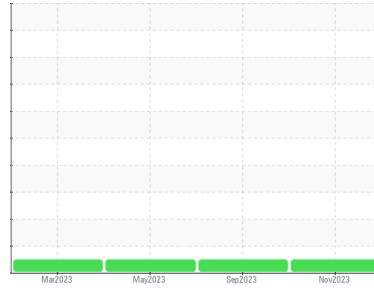




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
INTERNATIONAL 51949
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 10W30 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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			WC0879119	WC0759717	WC0817313
Sample Date	Client Info			24 Nov 2023	25 Sep 2023	21 May 2023
Machine Age	mls	Client Info		314289	164386	103556
Oil Age	mls	Client Info		30904	30351	34501
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>3.0		<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)	>165	14	15	21
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	8	15	21
Lead	ppm	ASTM D5185(m)	>150	1	2	1
Copper	ppm	ASTM D5185(m)	>90	1	1	2
Tin	ppm	ASTM D5185(m)	>5	<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

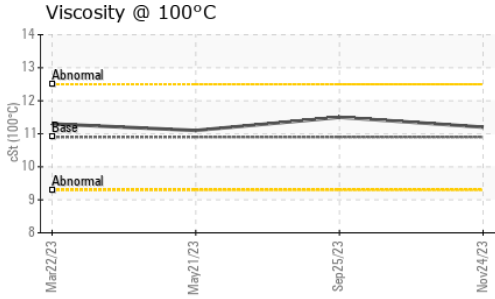
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	2	2	7
Barium	ppm	ASTM D5185(m)	10	<1	<1	0
Molybdenum	ppm	ASTM D5185(m)	100	62	63	62
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	450	1012	1026	1011
Calcium	ppm	ASTM D5185(m)	3000	1103	1122	1135
Phosphorus	ppm	ASTM D5185(m)	1150	986	1015	1094
Zinc	ppm	ASTM D5185(m)	1350	1233	1262	1264
Sulfur	ppm	ASTM D5185(m)	4250	2435	2444	2494
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>35	4	5	6
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	16	36	49

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>7.5	0.2	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	7.9	8.3	8.8
Sulfation	Abs./1mm	ASTM D7415*	>30	19.6	20.4	20.7



OIL ANALYSIS REPORT



FLUID DEGRADATION		method	limit/base	current	history1	history2
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Oxidation	Abs./1mm	ASTM D7414*	>25	16.1	16.4	17.3
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VISUAL		method	limit/base	current	history1	history2
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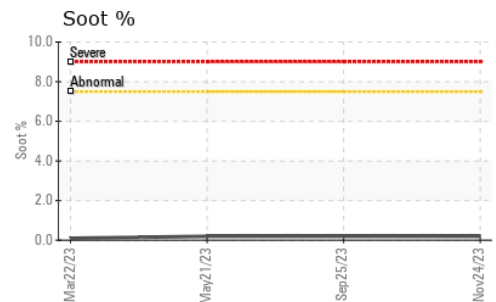
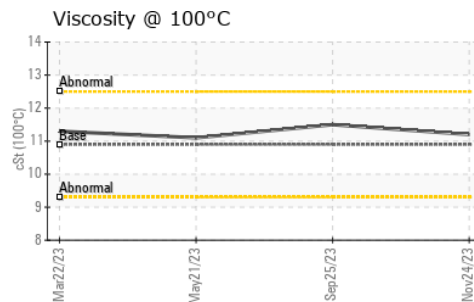
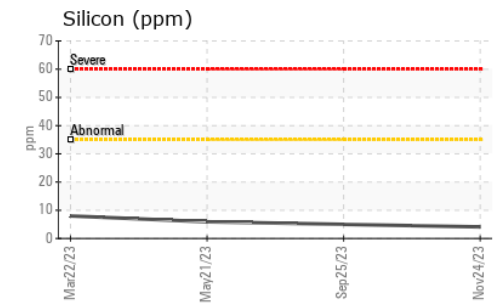
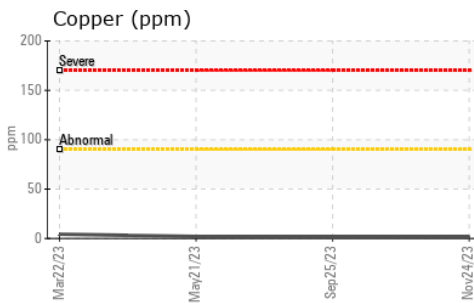
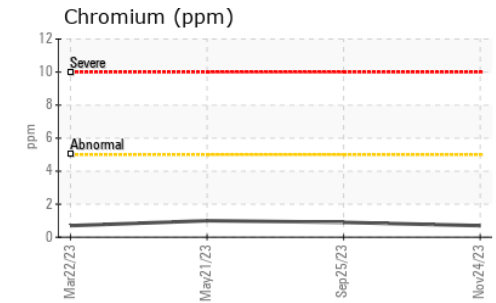
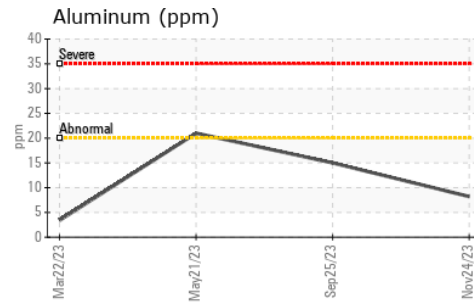
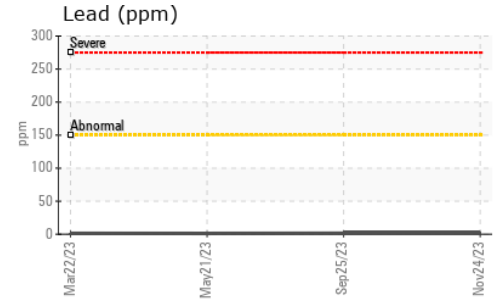
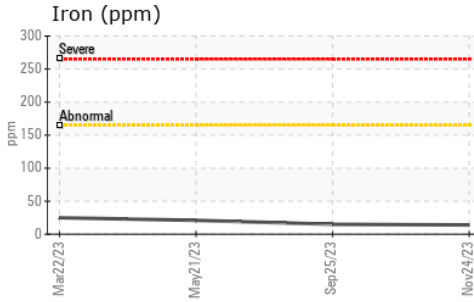
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
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Free Water	scalar	Visual*		NEG	NEG	NEG
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FLUID PROPERTIES		method	limit/base	current	history1	history2
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Visc @ 100°C	cSt	ASTM D7279(m)	10.9	11.2	11.5	11.1
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GRAPHS						
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Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**
Sample No. : WC0879119 **Received** : 12 Dec 2023 1335 SHAWSON DRIVE
Lab Number : 02602537 **Diagnosed** : 12 Dec 2023 MISSISSAUGA, ON
Unique Number : 5695622 **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.

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