



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
QUEEN CITY
Component
Starboard Genset
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (5 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0069886	MW0062655	MW0062643
Sample Date		Client Info		01 May 2024	25 Mar 2024	21 Jan 2024
Machine Age	hrs	Client Info		38632	38128	500
Oil Age	hrs	Client Info		500	500	500
Filter Age	hrs	Client Info		500	500	500
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	7	6	11
Chromium	ppm	ASTM D5185m	>4	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		16	13	15
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	1	<1	1
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		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

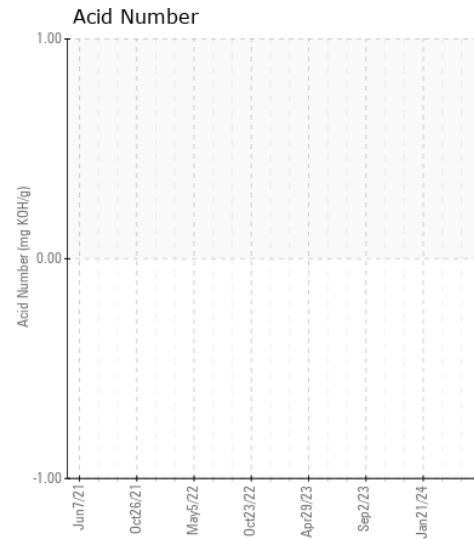
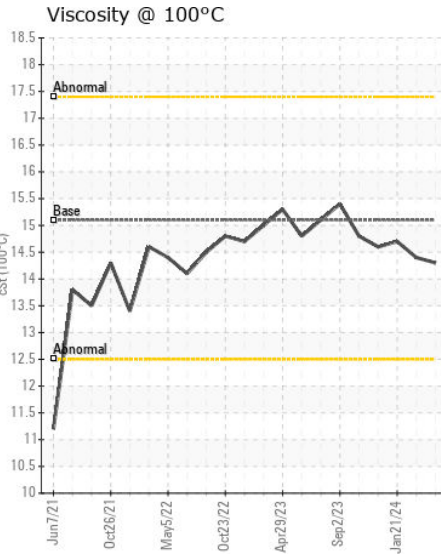
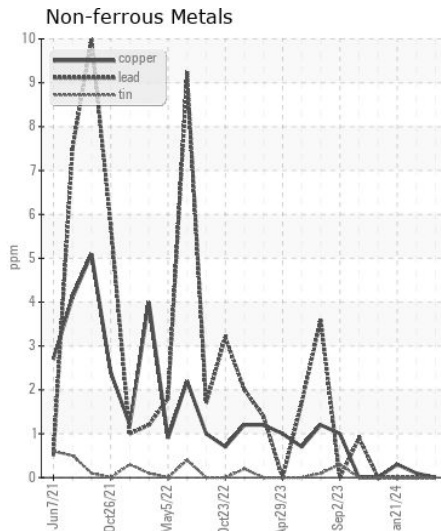
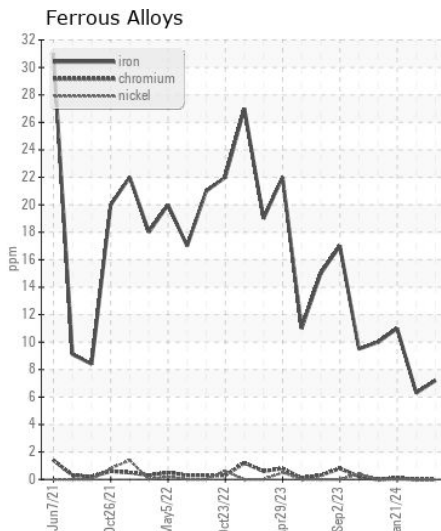
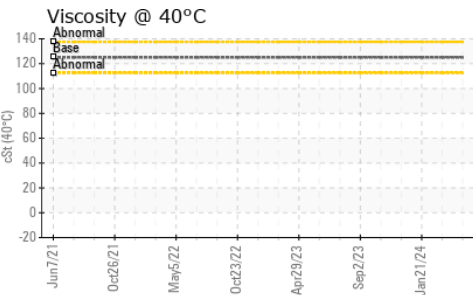
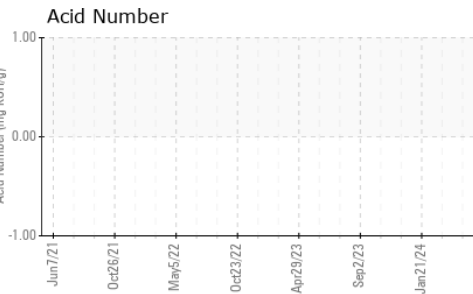
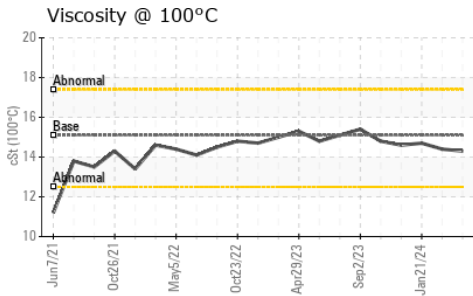
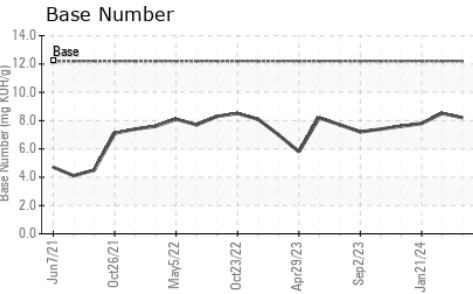
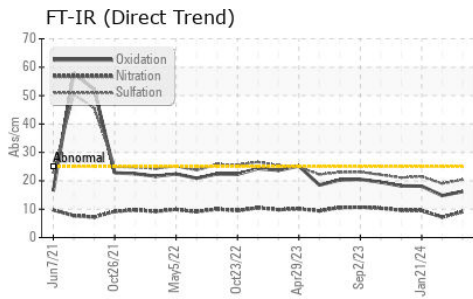
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	3	3
Potassium	ppm	ASTM D5185m	>20	2	2	4
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		0.2	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.1	7.2	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	19.0	21.5
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		1	<1	2
Boron	ppm	ASTM D5185m		83	82	94
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		27	25	29
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		737	680	750
Calcium	ppm	ASTM D5185m		1529	1459	1570
Phosphorus	ppm	ASTM D5185m	1360	713	709	732
Zinc	ppm	ASTM D5185m	1480	865	807	888
Sulfur	ppm	ASTM D5185m		3350	3529	3054
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	14.8	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	12.2	8.2	8.5	7.8
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	14.4	14.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0069886 **Received** : 01 Jul 2024
Lab Number : 06225619 **Tested** : 03 Jul 2024
Unique Number : 11103816 **Diagnosed** : 03 Jul 2024 - Jonathan Hester
Test Package : MAR 2 (Additional Tests: KV40, TAN Man)

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 50 E RIVERCENTER BLVD, SUITE 1180
 COVINGTON, KY
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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)