



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
E BRONSON INGRAM
Machine Id
[E BRONSON INGRAM] 008 571430-8
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		MW0062908	MW0062916	MW0063066
Sample Date		Client Info		13 Mar 2024	12 Feb 2024	30 Nov 2023
Machine Age	hrs	Client Info		14185	13795	12995
Oil Age	hrs	Client Info		390	400	397
Filter Age	hrs	Client Info		390	0	397
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	6	8	8
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	3	4	3
Lead	ppm	ASTM D5185m	>17	0	1	<1
Copper	ppm	ASTM D5185m	>70	4	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

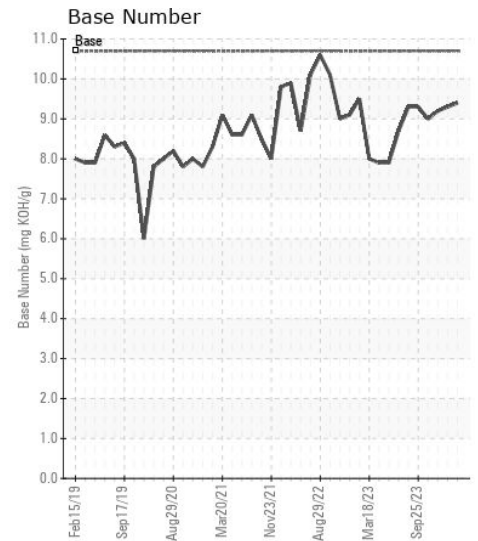
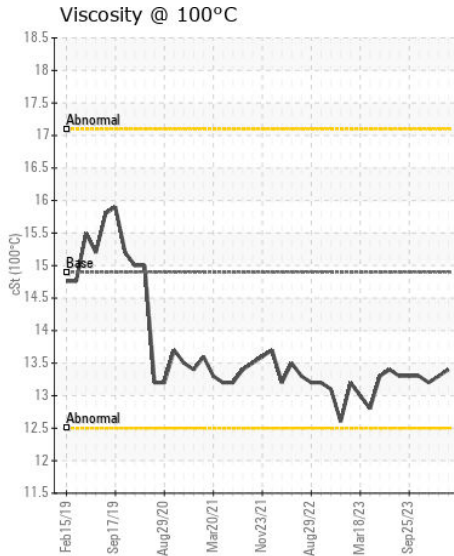
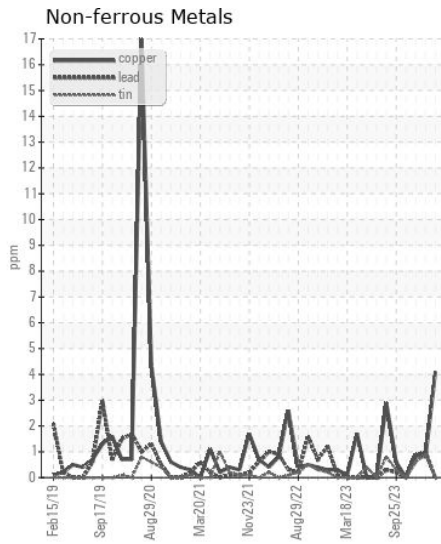
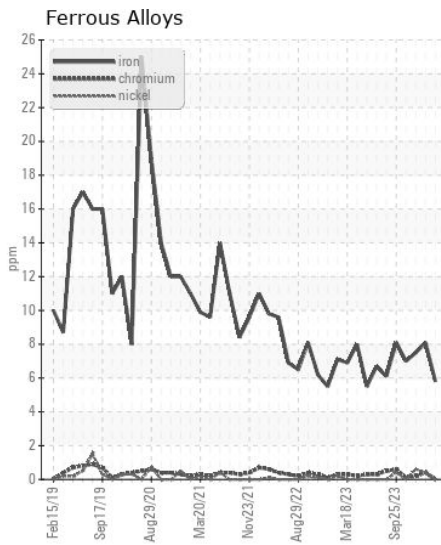
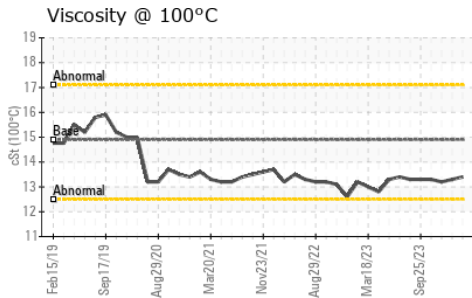
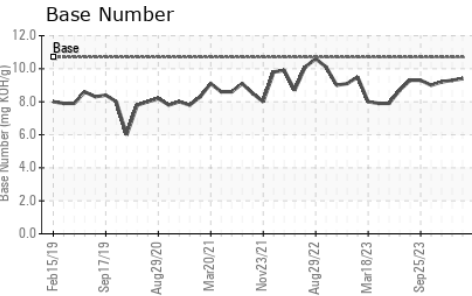
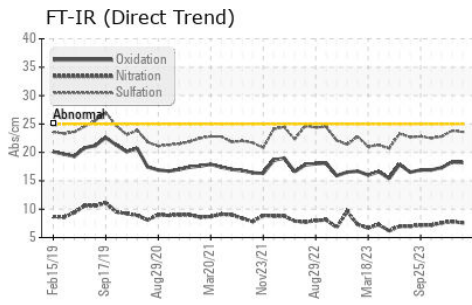
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	6	7
Potassium	ppm	ASTM D5185m	>20	5	3	2
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		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.6	7.8	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	23.8	22.8
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	0	0
Boron	ppm	ASTM D5185m		306	413	364
Barium	ppm	ASTM D5185m		<1	2	14
Molybdenum	ppm	ASTM D5185m		115	134	128
Manganese	ppm	ASTM D5185m		<1	1	1
Magnesium	ppm	ASTM D5185m		643	669	643
Calcium	ppm	ASTM D5185m		1658	1870	1637
Phosphorus	ppm	ASTM D5185m	760	723	806	727
Zinc	ppm	ASTM D5185m	830	830	944	895
Sulfur	ppm	ASTM D5185m	2770	2904	2890	2803
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	18.3	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	9.4	9.3	9.2
Visc @ 100°C	cSt	ASTM D445	14.9	13.4	13.3	13.2



Certificate L2367

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

Sample No. : MW0062908

Lab Number : 06151028

Unique Number : 10981106

Test Package : MAR 2

Received : 16 Apr 2024

Tested : 17 Apr 2024

Diagnosed : 17 Apr 2024 - Wes Davis

INGRAM BARGE

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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)