



OIL ANALYSIS REPORT

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

Area
[142396]
 Machine Id
130023
 Component
Diesel Engine
 Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

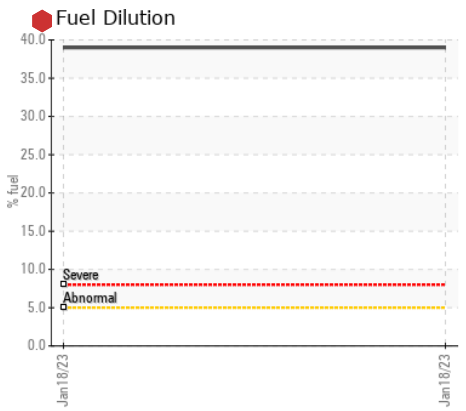
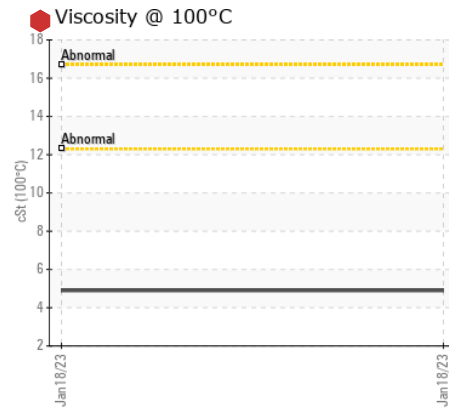
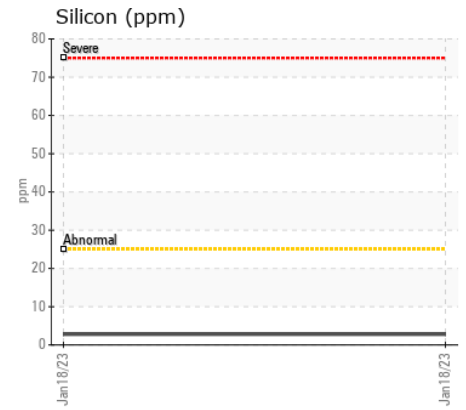
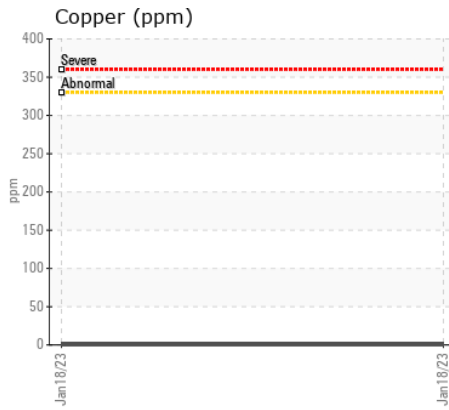
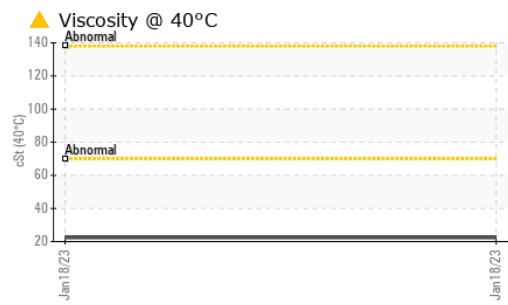
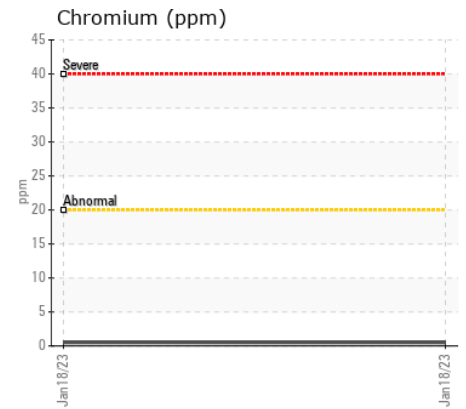
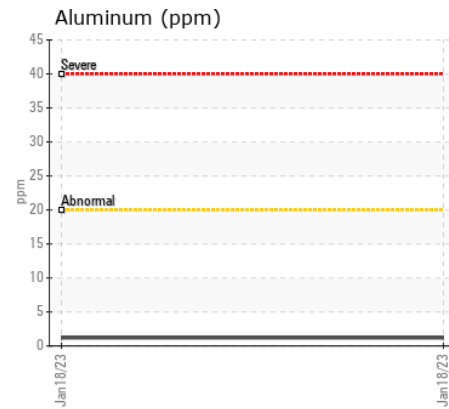
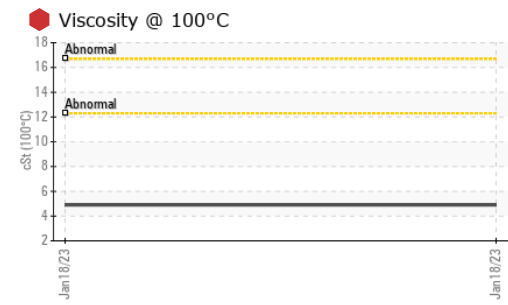
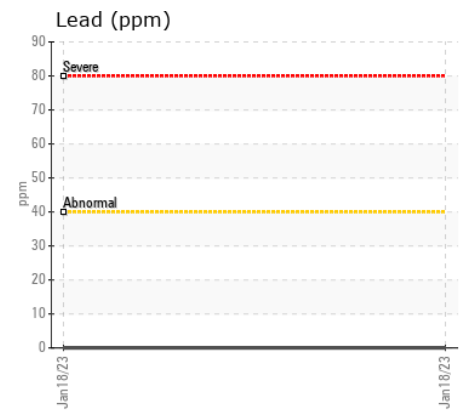
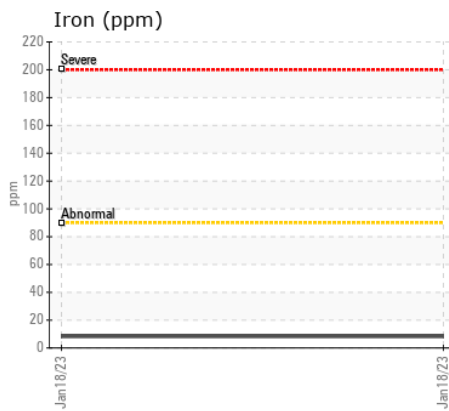
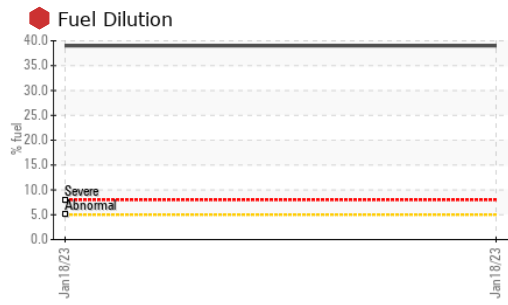
CONTAMINATION

