

Area
[1210696]
Machine Id
512026
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | GFL0110705 | --- | --- |
| Sample Date | | Client Info | | 16 Jan 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 3552 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | N/A | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | MARGINAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185(m) | >90 | 12 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | 4 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >40 | 2 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >330 | <1 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | <1 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |

CONTAMINATION

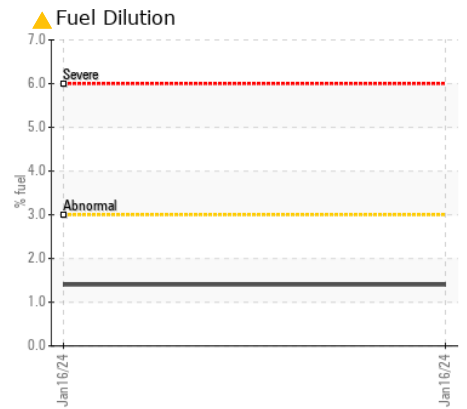
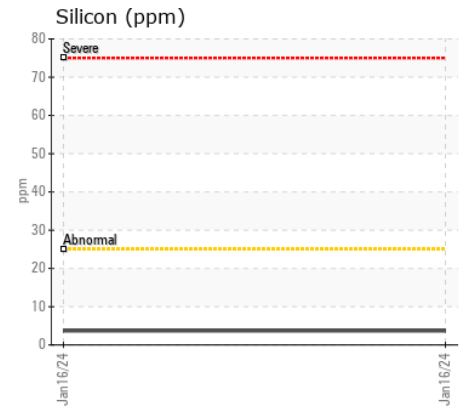
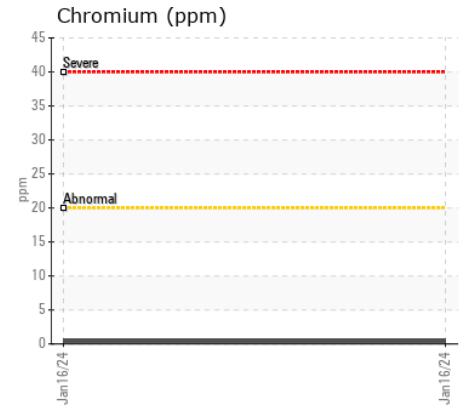
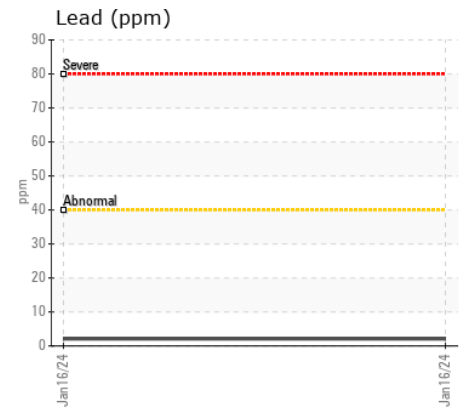
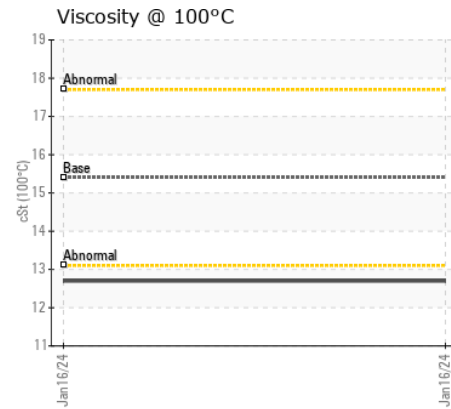
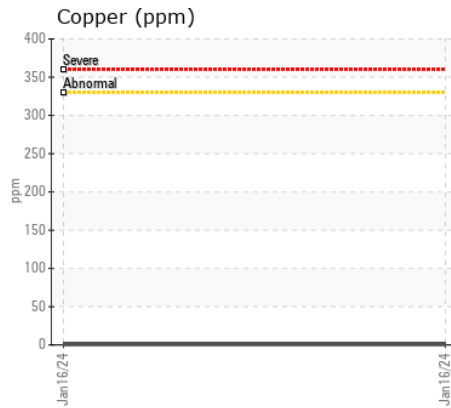
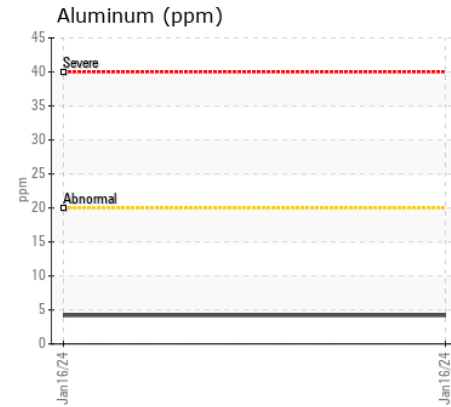
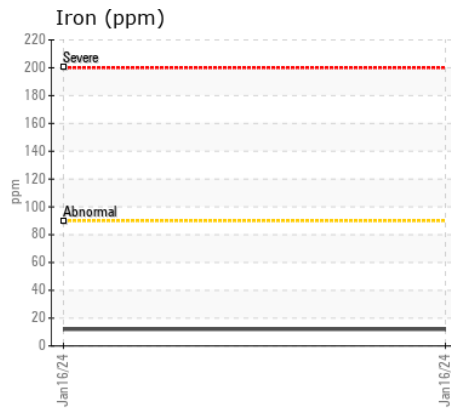
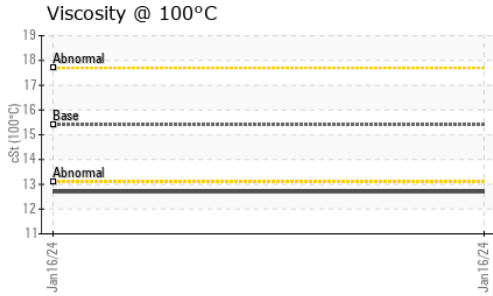
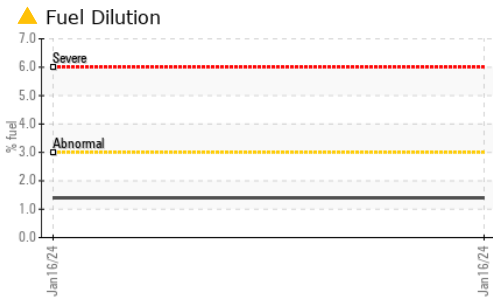
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

| | | | | | | |
|------------------|----------|---------------|------|--------------|-----|-----|
| Silicon | ppm | ASTM D5185(m) | >25 | 4 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 10 | --- | --- |
| Fuel | % | ASTM D7593* | >3.0 | ▲ 1.4 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | ASTM D7844* | >6 | 0.2 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 8.0 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 20.3 | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |

FLUID CONDITION

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

| | | | | | | |
|--------------|----------|---------------|------|-------------|-----|-----|
| Sodium | ppm | ASTM D5185(m) | | 4 | --- | --- |
| Boron | ppm | ASTM D5185(m) | 0 | 2 | --- | --- |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 60 | 58 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 1010 | 969 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 1070 | 1089 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 1001 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 1270 | 1187 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 2060 | 2631 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 15.9 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.4 | 12.7 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 207 - Pickering SW**
Sample No. : GFL0110705 **Received** : 22 Jan 2024 **1034 TOY AVENUE, PICKERING YARD**
Lab Number : 02610119 **Diagnosed** : 23 Jan 2024 **PICKERING, ON**
Unique Number : 5711205 **Diagnostician** : Wes Davis **CA L1W 3P1**
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel) **Contact: Ian Patton**
ipatton@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.

T: (905)831-6297
F: (905)426-3577