stock and moderate performance engines.	

Includes one each intermediate jets (.025", .0265", .028", .0295") one each main jets (.062", .064", .066", .068", .070", .072", .074").

**11-7270**

High Range Jet Pack – For jetting some stock and all performance engines.

Includes one each intermediate jets (.0295", .031", .032", .033") and one each main jets (.072", .074", .076", .078", .080", .082", .084").

**11-7271**

Master Jet Pack – For jetting all Super B, E, and G equipped engines.

Includes one each intermediate jets (.025", .0265", .028", .0295", .031", .032", .033") and one each main jets (.062", .064", .066", .068", .070", .072", .074", .076", .078", .080", .082", .084").

**11-7272**

WARNING: Cancer and Reproductive Harm

## INTERMEDIATE JETS - SERIES #94 INDIVIDUAL SELECTION

Size	QTY	Part #	Size	QTY	Part #
.025	each	<b>11-0250</b>	.032	each	<b>11-0320</b>
	3 pack	<b>11-7107</b>		3 pack	<b>11-7112</b>
.0265	each	<b>11-0265</b>	.033	each	<b>11-0330</b>
	3 pack	<b>11-7108</b>		3 pack	<b>11-7113</b>
.028	each	<b>11-0280</b>	.036	each	<b>11-0360</b>
	3 pack	<b>11-7109</b>		3 pack	<b>11-7114</b>
.0295	each	<b>11-0295</b>	.040	each	<b>11-0400</b>
	3 pack	<b>11-7110</b>		3 pack	<b>11-7115</b>
.031	each	<b>11-0310</b>	Blank	each	<b>11-0000</b>
	3 pack	<b>11-7111</b>			

WARNING: Cancer and Reproductive Harm

Early Series #94 gas jets were stamped with single digit numbers. Conversions for these numbers are:

- |            |            |
|------------|------------|
| 1.....025" | 4.....033" |
| 2.....028" | 5.....036" |
| 3.....031" | 6.....040" |



**11-3102<sup>±</sup>**



**11-7272<sup>±</sup>**



**106-3517<sup>±</sup>**

## NOTES

No returns or exchanges on jets.

Milwaukee-Eight<sup>™</sup>

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88<sup>™</sup>

1986–2019  
Sportster<sup>™</sup> & Buell<sup>™</sup>

2014–2019 Street<sup>™</sup> &  
Street Rod<sup>™</sup>

Indian<sup>™</sup> Models

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### MAIN JETS - SERIES #72 INDIVIDUAL SIZE SELECTION<sup>±</sup>

Size	QTY	Part #	Size	QTY	Part #
.040	each	<b>11-4040</b>	.080	each	<b>11-4080</b>
	5 pack	<b>11-7220</b>		5 pack	<b>11-7240</b>
.042	each	<b>11-4042</b>	.082	each	<b>11-4082</b>
	5 pack	<b>11-7221</b>		5 pack	<b>11-7241</b>
.044	each	<b>11-4044</b>	.084	each	<b>11-4084</b>
	5 pack	<b>11-7222</b>		5 pack	<b>11-7242</b>
.046	each	<b>11-4046</b>	.086	each	<b>11-4086</b>
	5 pack	<b>11-7223</b>		5 pack	<b>11-7243</b>
.048	each	<b>11-4048</b>	.088	each	<b>11-4088</b>
	5 pack	<b>11-7224</b>		5 pack	<b>11-7244</b>
.050	each	<b>11-4050</b>	.090	each	<b>11-4090</b>
	5 pack	<b>11-7225</b>		5 pack	<b>11-7245</b>
.052	each	<b>11-4052</b>	.092	each	<b>11-4092</b>
	5 pack	<b>11-7226</b>		5 pack	<b>11-7246</b>
.054	each	<b>11-4054</b>	.094	each	<b>11-4094</b>
	5 pack	<b>11-7227</b>		5 pack	<b>11-7247</b>
.056	each	<b>11-4056</b>	.096	each	<b>11-4096</b>
	5 pack	<b>11-7228</b>		5 pack	<b>11-7248</b>
.058	each	<b>11-4058</b>	.098	each	<b>11-4098</b>
	5 pack	<b>11-7229</b>		5 pack	<b>11-7249</b>
.060	each	<b>11-4060</b>	.100	each	<b>11-4100</b>
	5 pack	<b>11-7230</b>		5 pack	<b>11-7250</b>
.062	each	<b>11-4062</b>	.102	each	<b>11-4102</b>
	5 pack	<b>11-7231</b>		5 pack	<b>11-7251</b>
.064	each	<b>11-4064</b>	.104	each	<b>11-4104</b>
	5 pack	<b>11-7232</b>		5 pack	<b>11-7252</b>
.066	each	<b>11-4066</b>	.106	each	<b>11-4106</b>
	5 pack	<b>11-7233</b>			
.068	each	<b>11-4068</b>	.110	each	<b>11-4110</b>
	5 pack	<b>11-7234</b>		5 pack	<b>11-7255</b>
.070	each	<b>11-4070</b>	.115	each	<b>11-4115</b>
	5 pack	<b>11-7235</b>		5 pack	<b>11-7256</b>
.072	each	<b>11-4072</b>	.120	each	<b>11-4120</b>
	5 pack	<b>11-7236</b>		5 pack	<b>11-7257</b>
.074	each	<b>11-4074</b>			
	5 pack	<b>11-7237</b>			
.076	each	<b>11-4076</b>			
	5 pack	<b>11-7238</b>			
.078	each	<b>11-4078</b>			
	5 pack	<b>11-7239</b>			

