



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

Area  
**SUSAN JOHNSON**  
Machine Id  
**[SUSAN JOHNSON] 008 569359-8**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 400 XLE 15W40 (7 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0064767</b>	MW0064773	MW0058682
Sample Date		Client Info		<b>27 May 2024</b>	25 Apr 2024	07 Dec 2023
Machine Age	hrs	Client Info		<b>12612</b>	12250	11864
Oil Age	hrs	Client Info		<b>362</b>	386	369
Filter Age	hrs	Client Info		<b>362</b>	386	369
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>12</b>	13	13
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>14</b>	16	15
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>2</b>	2	1
Lead	ppm	ASTM D5185m	>17	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>70	<b>33</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

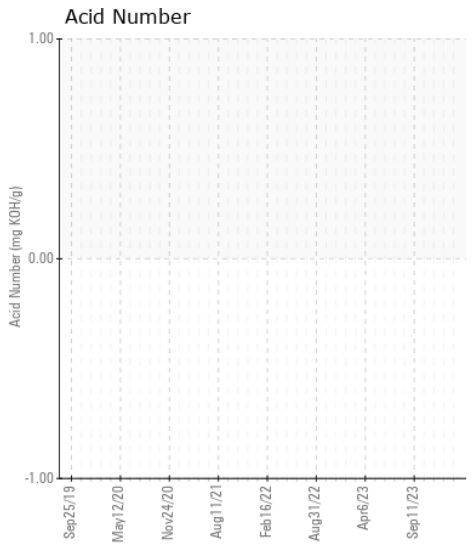
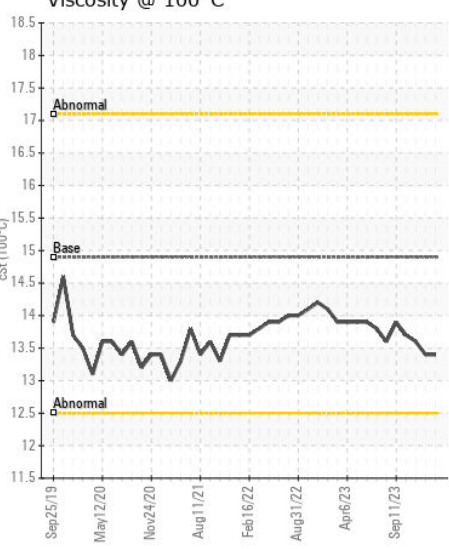
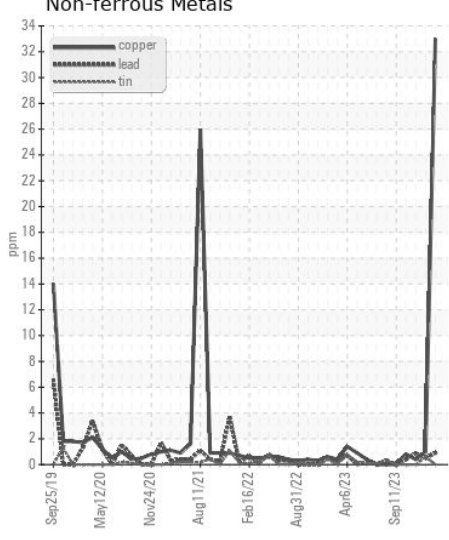
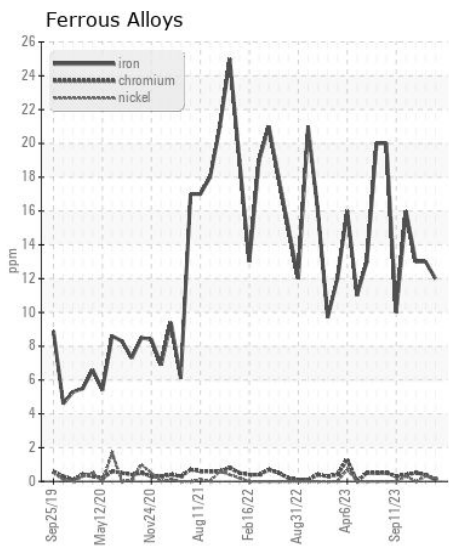
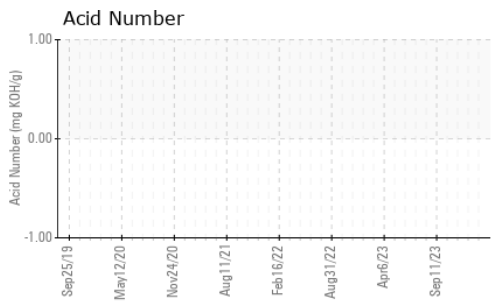
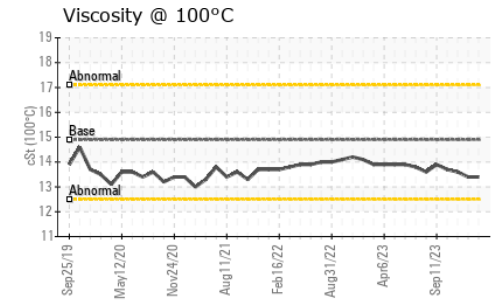
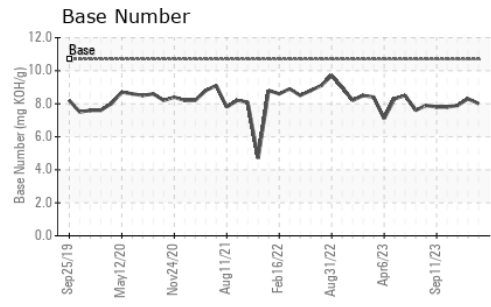
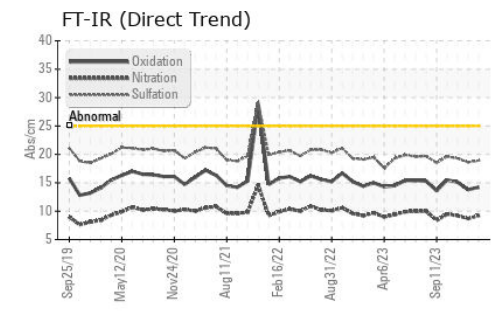
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	5	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>0.3</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	8.7	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.9</b>	18.6	19.3
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>4</b>	<1	<1
Boron	ppm	ASTM D5185m		<b>71</b>	106	89
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>32</b>	36	33
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>744</b>	695	713
Calcium	ppm	ASTM D5185m		<b>1591</b>	1538	1499
Phosphorus	ppm	ASTM D5185m	760	<b>755</b>	707	619
Zinc	ppm	ASTM D5185m	830	<b>875</b>	849	834
Sulfur	ppm	ASTM D5185m	2770	<b>3578</b>	3407	3014
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.2</b>	13.8	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>8.0</b>	8.3	7.9
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.4</b>	13.4	13.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0064767 **Received** : 17 Jun 2024  
**Lab Number** : 06212778 **Tested** : 19 Jun 2024  
**Unique Number** : 11085642 **Diagnosed** : 19 Jun 2024 - Angela Borella  
**Test Package** : MAR 2 ( Additional Tests: TAN Man )

**INGRAM BARGE**  
 900 S 3RD ST  
 PADUCAH, KY  
 US 42003  
 Contact: ANTHONY VAN CURA  
 anthony.vancura@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)