



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

Machine Id  
**GARRON L SNEED (S/N 560609)**  
Component  
**Starboard Main Engine**  
Fluid  
**MOBIL MOBILGARD 410 NC (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0046150</b>	MW0046170	MW0046111
Sample Date		Client Info		<b>02 Jan 2024</b>	27 Nov 2023	30 Oct 2023
Machine Age	hrs	Client Info		<b>33702</b>	32814	32197
Oil Age	hrs	Client Info		<b>3819</b>	2965	2260
Filter Age	hrs	Client Info		<b>386</b>	821	199
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>16</b>	14	18
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>5</b>	4	5
Lead	ppm	ASTM D5185m	>18	<b>6</b>	4	5
Copper	ppm	ASTM D5185m	>80	<b>32</b>	30	33
Tin	ppm	ASTM D5185m	>14	<b>6</b>	6	6
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

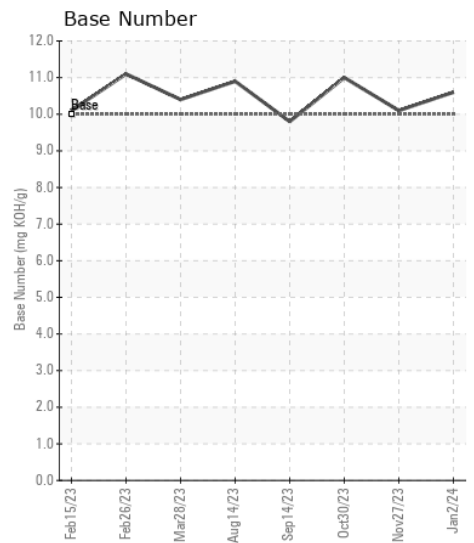
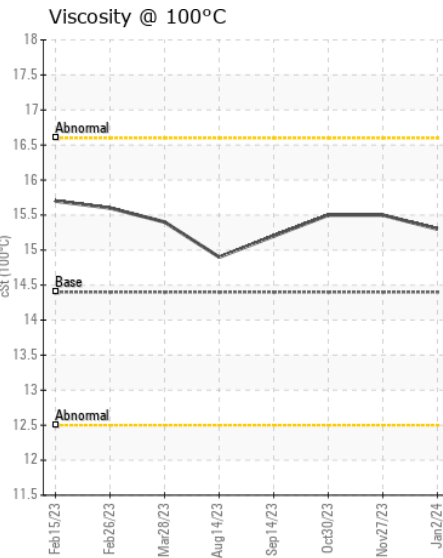
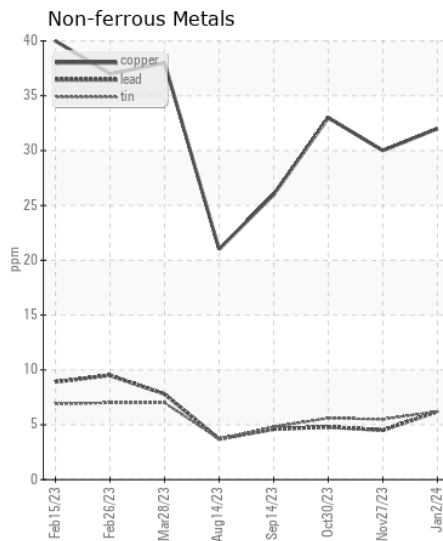
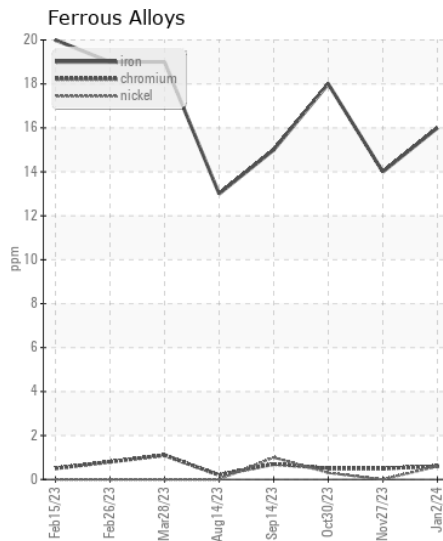
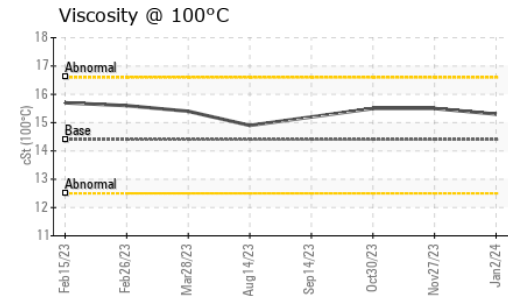
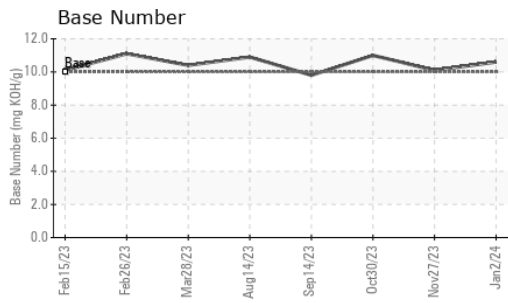
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>6</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.5</b>	0.6	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.8</b>	10.6	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.6</b>	21.1	21.0
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 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 D5185m	>75	<b>4</b>	<1	0
Boron	ppm	ASTM D5185m		<b>3</b>	2	2
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>3</b>	<1	2
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>21</b>	14	13
Calcium	ppm	ASTM D5185m		<b>3030</b>	3139	3440
Phosphorus	ppm	ASTM D5185m		<b>15</b>	7	0
Zinc	ppm	ASTM D5185m	10	<b>9</b>	0	0
Sulfur	ppm	ASTM D5185m		<b>4555</b>	4480	5020
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.8</b>	15.6	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>10.6</b>	10.1	11.0
Visc @ 100°C	cSt	ASTM D445	14.4	<b>15.3</b>	15.5	15.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0046150 **Received** : 31 Jan 2024  
**Lab Number** : 06075582 **Diagnosed** : 31 Jan 2024  
**Unique Number** : 10857673 **Diagnostician** : Wes Davis  
**Test Package** : MAR 2

**AMERICAN COMMERCIAL LINES**  
 PO BOX 610, 1701 E. MARKET STREET  
 JEFFERSONVILLE, IN  
 US 47130  
 Contact: RONALD SCHNEIDER  
 ronald.schneider@bargeacbl.com  
 T:  
 F: (812)288-1644

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)