



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Area
SEAWARD EXPLORER
Machine Id
Explorer - Anchor Windlass HPU
Component
Hydraulic System
Fluid
SHELL TELLUS T46 (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

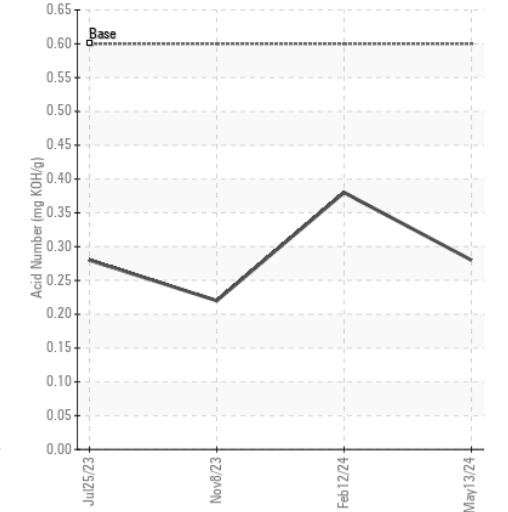
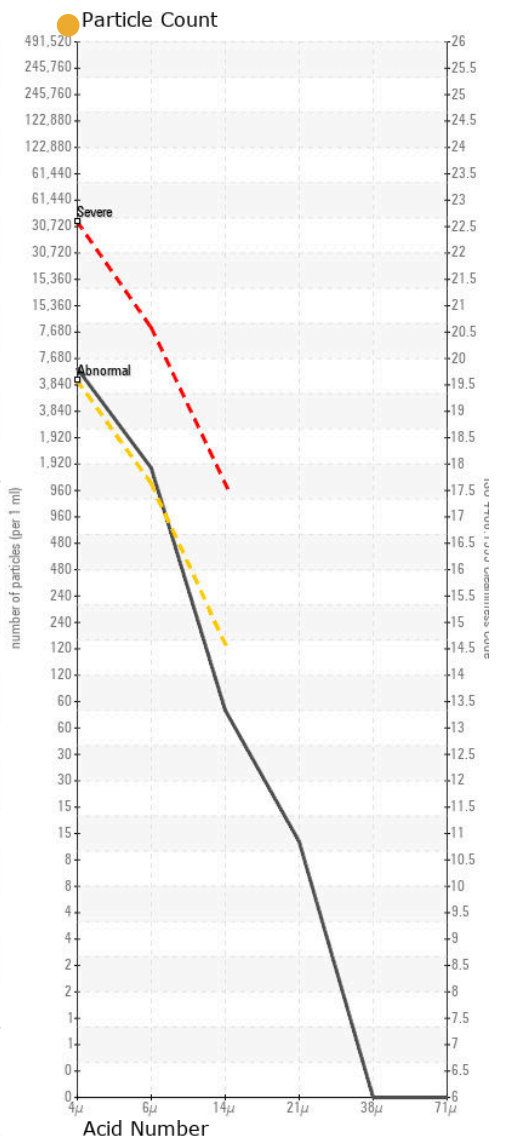
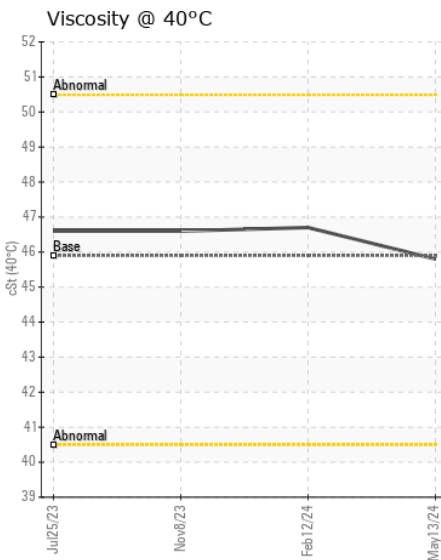
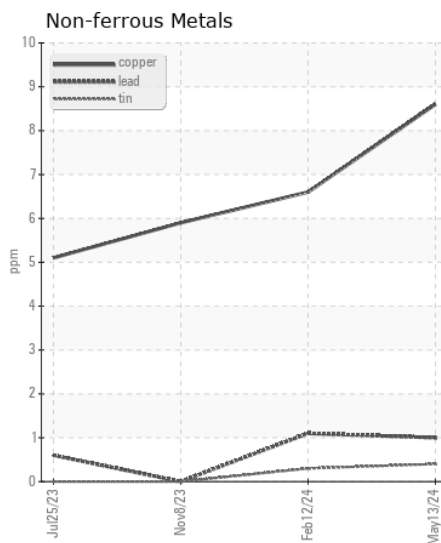
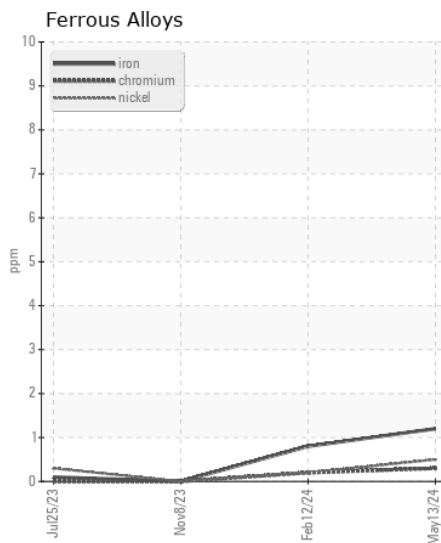
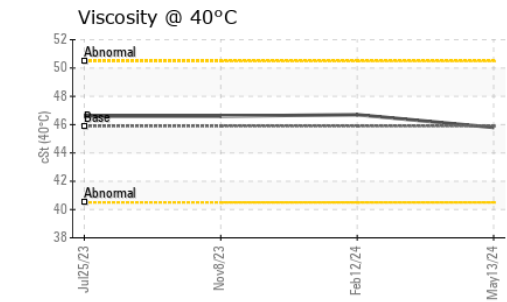
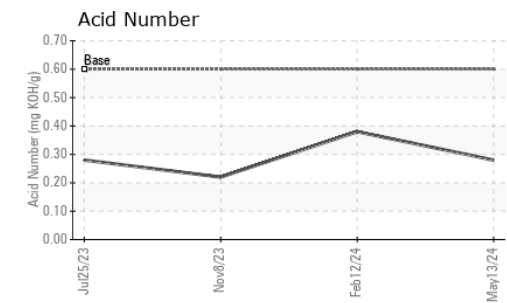
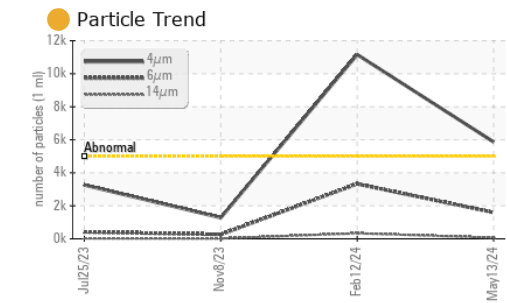
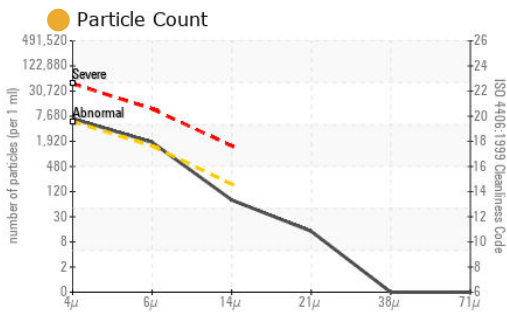
CONTAMINATION

