



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
EMD MISS KATHY
Component
Starboard Main Engine
Fluid
CHEVRON DELO 710 LE (260 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0044119	MW0044130	MW0044134
Sample Date		Client Info		01 Feb 2024	05 Dec 2023	24 Sep 2023
Machine Age	hrs	Client Info		5543	0	2866
Oil Age	hrs	Client Info		2832	1590	2866
Filter Age	hrs	Client Info		1412	170	1500
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	11	7	25
Chromium	ppm	ASTM D5185m	>8	<1	<1	2
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>3	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	1	4
Lead	ppm	ASTM D5185m	>18	3	2	6
Copper	ppm	ASTM D5185m	>80	12	8	20
Tin	ppm	ASTM D5185m	>14	6	4	13
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

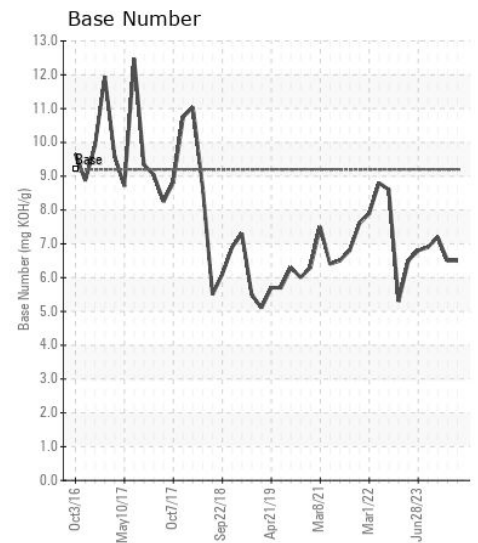
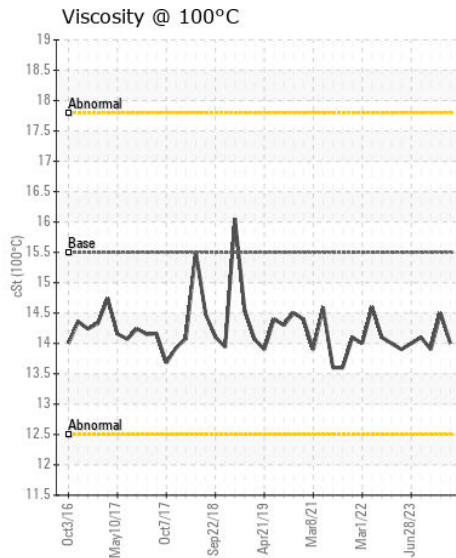
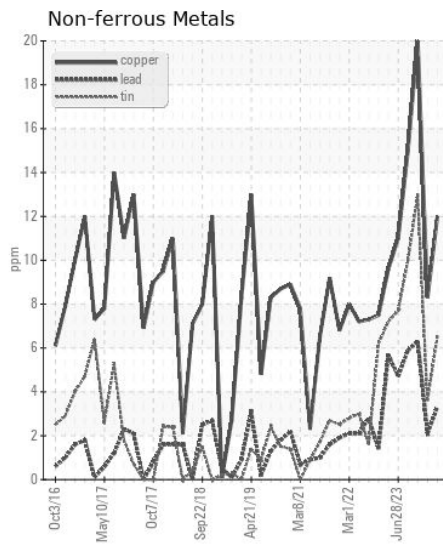
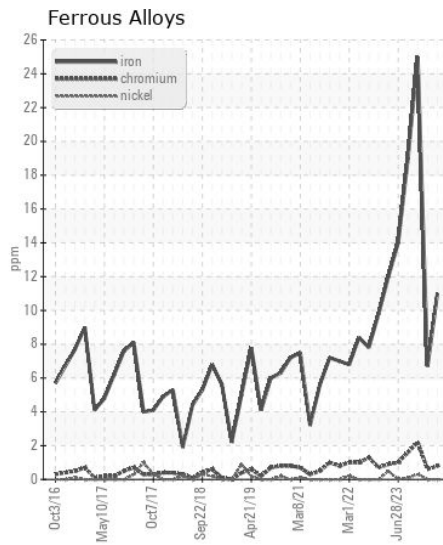
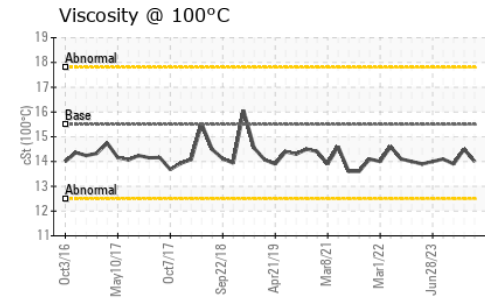
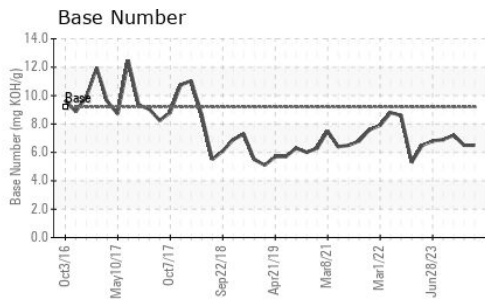
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	3	4	8
Potassium	ppm	ASTM D5185m	>20	<1	<1	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	>3	0.3	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.5	6.4	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.0	14.0	15.3
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	<1	3
Boron	ppm	ASTM D5185m		36	38	49
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		40	41	51
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		14	20	14
Calcium	ppm	ASTM D5185m		3162	3253	3905
Phosphorus	ppm	ASTM D5185m		6	9	8
Zinc	ppm	ASTM D5185m	10	2	2	0
Sulfur	ppm	ASTM D5185m		2135	2163	3331
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.4	7.3	8.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	6.5	6.5	7.2
Visc @ 100°C	cSt	ASTM D445	15.5	14.0	14.5	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0044119
Lab Number : 06089305
Unique Number : 10876750
Test Package : MAR 2

Received : 14 Feb 2024
Tested : 15 Feb 2024
Diagnosed : 15 Feb 2024 - Wes Davis

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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