<sup>±</sup>  WARNING: Cancer and Reproductive Harm

### MAIN JET AIR BLEED KIT<sup>±</sup> (One Jet Each Size)

Sizes	Part #
.042" - .060"	<b>106-3517</b>
.084" - .120"	<b>106-3518</b>

<sup>±</sup>  WARNING: Cancer and Reproductive Harm



### S&S® CARBURETOR REBUILD KITS

To insure that you continue to get the utmost in performance from your S&S carburetor, we have put together a series of rebuild kits that are designed to provide the proper parts to return a worn carburetor to top shape. We have assembled different types of kits to cover the different degrees of rebuild necessary.

#### MASTER REBUILD KITS

Master rebuild kits contain a body rebuild kit, accelerator pump rebuild kit (Super E and G only), all new fasteners, springs, idle mixture screw, seat, and needle assembly. Everything needed to completely rebuild one carburetor.

#### MASTER REBUILD KIT<sup>±</sup>

Description	Part #
Super E	<b>11-2923</b>
Super G	<b>11-2924</b>

<sup>±</sup>  WARNING: Cancer and Reproductive Harm

#### BODY REBUILD KITS

Body rebuild kits for Super E and G carbs also contain throttle shaft nuts, nylon washers, accelerator pump o-ring, and accelerator pump boot. Body rebuild kits for Super E and G carbs do not contain throttle shaft bushings since these carbs have stainless steel throttle shaft bushings already installed.

#### BODY REBUILD KIT<sup>±</sup>

Description	Part #
Super E	<b>11-2906</b>
Super G	<b>11-2907</b>



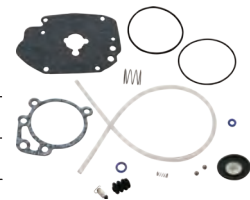
<sup>±</sup>  WARNING: Cancer and Reproductive Harm

#### BASIC REBUILD KIT

A gasket and seal kit for low mileage Super E & G carbs. Perfect to reassemble carbs taken apart for inspection and cleaning.

#### BASIC REBUILD KIT<sup>±</sup>

Description	Part #
Super E & G	<b>110-0067</b>



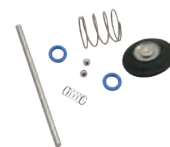
<sup>±</sup>  WARNING: Cancer and Reproductive Harm

#### ACCELERATOR PUMP REBUILD KITS

Accelerator pump rebuild kits contain diaphragm, diaphragm spring, check balls, check ball spring, pump pushrod, and required hardware and o-rings.

#### ACCELERATOR PUMP REBUILD KIT

Description	Part #
Super E & G	<b>11-2918</b>



#### FUEL LINE KIT

Fuel Line Kit for Super E and G Carburetors p/n 190-0005<sup>±</sup>

#### FUEL LINE KIT

Description	Part #
Fuel Line, Kit, Carb, Super E/G, Swivel Retrofit	<b>190-0005<sup>±</sup></b>
Fuel Line, .311" x .563" x 17.5", SAE 30R14 (replacement fuel line only)	<b>190-0001</b>

<sup>±</sup>  WARNING: Cancer and Reproductive Harm



# TOUCH UP PAINT, LUBRICANT AND SEALANTS



106-3023



51-9000



51-9009



51-9002



500-0143

## TOUCH UP PAINT

Description	Part #
S&S touch up paint is included with each powdercoated S&S engine, but it's handy to have a spare! Keep one in the shop and one in your saddle bag. Sold in ½ oz. bottles with applicator cap.	
Wrinkle Black ½ oz, matte finish (used after April 2009)*	510-0053
Silver ½ oz	106-3023
Stone Gray ½ oz	510-0350

\*NOTE: Wrinkle Black (51-9001) has a slightly glossy finish. Wrinkle Black (510-0053) has a matte finish with no gloss.

