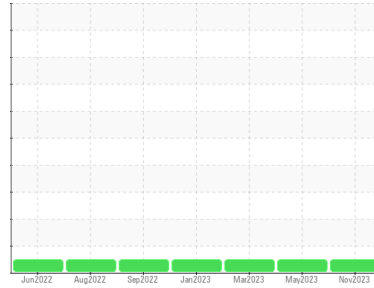




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**FREIGHTLINER 51933**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 10W30 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### 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			<b>WC0864518</b>	WC0817314	WC0797602
Sample Date	Client Info			<b>27 Nov 2023</b>	23 May 2023	20 Mar 2023
Machine Age	mls	Client Info		<b>336360</b>	230537	193953
Oil Age	mls	Client Info		<b>35748</b>	36584	40601
Oil Changed	Client Info			<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>80	<b>13</b>	19	23
Chromium	ppm	ASTM D5185(m)	>5	<b>1</b>	1	2
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>30	<b>4</b>	8	12
Lead	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	<1	1
Copper	ppm	ASTM D5185(m)	>150	<b>4</b>	18	56
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

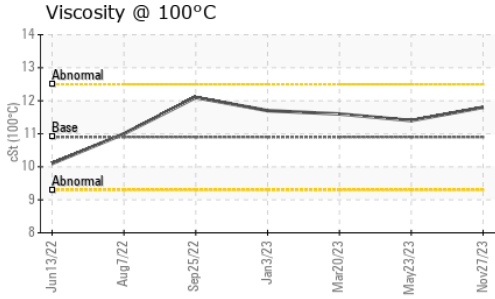
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	250	<b>1</b>	1	2
Barium	ppm	ASTM D5185(m)	10	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	100	<b>60</b>	62	63
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	450	<b>978</b>	1019	975
Calcium	ppm	ASTM D5185(m)	3000	<b>1067</b>	1148	1126
Phosphorus	ppm	ASTM D5185(m)	1150	<b>942</b>	1077	960
Zinc	ppm	ASTM D5185(m)	1350	<b>1204</b>	1245	1163
Sulfur	ppm	ASTM D5185(m)	4250	<b>2252</b>	2179	2046
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	<b>4</b>	4	3
Sodium	ppm	ASTM D5185(m)		<b>2</b>	5	3
Potassium	ppm	ASTM D5185(m)	>20	<b>4</b>	16	29

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	<b>0.6</b>	0.6	0.6
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.5</b>	8.5	9.6
Sulfation	Abs.1mm	ASTM D7415*	>30	<b>20.8</b>	21.2	23.6



# OIL ANALYSIS REPORT



### FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>16.9</b>	17.2	17.5

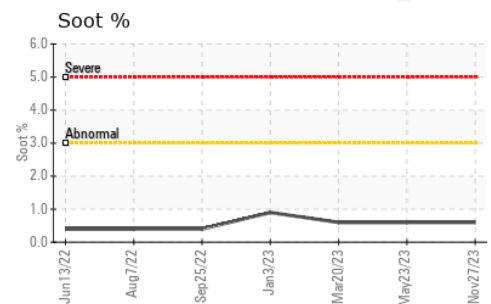
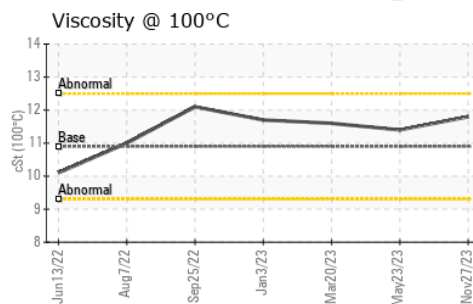
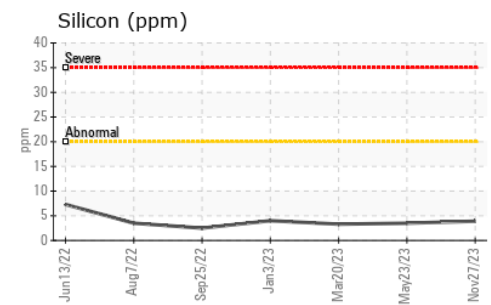
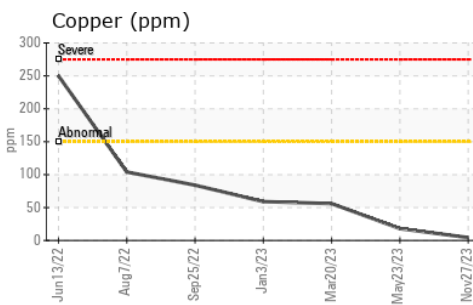
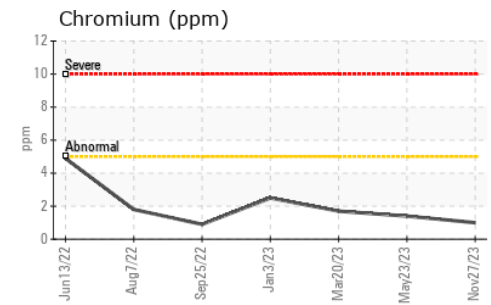
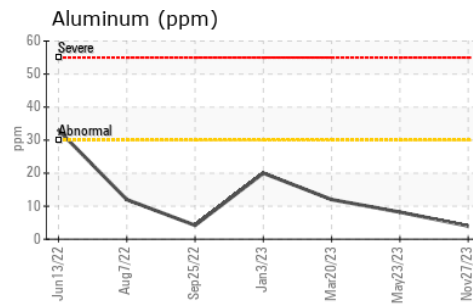
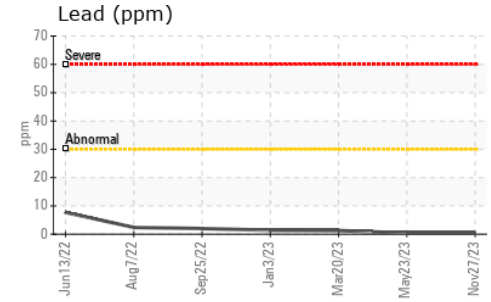
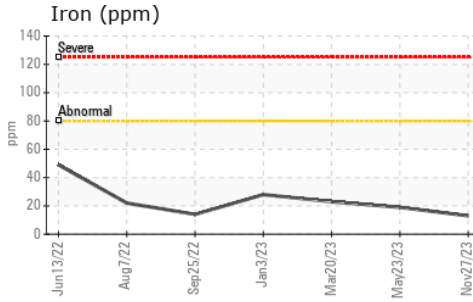
### VISUAL

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

### FLUID PROPERTIES

	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	<b>11.8</b>	11.4	11.6

### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**  
**Sample No.** : WC0864518 **Received** : 05 Dec 2023 1335 SHAWSON DRIVE  
**Lab Number** : 02600869 **Diagnosed** : 05 Dec 2023 MISSISSAUGA, ON  
**Unique Number** : 5693954 **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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