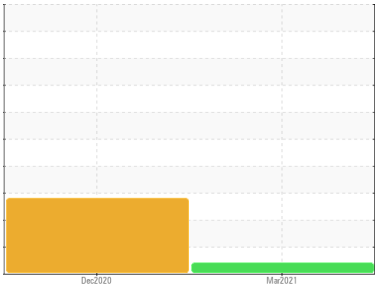
OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS

Machine Id
OSV HERCULES 2PH
Component
Starboard Wheel Hub
Fluid
SHELL OMALA S2 G100 (25 GAL)

DIAGNOSIS

Recommendation
We suspect abnormal contamination may be due to sampling method. We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0541048**	WC0423675	---
Sample Date		Client Info		**17 Mar 2021**	22 Dec 2020	---
Machine Age	hrs	Client Info		**18087**	17476	---
Oil Age	hrs	Client Info		**195**	4977	---
Oil Changed		Client Info		**Not Changd**	Not Changd	---
Sample Status				**ABNORMAL**	ABNORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	---

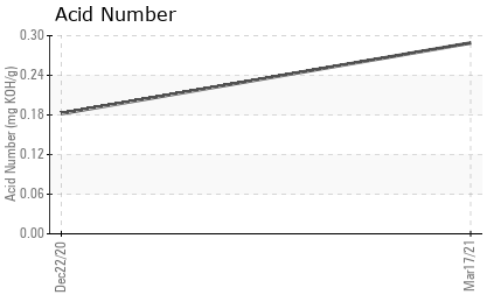
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**12**	253	---
Chromium	ppm	ASTM D5185m	>8	**1**	16	---
Nickel	ppm	ASTM D5185m	>5	**<1**	8	---
Titanium	ppm	ASTM D5185m		**0**	<1	---
Silver	ppm	ASTM D5185m		**<1**	<1	---
Aluminum	ppm	ASTM D5185m	>5	**4**	7	---
Lead	ppm	ASTM D5185m	>5	**<1**	4	---
Copper	ppm	ASTM D5185m	>50	**4**	▲ 935	---
Tin	ppm	ASTM D5185m		**<1**	▲ 90	---
Antimony	ppm	ASTM D5185m		**0**	0	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

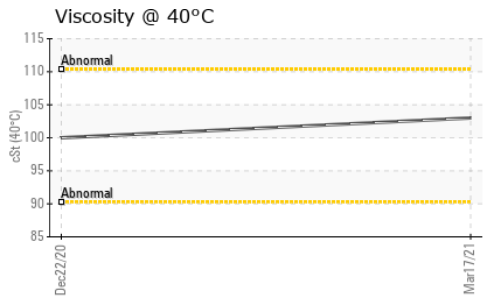
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**2**	<1	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**0**	<1	---
Manganese	ppm	ASTM D5185m		**<1**	4	---
Magnesium	ppm	ASTM D5185m		**2**	3	---
Calcium	ppm	ASTM D5185m		**22**	4	---
Phosphorus	ppm	ASTM D5185m		**197**	244	---
Zinc	ppm	ASTM D5185m		**0**	0	---
Sulfur	ppm	ASTM D5185m		**5229**	7276	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**2**	6	---
Sodium	ppm	ASTM D5185m		**1**	24	---
Potassium	ppm	ASTM D5185m	>20	**0**	<1	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.289**	0.182	---

OIL ANALYSIS REPORT



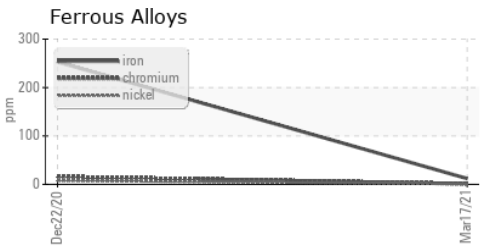


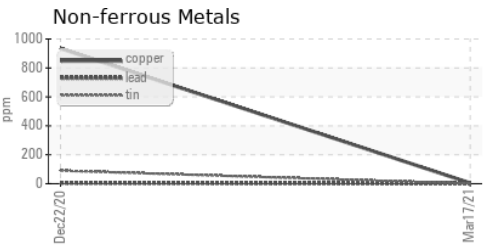
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	▲ MODER	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	▲ **MODER**	NONE	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	---
Appearance	scalar	*Visual	NORML	**NORML**	NORML	---
Odor	scalar	*Visual	NORML	**NORML**	NORML	---
Emulsified Water	scalar	*Visual	>0.2	**NEG**	NEG	---
Free Water	scalar	*Visual		**NEG**	NEG	---

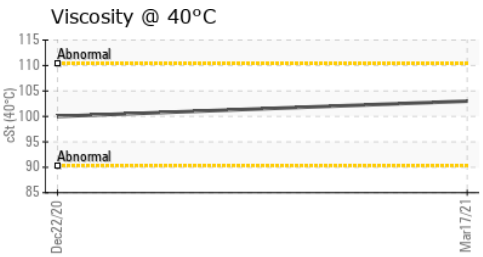
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**103**	100	---

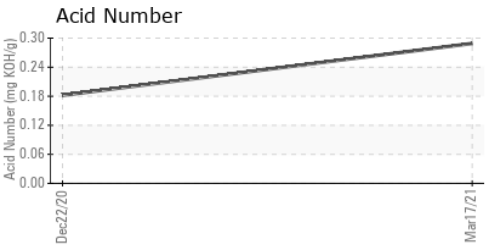
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0541048 **Received** : 12 Apr 2021
Lab Number : 05226794 **Tested** : 14 Apr 2021
Unique Number : 9460701 **Diagnosed** : 14 Apr 2021 - 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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