



CAR LINE ▶8

BAG-IN-BOX
Flexibility
and more

REPORT ▶14

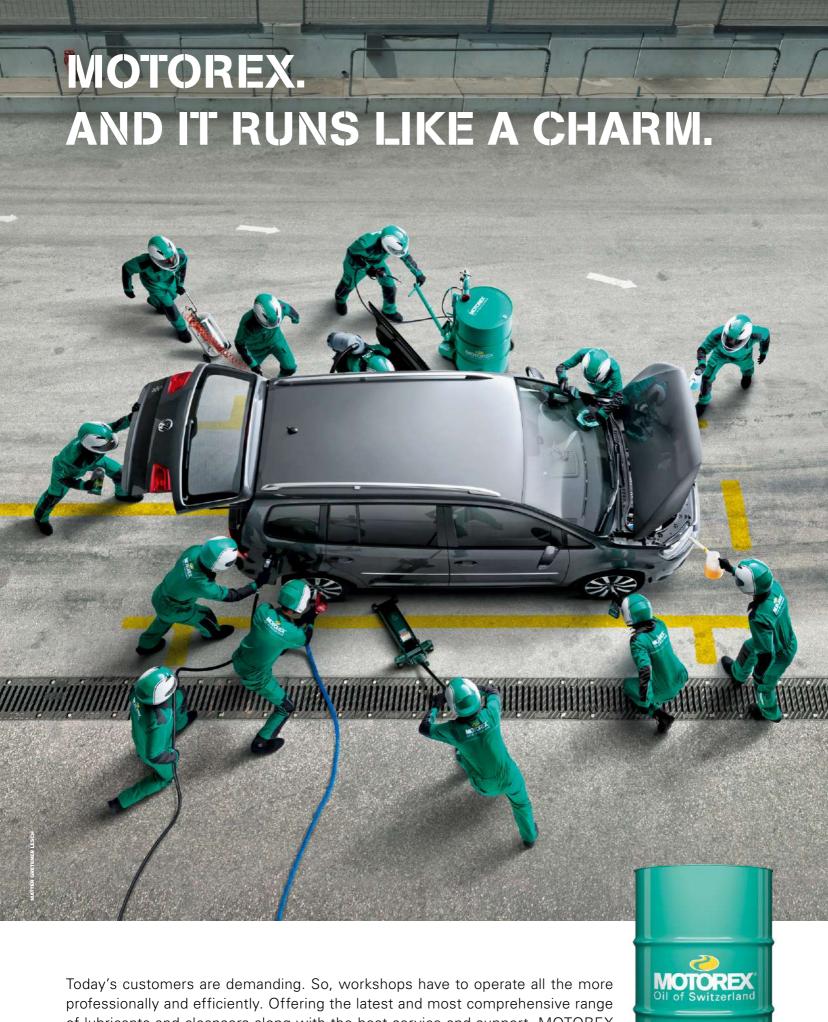
MINIATURE ENGINES

"There's music in them!"

INDUSTRY ▶28

MACHINING FLUID

Decomed HP-X combines the benefits



Today's customers are demanding. So, workshops have to operate all the more professionally and efficiently. Offering the latest and most comprehensive range of lubricants and cleansers along with the best service and support, MOTOREX is number one for garagists who insist on the highest standards of quality. Put your trust in an independent partner who is fully committed to helping you give your very best.

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EDITORIAL



CHANGE, CONSTANTIY

Dear customers and readers

"The only thing constant is change" – this quotation originated not in our present modern age but with the Greek philosopher Heraclitus, who lived and worked 2500 years ago.

In times of transformation, there are still things and values that remain constant despite all the changes. For MOTOREX, these include a fascination and passion for technology and for developing new products and solutions, with customer needs always at the focus of our actions.

Our article on "Helping Mountain Railways Climb" offers a perfect example of change and continuity. The development of cog railways dates back to the 19th century, but the technology is still used today and has lost nothing of its fascination. What has changed is the requirements for lubrication of the cograil rack. Read what a modern specialized lubricant has to do to keep mountain railways reliably carrying passengers in summer and winter alike. Racing is another area that demands a large helping of fascination and passion for technology. We bring the unique atmosphere of MotoGP a bit closer with a look behind the scenes.

In spite of constant change, MOTOREX will continue to focus on customer benefits and on quality products, consultation and services. We're grateful for the opportunity to share our fascination and thank you for the trust you put in our people every day.

I wish you lots of success in your work with MOTOREX products and a good start to the new year.

Martin Basler

Head of Marketing and Sales, Switzerland

Member of the MOTOREX-BUCHER Group AG Board of Management

NEWS



- ✓ SPECIAL CHAIN LUBRICANT FOR TOURING ENDUROS
- **✓ LOW DIRT ADHESION**
- ✓ WATER- AND PRESSURE-RESISTANT LUBRICANT LAYER
- ✓ LONG SERVICE LIFE, NON-DRIP
- √ WITHSTANDS ADVERSE WEATHER CONDITIONS
- √ WITH PTFE TO REDUCE WEAR AND TEAR

READY FOR THE BIG TOUR?

MOTOREX offers tailor-made chain care products for every application. The new Chainlube Adventure aims straight at yet another user profile. The white chain lubricant with PTFE (a solid lubricant) is specially designed for the requirements of modern touring enduro bikes and features extremely long-lasting performance. The waterproof, dirt-repelling and highly adhesive chain lu-

bricant is suitable for everyday use as well as extended tours. It shows its strengths both during a quick dash to the destination by highway and on the following adventure tour. Either way, the focus is always on optimum lubrication and strong protection against wear in the chain, sprocket and chainring. Available today in the economical 500-ml spray can. Try it out now!



"KTM SUPPLIER AWARD" FOR MOTOREX



"MOTOREX is an A+ supplier who has impressed us with their strong performance and top reliability," says KTM. The successful company from Mattighofen, Austria regularly assesses the quality of its suppliers and has recognized MOTOREX with its "KTM Supplier Quality Excellence Award" more than once in the past. For 16 years now, KTM and MOTOREX have worked hand in hand. Together with factory filling of all KTM series bikes, this collaboration also includes a successful motor sports program. The expertise acquired in competition flows directly back into mass-market products and is part of every KTM and MOTOREX Moto Line product. Congratulations!



It is him, isn't it? That's what everyone was wondering when they caught sight of Mr Bean by the MOTOREX stand at Auto Zürich. It soon became clear that Mr Bean and the beefy "Meanie" were just doppelgänger. The Meanie is a highly modified Mini Cooper, built in a small series (seven in all) in collaboration with Emil Frey Classics as part of a bachelor thesis project. The street-legal 220 hp mid-engine power dwarf weighs a mere 875 kilos and accelerates from zero to 100 kph in less than four seconds. Of course the scene with the Meanie and Mr Bean doppelgänger by the booth was staged for guests. But the ideal MOTOREX lubricants and care products for the Meanie are the real thing. A fun time was had by all. Thank you for dropping by!



HELPING MOUNTAIN RAILWAYS CLIMB

When cogwheel trains start climbing or descending steeply, their cogs grip the rack anchored in the trackbed and overcome grades of up to 45%. Anywhere there are gears bearing heavy loads, there is a need for lubrication. For three years now Berner Oberland Bahnen AG has successfully relied on rapidly biodegradable MOTOREX Cograil Oil Plus rack lubricant.

Visitors from around the world lean back comfortably on the ride up to Europe's highest train station, situated at 3450 meters above sea level on the Jungfraujoch. Every day thousands of passengers make the journey. For Thomas Blatter, manager of the BOB workshop in Zweilütschinen, the top priority is always safety.

EXPERT ADVICE IS KEY

In its cooperation with Berner Oberland Bahnen, MOTOREX has already proven its excellent reliability.

In the fall of 2015, following successful testing, the switch was set for rolling out the new Cograil Oil Plus rack lubricant.

WHEN THE COGWHEELS ENGAGE

On all four rack-equipped sections of the BOB rail network, each time the cog wheel engages with or disengages from the rack is a key moment. Ideally passengers should never notice when the drive system temporarily changes. This is achieved by keeping the mechanical





A perfectly lubricated drive cog: Thomas Blatter manages the BOB workshop in Zweilütschinen.



MOTOREX Cograil Oil Plus is highly weather-resistant, adhesive and rapidly biodegradable.

✓ SPECIAL LUBRICANT FOR COGWHEEL (RACK) RAILWAYS ✓ RAPIDLY BIODEGRADABLE (OECD 301B) ✓ EXTREMELY PRESSURE-RESISTANT ✓ HIGHLY ADHESIVE ✓ LOW-TEMPERATURE RESISTANT ✓ NON-HARDENING

processes as synchronized as possible while using the right lubricant. If passengers only notice the racked sections because of their steepness, this means everything is running like a well-oiled machine.

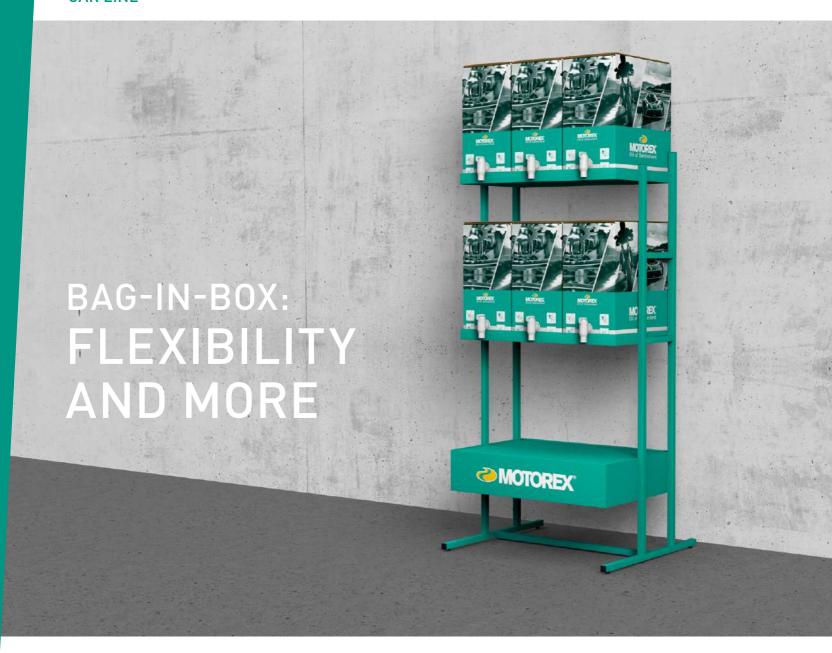
PREVENTING TOOTH (AND COG) DECAY

In simple terms, toothed racks and cog wheels are subject to "tooth decay" in the form of wear. The rack lubricant is designed to prevent wear while also reducing noise under any and all operating conditions. MOTOREX Cograil Oil Plus ISO 320 is based on synthetic esters with specially tuned additives. A high concentration of high-pressure additives free of solid lubricants efficiently minimizes wear. Since this is a lost-lubricant application, high adhesiveness and biodegradability are essential, significantly helping to reduce consumption. The low-temperature stability of Cograil

Oil Plus ISO 320 makes it suitable for use in both summer and winter.

