

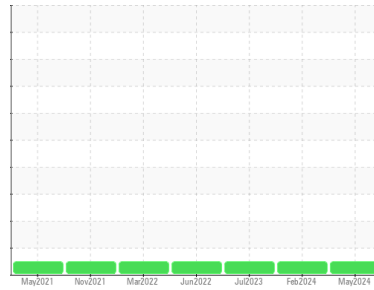


OIL ANALYSIS REPORT



Machine Id
401157
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



NORMAL



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 | | GFL0100575 | GFL0100599 | GFL0077036 |
| Sample Date | Client Info | | 31 May 2024 | 12 Feb 2024 | 05 Jul 2023 |
| Machine Age | hrs | Client Info | 12750 | 12160 | 10709 |
| Oil Age | hrs | Client Info | 0 | 7924 | 0 |
| Oil Changed | Client Info | | Changed | Changed | N/A |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >3.0 | <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) | >65 | 14 | 16 | 21 |
| Chromium | ppm | ASTM D5185(m) | >5 | 1 | <1 | 1 |
| Nickel | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185(m) | >5 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >35 | 7 | 8 | 6 |
| Lead | ppm | ASTM D5185(m) | >10 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185(m) | >180 | 2 | 2 | 4 |
| Tin | ppm | ASTM D5185(m) | >8 | 0 | <1 | <1 |
| Antimony | ppm | ASTM D5185(m) | >35 | 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) | 0 | 2 | 2 | 2 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 60 | 59 | 59 | 61 |
| Manganese | ppm | ASTM D5185(m) | 0 | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 1010 | 973 | 961 | 1005 |
| Calcium | ppm | ASTM D5185(m) | 1070 | 1059 | 1084 | 1070 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 967 | 1007 | 1057 |
| Zinc | ppm | ASTM D5185(m) | 1270 | 1172 | 1175 | 1217 |
| Sulfur | ppm | ASTM D5185(m) | 2060 | 2398 | 2584 | 2380 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

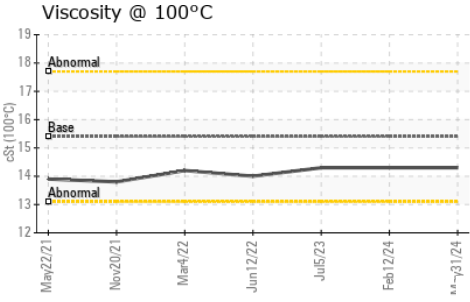
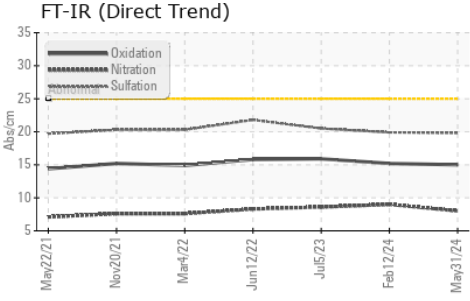
| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|----------|----------|---|
| Silicon | ppm | ASTM D5185(m) | >15 | 2 | 4 | 4 |
| Sodium | ppm | ASTM D5185(m) | | 2 | 1 | 2 |
| Potassium | ppm | ASTM D5185(m) | >20 | 2 | 3 | 3 |

INFRA-RED

| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot % | % | ASTM D7844* | >3 | 0.6 | 0.8 | 0.7 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 8.0 | 9.0 | 8.6 |
| Sulfation | Abs./1mm | ASTM D7415* | >30 | 19.8 | 19.9 | 20.5 |



