# Roadmaster 300

Sae 15W/40,

Becoming Obsolete - Refer to RM 600 15W/40

Technical Data Sheet

## Product Description

***Anglomoil Roadmaster 300*** 15W/40 meets the API CI-4 Plus / SL specification and has been registered with Mack Trucks for EO-M Plus approval and with Cummins for compliance with the CES 20076, 20077 and 20078 specifications. ***Roadmaster 300*** is suitable for use in all European heavy duty diesel engines complying with the latest **Euro 4** exhaust emission legislation.

## Product Features & Benefits

***Anglomoil Roadmaster 300*** has a unique formulation that provides a high Total Base Number (TBN) indicating a high alkalinity which is essential to combat corrosion from high sulphur still found in some countries.

## Background

Anti-pollution legislation in the US, Europe and Japan continues to drive engine oil specifications. The aim of the legislation for all countries is similar, with the result that specifications are now becoming more closely aligned than ever before. The new heavy duty diesel oil specification introduced recently in Europe, ACEA E7, is recognised as a leading global standard of performance. ACEA E7 is a combination of European and American test procedures. The Cummins Engine Co. oil specification, CES 20077, includes ACEA E7 amongst its requirements! The Japanese Automotive Standards

Organisation (JASO) DH-1 specification addresses the performance requirements of Japanese designed engines. These three specifications which meet the most severe requirements of the world's three manufacturing groups have now been

combined into one joint international specification, **DHD-1**.

*Roadmaster 300 15W-40 MEETS ALL THESE SPECIFICATIONS INCLUDING DHD-1 AND IS A TRUE INTERNATIONAL OIL.*

**Effect on Engines.** The diesel is a comparatively 'clean' engine and the new regulations are concerned only with oxides of nitrogen (which helps to form smog) and particulate matter (soot). Current engine designs employ exhaust gas recirculation and retarded timing of the fuel injection. These measures are intended to reduce

exhaust emissions.

**Effect on Oil.** The engine design changes which have been introduced are estimated to double the thermal stress on the oil and at the same time greatly increase the quantity of soot introduced into the oil. Engine oils must now possess greatly increased powers of dispersancy to keep the soot in suspension. Soot is also formed by combustion of the lubricating oil and the oil consumption of modern engines has been drastically reduced. This in turn exposes the oil longer to the hot zones of the engine and less fresh oil will be added between oil changes.

The ash content of the oil is now considered as less significant and ash contents are rising, giving better detergency and higher TBN.

**Viscosity.** American engine manufacturers prefer that the viscosity of CI-4 oils be SAE 15W 40. Accordingly, the viscosity of Roadmaster 300 is SAE 15W 40 in line with manufacturers preferences.

## Typical Characteristics

| | | | | | |
|---|---|---|---|---|---|
| SG@20° C | 0.872 | Viscosity, cP CCS | 5,770 | TBN, mgKOH/g | 10.9 |
| Viscosity @ 40°C, cSt | 101.2 | Viscosity, cP MRV | 19,400 | Sulphated Ash, %Wt | 1.39 |
| Viscosity @ 100°C, cSt | 14.1 | HTHS Viscosity, 150°C, mPa.s | 4.16 | Phosphorus, % wt | 0.359 |
| Viscosity Index | 141 | Evaporative loss, 1hr@250°C, % | 10.6 | Sulfur, % wt | 0.390 |

## Performance Levels

| | | |
|---|---|---|
| SAE 15W/40 | Cummins CES 20076 / 77 | ACEA E7-08 Issue 2 |
| API CI-4 Plus / SL | Caterpillar ECF-2, ECF-1-a | ACEA A3/B3/B4-04 |
| Daimler MB 228.3 | Global DHD-1 | ACEA E5-02 |
| MAN M3275 | Deutz DQC III-10 | ACEA E3-96 Issue 4 |
| MTU Type 2 | Detroit diesel DDC 93K215 | ACEA E2-96 Issue 5 |
| Volvo VDS-3 | Renault Trucks RLD | JASO DH-1 |
| Mack EO-N, EO-M Plus | Renault Trucks RLD-2 | |

Date Published : 18/05/17

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