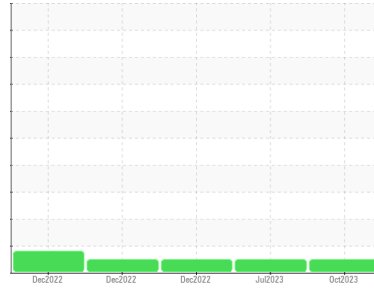




OIL ANALYSIS REPORT

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			WC0847405	WC0834559	WC0754328
Sample Date	Client Info			22 Oct 2023	06 Jul 2023	27 Dec 2022
Machine Age	hrs	Client Info		0	13850	12980
Oil Age	hrs	Client Info		0	13850	12018
Oil Changed	Client Info			N/A	Not Changd	Not Changd
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	21	21	19
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	1
Lead	ppm	ASTM D5185m	>100	0	0	0
Copper	ppm	ASTM D5185m	>50	3	4	4
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

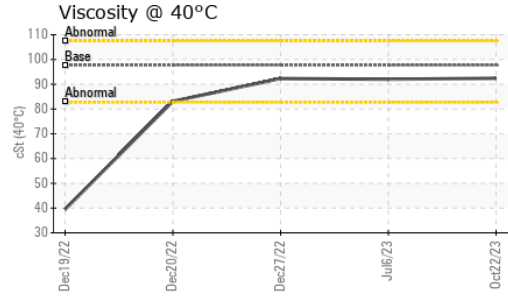
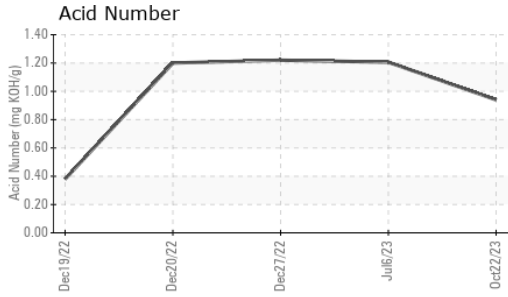
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	232	333	365
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	0	38	44	45
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		37	49	43
Calcium	ppm	ASTM D5185m	1890	3016	3531	3571
Phosphorus	ppm	ASTM D5185m	680	716	828	845
Zinc	ppm	ASTM D5185m	750	793	976	956
Sulfur	ppm	ASTM D5185m		4872	6009	5066

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	13	15	18
Sodium	ppm	ASTM D5185m		5	7	6
Potassium	ppm	ASTM D5185m	>20	0	0	0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.94	1.206	1.22



OIL ANALYSIS REPORT

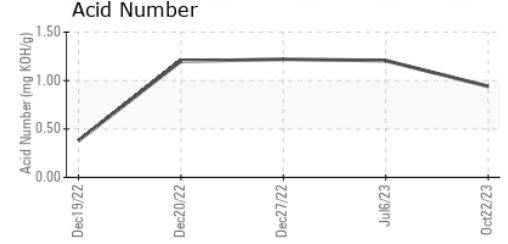
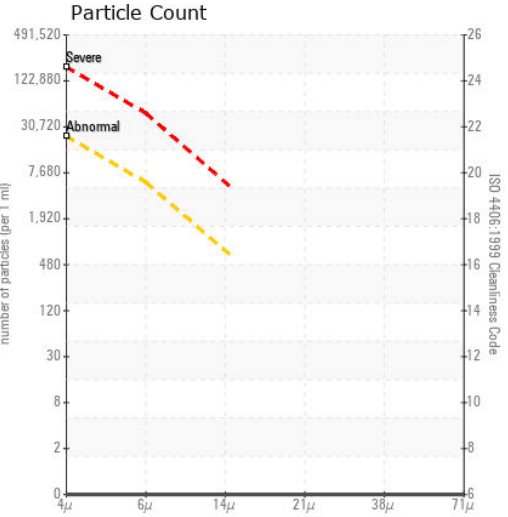
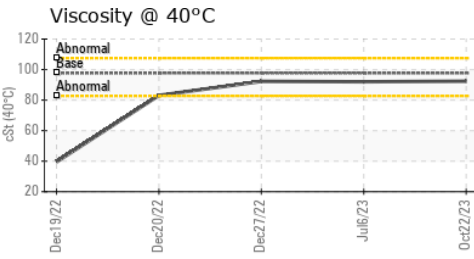
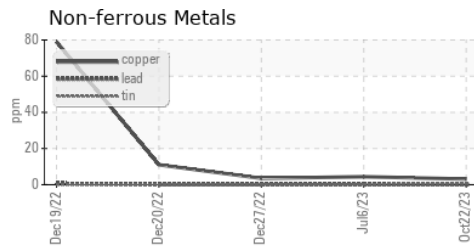
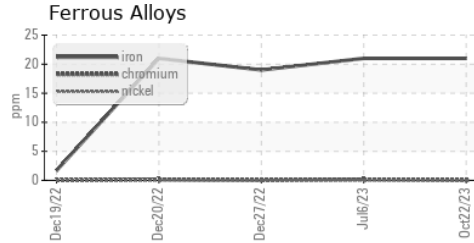


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	92.4	92.0	92.3

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. : WC0847405 **Received** : 20 Nov 2023
Lab Number : **06013400** **Diagnosed** : 24 Nov 2023
Unique Number : 10752544 **Diagnostician** : Jonathan Hester
Test Package : MAR 2 (Additional Tests: PrtCount)

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

Certificate L2367
 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)