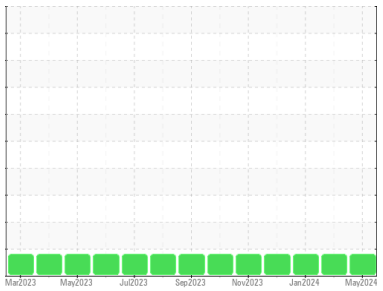
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
Huntington
Machine Id
[Huntington] Oil - Starboard Reduction Gear
Component
Starboard Reduction Gear
Fluid
DIESEL ENGINE OIL SAE 40 (24 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
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		**WC0874560**	WC0874746	WC0845905
Sample Date		Client Info		**08 May 2024**	19 Mar 2024	21 Jan 2024
Machine Age	hrs	Client Info		**22066**	21029	19870
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>150	**4**	6	4
Chromium	ppm	ASTM D5185m	>10	**<1**	0	0
Nickel	ppm	ASTM D5185m	>10	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	1	<1
Lead	ppm	ASTM D5185m	>100	**0**	0	2
Copper	ppm	ASTM D5185m	>50	▲ **212**	▲ 202	▲ 163
Tin	ppm	ASTM D5185m	>10	**0**	0	<1
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	250	**7**	5	4
Barium	ppm	ASTM D5185m	10	**0**	0	0
Molybdenum	ppm	ASTM D5185m	100	**96**	98	92
Manganese	ppm	ASTM D5185m		**<1**	0	<1
Magnesium	ppm	ASTM D5185m	450	**208**	190	197
Calcium	ppm	ASTM D5185m	3000	**2261**	2147	2016
Phosphorus	ppm	ASTM D5185m	1150	**914**	874	889
Zinc	ppm	ASTM D5185m	1350	**976**	951	975
Sulfur	ppm	ASTM D5185m	4250	**3267**	3036	2873

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**0**	3	3
Sodium	ppm	ASTM D5185m	>216	**4**	3	3
Potassium	ppm	ASTM D5185m	>20	**0**	3	1
Water	%	ASTM D6304	>0.1	**0.017**	0.011	0.041
ppm Water	ppm	ASTM D6304	>1000	**171**	120	410

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.887**	0.91	0.902

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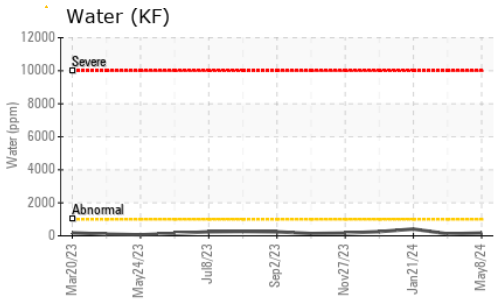
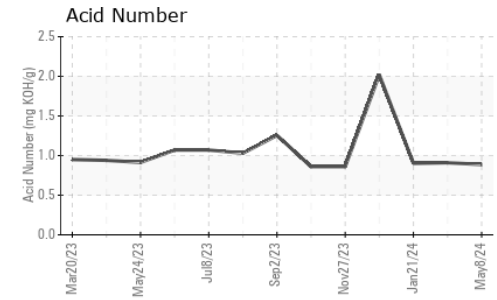
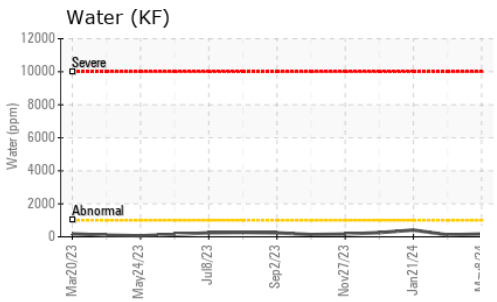
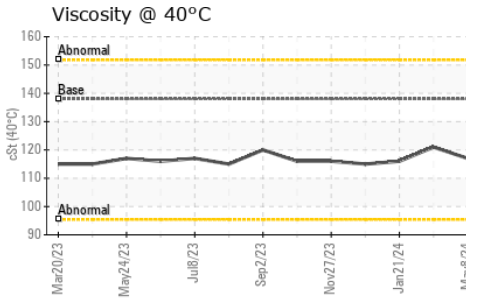






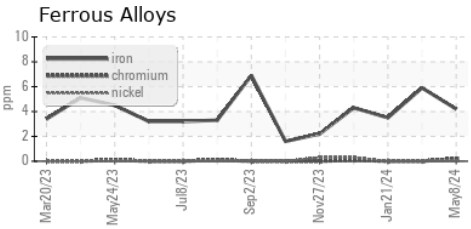


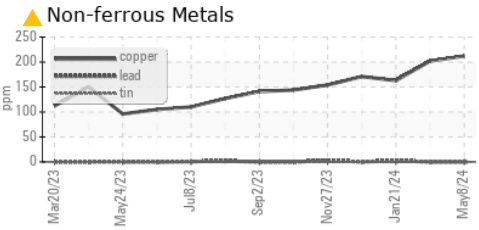
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

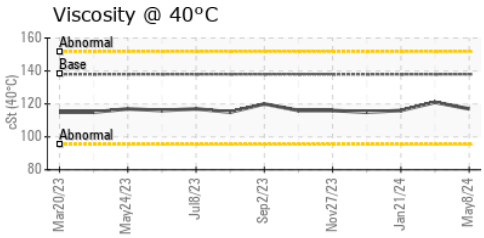
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	138	**117**	121	116

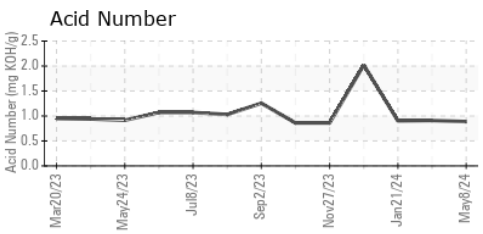
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0874560
Lab Number : 06181436
Unique Number : 11032762
Test Package : IND 2 (Additional Tests: KF)

Received : 16 May 2024
Tested : 17 May 2024
Diagnosed : 20 May 2024 - Angela Borella

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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Report Id: MARCAT [WUSCAR] 06181436 (Generated: 05/20/2024 10:22:40) Rev: 1

Submitted By: M/V HUNTINGTON