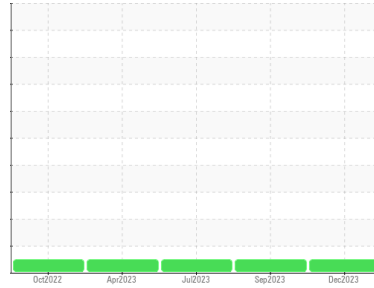




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
52908

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 10W30 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0864555	WC0848027	WC0828312
Sample Date	Client Info		15 Dec 2023	24 Sep 2023	03 Jul 2023
Machine Age	mls	Client Info	163516	132405	98054
Oil Age	mls	Client Info	31111	34351	31638
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
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)	>100	14	19	21
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	5	9	8
Lead	ppm	ASTM D5185(m)	>40	2	4	4
Copper	ppm	ASTM D5185(m)	>330	1	3	7
Tin	ppm	ASTM D5185(m)	>15	<1	<1	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	3	3
Barium	ppm	ASTM D5185(m)	10	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	100	59	62	60
Manganese	ppm	ASTM D5185(m)		0	0	1
Magnesium	ppm	ASTM D5185(m)	450	978	1005	991
Calcium	ppm	ASTM D5185(m)	3000	1082	1096	1077
Phosphorus	ppm	ASTM D5185(m)	1150	1028	1045	1053
Zinc	ppm	ASTM D5185(m)	1350	1207	1239	1203
Sulfur	ppm	ASTM D5185(m)	4250	2659	2505	2433
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

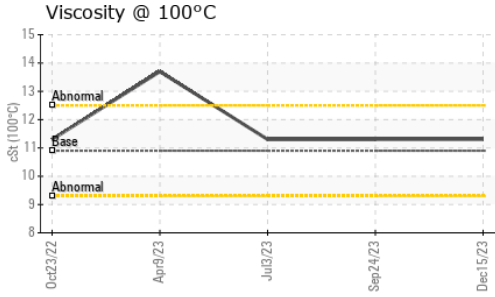
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	4	7	10
Sodium	ppm	ASTM D5185(m)		1	2	2
Potassium	ppm	ASTM D5185(m)	>20	4	19	14

INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	0.2	0.2	0.1
Nitration	Abs/cm	ASTM D7624*	>20	7.7	8.8	8.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.4	21.3	20.5



OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
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Oxidation	Abs./1mm	ASTM D7414*	>25	15.8	18.3	17.1
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VISUAL		method	limit/base	current	history1	history2
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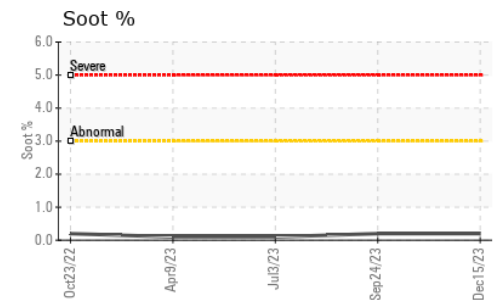
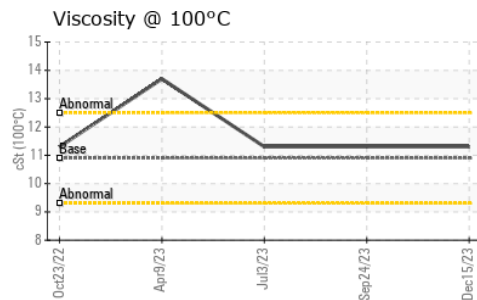
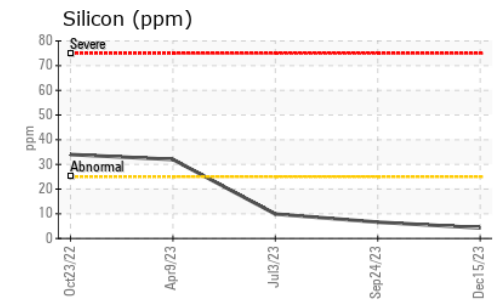
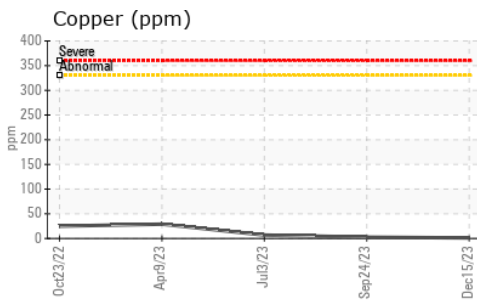
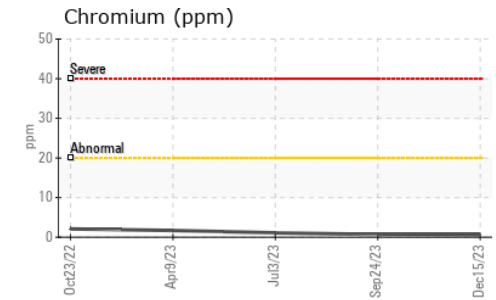
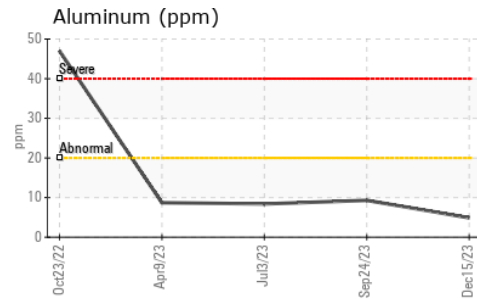
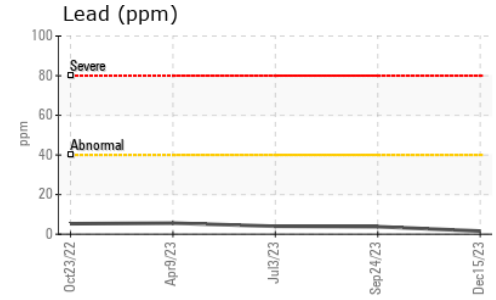
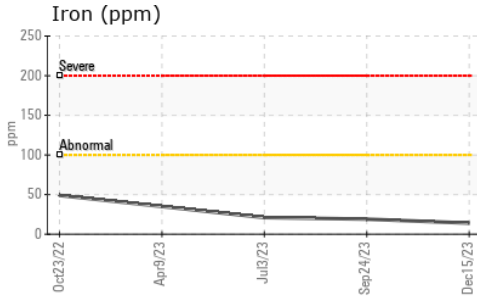
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
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Free Water	scalar	Visual*		NEG	NEG	NEG
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FLUID PROPERTIES		method	limit/base	current	history1	history2
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Visc @ 100°C	cSt	ASTM D7279(m)	10.9	11.3	11.3	11.3
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**
Sample No. : WC0864555 **Received** : 28 Dec 2023 1335 SHAWSON DRIVE
Lab Number : 02605500 **Diagnosed** : 28 Dec 2023 MISSISSAUGA, ON
Unique Number : 5698585 **Diagnostician** : Wes Davis CA L4W 1C4
Test Package : MOB 1

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.

Contact: Travis Spence
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T:
F: (905)564-6361