## LUBRICANT AND SEALANTS

Use what the pros use! S&S assembles a lot of engines and customers often ask what sealants and lubricants we use. We recommend and use the following:

### Torco® Engine Assembly Lube

Protect engine components during assembly and initial start up!

4 oz. Bottle	51-9000
1 oz. Tube	51-9002

### Gasgacinch® Gasket Sealer

4 oz. (118ml) Can	51-9009
-------------------	---------

### ThreeBond® Liquid Gasket 1194

Great for sealing crankcases! 3.5 oz. (100g) Tube	500-0143
--	----------

# ENGINE STANDS

- An economical way to hold an engine on the work bench, for shipping, or for display
- Constructed of heavy gauge stamped steel with "S&S" laser cut in both ends
- Durable blue powder coat finish gives the stands a professional appearance that is suitable for display and protects them from corrosion and minor abrasions
- Exclusively for M8:
  - Designed to fit both touring and Softail® models, in one!
  - Unique "drop-in" design allows for safe and easy mounting



## S&S® ENGINE STANDS

Application	Part #
M8 touring & 2018–2020 Softail® models	530-0068
2000–'17 balanced big twin	53-0145
1999–'17 unbalanced big twin	53-0143
1936–'99 big twin	53-0141
S&S X-Wedge®	53-0147

# DEALER SERVICE KIT FOR STREET LEGAL EXHAUST



DEALER SERVICE KIT ..... 510-0684 .....\$28.67

(Includes S&S proprietary tamper-proof bit (**available only to dealers**) and spare fasteners. Provides everything necessary to perform any required service or end cap replacement.)

Milwaukee-Eight®

2007–2017 Twin Cam  
96"/103"/110"

1999–2006  
Twin Cam 88®

1986–2019  
Sportster® & Buell®

2014–2019 Street® &  
Street Rod™

Indian® Models

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# LIMITED WARRANTY STANDARD PARTS

## WHO IS COVERED BY THIS WARRANTY?

This warranty covers only the original Consumer Purchaser of these parts and is not transferable.

## WHAT DOES THIS WARRANTY COVER?

S&S® Cycle, Incorporated (the “Company”) warrants these parts to be free from defects in material and workmanship. If the parts become defective during the warranty coverage period, the Company will, at its option, repair or replace any, or all, defective parts. Repair or replacement of defective parts is the sole and exclusive remedy.

## HOW LONG IS THE WARRANTY COVERAGE?

With the exception of electrical and electronic components, the warranty coverage remains in force for a period of twelve (12) months from the date that the original Consumer Purchaser buys the parts. Electrical and electronic components are covered by a warranty duration of six (6) months. However, warranty coverage will automatically terminate if the original Purchaser sells or otherwise transfers all or any portion of the purchased parts.

## WHAT IS NOT COVERED BY THIS WARRANTY?

The Company shall not pay or be responsible for the cost of shipping the defective parts to the Company for service under this warranty, nor will the Company pay for the cost of labor to remove and/or replace the defective parts.

Moreover, the Company shall have no obligation under this warranty in the event that the parts become defective in whole or in part as a result of improper assembly, installation, break-in, maintenance, or use, or any other misuse or mistreatment of the parts, including, without limitation, operation of the parts with fuels, oils or lubricants not conforming to specifications published by the Company or continued operation of the parts after a defect or malfunction occurs or is identified or suspected.

The Company shall have no obligation under this warranty for defects in parts with a powdercoat finish, when that option is selected, if the defects are caused by, but not limited to, negligence of parties other than the Company; an accident; ordinary wear and tear; assembly or disassembly; power washing; natural occurrences like stone chips; bead blasting; improper maintenance including the use of any harsh cleaning agent, chemical or solvent; and salt or other substances used on streets and highways for maintenance and safety.

The Company provides touch-up paint with powdercoated parts. It is the customer’s responsibility to repair minor finish damage to prevent or inhibit further deterioration.

