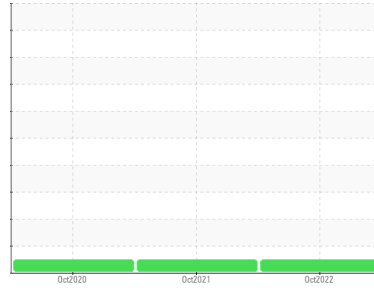




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**ACECO RWSB-W 10061374 - TROLLEY EAST (S/N 3218)**

Component  
**Gearbox**

Fluid  
**SHELL OMALA S2 GX 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.  
NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0657482</b>	WC0424938	WC0495714
Sample Date	Client Info			<b>03 Oct 2022</b>	04 Oct 2021	27 Oct 2020
Machine Age	mths	Client Info		<b>0</b>	0	0
Oil Age	mths	Client Info		<b>36</b>	24	12
Oil Changed	Client Info			<b>Not Chngd</b>	Not Chngd	Not Chngd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	<b>&lt;1</b>	<1	1
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>15	<b>0</b>	0	1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	0	0
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>200	<b>&lt;1</b>	0	0
Tin	ppm	ASTM D5185m	>25	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m		<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	6.2	<b>0</b>	8	1
Barium	ppm	ASTM D5185m	0.0	<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	0	<b>1</b>	<1	0
Calcium	ppm	ASTM D5185m	0.0	<b>9</b>	4	8
Phosphorus	ppm	ASTM D5185m	290	<b>276</b>	266	257
Zinc	ppm	ASTM D5185m	3.8	<b>12</b>	8	7
Sulfur	ppm	ASTM D5185m	8167	<b>13117</b>	9477	8994

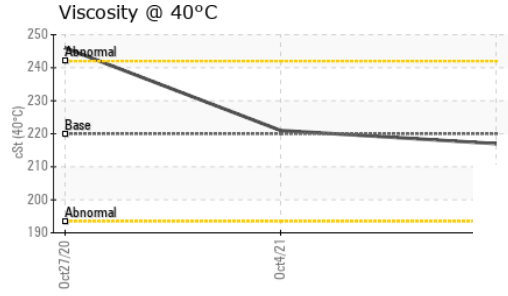
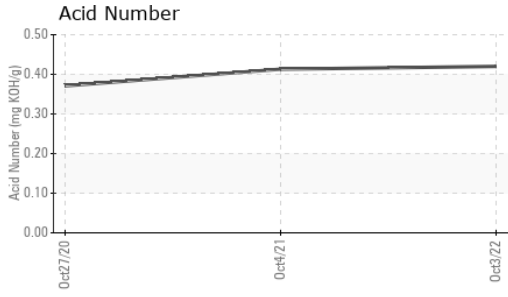
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>2</b>	2	3
Sodium	ppm	ASTM D5185m		<b>0</b>	<1	1
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.42</b>	0.413	0.371

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	VLITE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
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	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG	NEG



# OIL ANALYSIS REPORT

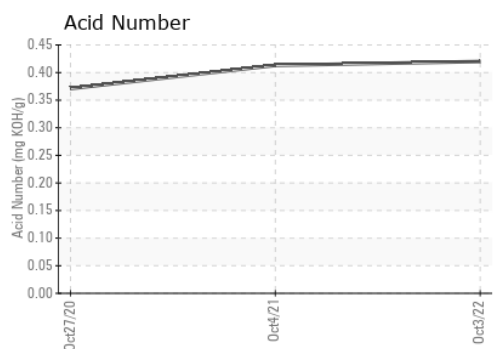
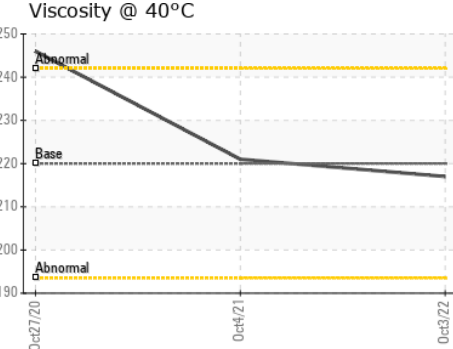
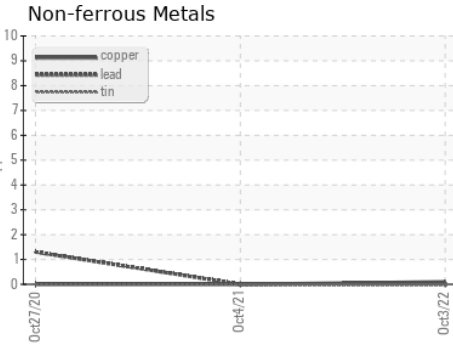
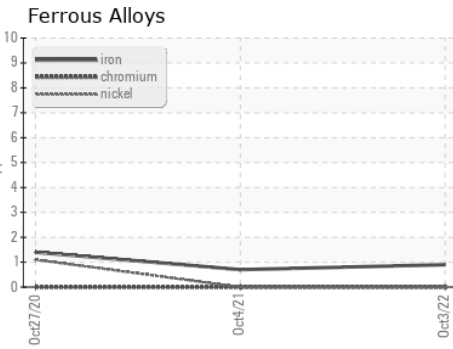


FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 220	<b>217</b>	221	246

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0657482      **Received** : 24 Oct 2022  
**Lab Number** : 05674417      **Diagnosed** : 25 Oct 2022  
**Unique Number** : 10188988      **Diagnostician** : Wes Davis  
**Test Package** : IND 2

**FLUOR MARINE PROPULSION LLC**  
 2401 RIVER RD  
 SCHENECTADY, NY  
 US 12309  
 Contact: Service Manager

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)

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