

Heavy Duty Diesel Engine Oils

Xcel Maximum Duty-Plus Motor Oils - Xcel Extra Duty Motor Oils - Xcel Super Duty Motor Oils
Xcel SDL Diesel Engine Oils - XHD Turbo

(6/25/2018 edition)

Xcel Maximum Duty-Plus 15W40 Motor Oil is formulated with high quality base stocks and fortified with premium additives to offer the ultimate protection of your heavy-duty diesel engine. Xcel Maximum Duty-Plus will protect EGR/Low-Emission Diesel Engines while maximizing the durability of Diesel Particulate Filters (DPF's). Its performance exceeds the latest OEM and API CK-4 requirements and is backwards compatible to previous OEM and API specifications such as CJ-4, CI-4, CI-4+, and CH-4. Xcel Maximum Duty-Plus 15W40 carries the API SN specification approval for use in gasoline engines allowing one oil for owner-operators with mixed fleet use requirements. It is recommended for use in a wide range of heavy-duty applications and operating environments found on-and off-highway, including engines operating under heavy loads. It is formulated for extended service/extended drain when operated under typical operating conditions. Xcel Maximum Duty-Plus 15W40 Motor Oil offers improved TBN retention, lower oil consumption, greater wear protection, oxidation stability, excellent shear stability, and reduced high temperature deposits.

Xcel Maximum Duty-Plus 15W40 Motor Oil meets Mack EOS 4.5 as well as prior specifications for EO-N Premium Plus, EO-M Plus, and EO-M. This oil is also meets Detroit Diesel 93K222 is suitable for use in DDC 93K218, 93K215, and 93K214; Cummins CES 20086, 20081, 20078, 20077, 20076. This oil meets Allison C4 and C3 fluids and Caterpillar ECF-3, ECF-2, ECF-1, TO-2. This oil is also registered or meets the following European and Asian approval standards: Volvo VDS-4.5, VDS-4, VDS-3, VDS-2, Global DHD-1; JASO DH-2 and DH-1. Xcel Maximum Duty-Plus 15W40 Motor Oil is engineered to be robust enough to meet MB 228.5, 228.3, 228.1, 227.1; Man 3575; MTU Type 2.1; ACEA E9, E7, E4, E2, A3/B4, A3B3; and Renault RLD-4. This highly advanced diesel engine oil is recommended for use in MIL L 2104-H, MIL L 46152-E, and CID A-A-52306 applications.

Xcel Extra Duty Motor Oils provide excellent protection against wear, long life performance, soot reduction and fuel economy. Xcel Extra Duty Motor Oils are specifically designed to withstand the rigorous requirements of exhaust gas recirculation (EGR) engines. Special formulation and advanced additive chemistry provides long lasting protection for both turbocharged and naturally aspirated diesel and gasoline engines. These high-performance oils are specifically engineered to meet the manufacturers' prerequisite for performance, TBN, and balanced low ash requirements. They are formulated for extended service/extended drain when operated under typical operating conditions and are engineered to help promote fuel economy. These new oils meet or exceed the API CI-4 Plus/SL Service Classification as well as the CI-4/SL, CH-4, CG-4, CF-4, CF-2, CF and CD API Service Classifications; Global DHD-1; JASO DH-1, and are engineered to meet Caterpillar, Cummins, DaimlerChrysler (Mercedes Benz), Detroit Diesel, Mack (*including Mack EO-N Premium Plus 03*), MAN, Navistar and Volvo. Xcel Extra Duty Motor Oils are recommended for use in diesel engines wherever MIL L 2104-G and MIL L 46152-E are recommended; wherever Allison C-3 and C-4 fluids and Caterpillar TO-2 are recommended or required; and are recommended for use wherever the following European approval standards are specified: ACEA E7-04, E5, E3, A3/B4, A3B3.