It is the responsibility of the original Consumer Purchaser to cease operation as soon as a defect or malfunction is identified or suspected. The failure to cease operation once a defect or malfunction exists can cause substantial damage to the Company’s parts that could otherwise be avoided.

In addition, the Company shall have no obligation under this warranty for parts defects caused by alteration including, but not limited to, polishing; powdercoating; painting; removing or reconfiguring any components; modification, repair, or unauthorized service.

The Company shall have no obligation under this warranty if the parts are used in racing or similar competitive activities. The Company shall have no obligation under this warranty when a competition application, including but not limited to a turbocharger, supercharger or nitrous oxide, is used with the Engine. Further, the Company shall have no obligation under this warranty for any parts that are included in a Competition Package Option offered by the Company since the Package is for use in racing and similar competitive activities.

**THE COMPANY SHALL NOT BE LIABLE FOR AND DISCLAIMS ALL CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR SPECIAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE, THESE PARTS.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

Milwaukee-Eight®

2007–2017 Twin Cam  
96™/103™/110™1999–2006  
Twin Cam 88®1986–2019  
Sportster® & Buell®2014–2019 Street® &  
Street Rod™

Indian® Models

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# APPENDIX

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# IDENTIFICATION OF FLYWHEELS

S&S® flywheels are manufactured in sets only. We do not sell individual right or left flywheels, nor do we recommend mixing flywheels. This is because the manufacturing techniques and/or tooling changes periodically.

To prevent mixing flywheels, as well as to identify each set, the right and left flywheels are stamped with identical serial numbers (see picture).

## Serial Number Identification Information

Serial Number ID, B01810-3SLX, deciphered as follows:

- (B01810)** Serial Number: From this number, S&S can determine when the flywheels were made and sold, to whom they were sold, and how the flywheels were originally balanced
- (3)** Stroke Code: Determines the stroke of the flywheels. In this case the stroke is 4¾"
- (SL)** Year Code: The year of the engine the flywheels were machined to fit and that the flywheels were machined to accept an S&S design sprocket shaft
- (X)** Diameter Code: Diameter of the flywheels. In this case the diameter is 8¼"



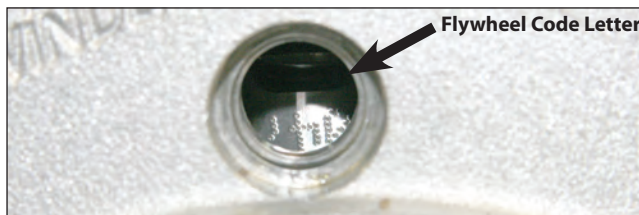
## S&S® FLYWHEEL IDENTIFICATION CODES FOR 1936–UP BIG TWIN

Stroke Code	Stroke	Year Code	Engine Year	Sprocket Shaft	Pinion Shaft	Crankpin Type	Diameter Code	Flywheel Diameter
1	4¾"	E	1936–'54	Stock	Stock	1941–'81	None	8½" (Stock)
2	4½"	L	1955–'71	Stock	Stock	1941–'81	A	8¾"
3	4¾"	AL	1972–Early '81	Stock	Stock	1941–'81	X	8¼"
4	5"	SE	1955–Early '81	S&S	Stock	1941–'81		
5	4¼" (Stock 80")	BL	Late 1981–'99	Stock	Stock	1981–'99		
6	4⅝"	SL	Late 1981–'99	S&S	Stock	1981–'99		
9	Special order	SF	1999–up	Press In	Press In	Press In		
12	5¼"	SG	S&S 4⅞" Bore	Press In	Press In	Press In		
13	3½" (Stock 61")	SM	1995–'99 EFI	Press In	S&S	1981–'99		
14	3⅜½" (Stock 74")	Y	74"/80" Indian®	Stock	Stock	Stock		
16	5⅝"							
17	4"							
18	3⅝"							
19	4⅞"							
TA	3⅞"							
TB	4450"	Titan Special						

## FLYWHEEL CODES:

Codes that pertain to the most common regular production flywheels have been listed. Many other codes for racing flywheels and special orders also exist. If you have a question about a set of S&S flywheels with codes different than those shown, contact an S&S technical assistant to properly identify what you have.

