







Ultra Strong Viscosity by RAVENOL

- 1) What is the new RAVENOL USVO® Technology?
- 2) Which products are sold with USVO® and are there alternatives?
- 3) What are the benefits of using USVO® oils?
- 4) When can the new USVO®-Products be ordered and will the prices change?



1) What is the new RAVENOL USVO® Technology?

The special feature of the new RAVENOL USVO® oils is that they have almost no shear losses due to their special formulation of selected base oils and additives.

This is possible through the use of fully synthetic base components without so-called VI improvers or in conjunction with the use of high-quality extremely shear-stable polymers.

Use of PAO based fully synthetic lubricants:

Synthetic lubricants cover a wide range of operating temperatures, have greater stability at high temperatures and offer better low temperature properties.

This allows us to achieve the following properties:

- Better friction values (FE/fuel-saving effect of around 1%)
- Better Noack values (less volatilisation = lower costs, as less or no refilling required)
- Better oxidation protection (longer product life span)
- Better cleaning effect = The engine remains clean and thus longer functional
- Better pumpability in cold conditions = faster oil supply to the parts to be lubricated even at cold starts = better engine protection
- Almost no shear loss, even under strong conditions the viscosity remains stable
- Longer durability of RAVENOL USVO® engine oil

Generally the use of VI improvers is seen rather positively. But that is not always correct, because they also have some disadvantages. With USVO®, we avoid the drawbacks of VI improvers and if necessary, leverage their benefits through our advanced development.

Advantages of formulations without VI improver:

- High-quality and specially selected base oils
- Thicker fully synthetic base
- Almost no shear loss, even when the oil is placed under significant stress
- The engine remains clean and therefore remains functional for a longer time
- Longer service life of the RAVENOL engine oil
- Very shear-stable oil
- Viscosity is maintained

2) Which products are sold with USVO® and are there alternatives?

| USVO® + CleanSynto® | | CleanSynto® Alternative | |
|---------------------|-------------------|-------------------------|-------------------|
| 1111102 | RAVENOL ECS 0W-20 | 1111113 | RAVENOL EHS 0W-20 |
| 1111110 | RAVENOL SFE 5W-20 | 1111311 | RAVENOL VFE 5W-20 |
| 1111124 | RAVENOL DXG 5W-30 | 1111125 | RAVENOL HDX 5W-30 |
| 1111139 | RAVENOL FDS 5W-30 | 1111115 | RAVENOL FO 5W-30 |
| 1111122 | RAVENOL VMP 5W-30 | 1111126 | RAVENOL SMP 5W-30 |
| 1111136 | RAVENOL VST 5W-40 | 1111147 | RAVENOL HST 5W-40 |
| 1111103 | RAVENOL EFE 0W-16 | | |
| 1111109 | RAVENOL DFE 0W-20 | | |
| 1111105 | RAVENOL EFS 0W-20 | | |
| 1111146 | RAVENOL FES 0W-20 | | |
| 1111100 | RAVENOL SSO 0W-30 | | |
| 1111145 | RAVENOL SSV 0W-30 | | |
| 1111137 | RAVENOL ALS 0W-30 | | |
| 1111104 | RAVENOL HFE 5W-16 | | |

| Racing + USVO® | | |
|----------------|--|--|
| 1141089 | RAVENOL RSP SAE 5W-30 | |
| 1141088 | RAVENOL REP SAE 5W-30 | |
| 1141091 | RAVENOL RUP SAE 5W-40 | |
| 1141090 | RAVENOL RCS SAE 5W-40 | |
| 1142100 | RAVENOL RRS SAE 5W-50 | |
| 1141105 | RAVENOL RSE SAE 10W-50 | |
| 1141100 | RAVENOL RSS SAE 10W-60 | |
| 1141101 | RAVENOL RHV SAE 20W-60 | |
| 1142105 | RAVENOL RFS SAE 15W-50 | |
| 1221111 | RAVENOL Racing Gearoil | |
| 1145100 | RHP RAVENOL RHP Racing High Performance Gear 75W-90 | |

The CleanSynto® alternatives come with same or similar specifications and or OEM approvals as the USVO® products.



3) What are the benefits of using USVO® oils?

- Better engine protection
- Improved performance of the engine
- Optimal engine cleanliness
- Extended oil change intervals

4) When can the new USVO®-Products be ordered and will the prices change?

The products with USVO® technology can be ordered by now. For price information on the individual products, please contact our sales team. You can find product informations for the new USVO® products under https://www.ravenol.de/en/products/usage/c/pkw-motorenoele-usvoR.html

