



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MARI LAMPTON
Component
Starboard Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (165 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0044312	MW0049272	MW0049247
Sample Date		Client Info		25 Apr 2024	20 Feb 2024	11 Dec 2023
Machine Age	hrs	Client Info		38535	37343	36060
Oil Age	hrs	Client Info		954	953	1375
Filter Age	hrs	Client Info		230	241	721
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	2	3	3
Chromium	ppm	ASTM D5185m	>8	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	16	14	14
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	<1	<1
Lead	ppm	ASTM D5185m	>18	<1	<1	0
Copper	ppm	ASTM D5185m	>80	2	2	<1
Tin	ppm	ASTM D5185m	>14	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

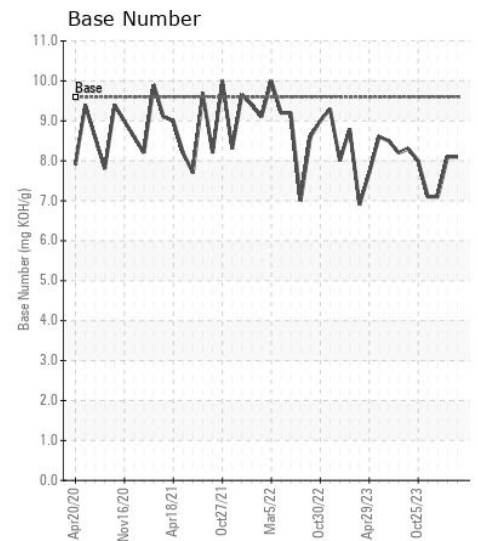
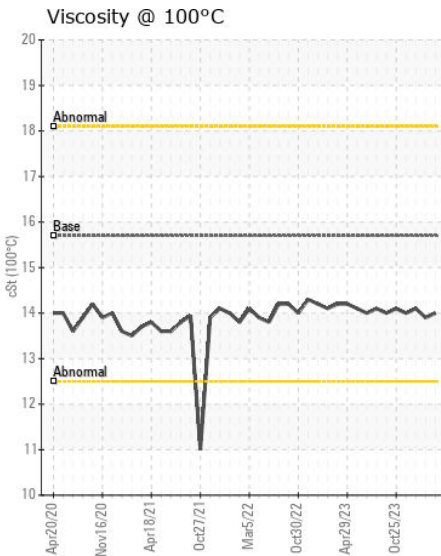
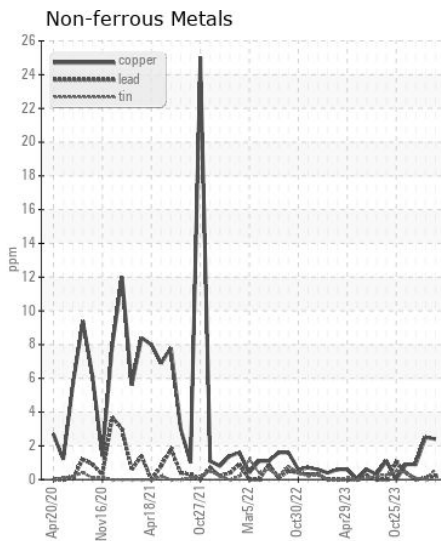
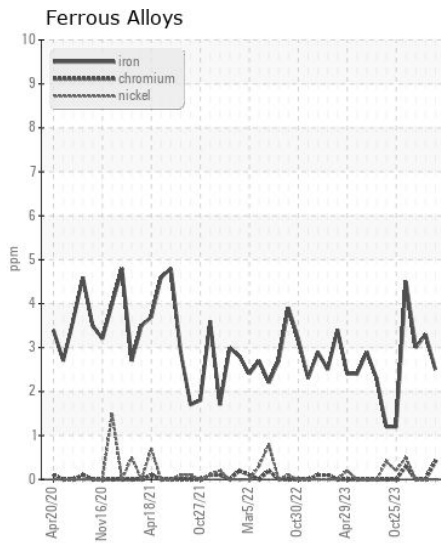
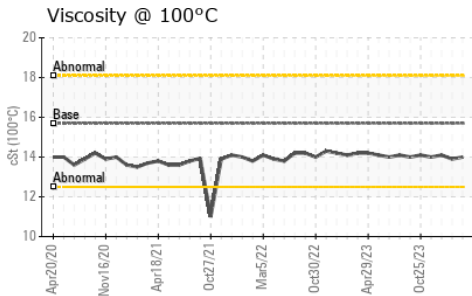
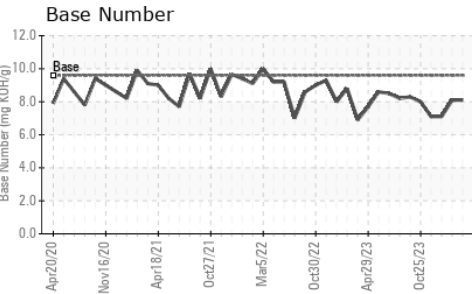
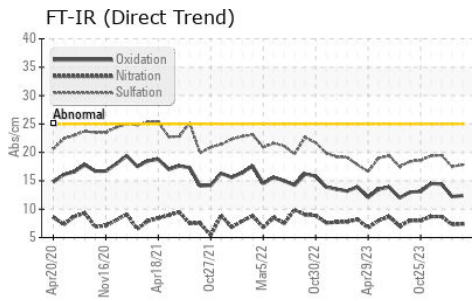
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	5	5	3
Potassium	ppm	ASTM D5185m	>20	4	2	3
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.4	7.3	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.8	17.5	19.5
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

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>75	<1	4	2
Boron	ppm	ASTM D5185m		107	90	68
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		30	28	31
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		654	717	713
Calcium	ppm	ASTM D5185m		1411	1514	1535
Phosphorus	ppm	ASTM D5185m	1200	696	682	678
Zinc	ppm	ASTM D5185m	1300	738	794	803
Sulfur	ppm	ASTM D5185m	3200	3052	3544	2956
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.4	12.2	14.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	8.1	8.1	7.1
Visc @ 100°C	cSt	ASTM D445	15.7	14.0	13.9	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0044312
Lab Number : 06176545
Unique Number : 11022598
Test Package : MAR 2

Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 14 May 2024 - Sean Felton

MAGNOLIA MARINE TRANSPORT
 697 HAINING ROAD
 VICKSBURG, MS
 US 39183
 Contact: MMT MAINTENANCE PLANNERS
 mmtmaintenanceplanners@ergon.com

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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