Flywheel ID codes that end with an "A" or an "X" designate flywheels with a smaller than stock diameter. Stock big twin flywheels measure 8½", and stock flywheels for Harley-Davidson® Sportster® models are 7⅞" in diameter. Typically, "A" means ⅛" smaller, and "X" means ¼" smaller. To verify the code, it is best to measure the flywheels.



Serial numbers can be seen through the timing hole to identify the stroke of an assembled engine. Keep in mind they will appear upside down in the hole.

## S&S® FLYWHEEL IDENTIFICATION CODES FOR HARLEY-DAVIDSON® SPORTSTER® & BUELL® MODELS

Stroke Code	Stroke	Year Code	Engine Year	Sprocket Shaft	Pinion Shaft	Crankpin Type	Rod Bearing Type	Diameter Code	Flywheel Diameter
1	4⅞"	None	1957–'76	Stock	Stock	Stock	Stock	None	7⅞" (Stock)
2	4⅜"	B	1957–Early '81	Stock	Stock	Stock	Stock	A	7¾"
3	4⅞"	SB	1957–Early '81	S&S	Stock	Stock	Stock	X	7⅝"
4	4⅞"	BD	1957–Early '81	Stock		Stock	Stock		
6	4⅝"	SBD	1977–Early '81	S&S		Stock	Stock		
7	4⅜"	C*	Late 1981–'85	Stock	Stock	Stock	Stock		
8	5"	SC	Late 1981–'85	S&S	Stock	Stock	Stock		
9	Special Order	SCD	Late 1981–'85	S&S		Stock	Stock		
11	4½"	SCR	Late 1981–'85	S&S	Stock	Stock	1987–Up		
12	5¼"	SCDR	Late 1981–'85	S&S		Stock	1987–Up		
15	3⅜"	D	Late 1986–'03	S&S	S&S	S&S	S&S		
16	5⅝"	DR	Late 1986–'03	S&S	S&S	S&S	1987–Up		
17	4"	PS	S&S Prostock	Press In	Press In	Press In			
18	3⅝"	KRS	45" WR/KR	Stock	Stock	1957–'81 XL	1957–'81 XL		
19	4⅞"	YS	45" Indian	Stock	Stock	Stock	Stock		

\* Obsolete – S&S no longer makes this design



# ORDERING S&S<sup>®</sup> MANIFOLDS

We make one style of manifolds for both Harley-Davidson<sup>®</sup> Evolution<sup>®</sup> and Twin Cam 88<sup>®</sup> engines to fit stock cylinder heads and S&S cylinder heads—meaning manifolds supplied in S&S carburetor kits can be used with stock or S&S Super Stock<sup>®</sup> cylinder heads. The only thing that you have to keep in mind is that due to the slightly larger port diameter, these manifolds must be used with S&S manifold seals.

## Replacement & Special Order Intake Manifolds

**Stock, S&S Engine or S&S Kit:** To order a replacement manifold, refer to the manifold size chart for your particular engine type. Manifolds are listed for various sized carburetors and throttle bodies in the correct lengths for engines and kits offered by S&S.

**Custom Engine:** If the effective cylinder length is different from the standard offerings, a special manifold can be machined to your specifications. Order manifolds using the special order part numbers listed in the charts. Allow two weeks for delivery.

## Specifying Manifold Length

When ordering a special manifold, specify the length of the manifold required for your application. There are several methods to specify the length of a manifold:

### Port-To-Port Distance: S&S Manifold Measuring Tools

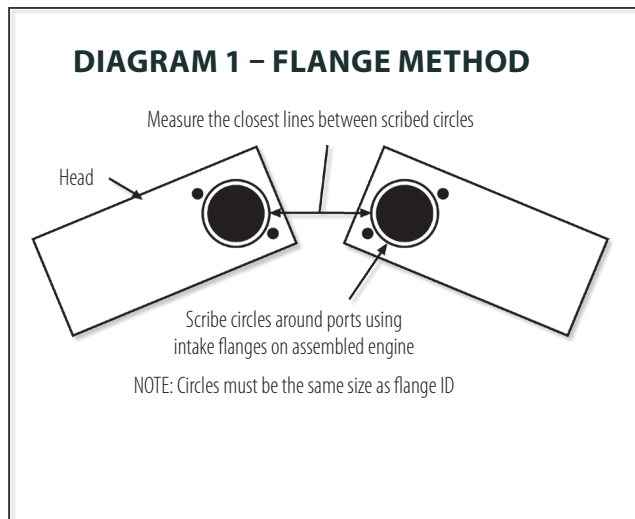
The most accurate method for specifying length for a special order manifold:

- Use the S&S Manifold Measuring Tools to measure port-center to port-center distance on an engine or an existing manifold.
- Specify whether the measurement was from an engine or from an existing manifold. (Manifold measurements will be approximately 0.30" shorter than engine measurements due to clearance normally built into the manifold).

