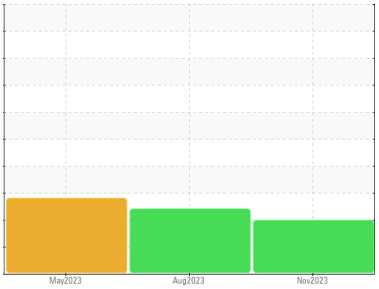
PROBLEM SUMMARY

Sample Rating Trend

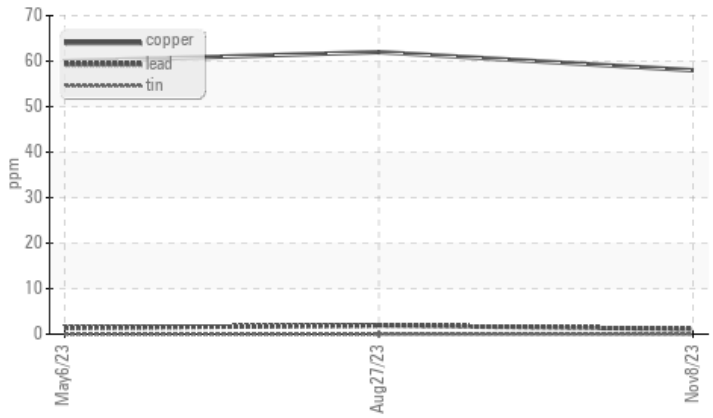


WEAR

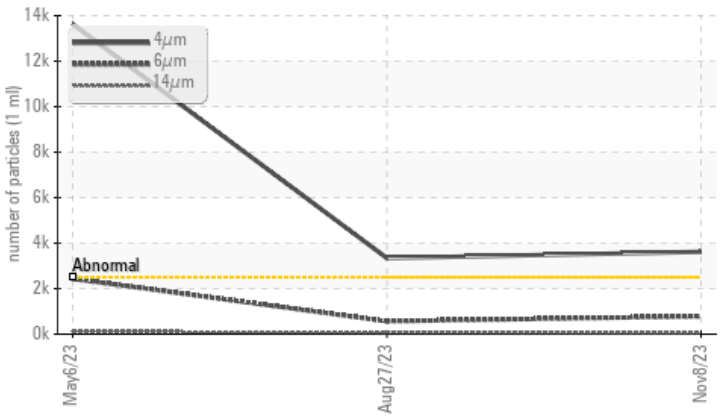
Area
SEAWARD EXPLORER
Machine Id
Explorer - Hydraulics
Component
2 Steering
Fluid
SHELL TELLUS T46 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Non-ferrous Metals



▲ Particle Trend



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ATTENTION	ABNORMAL
Copper	ppm	ASTM D5185m	>30	▲ **58**	▲ 62	▲ 60
Particles >4µm		ASTM D7647	>2500	▲ **3617**	▲ 3344	▲ 13627
Particles >6µm		ASTM D7647	>640	▲ **783**	565	▲ 2434
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ **19/17/12**	▲ 19/16/13	▲ 21/18/14

Customer Id: SEANEW
Sample No.: WC0859363
Lab Number: 06012335
Test Package: MAR 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

27 Aug 2023 Diag: Doug Bogart

WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. There is a moderate amount of particulates present in the fluid. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report

06 May 2023 Diag: Don Baldridge

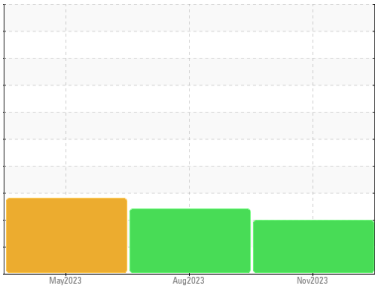
WEAR

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.The copper level is abnormal. All other component wear rates are normal. There is a high amount of particulates present in the fluid. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
SEAWARD EXPLORER
Machine Id
Explorer - Hydraulics
Component
2 Steering
Fluid
SHELL TELLUS T46 (--- 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 silt (particulates < 14 microns in size) present in the fluid.

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		**WC0859363**	WC0818090	WC0806904
Sample Date		Client Info		**08 Nov 2023**	27 Aug 2023	06 May 2023
Machine Age	hrs	Client Info		**5742**	1784	4593
Oil Age	hrs	Client Info		**5742**	0	0
Oil Changed		Client Info		**Not Changd**	N/A	Not Changd
Sample Status				**ABNORMAL**	ATTENTION	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	**7**	8	7
Chromium	ppm	ASTM D5185m	>12	**1**	<1	1
Nickel	ppm	ASTM D5185m	>6	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>4	**<1**	0	0
Lead	ppm	ASTM D5185m	>12	**1**	2	1
Copper	ppm	ASTM D5185m	>30	▲ **58**	▲ 62	▲ 60
Tin	ppm	ASTM D5185m		**0**	0	0
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	<1	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	0	0
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	2	0
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**0**	2	0
Calcium	ppm	ASTM D5185m	48	**60**	43	37
Phosphorus	ppm	ASTM D5185m	337	**336**	383	333
Zinc	ppm	ASTM D5185m	426	**393**	386	390
Sulfur	ppm	ASTM D5185m	2280	**1256**	1694	1484

