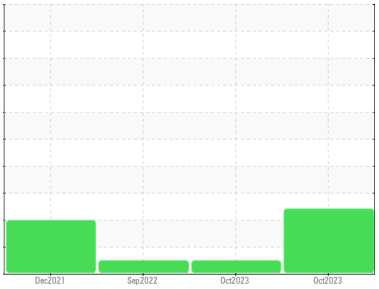
PROBLEM SUMMARY

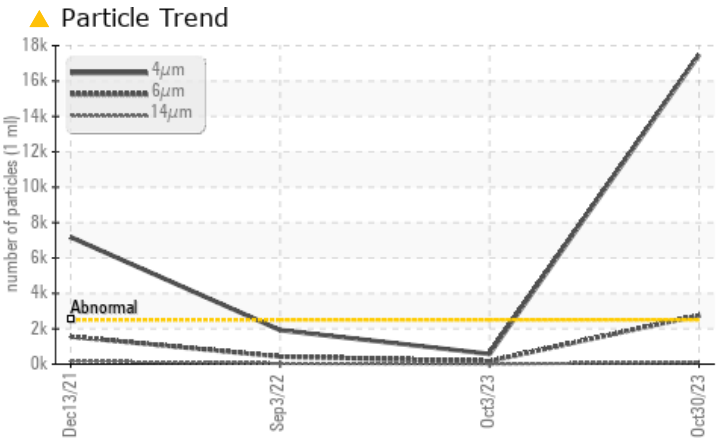
Sample Rating Trend



ISO

Area
OCEAN VOYAGER
Machine Id
[OCEAN VOYAGER] OCEAN VOYAGER STEERING SB
Component
Starboard Steering
Fluid
CASTROL HYSPIN AWH-M ISO 32 (400 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Particles >4µm		ASTM D7647	>2500	▲ **17487**	574	1921
Particles >6µm		ASTM D7647	>640	▲ **2757**	166	425
Particles >14µm		ASTM D7647	>80	▲ **97**	10	37
Particles >21µm		ASTM D7647	>20	▲ **28**	2	12
Particles >38µm		ASTM D7647	>4	▲ **6**	0	1
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ **21/19/14**	16/15/10	18/16/12

Customer Id: VICNEWIN
Sample No.: WC0824865
Lab Number: 06006267
Test Package: MAR 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.

HISTORICAL DIAGNOSIS

03 Oct 2023 Diag: Angela Borella

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the fluid. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report

03 Sep 2022 Diag: Jonathan Hester

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the fluid. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

view report

13 Dec 2021 Diag: Jonathan Hester

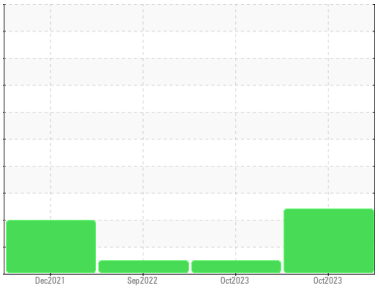
ISO

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.All 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



ISO

Area
OCEAN VOYAGER
Machine Id
[OCEAN VOYAGER] OCEAN VOYAGER STEERING SB
Component
Starboard Steering
Fluid
CASTROL HYSPIN AWH-M ISO 32 (400 LTR)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a high amount of particulates 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		**WC0824865**	WC0824573	WC0693030
Sample Date		Client Info		**30 Oct 2023**	03 Oct 2023	03 Sep 2022
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

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

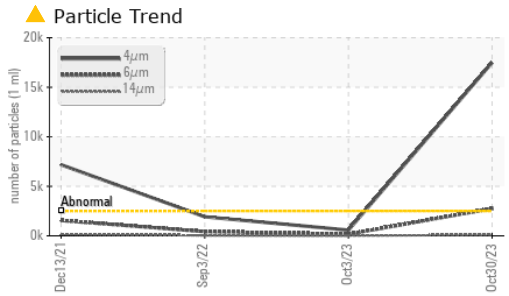
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	<1
Manganese	ppm	ASTM D5185m		**0**	0	0
Magnesium	ppm	ASTM D5185m		**3**	<1	5
Calcium	ppm	ASTM D5185m		**54**	62	74
Phosphorus	ppm	ASTM D5185m		**384**	380	404
Zinc	ppm	ASTM D5185m		**456**	499	494
Sulfur	ppm	ASTM D5185m		**2592**	2546	3272

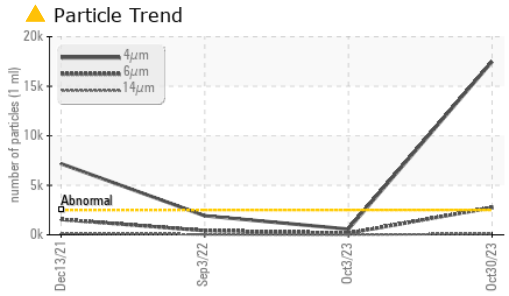
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>10	**1**	1	<1
Sodium	ppm	ASTM D5185m		**<1**	0	0
Potassium	ppm	ASTM D5185m	>20	**0**	<1	0

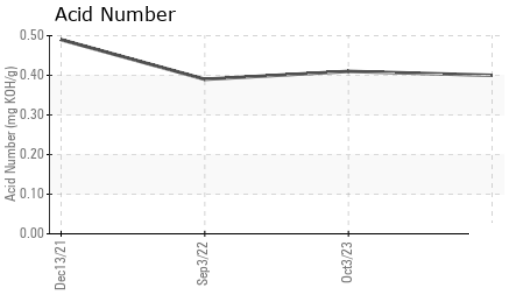
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	▲ **17487**	574	1921
Particles >6µm		ASTM D7647	>640	▲ **2757**	166	425
Particles >14µm		ASTM D7647	>80	▲ **97**	10	37
Particles >21µm		ASTM D7647	>20	▲ **28**	2	12
Particles >38µm		ASTM D7647	>4	▲ **6**	0	1
Particles >71µm		ASTM D7647	>3	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ **21/19/14**	16/15/10	18/16/12

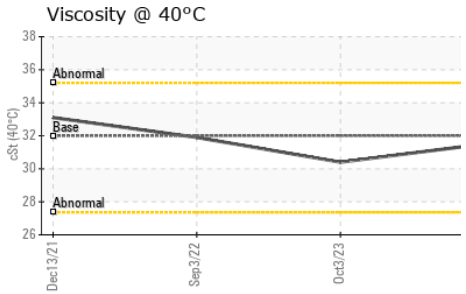
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.40**	0.41	0.39

OIL ANALYSIS REPORT





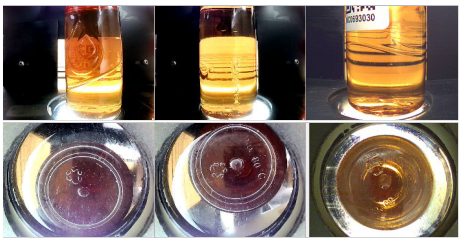




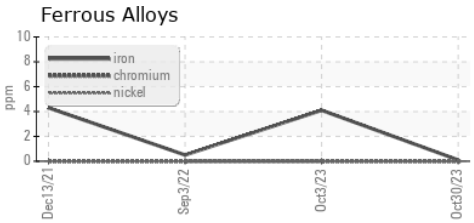
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

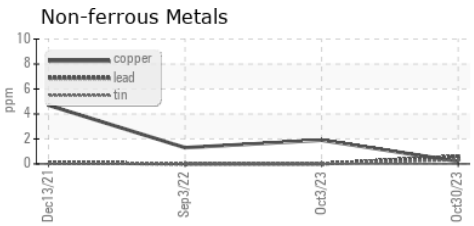
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32.0	**31.5**	30.4	31.9

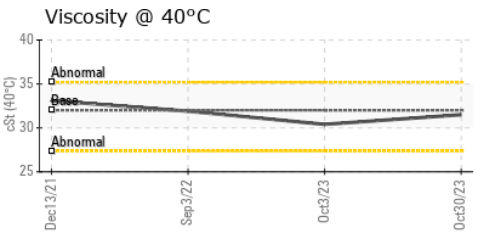
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

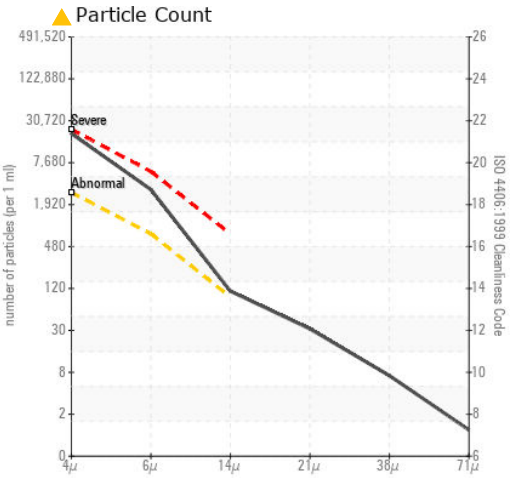


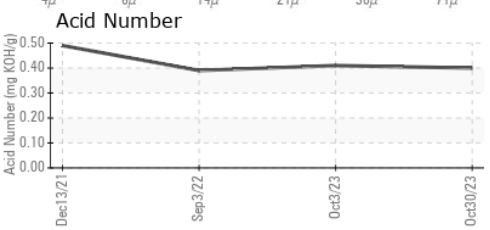
GRAPHS











Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0824865 **Received** : 13 Nov 2023
Lab Number : 06006267 **Diagnosed** : 14 Nov 2023
Unique Number : 10740029 **Diagnostician** : Doug Bogart
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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