



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**TENNESSEE MERCHANT (S/N 8-47382)**  
Component  
**Starboard Reduction Gear**  
Fluid  
**MOBIL DTE OIL HEAVY (65 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0044879</b>	MWM731256	MW0044709
Sample Date		Client Info		<b>14 May 2024</b>	02 Dec 2023	17 Nov 2023
Machine Age	hrs	Client Info		<b>42790</b>	42031	41679
Oil Age	hrs	Client Info		<b>180</b>	1769	1417
Filter Age	hrs	Client Info		<b>180</b>	0	1417
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	<b>5</b>	4	4
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>1</b>	0	0
Lead	ppm	ASTM D5185m	>100	<b>1</b>	0	0
Copper	ppm	ASTM D5185m	>50	<b>9</b>	11	11
Tin	ppm	ASTM D5185m	>10	<b>1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

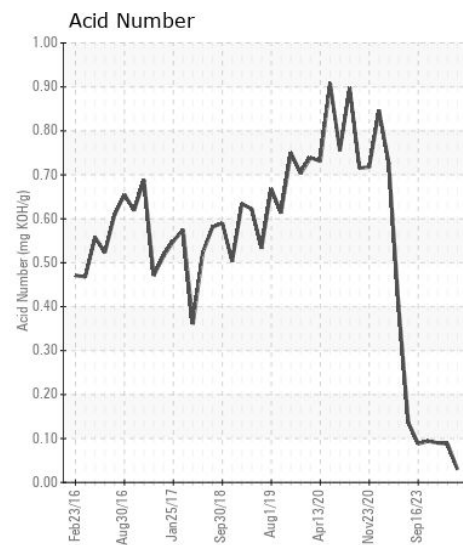
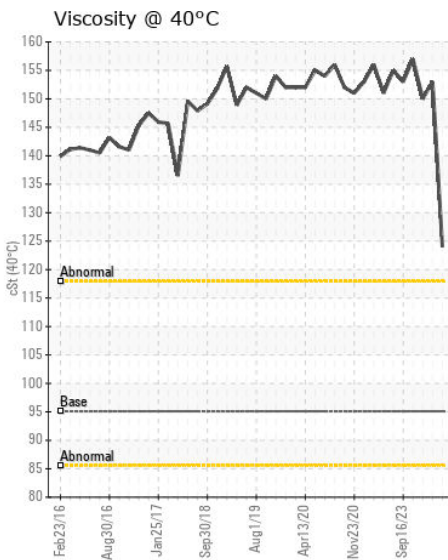
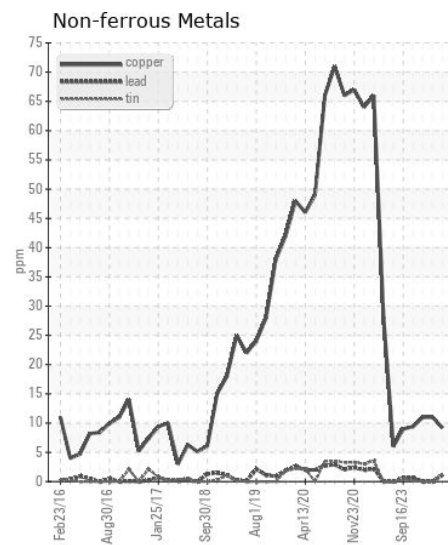
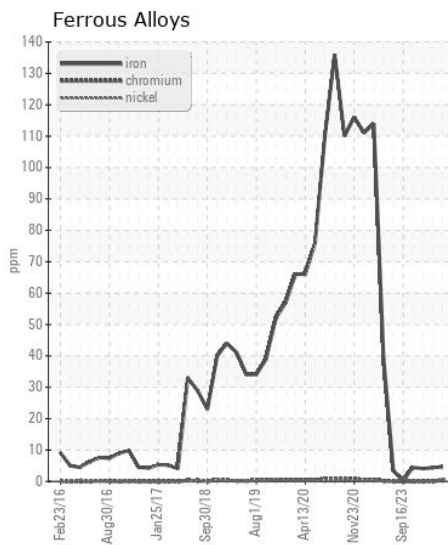
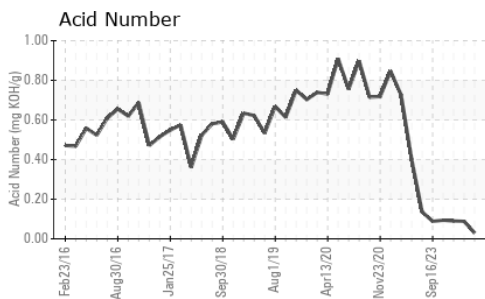
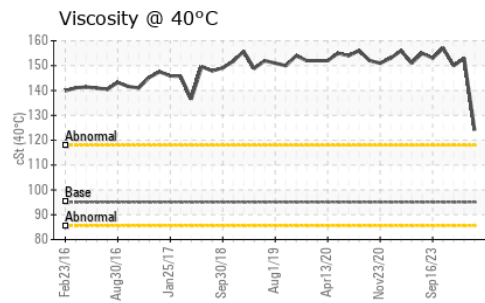
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>2</b>	<1	<1
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	2	<1
Boron	ppm	ASTM D5185m		<b>4</b>	6	6
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>3</b>	2	2
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>20</b>	18	10
Calcium	ppm	ASTM D5185m		<b>72</b>	60	45
Phosphorus	ppm	ASTM D5185m		<b>117</b>	38	32
Zinc	ppm	ASTM D5185m		<b>80</b>	31	23
Sulfur	ppm	ASTM D5185m		<b>1747</b>	2252	2192
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.03</b>	0.088	0.09
Visc @ 40°C	cSt	ASTM D445	95.1	<b>124</b>	153	150



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : MW0044879

**Lab Number** : 06186873

**Unique Number** : 11043625

**Test Package** : MAR 2

**Received** : 21 May 2024

**Tested** : 23 May 2024

**Diagnosed** : 23 May 2024 - Don Baldrige

**AMERICAN COMMERCIAL LINES**

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)