ACTION SERIES
LUBRICANTS FOR MOTORCYCLES

REPSOL

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Lubricants at the forefront of innovation

When you choose **Repsol, you get so much more. Because you have the confidence from a top-level global multi-energy company** present throughout the energy chain. We're a company that employs more than 24,000 people, and our products are sold in more than 80 countries, reaching 24 million customers. Our crude oil production exceeds 600,000 barrels of oil equivalent per day on average and has one of the most efficient refining systems in Europe. We manage low-emission power generation assets, including photovoltaic and wind energy projects.

We are a large group in continuous transformation and diversification of businesses to **lead the energy transition**, being the first company from the sector to support the Kyoto Protocol, to issue a green bond, and to set the goal of achieving net zero emissions by 2050.

The Repsol Commitment Net Zero Emissions by 2050

To achieve this goal, we are committed to technology and digitalization as fundamental pillars through a **model that integrates all technologies** for decarbonization, and is based on improved efficiency; renewable power generation; products with a low, neutral, or even negative carbon footprint; circular economy; and industrial innovation. That is what has made us leaders in innovation, sustainability, and efficiency, thanks to our cutting-edge projects.

MAXIMUM QUALITY

Repsol Lubricants exceed quality standards and industry norms; our products have been tested in competitions to guarantee maximum efficiency.

Our lubricants improve the durability of engines and exhaust gas after treatment systems, complying with sector regulations. Apart from offering superior protection for the most demanding engines, the lubricant also guarantees fuel economy and reduces CO2 emissions in the most advanced engines.

At Repsol, we evaluate and select the most appropriate base oils, that coupled with the use of the highest quality additives offer you products with specific formulations for each manufacturer that give you extra confidence in your engine.

NEW ACTION SERIES

New streamlined range architecture for an easier lubricant selection. Choose the ideal product according to your needs:

MXR Platinum: Fully synthetic motorcycle oil meeting the latest API standards and JASO MA2 qialification. Designed for maximum durability, cleanliness, wear protection, and optimum gear shifting.
MXR Matic Platinum: Fully synthetic engine oil with Matic Cooling Tech. Durable formula optimized to reduce friction, allow the engine to run cooler, and allow maximum power output.
MXR PLus: Semi-Synthetic Motorcycle oil designed with engine protection and cleanliness, and optimum gear shifting as the primary goals.
MXR Matic: Mineral-based engine oil with Matic Cooling Tech. Designed to reduce friction, allowing the engine to run cooler.
MXR 7, 5, 3: Mineral-based motorcycle oils specially formulated for a wide range of motorcycles. Some with higher viscosities to suit older engines.

NEW FORMULA

All Action series engine oils are designed with :

By formulating our products using carefully selected chemicals and **hydrotreated** base oils, we optimize the lubricants performance in 3 key areas :

Wear protection: XR Tech is reinforced anti-wear chemistry designed to reduce wear in all the critical areas in the engine. A protective oil film is generated between metal parts to prevent rubbing. thus improving performance and reducing the metalic wear under different engine operating conditions. Up to 30% less wear in cylinder liner found in Mack T-10 bench test.

Engine Cleanlines: XR Tech uses dispersant additives that keep soot particles in suspension and control sludge build-up, thus preventing blockage in engine parts with tighter tolerances. this way, it manages to enhance the performance of the oil during the drain interval, effectivelly extending the lubricant's life so it can protect the engine better and for a longer time.

