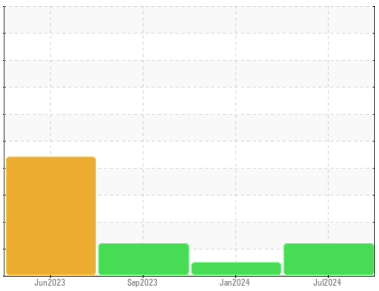
OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
RONI
Machine Id
386
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
All component wear rates are normal.

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

Fluid Condition
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0932677**	WC0888479	LH0275164
Sample Date		Client Info		**04 Jul 2024**	10 Jan 2024	23 Sep 2023
Machine Age	hrs	Client Info		**0**	0	2138
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.21	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>51	**12**	10	14
Chromium	ppm	ASTM D5185(m)	>11	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	**1**	<1	1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)	>3	**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>31	**3**	2	2
Lead	ppm	ASTM D5185(m)	>26	**2**	2	4
Copper	ppm	ASTM D5185(m)	>26	**11**	14	▲ 35
Tin	ppm	ASTM D5185(m)	>4	**2**	2	2
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	**<1**	<1	1
Barium	ppm	ASTM D5185(m)	10	**0**	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	**59**	56	60
Manganese	ppm	ASTM D5185(m)		**<1**	0	<1
Magnesium	ppm	ASTM D5185(m)	450	**945**	920	936
Calcium	ppm	ASTM D5185(m)	3000	**975**	995	1018
Phosphorus	ppm	ASTM D5185(m)	1150	**987**	952	966
Zinc	ppm	ASTM D5185(m)	1350	**1148**	1114	1176
Sulfur	ppm	ASTM D5185(m)	4250	**2471**	2510	2306
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>22	**5**	4	7
Sodium	ppm	ASTM D5185(m)	>158	**3**	3	4
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	2
Fuel	%	ASTM D7593*	>8.0	▲ **6.5**	<1.0	4.7

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**0.2**	0.1	0.2
Nitration	Abs/cm	ASTM D7624*	>20	**9.2**	8.2	7.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	**19.0**	19.7	19.5

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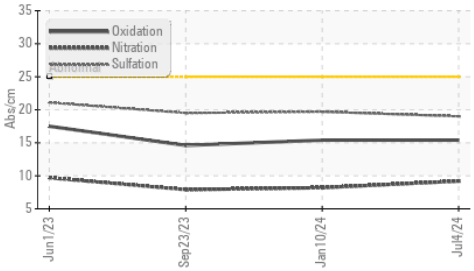
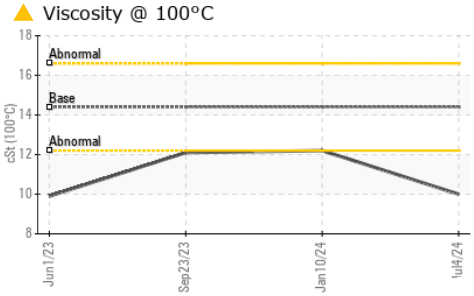
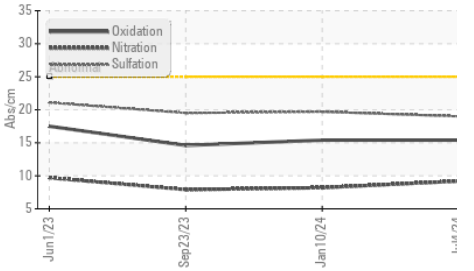
FT-IR (Direct Trend)



Viscosity @ 100°C



FT-IR (Direct Trend)



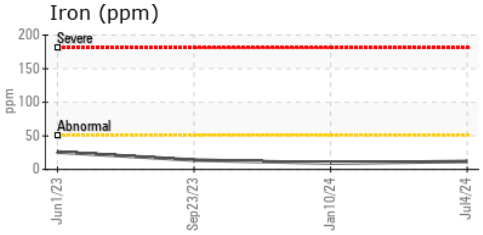
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**15.4**	15.4	14.6

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**VLITE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.21	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

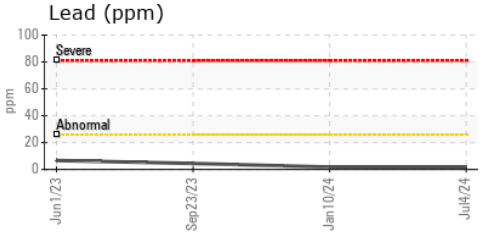
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	▲ **10.0**	12.2	▲ 12.1

GRAPHS

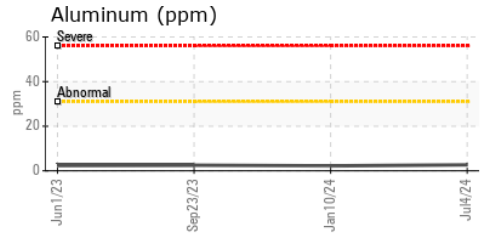
Iron (ppm)



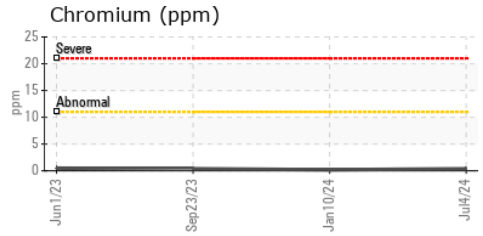
Lead (ppm)



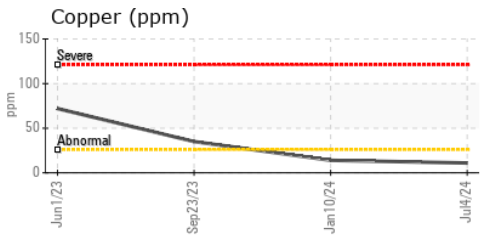
Aluminum (ppm)



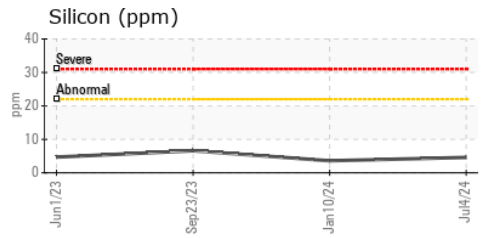
Chromium (ppm)



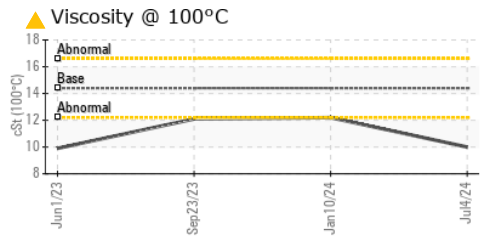
Copper (ppm)



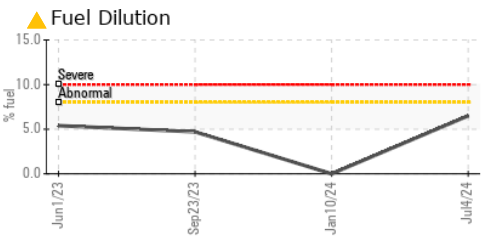
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0932677
Lab Number : 02646956
Unique Number : 5812508
Test Package : MOBCE (Additional Tests: FuelDilution, PercentFuel, Visual)

Received : 10 Jul 2024
Tested : 11 Jul 2024
Diagnosed : 11 Jul 2024 - 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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