

## **Castrol's Automobiles Lubricants**

### **1. Castrol Edge 5W-40**



#### **Description & Application**

Castrol EDGE is the strongest and most advanced fully synthetic range of engine oils. Its TITANIUM FST (Fluid Strength Technology) doubles its film strength, preventing oil film breakdown and reducing friction.

Castrol EDGE 5W-40 is suitable for use in automobile, gasoline and diesel engines where the manufacturer recommends an ACEA C3, API SN/CF or earlier specification.

Provides excellent protection for all European, US and Japanese technology engines.

#### **Advantages**

- Castrol EDGE with TITANIUM FST is up to 45% stronger\* against a major competitor reducing Metal-to-Metal contact. (\*In our variable Speed Fluid Strength Test, Castrol EDGE with TITANIUM FST gave up to 45% less metal-to metal contact than a major competitor's product)
- Castrol EDGE with TITANIUM FST maintains its strength for at least 140 hours longer\*. (\*In independent tests of engine wear, Castrol EDGE oils with TITANIUM FST maintained film strength more than 140 hours longer than the same Castrol oils without TITANIUM FST).
- Castrol EDGE with TITANIUM FST reduces friction by up to 15%\* (\* Castrol EDGE oils with TITANIUM FST gave up to 15% lower friction than the same Castrol oils without TITANIUM FST).

#### **Product Performance claims**

- ✓ Meets ACEA C3, API SN/CF, SAE 5W-40, BMW Longlife-04, dexos2®\*, Fiat 9.55535-S2, Ford WSS-M2C917-A, MB 226.5/ 229.31/ 229.51, Renault RN 0700/ RN 0710, VW 502 00/ 505 00/ 505.01

### **2. Castrol GTX 20W-50**



## Description & Application

Castrol GTX is one of the world's most trusted engine oils.

It's more than just oil. It's liquid engineering that protects against the problems your engine faces every day.

Severe driving conditions can cause the buildup of a thick, tar-like, substance called sludge.

Sludge can block your engine's vital oil ways like cholesterol – and if untreated it can rob an engine of power and, ultimately, its life.

## Advantages

- Castrol GTX Double Action Formula cleans away old sludge\*, and protects against new sludge formation better than tough industry standards (\*Vs API SL limits)
- Castrol GTX 20W-50 is suitable for use in automotive gasoline and diesel engines where the manufacturer recommends and ACEA A3/B3, API SL/CF or earlier specification 20W-50 lubricant.
- Provides superior protection against engine sludge Vs API SL limits
- Castrol GTX has passed the API's toughest sludge tests and is proven to provide 25% superior engine protection Vs API SL standard.
- It provides superior protection against the oil burn-off, 60% better than the tough industry volatility test. As your engine ages, oil burns off faster. Over time, this can increase engine wear, shortening the life of your vehicle.

## Product Performance claims

- ✓ Meets ACEA A3/B3, API SL/CF, SAE 20W-50

## Castrol's Heavy Duty Trucks & Machinery Lubricants

### 1. Castrol Vecton 15W-40





### **Description & Application**

Castrol Vecton 15W-40 is an advanced multi-grade diesel engine oil, formulated with unique System 5 Technology for up to 40% better performance.\*

Castrol Vecton 15W-40 is suitable for a wide range of European, US and Japanese diesel engines, used in on- and off-highway applications.

### **Advantages**

Modern engines operate in constantly changing conditions which impacts engine performance. Castrol Vecton 15W-40's unique System 5 Technology adapts to these changing conditions to help maximize performance in 5 key areas:

- 1 – Fuel Consumption: Fights oil thickening resulting in better fuel efficiency
- 2 – Oil Consumption: Fights piston deposits, resulting in lower oil consumption
- 3 – Oil Change Interval: Fights contaminants, resulting in longer oil drain intervals
- 4 – Component Life: Fights wear and corrosion, enhancing the life of critical engine components
- 5 – Power: Fights soot, improving engine power all the way through the oil drain

New Castrol Vecton 15W-40 with unique System 5 Technology adapts to changing engine conditions delivering up to 40% better performance\*

\*In independent laboratory tests, Castrol Vecton 15W-40 performed up to 40% better than API and ACEA industry standard limits across oil thickening, piston deposits, soot handling and wear and corrosion.

### **Product Performance claims**

- ❖ API CI-4/SL, ACEA E7, DHD-1, CAT ECF-2, Cummins CES 20.076, 20.077, 20.078, Mack EO-M Plus, EO-N, MAN M3275-1, MB-Approval 228.3, RVI RLD-2, Volvo VDS 3

## **2. Castrol Tecton 15W-40**



## Description & Application

Castrol Tecton Global is a 15W-40 mixed fleet multi-grade diesel engine oil designed to provide excellent protection for fleets containing vehicles from a variety of manufacturers.

