



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

Area
GFL035
 Machine Id
2627
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (40 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0116493 | GFL0102360 | GFL0102310 |
| Sample Date | | Client Info | | 22 May 2024 | 07 Feb 2024 | 22 Dec 2023 |
| Machine Age | hrs | Client Info | | 0 | 18669 | 18669 |
| Oil Age | hrs | Client Info | | 600 | 600 | 600 |
| Filter Age | hrs | Client Info | | 0 | 0 | 600 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Changed |
| Filter Changed | | Client Info | | N/A | N/A | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >165 | 10 | 14 | 9 |
| Chromium | ppm | ASTM D5185m | >5 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | 3 | 1 |
| Lead | ppm | ASTM D5185m | >150 | 1 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >90 | <1 | <1 | 0 |
| Tin | ppm | ASTM D5185m | >5 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

There is no indication of any contamination in the oil.

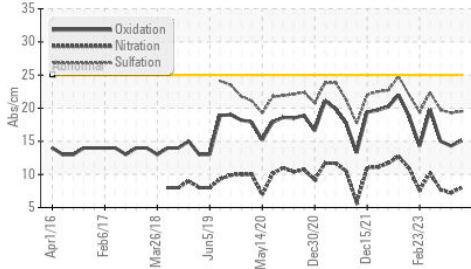
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >35 | 30 | 5 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 2 | 0 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >7.5 | 0.3 | 0.6 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.0 | 7.2 | 7.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.5 | 19.3 | 19.7 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

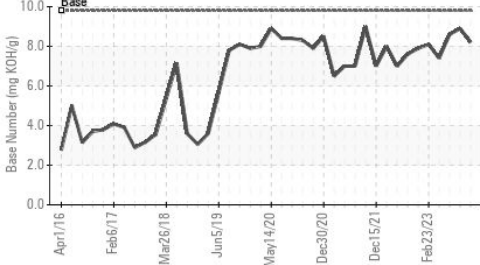
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 2 | 2 | 2 |
| Boron | ppm | ASTM D5185m | 0 | 1 | 2 | 6 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 59 | 60 | 48 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 1010 | 984 | 950 | 829 |
| Calcium | ppm | ASTM D5185m | 1070 | 1164 | 1113 | 1052 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1122 | 1071 | 872 |
| Zinc | ppm | ASTM D5185m | 1270 | 1288 | 1281 | 1121 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3761 | 3240 | 2779 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.1 | 14.3 | 15.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.2 | 8.9 | 8.6 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.6 | 14.0 | 13.8 |

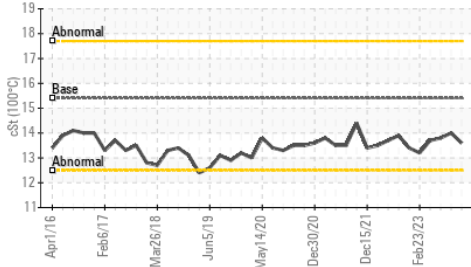
FT-IR (Direct Trend)



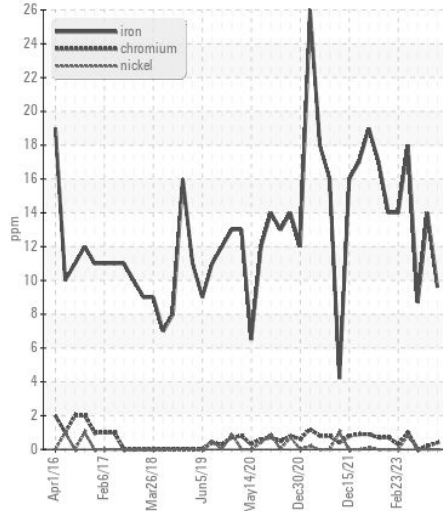
Base Number



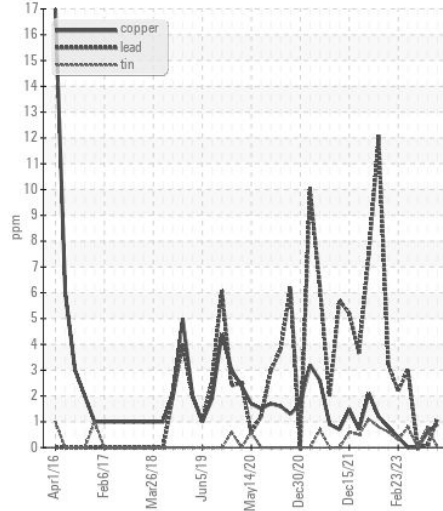
Viscosity @ 100°C



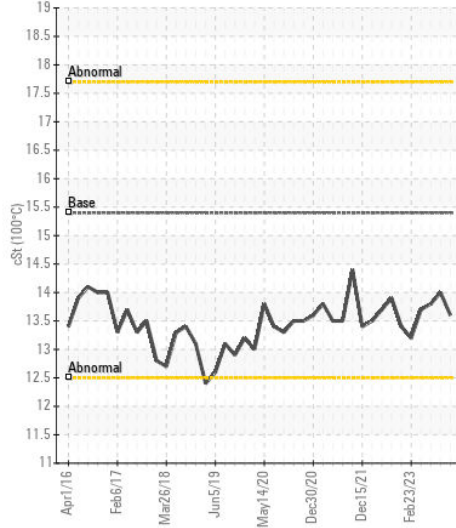
Ferrous Alloys



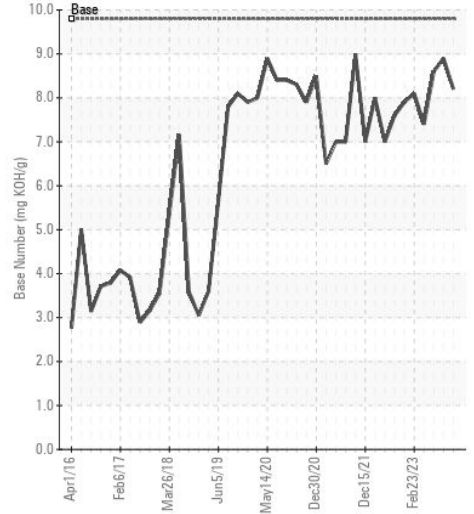
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116493
Lab Number : 06191468
Unique Number : 11048220
Test Package : FLEET

Received : 24 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Wes Davis

GFL Environmental - 035 - Greensboro
 1236 Elon Place
 High Point, NC
 US 27263
 Contact: JORGE COSTA
 jorge.costa@gflenv.com
 T: (336)668-3712
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)