



# OIL ANALYSIS REPORT

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

Area  
**SEAWARD EXPLORER**  
Machine Id  
**Explorer**  
Component  
**Starboard Reduction Gear**  
Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

## RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

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

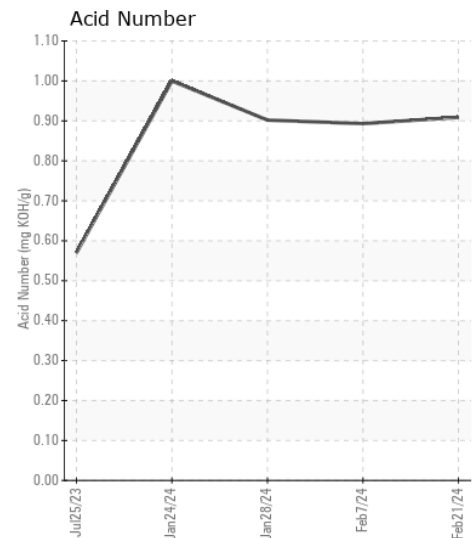
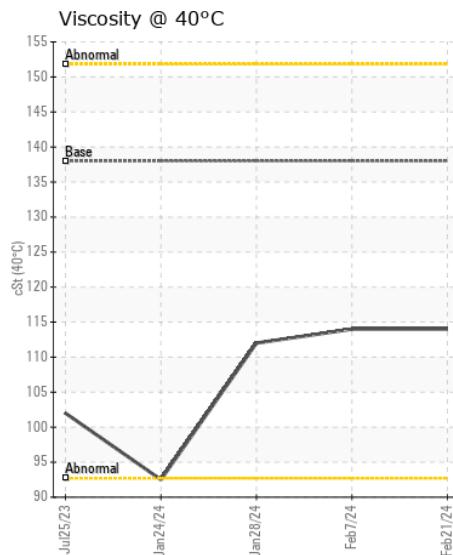
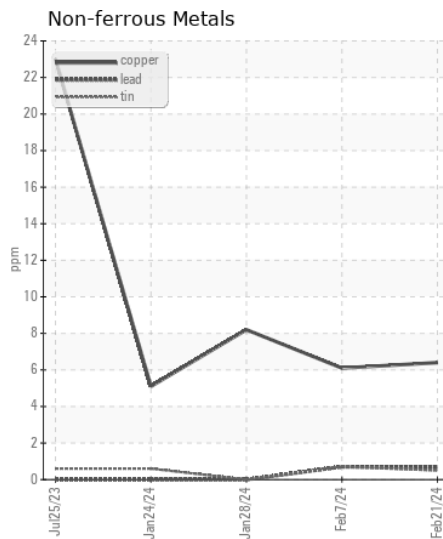
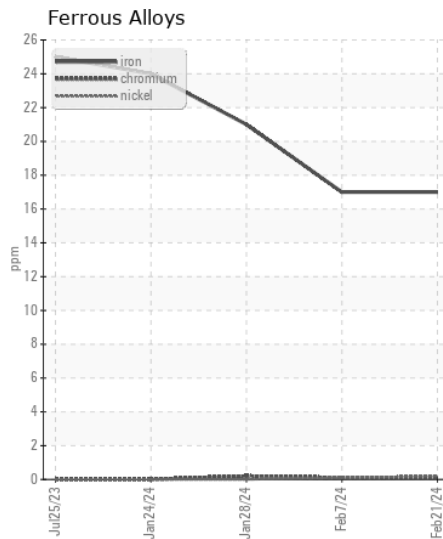
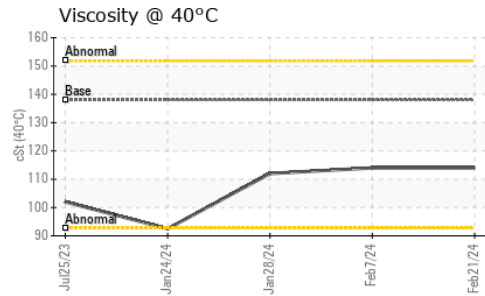
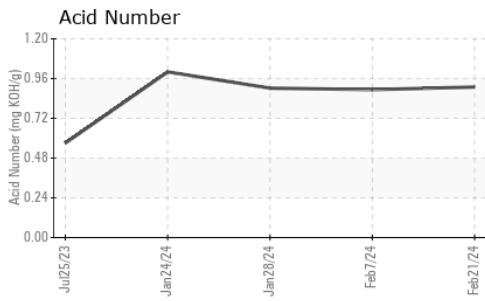
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0886567</b>	WC0859380	WC0886558
Sample Date		Client Info		<b>21 Feb 2024</b>	07 Feb 2024	28 Jan 2024
Machine Age	hrs	Client Info		<b>16564</b>	16555	16551
Oil Age	hrs	Client Info		<b>1000</b>	16555	36
Filter Age	hrs	Client Info		<b>1000</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

Iron	ppm	ASTM D5185m	>150	<b>17</b>	17	21
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	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	2
Lead	ppm	ASTM D5185m	>100	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>50	<b>6</b>	6	8
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

Silicon	ppm	ASTM D5185m	>50	<b>11</b>	10	9
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	2
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

Sodium	ppm	ASTM D5185m	>216	<b>4</b>	3	0
Boron	ppm	ASTM D5185m	250	<b>2</b>	2	4
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	6
Molybdenum	ppm	ASTM D5185m	100	<b>3</b>	3	3
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	450	<b>286</b>	287	279
Calcium	ppm	ASTM D5185m	3000	<b>3468</b>	3517	3208
Phosphorus	ppm	ASTM D5185m	1150	<b>803</b>	811	701
Zinc	ppm	ASTM D5185m	1350	<b>937</b>	953	869
Sulfur	ppm	ASTM D5185m	4250	<b>3299</b>	3367	3263
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.909</b>	0.893	0.902
Visc @ 40°C	cSt	ASTM D445	138	<b>114</b>	114	112



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0886567  
**Lab Number** : 06104499  
**Unique Number** : 10902729  
**Test Package** : MAR 2

**Received** : 29 Feb 2024  
**Tested** : 01 Mar 2024  
**Diagnosed** : 01 Mar 2024 - Wes Davis

**SEAWARD SERVICES**  
 222 PEARL ST  
 NEW ALBANY, IN  
 US 47150

Contact: PETER CHARBONNET  
 PCHARBONNET@HMS-SEAWARD.COM

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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