

Description

FEDERATED 15W-40 CK-4 3/1GL

Inspection Information	Test Method	Typical Value
Gravity, °API	ASTM D287	30.1
Specific Gravity at 60°F (15.6°C)	ASTM D4052	0.8756
Flash Point, °C	ASTM D92	224
Flash Point, °F	ASTM D92	435
Viscosity at 40°C, cSt	ASTM D445	116.2
Viscosity at 100°C, cSt	ASTM D445	15.56
Viscosity Index	ASTM D2270	141
Pour Point, °C (°F)	ASTM D5950	-36°C (-33°F)
Cold Cranking Simulator at (°C), cP	ASTM D5293	5832 (-20)
High Temperature / High Shear Vis at 150°C, cP	ASTM D5481	4.2
Noack Volatility, % loss	ASTM D5800	10
Color	ASTM D1500	3
Zinc, wt. %	ASTM D5185	0.127
Phosphorus, wt. %	ASTM D5185	0.115
Calcium, wt. %	ASTM D5185	0.105
Sulfur, wt. %	ASTM D4951	0.32
Magnesium, wt. %	ASTM D5185	0.1
Molybdenum, wt. %	ASTM D5185	0.0066
Sulfated Ash, wt. %	ASTM D874	0.99
Nitrogen, wt. %	ASTM D4629	0.105
Pumping Viscosity at (°C), cP	ASTM D4684	20,000 (-25)
Foam Seq. I (Tendency/Stability), mL	ASTM D892 (Opt. A)	0/0
Foam Seq. II (Tendency/Stability), mL	ASTM D892 (Opt. A)	10/0
Foam Seq. III (Tendency/Stability), mL	ASTM D892 (Opt. A)	0/0
TBN, mgKOH/g	ASTM D2896	10

Claims Information

ACEA E11, E7	Recommended For
Allison C-4	Recommended For
API CI-4 Plus, CI-4, CH-4, CG-4, CF-4, CF-2, CF	Recommended For
API CJ-4	Recommended For
API CK-4	Approved
API SJ, SH, SG, SF, SE, SD, SC	Recommended For
API SL	Recommended For
API SM	Recommended For
API SN	Approved
CAT ECF-3, ECF-2, ECF-1-a	Recommended For
CAT TO-2	Recommended For
Chrysler/Fiat MS-10902	Recommended For
Highline Warren recommends this product in applications specifying CES 20081, 20077, 20076	Recommended For
Highline Warren recommends this product in applications specifying Cummins CES 20086	Recommended For
Detroit Diesel 93K218, 93K215, 93K214	Recommended For
Detroit Diesel 93K222	Recommended For
Ford WSS-M2C171-E	Recommended For
Ford WSS-M2C171-F1	Recommended For
Global DHD-1	Recommended For
JASO DH-2	Recommended For
Mack EO-O Premium Plus, EO-N Premium Plus 03, EO-M Plus, and prior	Recommended For
Mack EOS-4.5	Recommended For
MAN 3275	Recommended For
MAN 3575	Recommended For
MB 228.3, 228.31	Recommended For
MTU 2.1	Recommended For
MTU Type I, Type II	Recommended For
Renault RLD-4	Recommended For
Volvo VDS-4, 3, 2	Recommended For
Volvo VDS-4.5	Recommended For