OIL ANALYSIS REPORT

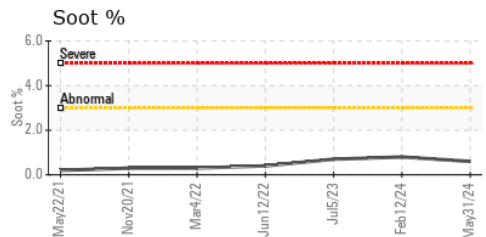
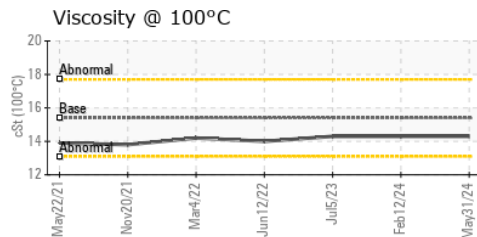
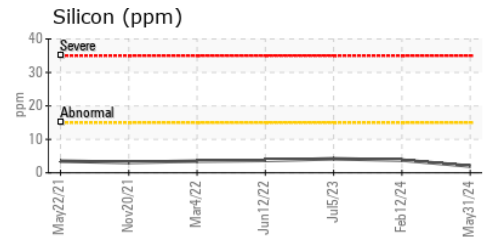
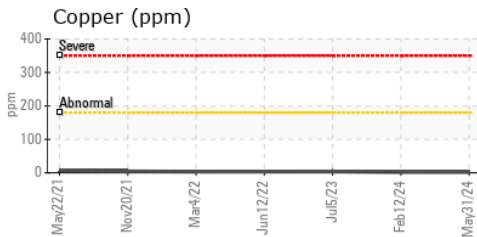
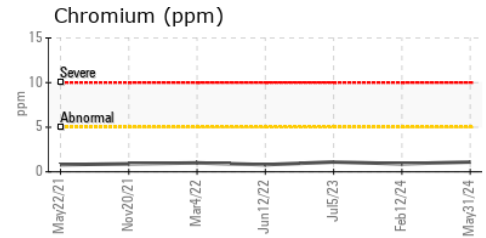
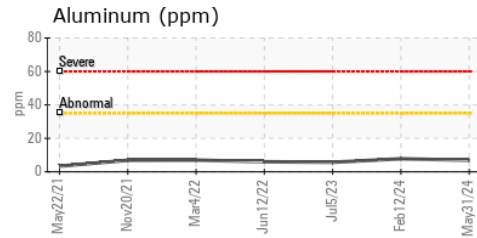
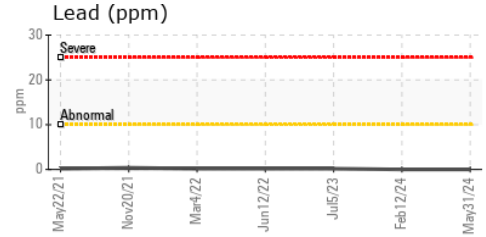
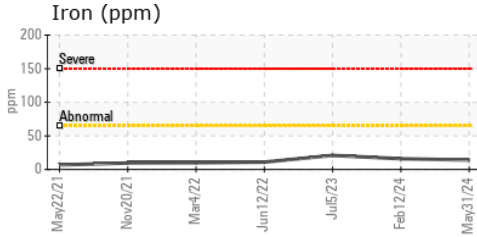


| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation | Abs./1mm | ASTM D7414* | >25 | 15.0 | 15.2 | 15.9 |

| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Precipitate | scalar | Visual* | NONE | NONE | --- | --- |
| Silt | scalar | Visual* | NONE | NONE | --- | --- |
| Debris | scalar | Visual* | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | --- | --- |
| Appearance | scalar | Visual* | NORML | NORML | --- | --- |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|---------------|------------|-------------|----------|----------|
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.4 | 14.3 | 14.3 | 14.3 |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 575 - Squamish Hauling**
Sample No. : GFL0100575 **Received** : 04 Jun 2024 **38950 Queens Way,**
Lab Number : **02639554** **Tested** : 05 Jun 2024 **Squamish, BC**
Unique Number : 5788716 **Diagnosed** : 05 Jun 2024 - Wes Davis **CA V8B 0K8**
Test Package : MOB 1 (Additional Tests: Visual) **Contact: Dean Imbeau**
dimbeau@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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