



Area
ERNA E HONEYCUTT
Machine Id
[ERNA E HONEYCUTT] 008 641346-8
Component
Starboard Genset
Fluid
CHEVRON DELO 400 LE 15W40 (--- 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		MW0063217	MW0063216	MW0043036
Sample Date		Client Info		23 Jan 2024	24 Dec 2023	14 Oct 2023
Machine Age	hrs	Client Info		4447	4094	3229
Oil Age	hrs	Client Info		353	433	347
Filter Age	hrs	Client Info		353	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ATTENTION	ABNORMAL	MARGINAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	7	8	8
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>5	<1	0	0
Aluminum	ppm	ASTM D5185m	>12	3	2	2
Lead	ppm	ASTM D5185m	>17	0	0	<1
Copper	ppm	ASTM D5185m	>70	4	<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

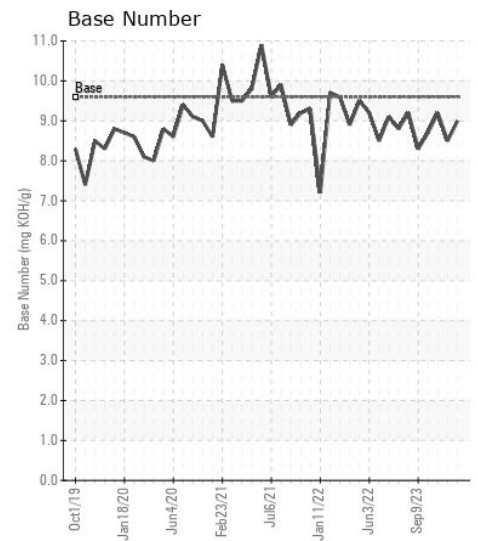
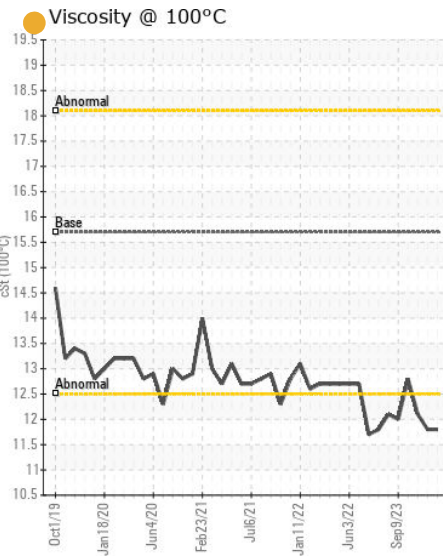
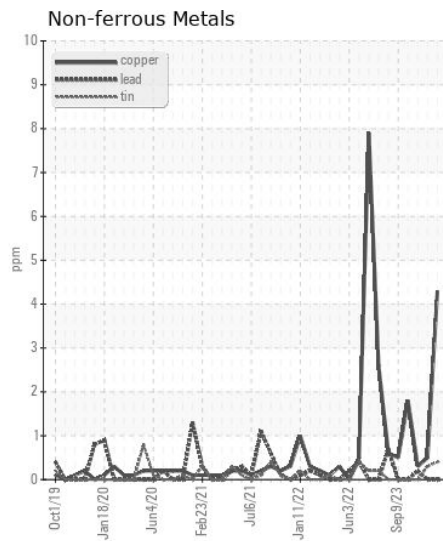
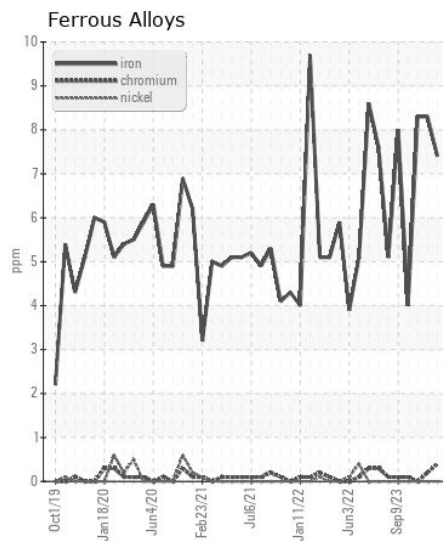
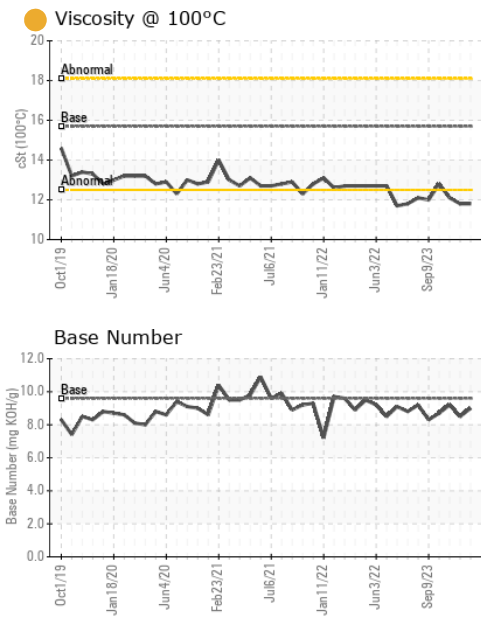
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	7	7
Potassium	ppm	ASTM D5185m	>20	3	2	1
Fuel		WC Method	>4.0	<1.0	▲ 3.8	▲ 3.5
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.6	7.8	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	23.0	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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		0	0	<1
Boron	ppm	ASTM D5185m		344	313	302
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		138	118	118
Manganese	ppm	ASTM D5185m		2	2	1
Magnesium	ppm	ASTM D5185m		633	615	601
Calcium	ppm	ASTM D5185m		1614	1440	1454
Phosphorus	ppm	ASTM D5185m	1200	628	720	655
Zinc	ppm	ASTM D5185m	1300	834	784	812
Sulfur	ppm	ASTM D5185m	3200	2565	2640	2335
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.4	17.6	17.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	9.0	8.5	9.2
Visc @ 100°C	cSt	ASTM D445	15.7	● 11.8	▲ 11.8	12.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0063217
Lab Number : 06125396
Unique Number : 10939547
Test Package : MAR 2

Received : 21 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 26 Mar 2024 - Jonathan Hester

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

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)