



TECH REPORT



The Original Bardahl USA

# HDD 15W-40 SEMI-SYNTHETIC MOTOR OIL

Specifications: API CK-4

ProductNo(s): 35000-35001

## Product Description

**HEAVY DUTY DIESEL (HDD) 15W-40** is designed to meet the warranty requirements of most manufacturers of diesel engines equipped with EGR and was specifically developed for diesel engines operating on high sulfur fuels. The high alkaline reserve (TBN) effectively protects bearings and other engine surfaces from the corrosive effect of acids formed by the combustion of high sulfur fuels. Recommended for extended drain service when suggested by original equipment manufacturer.

This motor oil is a blend of highly refined base oils and specially selected additives designed to provide excellent performance in all recommended applications. Contains effective detergent dispersant to keep sludge and varnish deposits to a minimum. Additionally fortified with oxidation-corrosion inhibitors, high temperature anti-wear additives and foam inhibitors, to protect vital engine parts from scuffing and protect bearings from corrosion.

## Advantages & Uses

- HDD 15W-40 meets the Service Classification CK-4.
- Recommended for use as “long drain” motor oil. Especially cost effective when used in conjunction with an effective oil analysis program.
- Meets all European OEM requirements of ACEA E9-12, E7-12, MAN M3575, MTU Type 2.1, Renault Truck & Duetz DQC.
- Meets Mack requirements.
- Meets and exceeds service requirements for Cummins CES.
- Recommended for all turbo-charged & ERG engines where manufacturers specified a CI-4 Plus, CI-4, & CH-4.
- Meets Volvo requirements, Backward compatible to VDS, VDS-2.
- Meets Detroit Diesel, Caterpillar ECF-3, ECF-1-a & ECF-2 requirements.



## Features

- Formulated to sustain emission control system durability where particulate filters and other advanced after-treatment systems are used.
- High TBN/Alkaline Reserve - Permits maximum drain interval recommended by manufacturers while protecting vital engine components.
- Highly oxidation stable - Protects engine against sludge and varnish deposits.
- Effective anti-scuff additive protects cam lobes and other highly loaded parts from wear.

## Typical Specifications

TEST	ASTM	Result
Gravity, °API	D-287	N/A
Flash Point, °C	D-92	220
Pour Point, °C	D-97	-35
Viscosity: cSt @ 100 °C	D-445	14.5
Viscosity: cSt @ 40 °C	D-445	103.4
Viscosity Index	D-2270	145
Appearance	Visual	Bright & Clear
Color	Visual	Amber
Zinc, Wt. %	D-5185	N/A
Phos, Wt. %	D-5185	N/A
TBN	D-2896	9

VALUES SHOWN HERE ARE TYPICAL AND MAY VARY