



Machine Id  
**GERALD SHREVE (S/N RG-6090G008010)**

Component  
**Starboard Genset**

Fluid  
**CHEVRON DELO 710 LS (300 GAL)**

**RECOMMENDATION**

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0050343</b>	MW0056222	MW0050313
Sample Date		Client Info		<b>21 Jan 2024</b>	13 Oct 2023	27 Aug 2023
Machine Age	hrs	Client Info		<b>522</b>	20143	19555
Oil Age	hrs	Client Info		<b>522</b>	303	283
Filter Age	hrs	Client Info		<b>522</b>	303	283
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

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

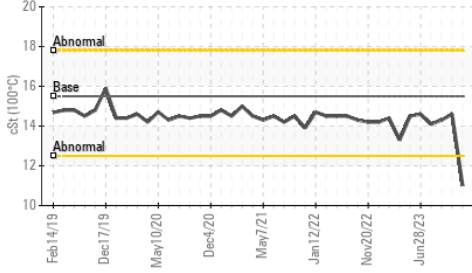
Silicon	ppm	ASTM D5185m	>25	<b>42</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	2
Fuel	%	ASTM D3524	>4.0	<b>0.2</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.4</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	5.1	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.4</b>	13.1	13.3
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**

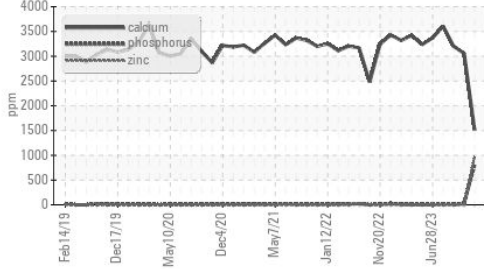
The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>7</b>	1	7
Boron	ppm	ASTM D5185m		<b>▲ 255</b>	45	45
Barium	ppm	ASTM D5185m		<b>0</b>	11	0
Molybdenum	ppm	ASTM D5185m		<b>▲ 246</b>	41	44
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>▲ 731</b>	9	11
Calcium	ppm	ASTM D5185m		<b>▲ 1514</b>	3057	3200
Phosphorus	ppm	ASTM D5185m		<b>▲ 808</b>	29	4
Zinc	ppm	ASTM D5185m		<b>▲ 964</b>	<1	2
Sulfur	ppm	ASTM D5185m		<b>2769</b>	2399	2453
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.8</b>	6.1	6.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	<b>7.9</b>	6.1	6.1
Visc @ 100°C	cSt	ASTM D445	15.5	<b>▲ 11.0</b>	14.6	14.3

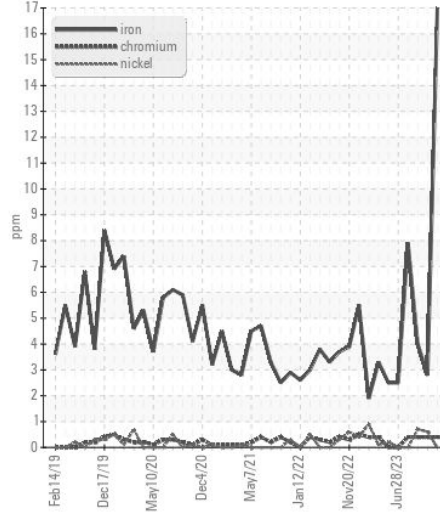
▲ Viscosity @ 100°C



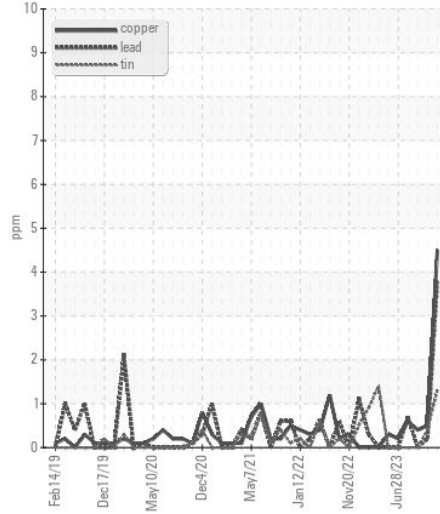
▲ Additives



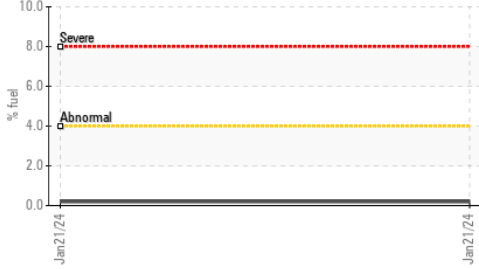
Ferrous Alloys



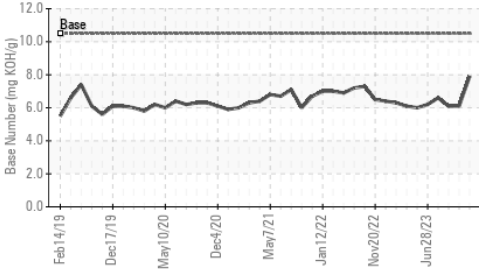
Non-ferrous Metals



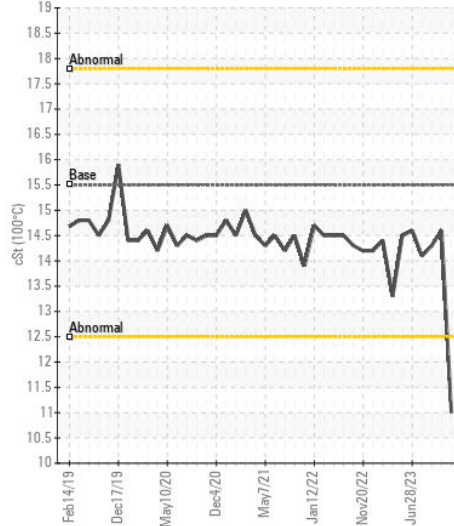
Fuel Dilution



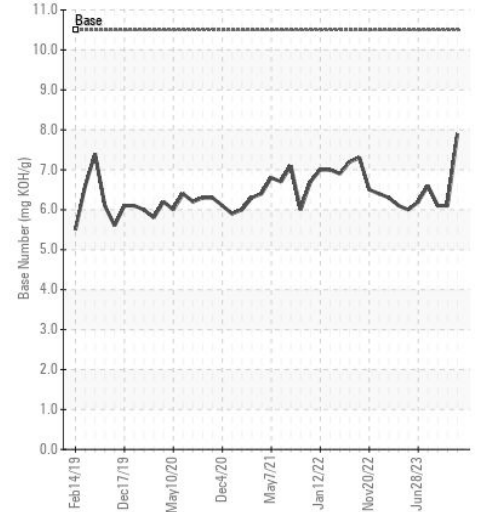
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : MW0050343

Lab Number : 06097527

Unique Number : 10890380

Test Package : MAR 2 ( Additional Tests: FuelDilution, PercentFuel )

Received : 22 Feb 2024

Tested : 26 Feb 2024

Diagnosed : 26 Feb 2024 - Sean Felton

AMERICAN COMMERCIAL LINES

PO BOX 610, 1701 E. MARKET STREET

JEFFERSONVILLE, IN

US 47130

Contact: RONALD SCHNEIDER

ronald.schneider@bargeacbl.com

T:

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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