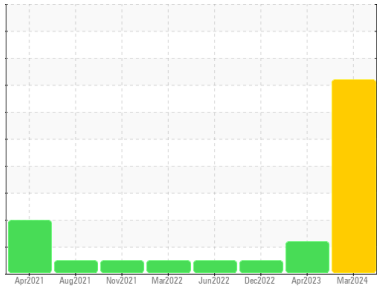
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
7431
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

▲ Wear
Aluminum ppm levels are severe. Piston wear is indicated.

▲ Contamination
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

▲ Fluid Condition
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0853468**	WC0796358	WC0702863
Sample Date		Client Info		**08 Mar 2024**	15 Apr 2023	24 Dec 2022
Machine Age	kms	Client Info		**156731**	99405	111890
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**SEVERE**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>130	**43**	58	20
Chromium	ppm	ASTM D5185(m)	>10	**<1**	2	<1
Nickel	ppm	ASTM D5185(m)	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	<1	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	▲ **30**	60	25
Lead	ppm	ASTM D5185(m)	>20	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>125	**2**	3	1
Tin	ppm	ASTM D5185(m)	>4	**0**	<1	0
Antimony	ppm	ASTM D5185(m)		**0**	<1	<1
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)	250	**51**	32	63
Barium	ppm	ASTM D5185(m)	10	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	100	**15**	4	4
Manganese	ppm	ASTM D5185(m)		**0**	1	<1
Magnesium	ppm	ASTM D5185(m)	450	**714**	735	727
Calcium	ppm	ASTM D5185(m)	3000	**1295**	1407	1385
Phosphorus	ppm	ASTM D5185(m)	1150	**671**	748	738
Zinc	ppm	ASTM D5185(m)	1350	**757**	780	767
Sulfur	ppm	ASTM D5185(m)	4250	**2354**	2557	2567
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**5**	10	7
Sodium	ppm	ASTM D5185(m)	>158	**3**	4	3
Potassium	ppm	ASTM D5185(m)	>20	**24**	60	30
Fuel	%	ASTM D7593*	>3.0	▲ **3.6**	▲ 2.9	<1.0
Glycol	%	ASTM D7922*		**0.0**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.5**	0.7	0.2
Nitration	Abs/cm	ASTM D7624*	>20	**13.0**	12.8	10.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**24.3**	24.9	21.5

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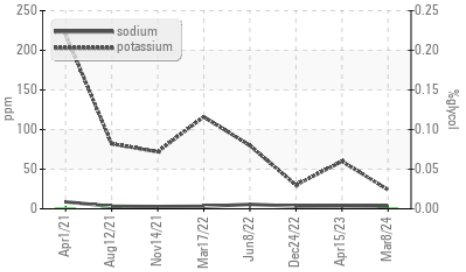
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**22.1**	21.7	16.6

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

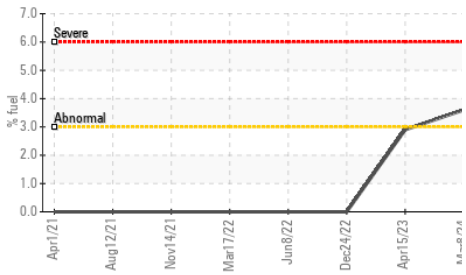
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ **11.0**	▲ 10.8	10.9

GRAPHS

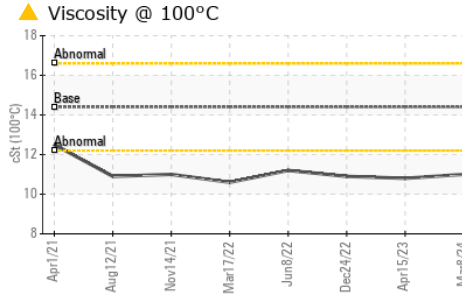
Glycol Contamination



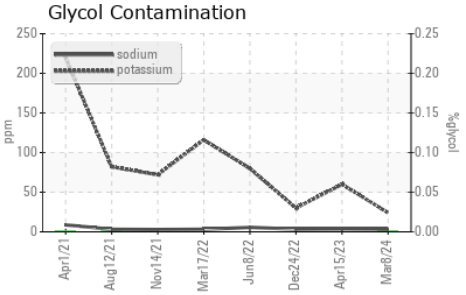
▲ Fuel Dilution



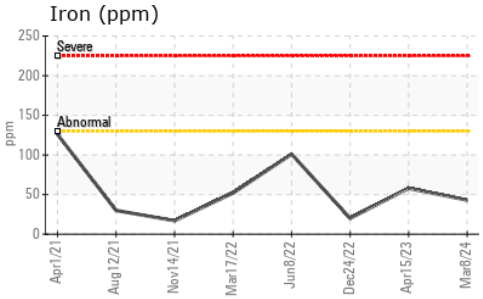
▲ Viscosity @ 100°C



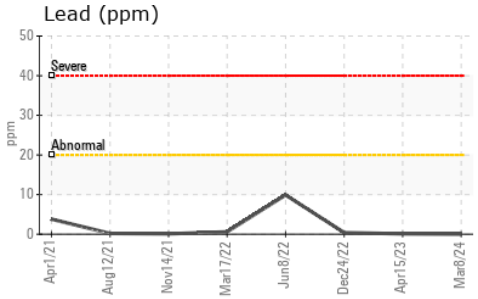
Glycol Contamination



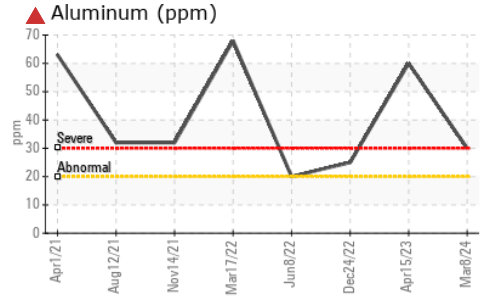
Iron (ppm)



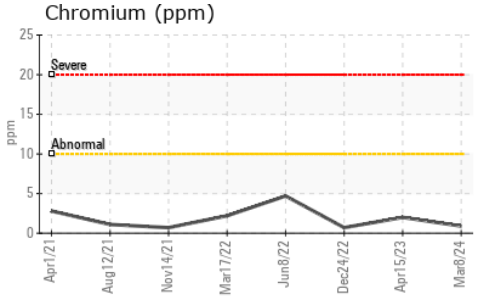
Lead (ppm)



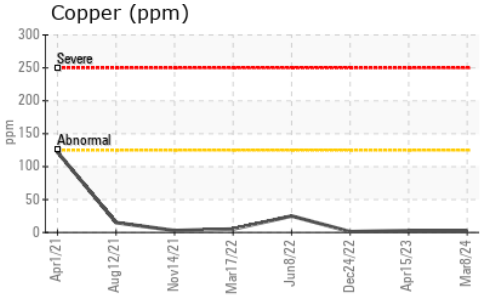
▲ Aluminum (ppm)



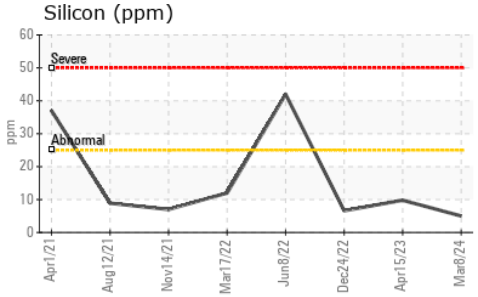
Chromium (ppm)



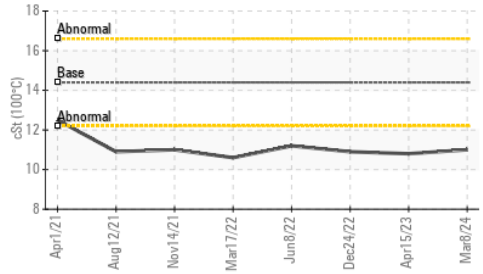
Copper (ppm)



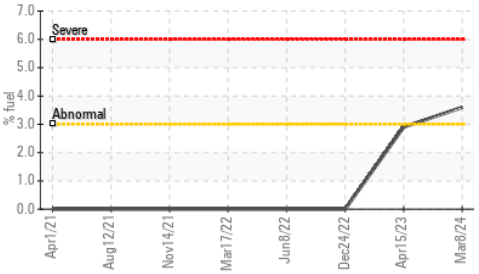
Silicon (ppm)



▲ Viscosity @ 100°C



▲ Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0853468 **Received** : 26 Mar 2024
Lab Number : 02624541 **Tested** : 28 Mar 2024
Unique Number : 5749660 **Diagnosed** : 28 Mar 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FUELDILUTION, Glycol, PercentFuel)

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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