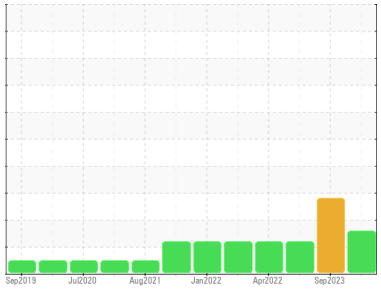
OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION

Area
[72823726]
Machine Id
9472
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check for faulty combustion and a possible overheat condition. We recommend that you drain the oil from the component if this has not already been done. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
All component wear rates are normal.

Contamination
There is an abnormal level of sulfation indicated.

Fluid Condition
A small degree of oil oxidation was indicated. The oil is no longer serviceable.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0853191**	WC0853381	WC0738003
Sample Date		Client Info		**06 Jan 2024**	16 Sep 2023	08 Oct 2022
Machine Age	kms	Client Info		**0**	435384	357195
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Changed	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	▲ 1.5
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	**40**	▲ 95	18
Chromium	ppm	ASTM D5185(m)	>20	**2**	4	<1
Nickel	ppm	ASTM D5185(m)	>2	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	**4**	10	5
Lead	ppm	ASTM D5185(m)	>40	**6**	8	3
Copper	ppm	ASTM D5185(m)	>330	**4**	10	2
Tin	ppm	ASTM D5185(m)	>15	**<1**	1	<1
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)	250	**28**	19	29
Barium	ppm	ASTM D5185(m)	10	**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)	100	**2**	4	3
Manganese	ppm	ASTM D5185(m)		**<1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	**684**	753	711
Calcium	ppm	ASTM D5185(m)	3000	**1241**	1413	1396
Phosphorus	ppm	ASTM D5185(m)	1150	**643**	711	745
Zinc	ppm	ASTM D5185(m)	1350	**721**	842	802
Sulfur	ppm	ASTM D5185(m)	4250	**2403**	2434	2574
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**6**	7	4
Sodium	ppm	ASTM D5185(m)		**3**	5	3
Potassium	ppm	ASTM D5185(m)	>20	**4**	26	13

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	**0.4**	0.7	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**14.9**	16.6	10.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	▲ **31.5**	▲ 33.5	23.8

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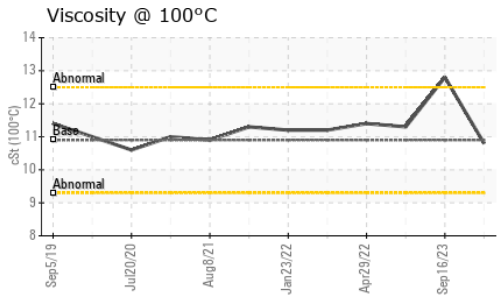
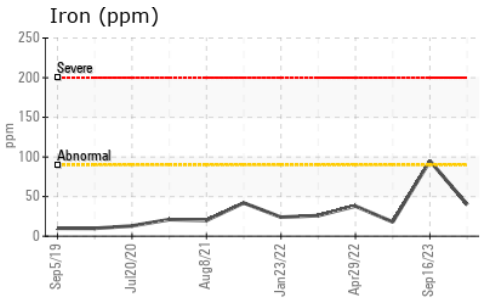


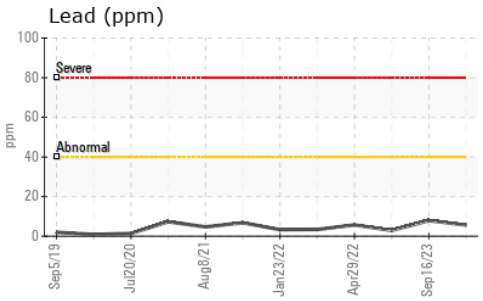
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	▲ **35.6**	▲ 37.9	20.2

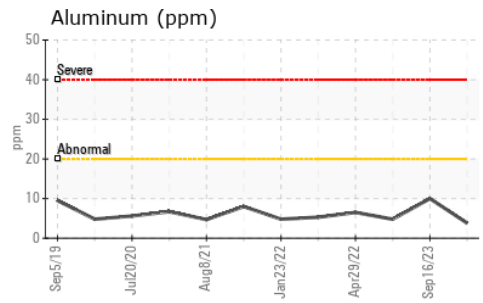
VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

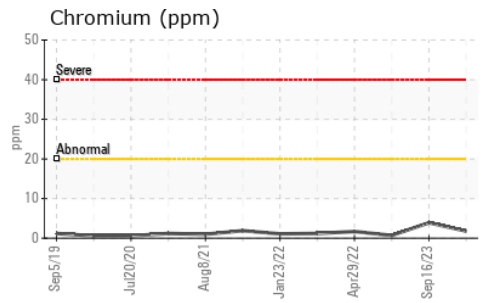
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	**10.8**	▲ 12.8	▲ 11.3

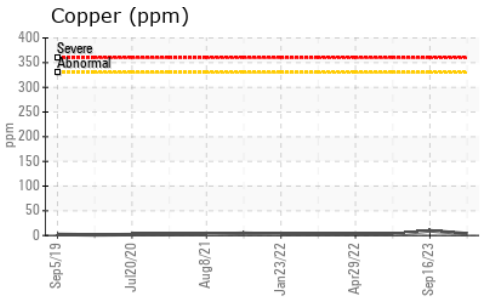
GRAPHS

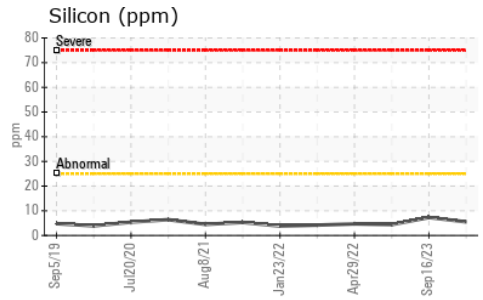


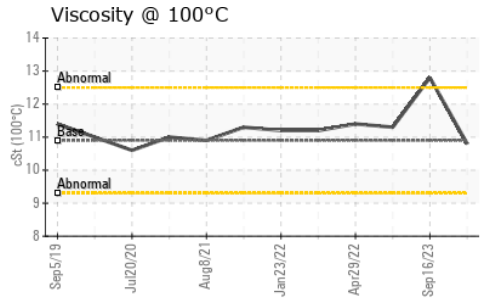


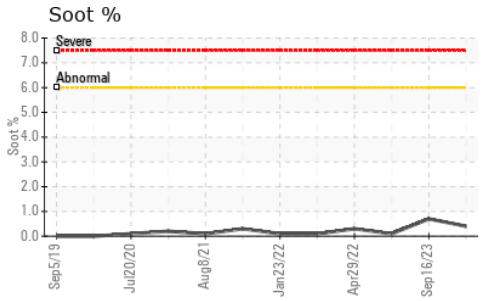












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0853191
Lab Number : 02607436
Unique Number : 5708522
Test Package : MOB 1
Recieved : 09 Jan 2024
Diagnosed : 10 Jan 2024
Diagnostician : Kevin Marson

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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