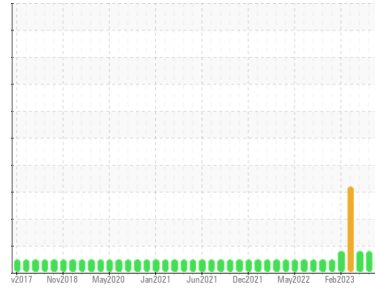




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(YA133459)
 Machine Id
10643C

Component
Natural Gas Engine
 Fluid

PETRO CANADA DURON GEO LD 15W40 (32 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | GFL0111059 | GFL0098537 | GFL0087751 |
| Sample Date | Client Info | | 06 Mar 2024 | 21 Oct 2023 | 19 Sep 2023 |
| Machine Age | hrs | Client Info | 18534 | 17801 | 19617 |
| Oil Age | hrs | Client Info | 733 | 1646 | 900 |
| Oil Changed | Client Info | | Not Chngd | Changed | Not Chngd |
| Sample Status | | | NORMAL | ABNORMAL | ABNORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >50 | 41 | 41 | 33 |
| Chromium | ppm | ASTM D5185m >4 | 5 | 5 | 4 |
| Nickel | ppm | ASTM D5185m >2 | 1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >9 | 6 | 5 | 2 |
| Lead | ppm | ASTM D5185m >30 | 4 | 6 | 6 |
| Copper | ppm | ASTM D5185m >35 | 22 | ▲ 46 | ▲ 46 |
| Tin | ppm | ASTM D5185m >4 | 1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | <1 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron | ppm | ASTM D5185m 50 | 13 | 0 | 7 |
| Barium | ppm | ASTM D5185m 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 50 | 54 | 55 | 58 |
| Manganese | ppm | ASTM D5185m 0 | 1 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m 560 | 574 | 573 | 603 |
| Calcium | ppm | ASTM D5185m 1510 | 1590 | 1578 | 1728 |
| Phosphorus | ppm | ASTM D5185m 780 | 752 | 708 | 706 |
| Zinc | ppm | ASTM D5185m 870 | 1010 | 940 | 964 |
| Sulfur | ppm | ASTM D5185m 2040 | 2361 | 2206 | 2637 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m >+100 | 5 | 6 | 6 |
| Sodium | ppm | ASTM D5185m | 6 | 9 | 7 |
| Potassium | ppm | ASTM D5185m >20 | 6 | 10 | 2 |

INFRA-RED

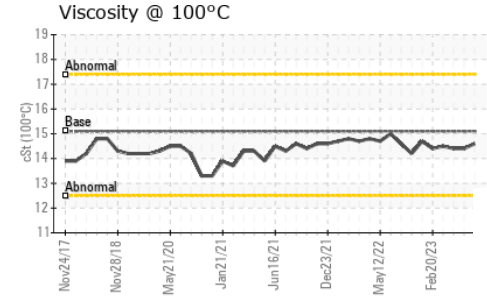
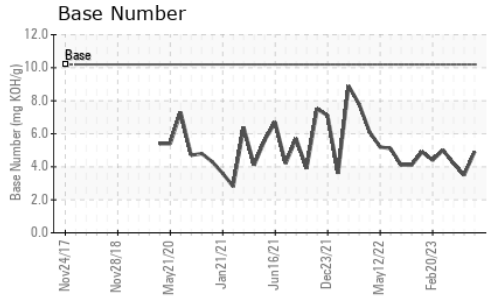
| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 | 0 | 0 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 >20 | 11.0 | 11.9 | 10.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | 22.1 | 24.4 | 22.5 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 >25 | 18.6 | 20.7 | 18.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 10.2 | 4.9 | 3.5 | 4.2 |



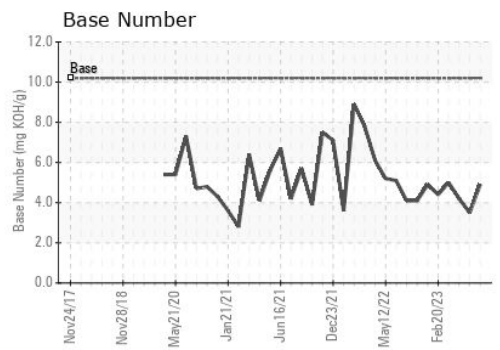
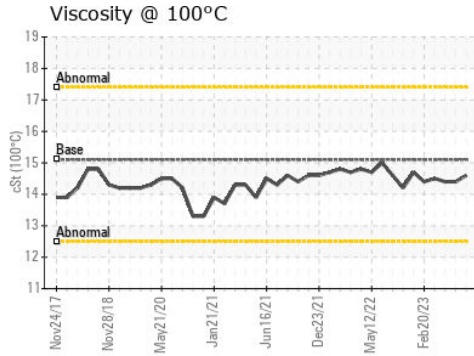
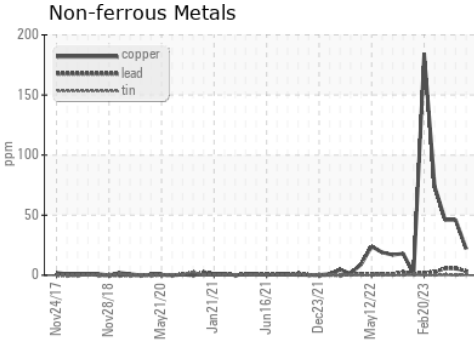
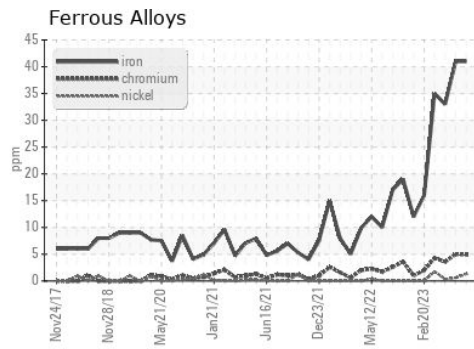
OIL ANALYSIS REPORT



| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| 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 | >0.1 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|-------------|----------|------|
| Visc @ 100°C | cSt | ASTM D445 | 15.1 | 14.6 | 14.4 | 14.4 |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111059 **Received** : 08 Mar 2024
Lab Number : **06112674** **Tested** : 11 Mar 2024
Unique Number : 10916171 **Diagnosed** : 11 Mar 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 006 - Wilmington
 3618 US Highway 421 N
 Wilmington, NC
 US 28401
 Contact: Eric Wood
 eric.wood@gflenv.com
 T: (717)723-1956
 F: (910)762-6880

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)