



WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Area
HORTENSE B INGRAM
Machine Id
[**HORTENSE B INGRAM**] 008 583226-8
Component
Starboard Genset
Fluid
CHEVRON DELO 400 XLE 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0064685	MW0064676	MW0048716
Sample Date		Client Info		04 Apr 2024	01 Mar 2024	10 Dec 2023
Machine Age	hrs	Client Info		36818	36374	35646
Oil Age	hrs	Client Info		364	389	382
Filter Age	hrs	Client Info		364	389	382
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				MARGINAL	MARGINAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

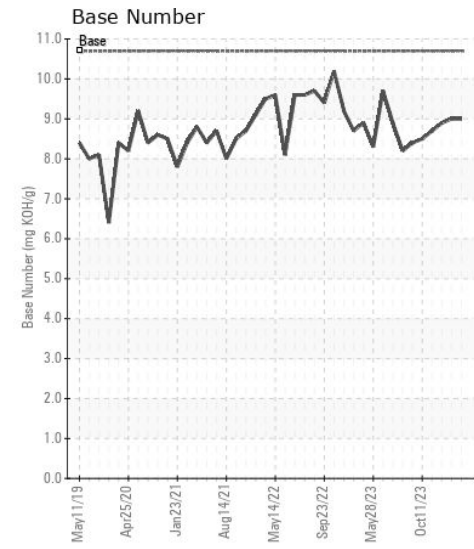
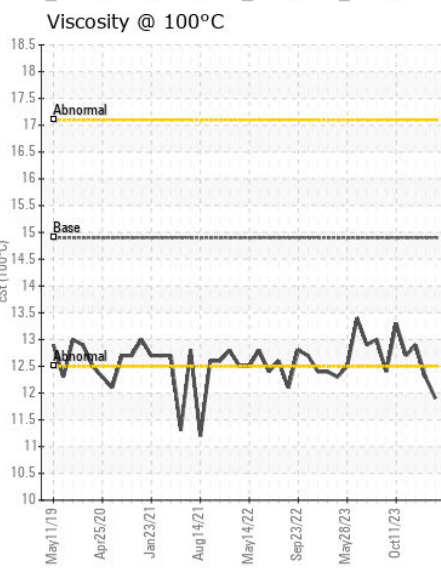
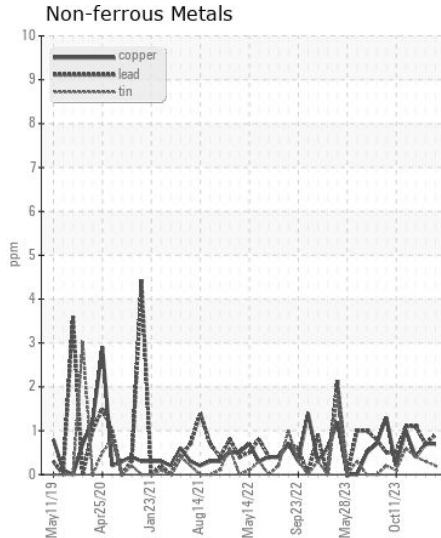
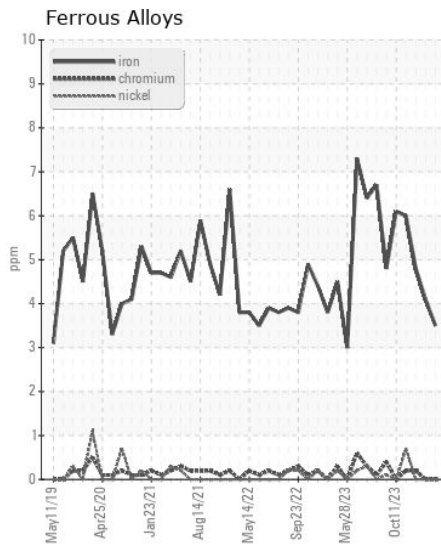
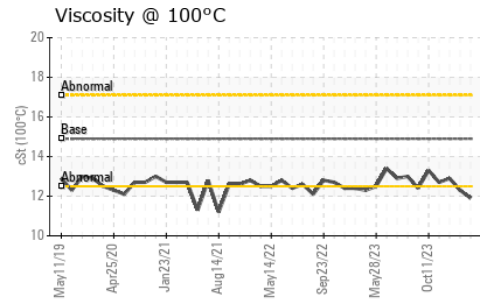
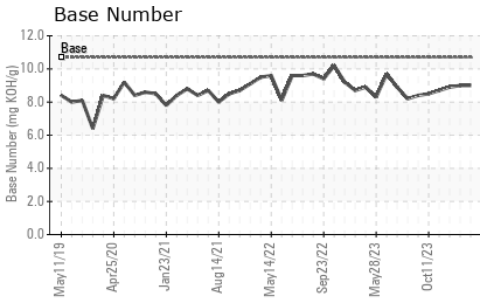
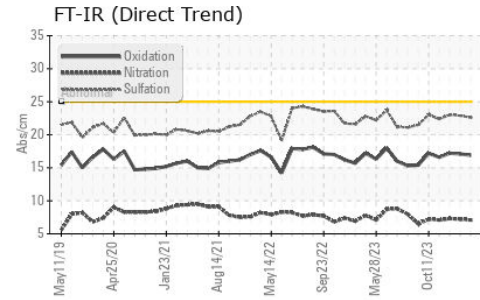
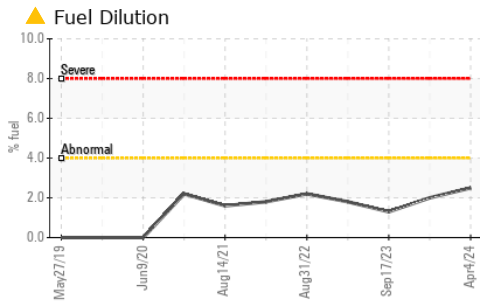
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	5	5	5
Potassium	ppm	ASTM D5185m	>20	1	<1	0
Fuel	%	ASTM D3524	>4.0	▲ 2.5	▲ 2.0	<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	7.1	7.2	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	22.9	23.0
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	2	1
Boron	ppm	ASTM D5185m		398	423	306
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		120	128	124
Manganese	ppm	ASTM D5185m		1	2	1
Magnesium	ppm	ASTM D5185m		648	679	652
Calcium	ppm	ASTM D5185m		1512	1543	1639
Phosphorus	ppm	ASTM D5185m	760	691	730	727
Zinc	ppm	ASTM D5185m	830	792	823	823
Sulfur	ppm	ASTM D5185m	2770	2830	2906	2491
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	17.1	17.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	9.0	9.0	8.9
Visc @ 100°C	cSt	ASTM D445	14.9	11.9	12.3	12.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0064685 **Received** : 18 Apr 2024
Lab Number : 06153731 **Tested** : 23 Apr 2024
Unique Number : 10983809 **Diagnosed** : 23 Apr 2024 - Wes Davis
Test Package : MAR 2 (Additional Tests: FuelDilution, PercentFuel)

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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)