



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

Area  
**RONALD L SENSENBACH**  
Machine Id  
[RONALD L SENSENBACH] 008 685579-8  
Component  
Starboard Genset  
Fluid  
CHEVRON DELO 400 XLE 15W40 (--- GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0068225</b>	MW0058700	MW0055711
Sample Date		Client Info		<b>01 Apr 2024</b>	08 Mar 2024	30 Jan 2024
Machine Age	hrs	Client Info		<b>29775</b>	29505	29131
Oil Age	hrs	Client Info		<b>270</b>	366	393
Filter Age	hrs	Client Info		<b>270</b>	366	393
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>4</b>	7	16
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	3
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>12	<b>4</b>	4	3
Lead	ppm	ASTM D5185m	>17	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m	>70	<b>1</b>	<1	9
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	2
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.

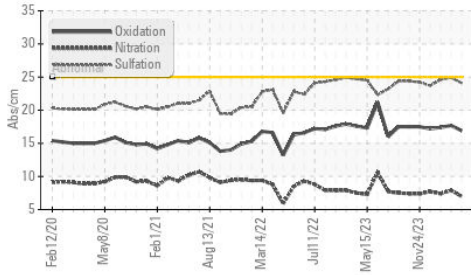
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	6	▲ 32
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	7
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	0.5
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.6</b>	1.1	0.8
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	7.9	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.1</b>	24.9	24.6
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**

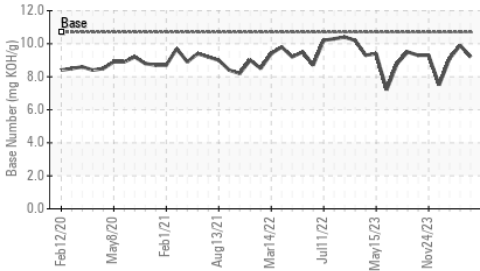
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	<1	0
Boron	ppm	ASTM D5185m		<b>367</b>	344	348
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>136</b>	135	128
Manganese	ppm	ASTM D5185m		<b>1</b>	2	4
Magnesium	ppm	ASTM D5185m		<b>730</b>	718	646
Calcium	ppm	ASTM D5185m		<b>1625</b>	1576	1442
Phosphorus	ppm	ASTM D5185m	760	<b>774</b>	738	705
Zinc	ppm	ASTM D5185m	830	<b>914</b>	866	803
Sulfur	ppm	ASTM D5185m	2770	<b>3117</b>	2838	2699
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.9</b>	17.7	17.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	<b>9.2</b>	9.9	9.1
Visc @ 100°C	cSt	ASTM D445	14.9	<b>13.9</b>	14.2	14.22

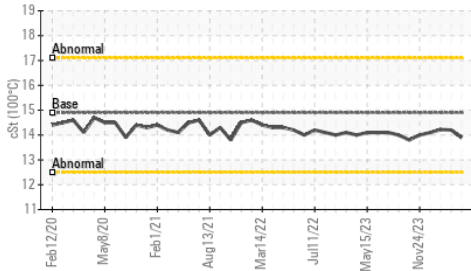
FT-IR (Direct Trend)



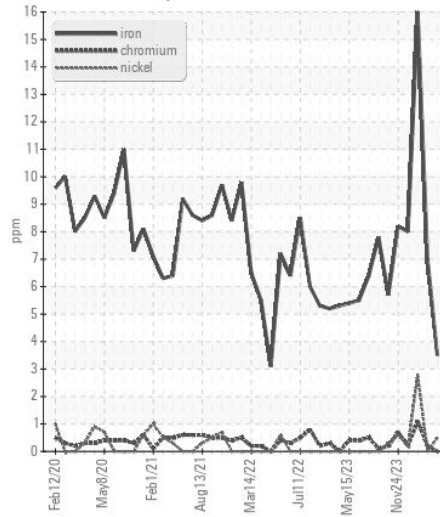
Base Number



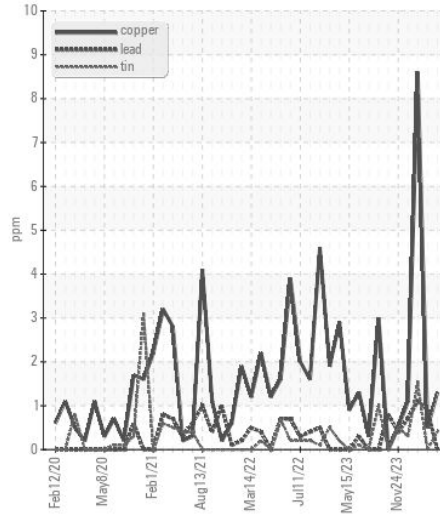
Viscosity @ 100°C



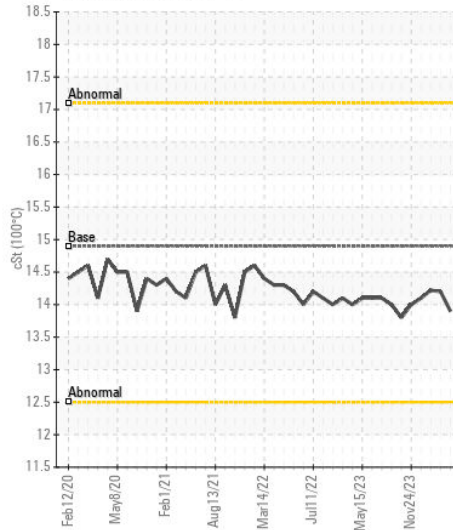
Ferrous Alloys



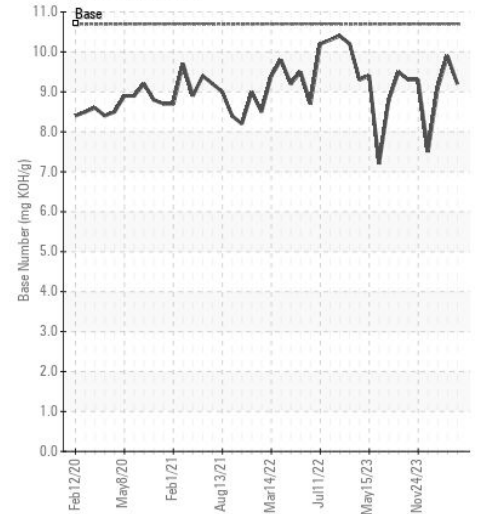
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : MW0068225

Lab Number : 06146382

Unique Number : 10976460

Test Package : MAR 2

Received : 11 Apr 2024

Tested : 12 Apr 2024

Diagnosed : 12 Apr 2024 - Wes Davis

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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)