



| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |



Area
GFL216
Machine Id
5539
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (35 GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0108437 | GFL0099662 | GFL0061069 |
| Sample Date | | Client Info | | 08 Jan 2024 | 02 Oct 2023 | 07 Feb 2023 |
| Machine Age | kms | Client Info | | 484418 | 468354 | 11641 |
| Oil Age | kms | Client Info | | 0 | 0 | 575 |
| Filter Age | kms | Client Info | | 0 | 0 | 575 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|------|--------------|----|----|
| Iron | ppm | ASTM D5185(m) | >120 | 19 | 9 | 9 |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185(m) | >5 | 1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | 1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 3 | 1 | 1 |
| Lead | ppm | ASTM D5185(m) | >40 | 5 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >330 | 2 | 1 | <1 |
| Tin | ppm | ASTM D5185(m) | >15 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

CONTAMINATION

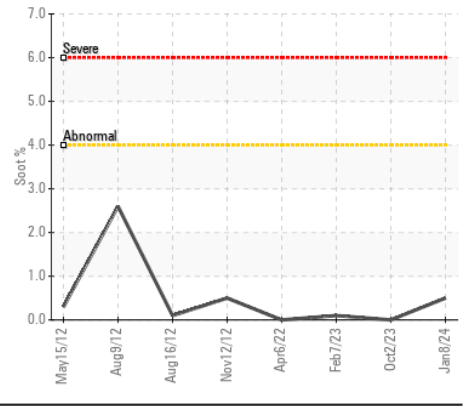
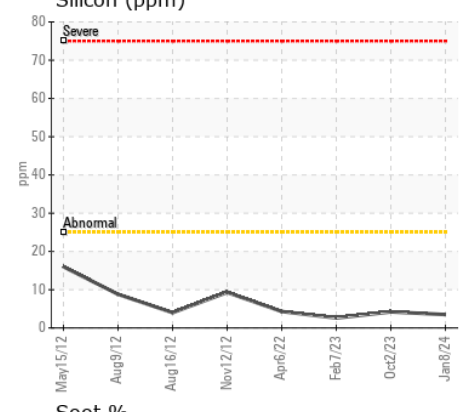
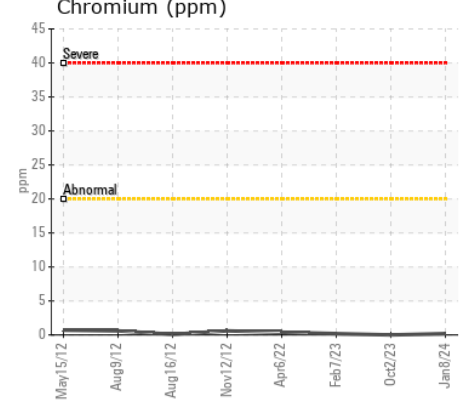
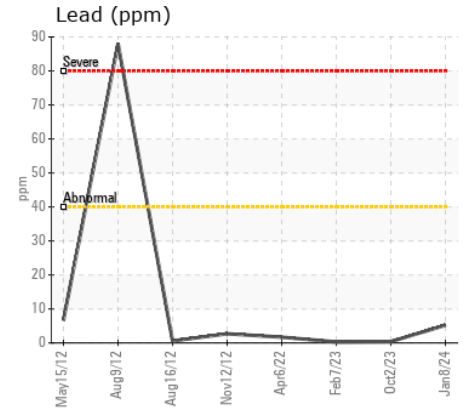
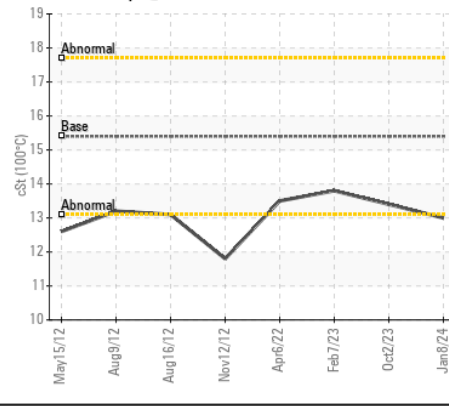
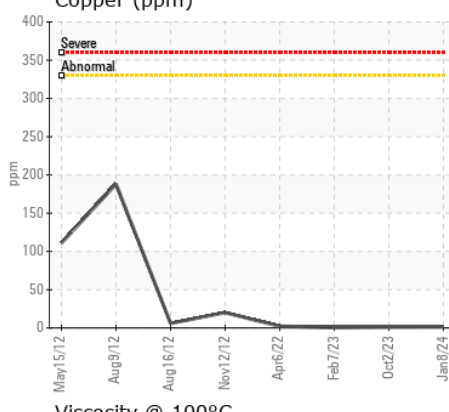
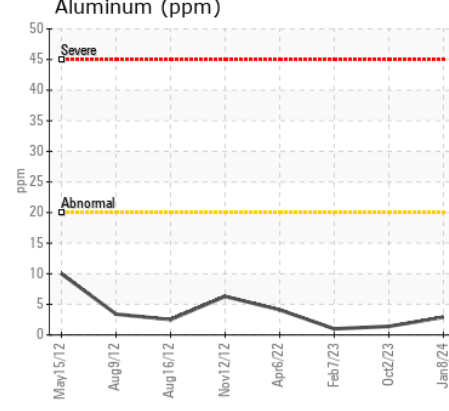
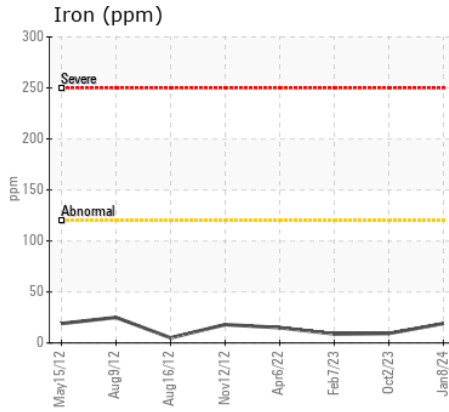
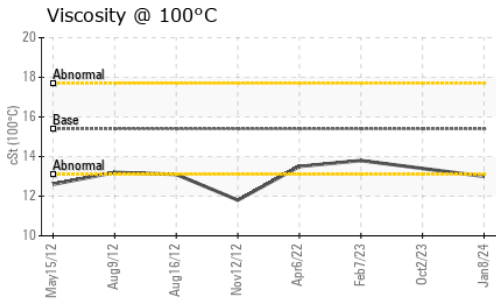
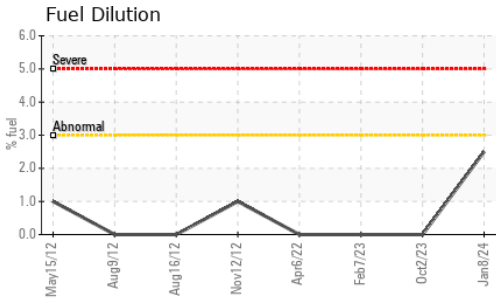
Light fuel dilution occurring. No other contaminants were detected in the oil.

