



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

Area
GFL218

Machine Id
815003

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)



RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|----------|
| Sample Number | | Client Info | | GFL0120082 | GFL0103073 | --- |
| Sample Date | | Client Info | | 25 Apr 2024 | 22 Nov 2023 | --- |
| Machine Age | kms | Client Info | | 137067 | 130480 | --- |
| Oil Age | kms | Client Info | | 130480 | 0 | --- |
| Filter Age | kms | Client Info | | 130480 | 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 D5185(m) | >120 | 8 | 35 | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | <1 | --- |
| Nickel | ppm | ASTM D5185(m) | >5 | <1 | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | 0 | --- |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | <1 | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | 2 | 3 | --- |
| Lead | ppm | ASTM D5185(m) | >40 | 0 | 2 | --- |
| Copper | ppm | ASTM D5185(m) | >330 | <1 | <1 | --- |
| Tin | ppm | ASTM D5185(m) | >15 | 0 | <1 | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | --- |

CONTAMINATION

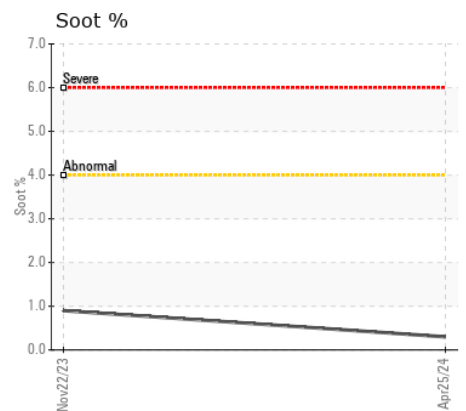
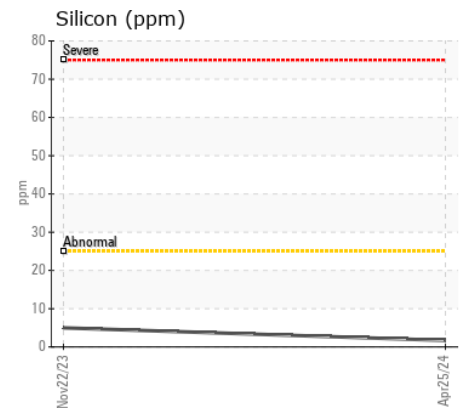
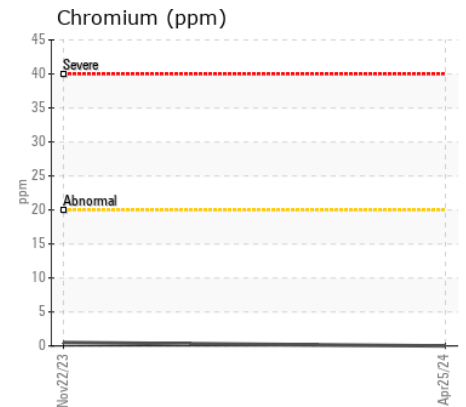
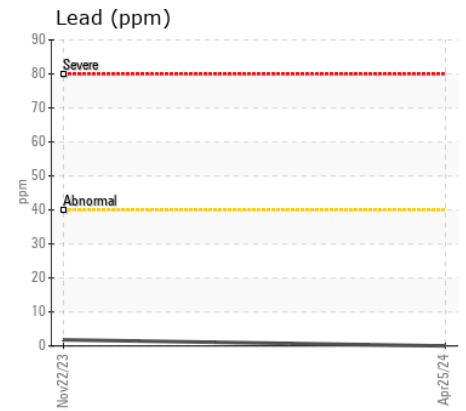
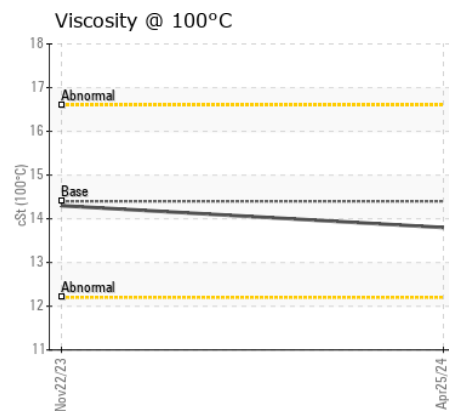
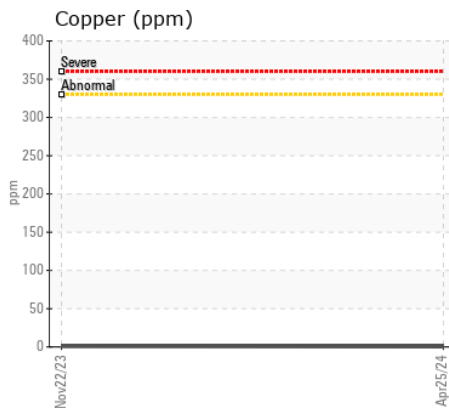
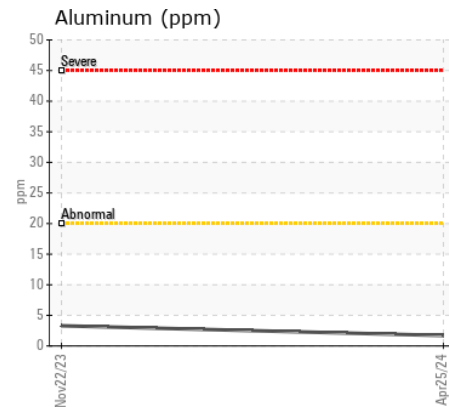
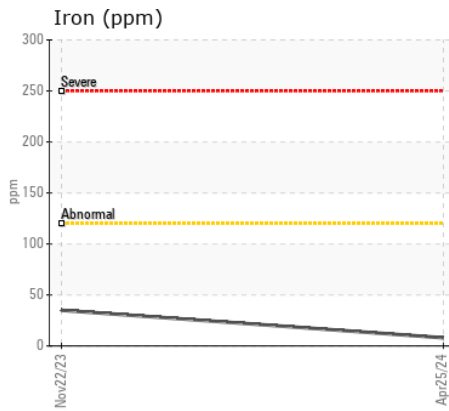
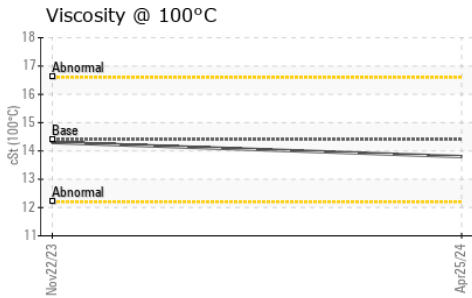
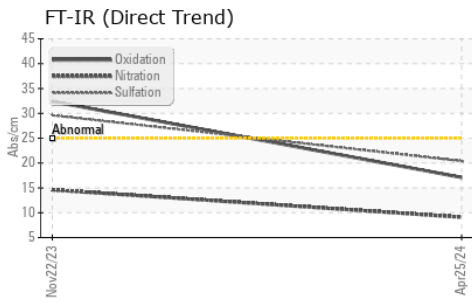
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|------|-----|
