WEAR CONTAMINATION FLUID CONDITION **NORMAL NORMAL NORMAL**

Machine Id **MRC**

Starboard Reduction Gear

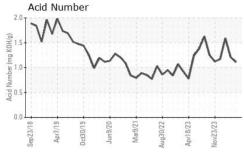
Reduction Gear Oil (GAL)							
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. 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 brand, type, and viscosity of the oil on your next sample.	Sample Number		Client Info		MW06152162	MW06108839	MW06071837
	Sample Date		Client Info		16 Apr 2024	04 Mar 2024	25 Jan 2024
	Machine Age	hrs	Client Info		11364	10633	9952
	Oil Age	hrs	Client Info		1412	681	1160
	Filter Age	hrs	Client Info		0	0	0
	Oil Changed		Client Info		N/A	N/A	N/A
	Filter Changed		Client Info		N/A	N/A	N/A
	Sample Status				NORMAL	NORMAL	NORMAL
WEAR	Iron	ppm	ASTM D5185m	>150	4	0	<1
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>10	0	<1	0
	Nickel	ppm	ASTM D5185m	>10	0	0	0
	Titanium	ppm	ASTM D5185m		<1	0	0
	Silver	ppm	ASTM D5185m		0	0	0
	Aluminum	ppm	ASTM D5185m	>25	1	2	<1
	Lead	ppm	ASTM D5185m	>100	0	0	0
	Copper	ppm	ASTM D5185m	>50	<1	4	0
	Tin	ppm	ASTM D5185m	>10	<1	0	0
	Vanadium	ppm	ASTM D5185m		0	0	0
	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
CONTAMINATION	Silicon	ppm	ASTM D5185m	>50	5	5	4
There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	2	2	0
	Water		WC Method	>0.1	NEG	NEG	NEG
	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
FLUID CONDITION	Sodium	ppm	ASTM D5185m		2	<1	1
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		360	333	335
	Barium	ppm	ASTM D5185m		0	0	0
	Molybdenum	ppm	ASTM D5185m		38	39	34
	Manganese	ppm	ASTM D5185m		<1	0	<1
	Magnesium	ppm	ASTM D5185m		49	17	27
	Calcium	ppm	ASTM D5185m		2570	2607	2590
	Phosphorus	ppm	ASTM D5185m		822	726	797
	Zinc	ppm	ASTM D5185m		883	910	911
	Sulfur	ppm	ASTM D5185m		3680	3122	2974
	Acid Number (AN)	mg KOH/g	ASTM D8045		1.11	1.21	1.59

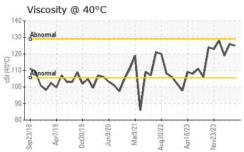
Visc @ 40°C cSt

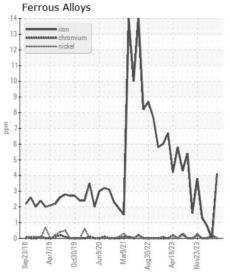
ASTM D445

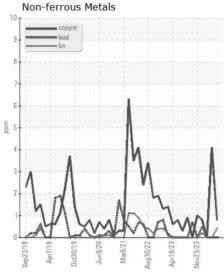
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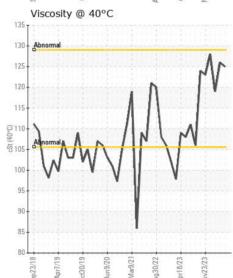
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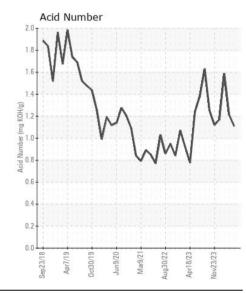
















Certificate L2367

Laboratory Sample No.

: MW06152162 Lab Number : 06152162 Unique Number : 10982240 Test Package : MAR 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 17 Apr 2024 **Tested** : 18 Apr 2024

Diagnosed

: 18 Apr 2024 - Wes Davis

ILLINOIS MARINE TOWING

PO BOX 391 LEMONT, IL US 60439

Contact: RHETT DANIEL rdaniel@imtowing.com

T: (630)280-4926

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)

F: (630)739-2041

Contact/Location: RHETT DANIEL - AMELEMIL