UP TO 50% SAVINGS

The lubricant is sprayed precisely onto the rack during travel through fine compressed-air nozzles, then spread onto the cog wheels during operation. The lubrication process is triggered automatically at preset intervals. "We have been able to cut lubricant consumption by up to 50% with Cograil Oil Plus," says Thomas Blatter. A further operating benefit is that the same product can also be used to lubricate the wheel flanges, simplifying logistics. And speaking of logistics, switching to Cograil Oil Plus also solved a residue problem in the storage tanks — much to the delight of shop staff, who are now spared the need to clamber around and clear out clogged pipes. •



Make-specific motor oils require garages to stock an ever broader palette of lubricants. MOTOREX meets the challenge with its handy, compact and tailored 20-liter bag-in-box (BIB) concept. Take the BIB test!

Repair services for foreign vehicle makes and multi-make shops increasingly require make/model-specific motor oils. Meeting the manufacturer's specifications typically means reaching for a one-liter bottle. But these are anything but economical and environmentally friendly.

AN IDEAL COMPLEMENT

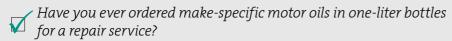
Lubricants in the bag-in-box container make sense both on their own and as a complement to existing lubricant supply options (drums, tanks with oil bar, etc.). MOTOREX has developed a practical bag-in-box rack (width $64.4\,\mathrm{cm} \times \mathrm{depth}\,55\,\mathrm{cm} \times \mathrm{height}\,115\,\mathrm{cm}$) for clean storage and easy access to up to six different BIBs. The rack is equipped with a drip pan, and slightly forward-leaning shelves make dispensing quick and clean. The potential configurations are practically unlimited.





- ✓ 20-LITER SIZE
- ✓ IDEAL FOR SUPPLEMENTING A WORKSHOP PRODUCT RANGE
- ✓ SPACE-SAVING STORAGE (STACKABLE)
- ✓ CLEAN AND EASY HANDLING
- √ GUARANTEES MAXIMUM PURITY OF CONTENTS
- ✓ BUILT-IN HIGH-FLOW DISPENSER
- √ GOOD EMPTYING OF RESIDUES
- **✓ MINIMAL WASTE**

Take the BIB test!





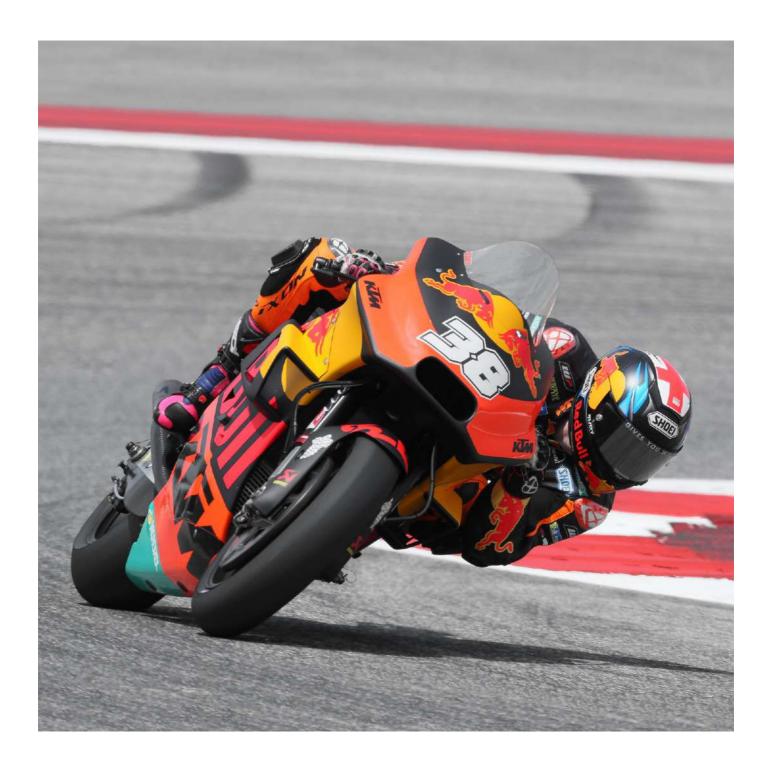
For reasons of logistics and economy, do you want to avoid stocking large quantities of a motor oil you only need occasionally?

If you answer "yes" to all three questions, then make-specific 20-liter bag-in-box motor oils from MOTOREX are the right choice for your firm.

Your MOTOREX partner will be glad to provide further information. •



Over a nine-month period, the world's best MotoGP riders face one another in 19 races worldwide. The team with the most successful strategy takes home the world championship title at the end of November. Much of the work that leads to victory takes place in the pit, where human and engineering factors meet. Dive into the thrilling atmosphere of the pit with MOTOREX.



The air rings with prayers, curses, laughter and tears — peeking behind the curtain of the MotoGP scene, into the pit, one sees just how tightly wound the team has become in pursuit of victory. But the entire team's success can never be allowed to depend on the emotions of one individual.

