

# MOTUL Oil Application Guide

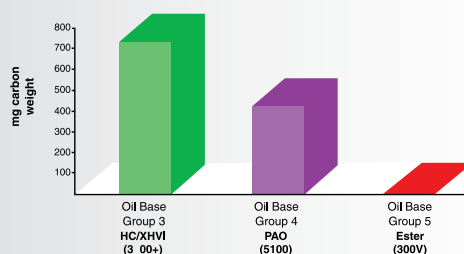
	CAPACITY	RECOMMENDED FACTORY SPEC	HIGH PERFORMANCE EXTREME PROTECTION	RACING; POWER AND EXTREME PROTECTION
<b>ENGINE OIL 4 STROKE</b>				
AIR COOLED	50cc-200cc	3100 10W40	7100 10W40	300V SPORT 10W40
AIR COOLED	200cc-2000cc	MOTO 4T 20W50	7100 20W50	7100 20W50
LIQUID COOLED SINGLE & TWIN	50cc-500cc	3100 10W40	7100 10W40	300V FACTORY LINE 5W40
LIQUID COOLED SINGLE & TWIN	500cc-2000cc	3100 10W40	5100 10W50	300V COMPETITION 15W50
LIQUID COOLED 4CYL & 6CYL	200cc-2000cc	3100 10W40	5100 10W40 / 7100 10W40	300V FACTORY LINE 5W40
SCOOTER	ALL	3100 10W40	SCOOTER EXPERT 4T	300V SPORT 10W40
HARLEY-PRE EVOLUTION		CLASSIC 50	CLASSIC 50	
HARLEY EVOLUTION	ALL	CLASSIC 20W50	TWIN SYN 20W50	7100 20W50
HARLEY TC 88 & 96	ALL	3000 15W50	TWIN SYN 20W50	7100 20W50
<b>FOR WORN ENGINES</b>				
AIR COOLED	ALL	MOTO 4T 20W50	7100 20W50	
LIQUID COOLED	ALL	3100 15W50	7100 20W50	
<b>ENGINE OIL 2 STROKE</b>				
PREMIX IN FUEL TANK	50cc-500cc	MOTOMIX	510 POWERLUBE	800 RACING
INJECTOR	50cc-500cc	MOTOMIX	510 POWERLUBE	710 2T
SCOOTER	ALL	MOTOMIX	SCOOTER EXPERT 2T	710 2T
<b>GEARBOX-DIFFERENTIAL</b>				
GEARBOX-DIFF OIL 4 STROKE ROAD	50cc-2000cc	GEARBOX/HD	MOTYLGEAR	GEAR 300
GEARBOX OIL 2 STROKE	50cc-125cc	TRANSOIL	TRANSOIL	TRANSOIL
GEARBOX OIL 2/4 STROKE DIRT	125cc-500cc	TRANSOIL	TRANSOIL EXPERT	TRANSOIL EXPERT

## Chart of OIL Manufacturing Grades - International Standard

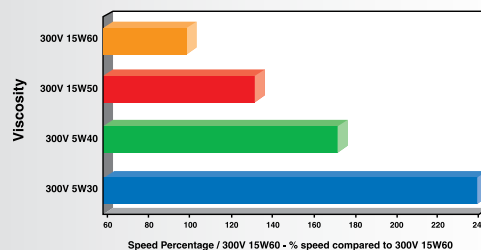
- Group 1:** Is a mineral base oil stock, with a low Viscosity index. (It needs to reach running temperature to lubricate properly. Viscosity breakdown with heat).
- Group 2:** Is a mineral base oil stock, better refining, higher viscosity index. (It needs to reach running temperature to lubricate properly. Viscosity breakdown with heat).
- Group 3:** HC/MC, VHVI, XHVI, XHVI (hydro-cracked), are all mineral based oil stocks, commonly used by leading manufacturers in Australia and **MOTUL** for various synthetic and full synthetic product lines. (Needs to reach running temperature to lubricate properly. High resistance to thermal breakdown).
- Group 4:** PAO (Poly Alpha Olefins) is a synthetic based stock, used by **MOTUL** for synthetic and 100% synthetic oils. (Works from cold. High resistance to thermal breakdown).
- Group 5:** Ester, the most advanced technology developed for synthetic oils. Also used by **MOTUL** for synthetic and 100% synthetic oils. (Magnetic oil film present at startup. Works from cold. Highest resistance to thermal breakdown. Unshearable oil film, allows lower viscosities to increase horse power without extra wear recommended for racing).

**Grid: The higher the Group number, the more superior the grade / quality of oil.**

Cocafaction Test (carbon deposits)



Oil speed at 100°C in a tube, done by gravity



### HELMET & VISOR CLEAN

- \*Cleans the outside of the helmet without leaving marks.
- \*Anti-insect effect.
- \*Suitable for all helmets & visor technologies

250ml



### HELMET INTERIOR CLEAN

- \*Bacterial sanitiser for the helmet interior.
- \*Thoroughly cleans and neutralises unpleasant odours.
- \*Non-irritating to the skin. Dermatologically tested.

250ml



### PERFECT LEATHER

- \*Cleanses, nourishes and revives all types of leather.
- \*Protects against external aggressions.
- \*Waterproofing / anti-rain effect.
- \*Prolongs leather life.

250ml



### HANDS CLEAN

- \*Cleans hands without water.
- \*Dissolves grease, oil and other stubborn dirt.
- \*Non-aggressive dermatologically formulated. Does not dry the skin

100ml



### WHEEL CLEAN

- \*Concentrated formula
- \*Effectively dissolves grease, oil and brake dust.
- \*Does not attack paints or varnishes.

400ml



### INSECT REMOVER

- \*Removes splattered insects and organic droppings.
- \*Can be used on screens, fairings, paints, metals, mirrors and plastics.

400ml



### CHROME & ALU POLISH

- \*Cleans, restores and shines.
- \*For all chrome and aluminium parts

100ml



### SCRATCH REMOVER

- \*Removes superficial scratches.
- \*Can be used on painted or varnished surfaces.

100ml



# Technical Guide

## 'maintaining your passion'

### 4 stroke

### 2 stroke

### A few points about Ester!

Esters are derived from plants. Unlike other synthetic oils on the market, such as PAO polyalphaolefens and hydrocracked (extra high viscosity index [XHVII]) which are derived from crude oil. Esters have better lubricating properties and bring engine oils to new levels in performance and endurance.

1. Esters have a higher resistance to thermal breakdown. Basically a higher flash point, up to 70 degrees celsius more than normal multigrade oil. This means in the hotter parts of the engine, such as the cylinder walls and bearings, where there is extreme heat, the oil doesn't burn off and leave carbon deposits. (When carbon deposits are formed, the detergent present in most oils will disperse these, which then mix with the oil, breaking down its lubricating properties and turning it black.

2. The Ester molecules (complex Ester in MOTUL) are double bonded, which effectively gives the oil an unshearable film.

3. MOTUL Ester molecules are polar static negative; (The carbon molecule has a negative polarity that makes the oil magnetic) and the oil sticks to every part of the metal inside the engine at all times, even when the motor is not running, so at cold startup, there's oil already there.

4. Esters reduce friction, which keeps the engine cooler and allows it to develop more horsepower.

5. Esters are produced from plants. They are a renewable product that are also biodegradable. That's great for your engine and great for our environment.

#### MOTUL 300V

ESTER Core 100% synthetic.

The best MOTUL has to offer, up to a 272 degree celsius flash point in the 15W50. Available in five different viscosity grades, 5W30, 5W40, 10W40, 15W50, 15W60, there is one to suit every current technology motorcycle.

1L, 2L & 4L

#### Extra Power

Factory teams do confirm that 300V FACTORY LINE 5W40 outperforms 10W40 and 15W50 formulas, not only in the first laps but throughout the whole race. Expect up to 5% + extra power.



#### Extra Protection

In superbike engines, hotspots can hit the 350oc / 750oF+ temperature range. 300V FACTORY LINE is designed for that. Thanks to its specially designed ESTER molecules, 300V FACTORY LINE withstands high temperatures twice as long as current synthetic oils.

#### MOTUL 7100 Ester

100% Synthetic.

Combining ester and 100% PAO technology delivers the best of both worlds with high shear strength, low friction and magnetivity at the right price. 10W40, 10W50, 10W60, 20W50 the coolest oil yet for Harley Davidsons.

1L & 4L

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1L & 4L

#### MOTUL 5100 Ester

This Ester based oil is blended with PAO technology to reduce the cost and still offer one of the best motorcycle oils on the market. MOTUL 5100 also has extreme pressure additives to protect the gearbox from metal to metal contact (through metal absorption), and a flash point of up to 240 degrees celsius in the 10W40. Available in three viscosity grades 10W30, 10W40 and 10W50 there is one to suit all four stroke bikes.

1L, 2L & 4L

#### MOTUL 3100 GOLD

Synthetic technology. Reduces engine wear.

High thermal stability, same gearbox package as 5100. 10W/40 and 15W50

1L & 4L

#### MOTUL TWIN SYN 20W50

Synthetic technology. Designed specifically for V-twins for maximum protection. Reduces engine wear and gives smoother operation.

