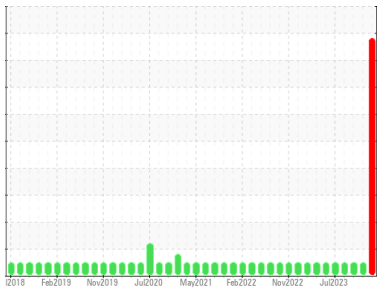
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
CUMMINS 234
Component
Rear Diesel Engine
Fluid
ESSO XD-3 EXTRA 15W40 (--- GAL)

DIAGNOSIS

▲ 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.

Wear
All component wear rates are normal.

▲ 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. Free water present.

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0889030**	WC0889191	WC0866498
Sample Date		Client Info		**14 Mar 2024**	23 Jan 2024	29 Nov 2023
Machine Age	kms	Client Info		**0**	0	0
Oil Age	kms	Client Info		**9167**	9960	9526
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	**6**	5	6
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>2	**0**	<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	**1**	2	1
Lead	ppm	ASTM D5185(m)	>40	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>330	**3**	2	4
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)		**104**	111	113
Barium	ppm	ASTM D5185(m)		**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)		**0**	<1	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**15**	13	12
Calcium	ppm	ASTM D5185(m)	3780	**2128**	2243	2150
Phosphorus	ppm	ASTM D5185(m)	1370	**920**	953	933
Zinc	ppm	ASTM D5185(m)	1500	**1147**	1177	1133
Sulfur	ppm	ASTM D5185(m)	3800	**2802**	3059	2841
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**3**	2	3
Sodium	ppm	ASTM D5185(m)	>192	**19**	2	2
Potassium	ppm	ASTM D5185(m)	>20	▲ **12**	5	5
Glycol	%	ASTM D7922*		▲ **>.70**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.2**	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	**9.7**	8.3	8.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	**22.0**	22.2	22.6

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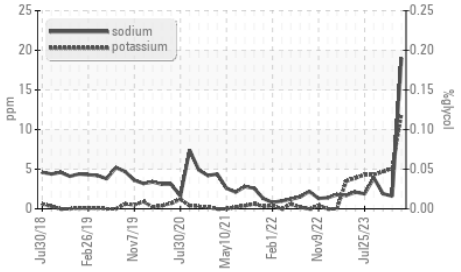
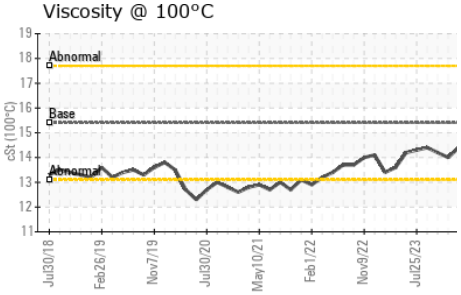
▲ Glycol Contamination



Viscosity @ 100°C



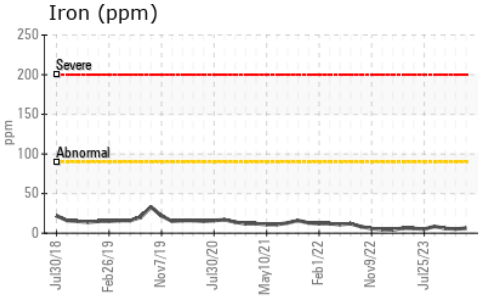
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.4**	18.3	19.8

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	▲ **.5%**	NEG	NEG
Free Water	scalar	Visual*		▲ **5%**	NEG	NEG

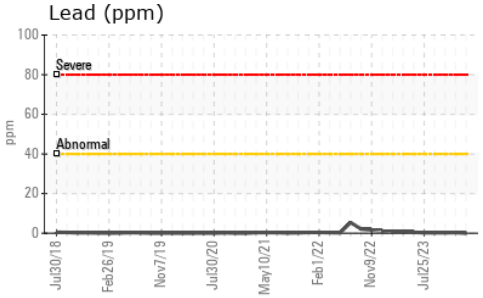
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**14.4**	14.0	14.2

GRAPHS

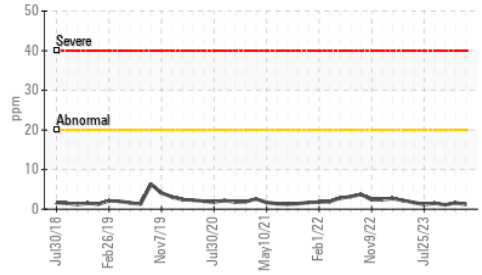
Iron (ppm)



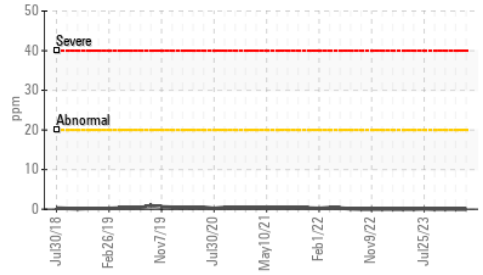
Lead (ppm)



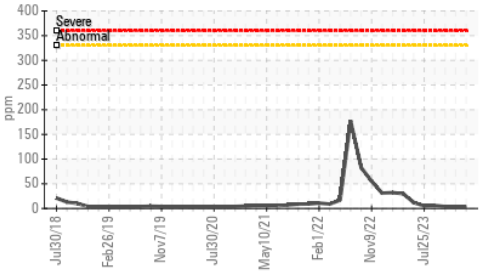
Aluminum (ppm)



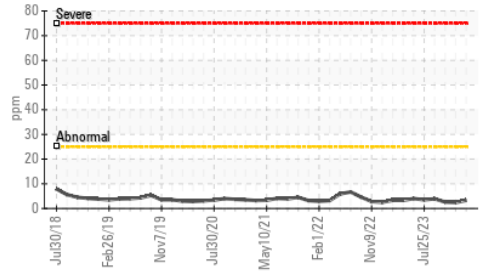
Chromium (ppm)



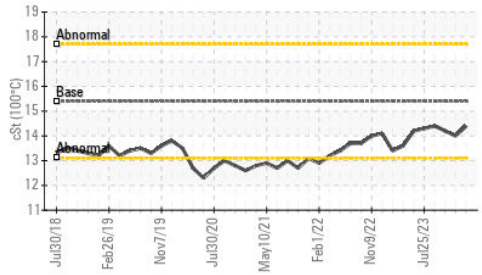
Copper (ppm)



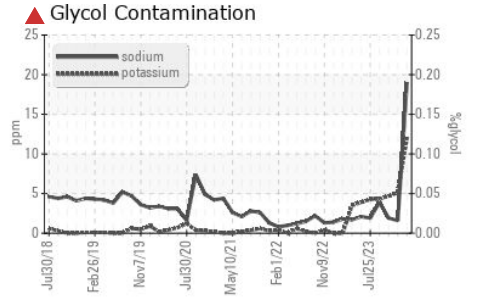
Silicon (ppm)



Viscosity @ 100°C



▲ Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0889030 **Received** : 27 Mar 2024
Lab Number : 02624915 **Tested** : 27 Mar 2024
Unique Number : 5750034 **Diagnosed** : 27 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: Glycol)

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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