

Machine Id
1224
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | PC0083695 | PC0078091 | PC0071994 |
| Sample Date | | Client Info | | 21 Jan 2024 | 13 Sep 2023 | 14 Feb 2023 |
| Machine Age | hrs | Client Info | | 6388 | 5825 | 4877 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|------|--------------|----|----|
| Iron | ppm | ASTM D5185(m) | >100 | 9 | 7 | 8 |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >4 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 5 | 5 | 8 |
| Lead | ppm | ASTM D5185(m) | >40 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185(m) | >330 | 2 | 1 | 1 |
| Tin | ppm | ASTM D5185(m) | >15 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

CONTAMINATION

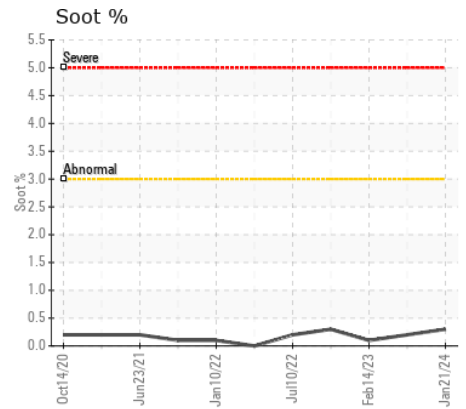
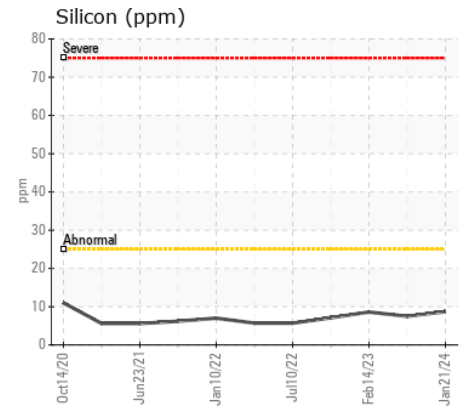
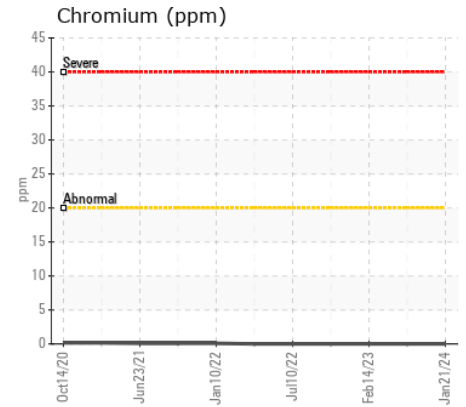
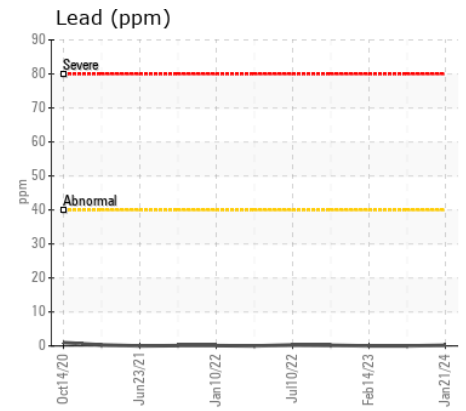
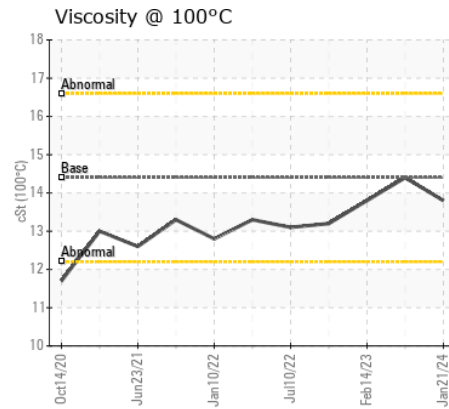
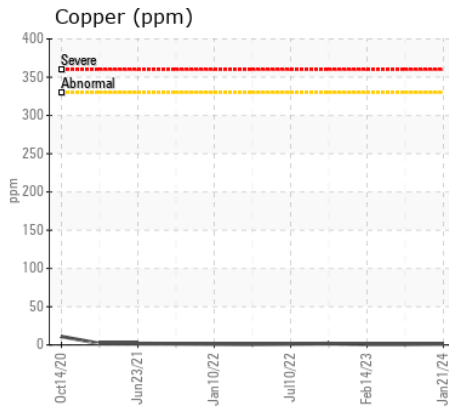
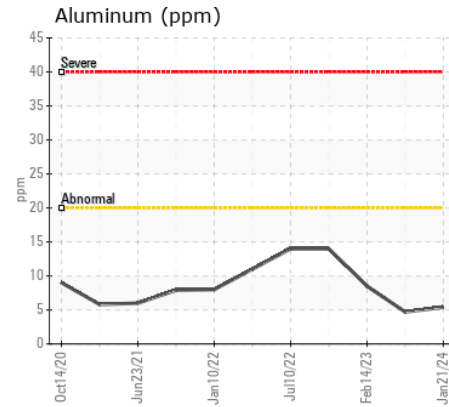
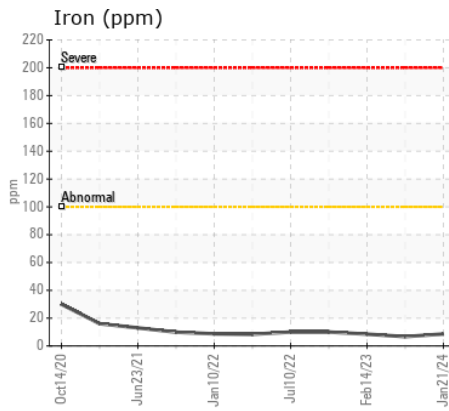
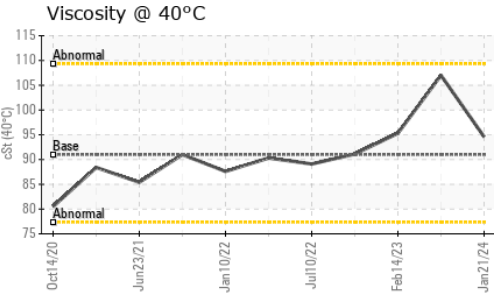
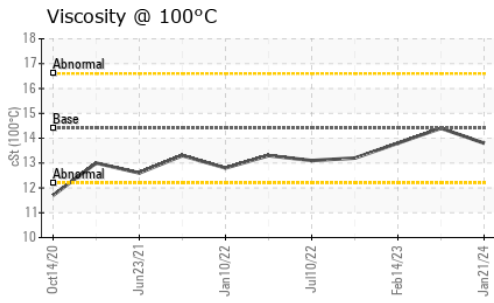
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|------|------|
| Silicon | ppm | ASTM D5185(m) | >25 | 9 | 8 | 9 |
| Potassium | ppm | ASTM D5185(m) | >20 | 12 | 15 | 18 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | >3 | 0.3 | 0.2 | 0.1 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 8.0 | 7.9 | 7.6 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 19.8 | 20.8 | 20.8 |
| 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) | >44 | <1 | 2 | 2 |
| Boron | ppm | ASTM D5185(m) | 250 | 6 | 88 | 1 |
| Barium | ppm | ASTM D5185(m) | 10 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 100 | 54 | 14 | 59 |
| Manganese | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 450 | 878 | 130 | 980 |
| Calcium | ppm | ASTM D5185(m) | 3000 | 1197 | 2063 | 1145 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 999 | 1006 | 1104 |
| Zinc | ppm | ASTM D5185(m) | 1350 | 1172 | 1141 | 1226 |
| Sulfur | ppm | ASTM D5185(m) | 4250 | 2632 | 2806 | 2610 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 15.9 | 16.2 | 15.4 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 91 | 94.6 | 107 | 95.3 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.4 | 13.8 | 14.4 | 13.8 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 164 | 148 | 137 | 146 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 LES ENTREPRISES MICHAUVILLE INC.
Sample No. : PC0083695 **Received** : 22 Jan 2024
Lab Number : 02610215 **Diagnosed** : 22 Jan 2024
Unique Number : 5711301 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: KV40, VI)

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.

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