



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
STEPHEN P VENABLE
Machine Id
[STEPHEN P VENABLE] 003 590046-3
Component
Starboard Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0063007	MW0067994	MW0067973
Sample Date		Client Info		01 Jun 2024	22 May 2024	03 Apr 2024
Machine Age	hrs	Client Info		6887	6669	5991
Oil Age	hrs	Client Info		550	332	5991
Filter Age	hrs	Client Info		550	332	5991
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	3	3	2
Chromium	ppm	ASTM D5185m	>8	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>3	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	1	0
Aluminum	ppm	ASTM D5185m	>15	2	4	3
Lead	ppm	ASTM D5185m	>18	0	<1	<1
Copper	ppm	ASTM D5185m	>80	8	10	17
Tin	ppm	ASTM D5185m	>14	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

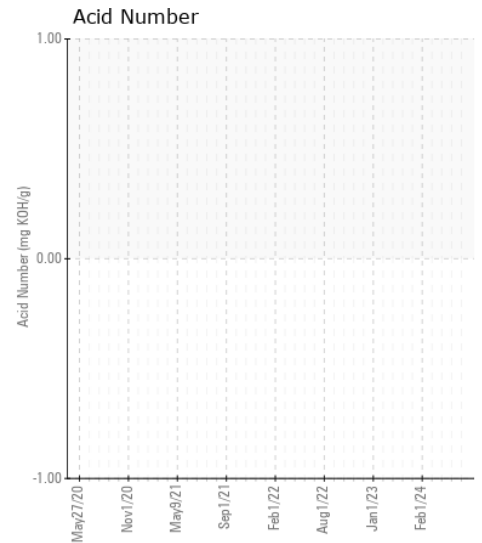
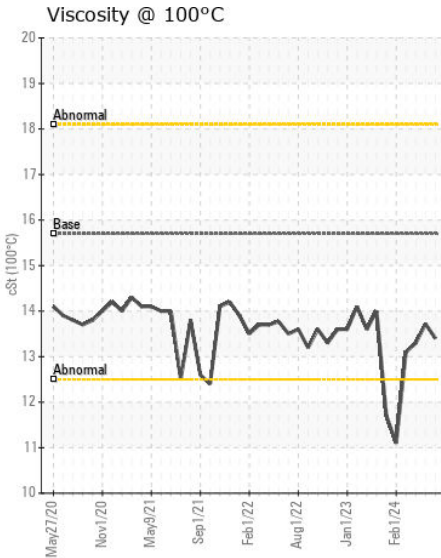
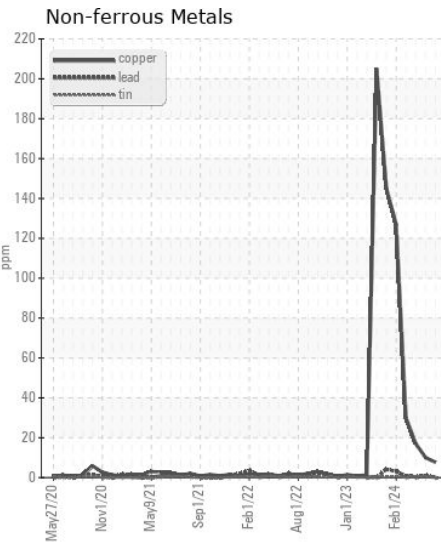
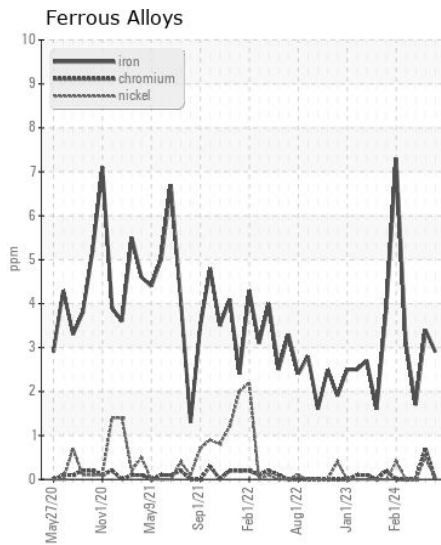
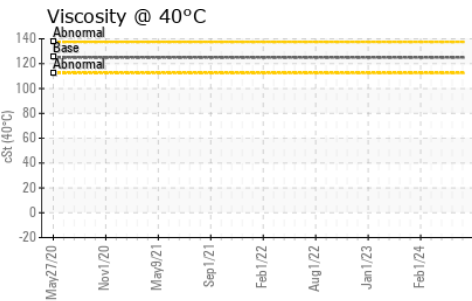
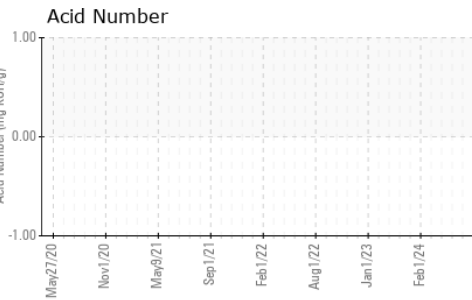
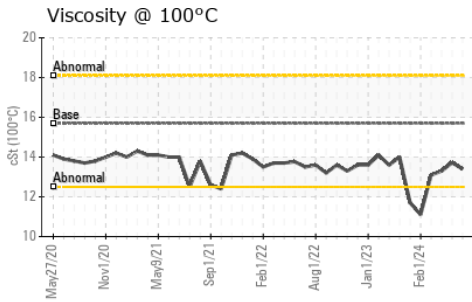
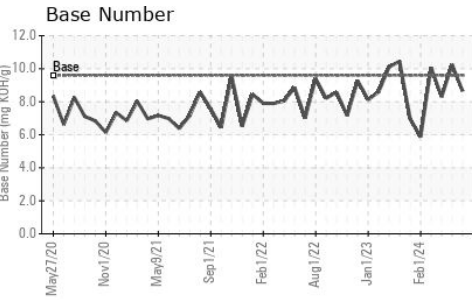
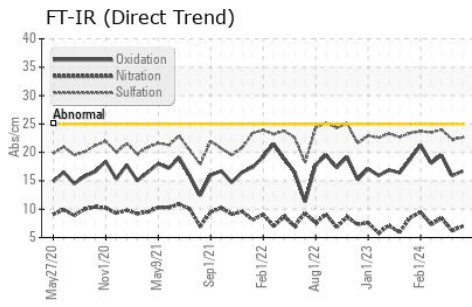
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	4	5	5
Potassium	ppm	ASTM D5185m	>20	<1	2	0
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	7.0	6.2	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	22.3	24.0
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>75	<1	2	2
Boron	ppm	ASTM D5185m		325	369	315
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		121	111	125
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		632	541	668
Calcium	ppm	ASTM D5185m		1786	1363	1487
Phosphorus	ppm	ASTM D5185m	1200	815	670	690
Zinc	ppm	ASTM D5185m	1300	1004	789	809
Sulfur	ppm	ASTM D5185m	3200	3332	2579	2299
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	15.9	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	8.65	10.24	8.30
Visc @ 100°C	cSt	ASTM D445	15.7	13.4	13.72	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0063007 **Received** : 14 Jun 2024
Lab Number : 06210907 **Tested** : 18 Jun 2024
Unique Number : 11083771 **Diagnosed** : 18 Jun 2024 - Sean Felton
Test Package : MAR 2 (Additional Tests: KV40, TAN Man)

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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)