



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**52938**

Component  
**Diesel Engine**

Fluid  
**NOT GIVEN (--- LTR)**

## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample. Please specify the component make and model with your next sample.

### Wear

Metal levels are typical for a new component breaking in.

### 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. Light fuel dilution occurring. No other contaminants were detected in the oil.

### Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. 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>WC0837238</b>	---	---
Sample Date	Client Info			<b>07 Aug 2023</b>	---	---
Machine Age	mls	Client Info		<b>32197</b>	---	---
Oil Age	mls	Client Info		<b>31613</b>	---	---
Oil Changed	Client Info			<b>Changed</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Glycol	WC Method			<b>NEG</b>	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	<b>64</b>	---	---
Chromium	ppm	ASTM D5185(m)	>20	<b>3</b>	---	---
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>20	<b>28</b>	---	---
Lead	ppm	ASTM D5185(m)	>40	<b>4</b>	---	---
Copper	ppm	ASTM D5185(m)	>330	<b>23</b>	---	---
Tin	ppm	ASTM D5185(m)	>15	<b>2</b>	---	---
Antimony	ppm	ASTM D5185(m)		<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		<b>55</b>	---	---
Barium	ppm	ASTM D5185(m)		<b>5</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>61</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>5</b>	---	---
Magnesium	ppm	ASTM D5185(m)		<b>449</b>	---	---
Calcium	ppm	ASTM D5185(m)		<b>1695</b>	---	---
Phosphorus	ppm	ASTM D5185(m)		<b>958</b>	---	---
Zinc	ppm	ASTM D5185(m)		<b>1136</b>	---	---
Sulfur	ppm	ASTM D5185(m)		<b>2347</b>	---	---
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---

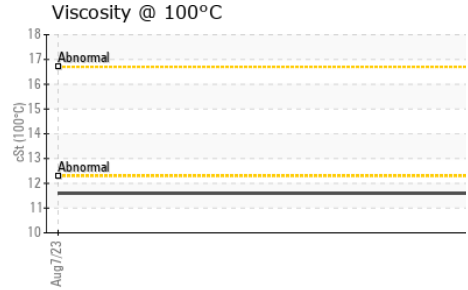
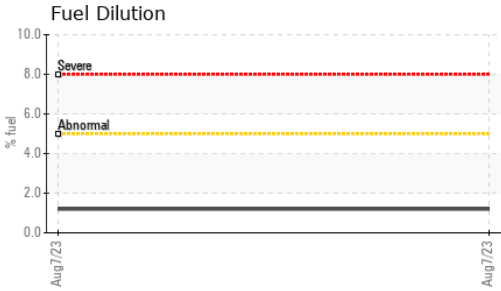
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<b>38</b>	---	---
Sodium	ppm	ASTM D5185(m)		<b>4</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>87</b>	---	---
Fuel	%	ASTM D7593*	>5	<b>1.2</b>	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	<b>0.1</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.6</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.9</b>	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.6</b>	---	---



