



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

Machine Id
526012-7007
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0094896 | GFL0112793 | GFL0101373 |
| Sample Date | | Client Info | | 08 May 2024 | 29 Feb 2024 | 22 Nov 2023 |
| Machine Age | mls | Client Info | | 577931 | 577931 | 17669 |
| Oil Age | mls | Client Info | | 16373 | 16373 | 0 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | Not Changd | Not Changd |
| Filter Changed | | Client Info | | N/A | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >165 | 30 | 18 | 40 |
| Chromium | ppm | ASTM D5185m | >5 | 2 | <1 | 4 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | 3 | 6 |
| Lead | ppm | ASTM D5185m | >150 | 3 | <1 | 5 |
| Copper | ppm | ASTM D5185m | >90 | 3 | 1 | 6 |
| Tin | ppm | ASTM D5185m | >5 | <1 | 0 | <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.

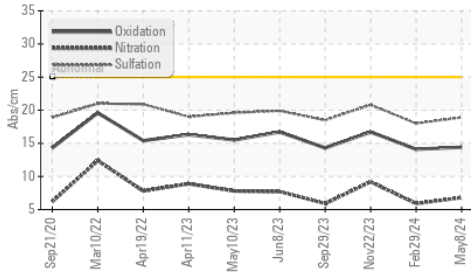
| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >35 | 13 | 7 | 23 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 0 | 6 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >7.5 | 0.2 | 0.1 | 0.4 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.8 | 5.9 | 9.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.9 | 18.0 | 20.8 |
| 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

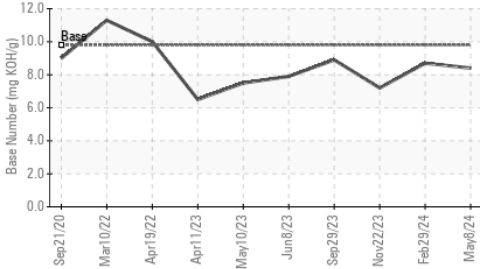
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 3 | 0 | 4 |
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 | 3 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 60 | 60 | 57 | 62 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 960 | 922 | 965 |
| Calcium | ppm | ASTM D5185m | 1070 | 1064 | 1015 | 1105 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1132 | 1014 | 997 |
| Zinc | ppm | ASTM D5185m | 1270 | 1276 | 1214 | 1240 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3435 | 2893 | 3352 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.4 | 14.1 | 16.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.4 | 8.7 | 7.2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.4 | 14.3 | 14.2 |

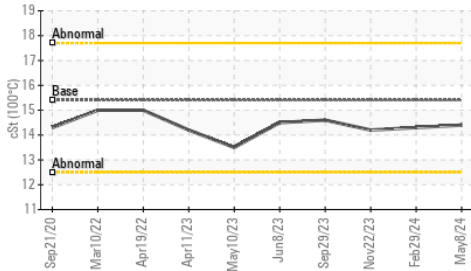
FT-IR (Direct Trend)



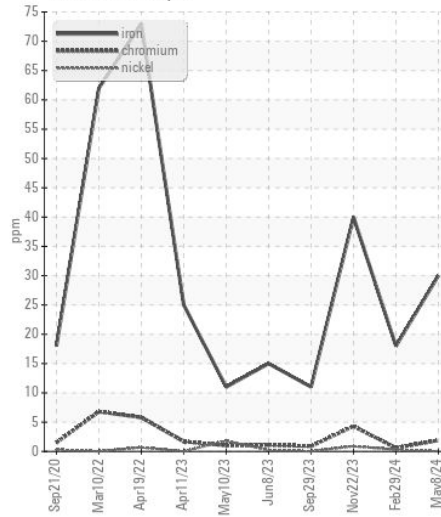
Base Number



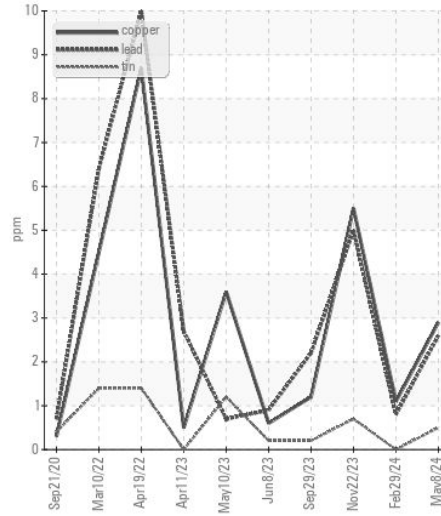
Viscosity @ 100°C



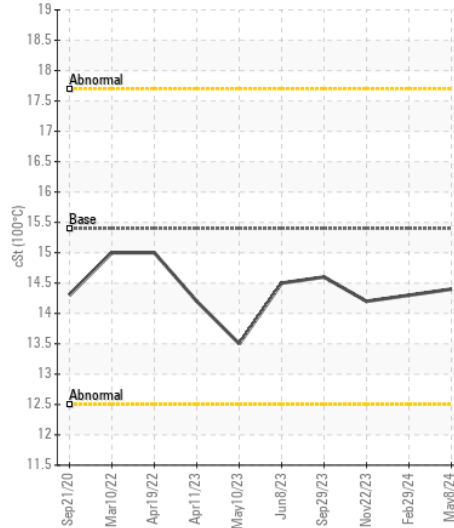
Ferrous Alloys



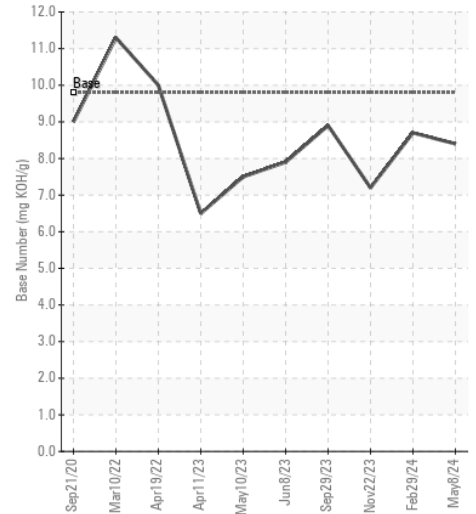
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0094896
Lab Number : 06174946
Unique Number : 11020999
Test Package : FLEET

Received : 09 May 2024
Tested : 10 May 2024
Diagnosed : 10 May 2024 - Wes Davis

GFL Environmental - 654 - Richmond Hauling
 11800 Lewis Road
 Chester, VA
 US 23831
 Contact: Jimmy Mayes
 jmayes@gflenv.com

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)