THE CIRCUIT OF THE MIND

"When the atmosphere in the team is good, that usually helps." Mike Leitner, MotoGP team leader for KTM, knows this from experience. "But there are also riders who absolutely need the competition with teammates," he adds after pausing for breath. Before the race, one rider is hyperactive, talks too much and fidgets while another

grows suspiciously quiet. There is no magic formula for the time before the race. Many riders go over the circuit in their minds, knowing exactly where to shift and brake and how much a precious one-hundredth of a second will cost. Lap for lap they grope their way towards their personal best using various training methods both mental and physical. Total fitness in mind and body is crucial.

ABSOLUTE TRUST

In a pit manned by as many as 25 people in close quarters, everyone needs to know exactly what to do. Every reach of the hand has to hit its target – even the slightest uncertainty can turn up the heat in an already

Bradley Smith getting the most out of his KTM RC16 in the Qualifying.



This is what true fans look like.









Deciding on the race strategy.

tense atmosphere. On the technical side are the racing engineers, who tune the motorcycles for each GP together with the mechanics and riders. A large number of technical parameters need to be tweaked just right, taking the rider's potential into account. The team manager is always the strategic leader, the one who pulls the strings and consults with each rider's crew chief to set the race strategy for each rider and for the team as a whole. As mastermind, he knows he can rely on each and every member of the team.

WHEN YOUR BACK HURTS

The physical therapist is the only one aware of the rider's back pains from the latest crash during training. After his fastest qualifying lap, the rider is totally focused and the pain has faded away. The prospect of earning championship points can work miracles. The "paddock guests," VIPs invited to visit KTM's pit boxes during the GP, are astonished by the professionalism and cleanliness as well as the equipment found here.





Visitors in the pit.



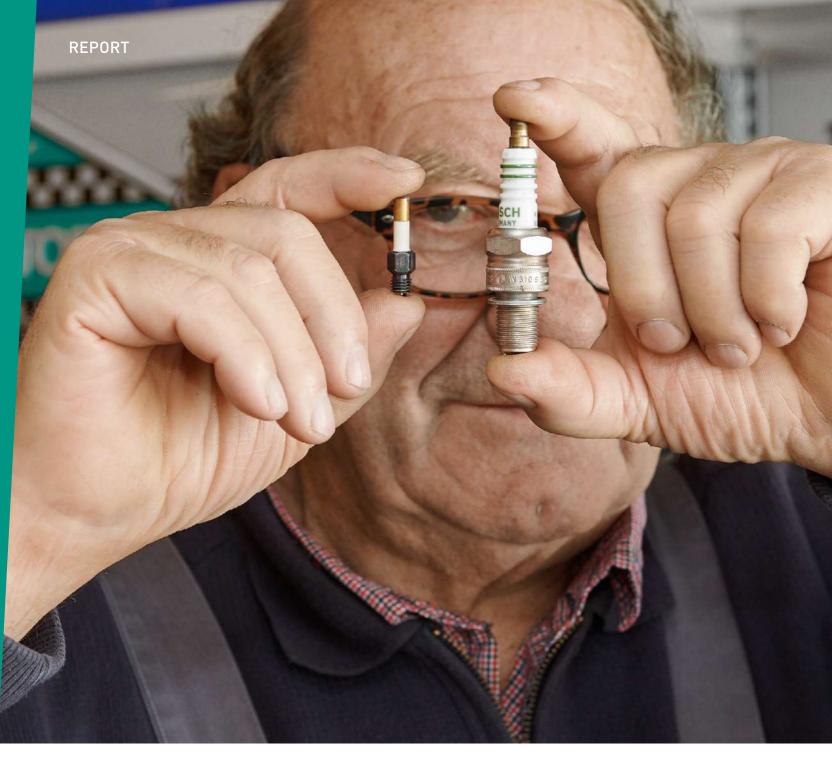
Pol Espargaró: Celebrating championship points.



CATCHING BREATH AFTER THE RACE

Keeping cool is team culture. But as soon as the riders are out on the circuit, every team member becomes their copilot. They share the fever, hash over the progress of the race and put their emotions on display in a variety of ways. If the racers are in good shape after the race and made a strong showing, everyone can take a deep breath. The gratitude is boundless. At the next of the 19 GP races of the season, the tension will once again hold everyone in its grip. For nine months out of the year, no one here would have it any other way.

In just a few weeks the entire KTM MotoGP retinue will set out again for the first test runs of the 2019 season. So the chase goes on, and the Red Bull KTM Factory Racing Team and its promising riders have an exciting second racing season in the top tier to look forward to.



DANIEL'S MINIATURE ENGINES: "... THERE'S MUSIC IN THEM!"

Daniel Aquilon (76) has been fascinated with engines since childhood. He built his first fully functional engine at age 17 during his apprenticeship as an electromechanical technician. What made it unique: its 1:3 scale. Together with friend Bernard Bussy (74) he has also tried his hand at the Ferrari® 512 TR's 180° V12 engine. Hailing from the French-speaking region of Switzerland, the ingenious hobbyist has built a total of 25 fully-functioning miniature internal combustion engines. MOTOREX paid the pair a visit.



French chansons play quietly in the background as Daniel Aquilon works on a miniature in his 14-squaremeter workshop. In the 1950s his father, a mechanic, would tell his son stories about his work, mostly on American engines. This was the age of technical refinements such as hydraulic tappets and automatic transmissions.

