



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ATTENTION

Machine Id
CUMMINS 236
Component
Rear Diesel Engine
Fluid
ESSO XD-3 EXTRA 15W40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: Test values may be askew due high concentration of free water present in sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0889099	WC0889181	WC0866456
Sample Date		Client Info		16 Jan 2024	28 Dec 2023	18 Oct 2023
Machine Age	kms	Client Info		0	0	0
Oil Age	kms	Client Info		1915	9294	10519
Filter Age	kms	Client Info		1915	9294	10519
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	4	10	10
Chromium	ppm	ASTM D5185(m)	>20	0	<1	0
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	5	2
Lead	ppm	ASTM D5185(m)	>40	4	2	<1
Copper	ppm	ASTM D5185(m)	>330	148	87	37
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

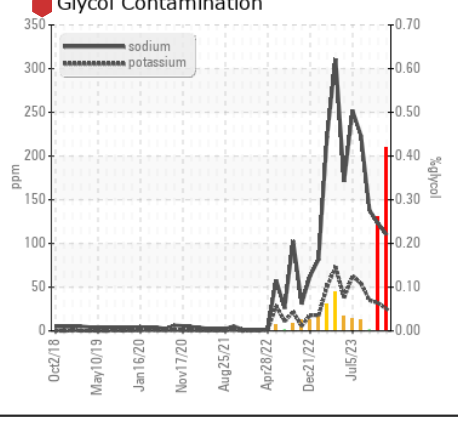
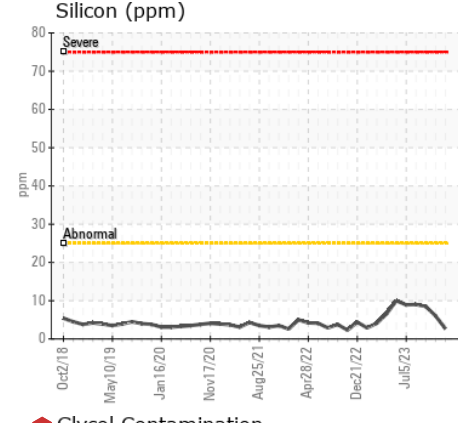
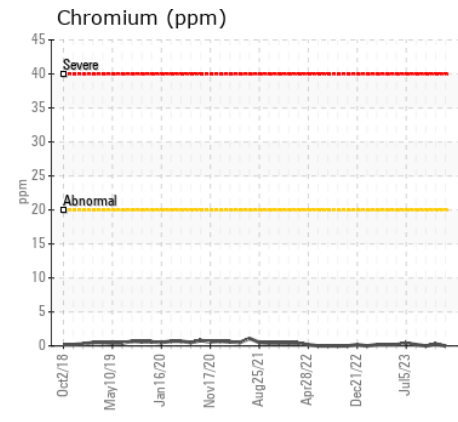
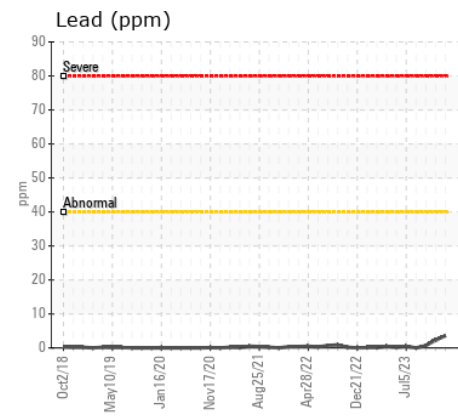
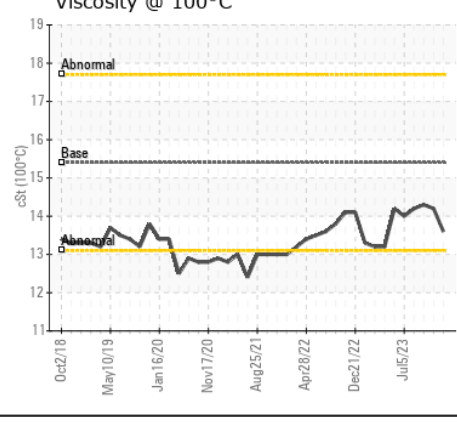
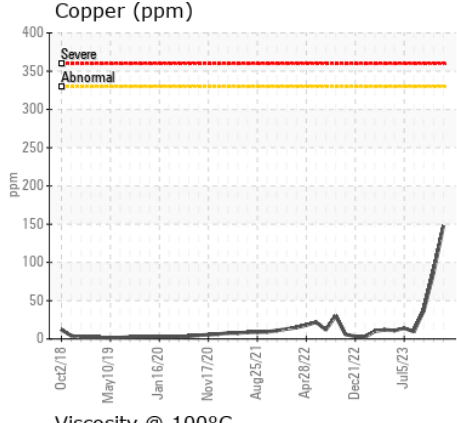
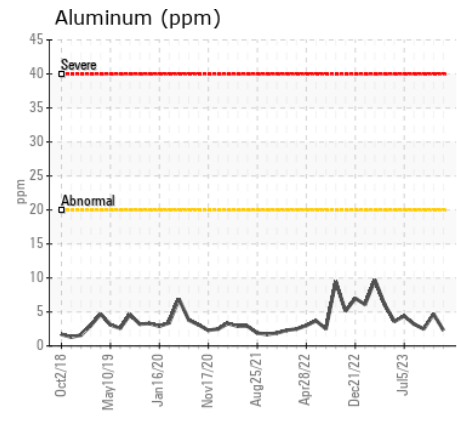
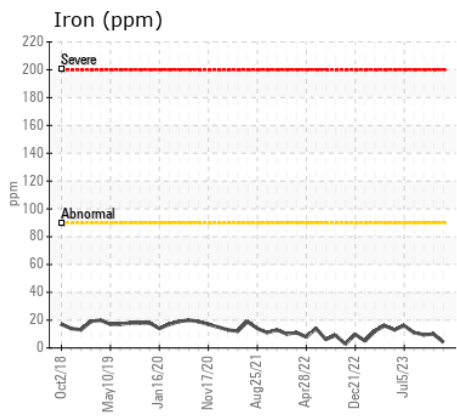
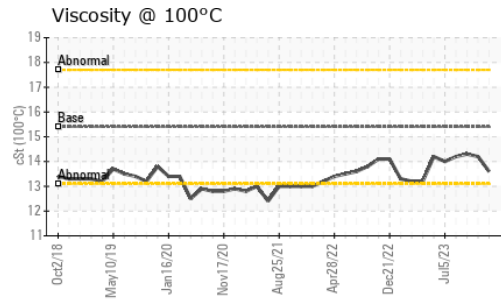
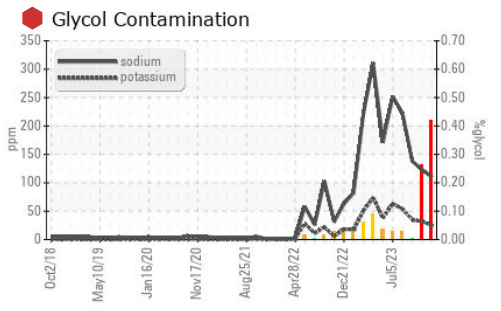
Test for glycol is positive. There is a high concentration of glycol present in the oil. There is a high concentration of water present in the oil. Excessive free water present.

Silicon	ppm	ASTM D5185(m)	>25	3	6	8
Potassium	ppm	ASTM D5185(m)	>20	▲ 25	▲ 32	35
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		● 0.419	● 0.261	0.0
Soot %	%	ASTM D7844*	>6	0	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	6.7	9.8	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.1	23.3	23.7
Emulsified Water	scalar	Visual*	>0.2	▲ .2%	▲ .2%	NEG

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)	>192	▲ 110	▲ 123	138
Boron	ppm	ASTM D5185(m)		58	28	18
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		1	<1	<1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		22	17	17
Calcium	ppm	ASTM D5185(m)	3780	1953	2020	2176
Phosphorus	ppm	ASTM D5185(m)	1370	958	945	906
Zinc	ppm	ASTM D5185(m)	1500	1092	1111	1094
Sulfur	ppm	ASTM D5185(m)	3800	3026	2909	2830
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.1	18.1	21.7
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.6	14.2	14.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0889099 **Received** : 19 Jan 2024
Lab Number : 02609877 **Diagnosed** : 22 Jan 2024
Unique Number : 5710963 **Diagnostician** : Kevin Marson
Test Package : MOB 1

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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.