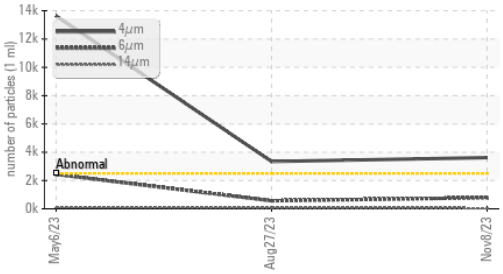
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>10	**2**	<1	<1
Sodium	ppm	ASTM D5185m		**6**	5	4
Potassium	ppm	ASTM D5185m	>20	**0**	0	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	▲ **3617**	▲ 3344	▲ 13627
Particles >6µm		ASTM D7647	>640	▲ **783**	565	▲ 2434
Particles >14µm		ASTM D7647	>80	**37**	80	▲ 111
Particles >21µm		ASTM D7647	>20	**10**	▲ 38	▲ 32
Particles >38µm		ASTM D7647	>4	**1**	▲ 5	2
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ **19/17/12**	▲ 19/16/13	▲ 21/18/14

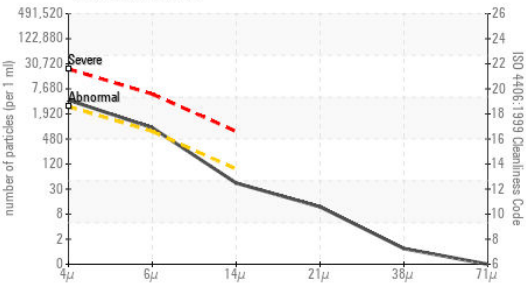
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	.6	**0.26**	0.38	0.25

OIL ANALYSIS REPORT

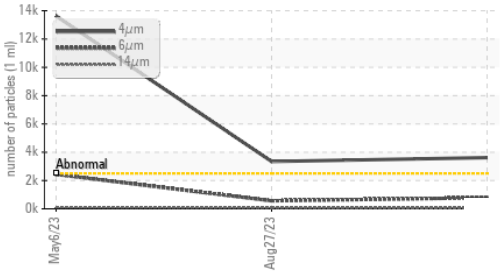
Particle Trend



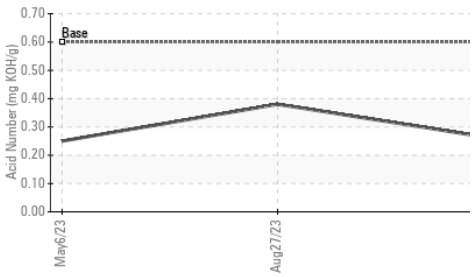
Particle Count



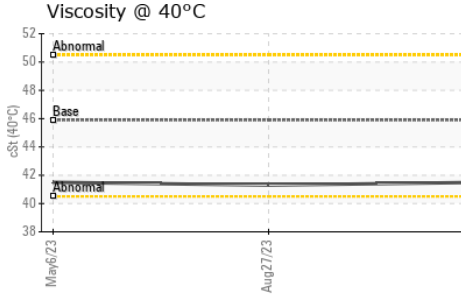
Particle Trend



Acid Number

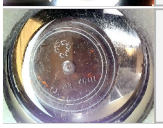
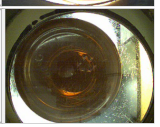


Viscosity @ 40°C



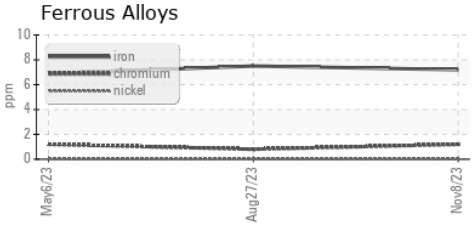
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**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	**41.5**	41.3	41.5

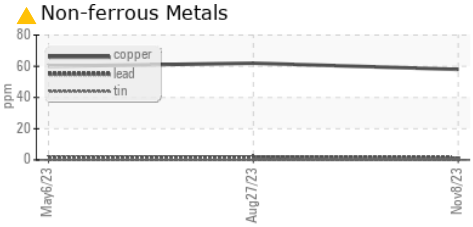
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	
Bottom				*no image*	

GRAPHS

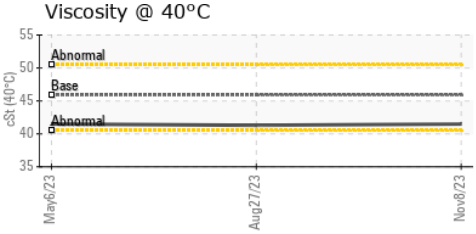
Ferrous Alloys



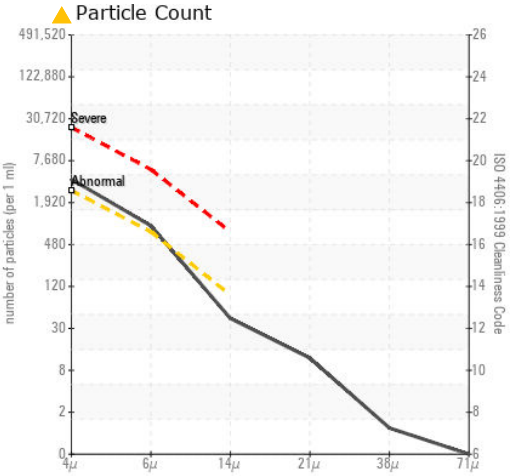
Non-ferrous Metals



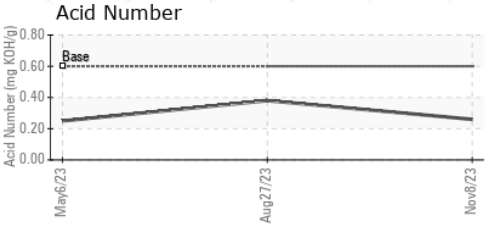
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0859363 **Received** : 20 Nov 2023
Lab Number : 06012335 **Diagnosed** : 22 Nov 2023
Unique Number : 10751479 **Diagnostician** : Don Baldridge
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)

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