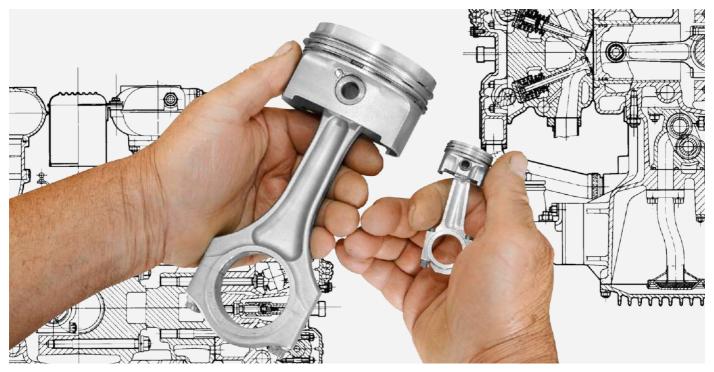
PUTTING HIMSELF TO THE TEST

At age 17, while still in his apprenticeship as an electromechanical technician, Daniel built his first functioning engine, a one-cylinder four-stroke model with

25 cc displacement. He went on to work 25 years for the same company as a plant mechanic. Wherever there were mechanical and electrical challenges to master, he would bring his considerable talent to bear. Again and again he achieved astonishing things, especially for someone boasting neither a degree in engineering nor professional experience as a prototype designer for a major auto manufacturer. The thing that fuels both him and his engines is pure passion. The passion to prove himself, to put himself to the test again and again. Yet in person he is modest and never makes himself or his abilities the center of attention.



Bernard Bussy (management) and Daniel Aquilon (engineering) in the showroom.



Just like in the full-sized version, the light-alloy pistons of the miniaturized Testarossa engine have three cylinder rings:

two compression rings and one oil ring.

"Building engines is pure passion. There's not a trace of a business idea behind it."

Bernard Bussy

With the simplest of tools – a drill press, a cross table with a milling cutter and a small lathe, Daniel continues to produce perfectly functioning miniatures to this day. Among his creations are a Stirling engine, several one- to 12-cylinder four-stroke engines in boxer, inline and V configurations, a one-cylinder diesel and even a 14-cylinder radial engine.

ENGINEER MEETS COMMUNICATOR

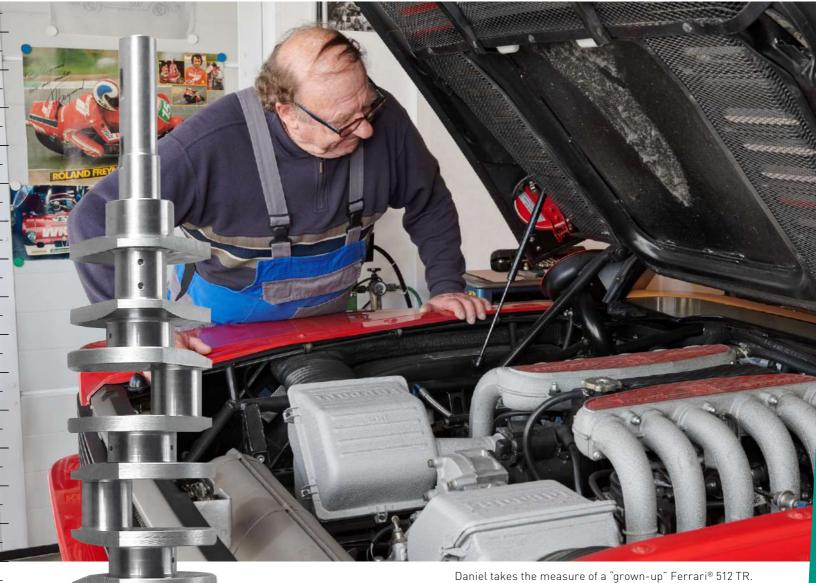
Daniel Aquilon and Bernard Bussy met by chance in 2002. Daniel was just working on his first twelve-

cylinder engine at the time, the legendary Ferrari® 60° V12 designed by Gioacchino Colombo, with one overhead camshaft for each cylinder bank, three carburetors, a two-valve design and wet oil sump. Bernard, who already had a high concentration of gasoline in his veins, promptly fell under the spell of the V12's throaty howl. What resulted was the idea of making these masterpieces of engine construction accessible to a wider audience under the name Motorconcept.

FIRST TWELVE-CYLINDER AT AGE 60

Almost on the day of his 60th birthday Daniel finished his first twelve-cylinder engine. It was a sensation! But he had reckoned without Bernard, who already had an even bigger challenge in mind for his "teammate": the 180° V12 designed by Mauro Forghieri, first used in a Formula 1 Ferrari® 512 F1 (1964–65). In a





"The Colombo-V12's pièce de résistance:

the crankshaft."

Daniel Aquilon

number of variants, this engine would go on to power thousands of produced 365 GT/4 BB, BB 512, BB 512i, Testarossa, 512 TR and 512 M cars between 1973 and 1996. If the crankshaft was the "pièce de résistance" and most difficult part of the Colombo-V12, in the new 12-cylinder it would be the four-valve cylinder heads controlled by a timing belt and the electronic fuel injection system. Like its big original, the 512-TR engine also features dry sump lubrication. Putting in over 4,000 hours of work, Daniel completed the unique piece in just two years.

PRECISE TO THE LAST DETAIL

It's worth noting that not everything can simply be reduced to a 1:3 scale. For example, making the spark plugs — which of course Daniel also builds himself — too much smaller would leave too small a gap between the center and ground electrodes. Accordingly, the

Miniature crankshaft (actual size).

REPORT CONTINUED

spark plugs look like the originals but are made on a slightly larger scale. The flat V12's entire fuel system including control system is particularly fascinating. Daniel was able to get the electronics from a family member of the dotcom generation. The 6.4 hp flat engine can reach up to 8,000 rpm before cutting back. The sound it makes is like no other. But which Motorconcept V12 has the lovelier tone: the 60° V12 with carburetors or the fuel-injection flat 12? That's like comparing Mozart with Beethoven or Pepsi® with Coca-Cola® – in other words, purely a question of taste. What's certain, however, is that the only lubricants for Daniel and Bernard are from MOTOREX.

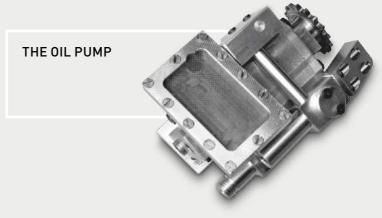


Beaming in amazement: Mauro Forghieri (r.) with Daniel (l.) and Bernard in 2007 in Modena.



There's no high-tech equipment here to be found. Daniel's 14 square meter workshop.







VISITORS WELCOME

With advance notice you can experience these Motorconcept master-pieces live in Ecublens near Lausanne, by yourself or in a professional group, club or business. The only thing the two passionate pensioners ask is that you have ears for a motley orchestra of internal combustion engines — electric vehicles have no place in their world. •





HEAR THE MUSIC



1-CYLINDER 4-STROKE

Gasoline

12 cc/0.13 hp/4,000 rpm

Built in 2017



1-CYLINDER 4-STROKE DIESEL

Diesel

80cc/1.3hp/3,000rpm

Built in 1988



4-CYLINDER 4-STROKE

Gasoline

60cc/2.3hp/10,000rpm

Built in 1997



6-CYLINDER 4-STROKE

Gasoline

127 cc/1.5 hp/4,500 rpm

Built in 1967



12-CYLINDER 4-STROKE

Gasoline

200 cc/6.4 hp/8,000 rpm

Built in 2007



7-CYLINDER 4-STROKE

Gasoline

100 cc/3.9 hp/6,200 rpm

Built in 2010

HYDRAULICS



COREX HVLP-D ZF: WHEN THE HYDRAULIC HEART BEATS ZINC-FREE

Even as modern hydraulic systems grow ever more powerful, we expect them to be more economical at the same time. These demands have a direct impact on how hydraulic fluids are formulated. Zinc-free MOTOREX Corex HVLP-D ZF 46 is a typical example of the new generation of fluids.

Indeed modern hydraulic systems not only have to meet rising performance and quality expectations, but also have an increasingly longer hydraulic fluid service life. The MOTOREX research and development department employs designated hydraulic specialists, committed to developing new solutions in collaboration with different manufacturers.

WATER, DIRT AND HEAT!

Water, contaminants and high temperatures are the three main factors that sooner or later put every hydraulic system to the test — especially if you're going to be working with the same hydraulic fluid for a long time. The table on page 21 shows how MOTOREX is tackling these risk factors with Corex HVLP-D ZF.

CAUSE		EFFECT	COREX HVLP-D ZF SOLUTION	
Water	Temperature fluctuations generate condensation which contaminates the hydraulic system.	Water in the hydraulic fluid.	Can absorb and hold up to 1% water in suspension. And zinc-free additives do not react with water. As a result, the properties of the hydraulic fluid are unaffected and metal surfaces are effectively protected against corrosion despite the presence of water.	
Dirt	Dirt particles contaminate the system. Under high pressure, these particles become weargenerating, function-degrading "projectiles".	Dirt particles can form deposits in the system, produce wear or even cause the hydraulic control system to break down.	Special additives that clean and hold dirt particles in suspension help keep the system clean. This allows contaminants to be reliably carried to the filter, where they are removed when the filter is changed.	
Heat	Heavy-duty hydraulic systems with high flow quantities and heavy shear forces heat the hydraulic fluid to extreme temperatures.	Engineering designs with smaller oil volumes heat up under heavy loads, generating oxidation products.	The innovative, zinc-free additive mix is extremely stable even at elevated temperatures. This reduces formation of oxidation products and protects against deposits and wear.	



Clean: Corex HVLP-D ZF holds dirt particles in suspension and carries them to the filters.



Under pressure: The valve set on this Takeuchi compact excavator controls all hydraulic functions.

✓ CLEANING AND DIRT-REPELLENT EFFECT

✓ WATER ABSORPTION CAPACITY OF UP TO 1%

✓ EXCELLENT RESISTANCE TO HIGH PRESSURE

✓ WEAR-REDUCING PROPERTIES

✓ PREVENTS STICK-SLIP BEHAVIOR

✓ RAPID AIR RELEASE

✓ NEUTRAL TO GASKETS

✓ OUTSTANDING PROTECTION

AGAINST CORROSION

✓ EXTENDED SERVICE LIFE

MOTOREX Oil of Switzerland

MOTOREX COREX HVLP-D ZF

The Corex HVLP-D ZF success formula is in the additives. A completely reformulated additive package with zinc-free anti-wear components makes the mineral oil-based heavy-duty hydraulic fluid's many positive qualities possible. As a result, Corex HVLP-D ZF sets a new quality standard. •

SPECIFICATIONS

Hydraulic oil HVLP-D

Hydraulic oil HVLP to DIN 51524/T3 (except water separation ability)
Observe manufacturers' specifications and consult with Technical Customer Service if you have any questions.

