

USVO®

Ultra Strong Viscosity Oil



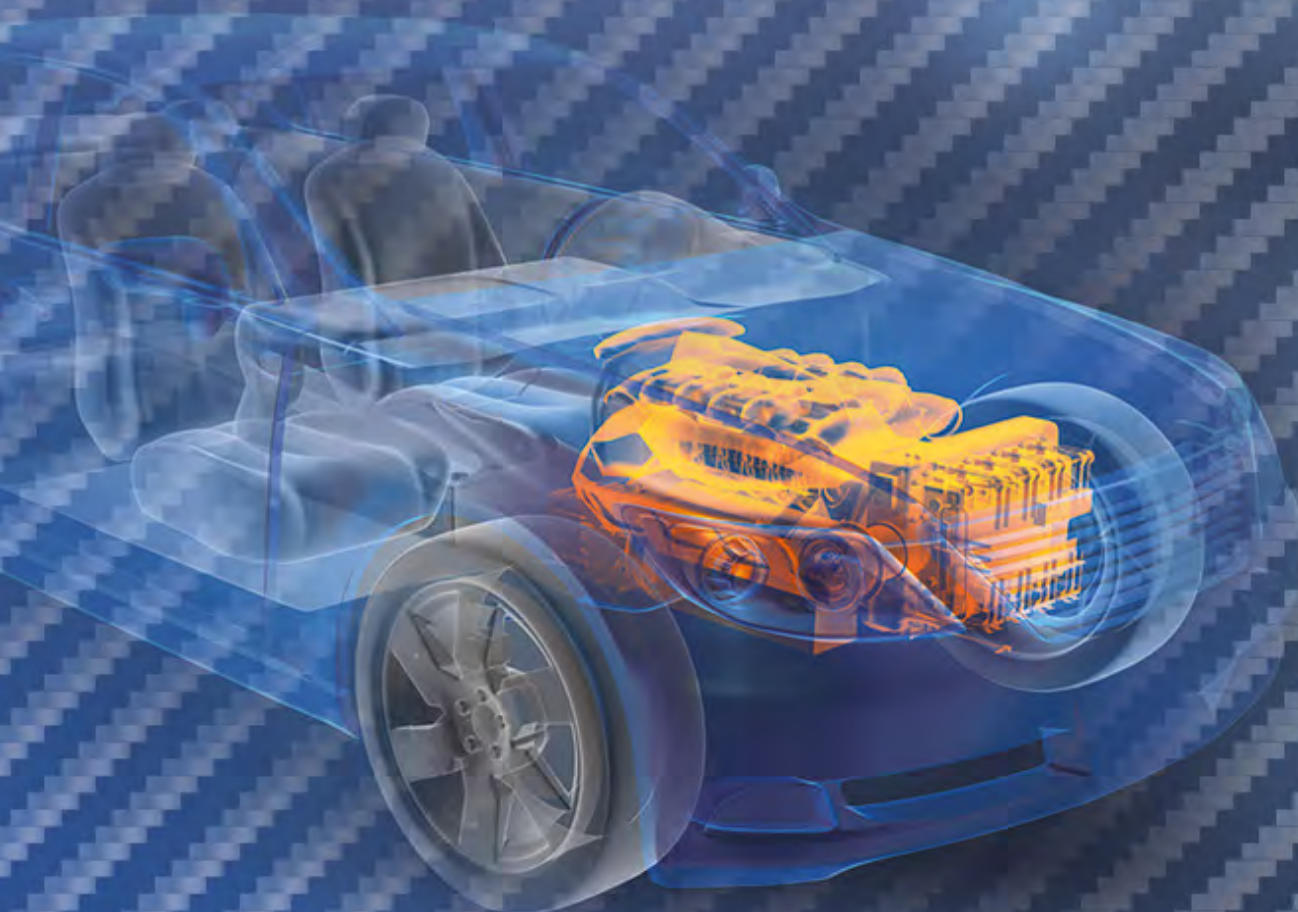
Ultra Strong Viscosity by RAVENOL

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.



