



## Mineral oil.

A top-of-the-range fluid for the lubrication of diesel engines which meet Tier 3 (Stage IIIA) emission standards for construction and agricultural vehicles and equipment or EURO V and later standards for HGVs and buses.

Compatible with the extended oil change intervals recommended by the main manufacturers.

## **PERFORMANCES**

Standards: ACEA E7/E5/E3

API CI-4/CH-4/CG-4

## Specifications:

ZF TE-ML 03A

MAN M 3275
RVI RD-2/RLD/RLD-2
VOLVO VDS-2/VDS-3
CUMMINS CES 20076/77/78
Mercedes-Benz p 228.3
CATERPILLAR ECF-2 / ECF-1a
Mack EO-N, EO-M Plus
ZF TE-ML 07C
DEUTZ DQC III-10
MTU Type 2
NH-330H

## **ORGANISATIONS & MANUFACTURERS - Scope of application -**

ACEA E7: For Euro I/II/III/IV/V systems having EGR and SCR without DPF, extended oil change intervals.

**ACEA E5**: European standard for HGV or industrial engines meeting the Euro 0/1/2/3 criteria (obsolete standards).

**ACEA E3**: This class of engine oils control deposits on pistons, cylinder wear and accumulation of deposits, as well as the stability of the lubricant, effectively. These oils are used in diesel engines that are compliant with the EURO 1 and EURO 2 emission standards in severe conditions. They are also perfectly suited to long oil change intervals as specified by the manufacturer. More or less equivalent to MB 228.3, MAN 3275.

API CI-4: Standard since 2002 for engine fitted with EGR

API CH-4/CG4: American standard in force since 1998.

**VOLVO VDS-3 since 2001**: For Volvo Euro III/IV/V engines + extended oil change intervals of 90,000 km max.

**MERCEDES MB 228.3**: For engines **without DPF**/standard oil change intervals (ACEA E3/E5) from 20,000 to 60,000 km.



**MAN M 3275**: For Euro 0/1/2/ engines/standard oil change intervals (ACEA E3/E5) of 60,000 km max.

**RENAULT RLD**: ACEA E5. For oil change intervals of 60,000 km max.

**RENAULT RLD-2**: ACEA E7-04 + Volvo VDS-3, for standard oil change intervals, in Renault Euro 5, Euro 4 or earlier engines.

Cummins CES 20076/77: For Cummins engine requiring an API CH-4/CI-4 oil.

MTU Type 2: Superior quality/single grade and multigrade oils.

**DEUTZ DQC III-10:** High performance diesel engine oils, application for closed crankcase ventilation engines and/or subject to high thermal loading.

**CAT ECF-1a:** Specification introduced in 2007 as replacement for the ECF-1 specification. Applies to all 2006 and earlier diesel engines used on the road, series 3500 Caterpillar diesel engines, small commercial engines and to machines incorporating ACERT technology. These oils must either meet the CH-4 standard, have a sulphated ash content < 1.3% and have passed the CAT 1P test first time, or meet the CH-4 standard, have a sulphated ash content of 1.3% to 1.5% and have passed the CAT 1P test twice.

**CAT ECF-2:** Specification introduced in 2007, and applicable to all 2006 and earlier Caterpillar diesel engines used on the road, series 3500 Caterpillar diesel engines, small commercial engines and to machines incorporating ACERT technology. These oils must meet either the CI-4 standard, or the CI-4 Plus standard and have a maximum content of 1.5% sulphated ash.

NH-330H: New Holland specification, can be compared with ACEA E5/E7 and API: CH-4 15W-40

Characteristics	Standards	Units	Values
Grade	SAE J 300	-	15W-40
Density at 15°C	NF T 60-101	kg/m3	890
Kinematic viscosity at 40°C	NF T 60-100	mm2/s	-
Kinematic viscosity at 100°C	NF T 60-100	mm2/s	14.5
Index viscosity	NF T 60-136	-	135
Pour point	NF T 60-105	°C	-45
VO Flash point	NF T 60-118	°C	228

Characteristics are given for information only and correspond with our manufacturing standards. IGOL reserves the right to modify them to provide its customers with the benefits of technical progress. Before using this product read the instructions for use and the environmental impacts mentioned in the technical and safety data sheets. The information given above is based on the current level of knowledge relative to the product concerned. The product user should take all useful precautions relative to its use. IGOL can in no circumstances be held responsible for damage resulting from incorrect use.

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