



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>MW06174812</b>	MW06100641	MW06035537
Sample Date		Client Info		<b>03 Apr 2024</b>	04 Feb 2024	03 Dec 2023
Machine Age	hrs	Client Info		<b>15344</b>	14647	14330
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
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>12</b>	0	10
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
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>8</b>	4	3
Lead	ppm	ASTM D5185m	>17	<b>3</b>	1	1
Copper	ppm	ASTM D5185m	>70	<b>2</b>	<1	9
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	1
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.

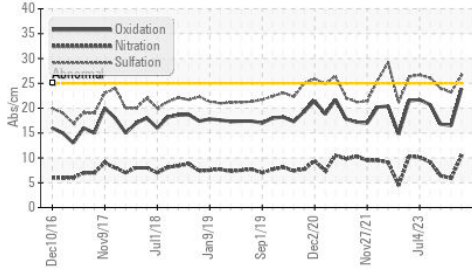
Silicon	ppm	ASTM D5185m	>25	<b>11</b>	5	9
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.5</b>	5.9	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.6</b>	23.2	24.0
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**

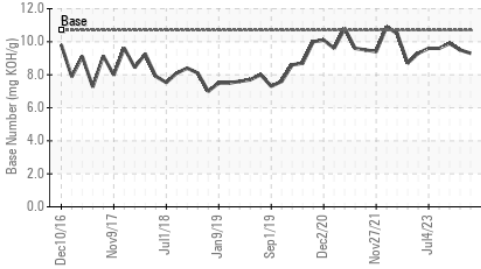
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>3</b>	2	0
Boron	ppm	ASTM D5185m		<b>514</b>	435	374
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	13
Molybdenum	ppm	ASTM D5185m		<b>197</b>	128	132
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>986</b>	701	640
Calcium	ppm	ASTM D5185m		<b>2377</b>	1732	1551
Phosphorus	ppm	ASTM D5185m	760	<b>1177</b>	773	710
Zinc	ppm	ASTM D5185m	830	<b>1332</b>	912	861
Sulfur	ppm	ASTM D5185m	2770	<b>4039</b>	2565	3234
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.9</b>	16.5	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>9.3</b>	9.5	9.9
Visc @ 100°C	cSt	ASTM D445	14.9	<b>14.7</b>	13.5	13.3

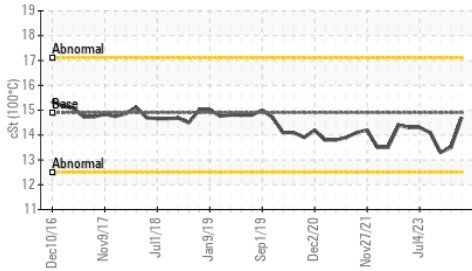
**FT-IR (Direct Trend)**



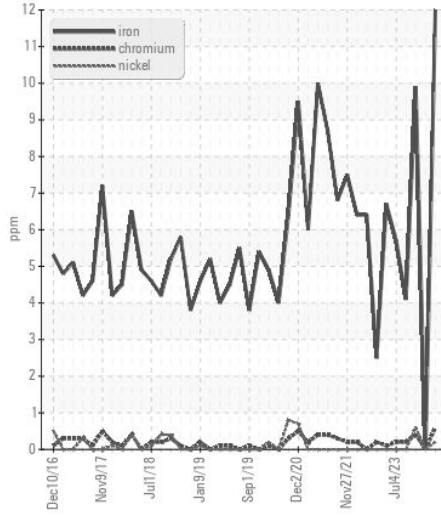
**Base Number**



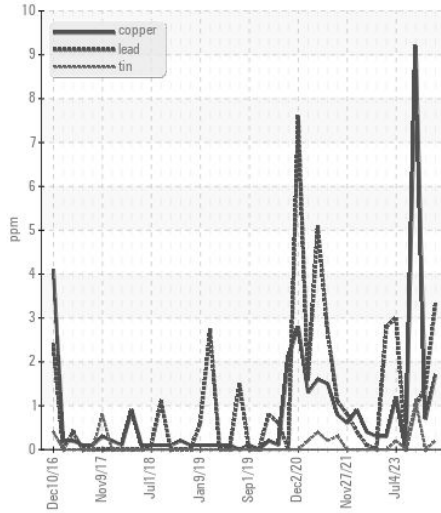
**Viscosity @ 100°C**



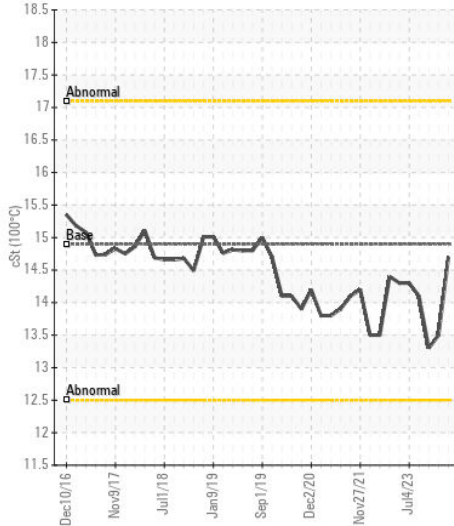
**Ferrous Alloys**



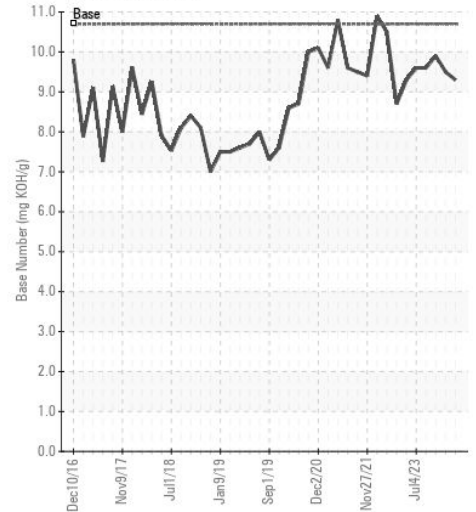
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW06174812  
**Lab Number** : 06174812  
**Unique Number** : 11020865  
**Test Package** : MAR 2  
**Received** : 09 May 2024  
**Tested** : 10 May 2024  
**Diagnosed** : 13 May 2024 - Sean Felton

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

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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)