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0907659	WC0859378	WC0859362
Sample Date		Client Info		13 May 2024	12 Feb 2024	08 Nov 2023
Machine Age	hrs	Client Info		388	383	379
Oil Age	hrs	Client Info		0	383	379
Filter Age	hrs	Client Info		0	383	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	N/A
Sample Status				ATTENTION	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>20	1	<1	0
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	<1	0
Lead	ppm	ASTM D5185m	>10	1	1	0
Copper	ppm	ASTM D5185m	>75	9	7	6
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	5	5	4
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	5867	▲ 11158	1276
Particles >6µm		ASTM D7647	>1300	1593	▲ 3325	263
Particles >14µm		ASTM D7647	>160	67	▲ 333	17
Particles >21µm		ASTM D7647	>40	12	▲ 91	3
Particles >38µm		ASTM D7647	>10	0	3	0
Particles >71µm		ASTM D7647	>3	0	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	20/18/13	▲ 21/19/16	17/15/11
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	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		1	<1	2
Boron	ppm	ASTM D5185m	0	0	0	0
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	<1	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	0	<1	<1	0
Calcium	ppm	ASTM D5185m	48	67	71	63
Phosphorus	ppm	ASTM D5185m	337	346	364	328
Zinc	ppm	ASTM D5185m	426	469	496	439
Sulfur	ppm	ASTM D5185m	2280	1154	1298	1030
Acid Number (AN)	mg KOH/g	ASTM D8045	.6	0.28	0.38	0.22
Visc @ 40°C	cSt	ASTM D445	45.9	45.8	46.7	46.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0907659
 Lab Number : 06211546
 Unique Number : 11084410
 Test Package : MAR 2

Received : 17 Jun 2024
 Tested : 18 Jun 2024
 Diagnosed : 18 Jun 2024 - Wes Davis

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)

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