



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
CPT OA FRANKS
Machine Id
[CPT OA FRANKS] 003 586734-3
Component
Starboard Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (41 GAL)

RECOMMENDATION

We recommend that you change the oil at the next available stoppage or outage. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW06063803	MW06032898	MW05898219
Sample Date		Client Info		01 Dec 2023	30 Oct 2023	30 Jun 2023
Machine Age	hrs	Client Info		21436	21164	18315
Oil Age	hrs	Client Info		0	1406	1314
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	4	4	6
Chromium	ppm	ASTM D5185m	>8	0	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	2	4	6
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	2	2
Lead	ppm	ASTM D5185m	>18	16	▲ 40	11
Copper	ppm	ASTM D5185m	>80	2	4	5
Tin	ppm	ASTM D5185m	>14	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

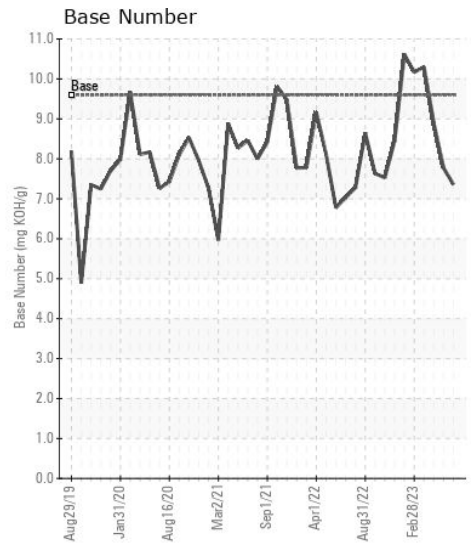
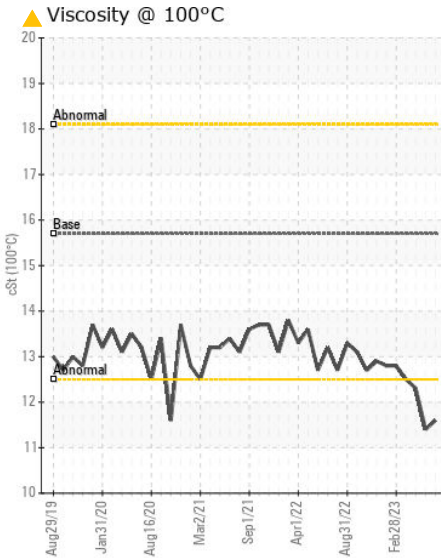
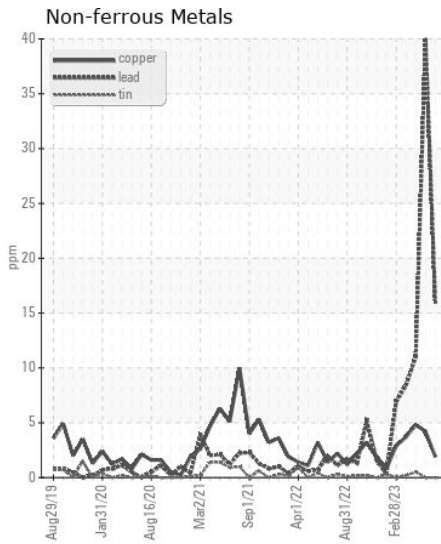
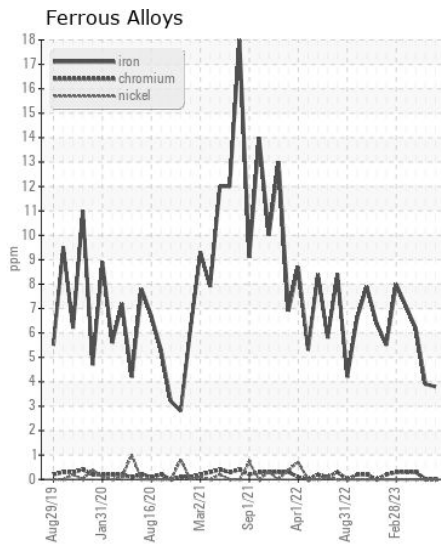
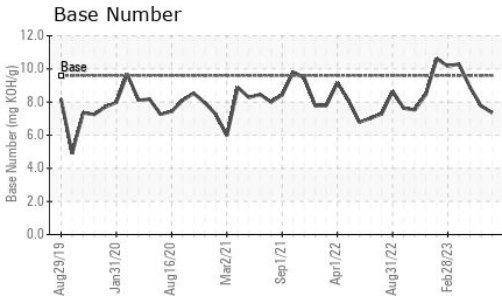
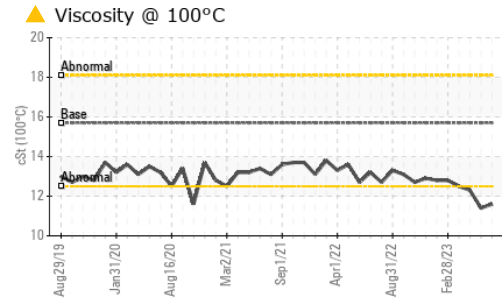
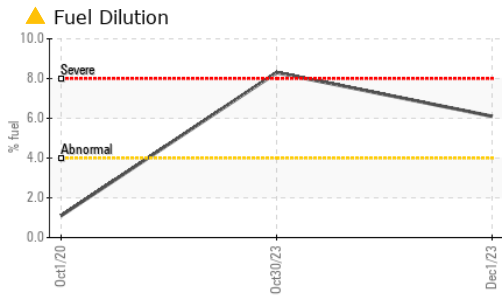
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>20	4	5	5
Potassium	ppm	ASTM D5185m	>20	2	<1	4
Fuel	%	ASTM D3524	>4.0	▲ 6.1	◆ 8.3	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.0	8.8	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	21.3	21.6
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. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>75	<1	3	<1
Boron	ppm	ASTM D5185m		238	238	194
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		88	81	73
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		598	595	630
Calcium	ppm	ASTM D5185m		1471	1445	1626
Phosphorus	ppm	ASTM D5185m	1200	686	688	758
Zinc	ppm	ASTM D5185m	1300	780	803	909
Sulfur	ppm	ASTM D5185m	3200	2735	2654	3497
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	17.2	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	7.36	7.77	8.90
Visc @ 100°C	cSt	ASTM D445	15.7	▲ 11.6	▲ 11.4	12.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06063803 **Received** : 17 Jan 2024
Lab Number : 06063803 **Diagnosed** : 19 Jan 2024
Unique Number : 10835185 **Diagnostician** : Wes Davis
Test Package : MAR 2 (Additional Tests: PercentFuel)

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)

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