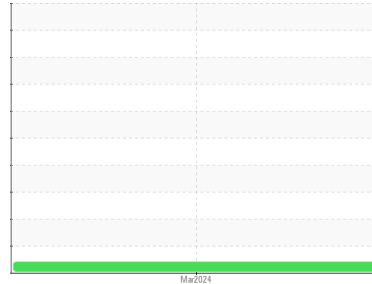




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
354126
 Component
Gasoline Engine
 Fluid
SAE 0W30 (--- 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.

Wear

Metal levels are typical for a new component breaking in.

Contamination

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

Fluid Condition

Viscosity of sample indicates oil is within SAE 20 range, advise investigate. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info | GFL0090752 | --- | --- |
| Sample Date | Client Info | 05 Mar 2024 | --- | --- |
| Machine Age | kms Client Info | 11092 | --- | --- |
| Oil Age | kms Client Info | 7500 | --- | --- |
| Oil Changed | Client Info | Changed | --- | --- |
| Sample Status | | ABNORMAL | --- | --- |

CONTAMINATION

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

WEAR METALS

| method | limit/base | current | history1 | history2 |
|-----------|------------------------|--------------|----------|----------|
| Iron | ppm ASTM D5185(m) >150 | 50 | --- | --- |
| Chromium | ppm ASTM D5185(m) >20 | 2 | --- | --- |
| Nickel | ppm ASTM D5185(m) >5 | <1 | --- | --- |
| Titanium | ppm ASTM D5185(m) | 0 | --- | --- |
| Silver | ppm ASTM D5185(m) >2 | <1 | --- | --- |
| Aluminum | ppm ASTM D5185(m) >40 | 5 | --- | --- |
| Lead | ppm ASTM D5185(m) >50 | 3 | --- | --- |
| Copper | ppm ASTM D5185(m) >155 | 106 | --- | --- |
| Tin | ppm ASTM D5185(m) >10 | <1 | --- | --- |
| 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) | 31 | --- | --- |
| Barium | ppm ASTM D5185(m) | 1 | --- | --- |
| Molybdenum | ppm ASTM D5185(m) | 151 | --- | --- |
| Manganese | ppm ASTM D5185(m) | 19 | --- | --- |
| Magnesium | ppm ASTM D5185(m) | 439 | --- | --- |
| Calcium | ppm ASTM D5185(m) | 1251 | --- | --- |
| Phosphorus | ppm ASTM D5185(m) | 614 | --- | --- |
| Zinc | ppm ASTM D5185(m) | 724 | --- | --- |
| Sulfur | ppm ASTM D5185(m) | 1540 | --- | --- |
| Lithium | ppm ASTM D5185(m) | <1 | --- | --- |

CONTAMINANTS

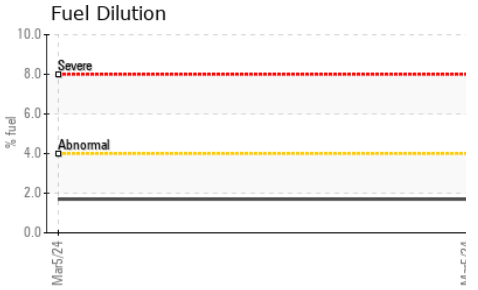
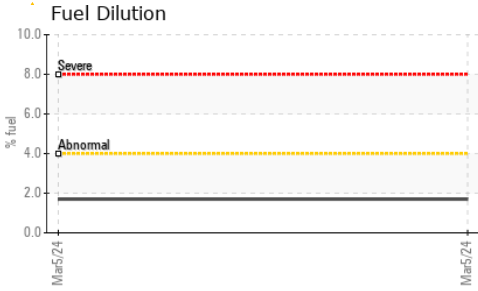
| method | limit/base | current | history1 | history2 |
|-----------|-----------------------|------------|----------|----------|
| Silicon | ppm ASTM D5185(m) >30 | 91 | --- | --- |
| Sodium | ppm ASTM D5185(m) >12 | 7 | --- | --- |
| Potassium | ppm ASTM D5185(m) >20 | 8 | --- | --- |
| Fuel | % ASTM D7593* >4.0 | 1.7 | --- | --- |

INFRA-RED

| method | limit/base | current | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot % | % ASTM D7844* | 0 | --- | --- |
| Nitration | Abs/cm ASTM D7624* >20 | 10.5 | --- | --- |
| Sulfation | Abs/.1mm ASTM D7415* >30 | 20.4 | --- | --- |



OIL ANALYSIS REPORT



FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|-----------|---------------------|---------|----------|----------|
| Oxidation | Abs/1mm ASTM D7414* | >25 | 13.8 | --- |

