



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area  
**(IMO 889648) MILLER SHIPPING LTD**  
Machine Id  
**MV WESTERN TUGGER**  
Component  
**Diesel Engine**  
Fluid  
**IRVING RR4011 SAE 40 (1200 LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: Oil used is Irving RR 4011 SAE 40 )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>OF0001098</b>	---	---
Sample Date		Client Info		<b>02 May 2024</b>	---	---
Machine Age	hrs	Client Info		<b>11280</b>	---	---
Oil Age	hrs	Client Info		<b>7</b>	---	---
Filter Age	hrs	Client Info		<b>7</b>	---	---
Oil Changed		Client Info		<b>Not Chngd</b>	---	---
Filter Changed		Client Info		<b>Not Chngd</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	<b>20</b>	---	---
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	---	---
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	---	---
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>5	<b>1</b>	---	---
Lead	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185(m)	>20	<b>1</b>	---	---
Tin	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---

**CONTAMINATION**

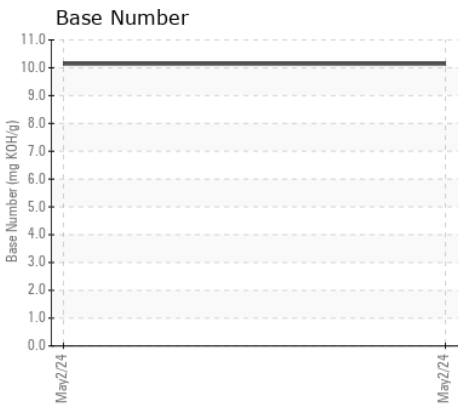
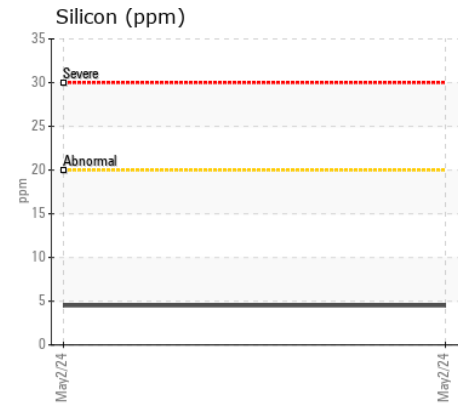
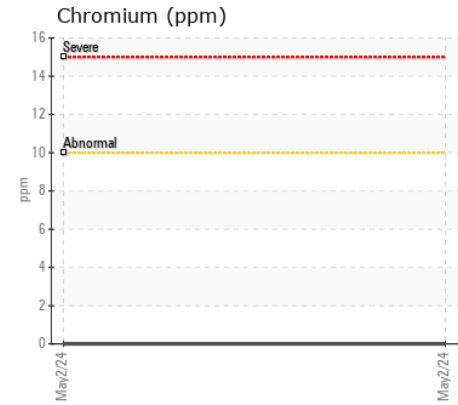
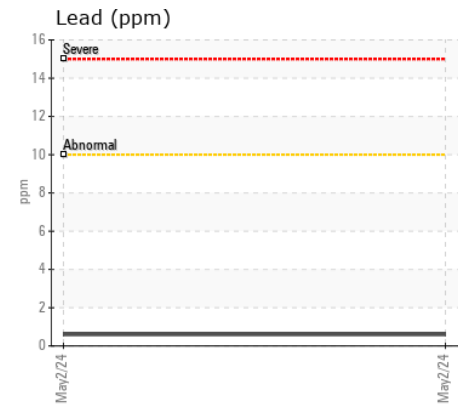
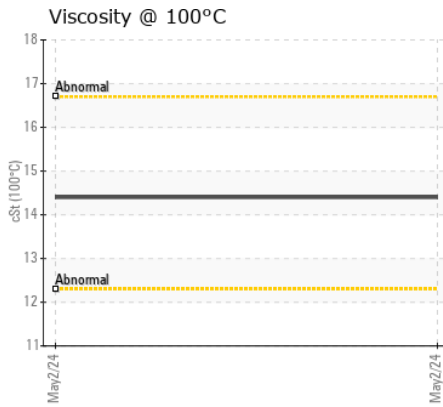
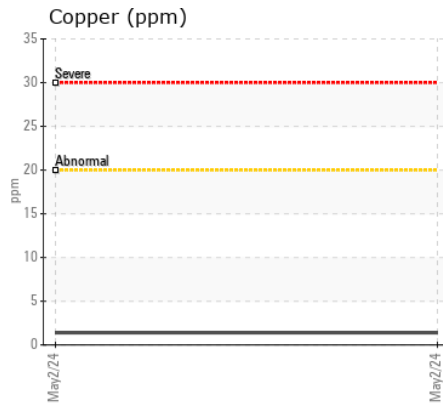
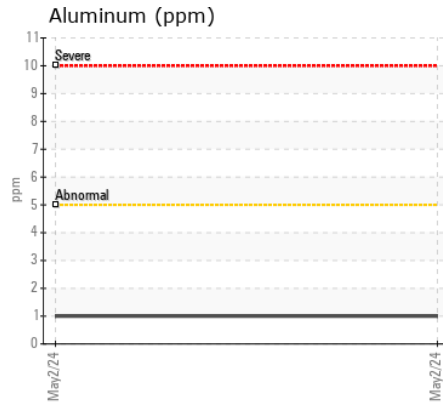
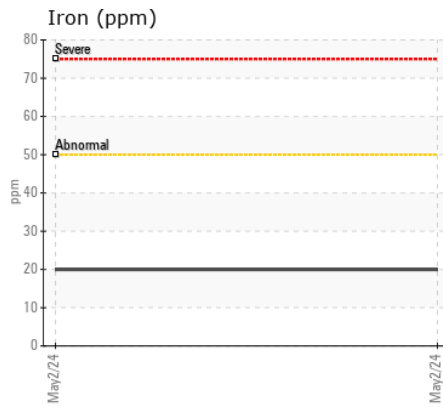
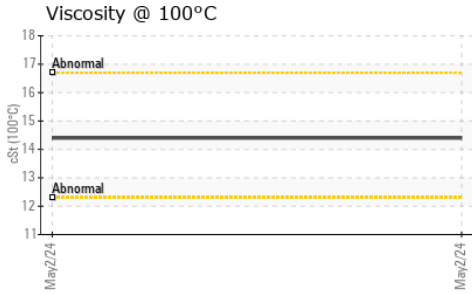
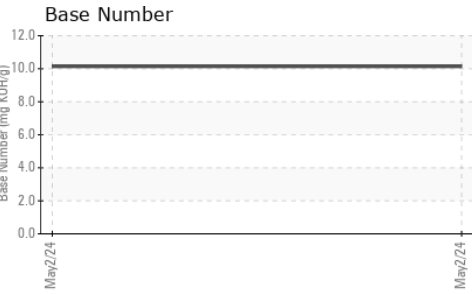
