



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



Machine Id
920114-1475
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 | | GFL0103560 | GFL0085364 | --- |
| Sample Date | | Client Info | | 07 Feb 2024 | 31 Jul 2023 | --- |
| Machine Age | mls | Client Info | | 92568 | 82102 | --- |
| Oil Age | mls | Client Info | | 92568 | 0 | --- |
| Filter Age | mls | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >120 | 7 | 20 | --- |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | --- |
| Nickel | ppm | ASTM D5185m | >5 | 0 | <1 | --- |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 1 | 3 | --- |
| Lead | ppm | ASTM D5185m | >40 | <1 | 1 | --- |
| Copper | ppm | ASTM D5185m | >330 | 2 | 2 | --- |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

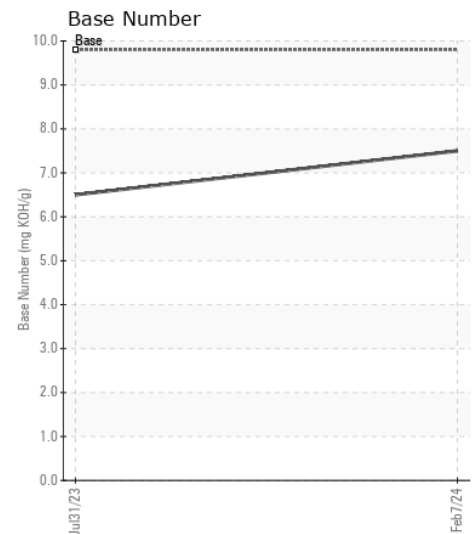
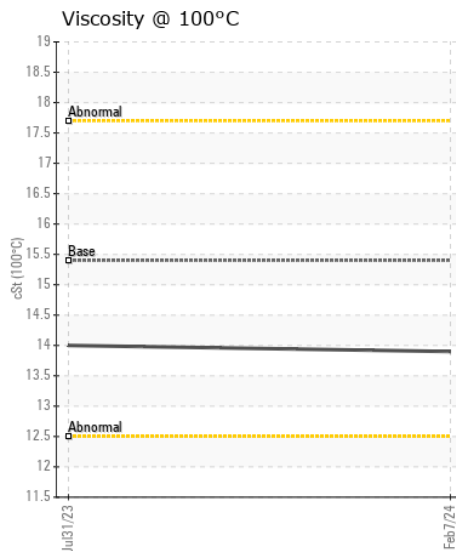
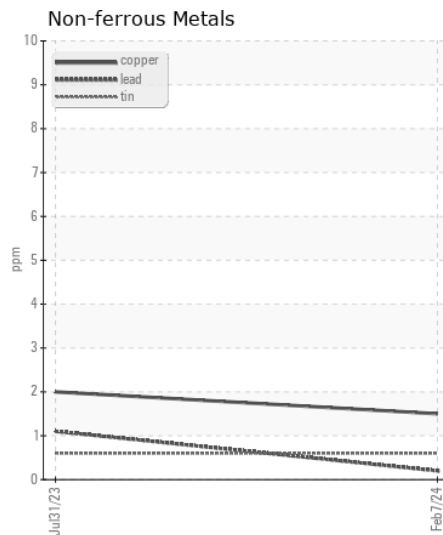
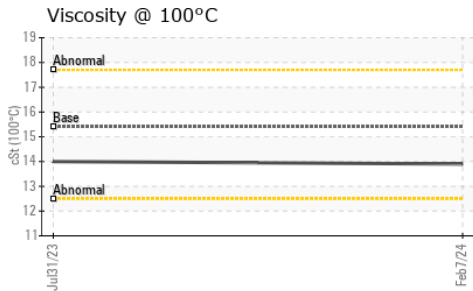
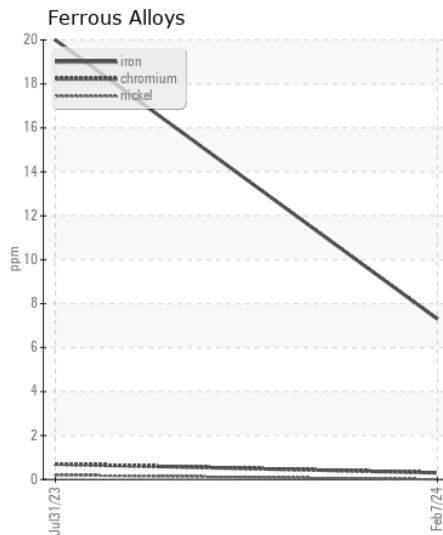
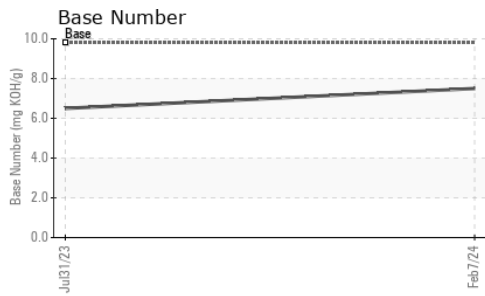
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >25 | 3 | 4 | --- |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 2 | --- |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >4 | 0.5 | 0.8 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.7 | 9.5 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.6 | 22.4 | --- |
| Silt | scalar | *Visual | NONE | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.2 | 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 | 6 | --- |
| Boron | ppm | ASTM D5185m | 0 | 1 | 2 | --- |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 60 | 58 | 59 | --- |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | --- |
| Magnesium | ppm | ASTM D5185m | 1010 | 1006 | 946 | --- |
| Calcium | ppm | ASTM D5185m | 1070 | 1049 | 1080 | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1015 | 953 | --- |
| Zinc | ppm | ASTM D5185m | 1270 | 1240 | 1229 | --- |
| Sulfur | ppm | ASTM D5185m | 2060 | 2832 | 2692 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.6 | 19.3 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.5 | 6.5 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.9 | 14.0 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103560
Lab Number : 06089309
Unique Number : 10876754
Test Package : FLEET

Received : 14 Feb 2024
Tested : 15 Feb 2024
Diagnosed : 15 Feb 2024 - Wes Davis

GFL Environmental - 958A - Chillicothe Wigand
 19908 N. State Rd 29
 Chillicothe, IL
 US 61523
 Contact: Bryan Link
 blink@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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F: