



Area

JAMES F NEAL

Machine Id

[JAMES F NEAL] 008 645834-8

Component

Starboard Genset

Fluid

CHEVRON DELO 400 LE 15W40 (6 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0072241	MW0072240	MW0050011
Sample Date		Client Info		05 Jun 2024	14 May 2024	09 Oct 2023
Machine Age	hrs	Client Info		4423	4054	2850
Oil Age	hrs	Client Info		369	403	332
Filter Age	hrs	Client Info		0	0	332
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ATTENTION	ATTENTION	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	2	2	7
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	3	4	3
Lead	ppm	ASTM D5185m	>17	0	0	0
Copper	ppm	ASTM D5185m	>70	0	<1	1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

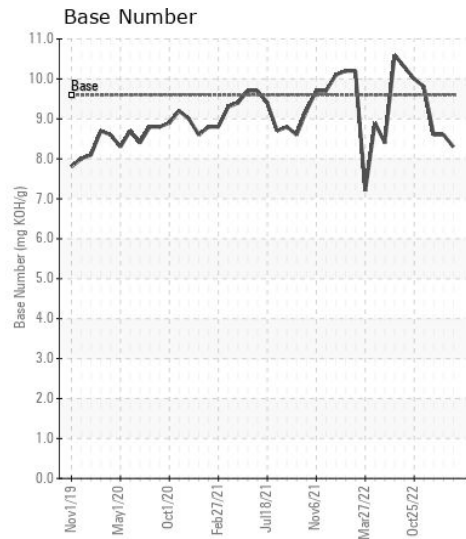
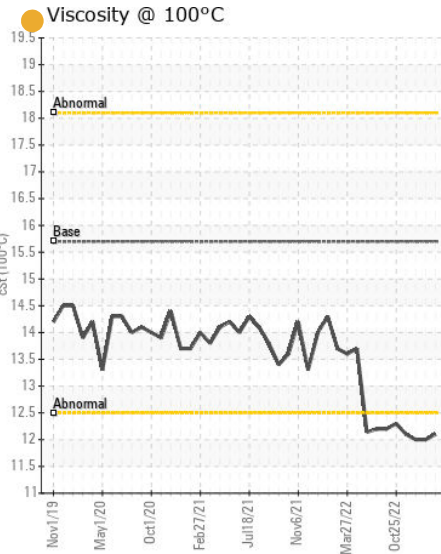
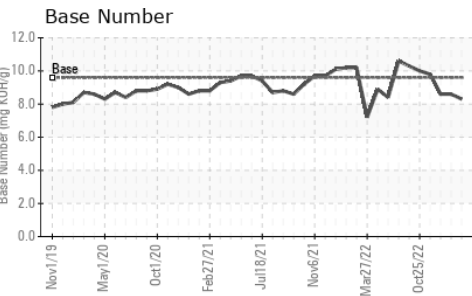
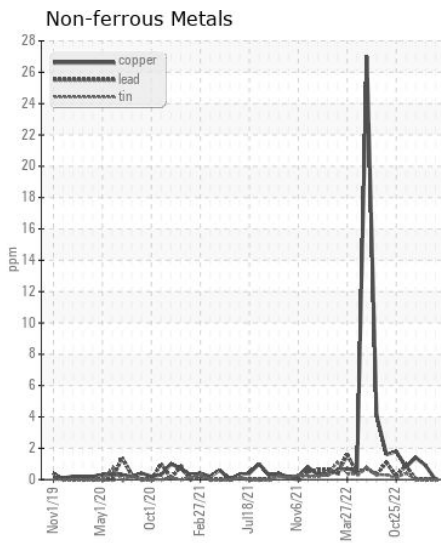
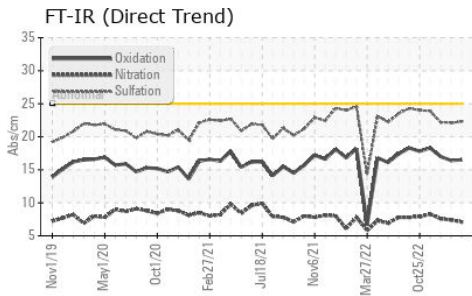
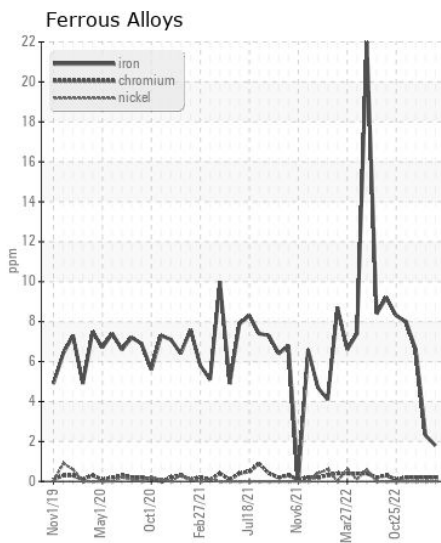
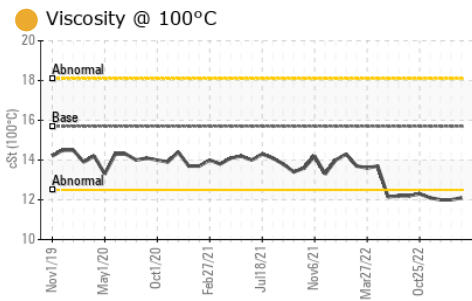
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	6
Potassium	ppm	ASTM D5185m	>20	2	2	1
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	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.1	7.4	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.3	22.1	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		0	<1	0
Boron	ppm	ASTM D5185m		290	302	318
Barium	ppm	ASTM D5185m		0	0	5
Molybdenum	ppm	ASTM D5185m		124	131	118
Manganese	ppm	ASTM D5185m		1	<1	0
Magnesium	ppm	ASTM D5185m		639	684	612
Calcium	ppm	ASTM D5185m		1473	1544	1345
Phosphorus	ppm	ASTM D5185m	1200	623	676	647
Zinc	ppm	ASTM D5185m	1300	855	911	780
Sulfur	ppm	ASTM D5185m	3200	2387	2611	2766
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	16.4	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	8.3	8.6	8.6
Visc @ 100°C	cSt	ASTM D445	15.7	12.1	12.0	12.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0072241 **Received** : 26 Jun 2024
Lab Number : 06221031 **Tested** : 27 Jun 2024
Unique Number : 11099228 **Diagnosed** : 27 Jun 2024 - Don Baldrige
Test Package : MAR 2

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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)