

Technical Bulletin

What Are The Differences Between Api Ck-4 And Cj-4?



What does API CJ-4 and API CK-4 stand for?

API CJ-4 is a diesel engine oil designed for the requirements of vehicles of 2007 and newer models, in addition to the performance of CI-4 PLUS, that consume fuels with up to 0.05% sulphur content and operate under heavy conditions at high speeds, offering advanced anti-oxidant and soot control at high temperatures in direct-injection and turbo-charged diesel engines equipped with systems reducing advanced exhaust emissions, better pumpability at low temperatures and lower lubricant consumption.

API CK-4 is a diesel engine oil designed for the requirements of vehicles of 2007 and newer models, in addition to the performance of CJ-4 and CI-4 PLUS, that consume fuels with up to 0.05% sulphur content and operate under heavy conditions at high speeds, offering advanced anti-oxidant and soot control at high temperatures in direct-injection and turbocharged diesel engines equipped with systems reducing advanced exhaust emissions, better pumpability at low temperatures and lower lubricant consumption and providing high-level protection against viscosity loss due to shear, catalyst poisoning, particle filter clogging, engine wear, piston deposits, degradation of low and high temperature properties, and soot-dependent viscosity increase.

OPET Product equivalent to API CK-4 Level

Fullpro HT LSPS 5W-30;

ACEA E9/E7/E6, API CK-4/SN, CES 20086, DEUTZ DQC IV-10 LA, JASO DH-2, MACK EO-4.5, MAN 3677/3777, MB-APPROVAL 228.51, MTU TYPE 3.1, RENAULT RLD-4, SCANIA LA, VOLVO VDS-4.5

Fullpro HT MSPS 10W-30;

ACEA E9, API CK-4/CJ-4/SN, CAT ECF-3/ECF-2/ECF-1-a, CUMMINS CES 20086, DETROIT DIESEL DFS93K222, DEUTZ DQC III-10 LA, JASO DH-2, MACK EO-S-4.5, MAN M 3775, MB-APPROVAL 228.31, MTU TYPE 2.1, RENAULT RLD-3, VOLVO VDS-4.5

Fullpro HT MSPS 15W-40;

ACEA E9, API CK-4, CJ-4, CAT ECF-3, CUMMINS CES 20086, DETROIT DIESEL DFS 93K222, Deutz DQC III-10 LA, JASO DH-2, MACK EO-5-4.5, MAN M3775, MB-APPROVAL 228.3, MTU Type 2.1, RENAULT RLD-3, VOLVO VDS-4.5

Engine Oil Requirements

Engine technology continues to evolve to comply with regulatory requirements that require lower emissions and improve engine performance. In parallel, engine oil manufacturers develop products for vehicles with new generation diesel engines and equipped with exhaust gas emission reduction equipment such as Diesel Particulate Filter (DPF), Diesel Oxidation Catalyst (DOC), Exhaust Gas Recirculation System (EGR) and Selective Catalytic Reduction System (SCR). Therefore, the American Petroleum Institute officially announced in December 2016 to have made the transition from the API CJ-4 engine oil level to CK-4 level.

Additional Benefits of API CK-4 compared to CJ-4



Additional Motor Tests for API CK-4

Oxidative Stability test was first applied to Volvo T-13 engines in API CK-4 performance grade oils, developed to slow down oxidation and extend the lifecycle of oil.

Aeration Resistance test was first applied to Caterpillar C13 engines in API CK-4 performance level oils in order to measure whether the oil successfully eliminates air contamination for the smooth operation of the lubrication system.

API CK-4 and CJ-4 Technical Specifications of Some OEMs

OEM	Volvo	Mack	MAN	Cummins	Mercedes Benz	Renault
CJ-4 - based Specification:	VDS-4	MACK EO-0 Premium Plus	MAN M 3775	CES 20081	228.31	RLD-3
API CK-4 - based Specification:	VDS-4.5	MACK EO-4.5	MAN M 3575	CES 20086	228.31	RLD-4
Advantages of the new Specifications	Longer engine life lower due to lower wear Lower service costs due to a higher change interval	Longer engine life lower due to lower wear Lower service costs due to a higher change interval	Longer engine life lower due to lower wear	Longer engine life lower due to lower wear	Longer engine life lower due to lower wear	Longer engine life lower due to lower wear