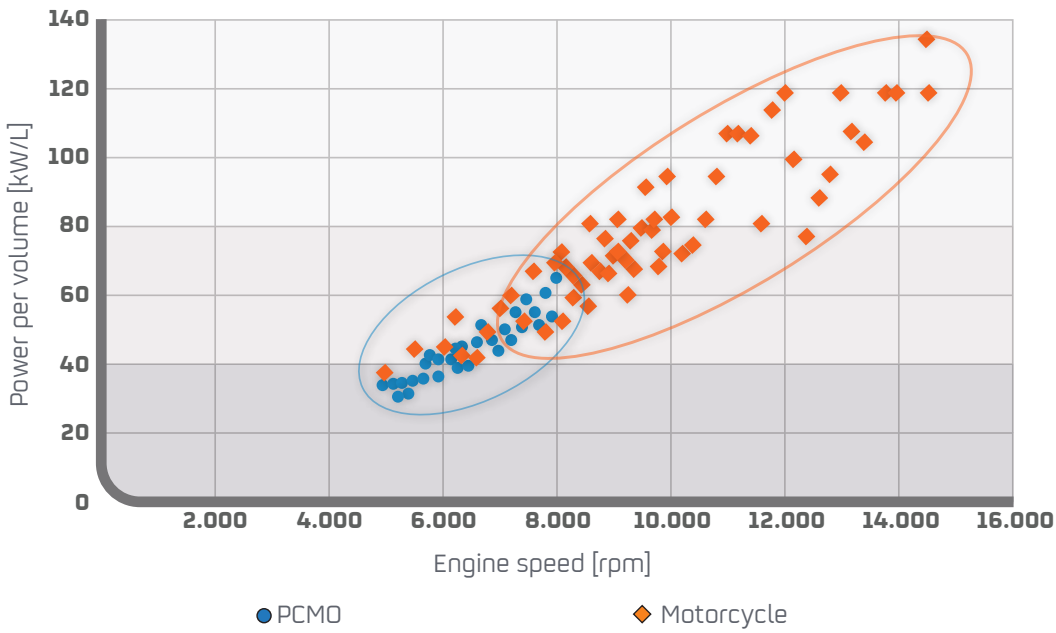
Oil durability: XR Tech uses highly refined base oils combined with carefully selected additives, which results in lubricants with improved oxidation control. An engine oil more resistant against oxidation maintains its properties for a more extended period of time and thus ensures optimum protection during the whole drain interval.

In a sector where new technological advances are being introduced every day, Repsol undertakes constant research to provide a wide range of lubricants that meet the specific needs of each of our customers.

In addition to complying with the most stringent quality standards and regulations, our lubricants exclusive formula offers perfect lubrication and maximum care for engines, enabling these systems' top performace and durability.

MOTORCYCLE OILS BASICS

Compared to car engines, motorcycle engines run under more severe conditions, putting the oil into a more challenging lubrication environment. Lubricating film strength is the key to avoid metal rubbing against metal.



*Adapted from the Specification Table, JSAE

Oil sump volumes of MCO are 3-4 times smaller than normal car oil sump. Enhanced antioxidant feature is required to reach desired drain oil intervals without performance depletion.

Less efficient cooling system (forced cooling system in PCMO vs air/water cooling system in MCO), means higher temperatures into the lubrication system. Very low evaporation losses in the oil will guarantee the right viscosity along its use.

For wet clutch motorcycles, the same oil has to lubricate the engine, clutch and transmission. This requires a wider set of features. In order for the oil to reach the right performance in all the lubricated parts. A lubricant with JASO MA2 qualification will generate enough friction hinder clutch slipping.

Automatic scooters, on the other hand, keep the engine and the transmission systems separate and specific oils can be used for each one. In this case, lubricants meeting JASO MB can be used. These lubricants are tuned for lower friction, which allows to reduce the oil consumption, and achieve lower operating temperatures in the engine.

THE FRICTION EQUATION

Wet clutch motorcycles:

Motorcycles with wet clutch use the lubricant for both engine, clutch, and transmission. Unfortunately, this creates a complication since what works best in the engine (lower friction) would cause the clutch to slip, making the gear shifting unreliable.

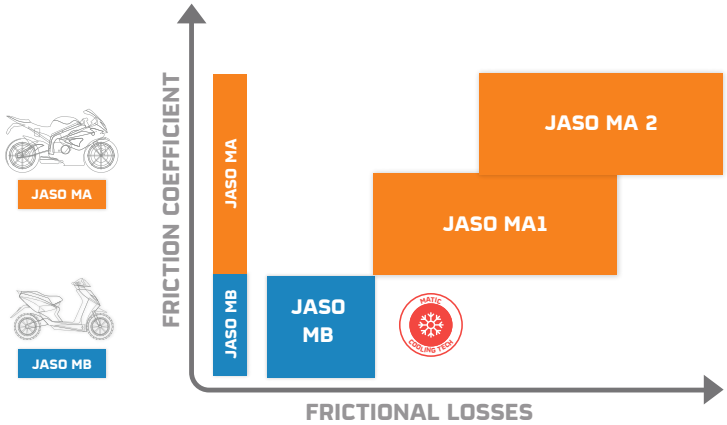
To counter this, lubricants for motorcycles with wet clutch are designed with higher friction in mind. The JASO standards regulate this property and act as reference for all the industry.

