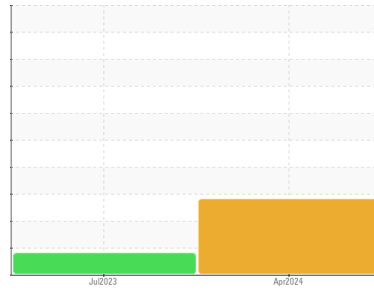




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

ENDEAVOR - CLUTCH (S/N 983270)

Component

Starboard Hydraulic System

Fluid

SHELL TELLUS S2 MX 46 (10 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. All other component wear rates are normal.

Contamination

There is a moderate amount of particulates present 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

Sample Number	Client Info	method	limit/base	current	history1	history2
WC0834567	WC0834563					
Sample Date	Client Info			26 Apr 2024	06 Jul 2023	
Machine Age	hrs	Client Info		15564	13850	
Oil Age	hrs	Client Info		0	13850	
Oil Changed	Client Info			Not Chngd	Not Chngd	
Sample Status				ABNORMAL	ABNORMAL	

CONTAMINATION

Water	method	limit/base	current	history1	history2
WC Method	>0.05	NEG	NEG		

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >20	<1	1	
Chromium	ppm	ASTM D5185m >20	0	0	
Nickel	ppm	ASTM D5185m >20	0	0	
Titanium	ppm	ASTM D5185m	0	0	
Silver	ppm	ASTM D5185m	0	0	
Aluminum	ppm	ASTM D5185m >20	0	<1	
Lead	ppm	ASTM D5185m >20	<1	0	
Copper	ppm	ASTM D5185m >20	78	78	
Tin	ppm	ASTM D5185m >20	<1	0	
Vanadium	ppm	ASTM D5185m	0	0	
Cadmium	ppm	ASTM D5185m	0	0	

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	0	
Barium	ppm	ASTM D5185m 0	0	0	
Molybdenum	ppm	ASTM D5185m 0	0	<1	
Manganese	ppm	ASTM D5185m 0	1	<1	
Magnesium	ppm	ASTM D5185m 70	0	2	
Calcium	ppm	ASTM D5185m 10	121	149	
Phosphorus	ppm	ASTM D5185m 300	363	377	
Zinc	ppm	ASTM D5185m 325	452	475	
Sulfur	ppm	ASTM D5185m 665	1797	1968	

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<1	<1	
Sodium	ppm	ASTM D5185m	1	<1	
Potassium	ppm	ASTM D5185m >20	0	0	

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	7972	1964	
Particles >6µm	ASTM D7647	>1300	2075	183	
Particles >14µm	ASTM D7647	>160	199	10	
Particles >21µm	ASTM D7647	>40	53	3	
Particles >38µm	ASTM D7647	>10	3	0	
Particles >71µm	ASTM D7647	>3	0	0	
Oil Cleanliness	ISO 4406 (c)	>19/17/14	20/18/15	18/15/10	

