



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
CUMMINS 234
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		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
Filter Age	kms	Client Info		9167	9960	9526
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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
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. Free water present.

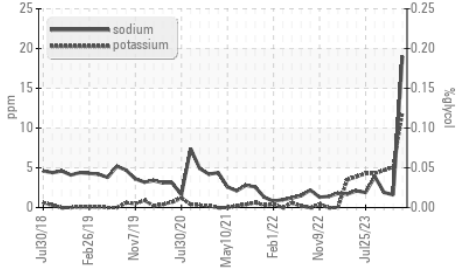
Silicon	ppm	ASTM D5185(m)	>25	3	2	3
Potassium	ppm	ASTM D5185(m)	>20	▲ 12	5	5
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	ASTM D7922*		▲ >.70	NEG	NEG
Soot %	%	ASTM D7844*	>6	0.2	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	9.7	8.3	8.4
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.0	22.2	22.6
Emulsified Water	scalar	Visual*	>0.2	▲ .5%	NEG	NEG

FLUID CONDITION

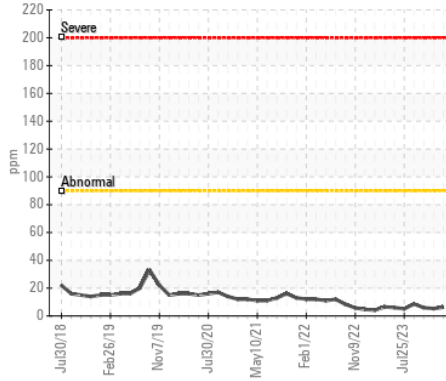
The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)	>192	19	2	2
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
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.4	18.3	19.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.4	14.0	14.2

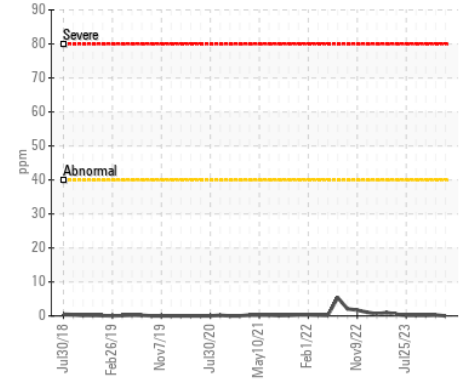
▲ Glycol Contamination



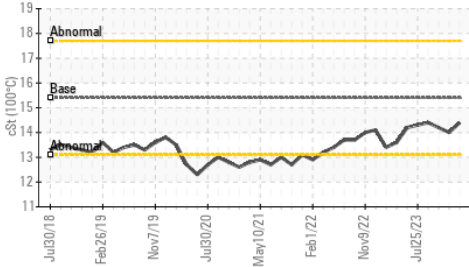
Iron (ppm)



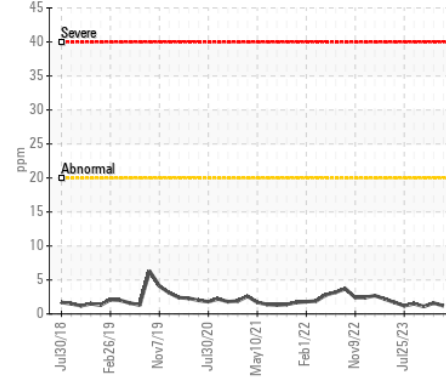
Lead (ppm)



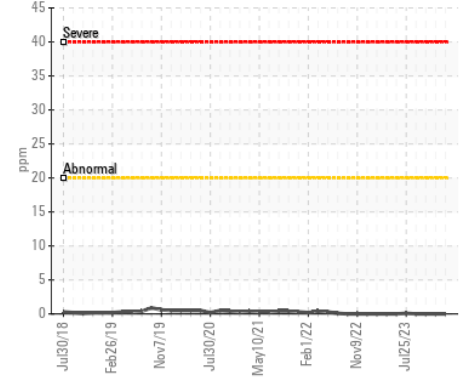
Viscosity @ 100°C



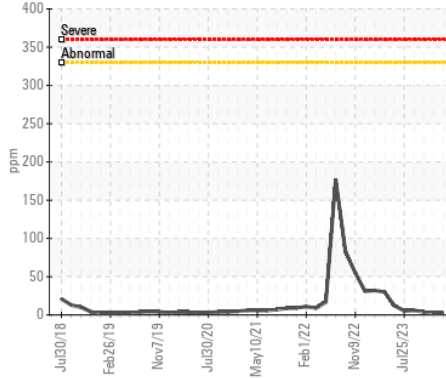
Aluminum (ppm)



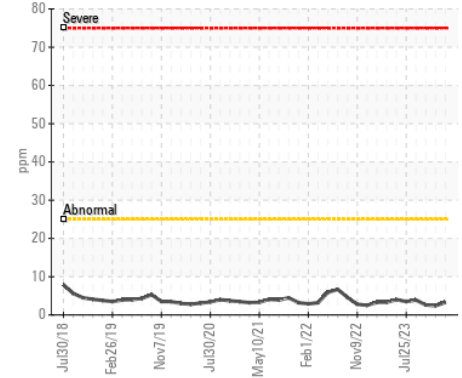
Chromium (ppm)



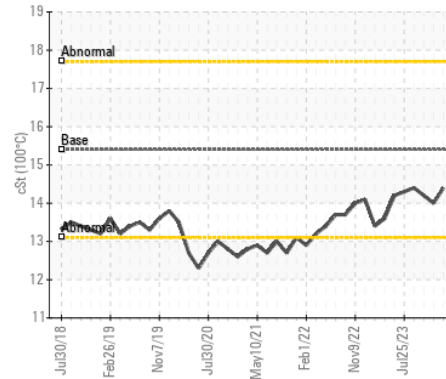
Copper (ppm)



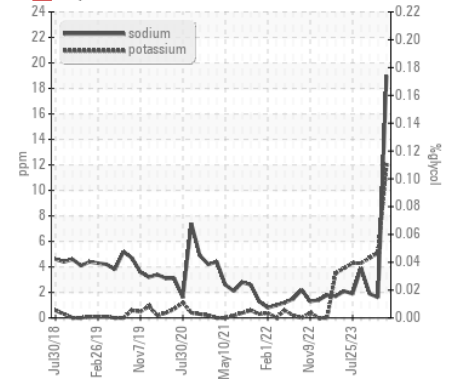
Silicon (ppm)



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)

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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.