



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



Machine Id
382M
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 | | GFL0122401 | GFL0117566 | GFL0108828 |
| Sample Date | | Client Info | | 12 Jun 2024 | 07 May 2024 | 29 Jan 2024 |
| Machine Age | hrs | Client Info | | 17890 | 17593 | 16748 |
| Oil Age | hrs | Client Info | | 17593 | 16748 | 600 |
| Filter Age | hrs | Client Info | | 17593 | 0 | 600 |
| Oil Changed | | Client Info | | Changed | Not Changd | Changed |
| Filter Changed | | Client Info | | Changed | Not Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >120 | 7 | 7 | 10 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 1 | 3 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 0 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 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.

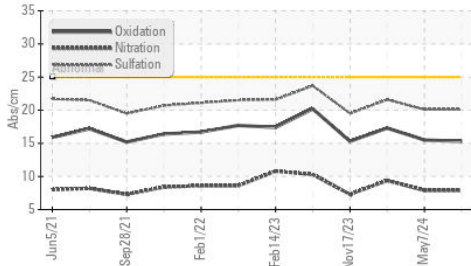
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 4 | 4 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 4 | 1 | 2 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >4 | 0.7 | 0.7 | 0.8 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.9 | 7.9 | 9.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.1 | 20.1 | 21.6 |
| 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

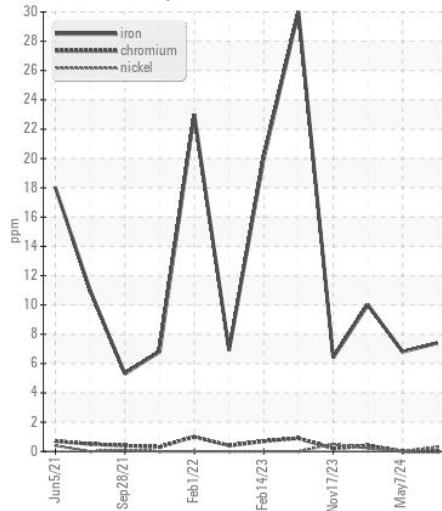
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 4 | 3 | 3 |
| Boron | ppm | ASTM D5185m | 0 | 3 | 1 | 2 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 60 | 60 | 59 | 58 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 1031 | 931 | 926 |
| Calcium | ppm | ASTM D5185m | 1070 | 1126 | 1061 | 1011 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1091 | 1024 | 941 |
| Zinc | ppm | ASTM D5185m | 1270 | 1385 | 1223 | 1219 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3381 | 3048 | 2363 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.3 | 15.5 | 17.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.3 | 7.5 | 6.0 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.3 | 14.1 | 14.0 |

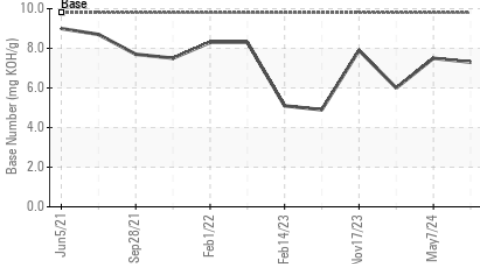
FT-IR (Direct Trend)



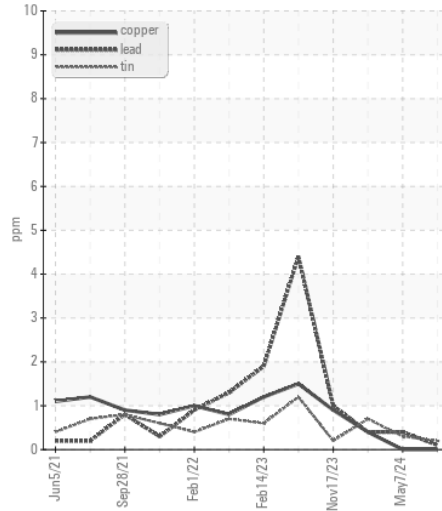
Ferrous Alloys



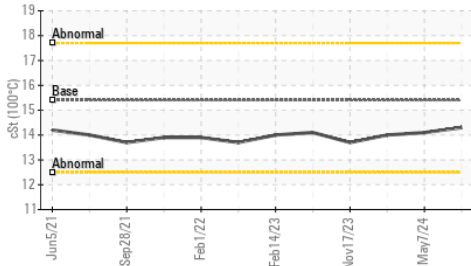
Base Number



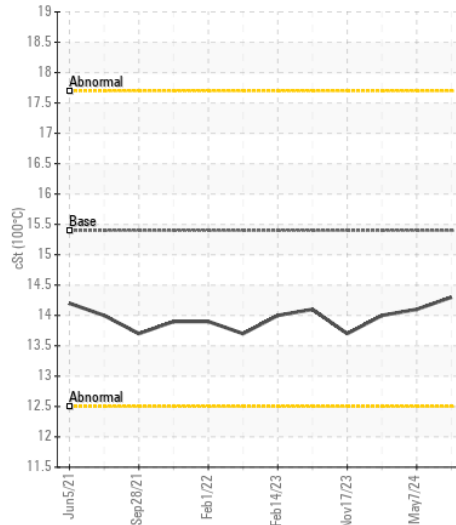
Non-ferrous Metals



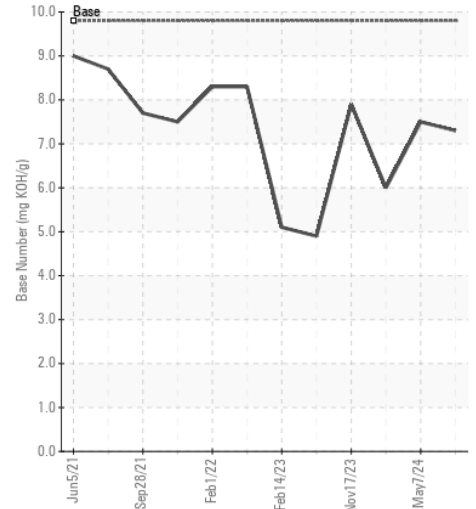
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122401
Lab Number : 06215357
Unique Number : 11088221
Test Package : FLEET

Received : 20 Jun 2024
Tested : 21 Jun 2024
Diagnosed : 21 Jun 2024 - Wes Davis

GFL Environmental - 415 - Michigan East
 6200 Elmridge
 Sterling Heights, MI
 US 48313
 Contact: Frank Wolak
 fwolak@gflenv.com
 T: (586)825-9514
 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)