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.35	0.41	0.41	

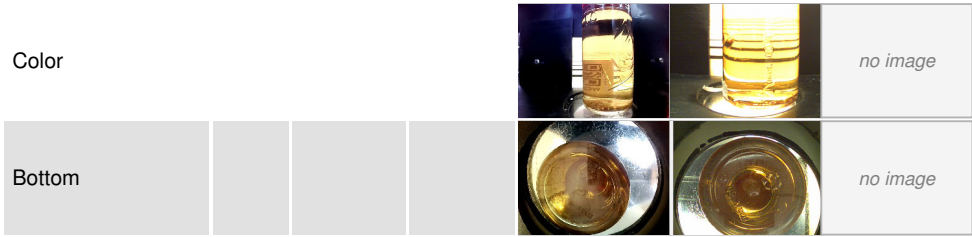


OIL ANALYSIS REPORT

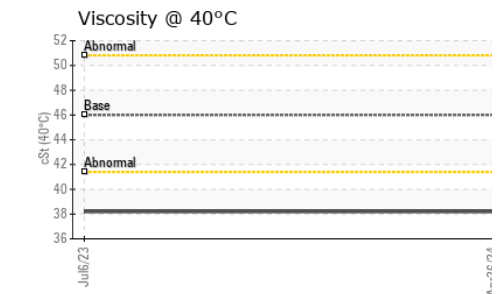
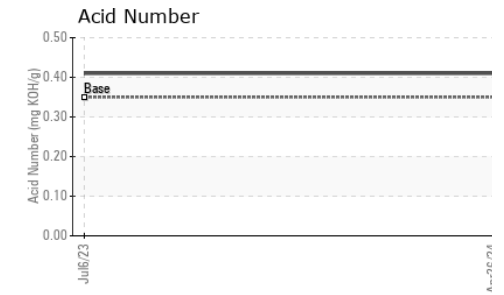
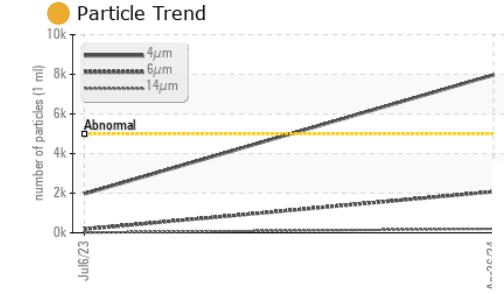
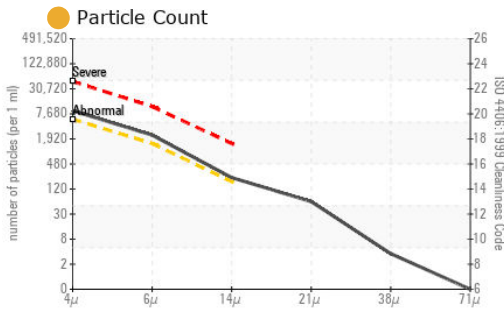
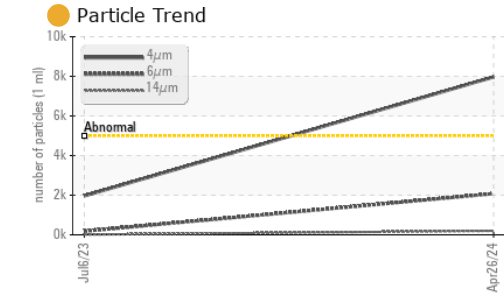
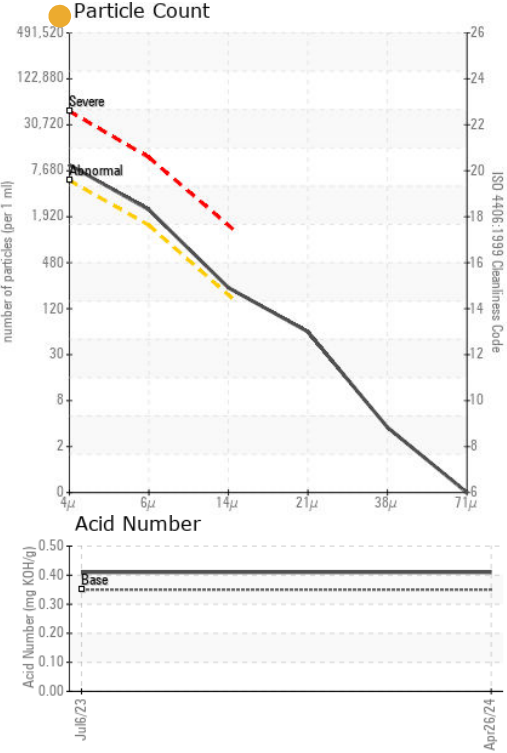
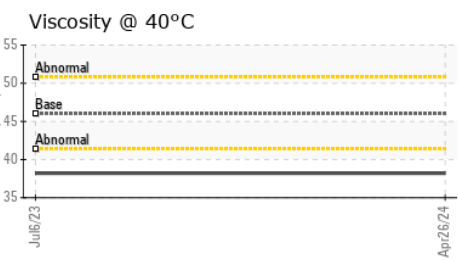
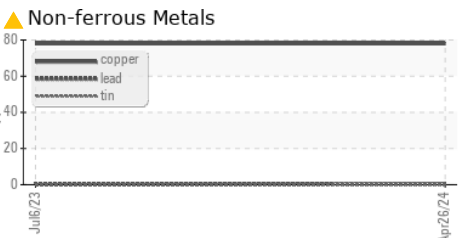
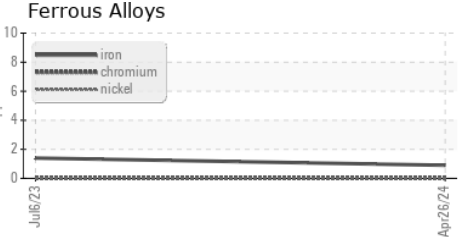
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.0	38.2	38.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0834567
Lab Number : **06177072**
Unique Number : 11023125
Test Package : MAR 2
Received : 13 May 2024
Tested : 14 May 2024
Diagnosed : 17 May 2024 - Jonathan Hester

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)

T: (985)290-6777
F: