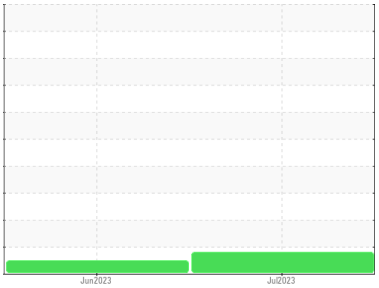
# OIL ANALYSIS REPORT

Sample Rating Trend




**FUEL**

Machine Id
**WL0416**
Component
**Diesel Engine**
Fluid
**DIESEL ENGINE OIL SAE 30 (--- GAL)**

## DIAGNOSIS

**Recommendation**

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 30. Please confirm.

**Wear**

All component wear rates are normal.

**Contamination**

Light fuel dilution occurring. No other contaminants were detected in the oil.

**Fluid Condition**

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

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **GFL0088313** | GFL0088311 | --- |
| Sample Date | | Client Info | | **12 Jul 2023** | 15 Jun 2023 | --- |
| Machine Age | hrs | Client Info | | **5138** | 5944 | --- |
| Oil Age | hrs | Client Info | | **500** | 500 | --- |
| Oil Changed | | Client Info | | **Changed** | Changed | --- |
| Sample Status | | | | **MARGINAL** | NORMAL | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Glycol | | WC Method | | **NEG** | NEG | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >100 | **53** | 11 | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | **1** | <1 | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | **1** | 0 | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185(m) | >3 | **0** | <1 | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | **6** | 4 | --- |
| Lead | ppm | ASTM D5185(m) | >40 | **25** | <1 | --- |
| Copper | ppm | ASTM D5185(m) | >330 | **4** | 4 | --- |
| Tin | ppm | ASTM D5185(m) | >15 | **<1** | 0 | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | 2 | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 250 | **19** | 56 | --- |
| Barium | ppm | ASTM D5185(m) | 10 | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 100 | **5** | 19 | --- |
| Manganese | ppm | ASTM D5185(m) | | **<1** | <1 | --- |
| Magnesium | ppm | ASTM D5185(m) | 450 | **21** | 153 | --- |
| Calcium | ppm | ASTM D5185(m) | 3000 | **2133** | 2153 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | **957** | 1090 | --- |
| Zinc | ppm | ASTM D5185(m) | 1350 | **1088** | 1224 | --- |
| Sulfur | ppm | ASTM D5185(m) | 4250 | **3186** | 3194 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

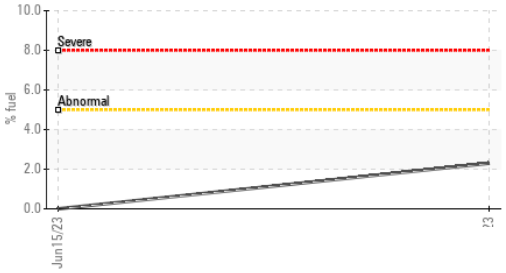
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >25 | **5** | 8 | --- |
| Sodium | ppm | ASTM D5185(m) | >75 | **2** | 2 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **2** | <1 | --- |
| Fuel | % | ASTM D7593* | >5 | **2.3** | <1.0 | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | ASTM D7844* | >3 | **0.8** | 0 | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | **13.3** | 10.6 | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | **27.0** | 23.1 | --- |

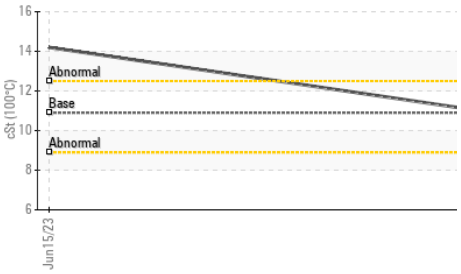
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | **20.4** | 18.2 | --- |

# OIL ANALYSIS REPORT

Fuel Dilution




Viscosity @ 100°C

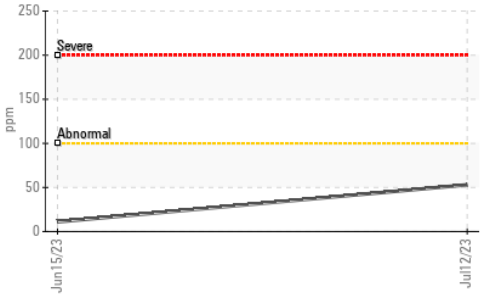



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Emulsified Water | scalar | Visual* | >0.2 | **NEG** | NEG | --- |
| Free Water | scalar | Visual* | | **NEG** | NEG | --- |