CONSTRUCTION



© Wacker Neuson AB

WACKER NEUSON AB: "YOU CAN RELY ON US"

The Wacker Neuson Group is an international alliance of companies with over 50 subsidiaries and 140 company-owned sales and service stations. As a well-known producer of construction equipment and compact machines, Wacker Neuson (WN) also offers customers a broad range of services. Since 2015, MOTOREX has been a key factor in the group's success in Sweden and other Scandinavian countries.

Wacker began operations in Malmö, Sweden in 1966. Sophisticated, dependable products and customer service have been the company's core values ever since. In 2007 Wacker merged with Neuson, another company in the industry. "We strive to offer customers a comprehensive, but also always an economical solution," explains Patrik Jacobsson during our visit to the new Center of Excellence and Service in Kungsängen, Sweden.

EVERYTHING YOU NEED

The Wacker Neuson Group's product brands include Wacker Neuson, Kramer and Weidemann. Headquartered in Munich, Germany, the corporate group develops, produces and distributes high-quality construction

equipment (Light Equipment) and compact machines (Compact Equipment) worldwide. Target markets include pro users in the construction industry, gardening and landscaping, and agriculture along with municipalities and industrial enterprises in sectors such as recycling. The product portfolio is perfectly adapted to their needs, including concrete equipment, sealing, demolition, pumps, dumpers, excavators and wheel loaders among others. The group recently began offering electric-powered equipment.

A DENSE DEALERSHIP NETWORK

In Sweden Wacker Neuson has branches in Stockholm, Gothenburg and Malmö. East of Stockholm, in Kungsängen, the company is building a new 2500



Pit stop: Christer Jönsson, a Wacker Neuson service technician in Kungsängen, services a tracked excavator from a rental fleet.

MOTOREX Sweden's sales manager in a customer discussion.

square meter Center of Excellence/Service Center, scheduled to open in January 2019. Wacker Neuson also has 24 contractual partners throughout the country to service WN customers regionally. Among them are many fleet rental operators who are glad to leave equipment repair and maintenance in the hands of WN's pros.

MOTOREX IMPRESSES

"A complete assortment of high-quality lubricants and operating fluids" was Wacker Neuson Sweden's requirement for a collaborative partnership. MOTOREX impressed the decision makers not only with its comprehensive product range, but also with services such as consulting by specialists with industry experience, lubrication plans and rapid, informative laboratory analysis. MOTOREX also regularly conducts lubrication training for Wacker Neuson workshop pros. All these factors are what set the stage for a shared commitment to absolute reliability and putting mutual dependability into practice. •





AUTOMATIC DRUM HANDLING:

"ROBI" LENDS A HAND

With the launch of an automated drum handling system, the first industrial robot at MOTOREX celebrates its debut.



ROBI IRB 760-450

Name	Robi IRB 760-450	Acceleration	0.8 m/s ²
Application	Material handling	Range	3.18 m
	and palletization	Lifting capacity	450 kg
Axes	4	Weight	2300 kg

The robot does the heavy work while humans supervise. Where once empty and full barrels were moved multiple times by hand or with warehouse equipment during the filling process, today the entire process is reduced to feeding in empty drums and carrying off the finished product on pallets. Sophisticated automation has optimized the filling process and improved process consistency. Join us on a tour of the drum filling station and meet "Robi"! •



1. DRUM DELIVERY

In accordance with production planning, drums are delivered just-in-time and carried by lift to the buffer zone at the drum station.



2. BUFFER ZONE AND DRUM STATION

Once delivered, the drums are held temporarily in the buffer zone before being sorted by type onto one of eight roller conveyors.



3. AUTOMATIC UNSTACKING

Robi unstacks the pallets and sets the empty drums on the motorized roller conveyor leading to the filling station.



4. TWO DRUMS PER MINUTE

One minute later, two full 200-liter drums are on their way back to Robi, who sets four drums on each pallet without the need for human guidance.



5. CENTRAL LOADING RAMP

The full pallet is automatically carried to the loading ramp.



6. READY FOR THE WAREHOUSE

The products are transported by forklift to their assigned warehouse bays.



TUBE INSTALLATION MADE EASY

When installing hydraulic and pneumatic tubes, depending on the tube's design and dimensional tolerance, mounting tube to fitting often takes considerable strength. It doesn't have to be this way. MOTOREX TMF tire mounting fluid reduces the friction between the tube and connecting piece, making installation noticeably easier. It takes very little TMF fluid. After installation, the fluid evaporates completely leaving no visible trace. Try it out now!



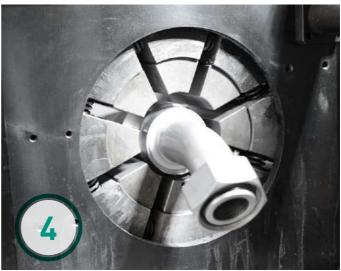
Place a little TMF fluid in a jar with a sponge. Press the fitting and the end of the tube briefly into the sponge.



Also wet the inside of the tube lightly with the mounting fluid.



Now you can attach the connecting piece to the tube without using excessive force.



Then attach the press nipple in the machine according to instructions.



Done: The TMF mounting fluid leave no residues.

