



OIL ANALYSIS REPORT

| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Area

[154817]

Machine Id

(E) BLUE (S/N 33144767)

Component

Diesel Engine

Fluid

VALVOLINE PREMIUM BLUE 2000 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | CU0022772 | CU0020860 | CU0018494 |
| Sample Date | | Client Info | | 03 Apr 2024 | 30 Mar 2023 | 22 Sep 2021 |
| Machine Age | hrs | Client Info | | 0 | 480 | 0 |
| Oil Age | hrs | Client Info | | 50 | 0 | 0 |
| Filter Age | hrs | Client Info | | 18 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changed | N/A | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|-----|----------|----|----|
| Iron | ppm | ASTM D5185(m) | >65 | 2 | 2 | 2 |
| Chromium | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >2 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >6 | 1 | 1 | 2 |
| Lead | ppm | ASTM D5185(m) | >13 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185(m) | >65 | 2 | <1 | 1 |
| Tin | ppm | ASTM D5185(m) | >2 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |

CONTAMINATION

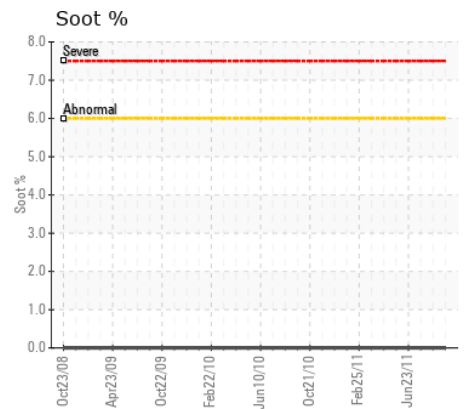
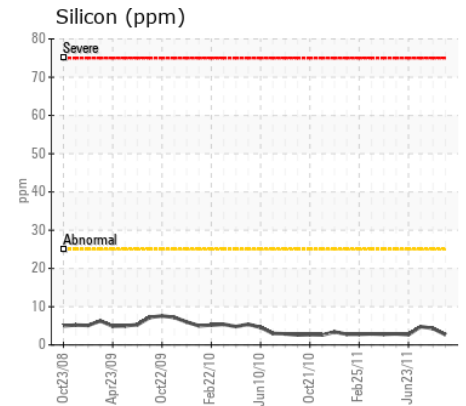
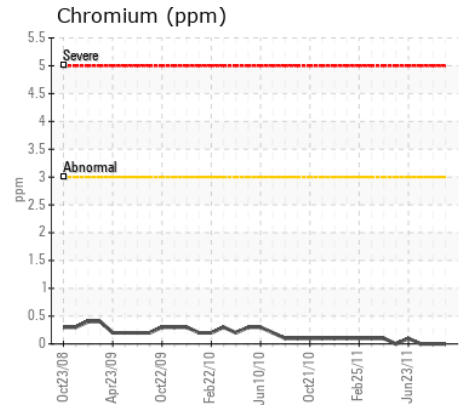
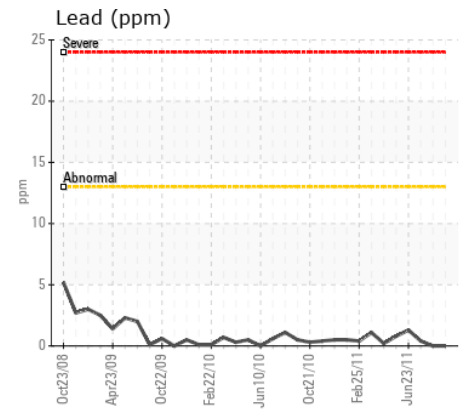
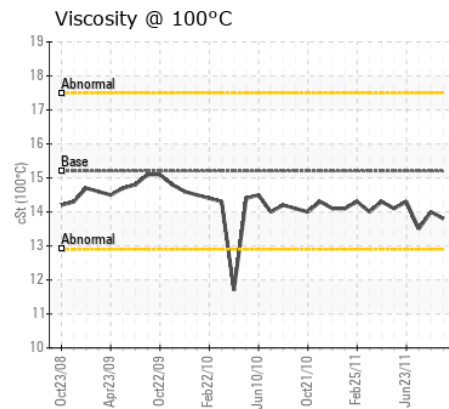
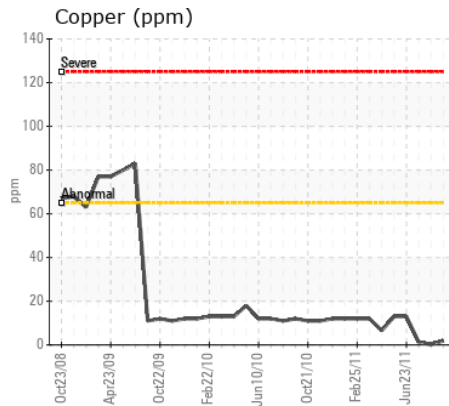
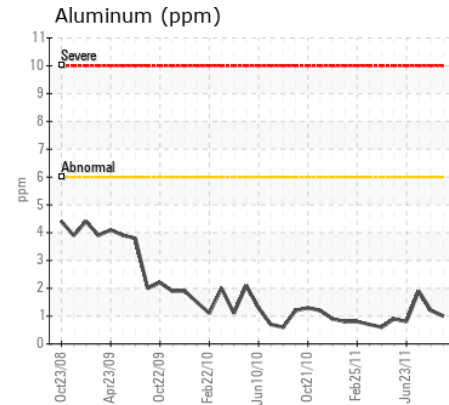
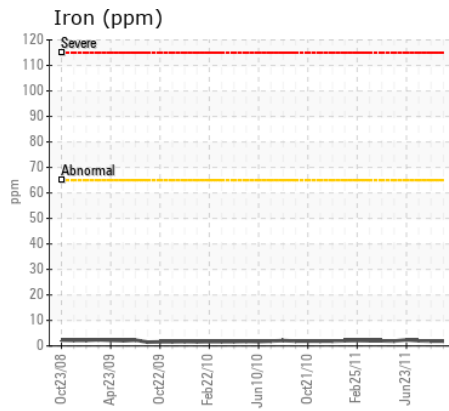
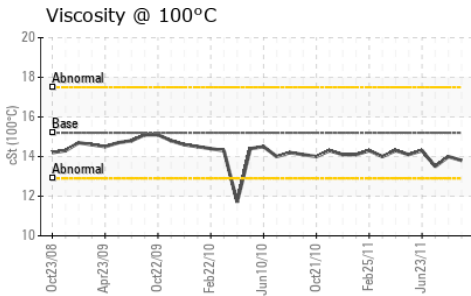
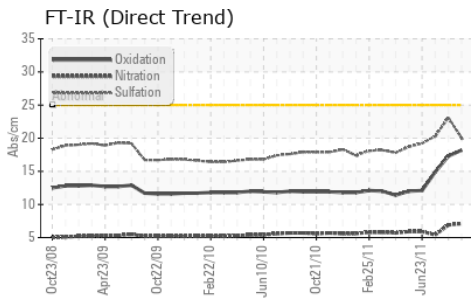
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|------|------|
| Silicon | ppm | ASTM D5185(m) | >25 | 3 | 4 | 5 |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | 0 | 1 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | >6 | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.1 | 6.9 | 5.4 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 20.0 | 23.1 | 20.3 |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|--------------|----------|---------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 3 | 3 | 3 |
| Boron | ppm | ASTM D5185(m) | | 77 | 82 | 395 |
| Barium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | | 52 | 52 | 78 |
| Manganese | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | | 773 | 771 | 394 |
| Calcium | ppm | ASTM D5185(m) | | 1259 | 1321 | 1552 |
| Phosphorus | ppm | ASTM D5185(m) | | 770 | 838 | 1057 |
| Zinc | ppm | ASTM D5185(m) | | 882 | 900 | 1205 |
| Sulfur | ppm | ASTM D5185(m) | | 2115 | 2226 | 3031 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 18.2 | 17.3 | 14.9 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.2 | 13.8 | 14.0 | 13.5 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : CU0022772
Lab Number : 02631893
Unique Number : 5773046
Test Package : MOB 1

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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.