



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

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		MW0068211	MW0068225	MW0058700
Sample Date		Client Info		06 Jun 2024	01 Apr 2024	08 Mar 2024
Machine Age	hrs	Client Info		30669	29775	29505
Oil Age	hrs	Client Info		382	270	366
Filter Age	hrs	Client Info		382	270	366
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

There is no indication of any contamination in the oil.

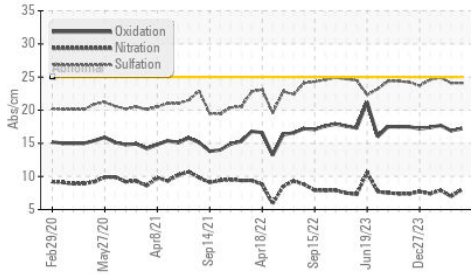
Silicon	ppm	ASTM D5185m	>25	8	5	6
Potassium	ppm	ASTM D5185m	>20	2	2	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.9	0.6	1.1
Nitration	Abs/cm	*ASTM D7624	>20	8.0	7.0	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.1	24.1	24.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

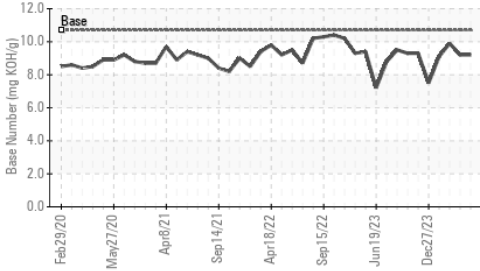
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	2	<1
Boron	ppm	ASTM D5185m		357	367	344
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		136	136	135
Manganese	ppm	ASTM D5185m		4	1	2
Magnesium	ppm	ASTM D5185m		646	730	718
Calcium	ppm	ASTM D5185m		1684	1625	1576
Phosphorus	ppm	ASTM D5185m	760	874	774	738
Zinc	ppm	ASTM D5185m	830	1047	914	866
Sulfur	ppm	ASTM D5185m	2770	2849	3117	2838
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.2	16.9	17.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	9.2	9.2	9.9
Visc @ 100°C	cSt	ASTM D445	14.9	14.0	13.9	14.2

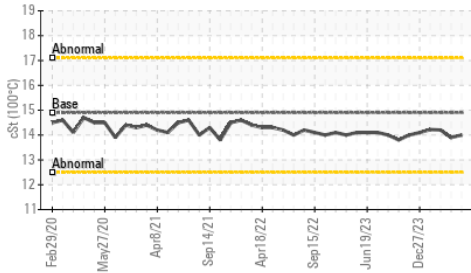
FT-IR (Direct Trend)



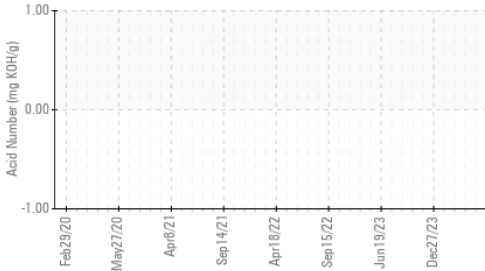
Base Number



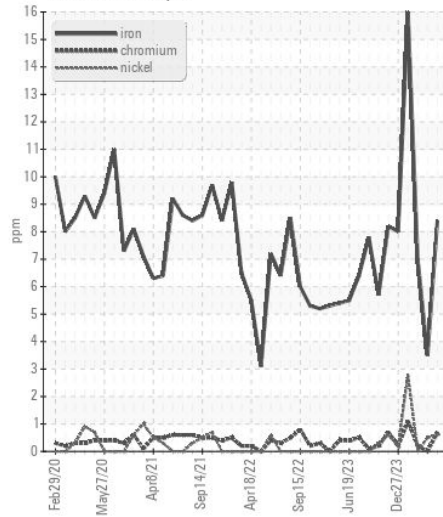
Viscosity @ 100°C



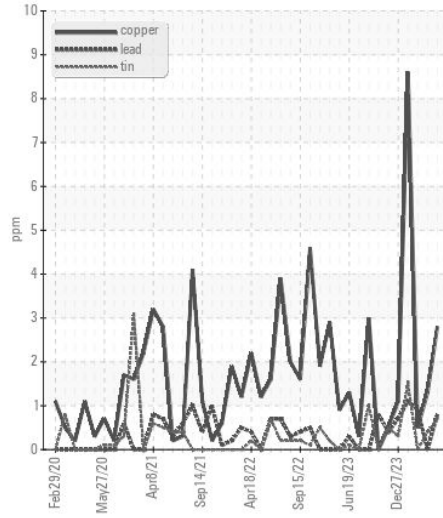
Acid Number



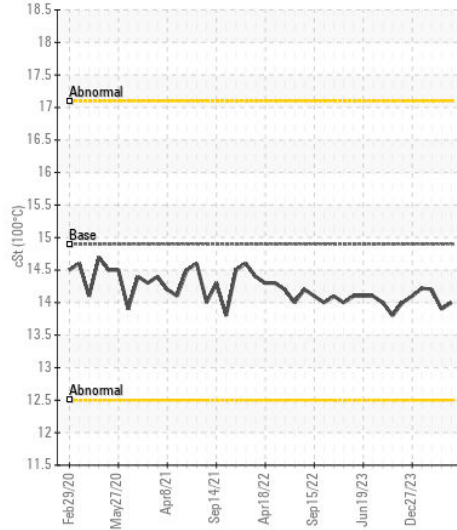
Ferrous Alloys



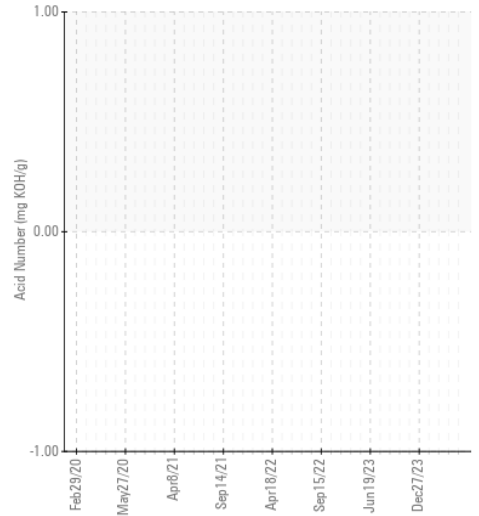
Non-ferrous Metals



Viscosity @ 100°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0068211 **Received** : 24 Jun 2024
Lab Number : 06217862 **Tested** : 25 Jun 2024
Unique Number : 11096059 **Diagnosed** : 25 Jun 2024 - Don Baldrige
Test Package : MAR 2 (Additional Tests: TAN Man)

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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