### Port-To-Port Distance: Flange Method

Another accurate method of specifying manifold length for special order is to measure the port-to-port distance on an assembled or mock-up engine:

- Assemble or mock-up the engine & install the intake flanges on heads
- Scribe a circle around the port using the mounting flange as a template. The circle must be the same size as the ID of the flange. (It is recommended that front flange be installed upside down on the rear head and vice versa, to avoid inaccuracy in the circle diameter).
- Remove the flanges and measure the shortest distance between the scribed circles. See Diagram 1.



## Effective Cylinder Length

Ordering a special manifold by effective cylinder length is commonly used since it does not require any special tools, however, this method will not account for machining inaccuracy in the cases or heads.

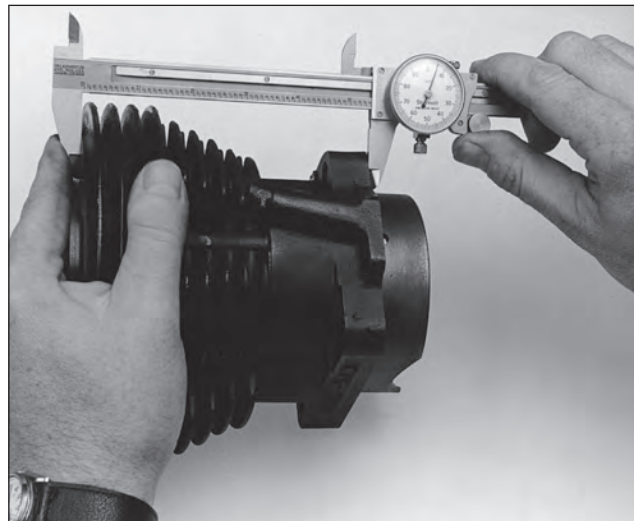
- Measure the cylinder length from gasket-surface to gasket-surface without the head and base gaskets in place. (A precision measuring instrument, such as a dial caliper, should be used to insure accurate results).
- If all components except the cylinder are stock, the actual cylinder length and the effective cylinder length are equal. However, if base plates will be used under the cylinders or if the crankcase deck height is taller than stock, the thickness of the base plates and any extra base gaskets, or the change in deck height must be added to the cylinder length to determine the effective cylinder length.
- If the cylinder heads have been decked to increase compression, the amount they have been shortened must be subtracted from the effective cylinder length.
- If the effective cylinder length is equal to or no more than 0.30" longer than the cylinder length listed for a specific manifold in a chart, that manifold will fit the engine.
- If the effective cylinder length is significantly different from any manifold that is available, the manifold must be special ordered. (When placing an order for a special manifold by effective cylinder length, you will be asked for actual dimensions of the cylinders and other components. S&S will calculate the effective cylinder length).

## Manifold Size Number

Specifying the length of a special order manifold by size number has proven not to be a reliable method. Many manifolds ordered by this method have proved to be too long because the customer took a size number from a part that had been shortened and no longer matched the original specifications. Manifolds ordered by size number are not returnable because of fitment problems.

## Manifolds For Panhead & Knucklehead Engines

Port-to-port measurement is easy since the ports are parallel to each other. On an assembled or mocked up engine, a measurement from head-to-head on opposite sides of each port should ideally be taken before the head bolts and base nuts are tightened. To insure that the ports are parallel, the heads and cylinders should be positioned so both measurements are equal. A precision measuring instrument, such as a dial caliper, should be used to ensure accurate results.



# YEAR CODES FOR OUR SERIALIZED PRODUCTS

S&S serial numbers begin with the following manufacturing year codes Year codes coincide with S&S Cycle's fiscal year, which starts on Oct 1st of the previous calendar year A product with serial number beginning with the letter "A" was manufactured in fiscal year 1978, between 10-01-77 and 09-31-78, or in the fiscal year 2000

