



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

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**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW06121738</b>	MW06063801	MW06063805
Sample Date		Client Info		<b>24 Feb 2024</b>	01 Jan 2024	28 Dec 2023
Machine Age	hrs	Client Info		<b>23446</b>	22650	22565
Oil Age	hrs	Client Info		<b>1398</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	MARGINAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>9</b>	2	4
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>3	<b>3</b>	2	2
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>15	<b>3</b>	2	2
Lead	ppm	ASTM D5185m	>18	<b>2</b>	10	22
Copper	ppm	ASTM D5185m	>80	<b>2</b>	1	2
Tin	ppm	ASTM D5185m	>14	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>LIGHT</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

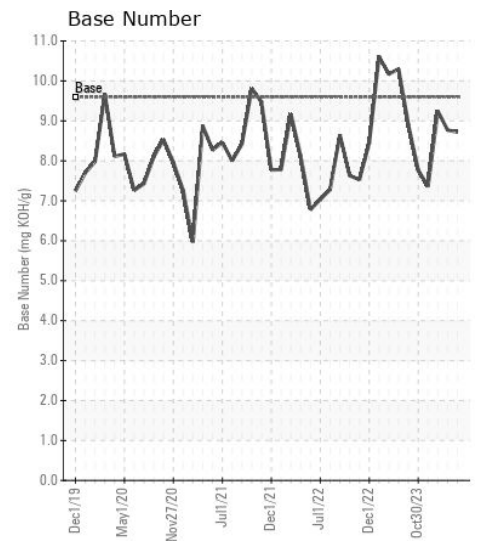
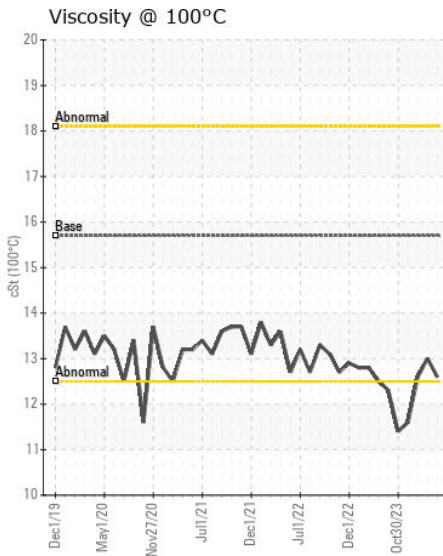
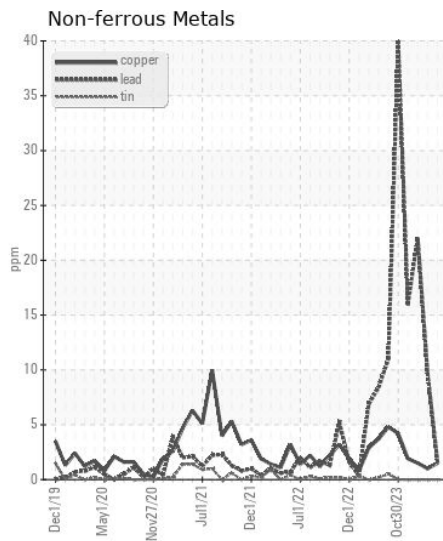
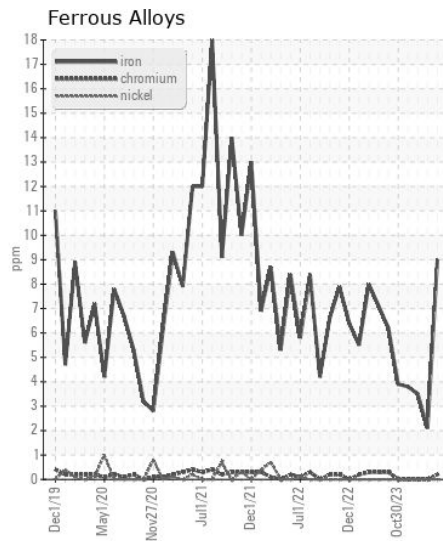
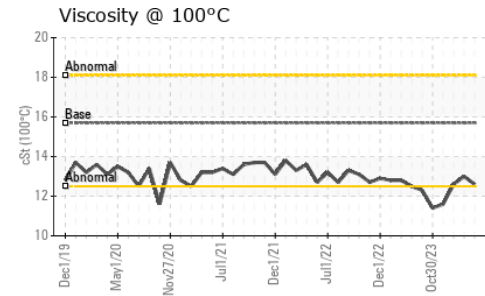
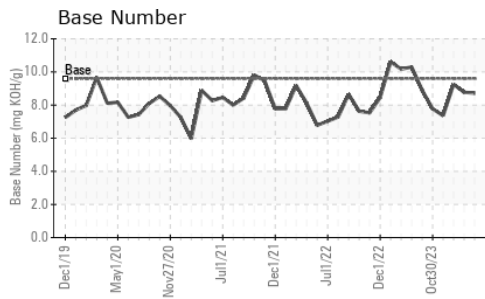
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>8</b>	5	7
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	3
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	▲ 2.4	▲ 4.1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	6.1	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	21.4	21.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	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	>75	<b>&lt;1</b>	<1	<1
Boron	ppm	ASTM D5185m		<b>311</b>	268	243
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>107</b>	94	89
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>625</b>	635	615
Calcium	ppm	ASTM D5185m		<b>1575</b>	1524	1468
Phosphorus	ppm	ASTM D5185m	1200	<b>804</b>	708	693
Zinc	ppm	ASTM D5185m	1300	<b>862</b>	829	799
Sulfur	ppm	ASTM D5185m	3200	<b>2942</b>	2858	2778
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.4</b>	15.2	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	<b>8.72</b>	8.77	9.25
Visc @ 100°C	cSt	ASTM D445	15.7	<b>12.6</b>	13.0	12.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW06121738  
**Lab Number** : 06121738  
**Unique Number** : 10930571  
**Test Package** : MAR 2

**Received** : 18 Mar 2024  
**Tested** : 19 Mar 2024  
**Diagnosed** : 19 Mar 2024 - Wes Davis

**INGRAM BARGE**  
 900 S 3RD ST  
 PADUCAH, KY  
 US 42003

Contact: ANTHONY VAN CURA  
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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)

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