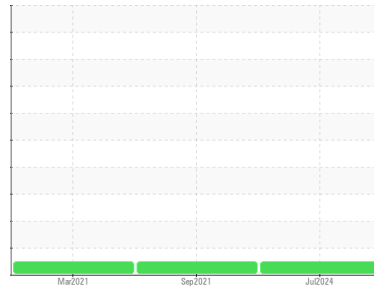




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
(PH3675)
 Machine Id
811023
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

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 | | GFL0029317 | GFL0029355 | GFL0020063 |
| Sample Date | Client Info | | 03 Jul 2024 | 03 Sep 2021 | 04 Mar 2021 |
| Machine Age | hrs | Client Info | 4714 | 1088 | 19682 |
| Oil Age | hrs | Client Info | 700 | 515 | 599 |
| Oil Changed | Client Info | | Changed | Changed | Changed |
| 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 | 0.0 |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185(m) | >80 | 30 | 46 | 59 |
| Chromium | ppm | ASTM D5185(m) | >5 | 1 | 2 | 2 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | <1 | 1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >30 | 6 | 5 | 11 |
| Lead | ppm | ASTM D5185(m) | >30 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >150 | 2 | 8 | 31 |
| Tin | ppm | ASTM D5185(m) | >5 | <1 | 1 | 3 |
| Antimony | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| 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) | 0 | 5 | 6 | 42 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 60 | 62 | 54 | 2 |
| Manganese | ppm | ASTM D5185(m) | 0 | <1 | 1 | 5 |
| Magnesium | ppm | ASTM D5185(m) | 1010 | 990 | 1012 | 744 |
| Calcium | ppm | ASTM D5185(m) | 1070 | 1128 | 1105 | 1376 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 978 | 1037 | 678 |
| Zinc | ppm | ASTM D5185(m) | 1270 | 1227 | 1189 | 824 |
| Sulfur | ppm | ASTM D5185(m) | 2060 | 2477 | 2523 | 2558 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|----------|----------|----|
| Silicon | ppm | ASTM D5185(m) | >20 | 3 | 4 | 8 |
| Sodium | ppm | ASTM D5185(m) | | 2 | 2 | 6 |
| Potassium | ppm | ASTM D5185(m) | >20 | 4 | 7 | 26 |

INFRA-RED

| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot % | % | ASTM D7844* | >3 | 1 | 0.6 | 0.5 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 9.7 | 8.4 | 9.6 |
| Sulfation | Abs./1mm | ASTM D7415* | >30 | 21.2 | 21.4 | 21.5 |

