



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



Area
(34743UA)
Machine Id
812095
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 | | GFL0112879 | GFL0100092 | GFL0100142 |
| Sample Date | | Client Info | | 12 Jul 2024 | 10 Apr 2024 | 12 Jan 2024 |
| Machine Age | hrs | Client Info | | 84183 | 34516 | 34516 |
| Oil Age | hrs | Client Info | | 84183 | 32924 | 32924 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >120 | 6 | <1 | 11 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | <1 | 2 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 1 | 1 | <1 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 0 | 2 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

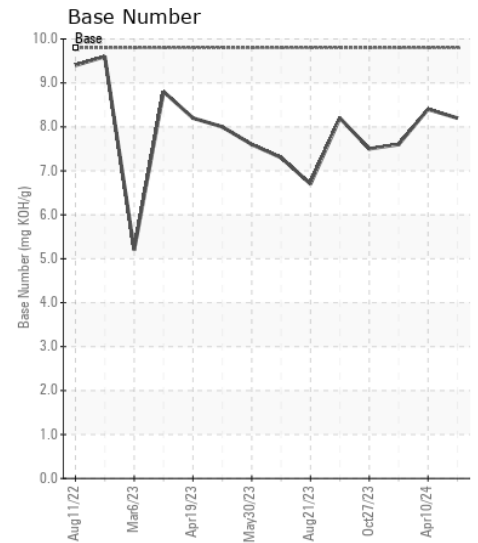
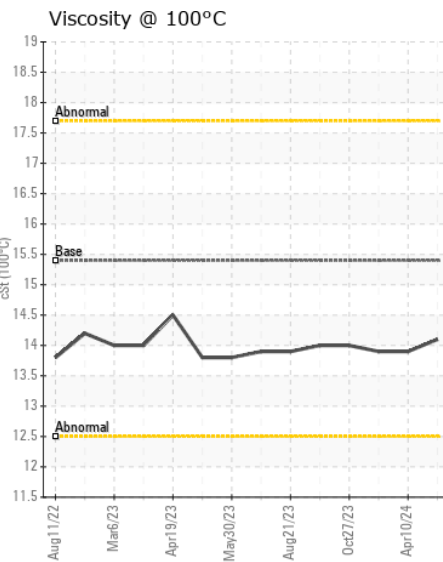
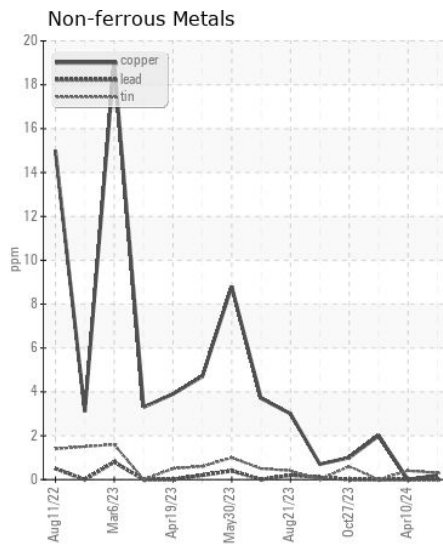
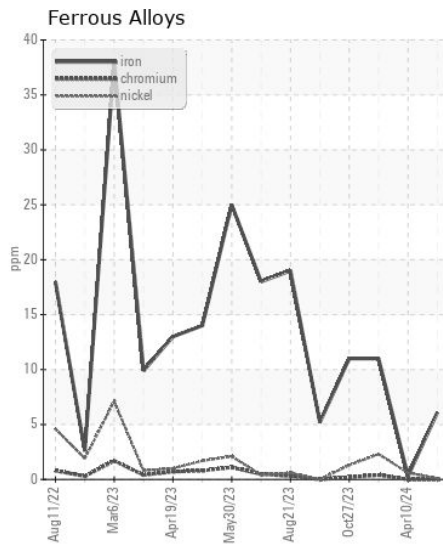
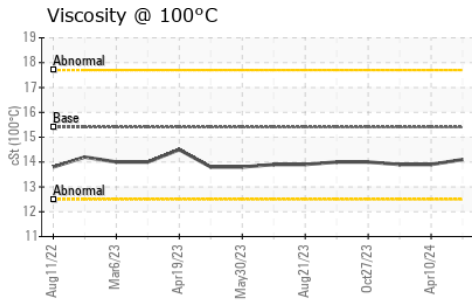
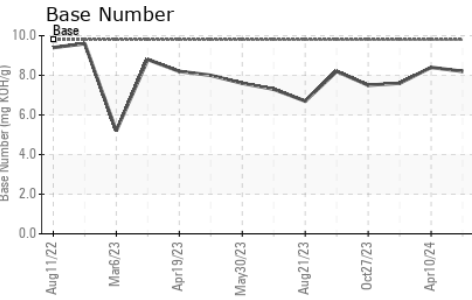
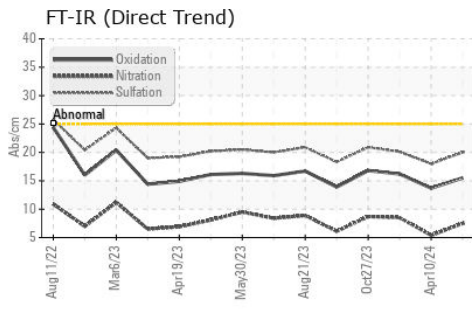
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 3 | 2 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 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 | 0.4 | 0.2 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.5 | 5.4 | 8.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.0 | 18.0 | 20.1 |
| 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 | 2 | 4 |
| Boron | ppm | ASTM D5185m | 0 | 0 | 7 | 3 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 58 | 54 | 60 |
| Manganese | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 1010 | 946 | 934 | 1018 |
| Calcium | ppm | ASTM D5185m | 1070 | 1100 | 1109 | 1153 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1093 | 1041 | 1099 |
| Zinc | ppm | ASTM D5185m | 1270 | 1289 | 1238 | 1268 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3580 | 3815 | 3199 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.5 | 13.7 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.2 | 8.4 | 7.6 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.1 | 13.9 | 13.9 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0112879
Lab Number : 06237391
Unique Number : 11126225
Test Package : FLEET

Received : 15 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 17 Jul 2024 - Wes Davis

GFL Environmental - 659 - Mechanicsville
 8280 RICHFOOD RD
 Mechanicsville, VA
 US 23116
 Contact: Dwayne Oliver
 dwayneoliver@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)