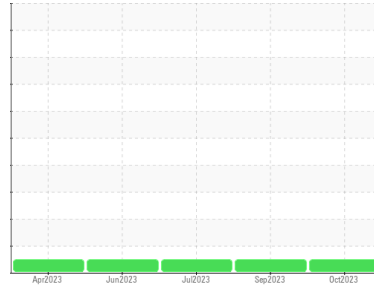




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
2214
 Component
Natural Gas Engine
 Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a new component breaking in.

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 | | WC0830236 | WC0849817 | WC0830060 |
| Sample Date | Client Info | | 20 Oct 2023 | 03 Sep 2023 | 14 Jul 2023 |
| Machine Age | kms | Client Info | 45567 | 0 | 27480 |
| Oil Age | kms | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | N/A | N/A | N/A |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185(m) | >50 | 8 | 7 | 7 |
| Chromium | ppm | ASTM D5185(m) | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >9 | 1 | 1 | 1 |
| Lead | ppm | ASTM D5185(m) | >30 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185(m) | >35 | 1 | 1 | 1 |
| Tin | ppm | ASTM D5185(m) | >4 | <1 | <1 | <1 |
| Antimony | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|---------------|---------|--------------|----------|------|
| Boron | ppm | ASTM D5185(m) | | 13 | 13 | 14 |
| Barium | ppm | ASTM D5185(m) | | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | | 54 | 51 | 51 |
| Manganese | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | | 811 | 787 | 809 |
| Calcium | ppm | ASTM D5185(m) | | 1250 | 1197 | 1204 |
| Phosphorus | ppm | ASTM D5185(m) | | 676 | 711 | 719 |
| Zinc | ppm | ASTM D5185(m) | | 889 | 861 | 846 |
| Sulfur | ppm | ASTM D5185(m) | | 1989 | 1970 | 1948 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|----------|----------|---|
| Silicon | ppm | ASTM D5185(m) | >+100 | 5 | 6 | 5 |
| Sodium | ppm | ASTM D5185(m) | | 2 | 3 | 2 |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |

INFRA-RED

| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot % | % | ASTM D7844* | | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 12.2 | 11.4 | 11.4 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 22.0 | 20.7 | 21.4 |

FLUID DEGRADATION

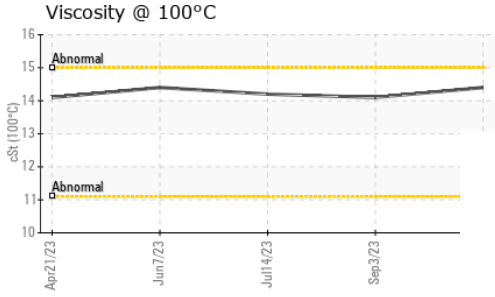
| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 19.7 | 18.5 | 19.0 |

VISUAL

| | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|------------|----------|-----|
| Emulsified Water | scalar | Visual* | >0.1 | NEG | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG | NEG |

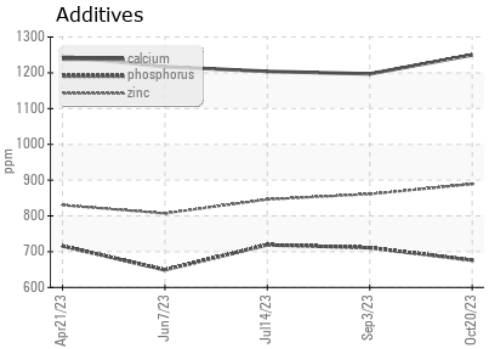
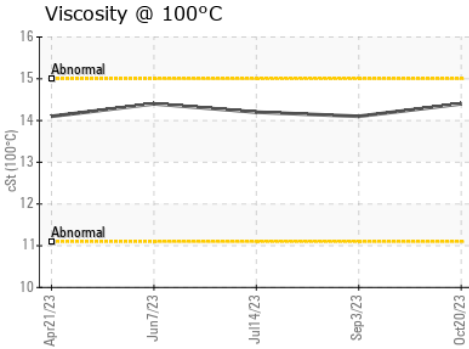
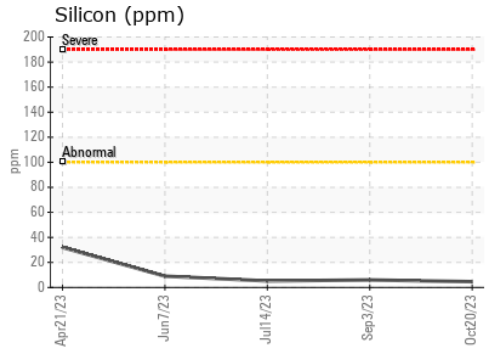
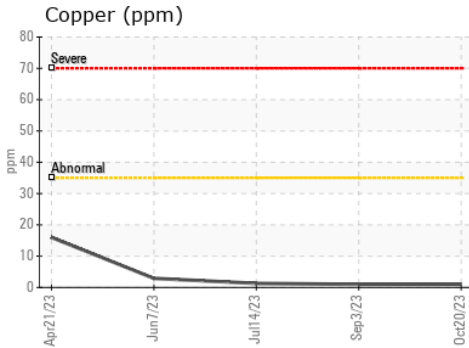
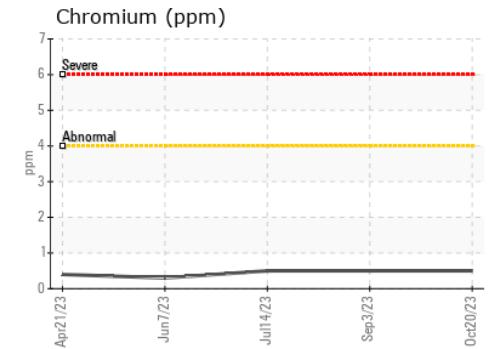
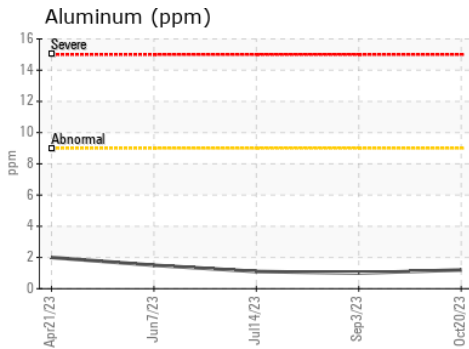
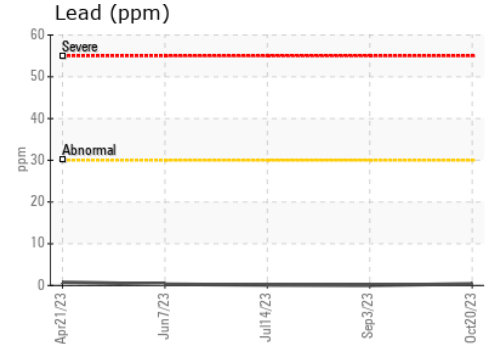
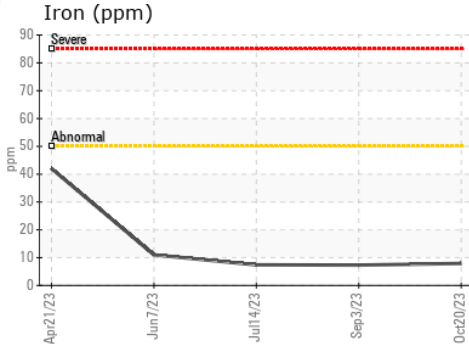


OIL ANALYSIS REPORT



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|---------------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D7279(m) | | 14.4 | 14.1 | 14.2 |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0830236
Lab Number : 02591729
Unique Number : 5668808
Test Package : MOB 1

CITY OF HAMILTON
 2200 UPPER JAMES., MOUNTAIN TRANSIT STOREROOM
 MOUNT HOPE, ON
 CA L0R 1W0
 Contact: Cliff Bird
 cliff.bird@hamilton.ca
 T:
 F: (905)679-4502

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.