

Area
[1272934]
Machine Id
114025
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | GFL0118515 | --- | --- |
| Sample Date | | Client Info | | 07 May 2024 | --- | --- |
| Machine Age | kms | Client Info | | 0 | --- | --- |
| Oil Age | kms | Client Info | | 0 | --- | --- |
| Filter Age | kms | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | N/A | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | ABNORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185(m) | >200 | 43 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >30 | 13 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >30 | <1 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >30 | 49 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | 2 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |

CONTAMINATION

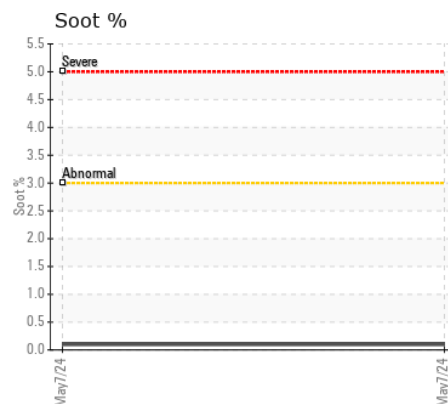
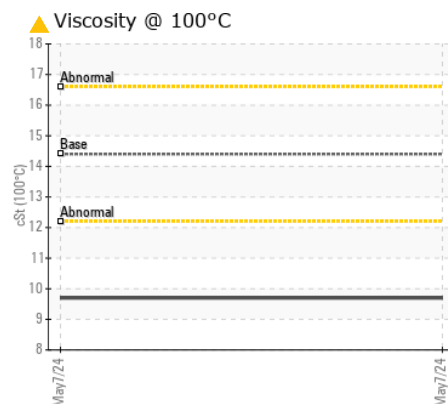
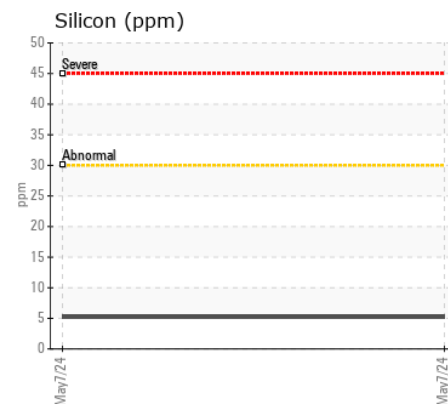
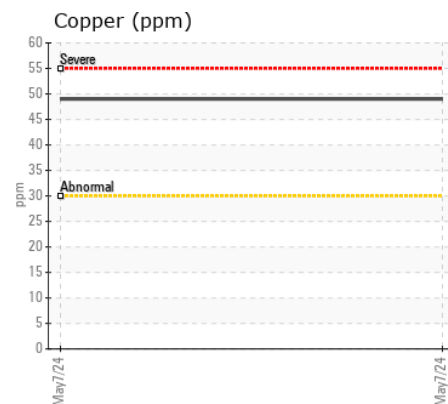
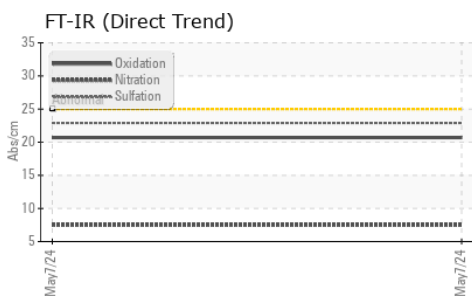
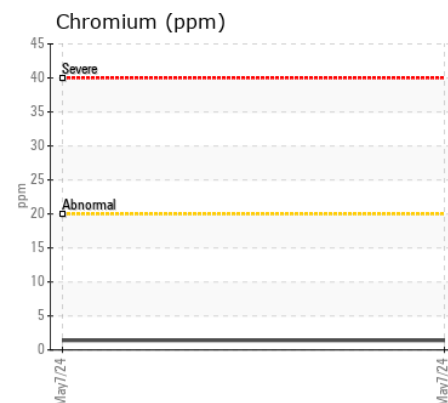
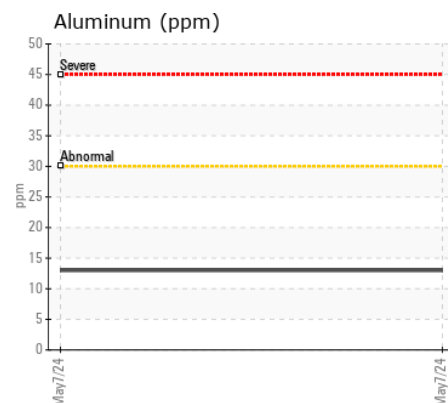
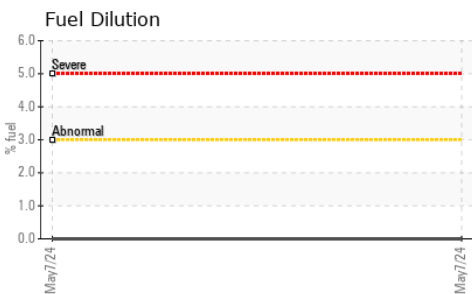
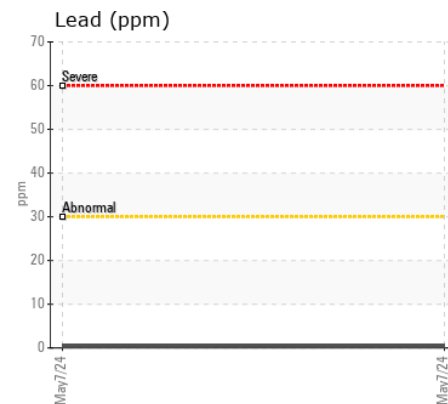
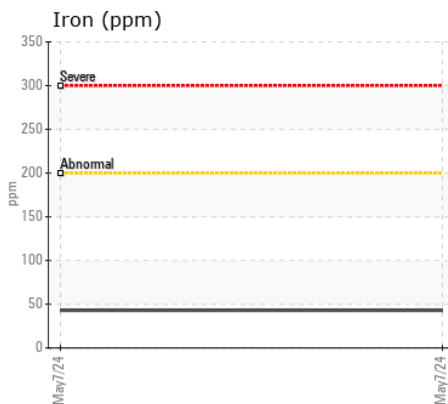
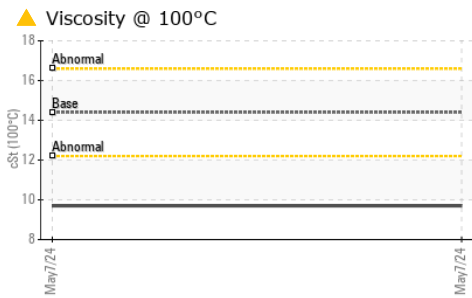
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|-------------|-----|-----|
| Silicon | ppm | ASTM D5185(m) | >30 | 5 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 48 | --- | --- |
| Fuel | % | ASTM D7593* | >3.0 | 0.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | ASTM D7844* | >3 | 0.1 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.5 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 22.9 | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|--------------|----------|---------------|------|--------------|-----|-----|
| Sodium | ppm | ASTM D5185(m) | >158 | 5 | --- | --- |
| Boron | ppm | ASTM D5185(m) | 250 | 53 | --- | --- |
| Barium | ppm | ASTM D5185(m) | 10 | <1 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 100 | 45 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | 3 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 450 | 456 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 3000 | 1744 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 790 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 1350 | 889 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 4250 | 2115 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 20.7 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.4 | ▲ 9.7 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0118515 **Received** : 09 May 2024
Lab Number : 02634245 **Tested** : 10 May 2024
Unique Number : 5775398 **Diagnosed** : 10 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 207 - Pickering SW
 1034 TOY AVENUE, PICKERING YARD
 PICKERING, ON
 CA L1W 3P1
 Contact: Jamie Holder
 jholder2@gflenv.com

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.

T:
F: