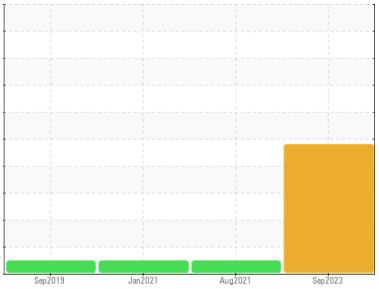
OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Area
[41585819]
Machine Id
R258
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. 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 light concentration of glycol present in the oil.

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		**WC0853399**	WC0581040	WC0502944
Sample Date		Client Info		**30 Sep 2023**	17 Aug 2021	19 Jan 2021
Machine Age	kms	Client Info		**193471**	109271	83543
Oil Age	kms	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	N/A	Changed
Sample Status				**ABNORMAL**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	**<1.0**	<1.0	<1.0

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	**27**	37	17
Chromium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>3	**<1**	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	**5**	3	2
Lead	ppm	ASTM D5185(m)	>40	**4**	1	<1
Copper	ppm	ASTM D5185(m)	>330	**4**	5	1
Tin	ppm	ASTM D5185(m)	>15	**<1**	<1	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	<1	<1
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	**12**	37	74
Barium	ppm	ASTM D5185(m)	10	**<1**	0	0
Molybdenum	ppm	ASTM D5185(m)	100	**16**	14	2
Manganese	ppm	ASTM D5185(m)		**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	**781**	745	726
Calcium	ppm	ASTM D5185(m)	3000	**1382**	1361	1353
Phosphorus	ppm	ASTM D5185(m)	1150	**752**	768	701
Zinc	ppm	ASTM D5185(m)	1350	**822**	850	816
Sulfur	ppm	ASTM D5185(m)	4250	**2634**	2583	2671
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

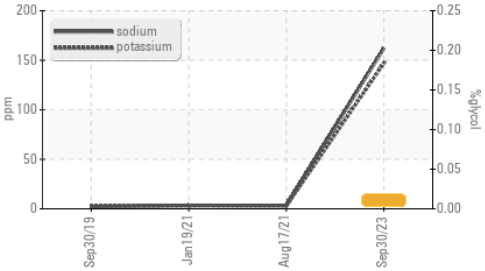
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	**7**	6	4
Sodium	ppm	ASTM D5185(m)		▲ **162**	3	4
Potassium	ppm	ASTM D5185(m)	>20	▲ **147**	3	3
Glycol	%	ASTM D7922*		▲ **0.019**	NEG	NEG

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	**1.4**	1.2	0.3
Nitration	Abs/cm	ASTM D7624*	>20	**12.5**	11.9	9.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	**23.8**	23.1	18.9

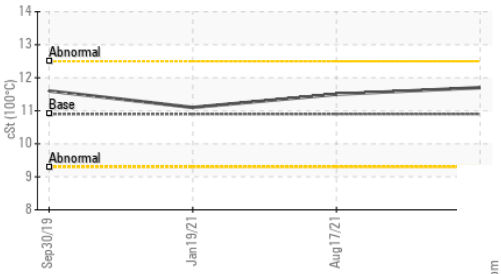
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	**17.2**	17.5	13.7

OIL ANALYSIS REPORT

Glycol Contamination



Viscosity @ 100°C

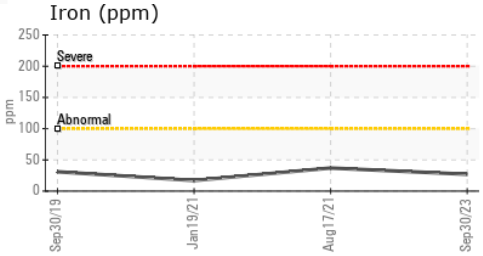


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar	Visual*	NONE	**VLITE**	---	---
Appearance	scalar	Visual*	NORML	**NORML**	---	---
Odor	scalar	Visual*	NORML	**NORML**	---	---
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

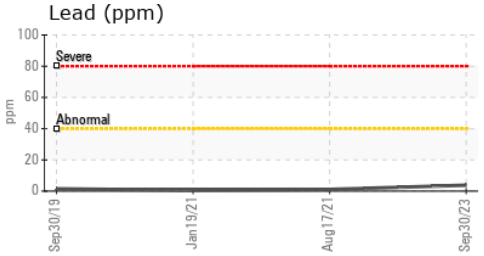
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	**11.7**	11.5	11.1

GRAPHS

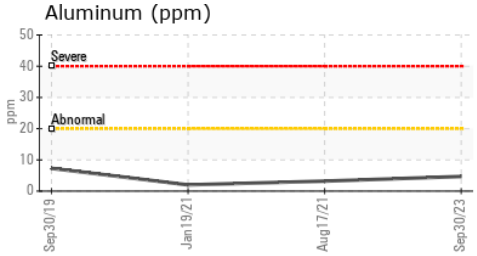
Iron (ppm)



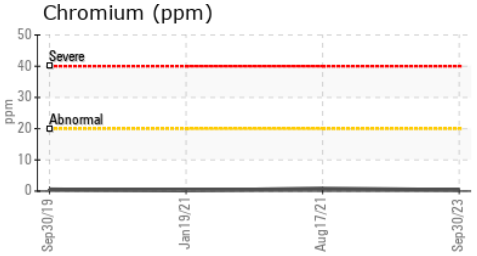
Lead (ppm)



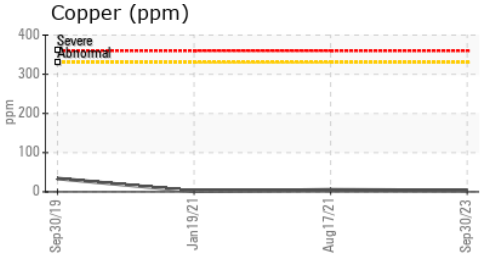
Aluminum (ppm)



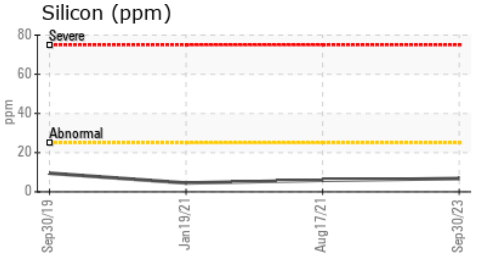
Chromium (ppm)



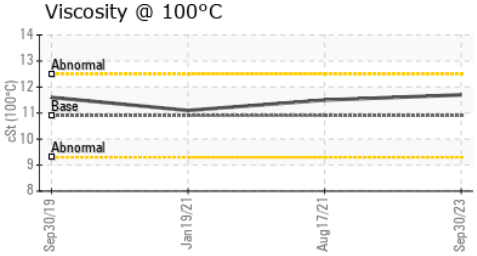
Copper (ppm)



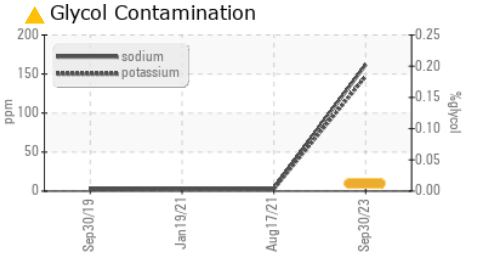
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0853399 **Received** : 05 Oct 2023
Lab Number : 02587069 **Diagnosed** : 06 Oct 2023
Unique Number : 5656135 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol, Visual)

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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