



5W-40 Full Synthetic Diesel Engine Oil

STARFIRE 5W-40 Full Syn Diesel Engine Oil is a fully synthetic, heavy duty engine oil formulated to meet or exceed the requirements of most major manufacturers of diesel engines. It is formulated with synthetic base fluids that provide extra thermal stability, oxidation resistance, shear stability, high-VI and excellent low-temperature fluidity. It meets certain requirements of Detroit Diesel, Cummins, Mack, Caterpillar and Allison. This fluid also meets the requirements of **CJ-4/SM** specifications.

Enhanced fuel economy can be expected when using **STARFIRE 5W-40 Full Syn Diesel Engine Oil** due to its enhanced fluid friction properties and lowered operating temperatures. It also provides for superior cold starting and faster startup lubrication compared to 15W-40 oils.

STARFIRE 5W-40 Full Syn Diesel Engine Oil can be used with complete success in most naturally aspirated or turbo-charged and exhaust gas recirculated diesel engines used in truck or off-highway equipment.

Applications:

- API CJ-4, CI-4 Plus, CI-4, SM, SL
- Caterpillar ECF-2 and ECF-3
- Global DHD-1
- Volvo VDS-4
- Detroit Diesel 93K218, 93K215, 93K214
- Mercedes Benz 228.3 and 228.31
- Mack EO-O Premium Plus (07)
- Mack EO-N Premium Plus (03)
- Cummins CES 20081
- ACEA E7-04
- JASO DH-2
- MAN
- MTU Type I and II
- International (Navistar) diesel engines
- Renault Trucks: RLD-3

Typical Properties

SAE Grade		5W-40
Viscosity cSt @ 40°C	ASTM D-445	95.5
Viscosity cSt @ 100°C	ASTM D-445	14.8
Viscosity Index	ASTM D-2270	162
Cold Cranking at temp °C, cP, D-5293	ASTM D-5293	6150 at -30°C
Pumping, MRV, at temp °C, cP, D-4684	ASTM D-4684	42,500 at -35°C
High Shear, HTHS, cP, D-4683	ASTM D-4683	3.8
Pour Point, °C, Typical	ASTM D-5949	-40
Total Base Number (TBN), D-2896	ASTM D-2896	10.0
Color	ASTM D-1500	3.5
Sulfated Ash, mass%	ASTM D-874	1.0 max.
Flash Point, COC	ASTM D-92	230°C