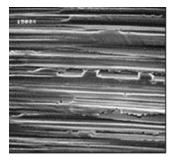


TECHNICAL DATA SHEET

Duralec Ultra

API CI-4/CI-4+ PERFORMANCE UPGRADE HD DIESEL MOTOR OIL

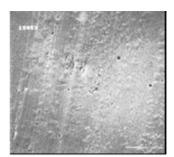
Royal Purple® Duralec Ultra motor oil is a high performance, heavy-duty diesel engine oil made for diesel engines that do not require the use of a low-ash engine oil. Because Duralec Ultra carries the less restrictive API CI-4 license and does not conform to low-ash chemistry restrictions, the formula contains a higher level of anti-wear additive than typically found in HD diesel engine oils, along with Royal Purple's proprietary Synerlec® additive technology. Duralec Ultra is specifically formulated to provide the absolute highest engine protection in an API licensed HD diesel engine oil.



New Bearing*



After Leading Synthetic*



After Royal Purple w/ Synerlec*

Synerlec® is Royal Purple's proprietary additive chemistry that greatly increases the protective film strength of the oil, reducing metal to metal contact, friction and wear. Synerlec® also increases the oil's resistance to thermal degradation, reducing deposit formation and lengthening the oil's useful life. Duralec Ultra reduces parasitic loss compared to other HD diesel engine oils, saving fuel, and its synthetic solvency keeps internal engine parts cleaner than detergents alone. Superior oxidation resistance also minimizes oil degradation and greatly extends engine oil drain intervals, reducing maintenance costs.

PERFORMANCE ADVANTAGES

- SUPERIOR WEAR PROTECTION Elevated anti-wear additive and Synerlec® additive technology prevents wear of piston rings, valve train, and other components beyond other licensed HD diesel engine oils.
- LONGER OIL DRAIN INTERVALS Outstanding oxidation resistance reduces oil aging, acidity build-up, and viscosity increase
- SUPERIOR CORROSION PROTECTION No rust observed in standard industry testing
- INCREASED EFFICIENCY Synthetic base oils and Synerlec® additive technology reduce parasitic loss, increasing fuel economy
- OUTSTANDING DEPOSIT CONTROL Keeps engines cleaner, ensuring maximum performance



TECHNICAL DATA SHEET

OEM SPECIFICATIONS

SAE 10W-30: Licensed API Service CI-4 heavy duty engine oil for diesel engines. It also meets ACEA E7-08; CAT ECF-1 & ECF-2;

Cummins CES 20076, 20077 & 20078; Detroit Diesel DFS 93K214; Mack EO-N Premium Plus; MB Approval 228.3;

Renault RLD/RLD-2; and Volvo VDS-3.

SAE 15W-40: Licensed API Service CI-4 Plus, CI-4 heavy duty engine oil for diesel engines. It also meets ACEA E7-08; CAT ECF-

1 & ECF-2; Cummins CES 20076, 20077 & 20078; Detroit Diesel DFS 93K214; Mack EO-N Premium Plus; MB

Approval 228.3; Renault RLD/RLD-2; and Volvo VDS-3.

| Typical Physical Properties | | | |
|-----------------------------|--------------------|--------------|--------------|
| Property | Test Method | 10W-30 | 15W-40 |
| API Service | | CI-4 | CI-4+ |
| Viscosity @ 40°C, cSt | ASTM D445 | 74.9 | 110 |
| Viscosity @ 100°C, cSt | ASTM D445 | 11.5 | 15.0 |
| Viscosity Index | ASTM D2270 | 146 | 140 |
| Flash Point, °C (°F) | ASTM D92 | 212 (414) | 238 (460) |
| Pour Point, °C (°F) | ASTM D97 | -45 (-49) | -45 (-49) |
| Cold Crank Simulator, cP | ASTM D5293 | 4,901 @-25°C | 4,367 @-20°C |
| TBN, mg KOH | ASTM D2896 | 10.5 | 10.8 |
| Sulfated Ash, wt% | ASTM D874 | 1.5 | 1.5 |