



OIL ANALYSIS REPORT

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

Area
ARCP [136020]
Machine Id
FL-V016
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

Iron ppm levels are severe. Cylinder, crank, or cam shaft wear is indicated.

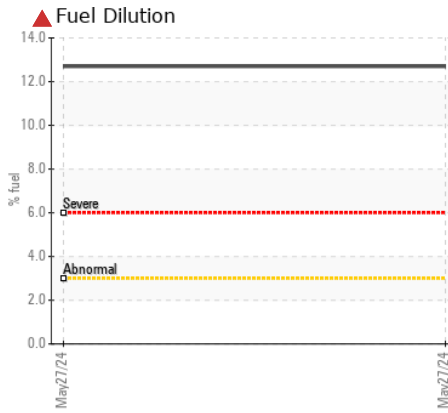
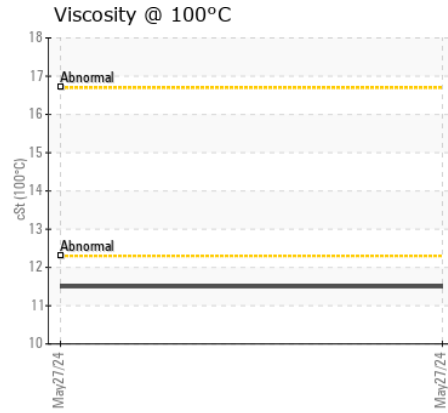
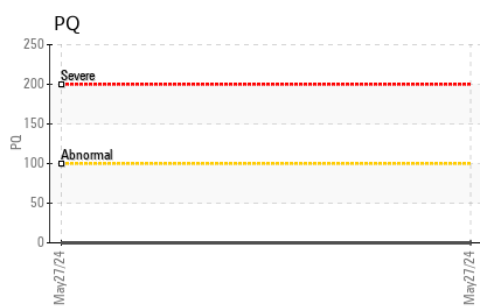
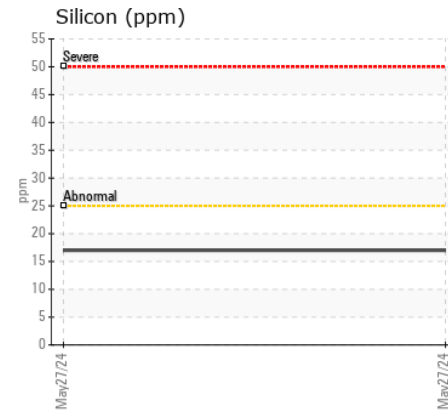
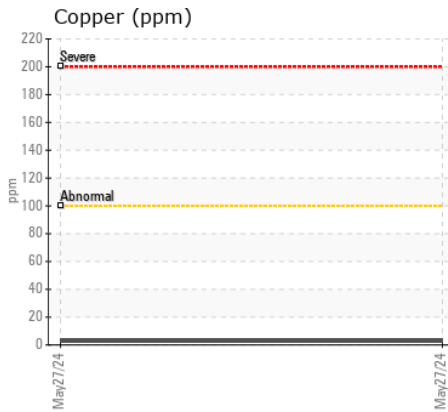
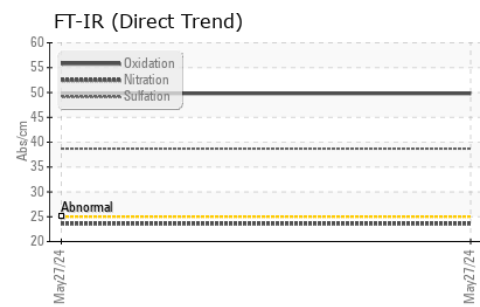
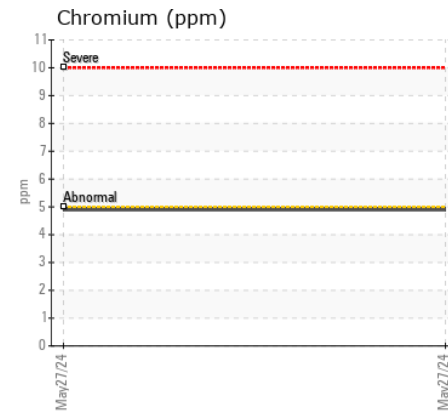
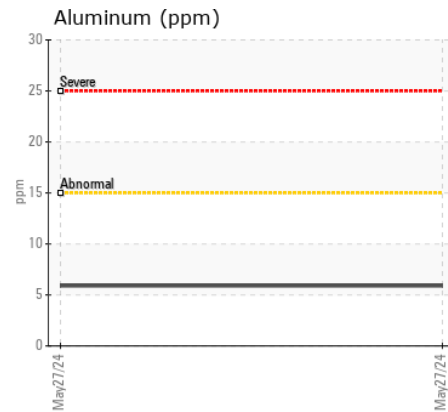
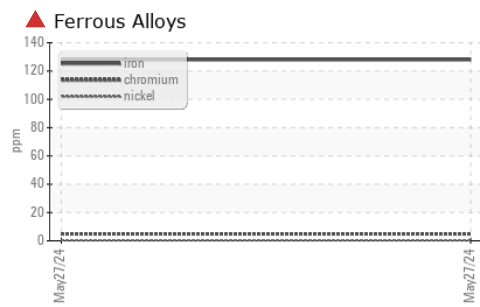
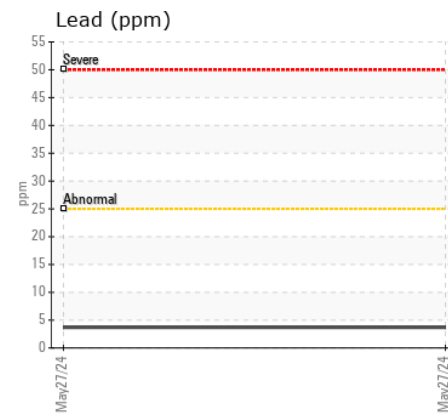
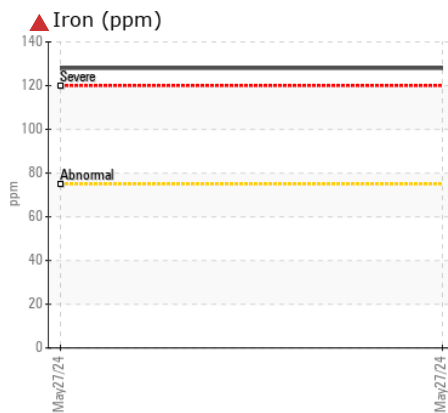
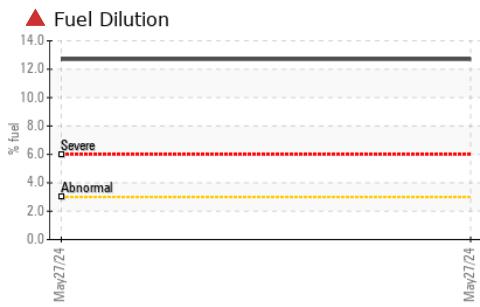
CONTAMINATION

