



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



Area
(BB06478)
Machine Id
827M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (36 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0109993 | GFL0104272 | GFL0104139 |
| Sample Date | | Client Info | | 15 Jan 2024 | 27 Dec 2023 | 01 Dec 2023 |
| Machine Age | hrs | Client Info | | 15395 | 15210 | 15033 |
| Oil Age | hrs | Client Info | | 600 | 15210 | 15033 |
| Filter Age | hrs | Client Info | | 600 | 0 | 15033 |
| Oil Changed | | Client Info | | Changed | N/A | N/A |
| Filter Changed | | Client Info | | Changed | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >130 | 16 | 13 | 40 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 0 | 2 |
| Copper | ppm | ASTM D5185m | >125 | <1 | <1 | 12 |
| Tin | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

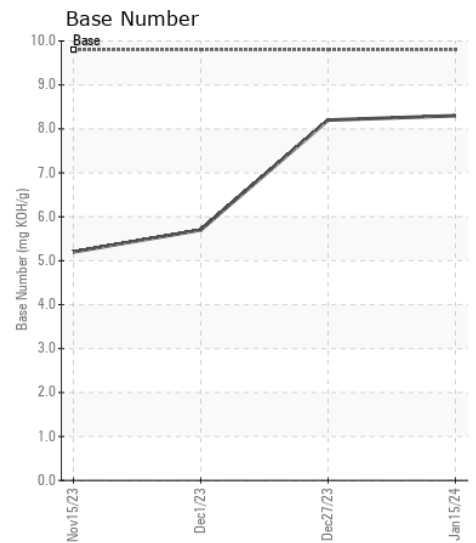
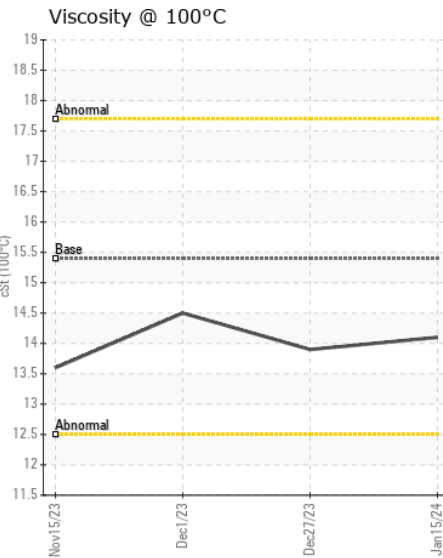
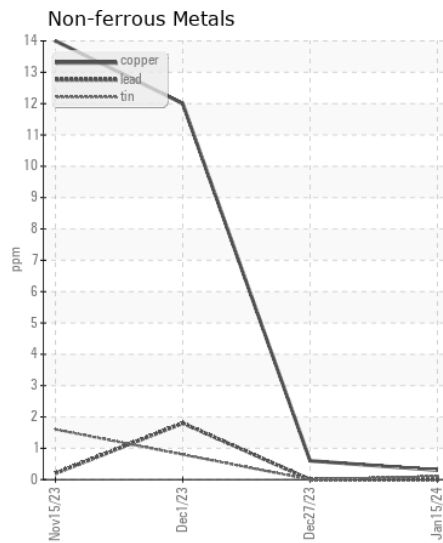
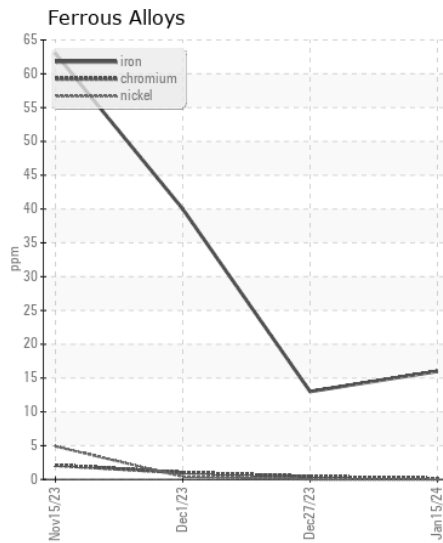
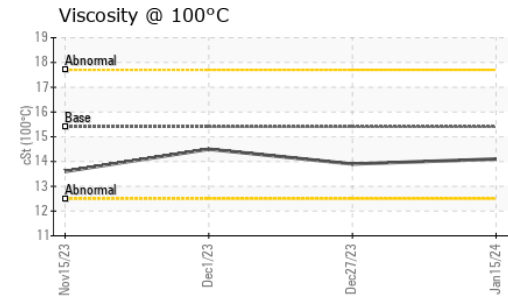
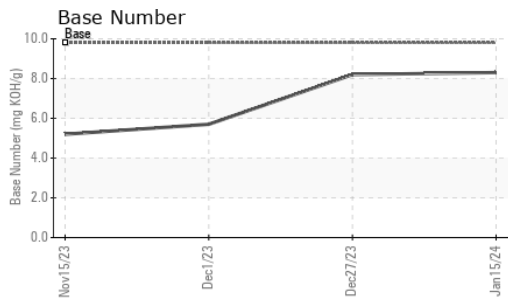
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 5 | 4 | 16 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | 3 |
| 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 | 0.2 | 0.4 | 0.9 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.1 | 7.8 | 13.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.9 | 19.2 | 25.1 |
| 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 | | 2 | 1 | 0 |
| Boron | ppm | ASTM D5185m | 0 | <1 | 1 | 5 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 58 | 59 | 62 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 988 | 969 | 953 |
| Calcium | ppm | ASTM D5185m | 1070 | 984 | 1092 | 1204 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1087 | 1021 | 1077 |
| Zinc | ppm | ASTM D5185m | 1270 | 1287 | 1256 | 1312 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3181 | 3014 | 3539 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.1 | 15.3 | 26.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.3 | 8.2 | 5.7 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.1 | 13.9 | 14.5 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109993 **Received** : 18 Jan 2024
Lab Number : 06064813 **Diagnosed** : 19 Jan 2024
Unique Number : 10836195 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184
 Contact: Belal Dgheish
 bdgheish@gflenv.com
 T: (734)714-2340
 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)