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------------|----------|---------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | CU0020844 | --- | --- |
| Sample Date | | Client Info | | 18 Jan 2023 | --- | --- |
| Machine Age | hrs | Client Info | | 0 | --- | --- |
| Oil Age | hrs | Client Info | | 0 | --- | --- |
| Filter Age | hrs | Client Info | | 0 | --- | --- |
| Oil Changed | | Client Info | | N/A | --- | --- |
| Filter Changed | | Client Info | | N/A | --- | --- |
| Sample Status | | | | SEVERE | --- | --- |
| Iron | ppm | ASTM D5185(m) | >90 | 8 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | 1 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >40 | 0 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >330 | <1 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silicon | ppm | ASTM D5185(m) | >25 | 3 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | <1 | --- | --- |
| Fuel | % | ASTM D7593* | >5 | 39 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | ASTM D7844* | >6 | 0 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.5 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 18.5 | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | 2 | --- | --- |
| Boron | ppm | ASTM D5185(m) | | 44 | --- | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 31 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | 200 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | 1039 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 616 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | 647 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | 1674 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 13.3 | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | | 22.4 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | | 4.9 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | | 148 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : CU0020844 **Received** : 19 Jan 2023
Lab Number : 02534212 **Diagnosed** : 20 Jan 2023
Unique Number : 5515211 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

CUMMINS EASTERN CANADA LP
 6950 EDWARDS BLVD
 MISSISSAUGA, ON
 CA L5T 2W2
 Contact: Jeffrey Moore
 jeffrey.moore@cummins.com
 T: (905)795-0050
 F: (905)795-0035

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.