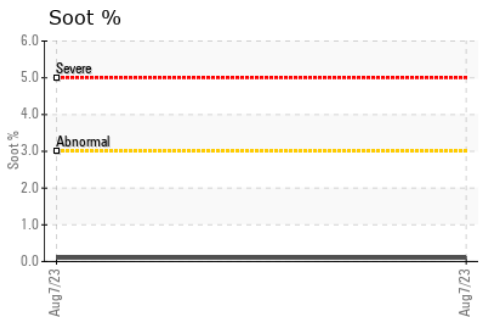
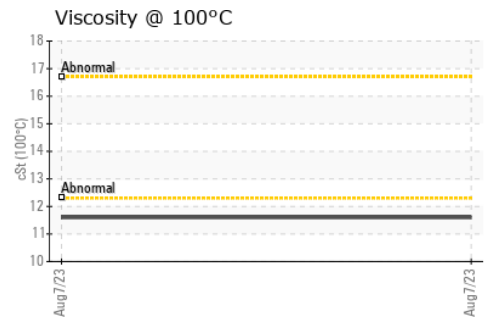
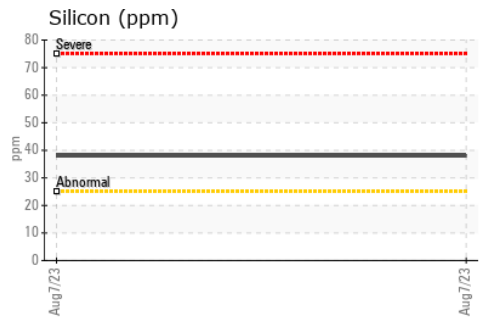
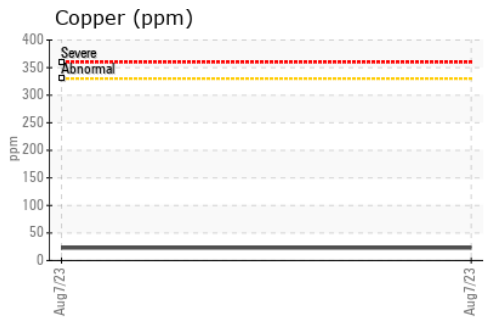
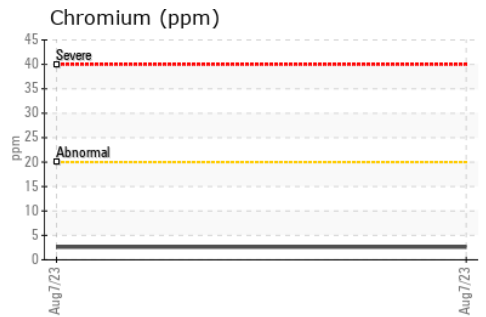
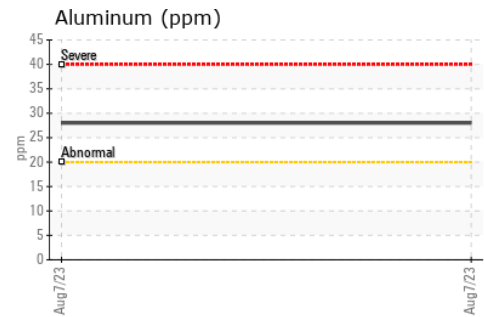
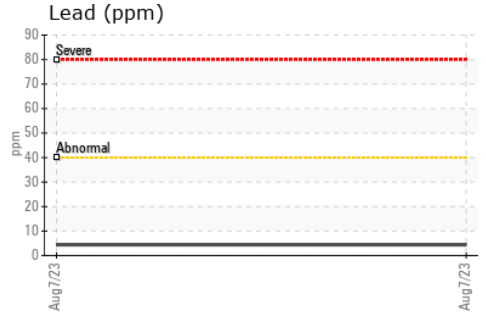
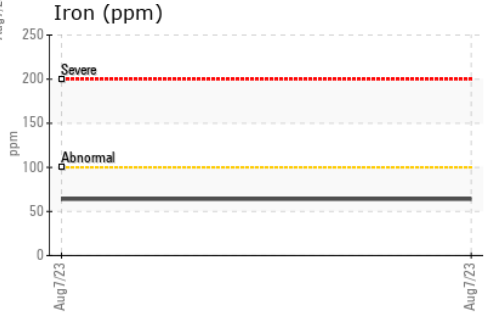
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	11.6	---	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **MANITOU LIN TRANSPORT (GARAGE)**  
**Sample No.** : WC0837238 **Received** : 22 Aug 2023 1335 SHAWSON DRIVE  
**Lab Number** : 02577421 **Diagnosed** : 23 Aug 2023 MISSISSAUGA, ON  
**Unique Number** : 5630481 **Diagnostician** : Kevin Marson CA L4W 1C4  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel ) Contact: Travis Spence

To discuss this sample report, contact Customer Service at 1-800-268-2131. tspence@manitoulintransport.com  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T:  
 Validity of results and interpretation are based on the sample and information as supplied. F: (905)564-6361