



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
SEAWARD ENDEAVOR
Machine Id
Endeavor
Component
Starboard Reduction Gear
Fluid
SHELL ROTELLA T 30 (9 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0907672	WC0779523	---
Sample Date		Client Info		10 May 2024	18 Mar 2023	---
Machine Age	hrs	Client Info		17421	13272	---
Oil Age	hrs	Client Info		0	13272	---
Filter Age	hrs	Client Info		0	13272	---
Oil Changed		Client Info		N/A	Not Changd	---
Filter Changed		Client Info		N/A	Not Changd	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	10	27	---
Chromium	ppm	ASTM D5185m	>10	0	<1	---
Nickel	ppm	ASTM D5185m	>10	<1	0	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m		0	2	---
Aluminum	ppm	ASTM D5185m	>25	1	3	---
Lead	ppm	ASTM D5185m	>100	0	<1	---
Copper	ppm	ASTM D5185m	>50	5	5	---
Tin	ppm	ASTM D5185m	>10	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

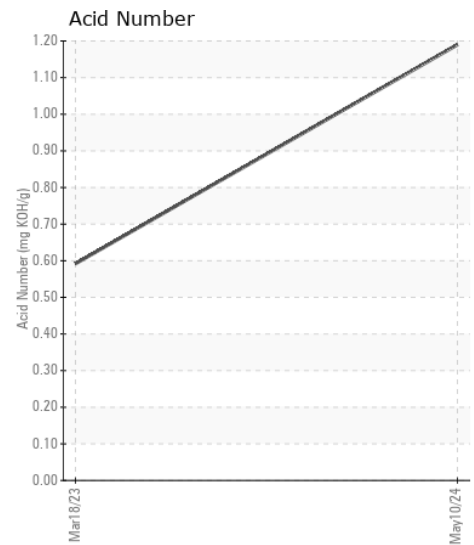
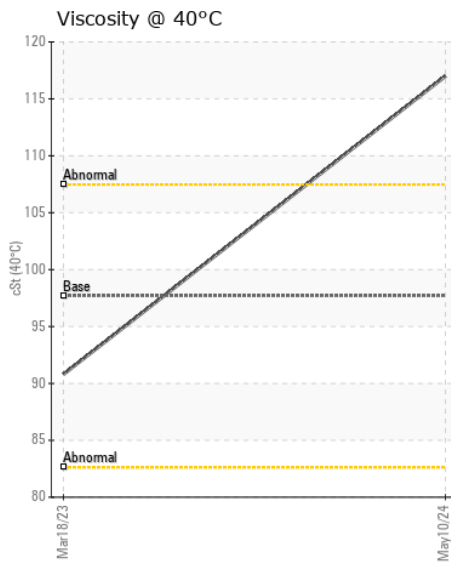
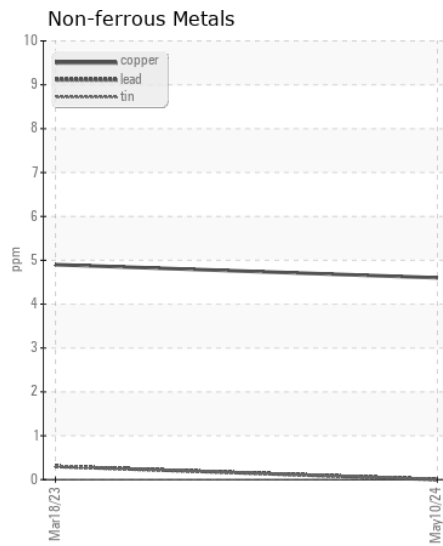
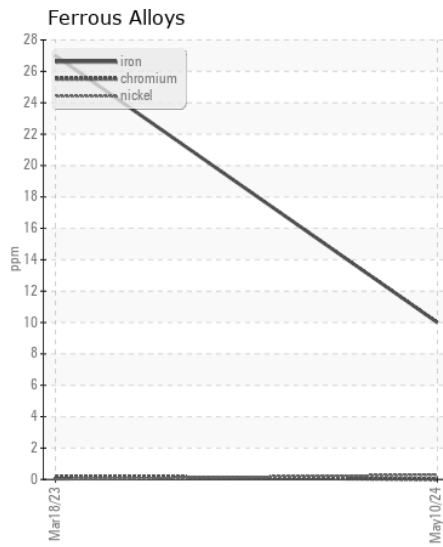
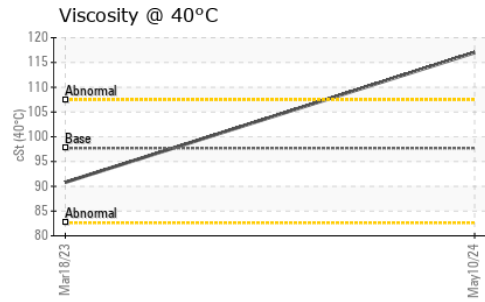
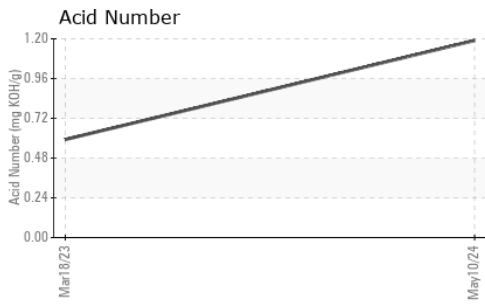
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	9	19	---
Potassium	ppm	ASTM D5185m	>20	1	2	---
Water		WC Method	>0.1	NEG	NEG	---
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	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		4	5	---
Boron	ppm	ASTM D5185m	0	2	389	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m	0	<1	49	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		249	47	---
Calcium	ppm	ASTM D5185m	1890	3472	3875	---
Phosphorus	ppm	ASTM D5185m	680	860	1024	---
Zinc	ppm	ASTM D5185m	750	919	1119	---
Sulfur	ppm	ASTM D5185m		3906	5317	---
Acid Number (AN)	mg KOH/g	ASTM D8045		1.19	0.592	---
Visc @ 40°C	cSt	ASTM D445	97.7	117	90.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0907672
Lab Number : 06211912
Unique Number : 11084776
Test Package : MAR 2

Received : 17 Jun 2024
Tested : 18 Jun 2024
Diagnosed : 19 Jun 2024 - Angela Borella

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)

T:
 F: