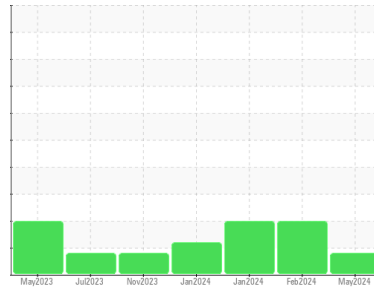




OIL ANALYSIS REPORT

Sample Rating Trend



Area
SEAWARD EXPLORER
 Machine Id
Explorer - Hydraulics
 Component
1 Steering
 Fluid
SHELL TELLUS T46 (60 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**
The amount and size of particulates present in the system are acceptable.
- Fluid Condition**
The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0907675	WC0859382	WC0886556
Sample Date	Client Info			10 May 2024	07 Feb 2024	27 Jan 2024
Machine Age	hrs	Client Info		6855	7398	7396
Oil Age	hrs	Client Info		0	7398	0
Oil Changed	Client Info			N/A	Not Changd	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>60	8	8	7
Chromium	ppm	ASTM D5185m	>12	2	2	<1
Nickel	ppm	ASTM D5185m	>6	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>4	2	<1	2
Lead	ppm	ASTM D5185m	>12	2	1	<1
Copper	ppm	ASTM D5185m	>30	▲ 60	▲ 61	▲ 66
Tin	ppm	ASTM D5185m		<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	0	0	0	5
Molybdenum	ppm	ASTM D5185m	0	<1	<1	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	0	2	1	<1
Calcium	ppm	ASTM D5185m	48	32	35	39
Phosphorus	ppm	ASTM D5185m	337	341	343	320
Zinc	ppm	ASTM D5185m	426	390	394	387
Sulfur	ppm	ASTM D5185m	2280	1364	1419	1280

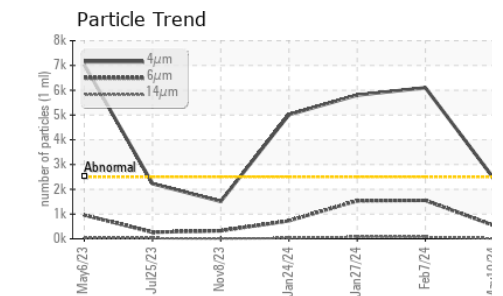
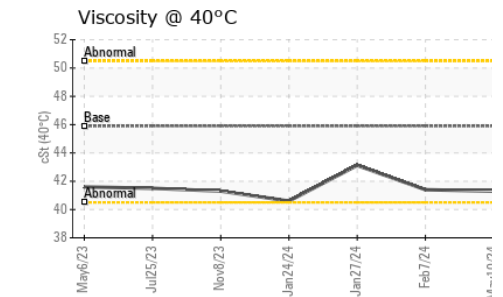
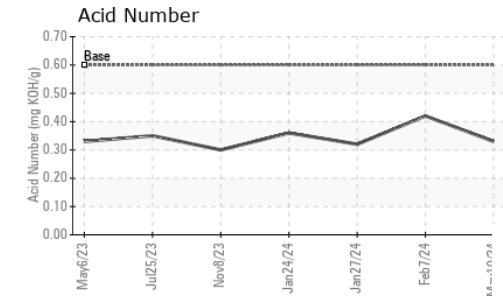
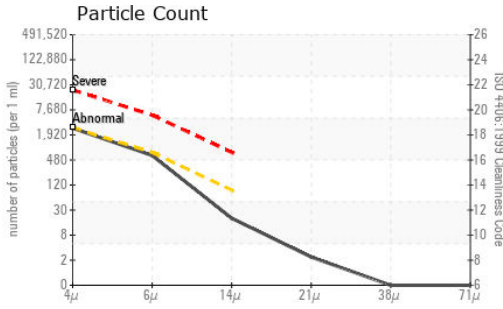
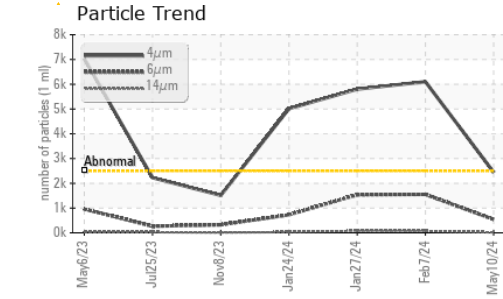
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>10	2	1	0
Sodium	ppm	ASTM D5185m		4	5	0
Potassium	ppm	ASTM D5185m	>20	<1	<1	1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	2447	▲ 6101	▲ 5802
Particles >6µm		ASTM D7647	>640	541	▲ 1553	▲ 1534
Particles >14µm		ASTM D7647	>80	17	73	80
Particles >21µm		ASTM D7647	>20	2	15	19
Particles >38µm		ASTM D7647	>4	0	1	1
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	18/16/11	▲ 20/18/13	▲ 20/18/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	.6	0.33	0.42	0.32



OIL ANALYSIS REPORT



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0907675 **Received** : 17 Jun 2024
Lab Number : 06211545 **Tested** : 18 Jun 2024
Unique Number : 11084409 **Diagnosed** : 18 Jun 2024 - Angela Borella
Test Package : MAR 2 (Additional Tests: PrtCount)

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)

SEAWARD SERVICES

222 PEARL ST
 NEW ALBANY, IN
 US 47150

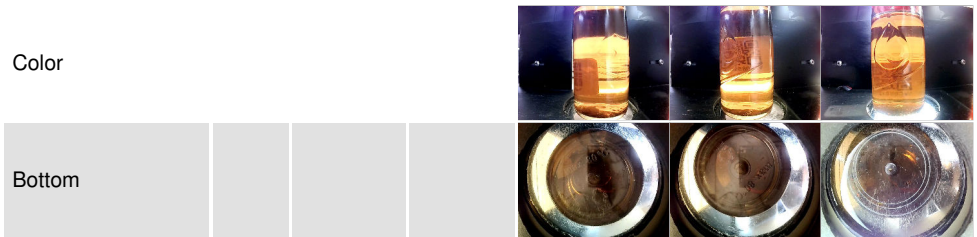
Contact: PETER CHARBONNET
 PCHARBONNET@HMS-SEAWARD.COM

T:
 F:

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	NEG	NEG	NEG
Free Water	scalar	*Visual	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45.9	41.3	41.4

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS

