



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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0889181	WC0866456	WC0816424
Sample Date		Client Info		28 Dec 2023	18 Oct 2023	03 Sep 2023
Machine Age	kms	Client Info		0	0	0
Oil Age	kms	Client Info		9294	10519	9531
Filter Age	kms	Client Info		9294	10519	9531
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	10	10	11
Chromium	ppm	ASTM D5185(m)	>20	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	5	2	3
Lead	ppm	ASTM D5185(m)	>40	2	<1	0
Copper	ppm	ASTM D5185(m)	>330	87	37	10
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

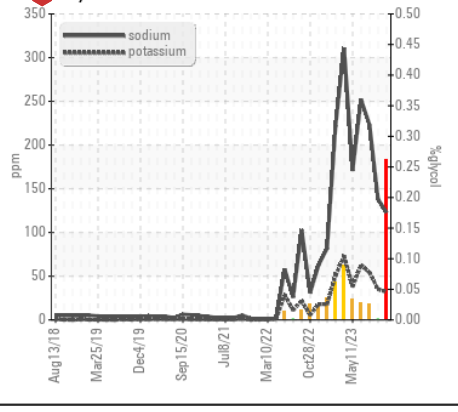
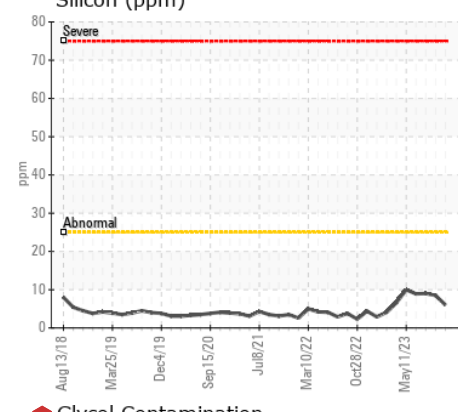
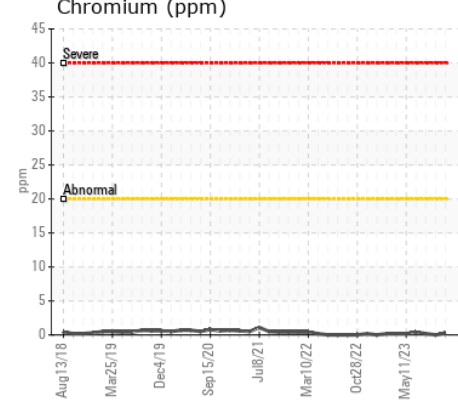
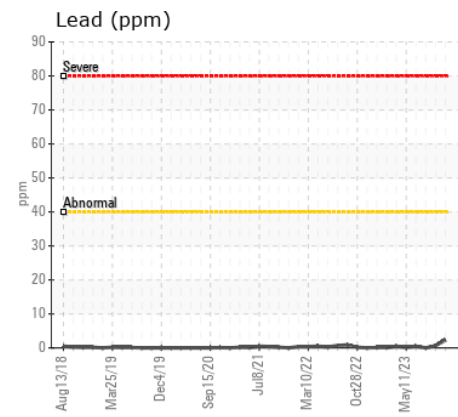
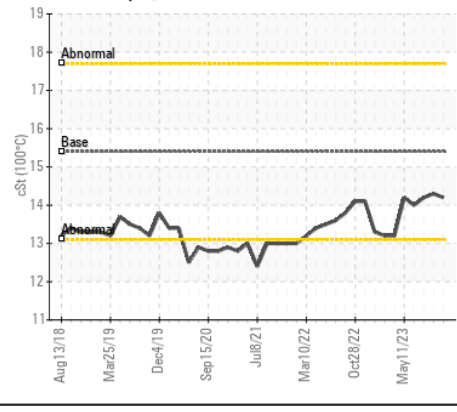
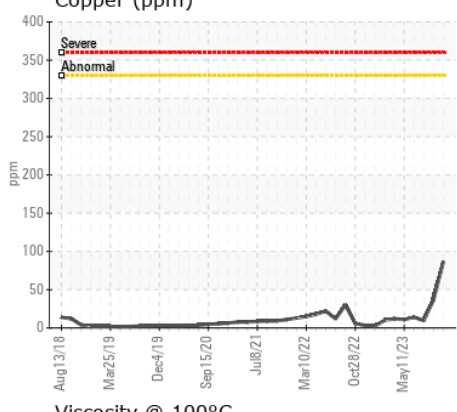
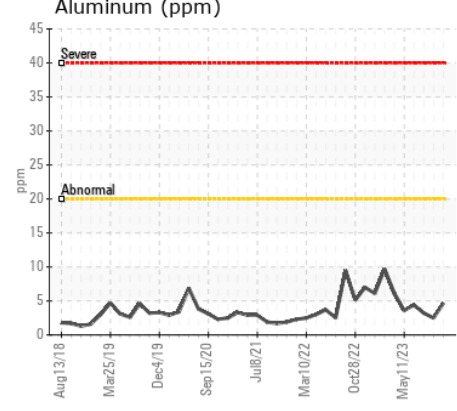
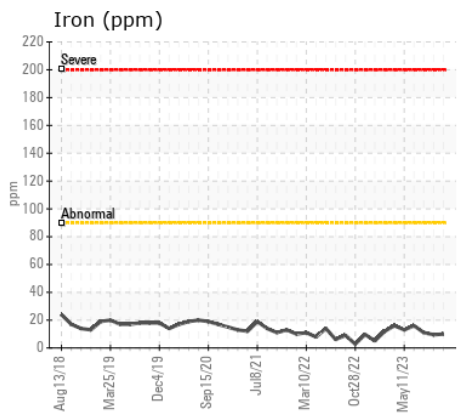
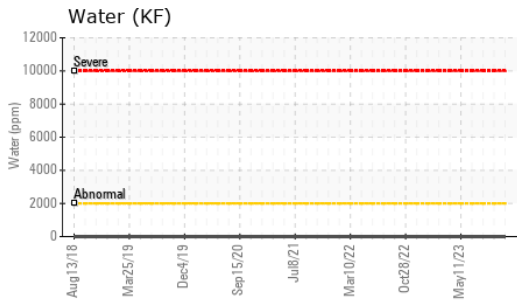
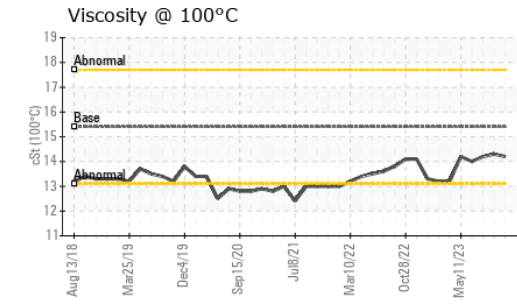
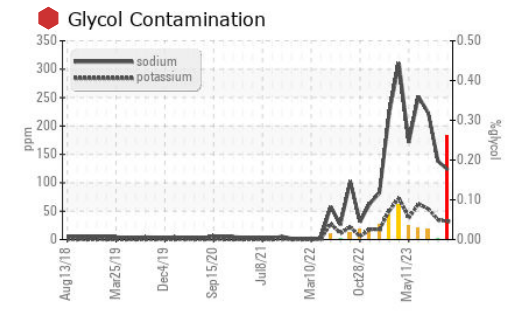
Test for glycol is positive. There is a high concentration of glycol present in the oil. There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185(m)	>25	6	8	9
Potassium	ppm	ASTM D5185(m)	>20	▲ 32	35	▲ 54
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water	%	ASTM D6304*	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		◆ 0.261	0.0	▲ 0.025
Soot %	%	ASTM D7844*	>6	0.2	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	9.8	9.5	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.3	23.7	25.4
Emulsified Water	scalar	Visual*	>0.2	▲ .2%	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)	>192	▲ 123	138	▲ 223
Boron	ppm	ASTM D5185(m)		28	18	12
Barium	ppm	ASTM D5185(m)		0	<1	0
Molybdenum	ppm	ASTM D5185(m)		<1	<1	3
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)		17	17	37
Calcium	ppm	ASTM D5185(m)	3780	2020	2176	2052
Phosphorus	ppm	ASTM D5185(m)	1370	945	906	887
Zinc	ppm	ASTM D5185(m)	1500	1111	1094	1071
Sulfur	ppm	ASTM D5185(m)	3800	2909	2830	2751
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.1	21.7	22.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.2	14.3	14.2



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0889181 **Received** : 12 Jan 2024
Lab Number : 02608502 **Diagnosed** : 15 Jan 2024
Unique Number : 5709588 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol, KF)

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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.