



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**DAVID M OLAUGHLIN**  
Machine Id  
**[DAVID M OLAUGHLIN] 008 670547-8**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 400 XLE 15W40 (6 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0043405</b>	MW0046535	MW0046526
Sample Date		Client Info		<b>13 Jan 2024</b>	20 Nov 2023	05 Sep 2023
Machine Age	hrs	Client Info		<b>39879</b>	39120	38305
Oil Age	hrs	Client Info		<b>343</b>	418	352
Filter Age	hrs	Client Info		<b>343</b>	418	352
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>8</b>	5	5
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>3</b>	2	2
Lead	ppm	ASTM D5185m	>17	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>70	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

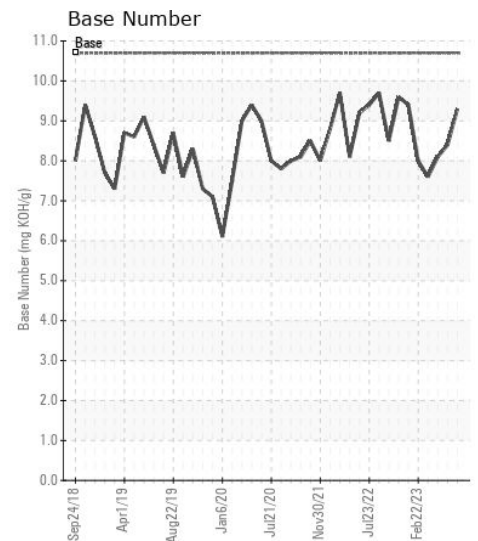
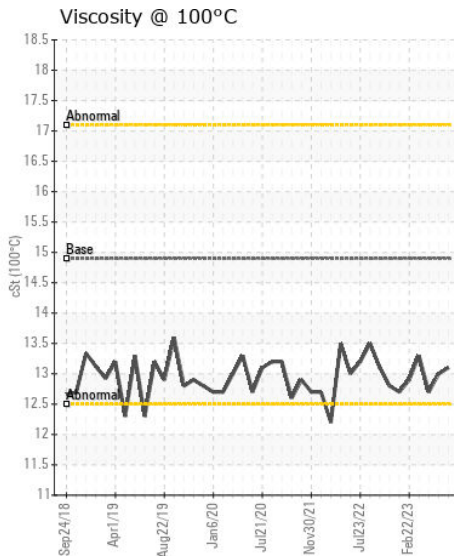
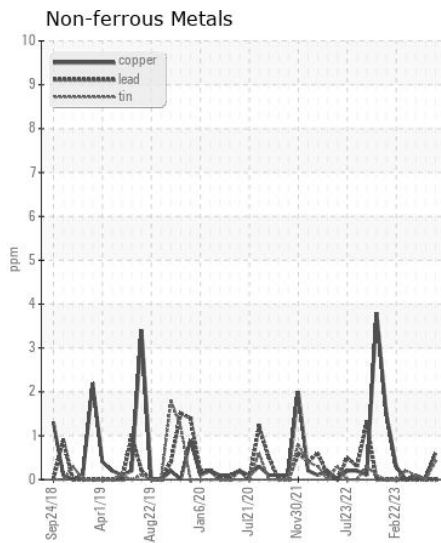
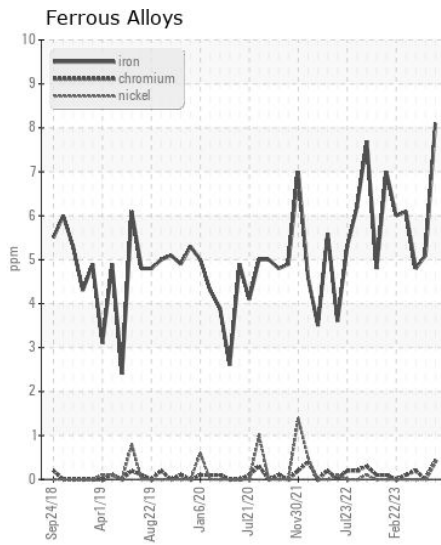
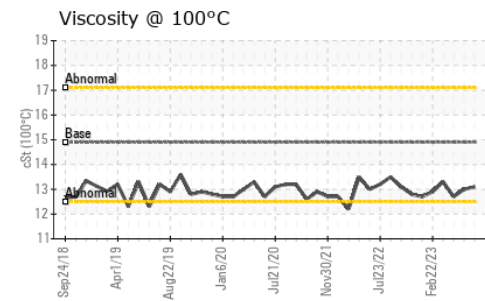
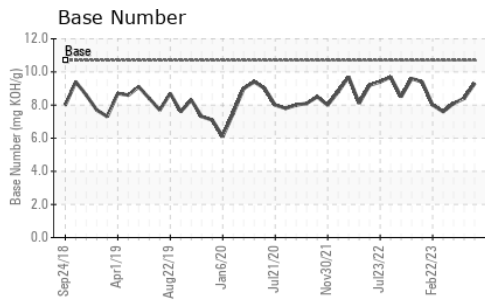
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	6.9	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.5</b>	22.8	22.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	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		<b>0</b>	<1	0
Boron	ppm	ASTM D5185m		<b>348</b>	363	310
Barium	ppm	ASTM D5185m		<b>1</b>	0	10
Molybdenum	ppm	ASTM D5185m		<b>147</b>	114	96
Manganese	ppm	ASTM D5185m		<b>3</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>686</b>	623	478
Calcium	ppm	ASTM D5185m		<b>1593</b>	1737	1392
Phosphorus	ppm	ASTM D5185m	760	<b>765</b>	967	882
Zinc	ppm	ASTM D5185m	830	<b>881</b>	1238	935
Sulfur	ppm	ASTM D5185m	2770	<b>2743</b>	3317	3175
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.3</b>	16.9	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>9.3</b>	8.4	8.1
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.1</b>	13.0	12.7



Certificate L2367

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

**Sample No.** : MW0043405

**Lab Number** : 06102316

**Unique Number** : 10900546

**Test Package** : MAR 2

**Received** : 27 Feb 2024

**Tested** : 28 Feb 2024

**Diagnosed** : 28 Feb 2024 - Wes Davis

**INGRAM BARGE**

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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)