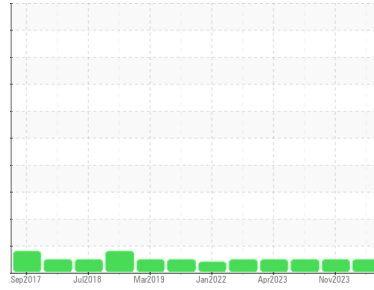




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

8431

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | GFL0118963 | GFL0101710 | GFL0085956 |
| Sample Date | Client Info | | 07 May 2024 | 21 Nov 2023 | 25 Jun 2023 |
| Machine Age | hrs | Client Info | 0 | 19231 | 19046 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | WC Method | | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185(m) | >110 | 22 | 16 | 21 |
| Chromium | ppm | ASTM D5185(m) | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >25 | 2 | 1 | 1 |
| Lead | ppm | ASTM D5185(m) | >45 | <1 | 1 | 2 |
| Copper | ppm | ASTM D5185(m) | >85 | 1 | 1 | 2 |
| Tin | ppm | ASTM D5185(m) | >4 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|---------------|---------|--------------|----------|------|
| Boron | ppm | ASTM D5185(m) | 2 | 2 | 1 | 4 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 50 | 62 | 58 | 58 |
| Manganese | ppm | ASTM D5185(m) | 0 | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 950 | 997 | 930 | 959 |
| Calcium | ppm | ASTM D5185(m) | 1050 | 1096 | 987 | 1031 |
| Phosphorus | ppm | ASTM D5185(m) | 995 | 1027 | 959 | 1058 |
| Zinc | ppm | ASTM D5185(m) | 1180 | 1198 | 1149 | 1163 |
| Sulfur | ppm | ASTM D5185(m) | 2600 | 2596 | 2504 | 2580 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|-----------|----------|----|
| Silicon | ppm | ASTM D5185(m) | >30 | 5 | 3 | 4 |
| Sodium | ppm | ASTM D5185(m) | | 30 | 22 | 25 |
| Potassium | ppm | ASTM D5185(m) | >20 | 4 | 2 | 4 |

INFRA-RED

| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot % | % | ASTM D7844* | >3 | 0.4 | 0.5 | 0.3 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.9 | 6.6 | 6.8 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 20.0 | 19.2 | 19.0 |

