



LE PRODUCTS  
MANUFACTURED  
UNDER AN ISO  
9001:2000  
CERTIFIED QUALITY  
SYSTEM

# 8820 MONOLEC® ENGINE OIL

*Long-drain SAE 20W-50 engine oil designed for year round extended drain service in diesel and gasoline engines.*

20W-50 engine oil formulated for extended drain service in both on-road and off-road diesel and gasoline engines. It is especially formulated to protect 2007 low-emission engines, and is backwards compatible for use in older diesel engines as well. It is especially suited for use in air-cooled four-stroke motorcycle engines, racing engines, and other high temperature applications. The extra viscosity provides extra film strength at higher temperature. It contains MONOLEC®, LE's proprietary wear-reducing additive.



## BENEFICIAL PROPERTIES:

- Formulated using high quality, low volatility, high viscosity base fluids which have been found to be helpful in high temperature applications.
- Contains shear resistant viscosity index improvers that provide good viscosity properties at both high and low temperatures.
- Low SAPS (sulfated ash, phosphorous and sulfur) formula that minimizes poisoning of SCR (selective catalytic reduction) and particulate filtration traps, to reduce emissions.
- Acceptable for use in both new and used engines.
- Excellent oxidation stability and detergency that allows for extended drain intervals in both diesel and gasoline engines.
- Contains MONOLEC®, LE's proprietary wear-reducing additive.
- Improves fuel efficiency.
- Protects critical ring-belt area in heavy-duty engines.
- Exceptional rust protection.
- High detergency level keeps engines clean.
- Easier starting in cold weather.
- Increases engine life.
- Prevents bearing corrosion.
- Keeps oil rings and screens clean, open and free flowing.

## WHAT IS MONOLEC®?

MONOLEC® is LE's exclusive wear-reducing additive which has proven its extraordinary performance in thousands of application. It is an invaluable component in LE's engine oils, industrial oils and other lubricants bearing the MONOLEC® trademark.

MONOLEC® creates a singular molecular lubricating film on the metal surface, vastly increasing film strength without affecting tolerances. MONOLEC® allows opposing surfaces to slide by one another, greatly reducing friction heat and wear.



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# 8820 TECHNICAL DATA

## PHYSICAL CHARACTERISTICS - TYPICAL:

SAE Grade	20W-50
Gravity, °API	30.9
Viscosity	
SUS @ 100°F	850
SUS @ 210°F	98.9
cSt @ 40°C	183.4
cSt @ 100°C	20.1
cP @ -15°C ASTM D-5293	8800
cP @ -20°C ASTM D-4684	<60,000
HTHS viscosity @ 150°C, ASTM D-4683	5.42
Viscosity Index, Min.	127
Color	Red
Flash Point, °F (°C), min.	445 (229)
Pour Point, °F (°C), max.	-18 (-27.8)
Total Base Number (TBN)	10
Sulfated Ash	1.0
Elemental Sulfur, %	≤0.40
Elemental Phosphorous, %	≤0.12



## APPROVALS AND SPECIFICATIONS EXCEEDED

API CJ-4, CI-4, CI-4 Plus/SM, SL	Mack EO-O Premium Plus, 07, EO-N Premium Plus 03, EO-M Plus, EO-M
ACEA E7-04, E4, E2 Demonstration	Volvo VDS-4, VDS-3, VDS-2
JASO DH-2 Demonstration	Cummins CES 20081, CES 20077, CES20076
Allison C-4 Transmission	Detroit Diesel 93K218, 93K215, 93K214
Global DHD-1	Caterpillar ECF-3, ECF-1
MB P228.3	MTU Type I & II
Renault RLD-3	MAN 3275

## RECOMMENDATIONS

Not for use with silver alloy bearings such as EMD engines (Electro-Motive Division of GM). When used in Cummins engines requiring an oil that meets the CES 20078 spec do so in coordination with a used oil monitoring program.



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