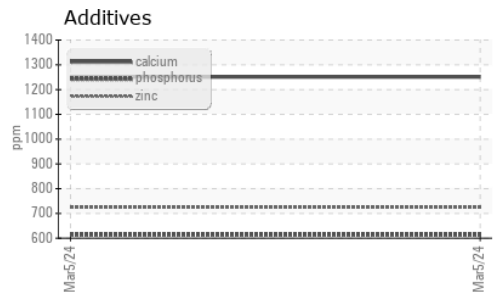
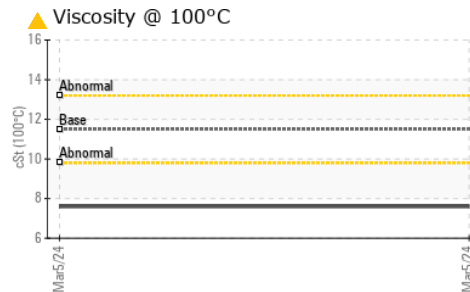
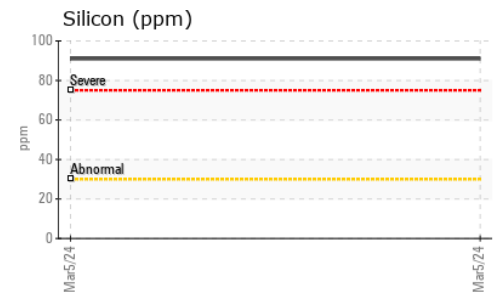
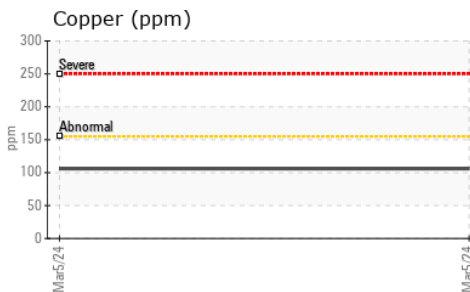
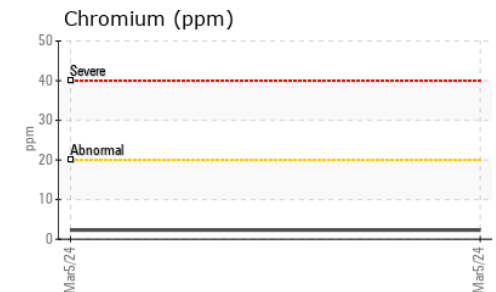
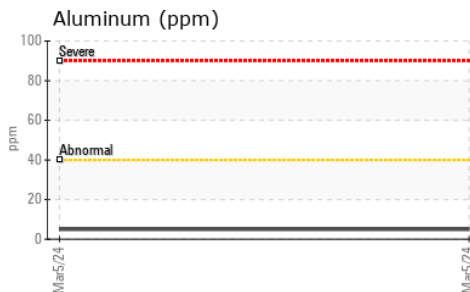
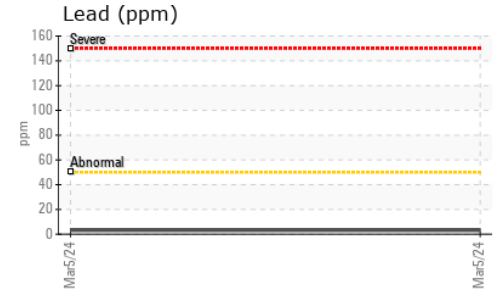
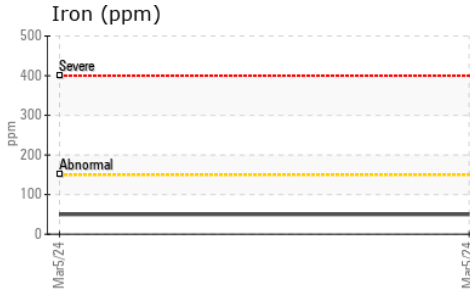
VISUAL

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

FLUID PROPERTIES

| method | limit/base | current | history1 | history2 |
|--------------|-------------------|---------|----------|----------|
| Visc @ 100°C | cSt ASTM D7279(m) | 11.5 | ▲ 7.6 | --- |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0090752 **Received** : 07 Mar 2024
Lab Number : 02620403 **Tested** : 08 Mar 2024
Unique Number : 5737513 **Diagnosed** : 08 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 504 - Edmonton
 12015 28 Street NE
 Edmonton, AB
 CA T6S 1E2
 Contact: Jerrod Adair
 jerrodadair@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.