



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

Area  
**ARTHUR J CARSON**  
Machine Id  
**[ARTHUR J CARSON] 008 556145-8**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 400 XLE 15W40 (4 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW06100641</b>	MW06035537	MW0053552
Sample Date		Client Info		<b>04 Feb 2024</b>	03 Dec 2023	02 Aug 2023
Machine Age	hrs	Client Info		<b>14647</b>	14330	13629
Oil Age	hrs	Client Info		<b>0</b>	0	247
Filter Age	hrs	Client Info		<b>0</b>	0	247
Oil Changed		Client Info		<b>N/A</b>	N/A	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>0</b>	10	4
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>4</b>	3	5
Lead	ppm	ASTM D5185m	>17	<b>1</b>	1	0
Copper	ppm	ASTM D5185m	>70	<b>&lt;1</b>	9	0
Tin	ppm	ASTM D5185m	>15	<b>0</b>	1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

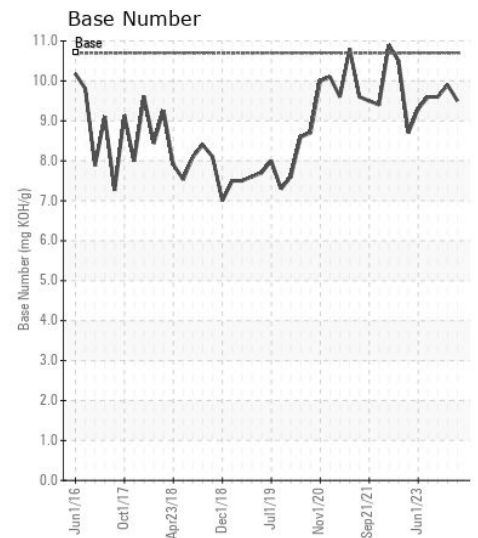
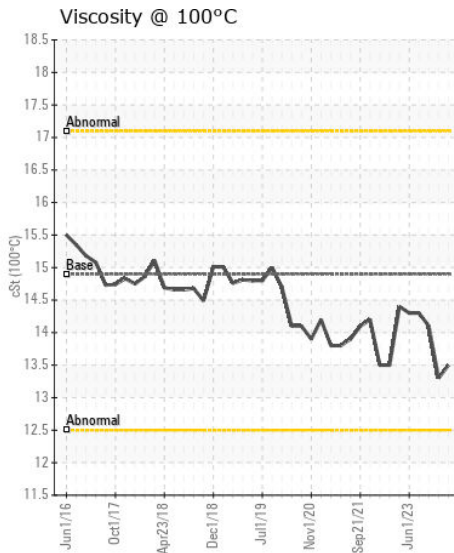
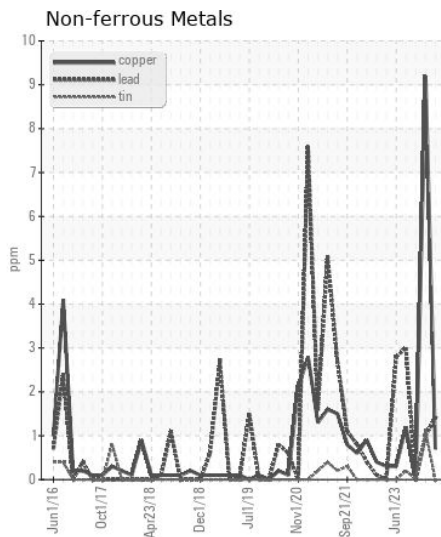
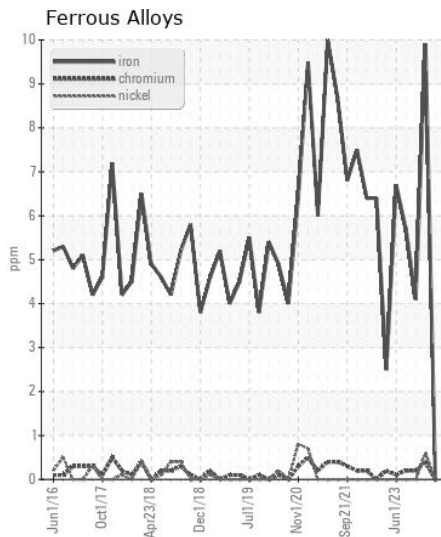
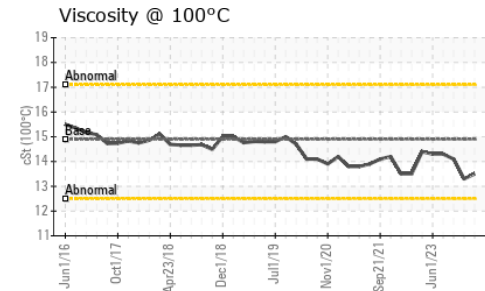
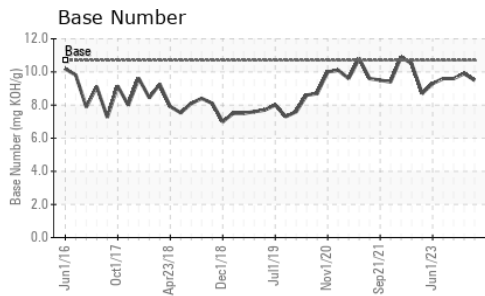
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	9	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	<1
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>5.9</b>	6.4	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.2</b>	24.0	26.1
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>2</b>	0	8
Boron	ppm	ASTM D5185m		<b>435</b>	374	326
Barium	ppm	ASTM D5185m		<b>0</b>	13	0
Molybdenum	ppm	ASTM D5185m		<b>128</b>	132	139
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>701</b>	640	789
Calcium	ppm	ASTM D5185m		<b>1732</b>	1551	1779
Phosphorus	ppm	ASTM D5185m	760	<b>773</b>	710	792
Zinc	ppm	ASTM D5185m	830	<b>912</b>	861	988
Sulfur	ppm	ASTM D5185m	2770	<b>2565</b>	3234	3204
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.5</b>	16.8	20.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>9.5</b>	9.9	9.6
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.5</b>	13.3	14.1



Certificate L2367

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

**Sample No.** : MW06100641

**Lab Number** : 06100641

**Unique Number** : 10898871

**Test Package** : MAR 2

**Received** : 26 Feb 2024

**Tested** : 27 Feb 2024

**Diagnosed** : 27 Feb 2024 - Wes Davis

**INGRAM BARGE**

900 S 3RD ST

PADUCAH, KY

US 42003

Contact: JAMES ADAIR

james.adair@ingrambarga.com

T: (270)415-4467

F: (615)695-3697

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)