



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

Machine Id
927085-260324
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0118270 | GFL0118165 | GFL0109125 |
| Sample Date | | Client Info | | 13 May 2024 | 17 Apr 2024 | 28 Mar 2024 |
| Machine Age | hrs | Client Info | | 10562 | 3812 | 18625 |
| Oil Age | hrs | Client Info | | 700 | 700 | 150 |
| Filter Age | hrs | Client Info | | 700 | 700 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | N/A |
| Filter Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 38 | 20 | 14 |
| Chromium | ppm | ASTM D5185m | >20 | 2 | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 7 | 3 | 3 |
| Lead | ppm | ASTM D5185m | >40 | 1 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 1 | 0 |
| Tin | ppm | ASTM D5185m | >15 | 1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 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.

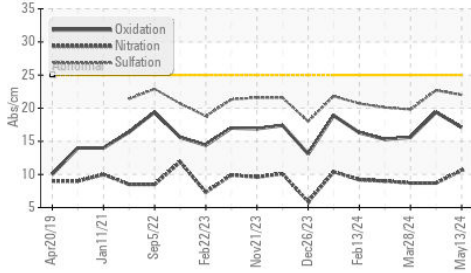
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 9 | 5 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 2 | 0 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 1.2 | 1 | 0.8 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.6 | 8.7 | 8.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.0 | 22.7 | 19.8 |
| 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

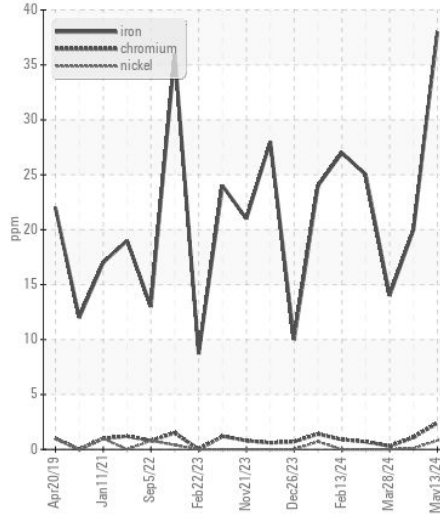
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 7 | 2 | 4 |
| Boron | ppm | ASTM D5185m | 0 | <1 | 6 | 1 |
| Barium | ppm | ASTM D5185m | 0 | 1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 81 | 56 | 57 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 1311 | 896 | 940 |
| Calcium | ppm | ASTM D5185m | 1070 | 1408 | 1026 | 1050 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1389 | 1137 | 1033 |
| Zinc | ppm | ASTM D5185m | 1270 | 1689 | 1211 | 1250 |
| Sulfur | ppm | ASTM D5185m | 2060 | 4145 | 3833 | 3382 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.1 | 19.4 | 15.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.8 | 8.2 | 8.2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.6 | 13.8 | 13.8 |

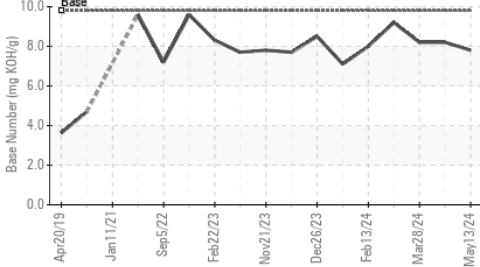
FT-IR (Direct Trend)



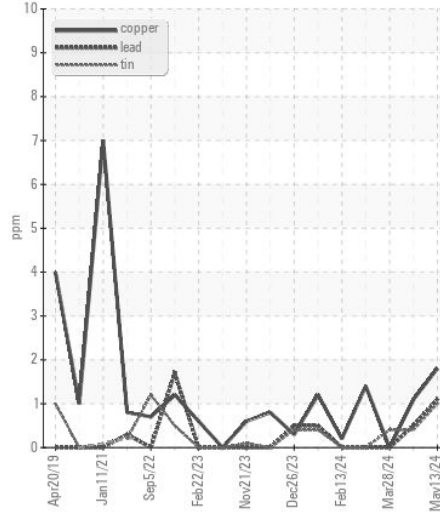
Ferrous Alloys



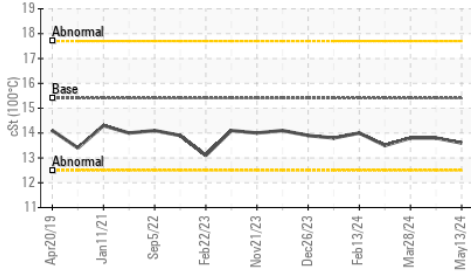
Base Number



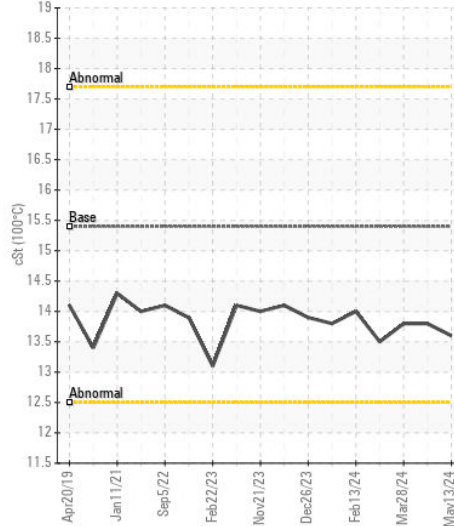
Non-ferrous Metals



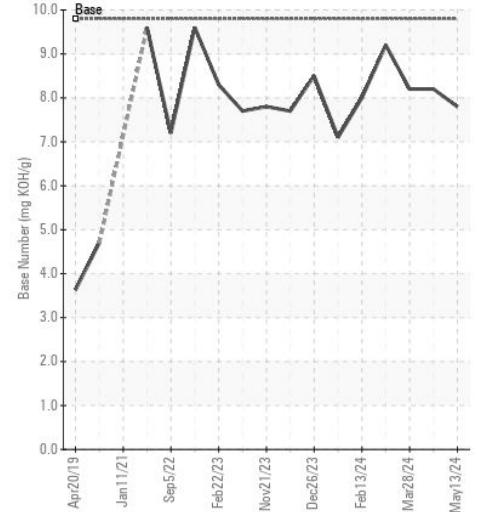
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0118270
Lab Number : 06191898
Unique Number : 11048650
Test Package : FLEET

Received : 28 May 2024
Tested : 29 May 2024
Diagnosed : 30 May 2024 - Sean Felton

GFL Environmental - 822 - Springfield Hauling
 2120 West Bennett Street
 Springfield, MO
 US 65807
 Contact: Dennis Moore
 dennis.moore@gflenv.com
 T: (417)403-3641
 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)