1L & 4L

#### MOTUL 3000 PLUS SEMI SYNTHETIC

Great for air cooled engines. HC TECH. Has the same gear box additive as 5100 Ester, with a flash point of 240 degrees celsius. Available in three viscosity grades 10W30, 10W40 & 15W50.

1L & 4L



### Mix Rates for Two Stroke Oil

Fuel / Oil Ratio	ml oil added for:					fl.oz per litre	fl.oz per gallon
	1 litre	5 litres	10 litres	20 litres	1 gallon		
25:1	40	200	400	800	182	1.41	6.4
32:1	31.3	156.5	313	626	142	1.10	5.0
33:1	30.3	151.5	303	606	137	1.07	4.9
40:1	25	125	250	500	130	0.88	4.0
50:1	20	100	200	400	91	0.70	3.2
66:1	15.2	76	152	304	71	0.56	2.5
100:1	10	50	100	200	45.5	0.35	1.6

#### For Premix Racing Two Stroke Engines

MOTUL 800 2T

Road Racing 125, 250, 500cc or Desert Racing 33:1 to 25:1 (Where throttle is open for an extended time)

Enduro (wide open track) 40:1

Moto Cross 125, 250, 500cc 50:1

Super Cross (tight short track) 66:1

#### For Injector Racing Two Stroke Engines

MOTUL 710 2T Use Manufacturers recommendations

#### For Injector Racing Two Stroke Engines

POWERLUBE Use Manufacturers recommendations

510 2T

#### 800 racing 2T

ESTER Core 100% synthetic lubricant benefiting directly from our experience in competition. Specific formula for high-performance two-stroke engines. Premix lubrication only. Retains all its properties even under extremely humid conditions (damp, fog). Its red colouring makes it easy to detect in the fuel and on engine parts during disassembly. Perfectly suited for racing or off-road bikes. Standards: API TC 1L & 4L

#### 710 2T

Ester-based 100% synthetic lubricant. Recommended for high-performance two-stroke engines, injector or premix lubrication. Anti-smoke and anti-fouling properties. For sports use and daily riding on the road or off. Standards: API TC, JASO FC, ISO-L-EGD 1L & 4L

#### Powerlube 510 2T

TECHNOSYNTHESE® lubricant for two-stroke engines, injector or pre-mix lubrication. Specific anti-smoke and anti-fouling formula keeps the engine perfectly clean. Special colouring makes the mix easily visible. Suitable for two-wheelers of all capabilities. Standards API TC, JASO FC, ISO-L-EGD 1L & 4L

#### 100 2T

Mineral oil for two-stroke engines, injector or premix lubrication. Standards API TC, JASO FB level. 1L & 4L

#### TRANSOIL

##### 10W30

Lightweight oil for more horsepower. Ideal for racing up to 125cc. 1L & 4L

##### TRANSOIL EXPERT

##### 10W40

Reinforced with Ester Base Stocks. Extreme Protection 1L & 4L

JASO

033MOT007

FC

low smoke  
high lubrication





# Maintenance Line

'maintaining your passion'

## Maintenance

### Chains



#### Chain lube Off-road: extra protection

A light tacky lubricant that resists picking up grit. Specially designed to lubricate chains for off road bikes and quads. For use in extreme operating conditions. 400ml



#### Chain clean: super degreaser

High powered degreaser for all bike chains (road and off road). Formulated without chlorine. 400ml



#### Chain Paste: lubricating paste

White lubricating paste with brush tip applicator. Specially designed to lubricate all types of road bikes and cart chains 150ml



#### Chain Lube Road: Compatible X-ring, O-ring Z-ring

Colourless lubricant specially designed for the chains or road bikes and karts. Reduces high-speed splatter. Resists flying off. 400ml



#### Chain Lube Factory Line: for more power

A lubricant specially developed to lubricate racing motorcycle chains; road racing and endurance bikes. Its BORON TECH® formulation limits the rolling resistance for greater power. 400ml



### Carburettor Cleaner

#### Carbu clean:

##### improves carburettion

Carburettor cleaner formulated to eliminate deposits, varnishes and gums. Spray directly into carb 400ml



### Air Filter

#### Air filter oil:

##### better carburettion

Oil specially developed to lubricate foam air filters for off road bikes. 1L



#### Air filter spray:

##### better carburettion

Use with on and off road motorcycles. Convenient aerosol pack prevents wastage. 400ml



### Engine Cleaners

#### Motul Care System

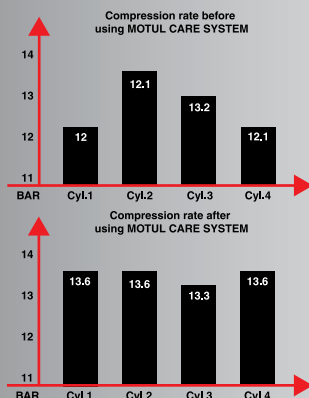


#### Engine clean cleans and protects the engine

Clean the engine before an oil change. Specifically formulated for 4 stroke bike engines. Keeps the oil clean longer and restores engines compression. 200ml

#### Compression test:

4 stroke Motorcycle Engine 1000cc - 15000kms



#### Fuel system clean:

##### superior engine output

Cleaner specially designed for the fuel system of 4 stroke bike engines. Reinforced action on valves, carburettors, injectors and combustion chambers. Disperses moisture for 3 months. 200ml



#### FUEL STABILIZER

##### keeps fuel fresh

Prevents fuel from deteriorating up to 2 years. Cleans valves. Excellent protection against engine corrosion. 2T & 4T 250ml



#### VALVE EXPERT

##### protects and lubricates

Effective in modern 4-stroke MX bikes. Lubricating effect of lead when using unleaded fuel. 250ml

## Clean & Shine

#### SHINE & GO silicone clean:

##### brilliance and protection

Shine & Go shines and enhances plastic surface colours thanks to its exclusive silicone-based formula. It leaves behind a long lasting protective film. Spray on radiator and under fenders to prevent mud buildup. 400ml



#### PERFECT SEAT: maintain & clean vinyl seats

Silicone free, anti-slip formula. Leaves seat looking new! 400ml



#### WASH & WAX:

##### "dry clean" your bike

Wash & Wax cleans, protects and makes your bike shine down to the chrome, all without the use of water. It leaves behind a long lasting protective finish. 400ml



#### MOTO WASH:

##### "entire bike" wash

Moto Wash is a powerful biodegradable cleaner & degreaser. Leaves a corrosion resistant film which protects all parts. 1L







# Maintenance Line

'maintaining your passion'

## Brake Fluid

### Dot 3 & 4

Perfect for everyday use.  
Dry boiling point of 245°C.  
Meets Dot 3 & Dot 4 manufacturer's recommendations  
100% Synthetic  
500ml



### Dot 5.1

Performance brake fluid for those wanting improved resistance to brake fade with a higher dry boiling point of 272°C. Specially developed for anti-lock braking systems (ABS)  
100% Synthetic  
500ml



### Racing Brake Fluid 600

Motul racing brake fluid has an incredibly high boiling point of 312°C. Brake fade becomes a thing of the past!  
Dot 4 100% Synthetic  
500ml



### Racing Brake Fluid 660

Motul's highest boiling point brake fluid at 325°C. Guarantees exceptional performance under extreme conditions.  
Dot 4 100% Synthetic  
500ml



## Preservation

### Tyre repair anti-flat:

**quick repair**  
Seals and re-inflates tyre, with or without an inner tube.  
Latex formulation.  
300ml



### E.Z. Lube:

**multi protect**  
Multi-use lubricant and anti-corrosive film, great for lubricating cables, foot pegs, etc.  
400ml



### Brake & Parts Cleaners

**Brake clean**  
**brake and contact cleaner**  
Powerful, non-chlorinated degreaser. For brake discs, clutches, metallic parts, electronic contacts and spark plugs.  
Leaves surfaces clean and dry.  
400ml



### Parts clean

**quick drying cleaner**  
Cleaning of mechanical parts & systems.  
Quick evaporation for a stainless finish.  
840ml



## Cooling Down

### MOCOOL

**Concentrate** - pour straight in  
Run your bike up to 15 degrees celcius COOLER!  
Designed to be used with pure water at a dilution of 5% (20:1), or mix with your coolant at 5% of volume  
\*Improves heat transfer  
\* Increases performance  
\* Reduces corrosion  
\* Compatible with coolants  
500ml



### Reinforced Organic Technology

**MOTOCOOL Factory Line**  
**alloy protection**  
Motocool's Organic + formulation ensures exceptional protection for the latest aluminium and magnesium alloys. An extremely high boiling point (136 degrees C/227 degrees F) for greater power.  
1L



### Inugel Expert:

Has Organic/non-organic technology provides an excellent thermal exchange which therefore improves engine cooling efficiency. Protects the entire cooling system against corrosion.  
135c - 275f  
1L



PROTECTION		INUGEL Expert Ultra
T°C / T°F	T°C / T°F	%
-22°C / -8°F	+132°C / +269°F	33%
-30°C / -22°F	+134°C / +273°F	40%
-41°C / -42°F	+136°C / +277°F	50%
-54°C / -65°F	+139°C / +282°F	60%

### Inugel Expert Ultra

**Concentrate**  
Hybrid technology that can be mixed at 33% for outstanding value and protection. Compatible with all cooling fluids.  
1L