Contact your sales rep for more information. •



SWISSCUT DECOMED HP-X COMBINES THE BENEFITS

Bees are hard-working and intelligent. As a group they combine their abilities to accomplish multiple tasks at the same time in a purposeful and highly efficient way. That also applies to the latest high-end Swisscut Decomed HP-X cutting oils. Using the new HSC additive technology doesn't just enable high and broad-based performance levels to be achieved: beyond that, Swisscut Decomed HP-X also meets current and all foreseeable requirements in terms of process and work safety, notably in medical technology.



UP TO 30% MORE PERFORMANCE

✓ MILD FORMULA

√ BEST SURFACE QUALITY

√ LOW VOLATILITY LOSSES

In comparison tests under identical process conditions, Swisscut Decomed HP-X achieved up to 30% higher performance than conventional products. Tool life was also extended. At the same time, volatility loss (the Noack value) was reduced by half. This maintains the fluid level in the machine, measurably reduces consumption and enhances safety.

POWERFUL HSC TECHNOLOGY

Combining highly refined, low-volatility base oils with a brand-new additive package results in a very high performance level. MOTOREX's pioneering HSC (high-speed cutting) technology combines the effects of different additives over an extended period. The cutting fluid's high air release capability gives it a very low foaming tendency. At the same time, Decomed HP-X reduces friction and protects against corrosion. It also resists oxidation, which has a positive impact on the fluid's aging characteristics and extends its service life.

WIDE SPECTRUM OF APPLICATIONS

The universal versatility of the latest MOTOREX machining fluid generation is the result of Decomed HP-X's very high performance level. It is ideal for working a wide range of materials such as high-alloy steels, titanium, stainless steel, medical stainless steels and nonferrous metals. It will not stain aluminum or nonferrous metals.

CONFORMS TO REGULATIONS

The mild formula of Swisscut Decomed HP-X 10, 15 and 22 is free of aromatic compounds, chlorine, zinc and other undesirable materials. Its composition is in conformity with applicable REACH requirements and with the latest standards of the medical device industry. Human biocompatibility at the highest level has been a standard at MOTOREX for years.

HIGH PROCESS RELIABILITY

Swisscut Decomed HP-X's high performance reserves and many benefits ensure excellent process reliability. And all processes can be carried out with one and the same cutting oil. A high flash point is another strong argument for Decomed HP-X. This further improves safety, especially during unmanned shifts.

Ready to optimize your production processes? Your MOTOREX representative will be happy to provide more information. •



The family project (l. to r.): Mother Doris Wyssen in sidecar, father Samuel with friend and club photographer Hugo Lanz and proud owner Beni Wyssen.

A MOPED FAN'S DREAM - WITH SIDECAR

Beni Wyssen (20) of Roggwil in the Canton of Bern had already attached a sidecar to his Sachs moped once before – but somehow something was still missing. Then he got the idea of getting a drum from nearby MOTOREX, converting it into a sidecar and finishing the result in the unmistakable MOTOREX livery. Since he had apprenticed as an auto painter, the last part, at least, was no problem. For six long months Benjamin and his father Samuel spent their leisure hours working on the vehicle. "The painting was the part I enjoyed most," said Benjamin proudly as he and his parents presented their rig at MOTOREX headquarters in Langenthal. Congratulations!



ADVENTURE REPORTED COM

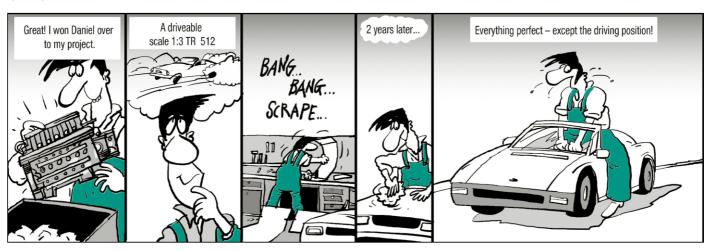


Baz (Barry) and Kaz (Karen).

DID YOU KNOW HOW TO ESCAPE WINTER?

For motorcycle fans, the best place is in the saddle of a cutting-edge Husqvarna at the Adventure Riding Center in Mijas in the south of Spain. The town is a short distance from the coast near Malaga. Here Kaz, Baz and Jaz offer offroad fans one of the world's best playscapes for riding on the latest equipment. Everything here is top-notch, from the trails to the instructors to the MOTOREX-lubricated motorbikes. Afterwards riders can soak their tired muscles in the pool at a luxury hotel.

OTTOREX





We love Winter!





MOTOREX KNITTED HAT

Knitted hat with jacquard weave and fleece inlay. Motif: MOTOREX.
Quality: 50% wool, 50% polyacrylic.
Colour: grey/black Flag Label
MOTOREX.



Article no 451694



HATCH BEANIE MOTOREX

The Beanie made of 100% Acrylic is available in one size and can be worn in two variations. Thanks to the two existing labels you can easily turn the envelope over and the beanie gets a different look.

Article no 451811



MOTOREX SOFTSHELL JACKET

Softshell jacket, athletic-cut, water and wind resistant, breathable. Ultra soft and light, with added stretch. Softshell 95% / elastane 5%. With elastic cuffs, sleeve pocket, 1 left-hand breast pocket, 2 outer pockets, collar with elastic drawcord. Reflective stripes on the back and the pockets. Logo on left side of the chest.



ENDLESS POWER





THANK YOU FOR OUR 8TH VICTORY!

For the 8th time now, readers of the "auto-illustrierte" voted us the best brand in the lubricant category. In order to make sure that everything continues to run smoothly in your future, we continue to put all our energy in the enhancement of our products.