<b>A</b> .....	<b>1978</b>	<b>R</b> .....	<b>1992</b>	<b>I</b> .....	<b>.NOT USED</b>
<b>B</b> .....	<b>1979</b>	<b>S</b> .....	<b>1993</b>	<b>J</b> .....	<b>2008</b>
<b>C</b> .....	<b>1980</b>	<b>T</b> .....	<b>1994</b>	<b>K</b> .....	<b>2009</b>
<b>D</b> .....	<b>1981</b>	<b>U</b> .....	<b>1995</b>	<b>L</b> .....	<b>2010</b>
<b>E</b> .....	<b>1982</b>	<b>V</b> .....	<b>.NOT USED</b>	<b>M</b> .....	<b>2011</b>
<b>F</b> .....	<b>1983</b>	<b>W</b> .....	<b>1996</b>	<b>N</b> .....	<b>2012</b>
<b>G</b> .....	<b>1984</b>	<b>X</b> .....	<b>1997</b>	<b>O</b> .....	<b>.NOT USED</b>
<b>H</b> .....	<b>1985</b>	<b>Y</b> .....	<b>1998</b>	<b>P</b> .....	<b>2013</b>
<b>I</b> .....	<b>.NOT USED</b>	<b>Z</b> .....	<b>1999</b>	<b>Q</b> .....	<b>.NOT USED</b>
<b>J</b> .....	<b>1986</b>	<b>A</b> .....	<b>2000</b>	<b>R</b> .....	<b>2014</b>
<b>K</b> .....	<b>1987</b>	<b>B</b> .....	<b>2001</b>	<b>S</b> .....	<b>2015</b>
<b>L</b> .....	<b>1988</b>	<b>C</b> .....	<b>2002</b>	<b>T</b> .....	<b>2016</b>
<b>M</b> .....	<b>1989</b>	<b>D</b> .....	<b>2003</b>	<b>U</b> .....	<b>2017</b>
<b>N</b> .....	<b>1990</b>	<b>E</b> .....	<b>2004</b>	<b>V</b> .....	<b>.NOT USED</b>
<b>O</b> .....	<b>.NOT USED</b>	<b>F</b> .....	<b>2005</b>	<b>W</b> .....	<b>2018</b>
<b>P</b> .....	<b>1991</b>	<b>G</b> .....	<b>2006</b>	<b>X</b> .....	<b>2019</b>
<b>Q</b> .....	<b>.NOT USED</b>	<b>H</b> .....	<b>2007</b>	<b>Y</b> .....	<b>2020</b>

## OLDER S&S® CARBURETOR REPLACEMENT PARTS

When ordering parts for older S&S carburetors, it is necessary to determine the correct style of float, needle and bowl S&S has used two different mechanisms to connect the float to the inlet needle

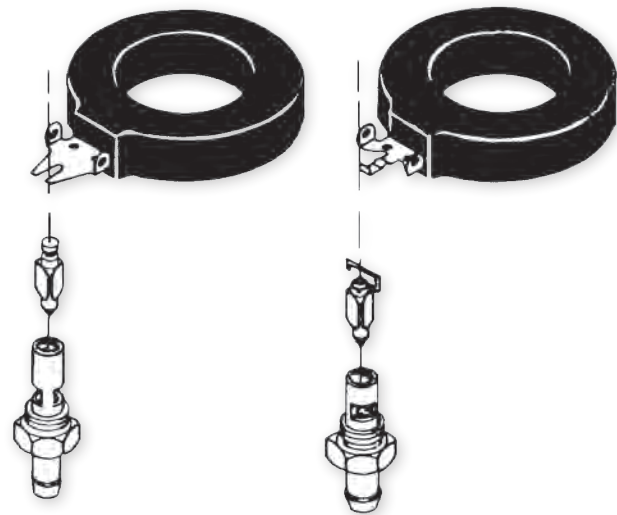
**Forked Mechanism:** Older style that utilizes a forked float tang, which slides into a slot in the top of the needle

**Wire Mechanism:** Current style that features a needle with a wire hook which attaches to the tang of the float

Parts of differing styles may not be used together For example, although the carburetor bowls of the two styles look very similar, they are not interchangeable due to differences in the float retaining pin position Some parts are no longer available for carbs with forked style mechanisms If these parts must be replaced, the entire bowl assembly must be replaced with wire mechanism style components