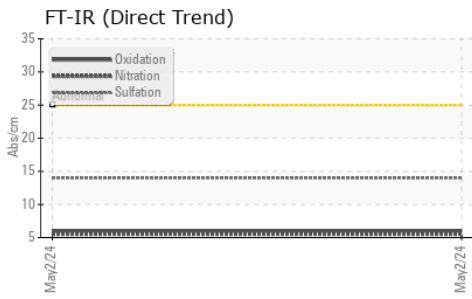
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	<b>4</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	---	---
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.1	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	ASTM D7844*	>3	<b>0</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>5.5</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>14.0</b>	---	---
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	---	---

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		<b>3</b>	---	---
Boron	ppm	ASTM D5185(m)		<b>42</b>	---	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>44</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185(m)		<b>14</b>	---	---
Calcium	ppm	ASTM D5185(m)		<b>3312</b>	---	---
Phosphorus	ppm	ASTM D5185(m)		<b>9</b>	---	---
Zinc	ppm	ASTM D5185(m)		<b>7</b>	---	---
Sulfur	ppm	ASTM D5185(m)		<b>8076</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>6.0</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*		<b>10.14</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)		<b>14.4</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : OF0001098  
**Lab Number** : **02641632**  
**Unique Number** : 5799171  
**Test Package** : MOB 2  
**Received** : 13 Jun 2024  
**Tested** : 14 Jun 2024  
**Diagnosed** : 14 Jun 2024 - Kevin Marson

**Oil Filtration Solutions Ltd.**  
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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.