



## SPIRAL FE LONG LIFE TRANSMISSION OIL

### PRODUCT DESCRIPTION:

Spiral FE is a fully synthetic fluid developed specifically to meet ZF extended drain intervals requirements (540.000 km) and is recommended for use in all ZF commercial manual and automated gearboxes, whether synchronized or non- synchronized, running under the most severe conditions of load, speed and temperature. It can be recommended in other manual transmissions requiring API GL-4 and is particularly suitable for severe applications where loads and temperatures are higher.

### APPLICATION:

Spiral FE is specifically developed for all ZF gearboxes with or without Intarder allowing a drain interval up to 540.000 km. This lubricant is particularly suited for latest ZF gearboxes with Carbon synchronization (ZF TE-ML 01E) and for ZF gearboxes with Molybdenum synchronization (ZF TE-ML 02E). Spiral FE 75W-80 meets the requirements of VOLVO 97307 (Drain interval up to 400.000 km), MAN 341 type Z5 (Drain interval up to 500.000 km) with or without Intarder, Retarder application VOITH CLASS C, MAN 341 type VR and MB 235.28. Spiral FE is also suitable for extended drain intervals on gearboxes of commercial vehicles from Renault Trucks, DAF, Iveco and for all commercial vehicles equipped with manual and automated gearboxes and any application requiring an API GL-4 level of performance.

### FEATURES & BENEFITS:

- Excellent frictional characteristics with carbon, sinter bronze and molybdenum synchronizers provides improved shift quality and extends component life.
- Reduced cost of maintenance due to extended drain intervals.
- Excellent lubrication at low and high temperatures.
- Excellent protection of gearboxes against wear and corrosion due to extreme-pressure properties of oil.
- Excellent low temperature fluidity due to a high viscosity index, generating benefits during cold starts and limiting drag losses and fuel consumption.
- Improved gear engagement.
- Excellent thermal and oxidative stability extends the life of transmission and lubricant.

### PERFORMANCE LEVELS / MEETS OR EXCEEDS:

SAE GRADES	75W-80
API	GL-5
VOITH	CLASS C
VOLVO	97305/ 97307
MAN	341 E3/Z3/Z4/Z5
MB	235.28
ZF	TE-ML 01E/02E/16P/01L/02D/02L/16K/08

### TYPICAL PERFORMANCE:

PARAMETERS	ASTM	UNIT	SPIRAL FE
			75W-80
KV@ 104°F /40°C	D7042	cSt	TBR
KV @ 212°F /100°C	D7042	cSt	9.4
Viscosity Index	D2270	-	150
Density @15°C	D4052	g/cm3	TBR
Flash Point (min)	D92	°C	230
Pour Point (max)	D97	°C	-42
Brookfield Viscosity	D2983	cp	50,000(-40C)

### DISCLAIMER:

The test data mentioned above is not a definitive specification but serves as an indication and may fluctuate within acceptable production tolerances. Venom retains the right to alter this test data. Any updated information will replace previous versions, so please consult the latest Technical Data Sheet (TDS).

### HEALTH & SAFETY, ENVIRONMENT:

Extended and repeated exposure to oil can lead to skin conditions. Please avoid contact. If you do come into contact with oil, wash the affected area immediately with soap and water. Do not dispose of used oil down drains or into the environment; instead, take it to an authorized used oil collection point.

### HEALTH & SAFETY:

This product is unlikely to pose significant health or safety risks when used properly in the recommended application and with good personal hygiene practices. For more information, please refer to the Safety Data Sheet (SDS), which is available upon request from your local sales office.

### PROTECT THE ENVIRONMENT:

Please take used oil to an authorized collection point and adhere to local regulations. Do not discharge it into drains, soil, or water.

### STORAGE:

We recommend storing all packages in a covered area. If outdoor storage is necessary, drums should be positioned horizontally to prevent water ingress and protect the markings. Products should never be stored above 60°C or exposed to direct sunlight or freezing temperatures.