



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



Area
(H31502)
Machine Id
921036-260196
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | GFL0046916 | GFL0037255 | --- |
| Sample Date | | Client Info | | 15 Feb 2023 | 08 Dec 2021 | --- |
| Machine Age | hrs | Client Info | | 205 | 17360 | --- |
| Oil Age | hrs | Client Info | | 205 | 0 | --- |
| Filter Age | hrs | Client Info | | 0 | 0 | --- |
| Oil Changed | | Client Info | | Changed | Changed | --- |
| Filter Changed | | Client Info | | Changed | Changed | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-----|
| Iron | ppm | ASTM D5185m | >120 | 37 | 19 | --- |
| Chromium | ppm | ASTM D5185m | >20 | 1 | <1 | --- |
| Nickel | ppm | ASTM D5185m | >5 | 14 | <1 | --- |
| Titanium | ppm | ASTM D5185m | >2 | <1 | <1 | --- |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | 5 | --- |
| Lead | ppm | ASTM D5185m | >40 | 1 | 4 | --- |
| Copper | ppm | ASTM D5185m | >330 | 5 | 2 | --- |
| Tin | ppm | ASTM D5185m | >15 | 3 | 1 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | --- |
| White Metal | scalar | *Visual | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | --- |

CONTAMINATION

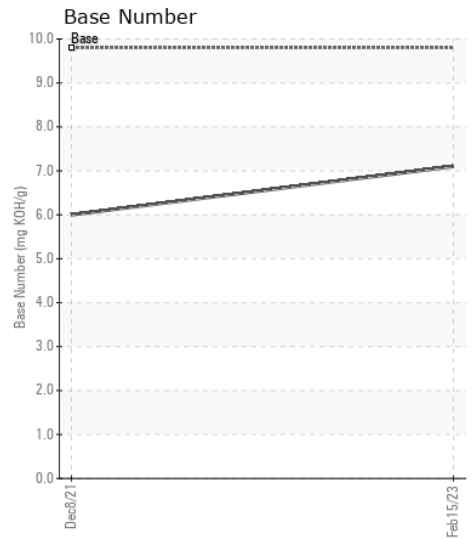
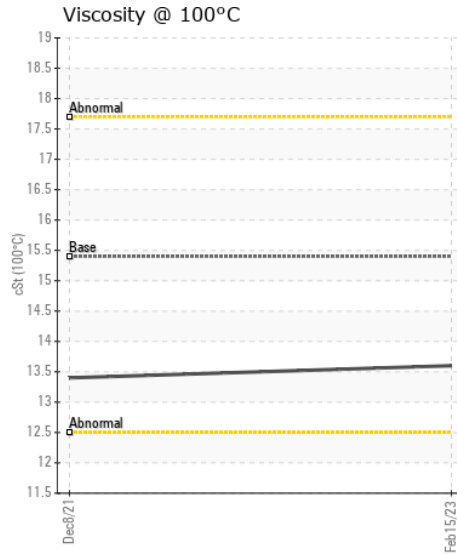
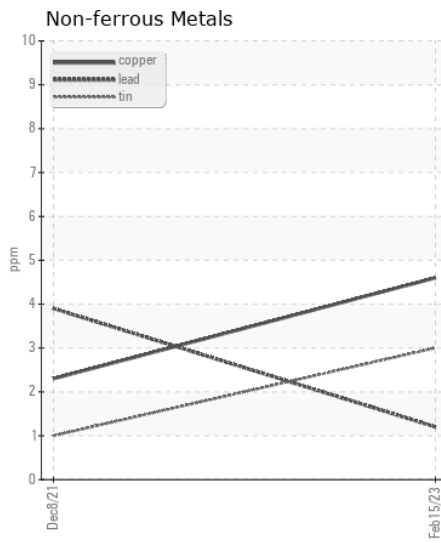
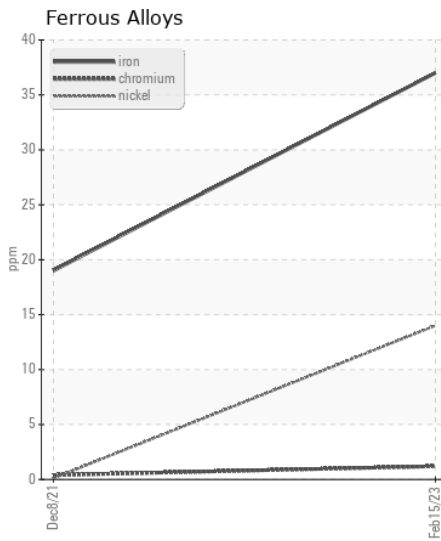
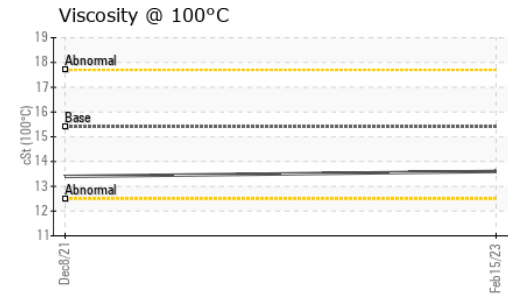
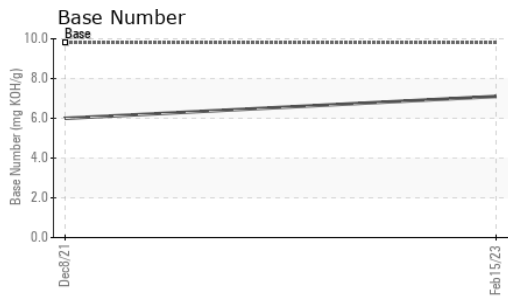
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-----|
| Silicon | ppm | ASTM D5185m | >25 | 30 | 13 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 7 | 1 | --- |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | *ASTM D7844 | >4 | 0.6 | 1 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.7 | 11.3 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.5 | 26.2 | --- |
| 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 | | 11 | 10 | --- |
| Boron | ppm | ASTM D5185m | 0 | 14 | 30 | --- |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 60 | 64 | 81 | --- |
| Manganese | ppm | ASTM D5185m | 0 | 2 | <1 | --- |
| Magnesium | ppm | ASTM D5185m | 1010 | 877 | 813 | --- |
| Calcium | ppm | ASTM D5185m | 1070 | 1067 | 1279 | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 906 | 825 | --- |
| Zinc | ppm | ASTM D5185m | 1270 | 1163 | 1003 | --- |
| Sulfur | ppm | ASTM D5185m | 2060 | 3347 | 2346 | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.5 | 23 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.1 | 6 | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.6 | 13.4 | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0046916 **Received** : 22 Feb 2023
Lab Number : 05774381 **Diagnosed** : 23 Feb 2023
Unique Number : 10348998 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 814 - Little Rock Hauling
 4005 Hwy 161 N.
 Little Rock, AR
 US 72117
 Contact: Brad Koenig
 bkoenig@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)