

Machine Id 9134 Component Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

| WEAR | | |
|------|--|--|
| | | |

All component wear rates are normal.

CONTAMINATION

Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|----------|-------------------|-----------|-------------|------------------|-------------|
| Sample Number | | Client Info | | GFL0112577 | GFL0102657 | GFL0093878 |
| Sample Date | | Client Info | | 03 Apr 2024 | 25 Jan 2024 | 21 Oct 2023 |
| Machine Age | hrs | Client Info | | 14944 | 0 | 19222 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | N/A |
| Filter Changed | | Client Info | | Changed | N/A | N/A |
| Sample Status | | | | NORMAL | SEVERE | ABNORMAL |
| | | | | | | |
| Iron | ppm | ASTM D5185(m) | >110 | 12 | ▲ 122 | 105 |
| Chromium | ppm | ASTM D5185(m) | >4 | <1 | <u> </u> | ▲ 5 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | <mark>▲</mark> 3 | A 3 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >25 | 1 | 9 | 8 |
| Lead | ppm | ASTM D5185(m) | >45 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >85 | <1 | 2 | 2 |
| Tin | ppm | ASTM D5185(m) | >4 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silicon | ppm | ASTM D5185(m) | >30 | 3 | 18 | 18 |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | 4 | 8 |
| Fuel | % | ASTM D7593* | >5 | 1 | 1 0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | 0.0 |
| Soot % | % | ASTM D7844* | >3 | 0 | 1.1 | 0.8 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 4.9 | 10.2 | 8.8 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 17.8 | 22.0 | 21.9 |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |
| Sodium | ppm | ASTM D5185(m) | | 4 | 31 | 83 |
| Boron | ppm | ASTM D5185(m) | 2 | 10 | 5 | 2 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 50 | 56 | 53 | 60 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 950 | 916 | 802 | 907 |
| Calcium | ppm | ASTM D5185(m) | 1050 | 1003 | 986 | 990 |
| Phosphorus | ppm | ASTM D5185(m) | 995 | 936 | 860 | 909 |
| Zinc | ppm | ASTM D5185(m) | 1180 | 1093 | 1000 | 1116 |
| Sulfur | ppm | ASTM D5185(m) | 2600 | 2483 | 2205 | 2332 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 13.0 | 17.8 | 18.7 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 12.00 | 11.2 | ▲ 9.3 | 11.0 |
| | 001 | Notwie Prero(ill) | 12.00 | | | 11.0 |

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