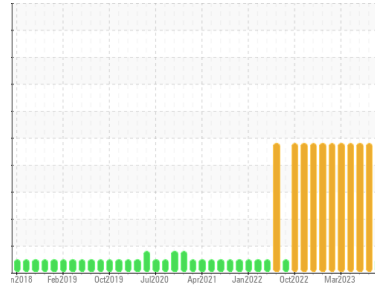




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CUMMINS 236

Component
Rear Diesel Engine

Fluid
ESSO XD-3 EXTRA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Test for glycol is negative. There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0866456	WC0816424	WC0816569
Sample Date	Client Info			18 Oct 2023	03 Sep 2023	05 Jul 2023
Machine Age	kms	Client Info		0	0	0
Oil Age	kms	Client Info		10519	9531	10249
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method		>3.0	<1.0	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	10	11	16
Chromium	ppm	ASTM D5185(m)	>20	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	3	4
Lead	ppm	ASTM D5185(m)	>40	<1	0	<1
Copper	ppm	ASTM D5185(m)	>330	37	10	14
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		18	12	10
Barium	ppm	ASTM D5185(m)		<1	0	0
Molybdenum	ppm	ASTM D5185(m)		<1	3	10
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		17	37	137
Calcium	ppm	ASTM D5185(m)	3780	2176	2052	1977
Phosphorus	ppm	ASTM D5185(m)	1370	906	887	890
Zinc	ppm	ASTM D5185(m)	1500	1094	1071	1056
Sulfur	ppm	ASTM D5185(m)	3800	2830	2751	2754
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

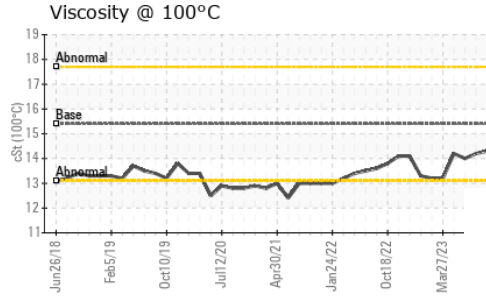
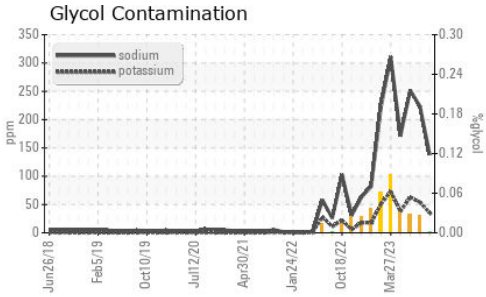
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	8	9	9
Sodium	ppm	ASTM D5185(m)	>192	138	▲ 223	▲ 252
Potassium	ppm	ASTM D5185(m)	>20	35	▲ 54	▲ 63
Glycol	%	ASTM D7922*		0.0	▲ 0.025	▲ 0.028

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	0.2	0.2	0.3
Nitration	Abs/cm	ASTM D7624*	>20	9.5	9.7	10.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.7	25.4	25.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.7	22.8	24.5



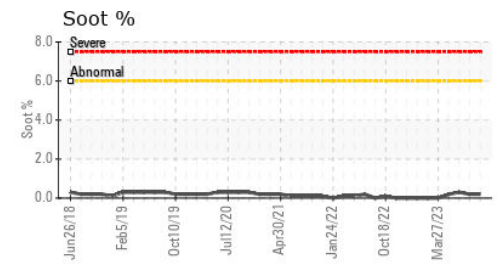
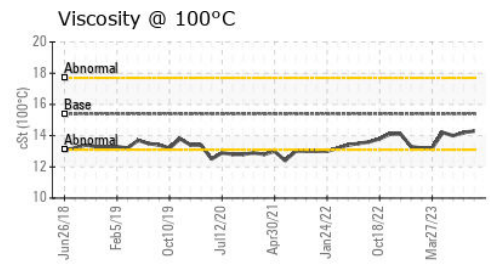
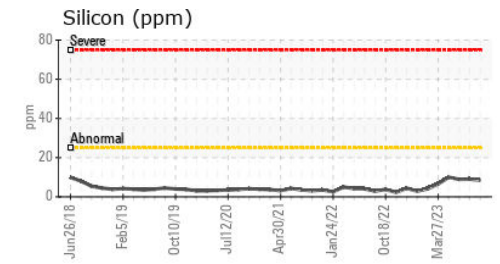
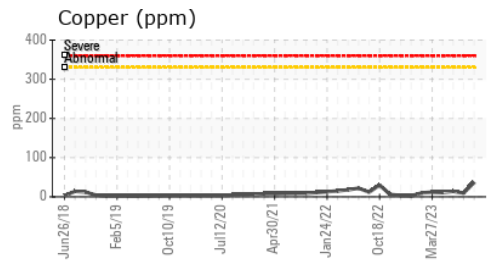
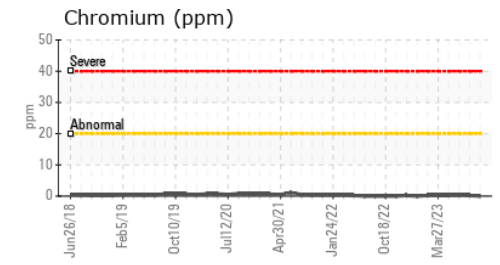
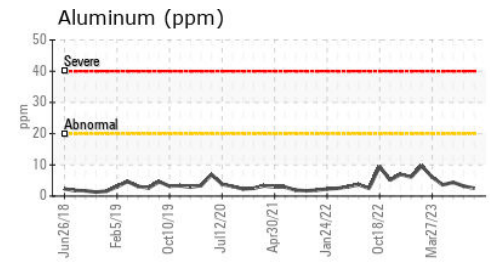
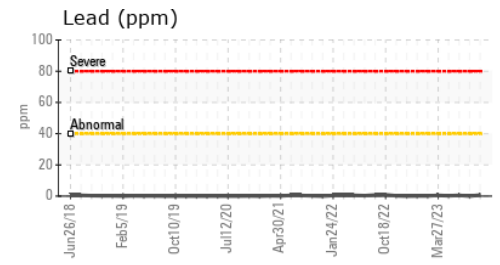
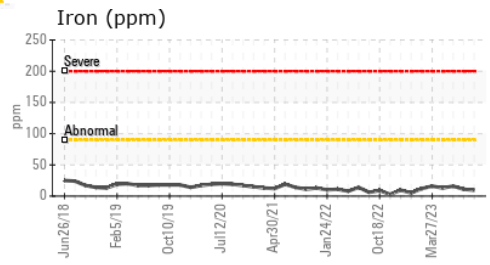
OIL ANALYSIS REPORT



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	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.3	14.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0866456 **Received** : 25 Oct 2023
Lab Number : 02591687 **Diagnosed** : 25 Oct 2023
Unique Number : 5668766 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol, Visual)

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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.