| Silicon | ppm | ASTM D5185(m) | >25 | 2 | 5 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | 0 | --- |
| Fuel | | WC Method | >3.0 | <1.0 | 1.8 | --- |
| Water | | WC Method | >0.2 | NEG | NEG | --- |
| Glycol | | WC Method | | NEG | NEG | --- |
| Soot % | % | ASTM D7844* | >4 | 0.3 | 0.9 | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 9.1 | 14.6 | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 20.4 | 29.6 | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | --- |

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| | | | | | | |
|--------------|----------|---------------|------|-------------|------|-----|
| Sodium | ppm | ASTM D5185(m) | >158 | 3 | 6 | --- |
| Boron | ppm | ASTM D5185(m) | 250 | 4 | 20 | --- |
| Barium | ppm | ASTM D5185(m) | 10 | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 100 | 61 | 49 | --- |
| Manganese | ppm | ASTM D5185(m) | | 0 | 0 | --- |
| Magnesium | ppm | ASTM D5185(m) | 450 | 990 | 618 | --- |
| Calcium | ppm | ASTM D5185(m) | 3000 | 1091 | 1708 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 1006 | 811 | --- |
| Zinc | ppm | ASTM D5185(m) | 1350 | 1217 | 987 | --- |
| Sulfur | ppm | ASTM D5185(m) | 4250 | 2467 | 2071 | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 17.1 | 32.4 | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.4 | 13.8 | 14.3 | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0120082
Lab Number : 02632229
Unique Number : 5773382
Test Package : MOB 1

GFL Environmental - 225 - COT(D2)
 20 Brydon Drive
 Etobicoke, ON
 CA M9W 5R6
 Contact: Rick Philip
 rphilip@gflenv.com
 T: (416)745-8080
 F:

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.