



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
OH INGRAM
 Machine Id
[OH INGRAM] 008 645896-8
 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		MW0064752	MW0058412	MW0058411
Sample Date		Client Info		20 Dec 2023	23 Nov 2023	22 Oct 2023
Machine Age	hrs	Client Info		32011	31609	31198
Oil Age	hrs	Client Info		397	404	375
Filter Age	hrs	Client Info		397	404	375
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	10	10	10
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		9	13	11
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	3	2	2
Lead	ppm	ASTM D5185m	>17	<1	<1	2
Copper	ppm	ASTM D5185m	>70	1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

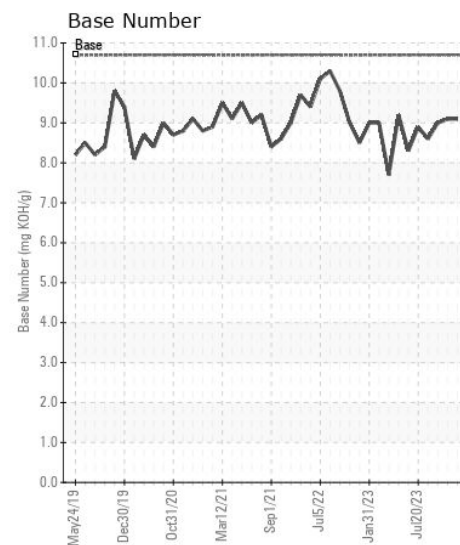
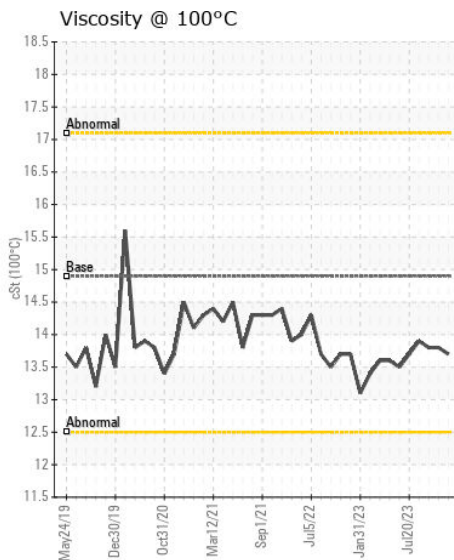
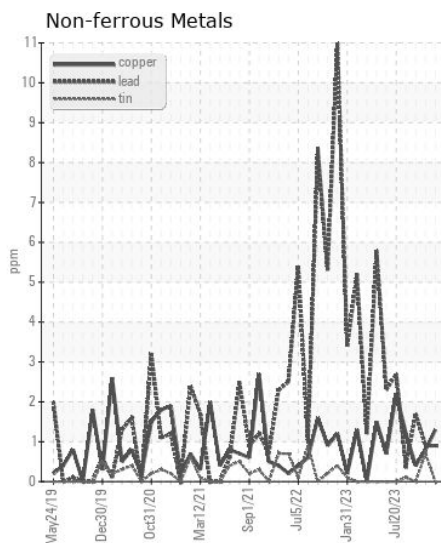
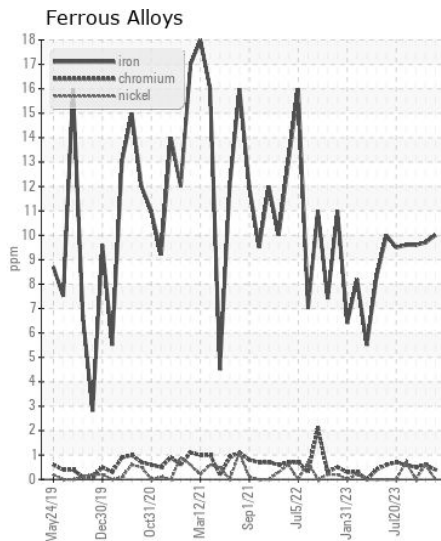
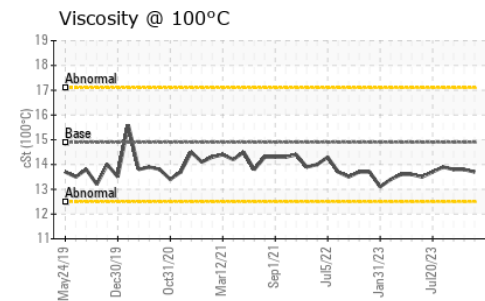
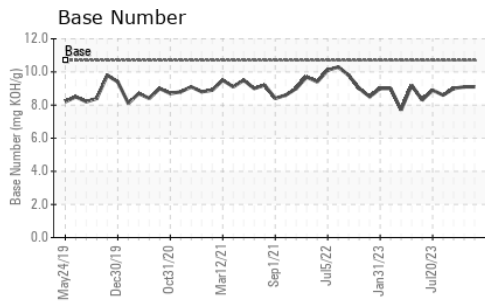
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	5	6
Potassium	ppm	ASTM D5185m	>20	1	3	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		0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.1	9.1	10.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	21.2	22.0
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		2	0	2
Boron	ppm	ASTM D5185m		265	206	150
Barium	ppm	ASTM D5185m		0	13	0
Molybdenum	ppm	ASTM D5185m		100	67	69
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		834	740	824
Calcium	ppm	ASTM D5185m		1894	1712	1763
Phosphorus	ppm	ASTM D5185m	760	925	831	793
Zinc	ppm	ASTM D5185m	830	1066	960	958
Sulfur	ppm	ASTM D5185m	2770	3231	3465	2956
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.6	16.1	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	9.1	9.1	9.0
Visc @ 100°C	cSt	ASTM D445	14.9	13.7	13.8	13.8



Certificate L2367

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

Sample No. : MW0064752

Lab Number : 06103572

Unique Number : 10901802

Test Package : MAR 2

Received : 28 Feb 2024

Tested : 01 Mar 2024

Diagnosed : 01 Mar 2024 - Wes Davis

INGRAM BARGE

900 S 3RD ST

PADUCAH, KY

US 42003

Contact: ALLEN WILLHELM

allen.willhelm@ingrambarga.com

T: (270)415-4467

F: (615)695-3697

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)