



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
TODD BROWN
Machine Id
[TODD BROWN] 008 587214-8
Component
Starboard Genset
Fluid
CHEVRON DELO 400 LE 15W40 (3 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0055679	MW0042519	MW0042523
Sample Date		Client Info		01 Dec 2023	01 Nov 2023	01 May 2023
Machine Age	hrs	Client Info		23107	22737	22102
Oil Age	hrs	Client Info		0	0	128
Filter Age	hrs	Client Info		0	0	128
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	2	3	6
Chromium	ppm	ASTM D5185m	>4	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	2	2	4
Lead	ppm	ASTM D5185m	>17	0	0	0
Copper	ppm	ASTM D5185m	>70	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

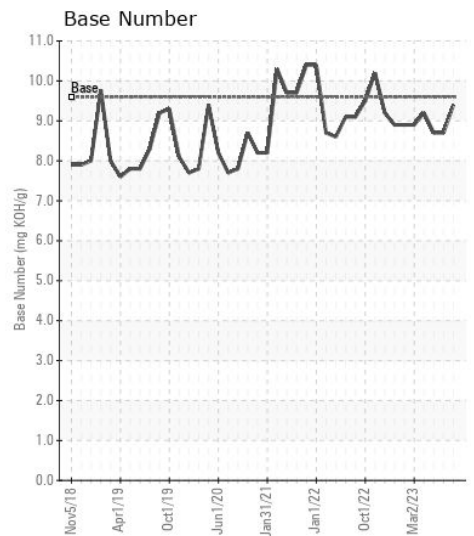
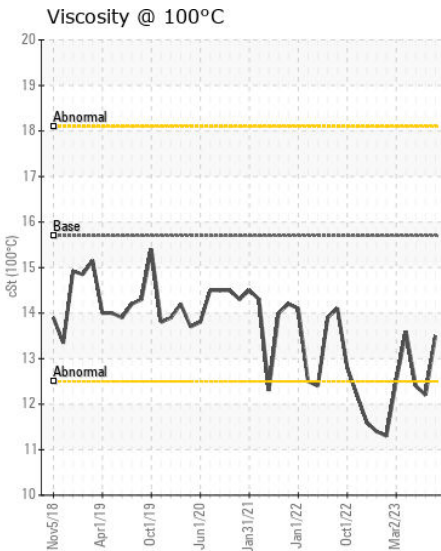
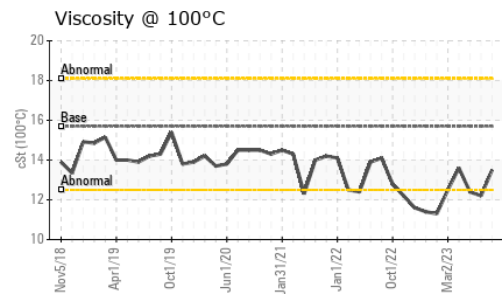
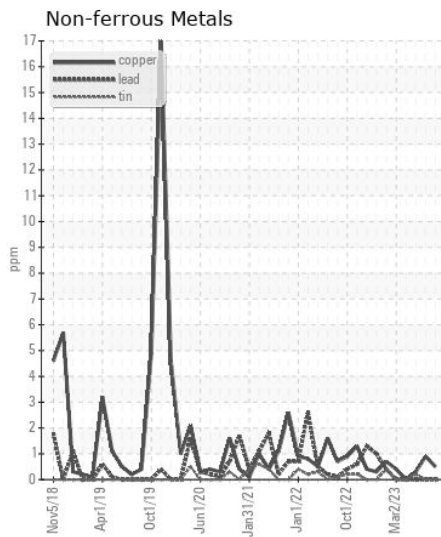
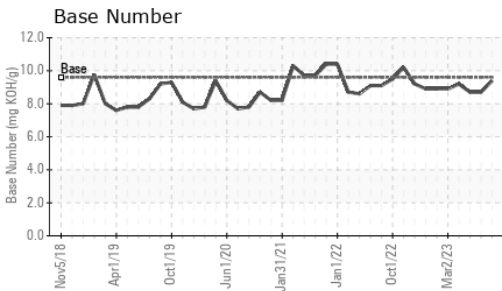
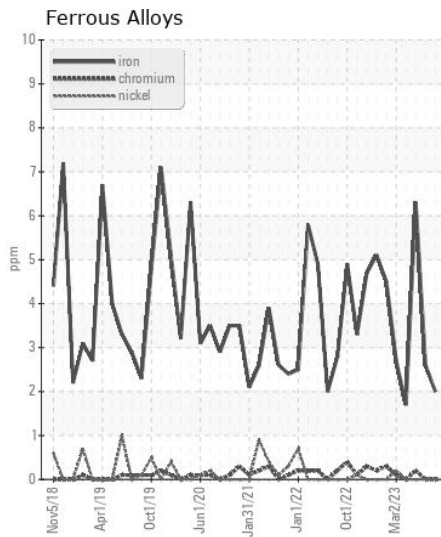
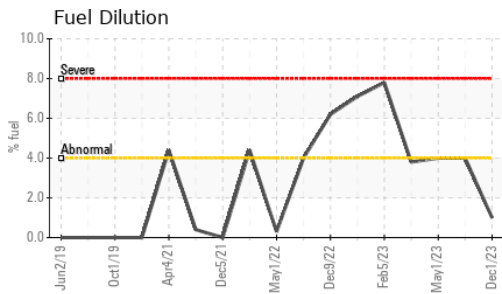
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	16
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Fuel	%	ASTM D3524	>4.0	1.0	▲ 4.0	▲ 4.0
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	5.0	5.6	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	21.3	21.9
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	<1	1
Boron	ppm	ASTM D5185m		322	308	354
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		118	110	116
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		597	584	580
Calcium	ppm	ASTM D5185m		1642	1597	1798
Phosphorus	ppm	ASTM D5185m	1200	646	611	603
Zinc	ppm	ASTM D5185m	1300	758	728	734
Sulfur	ppm	ASTM D5185m	3200	2426	2321	2662
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	14.9	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	9.4	8.7	8.7
Visc @ 100°C	cSt	ASTM D445	15.7	13.5	▲ 12.2	12.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0055679 **Received** : 16 Jan 2024
Lab Number : 06061767 **Diagnosed** : 26 Jan 2024
Unique Number : 10833149 **Diagnostician** : Jonathan Hester
Test Package : MAR 2 (Additional Tests: PercentFuel)

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)

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

Contact: ANTHONY VAN CURA
 anthony.vancura@ingrambarga.com
 T: (270)415-4467
 F: (615)695-3697