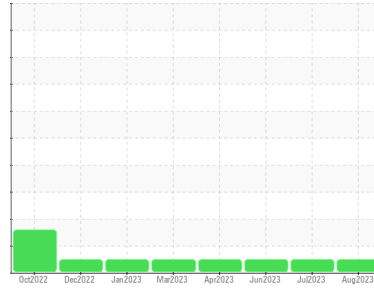




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id

2114

Component

Natural Gas Engine

Fluid

VALVOLINE PREMIUM BLUE 9200 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. 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 | | WC0849949 | WC0830142 | WC0811419 |
| Sample Date | Client Info | | 30 Aug 2023 | 17 Jul 2023 | 02 Jun 2023 |
| Machine Age | hrs | Client Info | 69786 | 62096 | 53456 |
| Oil Age | hrs | 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 | 7 | 7 | 8 |
| Chromium | ppm | ASTM D5185(m) | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >9 | 1 | 1 | 1 |
| Lead | ppm | ASTM D5185(m) | >30 | <1 | <1 | <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) | | 10 | 10 | 13 |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | | 51 | 50 | 50 |
| Manganese | ppm | ASTM D5185(m) | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | | 792 | 801 | 760 |
| Calcium | ppm | ASTM D5185(m) | | 1203 | 1190 | 1220 |
| Phosphorus | ppm | ASTM D5185(m) | | 680 | 671 | 683 |
| Zinc | ppm | ASTM D5185(m) | | 854 | 837 | 823 |
| Sulfur | ppm | ASTM D5185(m) | | 1941 | 1912 | 1929 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Silicon | ppm | ASTM D5185(m) | >+100 | 4 | 5 | 4 |
| Sodium | ppm | ASTM D5185(m) | | 2 | 2 | 2 |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | 0 | <1 |

INFRA-RED

| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot % | % | ASTM D7844* | | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 11.9 | 11.6 | 11.5 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 22.5 | 21.6 | 21.3 |

FLUID DEGRADATION

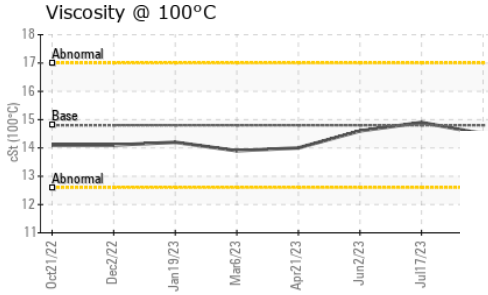
| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 19.3 | 19.6 | 19.3 |

VISUAL

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

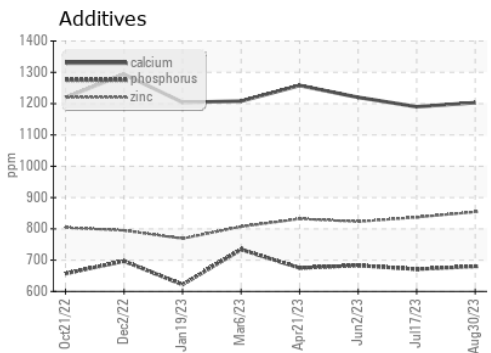
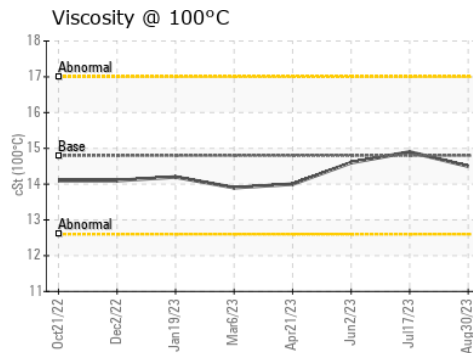
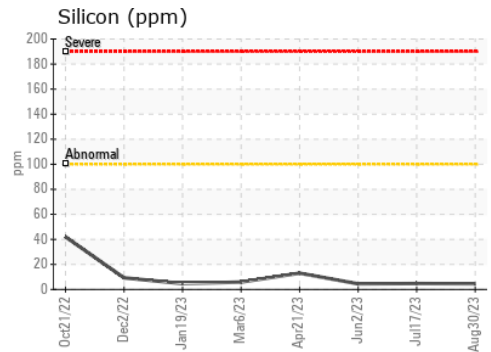
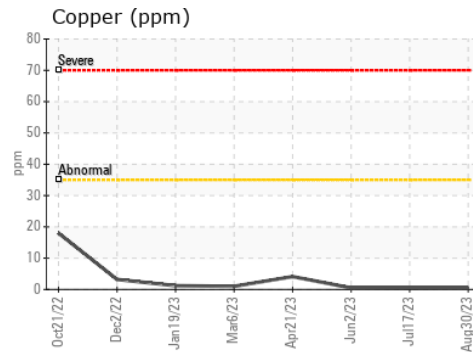
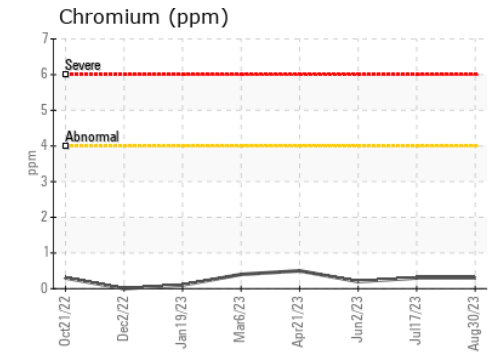
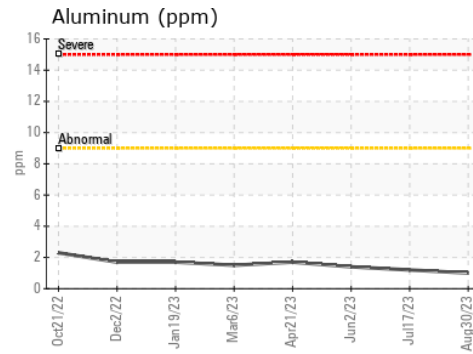
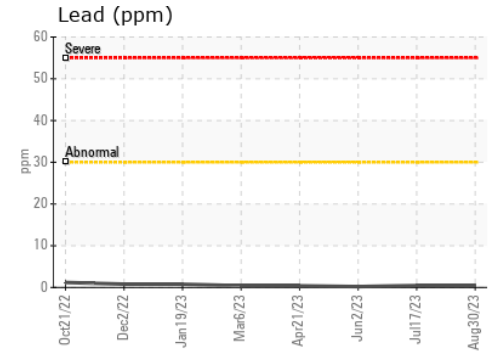
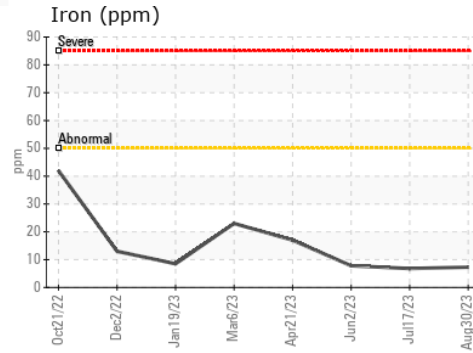


OIL ANALYSIS REPORT



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|---------------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.8 | 14.5 | 14.9 | 14.6 |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0849949 **Received** : 05 Sep 2023
Lab Number : 02580262 **Diagnosed** : 05 Sep 2023
Unique Number : 5633322 **Diagnostician** : Kevin Marson
Test Package : MOB 1

CITY OF HAMILTON
 2200 UPPER JAMES., MOUNTAIN TRANSIT STOREROOM
 MOUNT HOPE, ON
 CA L0R 1W0
 Contact: Jeff Parr
 jeff.parr@hamilton.ca
 T: (905)546-2424
 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.