

# Engine Oils

// PCMO // HDDO // Agricultural // Marine  
// Moto // Motorsport



# About Us

## **NZ OWNED & OPERATED**

We are market leaders through innovation, service, diverse/high quality ranges and a skilled staff passionate about the industry they work in. We believe our enthusiasm is one of the things that sets us apart from other oil companies and surpass what's on offer from oil distributors. With rigorous R & D, and investment in our business and our people, we have developed into a truly professional oil company. We pride ourselves in our understanding of our given markets. This includes not just our customer base, but industry categories as a whole.

## **WHAT WE DO**

At Lubricants NZ, we've curated a skill set that's the envy of the industry. We provide the most complete product offering for the market. Our combination of expertise & solutions focus means less fuss, increased service & your satisfaction. We specialise in the supply and delivery of oils, grease, coolant, chemicals and AdBlue.

## **SERVICE**

We have a dedicated customer services team in each of our regions, along with territory managers in the field. At Lubricants NZ, we've found communication creates success. Working with us, you'll receive a sensitivity toward your commercial needs and an open door approach designed to resolve issues.

## **OUR RANGE**

The Vertex Engine Oil range is centred on technical excellence, innovation and market understanding. Our vision is to not only meet, but exceed the markets needs and expectations. We provide complete value and quality in the broadest and most complete Range.

From Low SAPS, Mid SAPS, Diesel Engine, Petrol Engine, 2 Stroke, 4 Stroke, Marine, PWC and Specialist products, we have an incomparable product offering. Vertex Engine Oils are OEM Approved, and meet and exceed all industry standards.

The Vertex Engine Oil range is manufactured from market leading base products. Whether you require a multi-fleet Engine Oil, a specific/specialised product, no matter the application, we have a solution.

From Automotive, Mining, Agriculture, Transport, Commercial, Shipping, Industrial Manufacturing to Railways Applications, the Vertex brand has been tried and proven in the most demanding environments.

We specialise and provide you the partnership you deserve. For a first class product with a range second to none, Vertex is the smart choice.



Performance // Technical Excellence // Innovation

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Alternatively you can click on the QR code below.



Vertex Oil Selector



# Passenger Car Motor Oil (PCMO)

// LOW SAPS // Synthetic // Semi Synthetic  
// Mineral // Specialty



# Passenger Car Motor Oil (PCMO)



## Expert C5 5W20

Vertex Expert C5 5W20 is a High Performance 100% Synthetic Fuel Economy Engine Oil specially designed for Ford, MB and other OEMs requiring low friction and very low HTHS (High Temperature High Shear) viscosity oil (ACEA C5). Designed to offer unparalleled performance in turbo charged engines.

### Suitable for:

Vertex Expert C5 5W20 is suitable for use in FORD, JAGUAR, LAND ROVER, CHRYSLER, JEEP etc. Suitable also for Gasoline and Diesel engines requiring a 5W-20 viscosity grade Fuel Economy lubricant type. Compatible with catalytic converters.

**API SN • ILSAC GF-5 • Dexos 1 • ACEA C5 • Ford M2C948-B • STJLR.03.5006**

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEEC520/C3B5L | 5 Litre   | • Full Synthetic |
| VEEC520/P20L  | 20 Litre  | • Petrol         |
| VEEC520/D200L | 200 Litre | • Diesel         |
|               |           | • Fuel Economy   |
|               |           | • Low Saps       |



## Expert C4 5W30

Vertex Expert C4 5W30 is a high performance 100% synthetic lubricant specially designed for lubricating light diesel engines. A very high performance Fuel Economy lubricant blended to provide compatibility with post-treatment systems.

### Suitable for:

Use in automotive and light commercial diesel engines where the manufacturer recommends an ACEA C4 Renault RN 0720 or MB 226.51\* rated fluid. Compatible with catalytic converters and Diesel Particulate Filters (DPF). All vehicles manufactured by Renault, Kia, Hyundai, Ssangyong and Mercedes Benz.

\*MB 226.51 standard applies to all Renault outsourced Diesel engines (with DPF) fitted to Mercedes vehicles, and other Mercedes Benz requiring this standard.

**ACEA C4 • MB 226.51 • RN 0720**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEEC453/C12B1L | 1 Litre   | • Full Synthetic |
| VEEC453/C3B5L  | 5 Litre   | • Petrol         |
| VEEC453/P20L   | 20 Litre  | • Diesel         |
| VEEC453/D200L  | 200 Litre | • Low Saps       |



## Expert C3 5W40

Vertex Expert C3 5W40 is a high performance 100% synthetic lubricant specially designed for late model cars, powered by turbo diesel direct injection (incl DPF) and petrol engines. Suitable for use in EURO IV or EURO V emission regulation compliant engines. Vertex Expert C3 5W40 utilises a unique technology with a special molecular formulation to maximise the protection for engines under extreme conditions.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B3/B4/C3, API SN/CF, or earlier specification 5W40 lubricant. Compatible with catalytic converters and Diesel Particulate Filters (DPF). Designed for use in engines requiring an ACEA C3 engine oil i.e. high HTHS (> 3.5 mPa.s) viscosity and "Mid SAPS" with reduced content of sulphated ash ( $\leq 0.8\%$ ), phosphorus ( $0.07 \leq x \leq 0.09\%$ ) and sulphur ( $\leq 0.3\%$ ).

**API SN • ACEA A3/B4 • ACEA C3 • Dexos 2 • MB 229.51 • VW 505.01 • FIAT 9.55535-S2 • VW 505.00  
PSA B7 12290 • BMW LL-04 • Ford WSS M2C 917A**

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEEC354/C3B5L | 5 Litre   | • Full Synthetic |
| VEEC354/P20L  | 20 Litre  | • Petrol         |
| VEEC354/D200L | 200 Litre | • Diesel         |
|               |           | • Low Saps       |



## Expert LS 5W30

Vertex Expert LS 5W30 is an Ultra High Performance Diesel (UHPD) low SAP lubricant that is specifically formulated with ultimate active clean technology. It is blended with high quality synthetic base fluids and a high technology core additive package. Designed to replace multiple lubricants thereby reducing the inventory needed to service a wide vehicle park.

### Suitable for:

Use in automotive engines where the manufacturer recommends an ACEA A3/B4/C3, API SN, Dexos 2 or earlier specification 5W-30 lubricant. Particularly adapted to suit recent Mercedes-Benz and BMW vehicles equipped with a post-treatment system. Also suitable for VW motors with direct injection.

Note: Please consult online Lube Guide for specific VW listings before use.

**API SN • ACEA A5/B5 • ACEA B3/B4 • ACEA C3 • GM Dexos 2 • MB 229.51 • ILSAC GF-5  
VW 505.00/01/504.00\* • PSA Peugeot Citroen B7 12290 • BMW LL-04 • WSS M2C 913 D LOW  
SAPS**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEELS53/C12B1L | 1 Litre   | • Full Synthetic |
| VEELS53/C3B5L  | 5 Litre   | • Petrol         |
| VEELS53/P20L   | 20 Litre  | • Diesel         |
| VEELS53/D200L  | 200 Litre | • Low Saps       |

# Passenger Car Motor Oil (PCMO)



## Expert VW 5W30

A full synthetic engine oil that is particularly formulated to meet the unique demands of VW vehicles. This complex additive package ensures engine longevity and meets the most demanding of OEM specified drain intervals. Vertex Expert VW 5W30 is suitable for all types of driving and up to 30000 km drain intervals for Gasoline and 50000 km for Diesel engines.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B4/C3, VW507.00 or earlier specification 5W30 lubricant. Designed specifically of vehicles manufactured by VAG (VW, Audi, Skoda, Seat), and other German OEM's.

Note: Please always consult OEM intervals before deciding on drain parameters.

**ACEA C3 • ACEA A3/B4 • BMW LL-04 • EURO V COMPATIBLE • MB 229.51 • VW 507.00 • Porsche C30**

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEEVW53/C3B5L | 5 Litre   | • Full Synthetic |
| VEEVW53/P20L  | 20 Litre  | • Petrol         |
| VEEVW53/D200L | 200 Litre | • Diesel         |
|               |           | • Low Saps       |



## Expert C2 5W30

A high performance 100% synthetic lubricant specially designed for lubricating light diesel engines. Vertex Expert C2 5W30 is a very high performance Fuel Economy lubricant blended to provide compatibility with post-treatment systems. Vertex Expert C2 5W30 is compatible with catalytic converters and Diesel Particulate Filters (DPF). Suitable for all other vehicles requiring ACEA A5/B5 or API SN/CF.

### Suitable for:

Use in Peugeot, Citroën, Honda and Toyota models where an ACEA C2 engine oil is recommended.

Note: This product should not be used in place of ACEA C3 products, unless stated by the vehicle manufacturer.

**ACEA C2 • ACEA A5/B5 • API SN • ILSAC GF5 • PSA B71 2290 • Fiat 9.55535.S1 • Renault RNO700**

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEEC253/C3B5L | 5 Litre   | • Full Synthetic |
| VEEC253/P20L  | 20 Litre  | • Petrol         |
| VEEC253/D200L | 200 Litre | • Diesel         |
|               |           | • Low Saps       |



## Expert FE 0W30

Vertex Expert FE 0W30 is a high performance 100% synthetic lubricant specially designed for gasoline and diesel engines in passenger cars, especially for the most recent Toyota and Ford diesel engines. Expert FE 0W-30 fulfills the requirements of Ford WSS-M2C950-A.

### Suitable for:

Use in Peugeot, Citroën, Honda and Toyota models where an ACEA C2 engine oil is recommended.

Note: This product should not be used in place of ACEA C3 products, unless stated by the vehicle manufacturer.

**ACEA C2 • API SN • Fiat 9.55535-DS1 • Fiat 9.55535-GS1 • Ford M2C950-A • Peugeot PSA B71 2290 • Peugeot PSA B71 2312 • STJLR.03.5007**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEEFE030/C3B5L | 5 Litre   | • Full Synthetic |
| VEEFE030/P20L  | 20 Litre  | • Petrol         |
| VEEFE030/D200L | 200 Litre | • Diesel         |
|                |           | • Fuel Economy   |
|                |           | • Low Saps       |



## Expert Eco B 5W20

Vertex Expert Eco B 5W20 is a High Performance 100% Synthetic Fuel Economy Engine Oil specially designed for FORD and OEMs requiring low friction and very low HTHS (High Temperature High Shear) viscosity oil ( $\geq 2.6$  mPa.s).

Vertex Expert Eco B 5W20 Can be used in vehicles with DPF Filters\* (ACEA C2), but check with manufacturer for viscosity requirements first. Surpasses API SN and ACEA C2 and is suitable for use where ACEA A5/B5 and/or ILSAC GF-5 oils are specified.

### Suitable for:

Use in FORD, JAGUAR, LAND ROVER, CHRYSLER, JEEP etc. Suitable also for Gasoline and Diesel engines requiring a 5W-20 viscosity grade Fuel Economy lubricant type (ACEA A1/B1 standard). Compatible with catalytic converters. Suitable for use in Hybrid vehicles from the likes of Toyota and Honda. Specifically designed for use in the latest Eco Boost motors from Ford.

Note: This product should not be used in place of ACEA C3 products, unless stated by the vehicle manufacturer.

**API SN • ILSAC GF5 • Chrysler MS-6395 • Dexos 1 • ACEA C2 • Ford M2C925-A • Ford M2C930-A Ford M2C153-H • Ford M2C945-A • Ford M2C948-B • GM 16182**

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VEEEB520/C12B1L | 1 Litre   | • Full Synthetic |
| VEEEB520/C3B5L  | 5 Litre   | • Petrol         |
| VEEEB520/P20L   | 20 Litre  | • Diesel         |
| VEEEB520/D200L  | 200 Litre | • Fuel Economy   |
|                 |           | • Low Saps       |

# Passenger Car Motor Oil (PCMO)



## Expert FE 0W20

An advanced Fuel Economy synthetic oil engineered to help improve fuel economy in vehicles where SAE 0W-20 or 5W-20 motor oil is recommended. Designed to help deliver outstanding engine protection and enhanced fuel economy. It meets ILSAC GF-5 requirements. Vertex Expert FE 0W20 is designed for small capacity, high technology engines. Especially designed for recent cars, powered with gasoline engines, designed to use oil with low friction and very low HTHS viscosity ( $\leq 2.6$  mPa.s).

### Suitable for:

Modern cars, powered with gasoline engines, designed to use oil with "Mid SAPS" reduced content of Sulfated Ash ( $\leq 0.8\%$ ), Phosphorus ( $0.07 \leq x \leq 0.09\%$ ) and Sulfur ( $\leq 0.3\%$ ). Recommended for small cars and hybrids. Engines developed by Nissan, Subaru, Toyota, Honda, GM and Ford. Extreme cold conditions to help deliver quick starts and fast lubrication. Applications requiring an API 5W20 or 0W20 lubricant.

**API SN • ACEA C2 • ACEA A1/B1 • Ford WSS-M2C945-A • Ford WSS-M2C930-A • Ford WSS-M2C925-A ILSAC GF-5 • GM 6094M • Dexos 1 • Mitsubishi MZ320106 • Nissan KLAM7-00204 Toyota 00279-0WQTE-01 • Mazda 0000-G5-0W20-MQ**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEEFEO20/C3B5L | 5 Litre   | • Full Synthetic |
| VEEFEO20/P20L  | 20 Litre  | • Petrol         |
| VEEFEO20/D200L | 200 Litre | • Diesel         |
|                |           | • Fuel Economy   |
|                |           | • Low Saps       |



## Expert C1 5W30

Ultra High Performance Diesel low SAP, low HTHS lubricant designed for use in high performance gasoline and light duty diesel engines where advanced after treatment systems such as Diesel Particulate Filters (DPFs) and Three Way Catalysts (TWC) are used. Vertex Expert C1 5W30 is specifically designed for vehicles where ACEA C1 engine oils are specified and should only be used in diesel engines when low sulphur diesel fuel is also being used. Formulated for use in most modern engines with the focus to reduce exhaust emissions and improve fuel efficiency. Vertex Expert C1 5W30 offers increased fuel economy, low temperature viscosity and results in an easy cold start.

### Suitable for:

The Ford group of diesel engines. Low HTHS viscosity applications and engines requiring a fuel economy engine oil. Designed to protect emission reduction systems. Catalyst compatible engine oil, has the lowest SAPS limits and designed especially for use in engines where the O.E.M. recommends a C1 engine oil.

**API SM • ACEA C1 • ACEA A5/B5 • JASO DL-1 • FORD WSS-M2C934-B • ILSAC GF-5**

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEEC153/C3B5L | 5 Litre   | • Full Synthetic |
| VEEC153/P20L  | 20 Litre  | • Petrol         |
| VEEC153/D200L | 200 Litre | • Diesel         |
|               |           | • Low Saps       |





## Expert DX-1 5W30

Vertex Expert DX-1 5W30 is a premium synthetic engine oil meeting the most stringent requirements of gasoline, diesel and turbocharged engines in today's new cars. Primarily designed for modern Ford and GM petrol passenger vehicles. High performance fuel economy oil. Meets Dexos 1 and Ford WSS M2C 929 A/946 A standards.

### Suitable for:

All vehicles where Dexos 1 is required. All vehicles where Ford WSS M2C 929 A/946 A. Ford group vehicles – Ford, Jaguar, Land Rover, Lincoln, Mazda (dependant on year). GM group vehicles – Holden, Chevrolet, Vauxhall, Cadillac, Hummer (dependant on year). Chrysler Group Vehicles – Chrysler, Dodge, Jeep (dependant on year). Fuel efficient and reduced emission engines.

**API SN • ACEA A1 • ACEA A5 • ACEA B5 • WSS M2C 929 A • WSS-M2C946-A • ILSAC GF-5  
DEXOS 1 • Chrysler: MS-6395**

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VEEDX153/C12B1L | 5 Litre   | • Full Synthetic |
| VEEDX153/C3B5L  | 5 Litre   | • Petrol         |
| VEEDX153/P20L   | 20 Litre  | • Diesel         |
| VEEDX153/D200L  | 200 Litre | • Low Saps       |



## Workshop Pro 5W30

Vertex Workshop Pro 5W30 is a fully synthetic engine oil formulated from PAO-added VHVI base oil using high performance additive technology. Meets the requirements of API SN and ACEA C3 and is highly recommended for diesel passenger cars with DPF. It is engineered to provide outstanding engine protection ensuring longer engine life.

### Suitable for:

Where lower viscosity oil is recommended (SAE 5W30). Vertex Workshop Professional 5W30 is intended for use as catalyst compatible Oil at extended Drain Intervals in Vehicles with modern after-treatment Systems. All vehicles requiring an ACEA C3 rated fluid.

Compatible with catalytic converters, DPF and TWC's. Modern 4, 6 & 8+ cylinder multi-cam, multi-valve (including VVT), naturally aspirated, supercharged & turbocharged low emission engines including those fitted with/without DPF's.

**API SN • ACEA C3**

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VEWPC3530/P20L  | 20 Litre  | • Full Synthetic |
| VEWPC3530/D200L | 200 Litre | • Petrol         |
|                 |           | • Diesel         |
|                 |           | • Low Saps       |



# Passenger Car Motor Oil (PCMO)

## ACEA C Category Explained

Every ACEA specification is made of a letter or letters that indicate the class (e.g. E stands for the heavy duty class) and a number that defines the category (e.g. the 3 in C3). There are separate categories for oils with different purposes or for different applications within the same class.

The categories within the C class are divided along SAPS limits and along HTHS viscosities. C1 and C4 are low-SAPS oils, while C2 and C3 are mid-SAPS oils. On the other hand C1 and C2 oils have lower HTHS viscosities, while C3 and C4 oils have higher HTHS viscosities. The C5 category that has been newly introduced in the ACEA 2016 sequences has even lower limit for HTHS viscosity. In order for an oil to meet this specification it must be a mid-SAPS oil and its HTHS viscosity has to be between 2.6 and 2.9 mPa\*s.

**ACEA C1** Stable, stay-in-grade oil intended for use as catalyst compatible oil in vehicles with DPF and TWC in high performance car and light van diesel and gasoline engines requiring low friction, low viscosity, low SAPS oils with a minimum HTHS viscosity of 2.9 mPa.s. These oils will increase the DPF and TWC life and maintain the vehicles fuel economy.

**Warning: these oils have the lowest SAPS limits and are unsuitable for use in some engines.**

**ACEA C2** Stable, stay-in-grade oil intended for use as catalyst compatible oil in vehicles with DPF and TWC in high performance car and light van diesel and gasoline engines designed to be capable of using low friction, low viscosity oils with a minimum HTHS viscosity of 2.9 mPa.s. These oils will increase the DPF and TWC life and maintain the vehicles fuel economy. **Warning: these oils are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.**

**ACEA C3** Stable, stay-in-grade oil intended for use as catalyst compatible oil in vehicles with DPF and TWC in high performance car and light van diesel and gasoline engines, with a minimum HTHS viscosity of 3.5 mPa.s. These oils will increase the DPF and TWC life. **Warning: these oils are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.**

**ACEA C4** Stable, stay-in-grade oil intended for use as catalyst compatible oil in vehicles with DPF and TWC in high performance car and light van diesel and gasoline engines requiring low SAPS oil with a minimum HTHS viscosity of 3.5 mPa.s. These oils will increase the DPF and TWC life. **Warning: these oils are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.**

**ACEA C5** Stable, stay-in-grade Engine Oil with Mid SAPS-Level, for further improved Fuel Economy, intended for use as catalyst compatible Oil at extended Drain Intervals in Vehicles with all Types of modern After treatment Systems and High Performance Passenger Car & Light Duty Van Gasoline & DI Diesel Engines that are designed to be capable and OEM approved for use of Low Viscosity Oils with a minimum HTHS Viscosity of 2.6 mPa\*s.



## Expert HP 10W60

Vertex Expert HP 10W60 is a very high performance full synthetic lubricant for vehicles, that demand maximum engine performance, in competition or with high performance engines. High performance European vehicles (M Sport, AMG, Abarth etc). Motorsport and severe use road car applications. Superior high temperature stability and oxidation resistance increases lubrication of hot metal compared to other synthetics.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B4, API SN/CF, or earlier specification 10W-50 or 10W60 lubricant.

**API SN/CF • ACEA A3/B4 • MB 229.1 • FIAT 9.55535-H3**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEEHP16/C12B1L | 1 Litre   | • Full Synthetic |
| VEEHP16/C3B5L  | 5 Litre   | • Petrol         |
| VEEHP16/P20L   | 20 Litre  |                  |
| VEEHP16/D200L  | 200 Litre |                  |



## Expert LL-01 5W40

Vertex Expert LL-01 5W40 is a high performance 100% synthetic lubricant specially designed for late model cars, powered by turbo diesel direct injection or petrol engines. Vertex Expert LL-01 5W40 utilises a unique technology with a special molecular formulation to maximize the protection for engines under extreme conditions.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B4, SM, MB 229.5 or BMW LL-01 rated oil. Ideal for all Fiat, Lancia and Alfa Romeo's produced before 2007. Designed primarily for European petrol engines, especially those produced by Mercedes Benz and BMW.

**API SM/CF • ACEA A3/ B4 • BMW LL-01 • MB 229.5 • GM-Opel LL B-025 • Porsche A40 (all models except Cayenne V6 and diesel) VW: 502.00 • 505.00**

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VEELLO154/C3B5L | 5 Litre   | • Full Synthetic |
| VEELLO154/P20L  | 20 Litre  | • Petrol         |
| VEELLO154/D200L | 200 Litre |                  |



## Expert GT 10W30

Vertex Expert GT 10W30 is an advanced semi synthetic petrol engine oil. It combines outstanding low temperature fluidity and extreme load protection. It is blended with high quality base fluids and a high technology core additive package. Vertex Expert GT 10W30 is ideal for gasoline engine cars equipped with direct or indirect injection, multi valve and turbocharged technology.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B3, API SN/CF, or earlier specification lubricant. Particularly adapted to recent engine technology requiring lower viscosity fluids (SAE 10W30). Suits most modern petrol vehicles.

Note: Not suitable for engines equipped with DPF or post treatment systems.

**API SN/CF • ILSAC GF5 (SAE 10W30) • ACEA A3/B3**

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VEEGT103/C12B1L | 1 Litre   | • Semi Synthetic |
| VEEGT103/C3B5L  | 5 Litre   | • Petrol         |
| VEEGT103/P20L   | 20 Litre  |                  |
| VEEGT103/D200L  | 200 Litre |                  |



## Expert GT 10W40

Vertex Expert GT 10W40 is an advanced semi synthetic petrol engine oil. It combines outstanding low temperature fluidity and extreme load protection. It is blended with high quality base fluids and a high technology core additive package. Vertex Expert GT 10W40 is ideal for gasoline engine cars equipped with direct or indirect injection, multi valve and turbocharged technology.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B3, API SN/CF, or earlier specification lubricant. Particularly adapted to recent engine technology in Japanese and European vehicles requiring an SAE 10W40 engine oil. May also be used as a high performance replacement for SAE 15W40 oils. Suits most modern petrol vehicles.

Note: Not suitable for engines equipped with DPF or post treatment systems.

**API SN/CF • ACEA A3/B3**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEEGT14/C12B1L | 1 Litre   | • Semi Synthetic |
| VEEGT14/C3B5L  | 5 Litre   | • Petrol         |
| VEEGT14/P20L   | 20 Litre  |                  |
| VEEGT14/D200L  | 200 Litre |                  |



## Expert GT 15W40

Vertex Expert GT 15W40 is an advanced semi synthetic petrol engine oil. It combines outstanding low temperature fluidity and extreme load protection. It is blended with high quality base fluids and a high technology core additive package. Vertex Expert GT 15W40 is ideal for gasoline engine cars equipped with direct or indirect injection, multi valve and turbocharged technology.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B3, API SN/CF, or earlier specification lubricant. Particularly adapted to recent engine technology that has done higher km's.. Suits most modern petrol vehicles.

Note: Not suitable for engines equipped with DPF or post treatment systems.

### API SN/CF • ACEA A3/B3

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VEEGT154/C12B1L | 1 Litre   | • Semi Synthetic |
| VEEGT154/C3B5L  | 5 Litre   | • Petrol         |
| VEEGT154/P20L   | 20 Litre  |                  |
| VEEGT154/D200L  | 200 Litre |                  |



## Expert GT 20W50

Vertex Expert GT 20W50 is an advanced semi synthetic petrol engine oil. It combines outstanding low temperature fluidity and extreme load protection. It is blended with high quality base fluids and a high technology core additive package. Vertex Expert GT 20W50 is ideal for gasoline engine cars equipped with direct or indirect injection, multi valve and turbocharged technology.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B3, API SN/CF, or earlier specification lubricant. Particularly adapted to recent engine technology that has done higher km's, and older vehicles.. Suits most modern petrol vehicles.

Note: Not suitable for engines equipped with DPF or post treatment systems.

### API SN/CF • ACEA A3/B3

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VEEGT205/C12B1L | 1 Litre   | • Semi Synthetic |
| VEEGT205/C3B5L  | 5 Litre   | • Petrol         |
| VEEGT205/P20L   | 20 Litre  |                  |
| VEEGT205/D200L  | 200 Litre |                  |

# Passenger Car Motor Oil (PCMO)



## Expert GTI 10W40

Vertex Expert GTI 10W40 is a very high performance lubricant using Vertex semi synthetic technology, Specially developed for gasoline and diesel engines. Meets the demanding requirements of direct injection and most common rail engine technology.

### Suitable for:

Use as a high performance replacement for mineral oils and is fully adapted to all types of service (in town and around town, on highways). Ideally suited for use in the most extreme conditions (high temperatures). Vertex Expert GTI 10W40 is suitable for both diesel and petrol engines and can be used to replace multiple oils in stock.

Note: Not suitable for use in engines with DPF filters.

**API SN • API CI-4 • ACEA A3/B4 • ACEA A3/B3 • MB 229.1 • VW 505.00 • Fiat 9.55535.D2**

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VEEGT114/C12B1L | 1 Litre   | • Semi Synthetic |
| VEEGT114/C3B5L  | 5 Litre   | • Petrol         |
| VEEGT114/P20L   | 20 Litre  | • Diesel         |
| VEEGT114/D200L  | 200 Litre |                  |

## API Service Categories - Petrol

| Category | Status   | Service  |
|----------|----------|--|
| SP       | Current  | Introduced in May 2020, designed to provide protection against low-speed pre-ignition (LSPI), timing chain wear protection, improved high temperature deposit protection for pistons and turbochargers, and more stringent sludge and varnish control. API SP with Resource Conserving matches ILSAC GF-6A by combining API SP performance with improved fuel economy, emission control system protection and protection of engines operating on ethanol-containing fuels up to E85. |
| SN       | Current  | For 2020 manufactured and older automotive engines   |
| SM       | Current  | For 2010 and older automotive engines.   |
| SL       | Current  | For 2004 and older automotive engines.   |
| SJ       | Current  | For 2001 and older automotive engines.   |
| SH       | Obsolete | OBSOLETE: For 1996 and older automotive engines.   |
| SG       | Obsolete | CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1993. May not provide adequate protection against build-up of engine sludge, oxidation, or wear.   |
| SF       | Obsolete | CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1988. May not provide adequate protection against build-up of engine sludge.   |
| SE       | Obsolete | CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1979.  |
| SD       | Obsolete | CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1971. Use in more modern engines may cause unsatisfactory performance or equipment harm.   |
| SC       | Obsolete | CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1967. Use in more modern engines may cause unsatisfactory performance or equipment harm.   |
| SB       | Obsolete | CAUTION: Not suitable for use in most gasoline-powered automotive engines built after 1951. Use in more modern engines may cause unsatisfactory performance or equipment harm.   |



## Workshop Pro 10W30

Vertex Workshop Pro 10W30 is an advanced mineral high performance petrol engine oil. It combines outstanding low temperature fluidity and extreme load protection. It is blended with high quality base fluids and a high technology core additive package.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B3, API SN/CF, or earlier specification lubricant. Suits most modern petrol vehicles.

Note: Not suitable for engines equipped with DPF or post treatment systems.

### API SN/CF

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEWP103/P20L  | 20 Litre  | • Mineral        |
| VEWP103/D200L | 200 Litre | • Petrol         |



## Workshop Pro 10W40

Vertex Workshop Pro 10W40 is an advanced mineral high performance petrol engine oil. It combines outstanding low temperature fluidity and extreme load protection. It is blended with high quality base fluids and a high technology core additive package.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B3, API SN/CF, or earlier specification lubricant. Suits most modern petrol vehicles.

Note: Not suitable for engines equipped with DPF or post treatment systems.

### API SN/CF

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VEWP14/P20L  | 20 Litre  | • Mineral        |
| VEWP14/D200L | 200 Litre | • Petrol         |

# Passenger Car Motor Oil (PCMO)



## Workshop Pro 15W40

Vertex Workshop Pro 15W40 is an advanced mineral high performance petrol engine oil. It combines outstanding low temperature fluidity and extreme load protection. It is blended with high quality base fluids and a high technology core additive package.

### Suitable for:

Use in automotive gasoline and diesel engines where the manufacturer recommends an ACEA A3/B3, API SN/CF, or earlier specification lubricant. Suits most modern petrol vehicles.

Note: Not suitable for engines equipped with DPF or post treatment systems.

### API SN/CF

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEWP154/P20L  | 20 Litre  | • Mineral        |
| VEWP154/D200L | 200 Litre | • Petrol         |



## Expert Retro 20W50

A very specialised petrol engine oil which is formulated exclusively for use in pre 1980 engines. Contains higher levels of ZDDP and EP additives than modern SM and SN engine oils. Vertex Expert Retro 20W50 utilises the latest chemical technology additives to protect your older vehicle in a way that “modern” engine oils can not. This product is an ultra protective oil designed to provide sustained endurance in older vehicles even with modern fuel.

### Suitable for:

Pushrod, flat tappet engines, and also classic motor cars. For high performance please use Vertex Racing ZP 25W50.

Note: Not suitable for engines requiring an API SM level or higher.

### API SL • ZDDP 1250 ppm

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VERET25/C3B5L | 5 Litre   | • Mineral        |
| VERET25/P20L  | 20 Litre  | • Petrol         |
| VERET25/D200L | 200 Litre |                  |





## Expert GFO 15W40

A mineral multi grade fluid designed for mixed fleets produced between 1980 - 2004. Specifically blended for "modern" vehicles that do not require an API SN or Low SAPS oils. Vertex Expert GFO 15W40 is an ultra protective oil designed to provide sustained endurance in higher mileage vehicles even with modern fuel.

### Suitable for:

Gasoline engines in cars and light vans, turbo-charged or naturally aspirated. Can also be used in turbo-charged or naturally aspirated Diesel engines in cars and light vans.

**AP SL/CF • ACEA A3/B3 • MB 229.1 • VW 505.00**

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VEEGFO/C3B5L | 5 Litre   | • Mineral        |
| VEEGFO/P20L  | 20 Litre  | • Petrol         |



## Running In Oil

A high TBN mineral oil for the running in of new/rebuilt engines. Vertex Running In Oil is also formulated for running in on the road and ideal for test bed running.

### Suitable for:

Removing the machining glaze from cylinder bores, assists the formation of important oil retaining surfaces, and therefore prevents the possibility of bore polishing. Careful running in using Vertex Running In Oil can significantly extend engine life. Not for use in vehicles with DPF or EGR systems.

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VERIO/C6B5L  | 5 Litre   | • Mineral        |
| VERIO/P20L   | 20 Litre  | • Petrol         |
| VERIO/D200L  | 200 Litre |                  |

# Passenger Car Motor Oil (PCMO)

## ACEA Upgrades

Since their introduction in 1996, the ACEA Oil Sequences have prescribed the minimum quality level of service-fill oils demanded by the European Automobile Manufacturers' Association (ACEA) members for use in their vehicles.

December 2020 announced performance changes required by the original equipment manufacturers (OEMs) together with the replacement of four key tests will see a major upgrade from today's ACEA 2016 Oil Sequences for light duty engines.

Following are the headline changes within the ACEA A/B classes for high sulphated ash, sulphur and phosphorous ("High SAPS") gasoline and diesel engine lubricants:

- New ACEA A7/B7 high-performing, high SAPS category, likely to have global applicability. Builds on the requirements and updates of ACEA A5/B5, with three new performance tests.
- Removal of the ACEA A3/B3 category
- Introduction of four replacement tests across all categories. Within the "Low SAPS" ACEA C class for catalyst and GPF/DPF-compatible engine lubricants for gasoline and diesel engines, the following anticipated changes are included:
- New ACEA C6 category, for high-performance engines requiring advanced levels of protection. Builds on the requirements and updates of ACEA C5 with four new performance tests
- Removal of the ACEA C1 category
- Introduction of four replacement tests across all categories

The anticipated upgrade is also expected to see the linkage between used oil analysis to fresh oil analysis. This will be introduced through an additional measurement of Total Base Number (TBN) using the ASTM D4739 method. The method will be used in the following categories:

- ACEA A7/B7 category:  $\geq 6.0$  mgKOH/g
- ACEA C6 category:  $\geq 4.0$  mgKOH/g



# Heavy Duty Diesel Oil (HDDO - On Highway)

// Synthetic // Semi Synthetic // Mineral





### Magna HD-X FE 5W30

Universal lubricant for heavy diesel engines. Vertex Magna HD-X FE 5W30 is manufactured from high quality PAO base stock and for long drain intervals in European and North American engines. It is specially designed to exceed the demands of Euro V/VI.

#### Suitable for:

Use in previous engine types and designed to replace multiple engine oil types. Vertex Magna HD-X FE 5W30 is fuel economy rated and can be used where previous API specifications are recommended. It can be used where the manufacturer specifies either 5W30, 10W30, 10W40 or 15W40\* Ideal for use in the latest Euro IV and Euro V emissions European diesel engines including those that use SCR (Selective Catalytic Reduction) emissions systems along with those fitted with or without DPFs. Also suitable for use in normal or cooled EGR systems, and engines where API CI-4 or higher oils are required.

**ACEA E9/E7/E6 • API CK-4 • MB 228.51 • MB 228.31 • MAN M 3677 • MAN M 3477 • MAN M 3575 MTU Cat 3.1 • Volvo VDS-4.5 • Detroit (DFS) 93K222 • Scania Low Ash (LA-2) • Scania LDF-4 Mack EO-S 4.5 • Mack EO-O Premium Plus • Renault RLD-4 • Cummins CES 20086 Cat ECF-3 Deutz DQC IV-10 LA • JASO DH-2 • Ford WSS-M2C171-F1**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEMHDX14/C3B5L | 5 Litre   | • Full Synthetic |
| VEMHDX14/P20L  | 20 Litre  | • Petrol         |
| VEMHDX14/D200L | 200 Litre | • Diesel         |
|                |           | • Low Saps       |



### Magna HD-X 10W40

Complete universal lubricant for heavy diesel engines. Vertex Magna HD-X 10W40 employs synthetic technology, manufactured from high quality PAO base stock. Ideal for long drain intervals in European and North American engines and specially designed to exceed the demands of Euro V/VI.

#### Suitable for:

Use in previous engine types and designed to replace multiple engine oil types. Can be used where previous API specifications are recommended and where manufacturer specifies 10W40 or 15W40 viscosity oils. Use in the latest Euro IV and Euro V emissions, European diesel engines including those that use SCR (Selective Catalytic Reduction) emissions systems along with those fitted with or without DPFs. Also suitable for use in normal or cooled EGR systems, and engines where API CI-4 or higher oils are required.

**ACEA E9/E7/E6 • API CK-4 • MB 228.51 • MB 228.31 • MAN M 3477 • MAN M 3575 • MAN M327-1 MTU Cat 3.1 • MTU Cat 3.1 Volvo VDS-4 • DDC 93K218 • Scania Low Ash (LA-2) Mack EO-O Premium Plus • Renault RLD-3 • Cummins CES 20081 • Cat ECF-3 Deutz DQC IV-10 LA Deutz DQC III-10 LA • JASO DH-2**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEMHDX14/P20L  | 20 Litre  | • Full Synthetic |
| VEMHDX14/D200L | 200 Litre | • Petrol         |
|                |           | • Diesel         |
|                |           | • Low Saps       |



### Magna HD 10W40

Vertex magna HD 10W40 is a lubricants for European heavy diesel engines. Employing synthetic technology, and manufactured from high quality PAO base stock for long drain intervals in all conditions. It is specially designed to exceed the demands of Euro IV and V and is ideal for use in previous engine types. Can be used where previous API specifications are recommended. Manufacturers such as Mercedes-Benz, MAN, Scania etc recommend a high TBN 10W40 long drain fluid.

#### Suitable for:

Use in the latest Euro IV and Euro V emissions European diesel engines including those that use SCR (Selective Catalytic Reduction) emissions systems along with those fitted with or without DPFs (Diesel Particulate Filters). Also suitable for use in normal or cooled EGR systems, emissions engines where API CI-4 rated oils are required.

**ACEA E4/E7 • API CI-4 • MB 228.5 • MAN 3277 • MAN M3277 • Volvo VDS-3 • Mack EO-N Renault VI RLD-2 • Renault RLD/RXD • MTU Type 3 • Deutz DQC IV-10 • Caterpillar ECF-1a Cummins CES 20078**

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEMHD14/C3B5L | 5 Litre   | • Full Synthetic |
| VEMHD14/P20L  | 20 Litre  | • Diesel         |
| VEMHD14/D200L | 200 Litre | • Low Saps       |

| Category | Status   | Service  |
|----------|----------|--|
| FA-4     | Dec 2016 | FA-4 oils have lower HTHS viscosity. In addition to meeting the new category performance requirements, including improved oxidation resistance, shear stability and aeration control, FA-4 oils are designed to provide enhanced fuel economy, but are only be available in 5W30 & 10W-30 viscosity grade.   |
| CK-4     | Dec 2016 | CK-4 oils provide performance benefits exceeding today's CJ-4 engine oils, including improved oxidation resistance, shear stability and aeration control to enhance engine performance and durability, while still retaining backward compatibility to satisfy older makes and models.   |
| CJ-4     | Current  | Introduced in 2006. Current For high-speed four-stroke cycle diesel engines designed to meet 2010 model year on-highway and Tier 4 non-road exhaust emission standards as well as for previous model year diesel engines. These oils are formulated for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm (0.05% by weight). Effective at sustaining emission control system durability where particulate filters and other advanced after treatment systems are used. |
| CI-4     | Current  | Introduced in 2002. For high-speed, four-stroke engines designed to meet 2004 exhaust emission standards implemented in 2002. CI-4 oils are formulated to sustain engine durability where exhaust gas recirculation (EGR) is used and are intended for use with diesel fuels ranging in sulfur content up to 0.5% weight.  |
| CH-4     | Current  | Current Introduced in 1998. For high-speed, four-stroke engines designed to meet 1998 emission standards. CH-4 oils are specifically compounded for use with diesel fuels ranging in sulfur content up to 0.5% weight  |
| CG-4     | Obsolete | Introduced in 1995. For severe duty, high-speed, four-stroke engines using fuel with less than 0.5% weight sulfur. CG-4 oils are required for engines meeting 1994 emission standards.   |
| CF-4     | Obsolete | Introduced in 1990. For high-speed, four-stroke, naturally aspirated and turbocharged engines.   |





### Magna CK-4 15W40

Vertex Magna CK-4 15W40 is the most modern universal lubricant for heavy diesel engines. Employing synthetic technology, manufactured from high quality hydrocracked bases. Its low content in ash, phosphorus and sulphur (Mid SAPS) make it optimum for minimising particulate filter obstruction and preventing post-treatment degradation. It is specially designed to exceed the demands of Euro VI engine types.

#### Suitable for:

Turbocharged diesel engines on heavy vehicles used for public works, agriculture/ harvesting and also long-distance and urban transportation. Compatibility with fuels with a high biodiesel content, preventing the degradation that previous technologies were prone to. Practically all types of offroad and on highway machinery, and offers the ideal lubrication solution for mixed vehicle fleets. For low viscosity or fuel economy requirements, please use Magna CK-4 FE 10W30 or Magna HD-X FE

**API CK-4, API SN • ACEA E9 • Cat ECF-3 • Cummins CES 20086 • Detroit (DFS) 93K222 DEUTZ DQC III-10 LA • Ford WSS-M2C171-F1 • JASO DH-2 • Mack EOS 4.5 • MAN M 3575 • MB 228.31 MTU Category 2.1 • Renault RLD-4 • Volvo VDS-4.5 • ZF TE-ML 04C**

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VEMCK4/C18B1L | 1 Litre   | • Semi Synthetic |
| VEMCK4/C3B5L  | 5 Litre   | • Petrol         |
| VEMCK4/P20L   | 20 Litre  | • Diesel         |
| VEMCK4/D200L  | 200 Litre | • Low Saps       |



### Magna CK-4 FE 10W30

Vertex Magna CK-4 FE 10W30 is the most modern Fuel Economy lubricant for heavy diesel engines. Employing synthetic technology, manufactured from high quality hydrocracked bases. Its low content in ash, phosphorus and sulphur (Mid SAPS) make it optimum for minimising particulate filter obstruction and preventing post-treatment degradation. It is specially designed to exceed the demands of Euro VI engine types.

#### Suitable for:

Turbocharged diesel engines on heavy vehicles used for public works, agriculture/ harvesting and also long-distance and urban transportation. Compatibility with fuels with a high biodiesel content, preventing the degradation that previous technologies were prone to. Practically all types of offroad and on highway machinery, and offers the ideal lubrication solution for mixed vehicle fleets. For additional fuel economy requirements, please use Magna HD-X FE 5W30.

**API CK-4, API SN • ACEA E9 • Cat ECF-3 • Cummins CES 20086 • Detroit (DFS) 93K222 • DEUTZ DQC III-10 LA • Ford WSS-M2C171-F1 • JASO DH-2 • Mack EOS 4.5 • MAN M 3575 • MB 228.31 • MTU Category 2.1 • Renault RLD-4 • Volvo VDS-4.5 • ZF TE-ML 04C**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VEMCK4FE/C3B5L | 5 Litre   | • Semi Synthetic |
| VEMCK4FE/P20L  | 20 Litre  | • Petrol         |
| VEMCK4FE/D200L | 200 Litre | • Diesel         |
|                |           | • Fuel Economy   |
|                |           | • Low Saps       |



## Magna CI-4 15W40

Vertex Magna CI-4 15W40 is a maximum performance semi synthetic lubricant that complies with the ACEA E7, API CI-4 and GLOBAL DHD-1 specifications. It is particularly recommended for modern, low emission engines that comply with the Euro IV/EPA 3 (2004) regulations and previous ones which are not fitted with a DPF or EGR suitable.

### Suitable for:

On highway diesel engines working in all types of conditions. Long haul and urban transport trucks. Compatibility with fuels with a high biodiesel content, preventing the degradation that previous technologies were prone to. Compatibility with modern, heavy diesel engines of any kind of technology or manufacturer up to Euro IV and EPA 3 (2004) and which are not fitted with a Diesel Particulate Filter (DPF). Use with diesel fuels that contain up to 0.5% of Sulphur, always respecting the oil change periods specified by the manufacturers. Vertex Magna CI-4 15W40 provides up to 50% more protection against wear compared to API CH-4.

**ACEA E7 • MAN 3275-1 • MB 228.3 • VOLVO VDS-3 • API CI-4 • MTU Type 2 • GLOBAL DHD-1  
MACKEO-N CUMMINS CES 20078 • DDC 93K215 • RENAULT VI RLD-2 • CAT ECF-2 • DEUTZ DQC  
II-10 • JDQ 78A NH 330H • CASE MS 1121 • CASE MAT 3507**

| Product Code  | Pack Size | Product Features             |
|---------------|-----------|------------------------------|
| VEMCI4/C12B1L | 1 Litre   | • Semi Synthetic             |
| VEMCI4/C3B5L  | 5 Litre   | • Petrol                     |
| VEMCI4/P20L   | 20 Litre  | • Diesel                     |
| VEMCI4/D200L  | 200 Litre | • Fuel Economy<br>• Low Saps |





### Magna CH-4 15W40

Vertex Magna CH-4 15W40 is a medium-high detergent, mineral engine oil for predominantly pre 2000 diesel engines (turbo, supercharged or naturally aspirated). It can also be used in petrol engines requiring API S rated fluid. The advanced properties of Vertex Magna CH-4 15W40 have been validated in thousands of hours on construction sites and several million km on the roads in a variety of services.

Very high protection against wear, in all conditions of services, thus guaranteeing an extended engine lifespan. Higher dispersancy and detergency levels prolongs engine lifespan.

#### Suitable for:

Older mixed fleets. Early generation technology engines requiring a high TBN diesel engine oil. Vertex Magna CH-4 15W40 can be used in Diesel engines produced prior to 2000 and/ or engines requiring an API CH-4 oil. Transmissions and hydraulic requiring a CAT TO-2 rated fluid. Can be used in trucks, cars, vans, buses and offroad machinery.

**ACEA E5/E3 • API CH-4/SJ • MB 228.3 • MAN M 3275 • VOLVO VDS-2 • MTU OIL Type 2 • RENAULT RD-2 MACK EOM • CES 20071 • ZF TE-ML 04C • CATERPILLAR T-O2**

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VEMCH4/C3B5L | 5 Litre   | • Mineral        |
| VEMCH4/P20L  | 20 Litre  | • Petrol         |
| VEMCH4/D200L | 200 Litre | • Diesel         |



### Magna DD 40

Vertex Magna DD40 is a high performance low ash heavy duty diesel engine oil specifically formulated to meet the latest Detroit Diesel two-cycle lubricant recommendations. Also recommended for use in transmissions where SAE 40 monograde engine oil is specified.

#### Suitable for:

Diesel engines that specify the use of a mono grade engine oil. Hydraulic systems that specify the use of a mono grade engine oil. Transmissions that specify the use of a mono grade engine oil. Caterpillar hydraulic systems where a minimum of zinc additive is specified. Our prime recommendation for Detroit diesel two-cycle engines series 53, 71, 92 & 149 (for coolant outlet temperatures up to 94 C).

**API CF-2 • .DDC 0.8% Sash 2 cycle • Meets Detroit Diesel 2 stroke engine lubricant requirement as set out in publication 7SE 270 • ZF TE-ML 02C/04B • CAT TO-2**

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VEMDD/P20L   | 20 Litre  | • Mineral        |
| VEMDD/D200L  | 200 Litre | • Diesel         |

# Agri Heavy Duty Diesel Oil

(MFO - STOU - 2 Stroke - 4 Stroke)

// Semi Synthetic // Mineral





### Agri 4 Stroke 30W

Vertex Agri 4 Stroke 30W is a high TBN SAE 30 product primarily designed for stationary engines, and farm equipment. Thanks to an excellent base stock, and robust additive pack, Vertex Agri 4 Stroke 30W provides the following benefits: better wear protection, improved deposit protection, better low temperature performance over the life of the oil, extended lifespan of the engine and eliminates bore polishing.

#### Suitable for:

Use in applications that require a monograde engine oil. This can include, engines, transmissions and drive trains. Thanks to an excellent base stock, and robust additive pack.

**API CF/SH • CCMC D2 • MB 227.0 • CAT TO-2**

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VA4S3/C20B1L | 1 Litre   | • Mineral        |
| VA4S3/C6B5L  | 5 Litre   | • Petrol         |
| VA4S3/P20L   | 20 Litre  | • Diesel         |



### Agri 2 Stroke Pro

Vertex Agri 2 Stroke Pro is a specially developed lubricant for air-cooled two stroke engines in outdoor power equipment and farm machinery. It is made from semi-synthetic base oils and formulated with low ash additives, increasing engine performance and lifespan, and decreasing smoke output. Vertex Agri 2 Stroke Pro mixes easily with fuel, controls corrosion excellently, minimal ring wear and piston scuffing, is clean burning which assists in cleaner combustion chambers, ports and mufflers and dyed blue for ease of identification in fuel, suitable for use in modern clean burning combustion systems.

#### Suitable for:

Lawn mowers, lawn and garden equipment, 2 stroke generators, portable power equipment, chainsaws.

**API TC • JASO FD • ISO-L-EGC/EGD**

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VAA2SP/C3B5L | 5 Litre   | • Semi Synthetic |
| VAA2SP/P20L  | 20 Litre  | • Petrol         |
| VAA2SP/D200L | 200 Litre |                  |



### Agri STOU 10W40

Vertex Agri STOU 10W40 is a super high performance, synthetic, multi-functional, low-friction oil (STOU/ MFO) utilising synthetic technology. Offers increased versatility and can be used in various kinds of equipment (tractors, combines, seeding and harvesting equipment, sprayers and etc). The use of a single product type eliminates the risk of incorrect use when changing a lubricant.

#### Suitable for:

Agricultural engines, petrol and diesel, in light and heavy duty applications. Manual transmissions (including those calling for GL-4 and SAE 10W30/15W40). Hydraulic aggregates and final drives. Wet brake systems, and multi plate differentials. A wide variety of equipment requiring multi-functional lubrication performance. Euro-3, Euro-4 and EURO V engines with or without DPF and EGR.

Note: The choice of correct Viscosity Grade has to be taken in respect of Constructors' Recommendations and ambient temperatures.

DEUTZ DQC IV-10 • ACEA E7/E4 • API CI-4 • API GL-4 • MAN 3277 • MB 228.5 • AFNOR NFE 48603 HV ALLISON C-4 • CASE MS 1207/9/10/30 • DIN 51524-3: HVLP (-D) • CNH MAT 3505/9/25/2 FNHA 2C-200.00/201.00 • FORD M2C48-C3/M2C86-B/134-D/159-/C • New Holland 82009201/2/3 NH030C/330G/330H/410B/420/526C • John Deere JDM J 20 C • MF CMS M 1145 - ZF TE-ML 06L/07B

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VASTOU14/P20L  | 20 Litre  | • Semi Synthetic |
| VASTOU14/D200L | 200 Litre | • Diesel         |



### Agri STOU 15W40

Vertex Agri STOU 15W40 is a high performance and multi-functional oil (STOU/ MFO) utilising advanced semi synthetic technology. Offers increased versatility and can be used in various kinds of equipment (tractors, combines, seeding and harvesting equipment, sprayers and etc). Helps reduce the list of applied lubricants. The use of a single product type eliminates the risk of incorrect use when changing a lubricant. Vertex Agri STOU 15W40 delivers wear protection of high-load drives, gears and bearings through stable oil film.

#### Suitable for:

Reducing maintenance costs and has a high thermal stability ensuring reliable engine operation over a wide temperature range, extending lubricants life. Especially selected additives and friction modifiers deliver smooth vibration-free braking and gearshift. Resists early wear. Superior cleaning and dispersant properties, prevents engine and other parts of agricultural equipment from various types of deposits. Compatibility with seal materials and ideal for sealing materials and non-ferrous metals used in agricultural machinery.

API CF • ACEA E2 • API CF-4/SL • CMS M 1145 • CMS M 1144 • ZF TE-ML 06B/07B • MB 229.1

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VASTOU154/P20L  | 20 Litre  | • Semi Synthetic |
| VASTOU154/D200L | 200 Litre | • Diesel         |



## What is a Stou Lubricant?

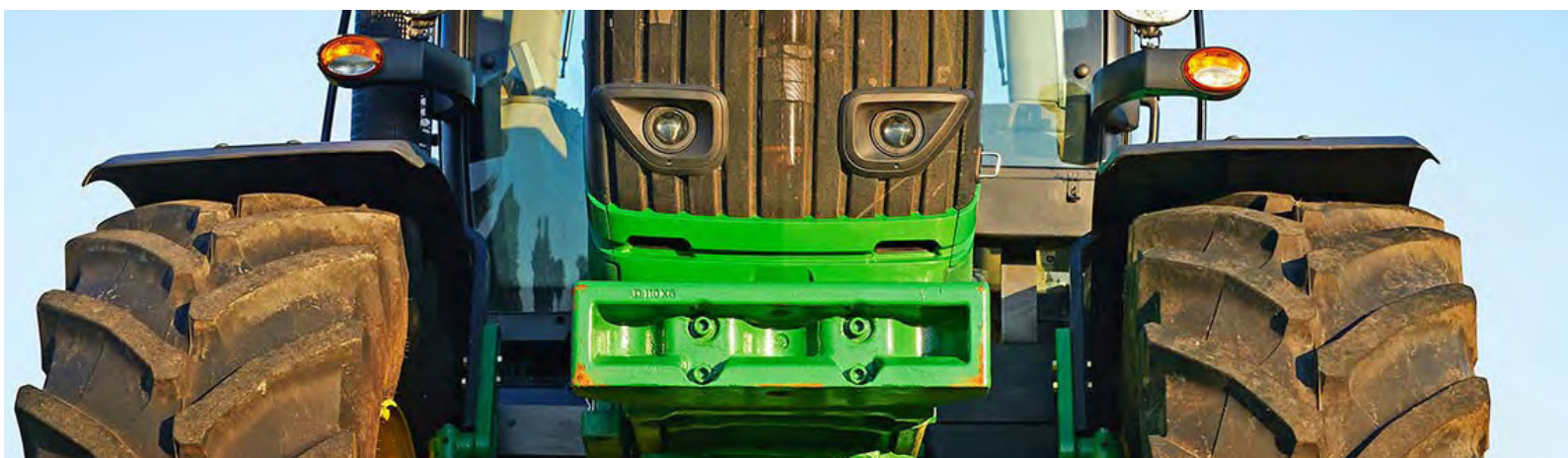
The key difference between Super Tractor Oil Universal (STOU) and Universal Tractor Transmission Oil (UTTO) is that STOU can be used as a tractor engine oil (up to API CF) as well as a transmission, final drive, wet brake and hydraulic fluid. Other than that, the two fluids are used in the same types of vehicles and equipment.

### Additive Requirements

A STOU must provide:

- Engine protection.
- Friction performance for clutches and wet brakes
- Gear protection for transmissions, axles and final drives
- Anti-wear protection
- Hydraulic pump durability
- Shear stability
- Oxidation resistance
- Corrosion protection
- Low temperature flow performance

STOU performance packages are the some of the most innovative in the industry. They have boosted soot control for reduced wear and viscosity increase; superior antiwear performance for reduced pitting and scoring in final drives; superior friction performance for transmission clutches and exceptional shiftability; viscosity modifiers to provide the desired viscosity grade; and exclusive manufacturer approvals.



# Moto (On Road & Off Road)

// Synthetic // Semi Synthetic // Mineral





### Moto 4T PRO 10W50

A high performance full synthetic PAO engine oil specifically developed for the stringent lubricating requirements of modern 4-stroke motorcycle engines, especially those used for racing. Vertex Moto 4T PRO 10W50 is compatible with engines running catalytic converters. Provides long drain intervals in road bikes. High performance off road bikes. Compatible with lead free fuels. High revving modern engines under all types of conditions and load. Wet clutch transmissions. Protection of piston and cylinder even at high temperatures: effective piston ring sealing is ensured. Additionally the advanced formulation also prevents excessive oil consumption thereby providing protection even at high temperatures. Polyalphaolefins (PAO) content, it provides excellent control with smooth gear changes and prolong the engine's life.

#### Suitable for:

Use in compacted, high speed and high temperature engine typically found in today's modern 4 stroke motorcycles. It can be used in most 4 Stroke engines including Yamaha, Honda, Kawasaki, Suzuki, Polaris, John Deere and Kubota. By adopting a specially selected synthetic base, Vertex Moto 4T PRO 10W50 differentiates itself from conventional 4T oils which are simply adapted from Passenger car motor oil (PCMO). Vertex Moto oils are especially formulated for bike/ ATV/ UTV use.

#### API SN • JASO MA2

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VMO4T15/C12B1L | 1 Litre   | • Full Synthetic |
| VMO4T15/C3B5L  | 5 Litre   | • Petrol         |
| VMO4T15/P20L   | 20 Litre  |                  |
| VMO4T15/D200L  | 200 Litre |                  |



### Moto 4T Max 10W40

A high performance semi synthetic low ash engine oil specifically developed for the stringent lubricating requirements of modern 4-stroke motorcycle engines, including those used for racing. Vertex Moto 4T Max 10W40 provides long drain intervals in road bikes, high performance in off road bikes and is compatible with lead free fuels. High revving modern engines under all types of conditions and load. Wet clutch transmissions. Especially formulated to take into account the unique transmission requirement and consequences of the much higher engine temperature of a modern 4 stroke motorcycle. Strong anti-oxidation that extends engine and oil life. Provides correct friction properties required uniquely by the 4 stroke motorcycle clutches. Retards harmful deposit formation on vital engine parts. Protects against rust and corrosion.

#### Suitable for:

Use in compacted, high speed and high temperature engines typically found in today's modern 4 stroke motorcycles. It can be used in most 4 Stroke engines including Yamaha, Honda, Kawasaki, Suzuki, and Kubota. By adopting a specially selected synthetic base, Vertex Moto 4T Max 10W40 differentiates itself from conventional 4T oils which are simply adapted from Passenger car motor oil (PCMO).

#### API SN • JASO MA2

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VMO4TM14/C12B1L | 1 Litre   | • Semi Synthetic |
| VMO4TM14/C3B5L  | 5 Litre   | • Petrol         |
| VMO4TM14/P20L   | 20 Litre  |                  |
| VMO4TM14/D200L  | 200 Litre |                  |





### Moto 4T 20W50

A high performance mineral lubricant specially designed for lubricating 4 stroke motorcycle engines. Especially designed for older engines and those with manual gear operation. Vertex Moto 4T 20W50 is compatible with engines running catalytic converters. Long drain intervals in road bikes (for offroad use, please stick to manufacturers recommendations). Compatible with lead free fuels. Additionally the advanced formulation of Vertex Moto 4T 20W50 also prevents oil consumption thereby providing protection even at high temperatures. Reduced wear of vital engine parts: the oil prevents formation for foam on the surface of the engine parts thereby preventing their wear. Prevention of clutch slippage: formula is JASO certified thereby ensuring that clutch slippage is avoided. High oxidation stability: the oil is designed to resist the oxidation process. This helps maintain the same viscosity over the entire life of the oil. Thus vital engine parts are well protected and life of the engine is enhanced.

#### Suitable for:

Older and worn engines requiring a high viscosity lubricant. Protection of piston and cylinder even at high temperatures: effective piston ring sealing is ensured. For high performance use please use Vertex Moto 4T Max 10W40, or Vertex Moto 4T Pro 10W50.

#### API SJ • JASO MA

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VMO4T25/C12B1L | 1 Litre   | • Mineral        |
| VMO4T25/C3B5L  | 5 Litre   | • Petrol         |
| VMO4T25/P20L   | 20 Litre  |                  |
| VMO4T25/D200L  | 200 Litre |                  |

## 4 Stroke oils explained

Most 4 stroke modern motorcycles have the same oil lubricating the engine and the wet clutch. For this reason, a good motorcycle oil is formulated to meet specific characteristics. The main criteria is the JASO T 904:2006 friction standard test.

You may wonder why special friction characteristics are needed?

Modern passenger car engine oils contain more and more friction modifiers. While this is the good thing for those segments (reduces wear and fuel consumption) it's bad for the motorcycles. At least for those motorcycles which use engine oil to lubricate their transmission and wet clutch.

JASO introduced the MA and MB specification to distinguish between friction modified and non friction modified engine oils. Most four-stroke motorcycles with wet clutches need a JASO MA oil.

JASO MA is a Japanese standard for special oil which can be used in 4-stroke motorcycle engine with one oil system for engine, gearbox and wet clutch system. Fluid is non-friction modified. This category is separated into MA, MA1 and MA2.

JASO MA2 is the highest rating under the current classification system.

JASO MB grade oils are classified as the lowest friction oils among motorcycle four-cycle oils. Not to be used where a JASO MA grade oil is required.

Do not be deceived by this spec and think it is ideal for your bike.

JASO MB is designed purely for certain scooter applications.



### Moto 2T PRO

A high performance full synthetic lubricant designed for 2-stroke motorcycles, scooters and mopeds. Vertex Moto 2T PRO is designed for use in modern 2 stroke engines with or without catalytic systems. 2 stroke engines requiring the use of API TC, JASO FD and ISO L-EGD equivalent lubricants. The product is pre-diluted and therefore suitable for separate lubrication and mixing. The oil content needs to be dosed according to the manufacturers' recommendations. Vertex Moto 2T PRO provides good engine cleanliness plus high resistance to deposit formation. Cleans exhaust systems and is completely combustibile, meaning low residue formation. Provides superior engine protection. Low friction formula maximises engine performance. Recommended for driving through urban traffic as well as rural conditions and for the most severe off road use. Provides hydrodynamic lubrication and assists in the engine's power and original performance. The specific fluid viscosity enables superior miscibility between the lubricant and the fuel, even in applications with separated fuel/ lubricant tanks. Full synthetic formula provides the highest temperature tolerance available in the market.

#### Suitable for:

All motorcycles with oil injection systems. Racing or daily driver motorcycles. Ideal for all types of riding and driving conditions. It's composition is perfectly compatible with lead-free fuels.

#### API TC • JASO FD • ISO L-EGD

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VMO2TS/C12B1L | 1 Litre   | • Full Synthetic |
| VMO2TS/C3B5L  | 5 Litre   | • Petrol         |
| VMO2TS/P20L   | 20 Litre  |                  |
| VMO2TS/D200L  | 200 Litre |                  |



### Moto 2T Max

A high performance semi synthetic lubricant designed for 2-stroke motorcycles, scooters and mopeds. Vertex Moto 2T Max is designed for use in modern 2 stroke engines with or without catalytic systems. 2 stroke engines requiring the use of API TC, JASO FD and ISO L-EGD equivalent lubricants. The product is pre-diluted and therefore suitable for separate lubrication and mixing. The oil content needs to be dosed according to the manufacturers' recommendations. Vertex Moto 2T Max provides good engine cleanliness plus high resistance to deposit formation. Cleans exhaust systems and is completely combustibile, due to its low residue formation. Provides superior engine protection. Low friction formula maximises engine performance. Recommended for driving through urban traffic as well as rural conditions and for the most severe off road use. Provides hydrodynamic lubrication and assists in the engine's power and original performance. The specific fluid viscosity enables superior miscibility between the lubricant and the fuel, even in applications with separated fuel/ lubricant tanks.

#### Suitable for:

All motorcycles with oil injection systems. Ideal for all types of riding and driving conditions. It's composition is perfectly compatible with lead-free fuels.

#### API TC • JASO FD • ISO L-EGD

| Product Code  | Pack Size | Product Features |
|---------------|-----------|------------------|
| VMO2TM/C12B1L | 1 Litre   | • Semi Synthetic |
| VMO2TM/C3B5L  | 5 Litre   | • Petrol         |
| VMO2TM/P20L   | 20 Litre  |                  |
| VMO2TM/D200L  | 200 Litre |                  |



## Moto 2T

A high performance mineral lubricant designed for 2-stroke motorcycles, scooters and mopeds. Vertex Moto 2T is designed for use in basic 2 stroke engines without catalytic systems. 2 stroke engines requiring the use of API TC, JASO FB and ISO L-EGB equivalent lubricants. The product is pre-diluted and therefore suitable for separate lubrication and mixing. The oil content needs to be dosed according to the manufacturers' recommendations. Vertex Moto 2T provides good engine cleanliness plus high resistance to deposit formation. Cleans exhaust systems and is completely combustible, meaning low residue formation. Provides superior engine protection. Low friction formula maximises engine performance.

### Suitable for:

Standard motorcycle with oil injection systems. Ideal for relatively un-demanding day to day driving conditions. It's composition is perfectly compatible with lead-free fuels.

### API SJ • JASO MA

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VMO2T/C12B1L | 1 Litre   | • Mineral        |
| VMO2T/C3B5L  | 5 Litre   | • Petrol         |
| VMO2T/P20L   | 20 Litre  |                  |
| VMO2T/D200L  | 200 Litre |                  |

## 2 Stroke oils explained

A lot of OE manufacturers found the limits demanded by the API TC specifications too "loose", or not exacting enough. It was observed that oils meeting the API TC standard may still produce smoke and did not always prevent exhaust blocking.

Therefore the Japanese Engine Oil Standards Implementation Panel (JASO) introduced the following specifications:

### JASO FA

Original spec established regulating lubricity, detergency, initial torque, exhaust smoke and exhaust system blocking.

### JASO FB

Increased lubricity, detergency, exhaust smoke and exhaust system blocking requirements over FA.

### JASO FC

Lubricity and initial torque requirements same as FB, however far higher detergency, exhaust smoke and exhaust system blocking requirements over FB.

### JASO FD

Same as FC with far higher detergency requirement.

For more information on specification makeup and benefits, please contact our technical department.  
[technical@lubenz.co.nz](mailto:technical@lubenz.co.nz)

## What does viscosity mean?

Viscosity is another type of bulk property defined as a liquid's resistance to flow. Simply put, viscosity is an oil's speed of flow as measured through a device known as a viscometer. The thicker (higher viscosity) of an oil, the slower it will flow. You will see oil viscosity measurement in technical data sheets stated in kinematic (kv) and absolute (cSt) terms. These are translated into the easier to understand SAE and ISO viscosity numbers you see on oil bottles and product names. Viscosity describes the internal friction of a moving fluid. A fluid with high viscosity resists motion because its molecular makeup gives it a lot of internal friction. A fluid with low viscosity flows easily because its molecular makeup results in very little friction when it is in motion.

## Base oil groups

Mineral oil is a term used to encompass lubricating base oil derived from crude oil. The American Petroleum Institute (API) designates several types of lubricant base oil:

### Group I

Saturates <90% and/or sulfur >0.03%, and Society of Automotive Engineers (SAE) viscosity index (VI) of 80 to 120. Manufactured by solvent extraction, solvent or catalytic dewaxing, and hydro-finishing processes. Common Group I base oil are 150SN (solvent neutral), 500SN, and 150BS (brightstock)

### Group II

Saturates over 90% and sulfur under 0.03%, and SAE viscosity index of 80 to 120. Manufactured by hydrocracking and solvent or catalytic dewaxing processes. Group II base oil has superior anti-oxidation properties since virtually all hydrocarbon molecules are saturated.

### Group III

Saturates > 90%, sulfur <0.03%, and SAE viscosity index over 120. Manufactured by special processes such as isohydromerization. Can be manufactured from base oil or slax wax from dewaxing process.

### Group IV

Polyalphaolefins (PAO)

### Group V

All others not included above such as naphthenics, PAG, esters. In North America, Groups III, IV and V are now described as synthetic lubricants, with group III frequently described as synthesised hydrocarbons, or SHCs. In Europe, only Groups IV and V may be classed as synthetics.



# Marine (Light, PWC, Coastal)

// Semi Synthetic // Mineral







### Aqua FC 25W40

Premium quality, mineral petrol engine oil containing specialised rust inhibitors and anti-wear additives for optimum engine protection in severe marine environments. Vertex Aqua FC 25W40 meets the requirements of NMMA (National Marine Manufacturers Association) FC-W®, an industry specification designed for the unique marine environment. Combines the benefits of fast oil flow at start up with superior high temperature wear protection. Vertex Aqua FC 25W-40 contains full zinc for maximum wear protection.

#### Suitable for:

Use in inboard, outboard and stern drive petrol engines. It can be used where SAE 25W40 and SAE 30 oils are required. Ideal for Mercruiser engines that specifically require this oil grade, Chevrolet, Indmar, PCM, Volvo Penta, Tohatsu, Mariner, Evinrude-Johnson stern drives, Chrysler, OMC Cobra etc.

**NMMA FC-W • API SL • JASO MA**

| Product Code    | Pack Size | Product Features |
|-----------------|-----------|------------------|
| VOA4T254/C12B1L | 1 Litre   | • Mineral        |
| VOA4T254/C3B5L  | 5 Litre   | • Petrol         |
| VOA4T254/P20L   | 20 Litre  |                  |
| VOA4T254/D200L  | 200 Litre |                  |



### Aqua FC 10W40

A premium quality, semi synthetic petrol engine oil containing specialised rust inhibitors and anti-wear additives for optimum engine protection in marine environments. Vertex Aqua FC 10W40 meets the requirements of NMMA FC-W® industry specification, specifically designed for the marine environment.

#### Suitable for:

Use in all types of petrol four stroke outboard engines where SAE 10W-40 and SAE 15W-40 oils are specified including: Honda, Johnson, Nissan, Suzuki, Tohatsu, Yamaha and other manufacturers. Vertex Aqua FC 10W40 is also ideal for use personal water craft/ inboard and stern drive petrol engines that require this viscosity grade such as: Honda, Kawasaki, Sea-Doo, Yamaha, VM and other manufacturers.

**NMMA FC-W • API SL • JASO MA**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VOA4T14/C12B1L | 1 Litre   | • Semi Synthetic |
| VOA4T14/C3B5L  | 5 Litre   | • Petrol         |
| VOA4T14/P20L   | 20 Litre  |                  |
| VOA4T14/D200L  | 200 Litre |                  |





### Aqua FC 10W30

A premium quality, mineral petrol engine oil containing specialised rust inhibitors and advanced low ash anti-wear additives for optimum engine protection in marine environments. Vertex Aqua FC 10W30 is designed to meet the requirements of NMMA FC-W (Catalyst Compatible) industry specification, specifically designed for the marine environment. Vertex Aqua FC 10W30 can also be used in personal watercraft/ inboard/ stern drive petrol engines that require this viscosity and is also suitable for use with marine exhaust catalysts.

**Suitable for:**

Use in all types of petrol four stroke outboard engines where SAE 10W-30 is specified. These include: Evinrude, Honda, Johnson, Mercury, Nissan, Suzuki, Yamaha and many other OEM's.

**NMMA FC-W • API SM • API GL-4**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VOA4T13/C12B1L | 1 Litre   | • Mineral        |
| VOA4T13/C3B5L  | 5 Litre   | • Petrol         |
| VOA4T13/P20L   | 20 Litre  |                  |
| VOA4T13/D200L  | 200 Litre |                  |

## 4 Stroke outboard oils explained

With the widespread introduction of the four-stroke outboard engine technology, NMMA considered it necessary to develop a marine engine oil category specifically for marine four-stroke engines.

With all of the major outboard engine manufacturers producing four-stroke outboards to further reduce emissions and increase fuel economy, the need for oil specifically designed for the unique marine environment became necessary.

Working with the NMMA, industry leaders in lubrication technology developed testing criteria for this marine four-stroke oil. These criteria include bench tests for viscosity, corrosion, filter plugging, foaming and aeration. In addition, the oil must successfully pass a 100-hour general performance engine test.

FC-W lubricants have demonstrated the necessary performance and quality needed in today's high performance four-stroke marine engines.

For more information on specification makeup and benefits, please contact our technical department.  
[technical@lubenz.co.nz](mailto:technical@lubenz.co.nz)



## Aqua 2T

Vertex Aqua 2T Outboard Two Stroke Oil is a NMMA TC-W3, mineral, low smoke two stroke oil manufactured from group III base oils and an ashless additive system. It is specially designed for NZ conditions. Vertex Aqua 2T minimises plug fouling, pre-ignition, ring sticking and exhaust port blockage by controlling deposit formation. Low smoke performance. Provides excellent anti-seize and anti-scuff performance. Correct viscosity for consistent flow rates in oil-injected engines. Improved smoke control with a very high pass in the ISO EG-B requirements.

### Suitable for:

Use in all water cooled two stroke outboard engines, including oil injected and premix systems, at mixing ratios as specified by manufacturer requirements. These include manufacturers: Chrysler, Evinrude, Honda, Johnson, Kawasaki Jet Skis, Mariner, Mercury, Suzuki, Tohatsu, Volvo Penta, Yamaha including Wave runners as well as other manufacturers.

**NMMA TC-WIII • JASO TB • API TC • ISO EG-B**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VOAQUAN/C12B1L | 1 Litre   | • Mineral        |
| VOAQUAN/C3B5L  | 5 Litre   | • Petrol         |
| VOAQUAN/P20L   | 20 Litre  |                  |
| VOAQUAN/D200L  | 200 Litre |                  |

## 2 Stroke outboard oils explained

Due to the nature of two-stroke marine engines, two-stroke oil lubricates the engine parts as it passes through the engine and is then burned along with the fuel. Two-stroke oil is either physically mixed with the fuel or, in the case of direct fuel injection, is combined with the fuel in the combustion chamber.

This is in contrast to four-stroke engines which have oil sumps circulate the oil by pumping it throughout the engines.

Automotive engines run hotter than outboards, and are therefore better at burning up moisture in the engine. Because of these, and due to the fact Outboards operate in such an extreme environment that it's important to use oils formulated to the specific operating temperatures in your engines.

The base oil in most 2 stroke outboard oils makes up approximately 60 percent of the final product. Then a heavier base oil called brightstock is added.. Brightstock is a great lubricity agent and helps make the oil more slippery.

Then added into the final blend is a solvent, which acts as a carrier and helps the oil mix thoroughly with gasoline (remember that there are still a lot of pre-mix engines in circulation).

About one percent or less is dye, so you can tell if the pre-mix gas has oil in it.

The remainder is made up of additives, which usually contains polyisobutylene, commonly known as PIB. PIB is a synthetic oil used for both lubrication and smoke control.

The two main improvements provided by additives are detergency, lubricity and dispersancy. And synergy between the additives is important

Dispersants help keep soot and varnish particles separated, so they don't gather in the ring grooves. Detergents carry undesirable particulates, carbon mostly, out through the exhaust port. This can help reduce "coking," the buildup of residue around the rings that can be fatal to a powerhead.

# Motorsport

// Semi Synthetic // Mineral



# Passenger Car Motor Oil (PCMO)



## Expert Racing 25W50

A very specialised high performance four stroke racing engine oil especially formulated to ensure trouble-free lubrication of all high stressed racetrack engines.

Vertex Expert Racing ZP 25W50 contains the highest levels of ZDDP as well as special additive chemistry that maximises lubricant related power output and gives complete protection against scuffing and scoring of all rapidly moving engine components. It is an ultra performance oil that provides sustained endurance under all the rigours of competition racing where engines are frequently stressed to their limits, endure extremes of load, turbocharging, speed and high operating temperatures. Increased RPM's though small, are a realisable bonus with Vertex Expert Racing ZP 25W50. Permanent shear stable viscosity improver polymers which are formulated in this product contribute to this special benefit.

### Suitable for:

Race Engines and High Performance Road Cars. Ideal for where high octane gasoline and their mixtures and other high energy fuels such as methanol and nitromethane are employed.

**API SL • ZDDP 1950 ppm**

| Product Code   | Pack Size | Product Features |
|----------------|-----------|------------------|
| VERAC255/C6B5L | 5 Litre   | • Mineral        |
| VERAC255/P20L  | 20 Litre  | • Petrol         |
|                |           | • High Zinc      |



## Expert Racing 50W

A very specialised high performance four stroke racing engine oil especially formulated to ensure trouble-free lubrication of all high stressed racetrack engines.

Vertex Expert Racing ZP 50W contains the highest levels of ZDDP as well as special additive chemistry that maximises lubricant related power output and gives complete protection against scuffing and scoring of all rapidly moving engine components. It is an ultra performance oil that provides sustained endurance under all the rigours of competition racing where engines are frequently stressed to their limits, endure extremes of load, turbocharging, speed and high operating temperatures. Increased RPM's though small, are a realisable bonus with Vertex Expert Racing ZP 50W. Permanent shear stable viscosity improver polymers which are formulated in this product contribute to this special benefit.

### Suitable for:

Race Engines and High Performance Road Cars. Ideal for where high octane gasoline and their mixtures and other high energy fuels such as methanol and nitromethane are employed.

**API SL • ZDDP 1950 ppm**

| Product Code | Pack Size | Product Features |
|--------------|-----------|------------------|
| VERAC5/C6B5L | 5 Litre   | • Mineral        |
| VERAC5/P20L  | 20 Litre  | • Petrol         |
|              |           | • High Zinc      |





## Expert Racing 10W40

A very specialised high performance four stroke racing engine oil especially formulated to ensure trouble-free lubrication of all high stressed racetrack engines.

Vertex Expert Racing ZP 10W40 contains the highest levels of ZDDP as well as special additive chemistry that maximises lubricant related power output and gives complete protection against scuffing and scoring of all rapidly moving engine components. It is an ultra performance oil that provides sustained endurance under all the rigours of competition racing where engines are frequently stressed to their limits, endure extremes of load, turbocharging, speed and high operating temperatures. Increased RPM's though small, are a realisable bonus with Vertex Expert Racing ZP 10W40. Permanent shear stable viscosity improver polymers which are formulated in this product contribute to this special benefit.

### Suitable for:

Race Engines and High Performance Road Cars. Ideal for where high octane gasoline and their mixtures and other high energy fuels such as methanol and nitromethane are employed.

### API SL • ZDDP 1950 ppm

| Product Code   | Pack Size | Product Features           |
|----------------|-----------|----------------------------|
| VERAC255/C6B5L | 5 Litre   | • Semi Synthetic           |
| VERAC255/P20L  | 20 Litre  | • Petrol<br>• Fuel Economy |

## What is ZDDP and why the hype?

Zinc Diakyl Dithio Phosphates (ZDDP) is a family of additives used in most oils in varying degrees. They are designed to meet a wide range of performance needs. Contrary to popular belief, ZDD is a "class" of additives today, not just one particular chemical. Many different types of ZDDP additives exist – Primary, Secondary, and Aryl. These different types of Zinc have different activation thresholds. You see, Zinc is not a lubricant until the ZDDP reacts under heat and load to create a phosphate glass film that protects the metal surface. The particular ZDDP combination in our Racing series oils are secondary alkyl types. This particular combination type provides the best antiwear protection and hydrolytic stability. It also controls oxidation and corrosion, keeping engines running longer and more smoothly by preventing valve train wear and bearing corrosion. All our Racing product contain a minimum of 1950 ppm ZDDP. In addition, our products carry a specific additive to provide a double barrier protection for your engine. Ashless triphenyl phosphorothionate (TPPT). When combined, this additive package, and pure base oil components combine to produce a world class engine oil designed specifically for high performance and motor sport use. As part of our ground up philosophy, we engineer the product to be market leading before we market it as such.

## Vertex engine oils

There are 6 Basic Functions of a Lubricant/Oil.

Lubrication – Provide a film between moving parts.

Cooling – Heat transfer media.

Sealing – Filling in uneven surfaces

Cleaning – Holding contaminants in suspension.

Dampening & Cushioning – Of components under high stress.

Protection – From oxidation & corrosion.

The key defining properties of a lubricant/oil are:

### Viscosity

Viscosity, by definition, is an oil's resistance to flow and shear. The most common unit of measure for viscosity is the Kinematic viscosity and this is usually quoted in data sheets at 40°C and 100°C. The commonly used unit of measure is centistokes but the correct SI unit of measure is mm<sup>2</sup>/s.

### Viscosity Index

Viscosity index (VI) is an arbitrary measure for the change of viscosity with variations in temperature. The lower the VI, the greater the change of viscosity of the oil with temperature and vice versa. It is used to characterise viscosity changes with relation to temperature in lubricating oil.

### Pour Point

The pour point of an oil is the lowest temperature at which it will pour when cooled under defined conditions.

### Demulsibility

Demulsibility is the ability of a lubricant to release water and readily separate when mixed. Because oil is hygroscopic, meaning that it absorbs water, this is a very important property of lubricating oils.

### Oxidation Resistance

The ability of a lubricant to withstand the presence of oxygen. The rate of oxidation is accelerated by high temperatures, water, acids and catalysts such as copper. Oxidation will lead to an increase in the oil's viscosity and deposits of varnish and sludge. The rate of oxidation doubles with every 10 °C rise in temperature.

### Thermal Stability

Thermal stability is defined as the ability of a fluid to resist breaking down under heat stress. As such, the maximum use temperature is the suggested maximum temperature to which the fluid can be heated before the fluid begins to break down or degrade at an appreciable rate. A fluid with high thermal stability will degrade less than a fluid with low thermal stability and will deliver a longer fluid life than a less stable fluid.

There are a myriad of others, that if it is of interest to you, please sign up to our newsletter for more regular and detailed information.

Or alternatively contact our technical team about scheduling a tailored training session for you and your team.



# Our Products

## LUBRICANTS

OEM, Engine Oils, Transmission Oils, Hydraulic Oils, Motorcycle Oils, Power Train Oils, Marine Lubricants, Industrial Oils, Biodegradable, Foodgrade & Environmentally Responsible Fluids.

## GREASE

OEM, High Speed, Low Speed, Water Proof, Wire Rope, Moly, High Temp, Foodgrade, Biodegradable, NLGI 000-3.

## COOLANTS

OEM, Long Life, Super Long Life, Propylene Glycol, Mono Ethylene Glycol, Si-OAT, NAPS Free, Glysantin.

## CHEMICALS

Degreasers, Detergents, Aerosols, Non Flammable, Non Toxic, Water Based, Biodegradable, Electrical Cleaners, Paints.

## ADBLUE

OEM, VDA Approved, Manufactured to ISO22241, IBC's, 205L, 20L, 5L.

## FLEET PLANT LUBRICATION AUDITS

Product Rationalisation, Fuel Savings, OEM Compliance, Fit for use analysis.

## FLEET PLANT LUBRICATION SURVEYS

Drain Interval Optimisation, Contamination Control, Fluid Handling Best Practices, HSSE Compliance, Fleet Lubrication Lists.

## LUBRICATION EQUIPMENT

Oil and Grease Pumping Equipment, Bulk Storage Tanks, Waste Oil Tanks, Fluid Monitoring Systems, Hose Reels, Dispensing Hand Pieces, Consumables.

## FLUID CONDITION MONITORING

Oil Analysis, Oil Analysis Interpretation, Wear Trending, Contamination Control, Lifespan Expansion of Plant.

## IN HOUSE SPECIALISTS

Oil Analysis Engineer, Lubrication Design and Fabrication Engineer, Fluid Transfer Technicians.



Oils // Grease // Coolant // Chemicals

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