## Advantages

- Castrol Tecton Global's primary application is in Euro 4\* and Euro 3 European technology vehicles, in US Technology vehicles and in Japanese technology vehicles.
- Castrol Tecton Global 15W-40 is a truly versatile product which can be used in Trucks, buses, LCVs, off-road vehicles and equipment and also in agricultural vehicles.
- Castrol Tecton Global 15W-40 provides excellent protection for a wide variety of engine makes, so is the first choice for on and off-road fleets which contain different vehicles types.
- Excellent protection for all European, US and Japanese technology engines.
- Castrol Tecton Global 15W-40's versatile formulation provides protection against wear and deposits, ensuring reduced maintenance costs and preventing unscheduled downtime.
- Reduced inventory, Castrol Tecton Global 15W-40 is so versatile, mixed fleets need to stock only one engine oil.
- Extended oil drain intervals. Castrol Tecton Global 15W-40 is approved by OEMs for use at extended drain intervals, so reducing downtime and servicing costs.

## Product Performance claims

- ✓ API CI-4/CF, ACEA E7, E5, E3, Global DHD-1, CAT ECF-2, RVI RLD, Volvo VDS-3, Cummins CES 20.076, 20.077, 20.078, Mack EO-M Plus, MB-Approval 228.3, MAN M 3275, Meets DAF requirements

### 3. Castrol CRB Mono 30/40/50



### **Description & Application**

Castrol CRB Mono diesel engine oil is designed to provide excellent protection, especially at high engine temperatures, ensuring longer engine life.

Castrol CRB Mono is designed for naturally aspirated diesel engine vehicles and is also suitable for use in tractors and agricultural equipment.

### **Advantages**

- Castrol CRB Mono forms a protective layer that works harder at high engine temperature, ensuring longer engine life.
- Greater protection against wear even at high temperature conditions
- Maintains excellent oil pressure in older engines
- Reduced oil consumption

### **Product Performance claims**

- ✓ Meets API CF requirements and above

## **4 Castrol CRB Mono 10W**

### **Description & Application**

Castrol CRB Mono 10W is high performance diesel engine oil, designed for use in a wide range of applications that require a mono-grade 10W oil.

Castrol CRB Mono 10W is mainly for use in hydraulic and certain transmission applications, but is also suitable for use in diesel engines as well as other applications that specify the use of a mono-grade 10W engine oil.

### **Advantages**

- Castrol CRB Mono 10W forms a protective layer that works harder at high temperature, ensuring longer engine life.
- High levels of cleanliness and wear protection
- Excellent resistance to oxidation, minimizes deposits
- Wide range of applications

### **Product Performance claims**

- ✓ Meets API CF requirements and above

## **Castrol's 2-stroke Lubricants**

### **Castrol 2T**



### **Description & Application**

Castrol 2T is modern, mineral based 2-stroke oil designed to give good all round performance in most 2-stroke motor cycles and other small engine applications. Its low ash formula will help to protect against pre-ignition and provide good engine lubrication and cleanliness to maintain good compression and reliable engine startability through-out its life.

#### **Advantages**

- Mineral based 2-stroke motorcycle engine oil
- Good overall protection against deposits.

#### **Product Performance claims**

- ✓ JASO FB

### **Castrol's Gear & Transmission Lubricants**

#### **1. Castrol Manual 90**

##### **Description & Application**

Castrol Manual 90 is a manual transmission fluid & may be used in applications where API GL-4 performance is required

##### **Advantages**

- Good thermal stability protects against deposit formation and oil thickening maintaining the life and performance of lubricant and transmission.
- Good anti-wear and load carrying characteristics extend the life of components. Improved low temperature protection and gear shifts compared to mono-grade products.

##### **Product Performance claims**

- ✓ API GL-4

#### **2. Castrol Manual 140**

##### **Description & Application**



Castrol Manual 140 is a manual transmission fluid & may be used in applications where API GL-4 performance is required

##### **Advantages**

- Good thermal stability protects against deposit formation and oil thickening maintaining the life and performance of lubricant and transmission.
- Good anti-wear and load carrying characteristics extend the life of components.

#### **Product Performance claims**

- ✓ API GL-4

### **3. Castrol Axle EPX 80W-90/ 85W-140**

#### **Description & Application**

Castrol Axle EPX is a multi-purpose axle oil which may be used in differentials, final drives and other applications in passenger cars and commercial vehicles where API GL-5 performance is required. It is approved by ZF for use in a range of commercial applications including axles in off-road and agricultural equipment.