| | | | | | | |
|------------------|----------|---------------|------|-------------|------|------|
| Silicon | ppm | ASTM D5185(m) | >25 | 4 | 4 | 3 |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | <1 | <1 |
| Fuel | % | ASTM D7593* | >3.0 | 2.5 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | >4 | 0.5 | 0 | 0.1 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 10.0 | 6.5 | 5.8 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 23.1 | 18.9 | 17.3 |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|--------------|----------|---------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 7 | 5 | 3 |
| Boron | ppm | ASTM D5185(m) | 0 | <1 | 6 | 4 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 60 | 59 | 59 | 60 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 1010 | 926 | 935 | 980 |
| Calcium | ppm | ASTM D5185(m) | 1070 | 998 | 1033 | 1085 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 921 | 945 | 1044 |
| Zinc | ppm | ASTM D5185(m) | 1270 | 1141 | 1146 | 1190 |
| Sulfur | ppm | ASTM D5185(m) | 2060 | 2530 | 2368 | 2523 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 19.8 | 14.8 | 10.5 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.4 | 13.0 | 13.4 | 13.8 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 252 - GTA Hauling
Sample No. : GFL0108437 **Received** : 10 Jan 2024 3668 Weston Road
Lab Number : 02607692 **Diagnosed** : 11 Jan 2024 North York, ON
Unique Number : 5708778 **Diagnostician** : Wes Davis CA M9L 1W2
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)
 Contact: Amanda Cipollone
 acipollone@gflenv.com
 T:
 F:

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.