

CONTAMINATION NORMAL FLUID CONDITION ABNORMAL

WEAR

NORMAL

Machine Id **519004** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

| | | | | | ~~~~~ | | |
|--|-------------------------------|----------|---------------|-----------|-------------|----------|----------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| Resample at the next service interval to monitor. | Sample Number | | Client Info | | GFL0107929 | | |
| | Sample Date | | Client Info | | 22 May 2024 | | |
| | Machine Age | kms | Client Info | | 5311 | | |
| | Oil Age | kms | Client Info | | 400 | | |
| | Filter Age | kms | Client Info | | 400 | | |
| | Oil Changed | | Client Info | | Changed | | |
| | Filter Changed | | Client Info | | Changed | | |
| | Sample Status | | | | ABNORMAL | | |
| WEAR Metal levels are typical for a new component breaking in. | Iron | ppm | ASTM D5185(m) | >127 | 19 | | |
| | Chromium | ppm | ASTM D5185(m) | >3 | <1 | | |
| | Nickel | ppm | ASTM D5185(m) | | 0 | | |
| | Titanium | ppm | ASTM D5185(m) | >2 | 0 | | |
| | Silver | ppm | ASTM D5185(m) | >2 | 0 | | |
| | Aluminum | ppm | ASTM D5185(m) | >59 | <1 | | |
| | Lead | ppm | ASTM D5185(m) | >29 | 3 | | |
| | Copper | ppm | ASTM D5185(m) | >135 | <1 | | |
| | Tin | ppm | ASTM D5185(m) | >2 | 0 | | |
| | Vanadium | ppm | ASTM D5185(m) | | 0 | | |
| | | | | | | | |
| CONTAMINATION Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil. | Silicon | ppm | ASTM D5185(m) | | 3 | | |
| | Potassium | ppm | ASTM D5185(m) | | 1 | | |
| | Fuel | % | ASTM D7593* | | 0.0 | | |
| | Water | | WC Method | >0.2 | NEG | | |
| | Glycol | | WC Method | 0 | NEG | | |
| | Soot % | % | ASTM D7844* | | 0.3 | | |
| | Nitration | Abs/cm | ASTM D7624* | >20 | 13.2 | | |
| | Sulfation Emulsified Water | Abs/.1mm | ASTM D7415* | >30 | 25.7 | | |
| | | scalar | Visual* | >0.2 | NEG | | |
| FLUID CONDITION Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service. | Sodium | ppm | ASTM D5185(m) | >158 | 5 | | |
| | Boron | ppm | ASTM D5185(m) | 250 | 2 | | |
| | Barium | ppm | ASTM D5185(m) | 10 | 0 | | |
| | Molybdenum | ppm | ASTM D5185(m) | 100 | 70 | | |
| | Manganese | ppm | ASTM D5185(m) | | <1 | | |
| | Magnesium | ppm | ASTM D5185(m) | 450 | 1136 | | |
| | Calcium | ppm | ASTM D5185(m) | 3000 | 1236 | | |
| | | | | | | | |

Phosphorus

Zinc

Sulfur

Oxidation

Visc @ 100°C cSt

ppm

ppm

ppm

Abs/.1mm

ASTM D5185(m) 1150

ASTM D5185(m) 4250

ASTM D7414* >25

ASTM D7279(m) 14.4

ASTM D5185(m)

1350

Contact/Location: Kim Cunningham - GFL350 Page 1 of 2

1162

1365

2594

24.6

12.5