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

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|----------|---------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | CU0021768 | --- | --- |
| Sample Date | | Client Info | | 27 May 2024 | --- | --- |
| Machine Age | kms | Client Info | | 368245 | --- | --- |
| Oil Age | kms | Client Info | | 13679 | --- | --- |
| Filter Age | kms | Client Info | | 13679 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | SEVERE | --- | --- |
| PQ | | ASTM D8184* | | 0 | --- | --- |
| Iron | ppm | ASTM D5185(m) | >75 | ▲ 128 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >5 | 5 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >15 | 6 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >25 | 4 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >100 | 3 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >4 | <1 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silicon | ppm | ASTM D5185(m) | >25 | 17 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 3 | --- | --- |
| Fuel | % | ASTM D7593* | >3.0 | ▲ 12.7 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | ASTM D7844* | >6 | 1.6 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 23.6 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 38.7 | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | 12 | --- | --- |
| Boron | ppm | ASTM D5185(m) | | 3 | --- | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | 70 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | 1 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | 280 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | 1565 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | 723 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | 873 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | 2139 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 49.8 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | | 11.5 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : CU0021768 **Received** : 31 May 2024
Lab Number : **02639134** **Tested** : 03 Jun 2024
Unique Number : 5788296 **Diagnosed** : 03 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, PQ)

CUMMINS DIESEL
 50 SIMMONDS DRIVE
 DARTMOUTH, NS
 CA B3B 1R3
 Contact: Stephen Hulse
 stephen.hulse@cummins.com
 T: (782)409-4641
 F: (902)468-5177

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.