



Area

**JAMES F NEAL**

Machine Id

**[JAMES F NEAL] 008 645834-8**

Component

**Starboard Genset**

Fluid

**CHEVRON DELO 400 LE 15W40 (6 GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0072240</b>	MW0050011	MW0037729
Sample Date		Client Info		<b>14 May 2024</b>	09 Oct 2023	17 Nov 2022
Machine Age	hrs	Client Info		<b>4054</b>	2850	2063
Oil Age	hrs	Client Info		<b>403</b>	332	373
Filter Age	hrs	Client Info		<b>0</b>	332	0
Oil Changed		Client Info		<b>N/A</b>	Changed	N/A
Filter Changed		Client Info		<b>N/A</b>	Changed	N/A
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>2</b>	7	8
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>4</b>	3	3
Lead	ppm	ASTM D5185m	>17	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>70	<b>&lt;1</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

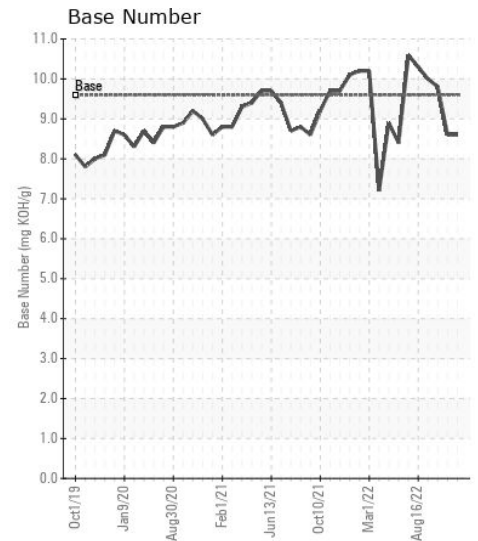
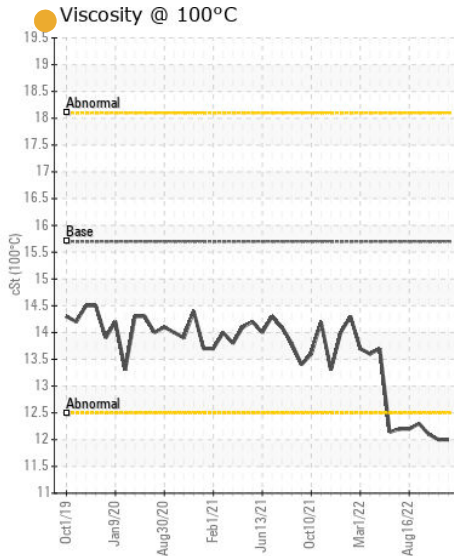
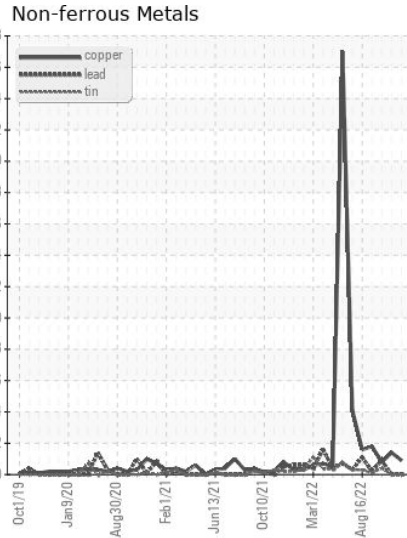
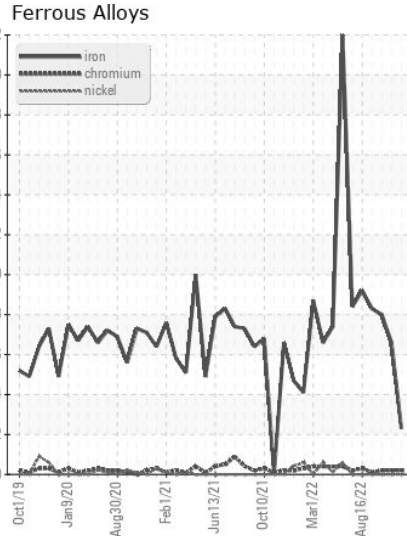
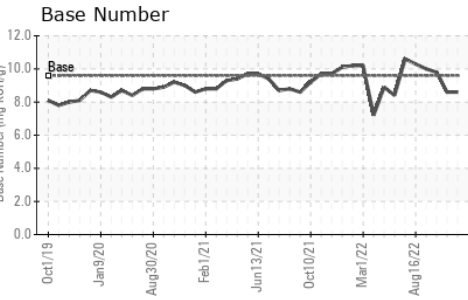
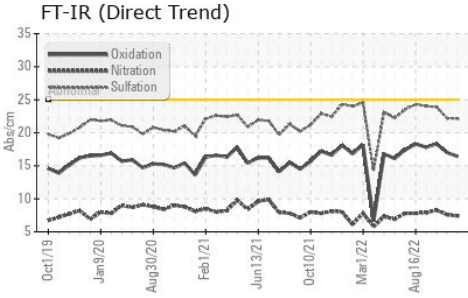
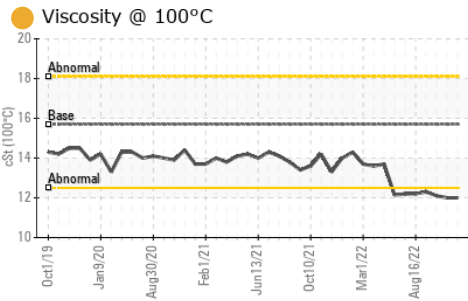
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	6	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	0
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>7.4</b>	7.6	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.1</b>	22.2	23.9
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	1
Boron	ppm	ASTM D5185m		<b>302</b>	318	315
Barium	ppm	ASTM D5185m		<b>0</b>	5	0
Molybdenum	ppm	ASTM D5185m		<b>131</b>	118	122
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>684</b>	612	680
Calcium	ppm	ASTM D5185m		<b>1544</b>	1345	1567
Phosphorus	ppm	ASTM D5185m	1200	<b>676</b>	647	733
Zinc	ppm	ASTM D5185m	1300	<b>911</b>	780	845
Sulfur	ppm	ASTM D5185m	3200	<b>2611</b>	2766	3087
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	17.0	18.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	<b>8.6</b>	8.6	9.8
Visc @ 100°C	cSt	ASTM D445	15.7	<b>12.0</b>	12.0	12.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0072240  
**Lab Number** : 06220998  
**Unique Number** : 11099195  
**Test Package** : MAR 2  
**Received** : 26 Jun 2024  
**Tested** : 27 Jun 2024  
**Diagnosed** : 27 Jun 2024 - Don Baldrige

**INGRAM BARGE**  
 900 S 3RD ST  
 PADUCAH, KY  
 US 42003

Contact: JEFF BISHOP  
 jeff.bishop@ingrambarga.com

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)

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