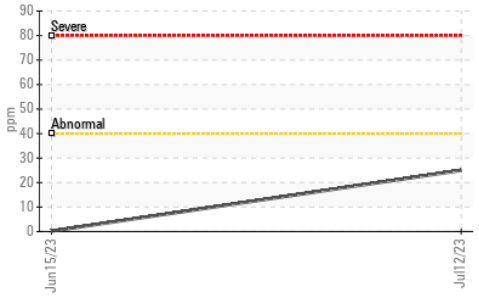
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D7279(m) | 10.9 | **11.0** | 14.2 | --- |

## GRAPHS

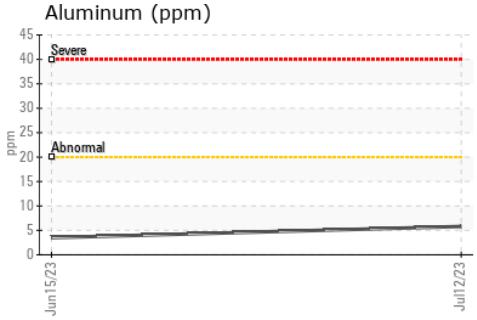
Iron (ppm)



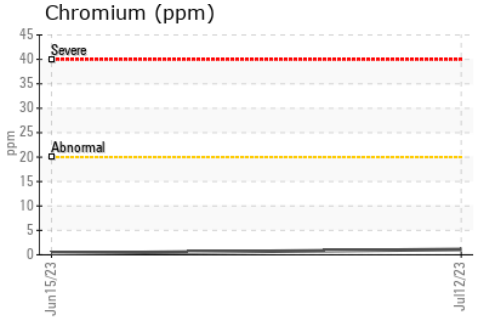

Lead (ppm)



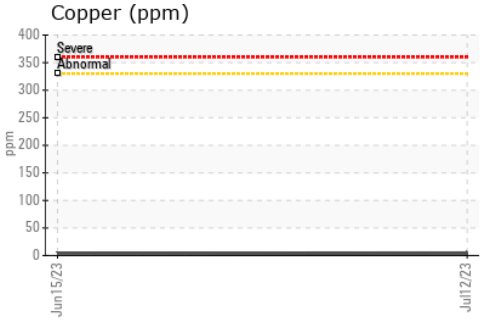

Aluminum (ppm)



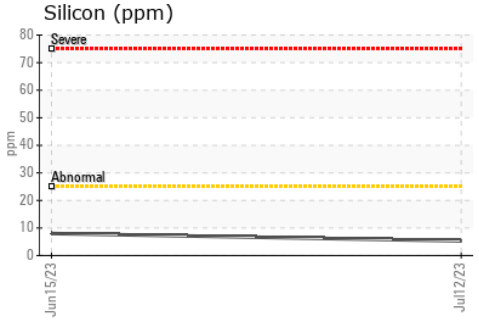

Chromium (ppm)



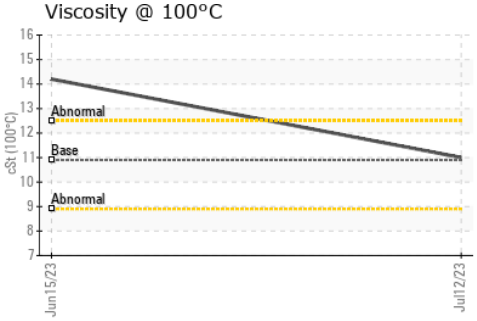

Copper (ppm)



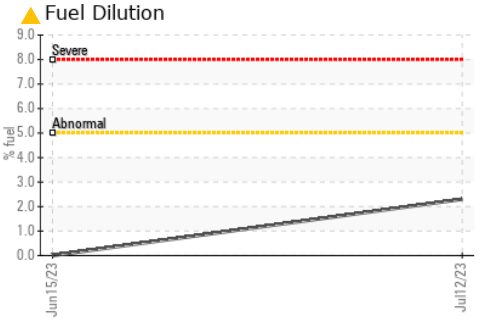

Silicon (ppm)




Viscosity @ 100°C




Fuel Dilution




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : GFL0088313
**Lab Number** : 02575573
**Unique Number** : 5620624
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

**Received** : 14 Aug 2023
**Diagnosed** : 15 Aug 2023
**Diagnostician** : Wes Davis

*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.*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