#### **Advantages**

- High load carrying capability ensures gear operating under high loads are protected prolonging component life.
- High film strength ensures protection against wear and shock loads.
- Good thermal/oxidation stability protects against the formation of deposits and oil thickening prolonging the life of components and lubricant.

#### **Product Performance claims**

##### **Castrol Axle EPX 80W-90**

- ✓ API GL-5
- ✓ Approved – ZF TE-ML 05A, 12E, 16B, 17B, 19B, 21A MAN 342 Typ M2

##### **Castrol Axle EPX 85W-140**

- ✓ API GL-5
- ✓ Approved – ZF TE-ML 05A, 12E, 16D, 21A MAN 342 Typ M1

### **Automatic Transmission Fluid**

#### **Castrol Transmax Dex III Multivehicle**



#### **Description & Application**

Castrol Transmax Dex III Multivehicle is a part synthetic automatic transmission fluid designed for use in GM automatic transmissions pre 2005 and Ford automatic transmissions built between 1983 and 1996, where Dexron® (II or III) or Mercon are required. This product is approved for in Allison heavy duty transmissions against TES 389. It is also approved for use in a wide range of European heavy duty automatic transmissions. It may be used in some power steering units.

### **Advantages**

- Multiple manufacturer approvals make it suitable for wide ranging use.
- It is specifically formulated for high thermal stability and resistance to oxidation which protects against the formation of deposits and oil thickening prolonging the life of components and lubricant.
- Optimised friction characteristics provide smooth shifting and efficient power transfer.
- High viscosity index provides a stable viscosity over a wide temperature range for effective protection of transmissions and operation of power steering units.

### **Product Performance claims**

- ✓ Allison C4, Allison TES 389, Meets Ford Mercon®, GM Dexron® IIIH, MAN 339 Z1, MAN 339 V1, MB-Approval 236.9, Voith H55.6335.xx, Volvo 97340, 97341, ZF TE-ML 04D, 14A

### **Brake Fluid**

#### **Castrol Brake Fluid DOT-4**



### **Description & Application**

Castrol Brake Fluid DOT 4 is a high boiling synthetic brake fluid which far exceeds the requirements of the SAE J1703, SAE J1704, FMVSS 116 DOT 4, ISO 4925 and JIS K2233 specifications.

Castrol Brake Fluid DOT 4 is designed for use in brake systems particularly those which are exposed to extreme conditions.

### **Advantages**

- This product has been formulated from mixed polyalkylene glycol ethers and borate esters together with other high performance additives and inhibitors which give ultimate system protection against the effects of corrosion and high temperature vapour lock.



- The formulation has been developed such that the vapor lock point can be sustained at a higher level than conventional glycol ether based fluids during the service life of the product.
- Castrol Brake Fluid DOT 4 is fully compatible with other fluids meeting FMVSS 116 DOT 3 and DOT 4 however, in order to maintain the superior performance characteristics of Castrol Brake Fluid DOT 4, avoid mixing with other brake fluid products.
- All conventional brake fluids deteriorate during use. It is strongly recommended that Castrol Brake Fluid DOT 4 should be changed according to the vehicle manufacturers advice. In the absence of such advice, a 2 year change period is recommended.

### **Product Performance claims**

- ✓ JIS K2233, SAEJ1703, SAE J1704, ISO 4925 Class 4, FMVSS DOT 4.

### **Coolant**

#### **1. Castrol Radicool SF**

#### **Description & Application**

Castrol Radicool SF is a long-life coolant based on monoethyleneglycol with advanced organic acid inhibitor technology. In contrast to traditional antifreeze coolants, Castrol Radicool SF does not contain amines, nitrites, phosphates, silicates or other inorganic inhibitors.

Castrol Radicool SF provides excellent corrosion protection, particularly to those engines employing light metals. It is suitable for a wide range of vehicles including cars, trucks, and buses using both petrol and diesel engines. It is therefore particularly suitable for use in mixed fleets.

Castrol Radicool SF works over a wide operating temperature range for effective engine cooling in all climates.

#### **Advantages**

- The special inhibitor package used in Castrol Radicool SF enables longer drain intervals with excellent protection against corrosion, cooling system blockage, overheating and freezing. It is especially suitable for use in engines employing cast iron, aluminum, copper or combinations of these metals used in modern engine designs. It is also compatible with all standard rubber hoses, gaskets and seals used within the cooling system.
- Castrol Radicool SF possesses a longer operational life by allowing extended drain intervals of 3 years plus. Longer drain intervals means reduced cost and less possibility of harm to the environment. Castrol Radicool SF provides excellent protection against cavitation corrosion and effective water pump lubrication, reducing wear and noise.
- The additive technology used in Castrol Radicool SF prevents the build up of Calcium deposits (scale) from use of hard water, thereby reducing possibility of radiator blocking and restricted flow of coolant. This technology also improves the fluids heat transfer properties ensuring engines run at optimum temperatures.
- Castrol Radicool SF is approved by a number of OEM's including Mercedes Benz, Volkswagen, MAN and Ford. It is also recommended against the following vehicle manufacturer's

specifications: General Motors GM 6277M, Deutz, Cummins IS series and N14 engines, Jenbacher, Komatsu, Renault Type D, Jaguar CMR 8229 and MTU MTL 5048 Series 2000C&I.

- Castrol Radicool SF contains a bittering agent to deter from accidental ingestion.

### **Product Performance claims**

- ✓ ASTM D3306(I), ASTM D4985, ASTM D6210, BS6580:2010, JIS K2234, MAN 324 Typ SNF, VW-TL-774F, FORD-WS-M97B44-D, MB-Approval 325.3

### **2. Castrol Radicool NF Premix**



### **Description & Application**

Castrol Radicool NF Premix is a ready to use antifreeze coolant formulated using monoethylene glycol and selected additives, free from nitrite, amine and phosphate inhibitors. It uses hybrid technology for the modern performance engines of cars and trucks.

This product requires no customer dilution therefore ensures the correct concentration is always used. Castrol Radicool NF Premix provides year round protection against corrosion, and offers freezing protection down to  $-35^{\circ}\text{C}$ .

### **Advantages**

- Castrol Radicool NF premix has been developed to meet the growing demand from engine and vehicle manufacturers for a higher performance coolant that minimizes environmental impact. It provides excellent protection against corrosion, and because it contains no phosphate, the problems of deposits in some modern performance engines are eliminated. In addition to providing excellent corrosion and low temperature protection, the use of the recommended level of antifreeze will significantly reduce the likelihood of wet cylinder liner pitting due to “cavitation erosion”. Cavitation erosion is caused by the implosion of air bubbles present in the coolant and which are attracted to the liner outer surface. These bubbles implode, resulting in the removal of minute amounts of liner material – this, if allowed to continue unchecked, will result in liner porosity and severe engine damage.
  - OEM approvals
  - Protects for up to 3 years
  - Excellent low temperature protection

- Provides excellent protection against corrosion
- Efficient lubrication of water pumps
- Compatible with conventional seal and hose materials used in engine cooling systems.
- Contains bittering agent.

### **Product Performance claims**

- ✓ ASTM D3306(III), BS - BS6580:2010, MAN 324 Typ NF, MB-Approval 326.0, MTU MTL 5048

### **Hydraulic Oil**

#### **Castrol Hyspin AWS 32/46/68**

### **Description & Application**

Castrol Hyspin AWS hydraulic oil range is based upon highly refined mineral oil enhanced with a stabilized zinc additive system.

Hyspin AWS has been specially formulated to provide good anti-wear and thermal stability performance using the very latest additive technology. The careful blend of additives with a high quality base stock ensures that Hyspin AWS has excellent hydrolytic and oxidative stability while exhibiting a minimal tendency to produce sludge and deposits. In addition, Hyspin AWS provides corrosion protection to ferrous and yellow metal components found within a hydraulic system.

This range is designed for use in industrial hydraulic systems which require anti-wear protection. It is also suitable for other duties in which lubricants of high oxidation stability and lubrication performance are required, such as lightly loaded gears, variable speed units and bearings.

The Hyspin AWS range is fully compatible with elastomer materials commonly used for static and dynamic seals, such as nitrile, silicone and fluorinated (e.g. Viton) polymers.

Hyspin AWS is classified as follows:

- DIN 51502 classification – HLP
- ISO 6743/4 – Hydraulic Oils Type HM

Hyspin AWS grades meet the requirements (for appropriate viscosity grade) of:

- DIN 51524 Part 2
- Cincinnati Lamb (Milacron) P 68-69-70
- Denison (Parker Hannafin HF-0
- US Steel 126 & 127
- Eaton (formerly Vickers) I-286-S & M-2950-S
- Bosch Rexroth RE90220

### **Advantages**

- Good thermal and oxidative stability leads to longer operating life, reduction in lubricant costs and minimizes deposit formation giving a cleaner system.
- Excellent anti-wear performance gives wear protection and reduces downtime from unscheduled maintenance.
- Good filterability characteristics (including in the presence of water) enables cost saving to be made from increased filter life and reduced maintenance.
- Excellent water separation and hydrolytic stability means reduced down time through prolonged lubricant life and increased equipment reliability.

**For more information : [www.castrol.com](http://www.castrol.com)**