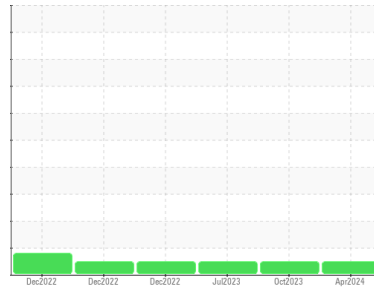




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
ENDEAVOR
 Component
Starboard Reduction Gear
 Fluid
SHELL ROTELLA T 30 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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		WC0834569	WC0847405	WC0834559
Sample Date	Client Info		26 Apr 2024	22 Oct 2023	06 Jul 2023
Machine Age	hrs	Client Info	15564	0	13850
Oil Age	hrs	Client Info	0	0	13850
Oil Changed	Client Info		Not Chngd	N/A	Not Chngd
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >150	26	21	21
Chromium	ppm	ASTM D5185m >10	<1	0	<1
Nickel	ppm	ASTM D5185m >10	<1	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	2	2	2
Lead	ppm	ASTM D5185m >100	<1	0	0
Copper	ppm	ASTM D5185m >50	6	3	4
Tin	ppm	ASTM D5185m >10	1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	261	232	333
Barium	ppm	ASTM D5185m	2	0	0
Molybdenum	ppm	ASTM D5185m 0	42	38	44
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	34	37	49
Calcium	ppm	ASTM D5185m 1890	3131	3016	3531
Phosphorus	ppm	ASTM D5185m 680	793	716	828
Zinc	ppm	ASTM D5185m 750	798	793	976
Sulfur	ppm	ASTM D5185m	6217	4872	6009

CONTAMINANTS

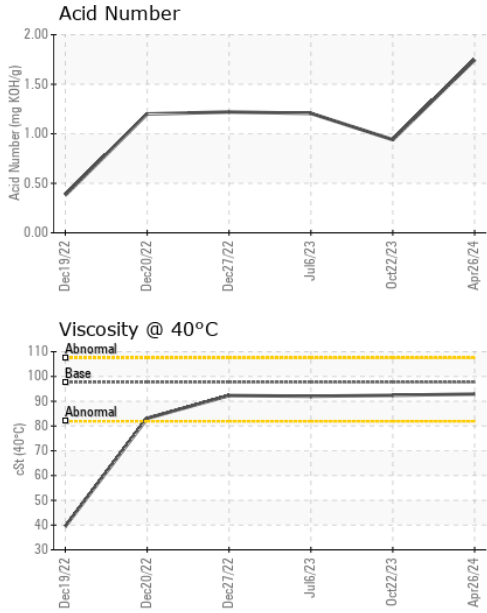
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	11	13	15
Sodium	ppm	ASTM D5185m	3	5	7
Potassium	ppm	ASTM D5185m >20	3	0	0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.747	0.94	1.206



OIL ANALYSIS REPORT

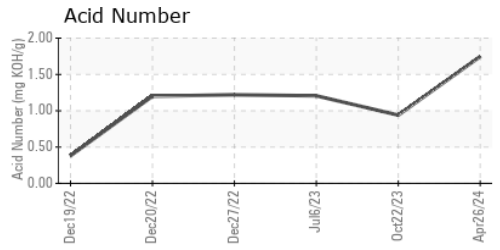
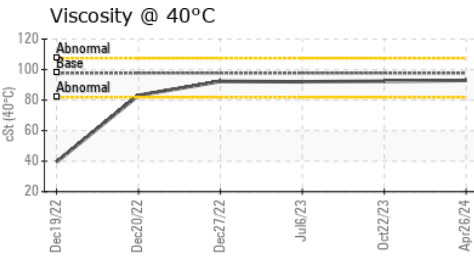
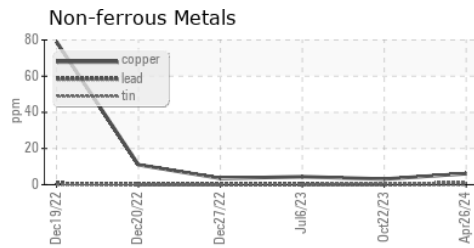
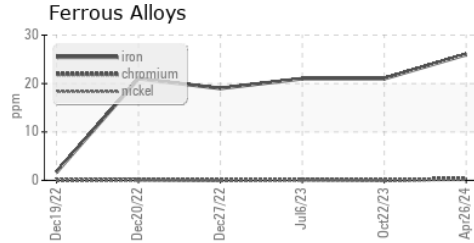


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	97.7	92.9	92.4	92.0

SAMPLE IMAGES	method	limit/base	current	history1	history2	
Color				no image	no image	no image
Bottom				no image	no image	no image

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0834569 **Received** : 13 May 2024
Lab Number : **06177347** **Tested** : 14 May 2024
Unique Number : 11023400 **Diagnosed** : 15 May 2024 - Don Baldrige
Test Package : MAR 2

CITY EXPERIENCES - SEAWARD EXPLORER
 2825 5TH AVENUE
 SAN DIEGO, CA
 US 92103
 Contact: PETER CHARBONNET

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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F: