



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

Area

(YA139898)

Machine Id

10833

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (46 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0116015 | GFL0089975 | GFL0099811 |
| Sample Date | | Client Info | | 18 Jun 2024 | 04 Jan 2024 | 22 Nov 2023 |
| Machine Age | hrs | Client Info | | 16901 | 16901 | 16452 |
| Oil Age | hrs | Client Info | | 0 | 449 | 9541 |
| Filter Age | hrs | Client Info | | 0 | 449 | 426 |
| Oil Changed | | Client Info | | Not Changd | Changed | N/A |
| Filter Changed | | Client Info | | Not Changd | Changed | None |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >75 | 29 | 5 | 25 |
| Chromium | ppm | ASTM D5185m | >5 | <1 | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >15 | 3 | 1 | 4 |
| Lead | ppm | ASTM D5185m | >25 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >100 | 3 | 1 | 16 |
| Tin | ppm | ASTM D5185m | >4 | <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

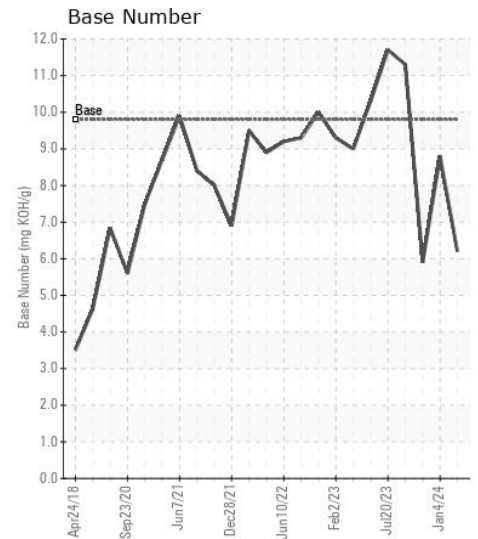
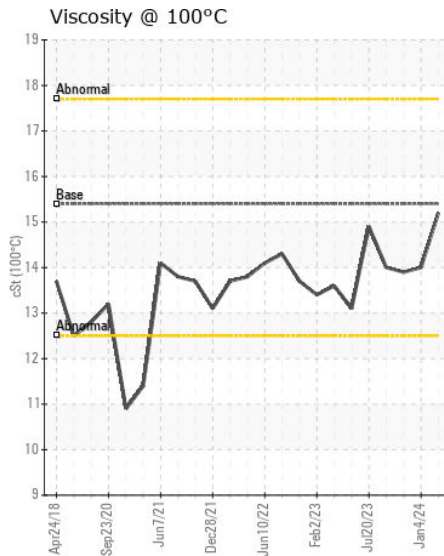
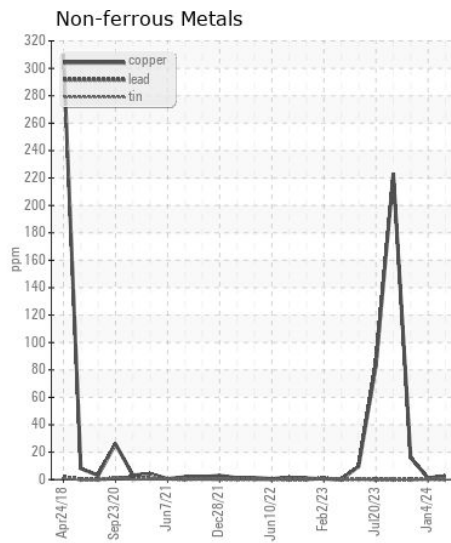
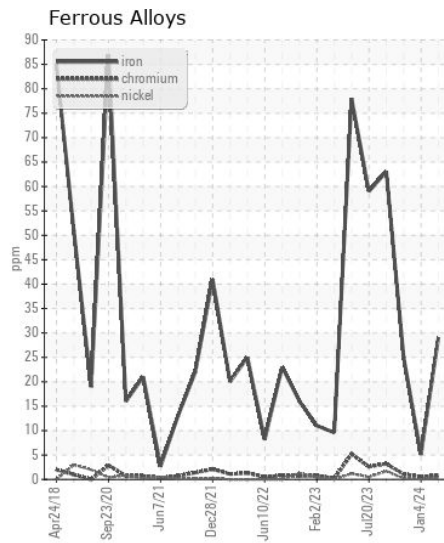
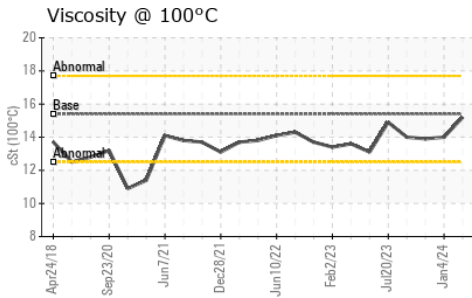
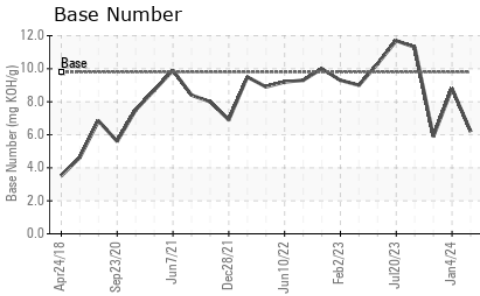
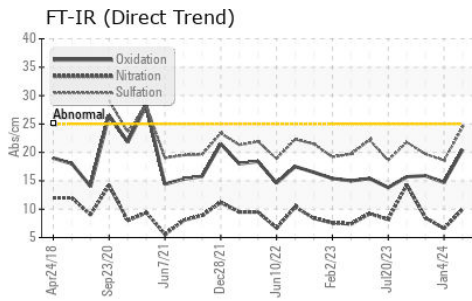
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 15 | 3 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 31 | 16 | ▲ 148 |
| 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 | >6 | 0.6 | 0.2 | 0.4 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.0 | 6.6 | 8.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.4 | 18.6 | 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 | | 5 | 3 | 14 |
| Boron | ppm | ASTM D5185m | 0 | 81 | 8 | 8 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 8 | 57 | 67 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 1010 | 138 | 892 | 798 |
| Calcium | ppm | ASTM D5185m | 1070 | 2274 | 1109 | 1269 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1044 | 1074 | 1027 |
| Zinc | ppm | ASTM D5185m | 1270 | 1297 | 1195 | 1266 |
| Sulfur | ppm | ASTM D5185m | 2060 | 4021 | 3132 | 3289 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 20.5 | 14.7 | 15.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 6.2 | 8.8 | 5.9 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 15.2 | 14.0 | 13.9 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0116015

Lab Number : 06214474

Unique Number : 11087338

Test Package : FLEET

Received : 19 Jun 2024

Tested : 20 Jun 2024

Diagnosed : 21 Jun 2024 - Don Baldrige

GFL Environmental - 018 - Fayetteville

4621 Marracco Drive

Hope Mills, NC

US 28348

Contact: Robert Carter

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T: (910)596-1170

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)