Action series lubricants from MXR 5 and above all meet JASO MA2, which means the gear shifting will be fast and responsive, even when high torques is required.

Matic Cooling Tech

Motorcycles with dry clutch (primarily scooters) use continuously variable transmissions (CVT) housed separately from the engine. Hence, two different lubricants are used for the engine and the gearbox. This means the gear oil will be optimized to achieve the best CVT performance, and the engine oil can be optimized for lower friction. Reducing frictional losses leads to lower operating temperatures in the engine and higher fuel efficiency.

All Repsol Action series MXR MATIC products come equipped with Matic Cooling Tech and are the best option for your engine if you have motorcycle with a dry clutch. However, using it with a motorcycle with a wet clutch will result in poor performance. Always consult your motorcycles's maintenance manual before choosing the lubricant.



- A higher friction coefficient is needed to guarantee good clutch engagement. The more powerful the motorcycles, the higher the friction coefficient should be. Most motorcycles require JASO MA2, which covers the most demanding applications.
- JASO MA or JASO MA1 is usually recommended for motorcycles with smaller cc. Check the motorcycle maintenance manual to determine which is the best motorcycle oil for your bike.
- JASO MB is suitable for motorcycles with a separate lubrication circuit for gear/clutch and the engine. The engine oil can be optimized for lower friction. Repsol lubricants come with Matic Cooling Tech, which allows the engine to run cooler and save fuel.

PRODUCT LINE UP

		VISCOSITY	API / JASO
MXR PLATINUM	Fully Synthetic	10W-40, 10W-50	API SN / JASO MA2
MXR MATIC PLATINUM		10W-30, 10W-40	API SN / JASO MB
MXR PLUS	Semi Synthetic	10W-40, 15W-50	API SN / JASO MA2
MXR MATIC PLUS		10W-40	API SN / JASO MB
MXR 2T LS			API TC / JASO FD
MXR 7	Mineral	10W-30, 10W-40, 15W-40, 15W-50, 20W-40, 20W-50	API SN / JASO MA2
MXR 5		10W-30, 15W-40, 20W-40, 20W-50	API SL / JASO MA2
MXR MATIC		10W-30, 10W-40, 20W-40	API SL / JASO MB
MXR 3		15W-40, 20W-50, SAE 40	API SG / JASO MA
MXR 2T			API TC / JASO FB

10W-40, 10W-50

REPSOL MXR PLATINUM

Repsol MXR Platinum is a top-tier, fully synthetic motorcycle oil. It provides maximum protection to the engine, gears and clutch while ensuring optimum clutch performance. In addition, the fully-synthetic base oils make this lubricant more resistant to oxidation extending its service life, while the carefully selected additives give the engine the ultimate boost.

Quality Level: API SN, JASO MA2

10W-30, 10W-40

REPSOL MXR MATIC PLATINUM

Repsol MXR Matic Platinum is an ultra-high-qualit engine oil for high-performance 4T engines. It contains special additives that improve lubricity and maintain a low friction coefficient. These additives are also following thw quality standards of JASO MB. Therefore, it is recommended for motorcycles that require a low-friction lubricant. JASO MB is recommended especially for dr-clutch scooters and automatic-transmission motorcycles.

Quality Level: API SN, JASO MB

10W-40, 15W-50

REPSOL MXR PLUS

Repsol MXR Plus is the most suitable semi-synthetic lubricant oil for modern 4-stroke engines. It provides maximum protection for medium and high cylinder capacity engines with one, two, three or four cylinders. It ensures the care of all its components and the proper lubrication of wet clutches. It is widely regarded as a lubricant that boosts the throttle response.

Quality Level: API SN, JASO MA2

10W-40

REPSOL MXR MATIC PLUS

High-quality semi synthetic engine oil for high performance 4T engines in Matic Scooters. Its special formulation contains additives that improve lubricity and low friction coefficient to provide JASO MB quality standard. Recommended especially for dry-clutch scooters and automatic-transmission motorcycles.