**FORKED TYPE MECHANISM  
(OBSOLETE)**

**WIRE TYPE MECHANISM**



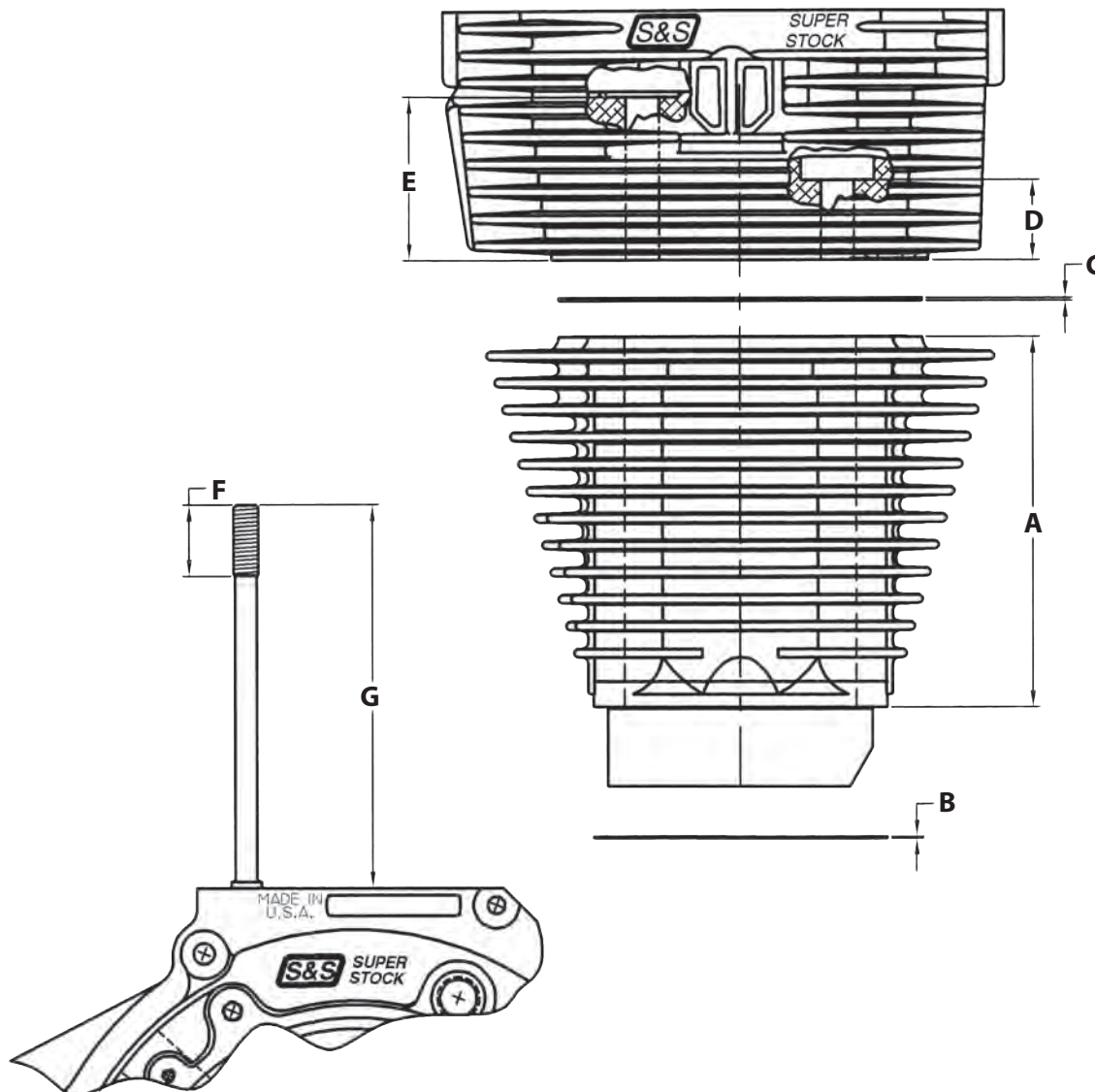
# CALCULATING CUSTOM HEAD BOLT LENGTHS

## Add:

- A** Cylinder Length  
(Gasket surface to gasket surface measurement)
- + B** Base Gasket Thickness
- + C** Head Gasket Thickness
- + D or E** Cylinder Head Thickness  
(Gasket surface to head bolt washer pad measurement:)
- D** Short Side  
All S&S = 1.207"  
Late 1985-'90 Stock = 1.207"  
1991-up Stock = 1.405"
- E** Long Side  
All S&S = 2.700"  
All Stock = 2.700"
- + F** Desired thread engagement .563"  
Usually 1½ times stud diameter - stock studs are ⅜"

## Subtract:

- G** Cylinder Stud Installed Height  
(Crankcase deck to top of stud measurement)



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