Xcel Super Duty Motor Oils are up to the task of protecting your engine; helping your engine operate within the new emission and pollution requirements as well as meeting or exceeding the OEM requirements for many engine manufacturers worldwide. The new high-performance Xcel Super Duty Motor Oils are specifically engineered to meet the manufacturers' prerequisite for

performance, TBN, and balanced low ash requirements. They will deliver superior long-lasting protection for both turbocharged and naturally aspirated diesel and gasoline engines, including those engines that have exhaust gas recirculation (EGR) systems. They are formulated for extended service/extended drain when operated under typical operating conditions and are engineered to help promote fuel economy.

These new oils meet or exceed the CI-4/SL API Service Classifications as well as the CH-4, CG-4, CF-4, CF-2, CF and CD API Service Classifications; Global DHD-1; and JASO DH-1. Xcel Super Duty Motor Oils are recommended for use wherever MIL L 2104-G and MIL L 46152-E are recommended; wherever Allison C-3 and C-4 fluids and Caterpillar TO-2 are recommended or required; and are recommended for use wherever the following European approval standards are specified: ACEA E7-04, E5, E3, A3/B4, A3B3.

Xcel SDL Diesel Engine Oils are high quality detergent motor oils recommended for diesel and gasoline engines manufactured by American, European, Korean, Japanese and other engine manufactures from around the world. These oils are manufactured to meet the requirements of API CH-4, CG-4, CF-4, CF-2, CF / SJ as well as European ACEA A3/B4, A3/B3, E5, E4, E3, E2 and E1. They are manufactured from select blends of high quality base oils and additives to promote long engine life, protect against rust, corrosion and harmful oxidation, and are designed to help reduce engine wear and oil consumption. SDL is very well suited for the low ash requirements of the 2-cycle Detroit Diesel Engines.

Xcel XHD Turbo Motor Oils are high quality detergent motor oils recommended for diesel and gasoline engines manufactured by American, European, Japanese, Korean and other engine manufactures from around the world. These oils are manufactured to meet the requirements of API CF-4, CF-2, CF / SG, SF as well as ACEA A3/B4, A3/B3, E3, E2, and E1. They are manufactured from select blends of high quality base oils and additives to promote long engine life, protect against rust, corrosion and harmful oxidation, and are designed to help reduce engine wear and oil consumption.

*Some performance levels are limited by viscosity grades. Please consult the Xcel Performance Application Chart, the Xcel Inspection Data Table for the appropriate Xcel product or contact your Xcel District Manager for more complete information and recommendations.
Consult your Xcel District Manager for specific pack sizes and product availability.*

TYPICAL INSPECTION DATA

	API Gravity	Flash Point C.	Viscosity cSt @100C	Viscosity cSt @40C	VI	Pour Point, C.	TBN (D-2896)
Xcel Maximum Duty-Plus Motor Oils							
15W-40 *	29.5	220	15.80	118	140	-30	10
Xcel Extra Duty Motor Oils							
40	28.0	230	14.50	133.0	109	-18	13
50	27.5	240	18.50	192.0	108	-12	13
15W-40	29.6	215	15.50	115.0	130	-30	13
20W - 50	27.5	230	17.0	156	118	-25	13
Xcel Super Duty Motor Oils							
10W-30	29.5	205	10.40	68.4	140	-36	10
15W-40	28.5	210	15.00	101.0	155	-30	10
20W-50	27.0	220	17.50	158.0	122	-24	10
10W	29.5	190	6.60	37.0	140	-33	10
30	28.5	220	11.20	88.0	105	-21	10
40	28.0	230	14.50	133.0	104	-18	10
50	27.5	240	18.50	192.0	103	-12	10
Xcel SDL Diesel Engine Oils							
15W-40	29.0	210	14.00	100.0	130	-27	report
40	28.0	220	14.60	141.0	95	-12	report
50	27.5	230	17.90	189.0	95	-12	Report
XHD Turbo							
5W-30	30.5	190	10.20	60.0	157	-39	report
10W-30	29.5	200	10.50	69.0	140	-35	report
10W-40	30.0	200	13.50	97.0	145	-32	report
15W-40	29.0	210	14.00	100.0	135	-27	report
20W-50	28.9	220	18.00	165.0	125	-18	report
25W-50	29.6	230	18.00	165.0	125	-18	report
10	29.5	190	5.90	37.0	100	-15	report
30	28.5	210	11.80	103.0	100	-15	report
40	28.0	220	14.60	141.0	100	-12	report
50	27.5	230	17.90	189.0	100	-12	report

