

# Product Information



## Monolec Ultra® Syn Heavy Duty Engine Oil (8854 & 8855)

### **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 is a multiviscosity SAE 5W-40 synthetic oil for diesel engines that delivers outstanding year-round performance, fuel efficiency and extended drains. It has been formulated to exceed API's CK-4 technology standards focusing on engine wear protection, oxidation stability, shear stability, resistance to aeration, and compatibility with low-emission engines. With its synthetic base oil and exclusive additive package, it provides reliable lubrication – even in low temperatures – without the shear stability and viscosity problems of conventional diesel engine oils. Its high viscosity index indicates less change in viscosity over a broad temperature range.



A primary advantage 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 oils 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, which resulted in increased wear and made it difficult to obtain OEM approvals. Monolec Ultra Syn eliminates this problem with its ability to 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 parts faster, prevents wear during operation, and decreases fuel consumption – making it the smart choice for fleet managers and owner operators who want better fuel economy and reliable low temperature performance.

#### **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 oil drain intervals\* with specified filter changes and periodic oil analysis (ask your LE consultant about the Xamine® Oil Analysis Program)

##### **Greener Technology**

- Specially formulated to meet API CK-4 standards for low-emission engines
- Compatible for use with biodiesel-containing fuels
- Compatible for use in vehicles equipped with diesel particulate filters
- Works in conjunction with EGR engines to manage soot and other exhaust contaminants
- Low SAPS formula minimizes poisoning of SCR systems and particulate filtration traps

#### **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.

\*For mobile applications, intervals can be extended up to 100,000 miles or more.





## Monolec Ultra<sup>®</sup> Syn Heavy Duty Engine Oil

### Performance Requirements Met or Exceeded

- ACEA E7, ACEA E9-2012
- Allison TES 439
- API-SAE Service CK-4, CJ-4, CI-4, CI-4 Plus, CH-4
- Caterpillar ECF-2, ECF-3
- Cummins CES 20086, CES 20081
- Daimler MB 228.31
- Detroit Diesel DFS 93K222, DFS 93K218
- Ford WSS M2C171-F1
- Mack EOS-4.5, EO-O Premium Plus, EO-N
- MAN M3575
- MTU category 2.1
- Renault RLD-4.5, RLD-3
- Volvo VDS-4.5, VDS-4, VDS-3

### Typical Applications

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

|   |                     |
|---|---------------------|
|   | <b>8854 / 8855*</b> |
| <b>Color</b>                                      | Red / Amber         |
| <b>SAE Grade</b>                                  | 5W-40               |
| <b>Relative Density @ 60°F/60°F, ASTM D1298</b>   | 0.855               |
| <b>Viscosity @ 100°C, cSt, ASTM D445</b>          | 15.18               |
| <b>Viscosity @ 40°C, cSt, ASTM D445</b>           | 95.19               |
| <b>Viscosity Index ASTM D2270</b>                 | 165                 |
| <b>Viscosity-HTHS @ 150°C, cP, ASTM D4683</b>     | 3.9                 |
| <b>Viscosity-CCS @ -30°C, cP, ASTM D5293</b>      | 5,300               |
| <b>Viscosity-MRV TP-1 @ -35°C, cP, ASTM D4684</b> | 23,500              |
| <b>Flash Point °C (°F), (COC), ASTM D92</b>       | 219 (426)           |
| <b>Pour Point °C (°F), ASTM D97</b>               | -42 (-43)           |
| <b>Ash-Sulfated %, ASTM D874</b>                  | 1.0                 |
| <b>Acid Number mg KOH/g, ASTM D664</b>            | 2.4                 |
| <b>Base Number ASTM D2896</b>                     | 11                  |

\*8855 is undyed.



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