



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



Area
(13J6UU)
Machine Id
913036
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 | | GFL0108033 | GFL0108110 | GFL0108168 |
| Sample Date | | Client Info | | 16 Feb 2024 | 31 Jan 2024 | 10 Jan 2024 |
| Machine Age | hrs | Client Info | | 3908 | 3779 | 3635 |
| Oil Age | hrs | Client Info | | 2446 | 2416 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| 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 | >120 | 11 | 7 | 2 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 2 | 2 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 3 | 3 | 1 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 4 | 3 | 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

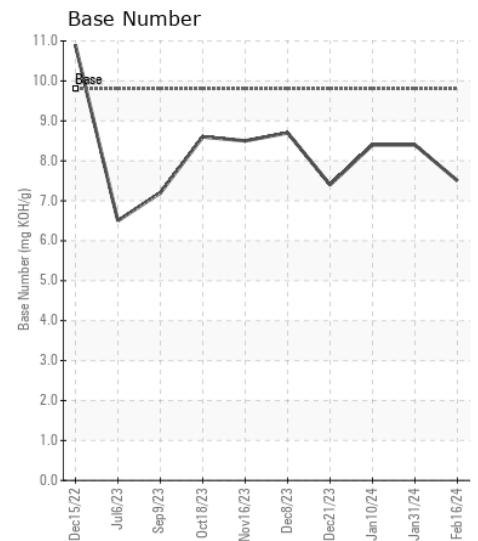
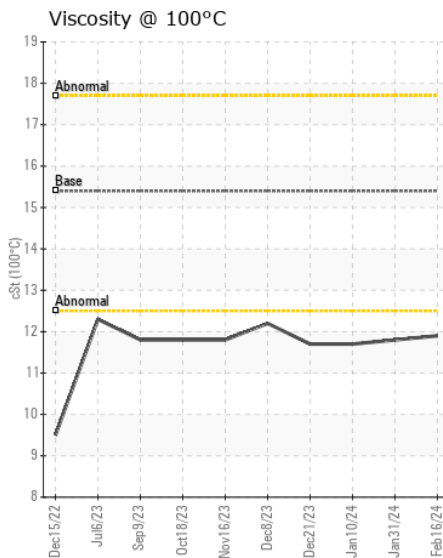
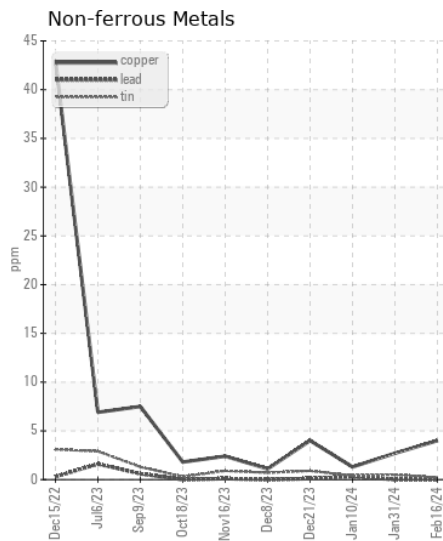
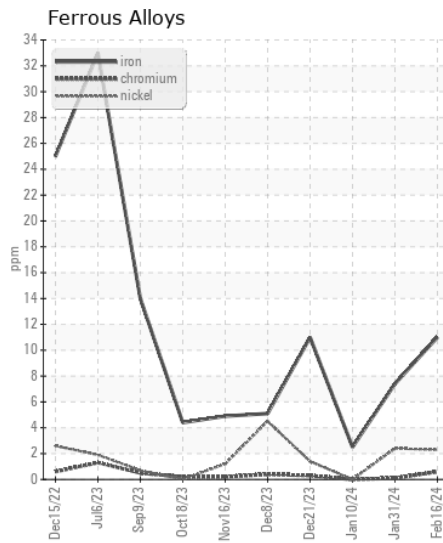
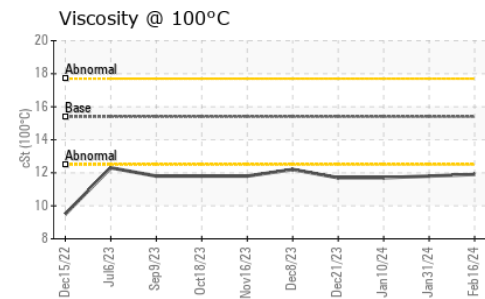
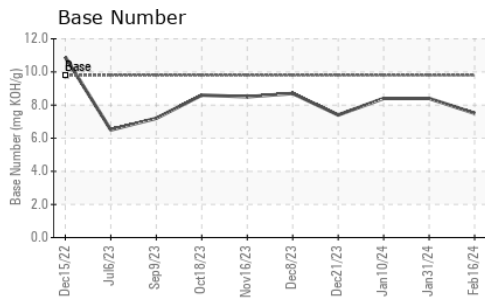
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 7 | 8 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 8 | 5 | 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 | 0.3 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.1 | 8.8 | 7.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.9 | 20.2 | 19.6 |
| 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 | | 6 | 5 | 4 |
| Boron | ppm | ASTM D5185m | 0 | 24 | 35 | 38 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 52 | 57 | 56 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 1010 | 1140 | 1105 | 1124 |
| Calcium | ppm | ASTM D5185m | 1070 | 834 | 790 | 822 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 966 | 1084 | 1070 |
| Zinc | ppm | ASTM D5185m | 1270 | 1244 | 1303 | 1250 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3276 | 3375 | 3242 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.4 | 18.0 | 17.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.5 | 8.4 | 8.4 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 11.9 | 11.8 | 11.7 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0108033
Lab Number : 06098976
Unique Number : 10897206
Test Package : FLEET

Received : 23 Feb 2024
Tested : 26 Feb 2024
Diagnosed : 26 Feb 2024 - Wes Davis

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Loyce Stewart
 loyce.stewart@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)

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