# **PRODUCT INFORMATION**



# Lubricants - Engine Oil - Heavy Duty Engine Oils

# Version: 152/02 All-Fleet<sup>™</sup> Superior LE SAE 15W-40

All-Fleet<sup>™</sup> Superior LE SAE 15W-40 engine oil is formulated to provide enhanced oxidation control and shear stability demanded in modern diesel engines operating under a wide variety of service conditions, including engines with Diesel Particulate Filters (DPF) and cooled Exhaust Gas Recirculation (EGR) and Selective Catalyst Reduction (SCR).

All-Fleet<sup>™</sup> Superior LE SAE 15W-40 engine oil is blended with premium base oils and high-quality additive chemistry to achieve the following benefits: high temperature piston deposit control, foam protection, soot dispersancy and oil-thickening control, oxidation inhibition, low temperature sludge protection, corrosion and rust inhibition, valve train wear protection and TBN retention. The product provides excellent performance in local stop and go routes, on-and off-road, farm, construction, and mining applications.

O.E.M. Approvals	
MB-Approval 228.31	
MTU Type 2.1	
Renault RLD-4	
Volvo VDS-4.5	

Performance levels		
ACEA: E7, E9		
API: CK-4, CI-4, CI-4+, CH-4, CJ-4		
Caterpillar ECF-3		
CES 20086, CES 20081		
Detroit Diesel DFS93 K222, K218		
Ford WSS-M2C171-F1		
Deutz DQC III-10 LA, II-10 LA		
JASO DH-1, DH-2		
Mack OE-N Premium Plus, OE-S-4.5		
MAN 3575		
MAT 3521, MAT 3522		
Renault RLD-3		
Volvo VDS-4, VDS-3		

# **Features & Benefits**

### **Applications**

Suitable for some of the latest heavy duty engines in trucks, buses and off-road machinery.

### **Emission control**

Fulfills the requirements of EU Euro 6 and Stage V emission standards. This formulation is especially effective at sustaining emission control and system durability where particulate filters and other advanced aftertreatment systems are used.

# **Backwards compatibility**

All-Fleet<sup>™</sup> Superior LE SAE 15W-40 engine oil exceeds the performance criteria of API: CJ-4, CI-4, CI-4 Plus and CH-4 and can effectively lubricate engines calling these API service categories.

# Clean engine and wear protection

The modern additive system provides effective piston cleanliness and wear protection as well as valvetrain wear control.

> VALVOLINE EUROPE WIELDRECHTSEWEG 39 3316 BG DORDRECHT NETHERLANDS

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### Keeping the world moving since 1866™

Serving more than 100 countries around the globe, Valvoline is a leading marketer, distributor and producer of quality branded automotive and industrial products and services. Products include automotive lubricants; transmission fluids; gear oils; hydraulic lubricants; automotive chemicals; specialty products; greases, and cooling system products.

For more information on Valvoline products, programs and services please visit www.valvolineeurope.com

### **Typical properties**

Typical property characteristics are based on current production. Whilst future production will conform to Valvoline specifications, variations in these characteristics may occur.

All-Fleet Superior LE Engine Oil		
SAE Viscosity Grade	15W-40	
Viscosity, mm <sup>2</sup> /s @ 100 °C.	14,3	
ASTM D-445		
Viscosity, mm²/s @ 40 °C.	107	
ASTM D-445		
Viscosity Index	137	
ASTM D-2270		
Viscosity, mPa.s –20°C.	<6800	
ASTM D-5293		
TBN, mg KOH/g	8,5	
ASTM D-2896		
Pour Point, <sup>o</sup> C	-36	
ASTM D-5949		
Specific Gravity @ 15.6°C.	0,876	
ASTM D-4052		
Flash Point, COC, ºC.	238	
ASTM D-92		

# This information only applies to products manufactured in the following location(s): Europe

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### Health & Safety

This product is not likely to present any significant health or safety hazards when properly used in the recommended application and good standards of personal hygiene are maintained. Reference is made to the Safety Data Sheet (SDS) which is available on request via your local sales office or via the internet http://sds.valvoline.com

#### Protect the environment

Take used oil to an authorized collection point. Comply with local regulations. Do not discharge into drains, soil or water.

#### Storage

We recommend to store all packages under cover. In case outside storage is unavoidable, drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should never be stored above 60°C, exposed to hot sun or freezing conditions.

Replaces - 152/01