



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
ELIZABETH R CHASE
Machine Id
[ELIZABETH R CHASE] 008 538269-8ER
Component
Starboard Genset
Fluid
CHEVRON DELO 400 XLE 15W40 (5 GAL)

RECOMMENDATION

No corrective action is recommended at this time. 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		MW0066045	MW0066001	MW0065672
Sample Date		Client Info		22 Jun 2024	22 May 2024	14 Apr 2024
Machine Age	hrs	Client Info		4418	3976	3527
Oil Age	hrs	Client Info		442	440	396
Filter Age	hrs	Client Info		442	440	396
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	8	8	8
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	1
Titanium	ppm	ASTM D5185m		2	15	3
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	2	3	4
Lead	ppm	ASTM D5185m	>17	0	<1	0
Copper	ppm	ASTM D5185m	>70	<1	1	13
Tin	ppm	ASTM D5185m	>15	0	<1	2
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

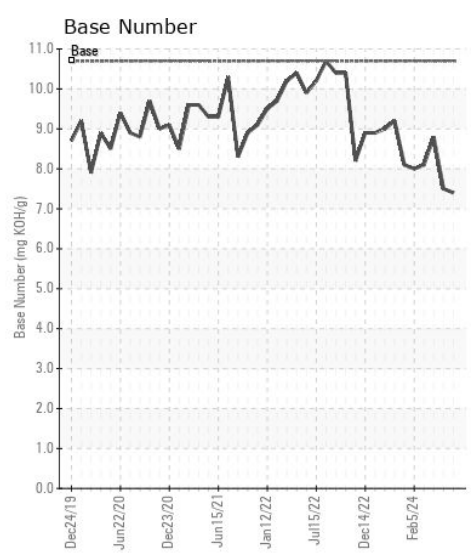
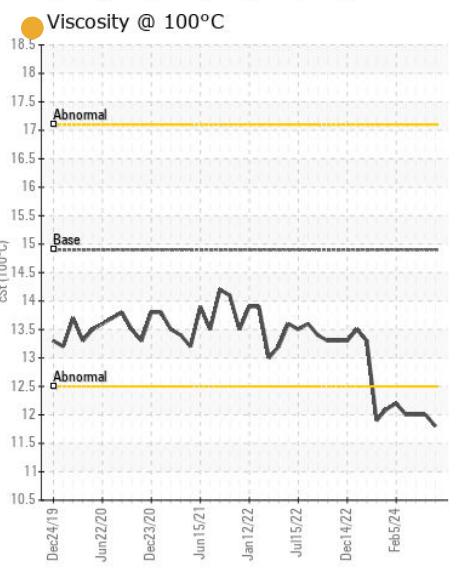
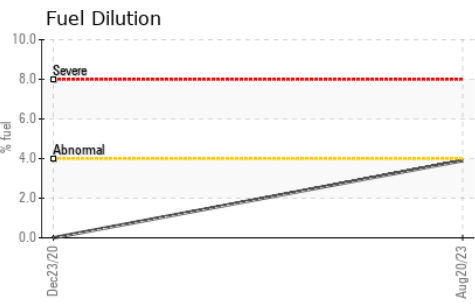
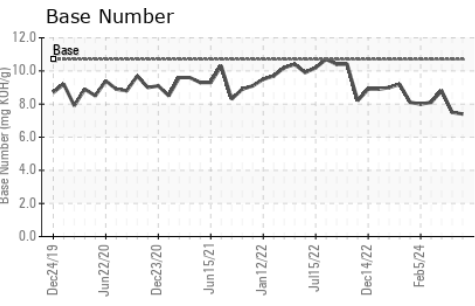
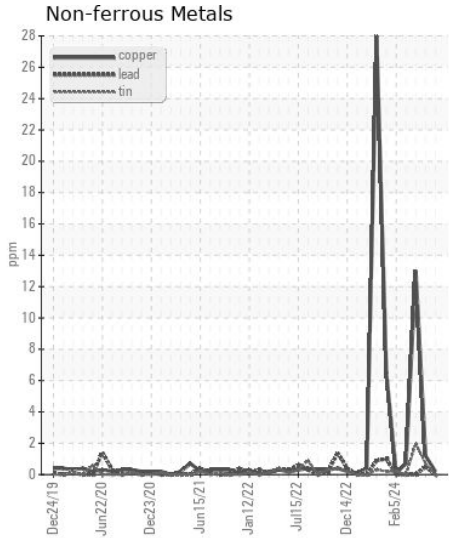
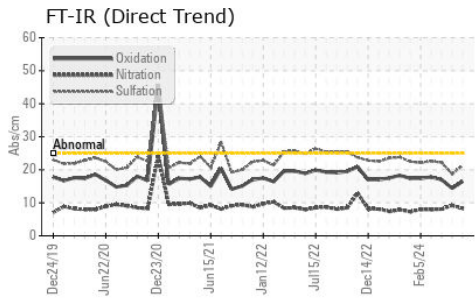
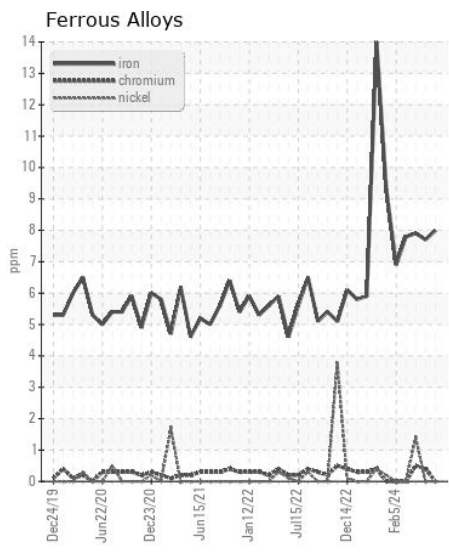
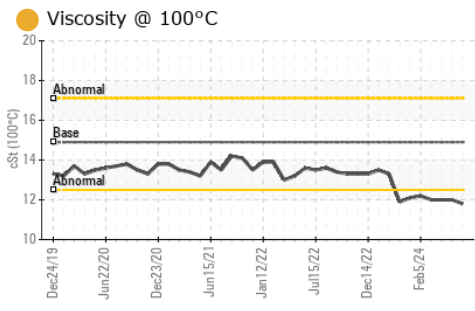
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	5
Potassium	ppm	ASTM D5185m	>20	0	3	3
Fuel	%	ASTM D3524	>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	8.3	9.2	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	18.7	22.2
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		2	0	1
Boron	ppm	ASTM D5185m		233	86	276
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		84	43	114
Manganese	ppm	ASTM D5185m		4	4	3
Magnesium	ppm	ASTM D5185m		440	696	702
Calcium	ppm	ASTM D5185m		1610	1499	1808
Phosphorus	ppm	ASTM D5185m	760	936	772	803
Zinc	ppm	ASTM D5185m	830	1057	827	958
Sulfur	ppm	ASTM D5185m	2770	3453	3183	3455
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	14.4	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	7.4	7.5	8.8
Visc @ 100°C	cSt	ASTM D445	14.9	11.8	12.0	12.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0066045 **Received** : 11 Jul 2024
Lab Number : 06234324 **Tested** : 12 Jul 2024
Unique Number : 11123158 **Diagnosed** : 14 Jul 2024 - Don Baldridge
Test Package : MAR 2 (Additional Tests: FuelDilution)

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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)