



**TOTAL**

**RUBIA**

HEAVY DUTY ENGINE OIL

# TOTAL RUBIA WORKS RANGE

✓ Engine oil range for the toughest conditions



**TOTAL**

Committed to Better Energy



## RUBIA WORKS RANGE

### APPLICATIONS

#### A high-performance diesel engine oil

which is designed for the most recent engines of construction and mining machinery, operating in extreme conditions and on-road trucks and buses operating under all loads.

### MAIN ADVANTAGES

#### Certifications

This lubricant is certified in accordance with Japanese, European and American criteria. Approved by many original equipment manufacturers.

#### Durability and longer drain intervals



#### Piston Cleanliness and Bore Polishing Tests

(OM 501LA and OM 646 DE 22 LA)



#### KOMATSU hot tube test

Oil deposits and detergency at high temperatures

#### ANAC PRO Oil condition monitoring service



# RUBIA WORKS 4000 15W-40

Earthmoving / Construction sites / Quarries / Mining operations / On-road truck & bus fleets

TOTAL RUBIA WORKS 4000 15W-40 is a premium heavy duty engine oil of a new generation, which meets the latest API CK-4 level. The product is especially formulated to optimize performance in the most recent engines of construction and mining machinery and trucks and buses of the world's leading manufacturers.

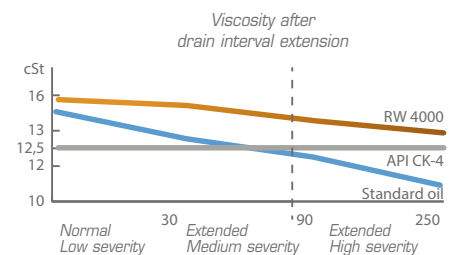
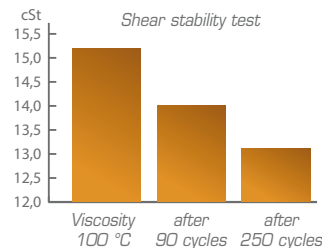
Specially designed for engines operating in the most extreme conditions - full load, long periods, dusty and hot atmosphere as well as moderate loads and stop and go work.

Recommended for Diesel engines up to the most recent compliance with the emission standards of US EPA Tier 4 Final and EURO Stage IV and Stage V. Due to its low ash content, the product is perfectly suitable for engines equipped with post-treatment systems, such as Diesel Particulate Filters (DPF) and Selective Catalytic Reduction (SCR).

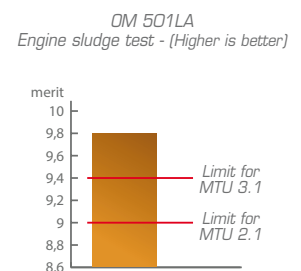
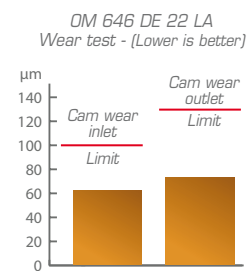


- International Specifications : • JASO DH-2 (D033T0L609) • ACEA E9/E7 • API CK-4/CJ-4/CI-4+/CI-4/CH-4/SN
- Manufacturer's approvals : • DEUTZ DQC III-10 LA • MTU Category 2.1 • MB-Approval 228.31  
• VOLVO VDS-4.5 • MACK EO-S 4.5 • RENAULT VI RLD-3  
• CUMMINS CES 20086 • DETROIT DIESEL DFS 93K222
- Meets the requirements : • CATERPILLAR ECF-3 / ECF-2 / ECF-1a
- Especially recommended in engines of machinery : • KOMATSU • HITACHI • ISUZU • KOBELCO • etc...

TOTAL RUBIA WORKS 4000 15W-40 provides excellent durability and drain interval extension even during harsh, extreme operating conditions. The abilities to keep the oil pressure stable and to provide a maximum protection against wear are proven by the Shear Stability Test results. This test is an instrument used to determine an oil's ability to retain its viscosity over a number of cycles of injector shearing. TOTAL RUBIA WORKS 4000 15W-40 perfectly passes Kurt Orbahn diesel injector shear bench test, which was designed to simulate the permanent viscosity loss in heavy-duty diesel engines. This test is usually performed over 90 cycles but RUBIA WORKS 4000 15W-40 shows perfect robust performance even after 250 cycles!



TOTAL RUBIA WORKS 4000 15W-40 provides excellent piston cleanliness and prevents cylinder liner glazing, which is proved by the test results, and which far exceeds the limits established not only by Daimler, but also by ACEA and other OEMs. These are key indicators of your engine protection and lubricant's performance.



TOTAL RUBIA WORKS 4000 15W-40 successfully passes Komatsu's standard Hot Tube Test, required by JASO. This test shows the oil's ability to resist oxidation and deposit formation. Furthermore, TOTAL RUBIA WORKS 4000 15W-40 is one of the few products on the market which is also able to pass the more stringent version of this test, performed at higher temperature, as required by certain OEMs.

TOTAL ANAC has been specially developed for tracking fleets. The measured parameters and the new advanced interpretation rules allow a more relevant and personalized diagnosis for each vehicle. For more information please visit <http://www.totaloil.com.au/value-added-services/anac.html>

## RUBIA WORKS RANGE

### APPLICATIONS

#### A multigrade engine lubricant for Earthmoving and Fleet operations

RUBIA WORKS 1000 meets the most stringent standards.

### MAIN ADVANTAGES

#### Type approvals

Compliance with international standards as well as constructors' standards.

#### Optimum engine protection even under the most extreme conditions

#### Detergency Piston cleanliness



#### Superior oxidation stability

KOMATSU  
HOT TUBE TEST

#### Reduce oil consumption

CATERPILLAR  
ECF-2

#### Maximum oil change intervals

# RUBIA WORKS 1000 15W-40

Earthmoving / Sitework / Quarrying / Mining operations /  
On-road truck and bus fleets

For use with most vehicle brands: the lubricant is certified in accordance with Japanese, European and American criteria.

Recommended for Diesel engines up to the most recent **compliance with the emission standards of EURO Phase IIIa and the US EPA TIER 3.**

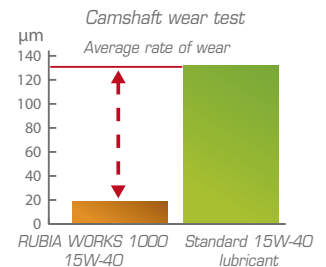
Especially designed for engines operating under **the most extreme conditions** (full load, long periods, dusty and hot atmosphere, stop & go driving).



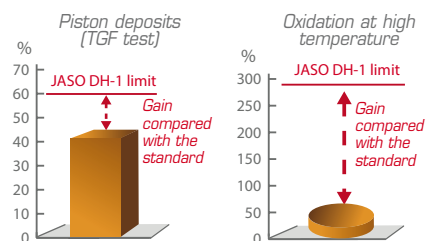
International	: JASO : DH-1 (approval N° D033TOL601) : ACEA : E7/E5 • API : CI-4 / SL
Constructors	: DEUTZ DQC III-10 • MACK EO-N • MAN M 3275-1 : MTU Category 2 • CUMMINS CES 20078 : DAIMLER MB-Approval 228.3 • VOLVO VDS-3 • RENAULT RLD-2 : ISUZU Drop List 2015 • Recommended for KOMATSU engines : Compliant with CATERPILLAR ECF-2, ECF-1a

The anti-wear performance of RUBIA WORKS 1000 provides optimum protection for the engine components.

Measurements of camshaft wear, the key indicator for these properties, have demonstrated the protective capacities of this lubricant.

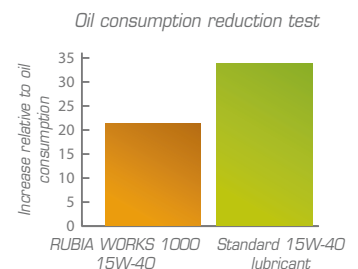


As demonstrated by tests carried out to obtain JASO approval, RUBIA WORKS 1000 15W-40 prevents piston deposits and is 5 times more resistant than standard lubricants.



RUBIA WORKS 1000 15W-40 successfully passed Komatsu's stringent independent test which tests the oil's ability to resist oxidation and deposit formation - a critical factor given Komatsu's 500 hour oil drain interval.

Tests carried out on the CATERPILLAR C13 engine have shown that when RUBIA WORKS 1000 15W-40 is used, nearly 50% less oil is consumed compared with the benchmark lubricant - evidence of its perfect piston ring sealing and maximum engine efficiency.



The formation of soot in the engine contaminates the lubricant and reduces its efficiency. RUBIA WORKS 1000 has undergone tests in order to meet the ACEA E7 standard. This lubricant enables the maximum oil change intervals authorised by the constructors to be attained.



 **Total**  
[totaloil.com.au](http://totaloil.com.au)

