



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

Machine Id  
**SANDY LOU**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON DELO 400 SDE SAE 15W40 (3 GAL)**

**RECOMMENDATION**

We advise that you check for possible coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0047397</b>	MW0047389	MW0036428
Sample Date		Client Info		<b>30 Jan 2024</b>	28 Nov 2023	15 Aug 2023
Machine Age	hrs	Client Info		<b>26389</b>	25838	25551
Oil Age	hrs	Client Info		<b>551</b>	286	759
Filter Age	hrs	Client Info		<b>551</b>	286	759
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>28</b>	0	13
Chromium	ppm	ASTM D5185m	>4	<b>2</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>13</b>	0	<1
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>7</b>	<1	<1
Lead	ppm	ASTM D5185m	>17	<b>15</b>	0	▲ 15
Copper	ppm	ASTM D5185m	>70	<b>4</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

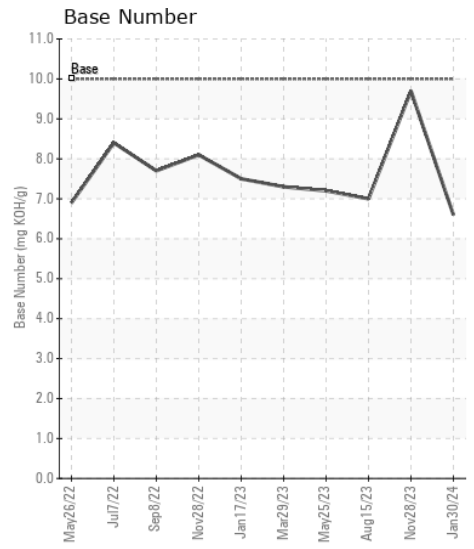
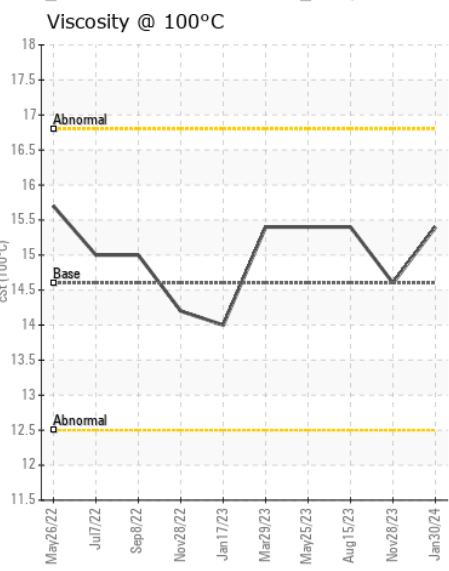
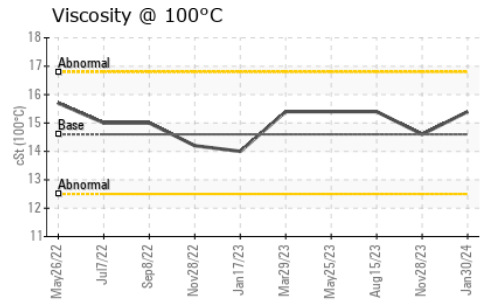
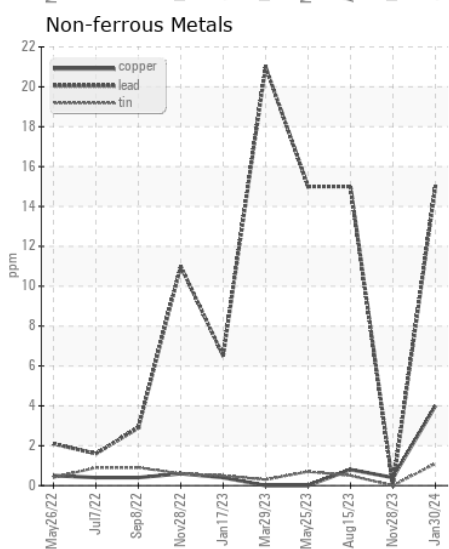
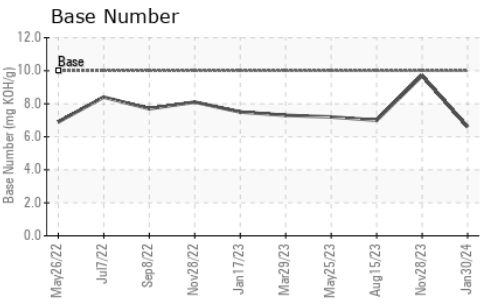
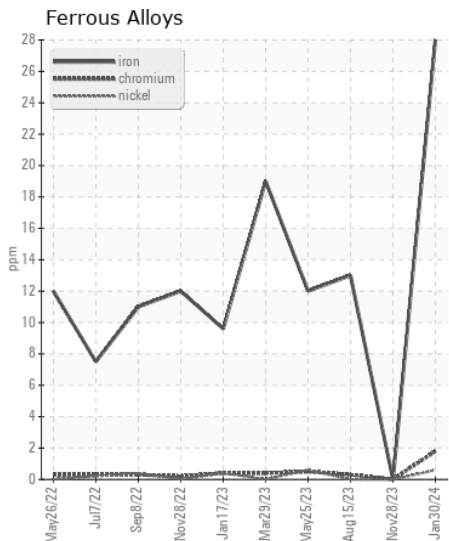
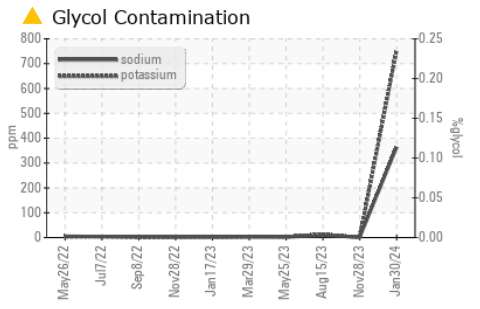
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	4	7
Potassium	ppm	ASTM D5185m	>20	▲ <b>754</b>	0	13
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>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>14.0</b>	14.3	12.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.5</b>	21.3	26.4
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.

Sodium	ppm	ASTM D5185m		▲ <b>364</b>	2	8
Boron	ppm	ASTM D5185m		<b>21</b>	2	210
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>116</b>	54	137
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>640</b>	911	758
Calcium	ppm	ASTM D5185m		<b>1429</b>	1033	1780
Phosphorus	ppm	ASTM D5185m	760	<b>665</b>	1017	745
Zinc	ppm	ASTM D5185m	800	<b>817</b>	1212	929
Sulfur	ppm	ASTM D5185m	3000	<b>2985</b>	3031	3023
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.3</b>	18.4	28.8
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>6.6</b>	9.7	7.0
Visc @ 100°C	cSt	ASTM D445	14.6	<b>15.4</b>	14.6	15.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0047397  
**Lab Number** : 06084463  
**Unique Number** : 10871908  
**Test Package** : MAR 2  
**Received** : 09 Feb 2024  
**Tested** : 09 Feb 2024  
**Diagnosed** : 12 Feb 2024 - Jonathan Hester

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 F:

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)