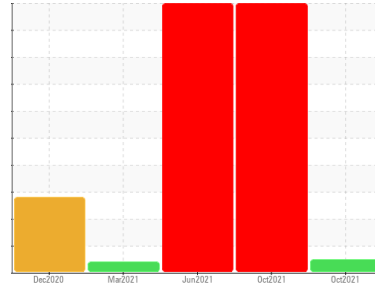




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
OSV HERCULES 2PH
 Component
Starboard Wheel Hub
 Fluid
SHELL OMALA S2 GX 100 (25 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (end of flushing).

Wear

All component wear rates are normal.

Contamination

The water content is negligible. There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0579473	WC0579474	WC0541061
Sample Date	Client Info		19 Oct 2021	18 Oct 2021	07 Jun 2021
Machine Age	hrs	Client Info	20055	20055	18666
Oil Age	hrs	Client Info	8000	8000	0
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			NORMAL	SEVERE	SEVERE

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >500	0	164	▲ 878
Chromium	ppm	ASTM D5185m >8	0	10	▲ 101
Nickel	ppm	ASTM D5185m >5	<1	5	▲ 74
Titanium	ppm	ASTM D5185m	0	<1	1
Silver	ppm	ASTM D5185m	0	0	<1
Aluminum	ppm	ASTM D5185m >5	0	2	6
Lead	ppm	ASTM D5185m >5	0	6	3
Copper	ppm	ASTM D5185m >50	3	▲ 214	▲ 368
Tin	ppm	ASTM D5185m	<1	▲ 32	▲ 36
Antimony	ppm	ASTM D5185m	0	<1	0
Vanadium	ppm	ASTM D5185m	<1	<1	<1
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	2	5
Barium	ppm	ASTM D5185m	1	4	0
Molybdenum	ppm	ASTM D5185m	0	<1	9
Manganese	ppm	ASTM D5185m	0	2	23
Magnesium	ppm	ASTM D5185m	0	7	9
Calcium	ppm	ASTM D5185m	0	4	15
Phosphorus	ppm	ASTM D5185m	271	195	245
Zinc	ppm	ASTM D5185m	0	5	2
Sulfur	ppm	ASTM D5185m	5995	5811	7205

CONTAMINANTS

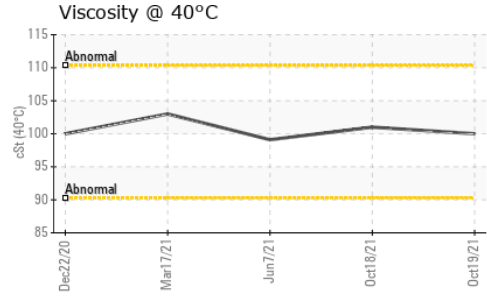
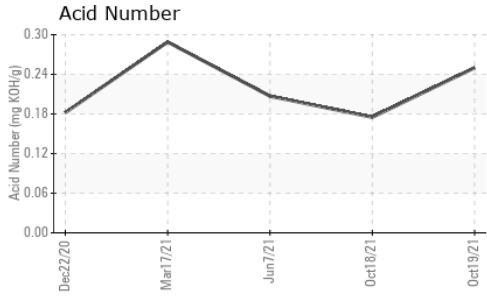
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<1	2	14
Sodium	ppm	ASTM D5185m	3	41	15
Potassium	ppm	ASTM D5185m >20	<1	3	0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.250	0.175	0.207



OIL ANALYSIS REPORT



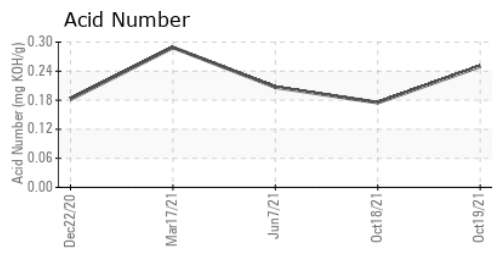
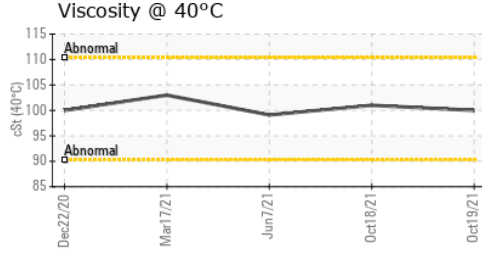
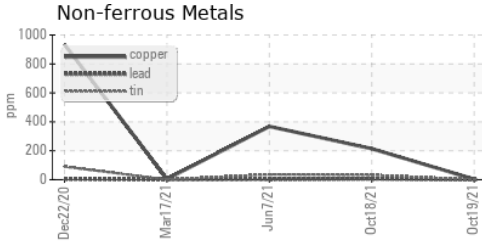
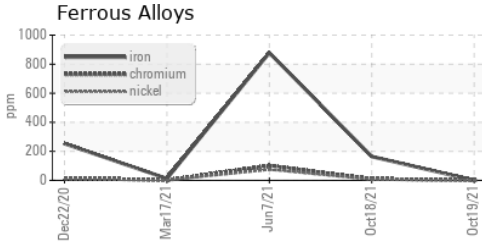
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	MODER
Debris	scalar	*Visual	NONE	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	100	101	99.1

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

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0579473
Lab Number : 05388957
Unique Number : 9723090
Test Package : MAR 2
Received : 02 Nov 2021
Tested : 03 Nov 2021
Diagnosed : 03 Nov 2021 - Don Baldrige

ALASKA VESSEL AGENTS
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 DUTCH HARBOR, AK
 US 99692
 Contact: MONIKA BERGERT
 monika.bergert@alaskavesselagents.com
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 F:

Certificate L2367
 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)