RAVENOL ATF T-ULV Fluid

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Category Gear oil for automatic transmissions

Item number 1211146

Oil type Fully synthetic

Recommendation ATF AW-2, BMW 83222413477 (8-Speed AT BMW GA8G45AW), BMW ATF 7, PSA 16 350 560 80 (8-Speed AT PSA AMN8/ATN8/AXN8), VOLVO 31492172 (8-Speed AT AWF8G45), VOLVO 31492173 (8-Speed AT AWF8G55), VW G 053 001 A2 (8-Speed AT VW 09S (AQ300-8F)

RAVENOL ATF T-ULV Fluid is a fully synthetic ATF (Automatic Transmission Fluid), designed on the basis of high quality polyalphaolefin (PAO) and Esters with a special additive and inhibition, which ensure a perfect function of the automatic transmission. **RAVENOL ATF T-ULV Fluid** is an ATF for the latest generation of Aisin Warner automatic transmissions. It guarantees a high wear protection in all operating conditions. **RAVENOL ATF T-ULV Fluid** has a red colour.

Reducing loss torque in automatic transmissions (ATFs) is a key factor in improving fuel economy. A promising approach is to reduce the viscosity of the Automatic Transmission Fluid (ATF) to minimize churning loss. RAVENOL has developed an ultra-low viscosity ATF, called “T-ULV”, which has approximately 50% lower kinematic viscosity at 40 °C compared to the conventional low viscosity ATFs. It is generally understood that if the viscosity of an ATF is too low, it can have a negative impact on the fatigue life of components such as gears and bearings, and possibly lead to increased wear or seizure. **RAVENOL ATF T-ULV Fluid** was designed to solve these problems via the application of two key technologies. The first is a high performance PAO (Polyalphaolefin) with a low traction coefficient, which translates to low viscosity under high pressure conditions. This decreases the shear resistance between sliding surfaces under elasto-hydrodynamic lubrication (EHL) conditions, which contributes to improving the fatigue life of bearings and other components. The second is an ester type base oil with high polarity. It was found that the amount of ester base oil used has a major influence on fatigue life. The adsorption of esters onto metal surfaces is thought to improve lubricity in severe lubrication conditions. Durability tests were performed in a wide range of conditions, using gear and bearing components and actual transmission units, and it was confirmed that **RAVENOL ATF T-ULV Fluid** outperforms low

1 L | 1211146-001
4 L | 1211146-004
10 L | 1211146-010
20 L | 1211146-020
20 L | 1211146-B20
60 L | 1211146-060
60 L | 1211146-D60
208 L | 1211146-208
208 L | 1211146-D28

viscosity ATFs, despite its ultra-low viscosity. Furthermore, **RAVENOL ATF T-ULV Fluid** reduces loss torque in the transmission by approximately 12% compared to other low viscosity ATFs.

Application Note

RAVENOL ATF T-ULV Fluid is an Ultra Low Viscosity ATF for modern 8-Speed automatic transmissions of Aisin Warner.

RAVENOL ATF T-ULV Fluid is suitable for use in automatic transmissions of BMW, Peugeot/Citroen, VW, Volvo. Note the original part number of manufacturer!

Characteristics

- Very good lubricity also at low temperatures in winter
- High, stable viscosity index
- Very good oxidation stability
- Excellent wear, corrosion and foaming protection
- Excellent friction constant
- High thermal and oxidative stability
- Excellent cooling capacity

Technical Product Data

Density at 20 °C	819,3		EN ISO 12185
Colour	Rot		VISUELL
Viscosity at 100 °C	3,3	mm²/s	DIN 51562-1
Viscosity at 40 °C	12,0	mm²/s	DIN 51562-1
Viscosity Index VI	151		DIN ISO 2909
Brookfield Viscosity at -40 °C	1090	mPa*s	ASTM D2983
Pourpoint	-78	°Celsius	DIN ISO 3016
Seq. I at 24 °C	10/0		ASTM D892
Seq. II at 93,5 °C	0/0		ASTM D892
Seq. III at 24 °C after 93,5 °C	10/0		ASTM D892
VKA Four Ball Test (Wear)	0,6	N	DIN 51350-3
VKA Four Ball Test (EP Extreme Pressure)	<2000	mm²/s	DIN 51350-3
Brookfield Viscosity at -50 °C	5800	mPa*s	ASTM D2983
Brookfield Viscosity at -55 °C	7000	mPa*s	ASTM D2983
Copper Strip Test at 150 °C	1a		ASTM D130
Flashpoint	164	°Celsius	DIN EN ISO 2592

All indicated data are approximate values and are subject to the commercial fluctuations.
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