



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JOHN DEERE MARITIME SE
Component
Starboard Main Engine
Fluid
CHEVRON DELO 710 LE (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0060490	MW0060504	MW0014525
Sample Date		Client Info		25 Jan 2024	06 Jul 2023	11 Nov 2021
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	18	7	18
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	1	<1	1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	2	2
Lead	ppm	ASTM D5185m	>40	2	0	1
Copper	ppm	ASTM D5185m	>300	1	<1	6
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

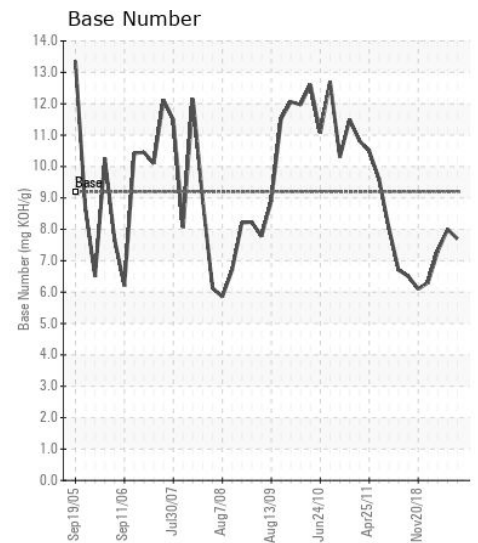
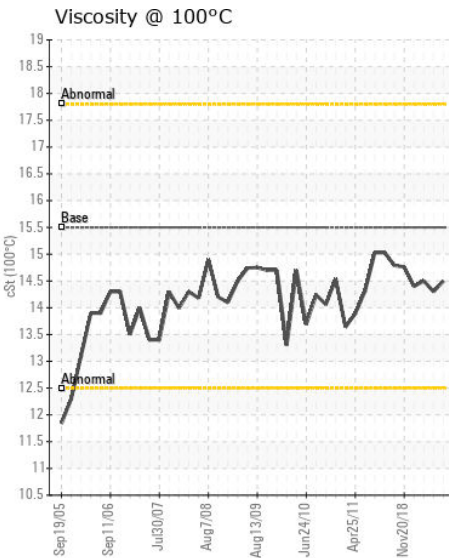
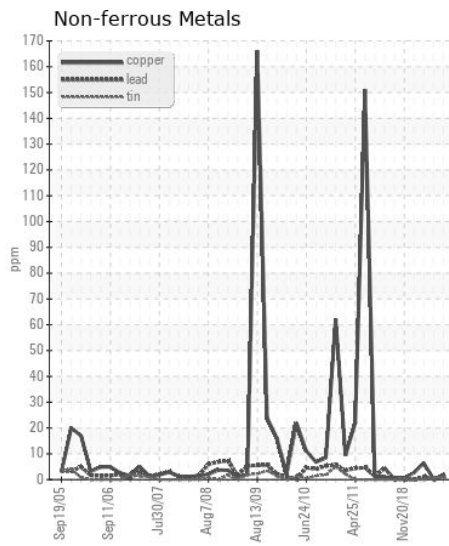
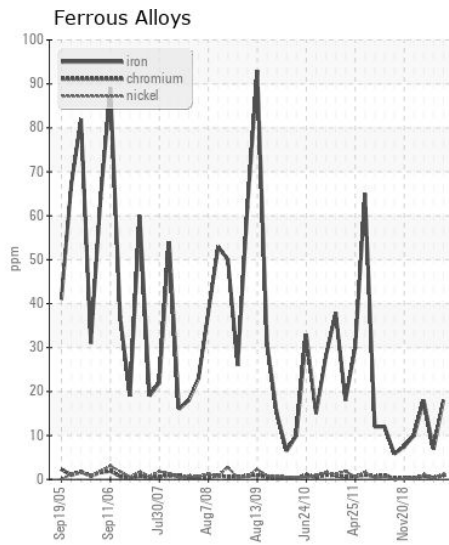
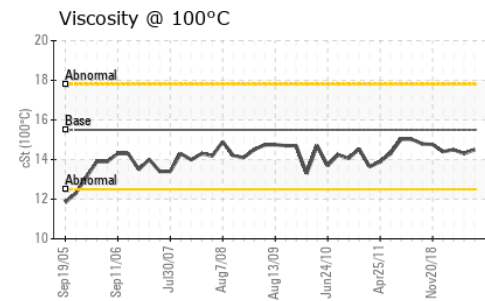
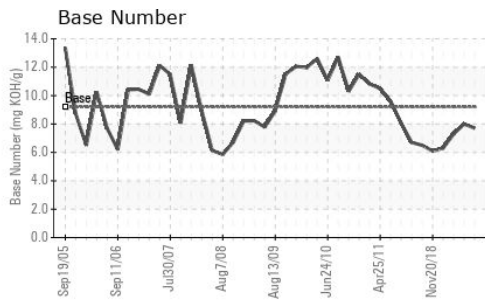
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	3	2
Potassium	ppm	ASTM D5185m	>20	2	2	0
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		0.2	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	10.4	8.5	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.8	15.7	16.6
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		0	1	3
Boron	ppm	ASTM D5185m		69	69	29
Barium	ppm	ASTM D5185m		14	0	0
Molybdenum	ppm	ASTM D5185m		65	44	40
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		16	19	23
Calcium	ppm	ASTM D5185m		4615	3718	3300
Phosphorus	ppm	ASTM D5185m		50	96	27
Zinc	ppm	ASTM D5185m	10	21	104	28
Sulfur	ppm	ASTM D5185m		3753	3187	2799
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.0	9.7	12.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	7.7	8.0	7.3
Visc @ 100°C	cSt	ASTM D445	15.5	14.5	14.3	14.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW0060490

Lab Number : 06085736

Unique Number : 10873181

Test Package : MAR 2

Received : 12 Feb 2024

Tested : 12 Feb 2024

Diagnosed : 12 Feb 2024 - Wes Davis

ERGON MARINE

100 LEE STREET

VICKSBURG, MS

US 39180

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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)