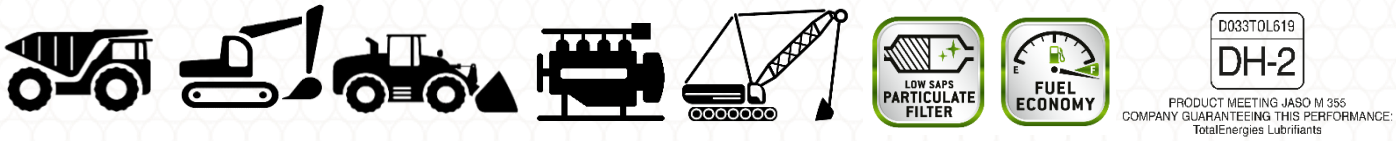
Rubia Works 4000 FE 10W-30

Diesel Engine Oil

KEY DATA



High performance "Low SAPS". Fuel economy diesel engine oil especially developed for earthmoving, mining and quarries machinery engines.

INTERNATIONAL STANDARDS

- ACEA E7 / E9 / E11
- API CK-4/CJ-4/CI-4+/CI-4/CH-4/SN
- JASO DH-2

MANUFACTURER APPROVALS

- DEUTZ DQC III-18 LA
- MTU Category 2.1
- MB-Approval 228.31
- VOLVO VDS-4.5
- MACK RO 4.5
- RENAULT VI RLD-3
- CUMMINS CES 20086
- DETROIT DIESEL DFS 93K222
- MAN M3775
- ISUZU Recommended Lubricant (2020)

MEETS THE REQUIREMENTS OF

- CATERPILLAR ECF-3/ECF-2/ECF-1a

SUITABLE FOR

Especially recommended in engines of machinery:

- KOMATSU
- HITACHI
- JCB
- KOBELCO
- CASE
- ...

APPLICATIONS

Rubia Works 4000 FE 10W-30 is especially suitable for engines used in earthmoving activities (quarries, construction, mining...) requesting API CK-4 or CJ-4 level. Furthermore, thanks to its numerous approvals, it can be used also in “On-road” truck engines.

This lubricant withstands very long working hours under severe conditions and high load, with dust and heat. Rubia Works 4000 FE 10W-30 is recommended for engines equipped with Exhaust gas after-treatment system meeting EURO Stage V (or US EPA Tier 4F) Standard and, for On-Road, EURO 6, as well as previous standards. Rubia Works 4000 FE 10W-30 is particularly suitable for American, European and Japanese engines. Thanks to its specific “low-SAPS” technology (low content of Sulphated Ash, Phosphorus and Sulphur), Rubia Works FE 10W-30 is designed for the latest Diesel engines equipped with post-treatment systems, such as Diesel particulate filters (DPF) or DENOX catalyst.

PERFORMANCES & CUSTOMER BENEFITS

- Rubia Works 4000 FE 10W-30 exhibits excellent thermal stability ensuring efficient lubrication of hot engine pieces during severe and long working periods.
- Rubia Works 4000 FE 10W-30 has been especially reinforced in oxidation resistance (much higher than simple API CK4), providing the possibility for the end user to reach or to exceed the maximum manufacturer's drain interval recommendation, even under severe working conditions with bad Fuel quality or with Bio-Diesel fuel.
- The 10W-30 viscosity grade allows engine starting under very low temperature and/or provides substantial Fuel Economy for the end user (up to 2.0 % in certain earthmoving machinery).
- Its advanced "low-SAPS" formulation helps prevent the clogging of the Diesel Particulate Filter (DPF) and extends the post- treatment system durability.

CHARACTERISTICS*

TEST	UNIT	TEST METHOD	RESULT
Kinematic viscosity at 40°C	mm²/s	ASTM D445	82
Kinematic viscosity at 100°C	mm²/s	ASTM D445	12.2
Viscosity index	-	ASTM D2270	145
Pour point	°C	ASTM D97	-36
T.B.N	mg KOH/g	ASTM D2896	10
Sulphated Ash	% m/m	ASTM D874	1.0

* The characteristics given above are obtained with a standard tolerance threshold during production and may not be considered specifications.

RECOMMENDATIONS FOR USE

Before using the product, the vehicle's maintenance guide should be checked. Oil changes should be carried out in accordance with the manufacturer's recommendations.

The product should not be stored at temperatures over 60°C. It should be kept away from sunlight, intense cold and extreme temperature fluctuations. If possible, the packaging should not be exposed to the elements. Otherwise, the drums should be laid horizontally in order to avoid any contamination from water and to prevent the product's label from rubbing off.

HEALTH, SAFETY AND THE ENVIRONMENT

Based on the toxicological information available, this product should not cause any adverse health effects, provided it is used for its intended purpose and in accordance with the recommendations laid out in the Safety Data Sheet (SDS).

This can be obtained on request from your local reseller and is available for consultation at https://ms-sds.totalenergies.com.

This product should not be used for any purposes other than the ones for which it is intended.

TotalEnergies

Some variations can be expected under normal production conditions, but these should not affect the product's expected performance irrespective of the site. The information contained in this document is subject to change without notice. Our products can be viewed on our website at www.lubricants.totalenergies.com.