



OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
NO UNIT GFL0123459
 Component
Diesel Engine
 Fluid
 DIESEL ENGINE OIL SAE 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 15W40. Please confirm. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination 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 | | GFL0123459 | --- | --- |
| Sample Date | Client Info | | 16 Jun 2024 | --- | --- |
| Machine Age | hrs | Client Info | 0 | --- | --- |
| Oil Age | hrs | Client Info | 0 | --- | --- |
| Oil Changed | Client Info | | N/A | --- | --- |
| Sample Status | | | NORMAL | --- | --- |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >5 | <1.0 | --- | --- |
| Water | WC Method | >0.2 | NEG | --- | --- |
| Glycol | WC Method | | NEG | --- | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|--------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) >100 | 16 | --- | --- |
| Chromium | ppm | ASTM D5185(m) >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185(m) >4 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) >3 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) >20 | 2 | --- | --- |
| Lead | ppm | ASTM D5185(m) >40 | 0 | --- | --- |
| Copper | ppm | ASTM D5185(m) >330 | 1 | --- | --- |
| Tin | ppm | ASTM D5185(m) >15 | 0 | --- | --- |
| Antimony | ppm | ASTM D5185(m) | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | 0 | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | 0 | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | 0 | --- | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|--------------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185(m) 250 | 2 | --- | --- |
| Barium | ppm | ASTM D5185(m) 10 | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) 100 | 56 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) 450 | 896 | --- | --- |
| Calcium | ppm | ASTM D5185(m) 3000 | 1034 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) 1150 | 931 | --- | --- |
| Zinc | ppm | ASTM D5185(m) 1350 | 1171 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) 4250 | 2339 | --- | --- |
| Lithium | ppm | ASTM D5185(m) | <1 | --- | --- |

CONTAMINANTS

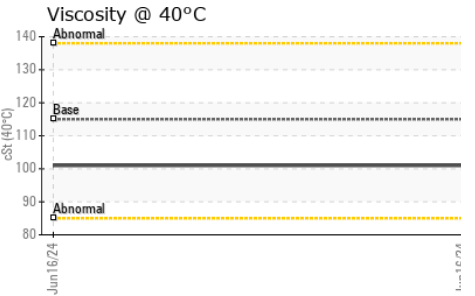
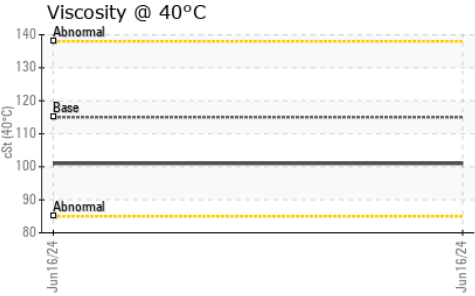
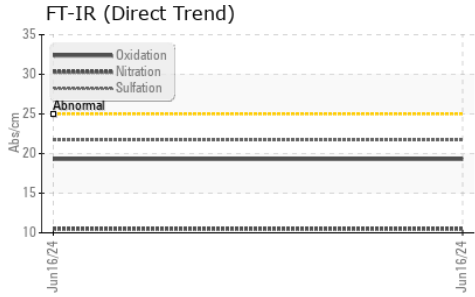
| | method | limit/base | current | history1 | history2 |
|-----------|--------|--------------------|----------|----------|----------|
| Silicon | ppm | ASTM D5185(m) >25 | 3 | --- | --- |
| Sodium | ppm | ASTM D5185(m) >158 | 2 | --- | --- |
| Potassium | ppm | ASTM D5185(m) >20 | 2 | --- | --- |

INFRA-RED

| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | ASTM D7844* >3 | 0.4 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* >20 | 10.5 | --- | --- |
| Sulfation | Abs./1mm | ASTM D7415* >30 | 21.7 | --- | --- |



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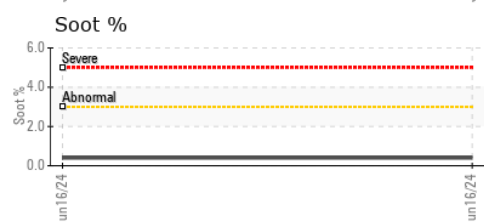
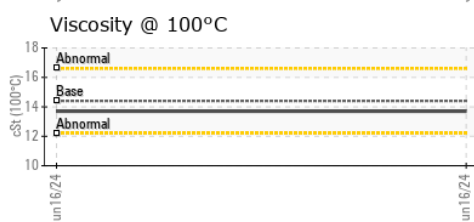
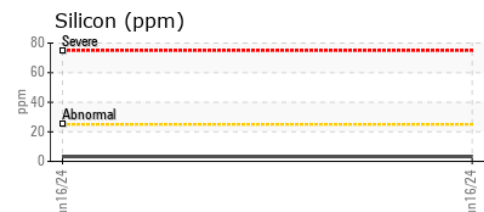
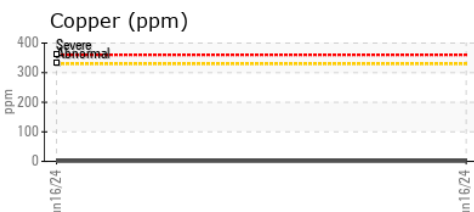
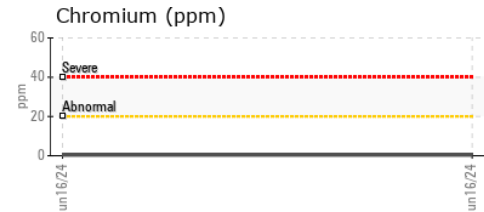
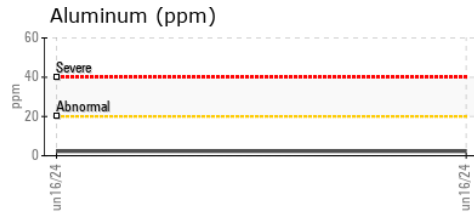
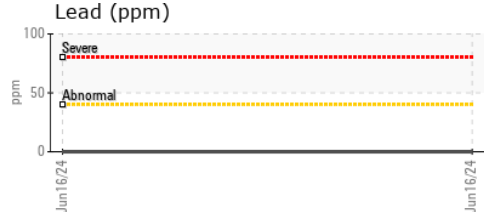
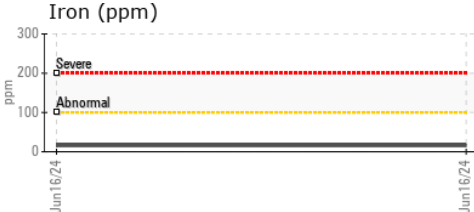


| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation | Abs./1mm | ASTM D7414* | >25 | 19.3 | --- | --- |

| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Precipitate | scalar | Visual* | NONE | NONE | --- | --- |
| Silt | scalar | Visual* | NONE | NONE | --- | --- |
| Debris | scalar | Visual* | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | --- | --- |
| Appearance | scalar | Visual* | NORML | NORML | --- | --- |
| Odor | scalar | Visual* | NORML | NORML | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |
| Free Water | scalar | Visual* | | NEG | --- | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|----------------------|-------|---------------|------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D7279(m) | 115 | 101 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.4 | 13.7 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | 126 | 136 | --- | --- |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0123459 **Received** : 17 Jun 2024
Lab Number : **02642269** **Tested** : 18 Jun 2024
Unique Number : 5799808 **Diagnosed** : 18 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

GFL Environmental - 221 - Windsor
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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.