* Also meets 1% maximum ash requirements

PERFORMANCE APPLICATION CHART

SPECIFICATIONS	Maximum Duty-Plus	Extra Duty Multi-grades	Extra Duty Mono-grades	Super Duty Multi-grades	Super Duty Mono-grades	SDL Diesel	XHD Turbo
API: CK-4/SN	√	-	-	-	-	-	-
CJ-4/SN, CI-4 Plus	√	CI-4 Plus	-	-	-	-	-
CI-4, CH-4, CG-4	√	√	√	√	-	CH-4, CG-4	-
CF-4	√	√	√	√	-	√	√
CF-2 [1] CF/CD	√	√	√	√	√	√	√
SL/SJ/SH [2]	√	√	√	√	√	SJ/SH	SG
Allison C-4, C-3	√	√	√	√	√	√	C-3
Mil-PRF-2104H(AA52306)	√	√	√	√	√	-	-
Mil-L-2104-B, Mil-L-46152	√	√	√	√	√	√	√
Caterpillar TO-2	√	√	√	√	√	-	-
ECF-3	√	-	-	-	-	-	-
ECF-1, SEBU 6250	√	√	√	√	-	-	-
Mack EOS-4.5	√	-	-	-	-	-	-
EO-O Premium Plus 07	√	-	-	-	-	-	-
EO-N Premium Plus 03	√	√	√	-	-	-	-
EO-N Premium Plus	√	√	√	√	-	-	-
EO-M, EO-M Plus	√	√	√	√	-	-	-
Cummins CES 20086, CES 20081	√	-	-	-	-	-	-
CES 20078, 76, 71	√	√	√	√	-	-	-
CES 20077, 72	√	√	√	√	-	-	-
JASO DH-2	√	-	-	-	-	-	-
DH-1	√	√	√	√	-	-	-
Global DHD-1	√	√	√	-	-	-	-
Navistar TSI-99-12	√	√	√	-	SAE 30	-	-
Detroit Diesel							
93K222, 93K218, 93K215	√	-	-	-	-	-	-
93K214	√	√	-	-	-	-	-
7SE270 [3]	√	√	√	√	√	-	-
Daimler Chrysler 228.5	√	√	-	-	-	-	-
DC(MB) 228.3, 228.2	√	√	√	√	-	-	-
DC(MB) 228.1, 228.0	-	-	-	-	√	mono	mono
ACEA ,A3/B4,A3/B3	√	√	√	√	√	A3/B4	A3/B4
E7,6,5,4,3,2,1	√	√	√	√	E1,2	E1,2,3,4	E1,2,3
Volvo VDS-4.5, VDS-4	√	-	-	-	-	-	-
VDS-3, 2	√	√	√	√	-	-	-
Renault RDL-4	√	-	-	-	-	-	-
RDL-3	√	√	-	-	-	-	-
Man 3575	√	-	-	-	-	-	-
3275/3277	√	√	√	-	-	-	-
270/271	√	√	√	√	-	-	-
MTU Type 2.1	√	-	-	-	-	-	-
MTU Type II, Type III	√	√	√	-	-	-	-
MTU Type I	√	√	√	√	√	-	-

NOTES:

[1]= CF-2 primary recommendation for two-cycle engines; single grades.

[2]= Above Preferred Phosphorus level of API SL/SJ (10W-30).

[3]= Multi-grade oils recommended for four-cycle engines, single grade oils for two-cycle engines