Quality Level: API SN, JASO MB

REPSOL MXR 2T LS

High quality semi synthetic lubricant for 2-stroke motorcycle engines. Smokeless, high viscosity formulation that protects the engine against wear, increasing the lubricity and keeping the engine cleaner than regular mineral 2T formulations. Enhanced new formulation for a well-smelling experience.

Quality Level: API TC, JASO FD

10W-30, 10W-40, 15W-40 15W-50, 20W-40, 20W-50

REPSOL MXR 7

Repsol MXR 7 is a top-tier miltigrade lubricant oil suitable for modern 4-stroke engines. Its carefully selected additives offer ultimate performance, giving this product a competitive edge over similarly specced products. The lubricant has excellent wear protection for medium to high cylinder capacity engines. In addition, it provides outstanding protection for the gear and wet clutch and ensures optimum clutch response and quick gear shifting. On top of this, oil consumption with this lubricant will be very low, allowing for continued usage with no need to top up.

Quality Level: API SN, JASO MA2

10W-30, 15W-40, 20W-40, 20W-50

REPSOL MXR 5

Repsol MXR 7 is a top-tier miltigrade lubricant oil suitable for modern 4-stroke engines. Its carefully selected additives offer ultimate performance, giving this product a competitive edge over similarly specced products. The lubricant has excellent wear protection for medium to high cylinder capacity engines. In addition, it provides outstanding protection for the gear and wet clutch and ensures optimum clutch response and quick gear shifting. On top of this, oil consumption with this lubricant will be very low, allowing for continued usage with no need to top up.

Quality Level: API SL, JASO MA2

10W-30, 10W-40, 20W-40

REPSOL MXR MATIC

Repsol MXR Matic is a lubricant for four-stroke engines, developed to meet the requirements of the most important motorcycle manufacturers in the world. Designed to be used in automatic motorcycles, this product is equipped with friction modifiers to protect the engine while reducing friction and fuel consumption. Lower friction also means a more optimal power output and a more agile engine. Suitable whenever a JASO MB quality is required.

Quality Level: API SL, JASO MB

REPSOL MXR 3

Repsol MXR 3 is a mineral-grade lubricant oil for 4-stroke engines. It is designed as a general use oil to protect hard-working, high mileage engines against wear. It is specially formulated for demanding riding conditions. Its viscosity allows for optimal lubricity in the harshest environments and offers a special sealing effect in the combustion chamber to maximize power output. Especially ideal for the high-temperature climate. It also presents exceptionally low oil consumption. In addition, its frictional properties guarantee smooth gear shifting.

15W-40, 20W-50, SAE-40

Quality Level: API SG, JASO MA

REPSOL MXR 2T

Repsol MXR 2T is a lubricant oil suitable for general usage in 2-stroke engines. Apt for a wide range of motorcycles, this product is mainly recommended for urban use. A clean, good quality oil protects the engine and prevents ring sticking while keeping exhaust vents clean and reducing smoke emissions. Additionally, It supports very high temperature operating conditions, prevalent due to city traffic during intensive usage. It also supports weight-bearing activities such as carrying passengers on a scooter or a small cylinder capacity motorcycle.

Quality Level: API TC, JASO FB

The Repsol Technology Lab is one of the most cutting-edge private R&D models in Spain

Own **R+D**

250 experts
of 18 nationalities

+70 million euros
invested in 2020

CAPABILITIES
in multiple fields such as:

- Advanced Mobility
- Bio and Low Emissions
- Advanced Mathematics
- Geophysics
- New Materials

The **CORPORATE VENTURING**

fund equipped with
€85 million
investments in 17 startups with disruptive technologies

OPEN INNOVATION

Our open door to innovation in the energy sector

+11 NEW **PATENT** FAMILIES
registered in 2020

+100 INNOVATION **INITIATIVES**

TECHNOLOGY products
+200 **PARTNERSHIPS**
with collaborators and organizations around the world...

... to **transform the energy sector...**

+ **50.000 m²**
dedicated to innovation throughout the world

+20 **SPECIALIZED LABORATORIES**

REPSOL

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