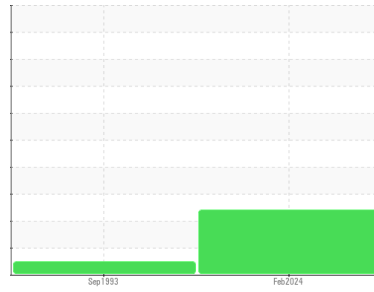




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
CUMMINS L-10 43

Component
Diesel Engine

Fluid
ESSO XD-3 EXTRA 10W30 (38 LTR)

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. Oil and filter change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

▲ Wear

Aluminum ppm levels are abnormal. Piston wear is indicated.

▲ Contamination

There is a moderate concentration of dirt present in the oil. High amount of ingressed dirt has caused abrasive wear to the component.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0864600	WC00219967	---
Sample Date	Client Info			28 Feb 2024	08 Sep 1993	---
Machine Age	kms	Client Info		190540	208432	---
Oil Age	kms	Client Info		500	8527	---
Oil Changed	Client Info			Changed	---	---
Sample Status				ABNORMAL	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	---
Water	WC Method	>0.2		NEG	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	40	19	---
Chromium	ppm	ASTM D5185(m)	>20	3	<1	---
Nickel	ppm	ASTM D5185(m)	>4	4	0	---
Titanium	ppm	ASTM D5185(m)		1	---	---
Silver	ppm	ASTM D5185(m)	>3	0	0	---
Aluminum	ppm	ASTM D5185(m)	>20	▲ 29	2	---
Lead	ppm	ASTM D5185(m)	>40	6	10	---
Copper	ppm	ASTM D5185(m)	>330	3	6	---
Tin	ppm	ASTM D5185(m)	>15	<1	0	---
Antimony	ppm	ASTM D5185(m)		0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
Beryllium	ppm	ASTM D5185(m)		0	---	---
Cadmium	ppm	ASTM D5185(m)		0	---	---

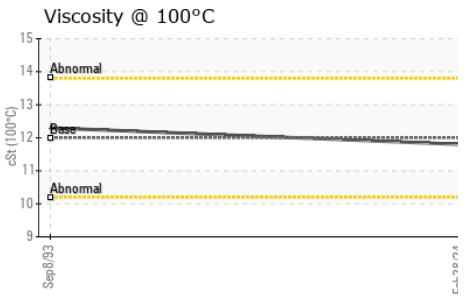
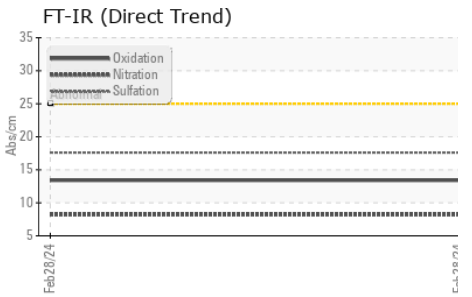
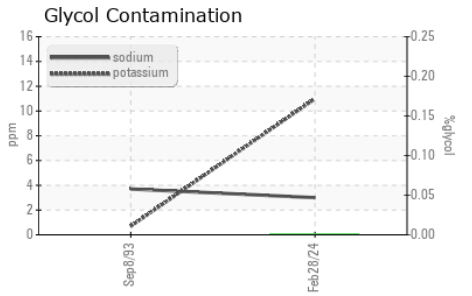
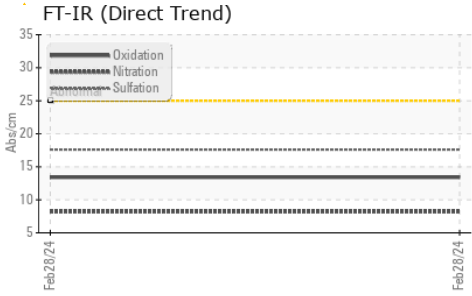
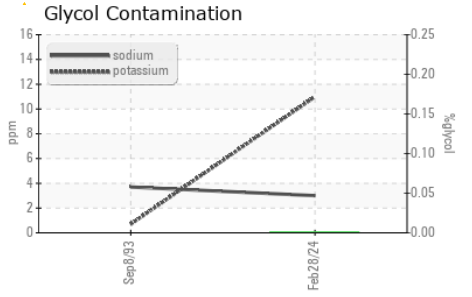
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		72	2	---
Barium	ppm	ASTM D5185(m)		<1	---	---
Molybdenum	ppm	ASTM D5185(m)		100	159	---
Manganese	ppm	ASTM D5185(m)		<1	---	---
Magnesium	ppm	ASTM D5185(m)		60	12	---
Calcium	ppm	ASTM D5185(m)	2360	2519	1955	---
Phosphorus	ppm	ASTM D5185(m)	1110	1009	692	---
Zinc	ppm	ASTM D5185(m)	1220	1118	894	---
Sulfur	ppm	ASTM D5185(m)		3181	---	---
Lithium	ppm	ASTM D5185(m)		<1	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	▲ 58	4	---
Sodium	ppm	ASTM D5185(m)		3	4	---
Potassium	ppm	ASTM D5185(m)	>20	11	<1	---
Glycol	%	ASTM D7922*		0.0	NEG	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0	---	---
Nitration	Abs/cm	ASTM D7624*	>20	8.2	---	---
Sulfation	Abs./1mm	ASTM D7415*	>30	17.6	---	---



OIL ANALYSIS REPORT

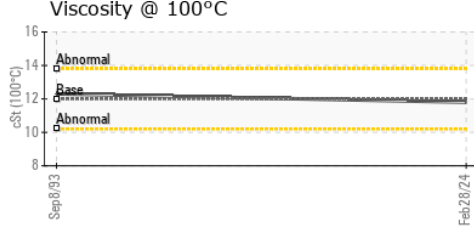
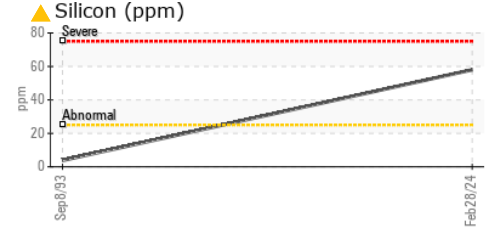
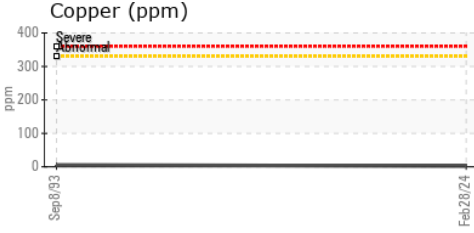
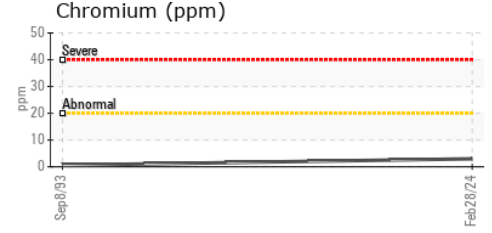
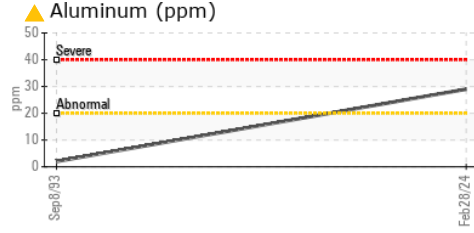
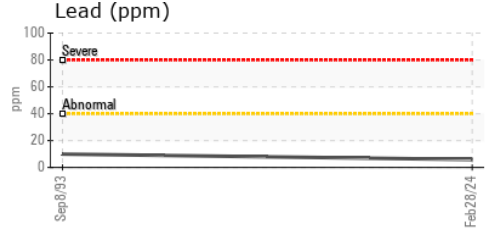
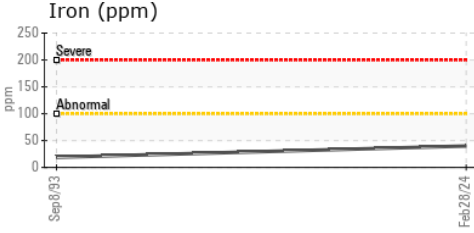


FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	13.4	---

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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	12.0	11.8	12.3

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0864600 **Received** : 16 Apr 2024
Lab Number : 02629159 **Tested** : 17 Apr 2024
Unique Number : 5762291 **Diagnosed** : 17 Apr 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, Visual)

COLACEM CANADA INC
 56 RUE LONGUEUIL CP 301
 L'ORIGINAL, ON
 CA K0B 1K0
 Contact: Gabriel Parent
 gparent@colacem.ca

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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