

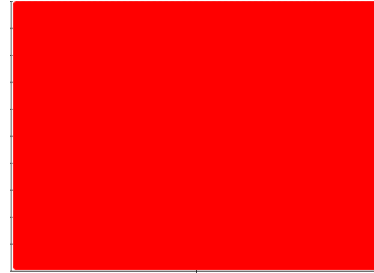


OIL ANALYSIS REPORT

Sample Rating Trend

GLYCOL

Area
[132670]
 Machine Id
NO UNIT CU0021747
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. NOTE: Test values may be asked due high concentration of free water present in sample.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Test for glycol is positive. Light fuel dilution occurring. There is a high concentration of glycol present in the oil. There is a high concentration of water present in the oil. Free water present.

Fluid Condition

The white residue present in the sample is oil additive precipitate. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	CU0021747	---	---
Sample Date	Client Info	10 Oct 2023	---	---
Machine Age	hrs Client Info	60	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		SEVERE	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185(m)	>100	10	---	---
Chromium ppm ASTM D5185(m)	>20	<1	---	---
Nickel ppm ASTM D5185(m)	>4	<1	---	---
Titanium ppm ASTM D5185(m)		0	---	---
Silver ppm ASTM D5185(m)	>3	<1	---	---
Aluminum ppm ASTM D5185(m)	>20	3	---	---
Lead ppm ASTM D5185(m)	>40	2	---	---
Copper ppm ASTM D5185(m)	>330	7	---	---
Tin ppm ASTM D5185(m)	>15	<1	---	---
Antimony ppm ASTM D5185(m)		0	---	---
Vanadium ppm ASTM D5185(m)		0	---	---
Beryllium ppm ASTM D5185(m)		0	---	---
Cadmium ppm ASTM D5185(m)		0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185(m)	250	12	---	---
Barium ppm ASTM D5185(m)	10	2	---	---
Molybdenum ppm ASTM D5185(m)	100	0	---	---
Manganese ppm ASTM D5185(m)		1	---	---
Magnesium ppm ASTM D5185(m)	450	12	---	---
Calcium ppm ASTM D5185(m)	3000	2749	---	---
Phosphorus ppm ASTM D5185(m)	1150	987	---	---
Zinc ppm ASTM D5185(m)	1350	1133	---	---
Sulfur ppm ASTM D5185(m)	4250	3569	---	---
Lithium ppm ASTM D5185(m)		<1	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185(m)	>25	30	---	---
Sodium ppm ASTM D5185(m)	>158	6	---	---
Potassium ppm ASTM D5185(m)	>20	7	---	---
Fuel % ASTM D7593*	>5	1.3	---	---
Glycol % ASTM D7922*		0.133	---	---

INFRA-RED

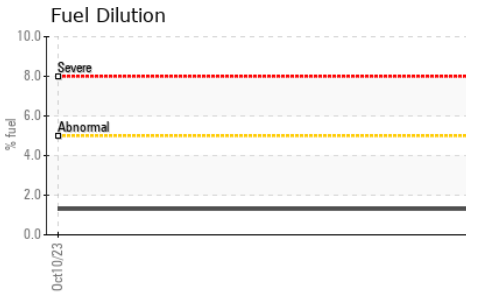
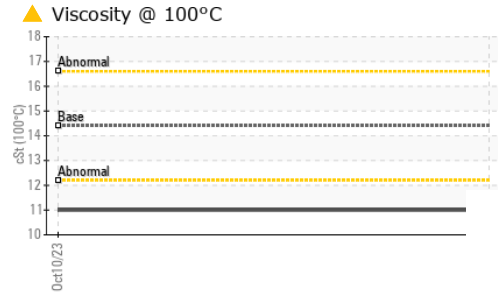
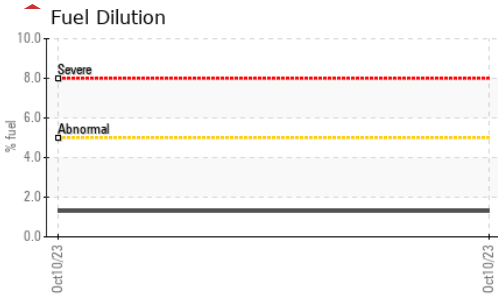
method	limit/base	current	history1	history2
Soot % ASTM D7844*	>3	0	---	---
Nitration Abs/cm ASTM D7624*	>20	4.8	---	---
Sulfation Abs/.1mm ASTM D7415*	>30	16.7	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation Abs/.1mm ASTM D7414*	>25	12.1	---	---



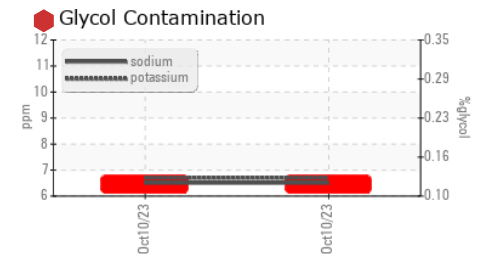
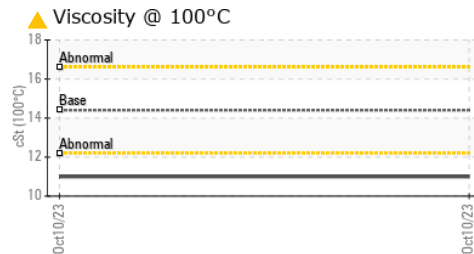
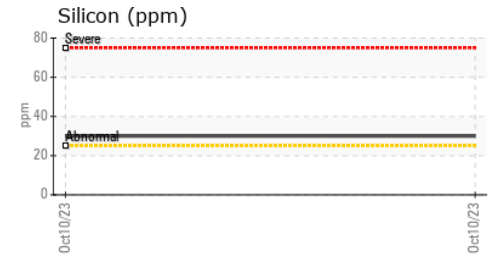
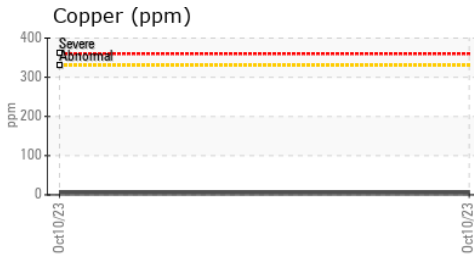
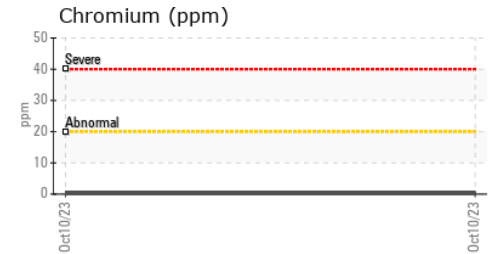
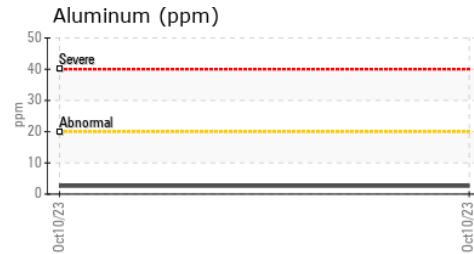
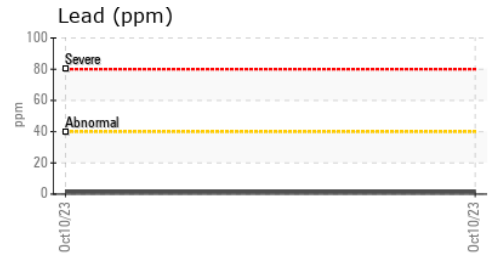
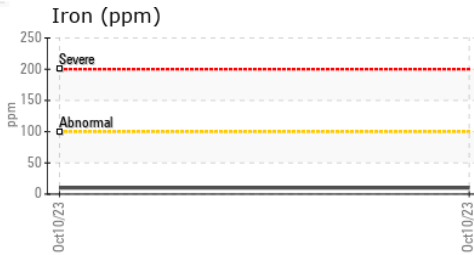
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	---	---
Precipitate	scalar	Visual*	NONE	---	---
Silt	scalar	Visual*	NONE	---	---
Debris	scalar	Visual*	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	---	---
Appearance	scalar	Visual*	NORML	---	---
Odor	scalar	Visual*	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	---	---
Free Water	scalar	Visual*		---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : CU0021747 **Received** : 17 Oct 2023
Lab Number : 02589553 **Diagnosed** : 18 Oct 2023
Unique Number : 5658619 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Bottom, FuelDilution, Glycol, PercentFuel, Visual)

CUMMINS DIESEL
 50 SIMMONDS DRIVE
 DARTMOUTH, NS
 CA B3B 1R3
 Contact: Maurice Connolly
 maurice.connolly@cummins.com
 T: (902)468-7938
 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.