



## Monolec Ultra® Syn Heavy Duty Engine Oil (8854)

### *Broad-Range Synthetic Diesel Engine Oil Pays for Itself with All-Weather Performance, Wear Protection and Fuel Economy*

Monolec Ultra® Syn Heavy Duty Engine Oil (8854) is a broad-range multiviscosity synthetic oil for diesel engines that delivers outstanding year-round performance, wear protection, fuel efficiency and extended drains. With its synthetic base oil and exclusive additive package, this SAE 5W-40 formulation reliably lubricates diesel engines, even in low-temperature conditions, without the shear stability and viscosity problems of conventional diesel engine oils. Its high viscosity index indicates less change in viscosity over a broad operating temperature range.

One of the primary advantages of 5W-40 vs. 15W-40 engine oil is better fuel economy. In a controlled lab setting, GM 6.5L dyno testing showed a 1.5-1.6% fuel economy improvement. In addition, low-viscosity or broad-range oils are preferred for low-temperature conditions because of their ability to achieve flow quickly during cold startups. Most engine wear occurs within the first two to five minutes of starting. However, conventional low-viscosity oils have not always provided adequate oil film at operating temperatures. This resulted in increased wear and made it difficult to obtain OEM approvals. The improved technology of Monolec 8854 has eliminated this problem, enabling it to achieve flow quickly in cold weather and maintain viscosity at operating temperatures. It also meets all major OEM approvals.

Monolec Ultra® Syn Heavy Duty Engine Oil lubricates important parts faster, prevents wear during operation, and decreases fuel consumption – making it the smart choice for on- and off-road fleet managers and owner operators who want better fuel economy, reliable low-temperature performance, or a combination of both.

### Beneficial Qualities

#### **All-Weather Performance**

- Offers reliable performance and wear protection in heavy-duty diesel engines
- Achieves flow during cold startups, providing lubrication during critical early minutes
- Eliminates need for overnight auxiliary heaters, unless under extremely cold conditions
- Maintains film strength at operating temperatures

#### **Cost Reductions**

- Decreases fuel consumption by 1-3% over SAE 15W-40 oils
- Extends drains for long service life, when combined with oil analysis

#### **OEM & Industry Approvals**

- Safeguards engine warranties with authorized OEM approvals
- Provides necessary protection for modern low-emission engines, per CJ-4 standards



### Proprietary Additive

LE's proprietary additives are used exclusively in LE lubricants. Monolec Ultra® Syn Heavy Duty Engine Oil contains Monolec.

**Monolec®** wear-reducing additive creates a single molecular lubricating film on metal surfaces, vastly increasing oil film strength without affecting clearances. An invaluable component in LE's engine oils, industrial oils and many of its other lubricants, Monolec allows opposing surfaces to slide by one another, greatly reducing friction, heat and wear.



## Monolec Ultra® Syn Heavy Duty Engine Oil

	<b>8854</b>
<b>Color</b>	Red
<b>SAE Grade</b>	5W-40
<b>Relative Density @ 60°F/60°F, ASTM D1298</b>	0.852
<b>Viscosity @ 100°C, cSt, ASTM D445</b>	13.65
<b>Viscosity @ 40°C, cSt, ASTM D445</b>	79.70
<b>Viscosity Index ASTM D2270</b>	165
<b>Viscosity-HTHS @ 150°C, cP, ASTM D4683</b>	3.60
<b>Viscosity-CCS @ -30°C, cP, ASTM D5293</b>	6,000
<b>Viscosity-MRV TP-1 @ -35°C, cP, ASTM D4684</b>	50,000
<b>Flash Point °C (°F), (COC), ASTM D92</b>	219 (426)
<b>Pour Point °C (°F), ASTM D97</b>	-40 (-40)
<b>Ash-Sulfated %, ASTM D874</b>	1.0
<b>Base Number ASTM D2896</b>	10

### Performance Requirements Met or Exceeded

- ACEA E7-04
- API CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4 & CF-4
- Caterpillar ECF-2 & ECF-3
- Cummins CES 20081
- Detroit Diesel Power Guard Oil Specifications 93K218, 93K215 & 93K214
- Global DHD-1
- JASO DH-2
- Mack EO-O Premium Plus
- Mack EO-N Premium PLUS '03, EO-M PLUS, EO-M
- MAN 3275
- Mercedes Benz 228.3 & 228.31
- MTU Type I & II
- Renault RLD-3
- Volvo VDS-4



### Typical Applications

- Diesel engines only
- Class 8 tractor trailer trucks
- Construction vehicles and other off-road mobile equipment