



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

Area  
**SANDY B**  
Machine Id  
[SANDY B] 006 562531-6  
Component  
Starboard Reduction Gear  
Fluid  
SHELL ROTELLA T 40 (--- GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0061657</b>	MW0061388	MWM691466
Sample Date		Client Info		<b>02 Jan 2024</b>	01 Nov 2023	30 Jan 2019
Machine Age	hrs	Client Info		<b>3702</b>	2887	0
Oil Age	hrs	Client Info		<b>1235</b>	431	0
Filter Age	hrs	Client Info		<b>1235</b>	431	0
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>4</b>	4	82
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>100	<b>&lt;1</b>	<1	38
Copper	ppm	ASTM D5185m	>50	<b>62</b>	50	41
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	1
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**

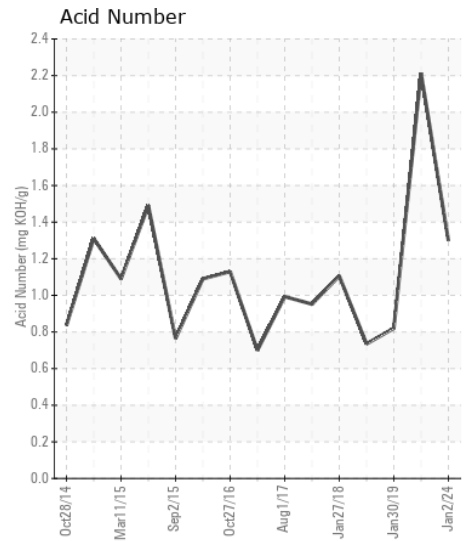
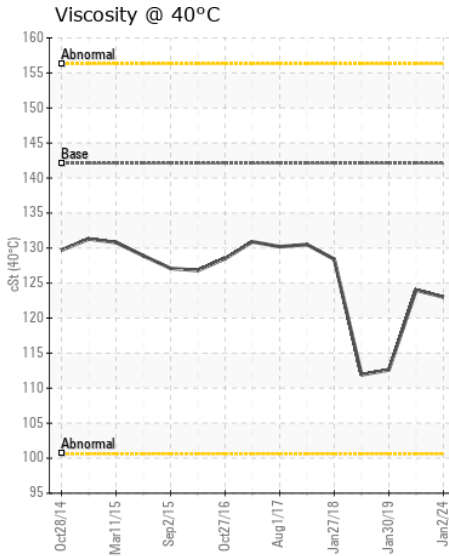
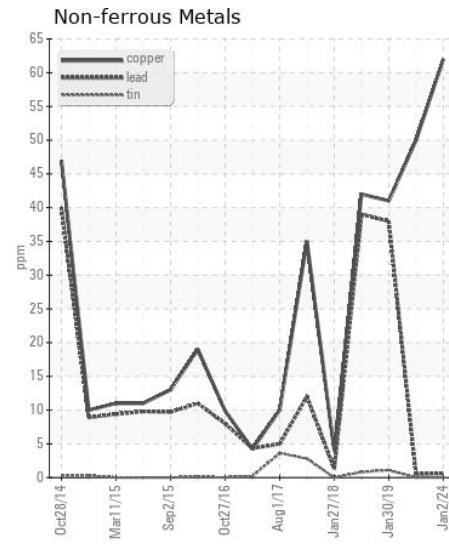
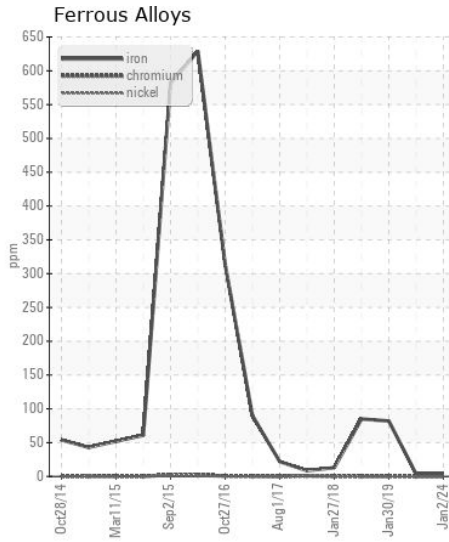
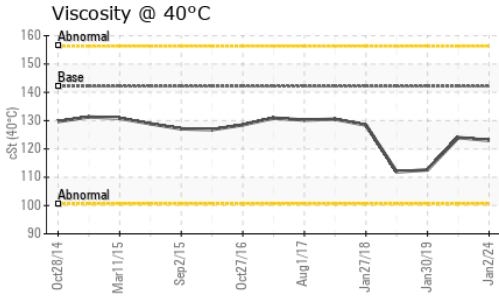
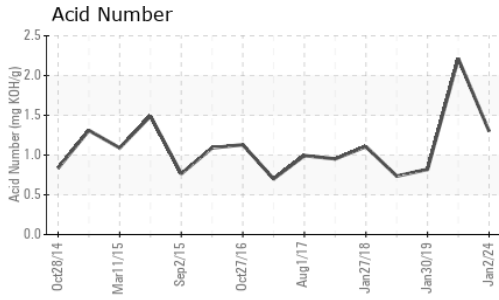
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>3</b>	3	6
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	3
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>3</b>	4	29
Boron	ppm	ASTM D5185m	0	<b>35</b>	38	212
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>96</b>	101	28
Manganese	ppm	ASTM D5185m		<b>0</b>	0	1
Magnesium	ppm	ASTM D5185m	432	<b>59</b>	56	80
Calcium	ppm	ASTM D5185m	1121	<b>2461</b>	2425	2080
Phosphorus	ppm	ASTM D5185m	996	<b>1029</b>	1028	658
Zinc	ppm	ASTM D5185m	881	<b>1065</b>	1140	729
Sulfur	ppm	ASTM D5185m		<b>3565</b>	3383	3496
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.30</b>	2.212	0.820
Visc @ 40°C	cSt	ASTM D445	142.1	<b>123</b>	124	112.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0061657 **Received** : 17 Jan 2024  
**Lab Number** : 06063742 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10835124 **Diagnostician** : Doug Bogart  
**Test Package** : MAR 2

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)

**INGRAM BARGE**  
 900 S 3RD ST  
 PADUCAH, KY  
 US 42003

Contact: KIM PRATER  
 kim.prater@ingrambarga.com  
 T: (270)415-4467  
 F: (615)695-3697