



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

Area  
**KENT W FREEMAN**  
Machine Id  
[KENT W FREEMAN] 003 537344-3  
Component  
Starboard Main Engine  
Fluid  
CHEVRON DELO 710 LE (350 GAL)

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0064330</b>	MW0064328	MW0064731
Sample Date		Client Info		<b>01 Jul 2024</b>	31 May 2024	01 May 2024
Machine Age	hrs	Client Info		<b>43574</b>	43021	42281
Oil Age	hrs	Client Info		<b>0</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>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>11</b>	8	11
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	1	2
Lead	ppm	ASTM D5185m	>18	<b>2</b>	1	2
Copper	ppm	ASTM D5185m	>80	<b>9</b>	6	9
Tin	ppm	ASTM D5185m	>14	<b>2</b>	1	3
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

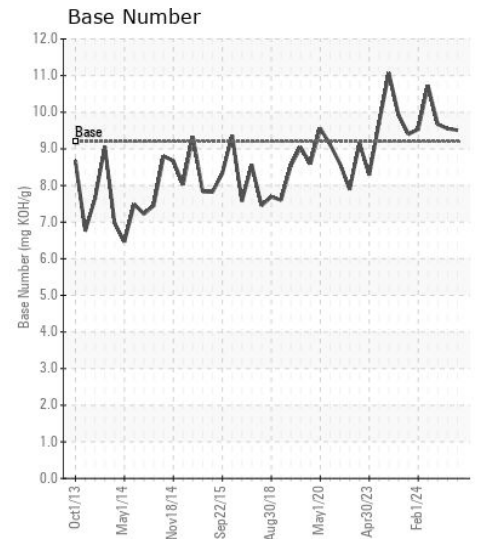
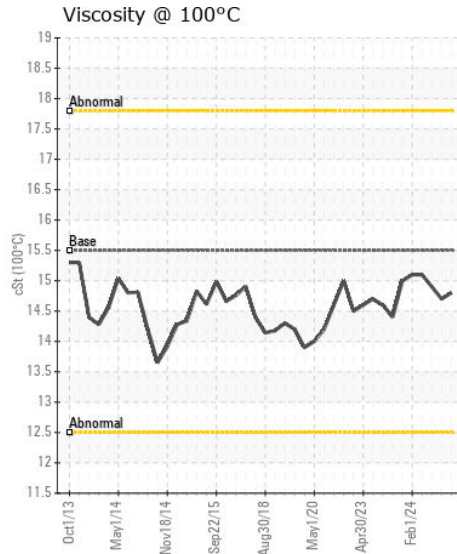
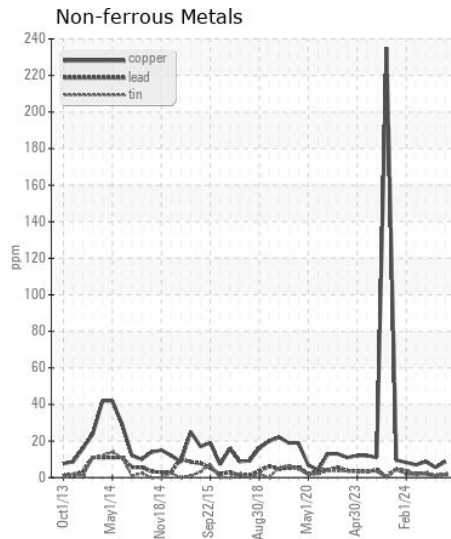
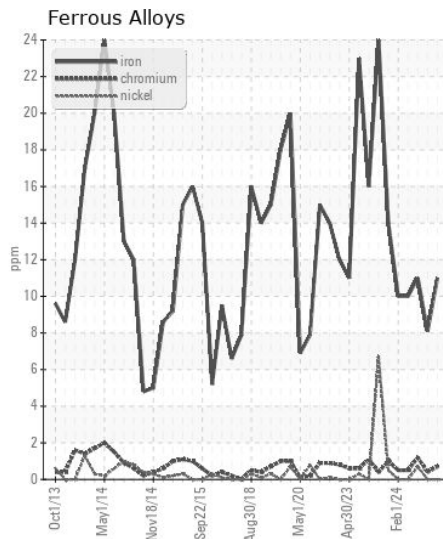
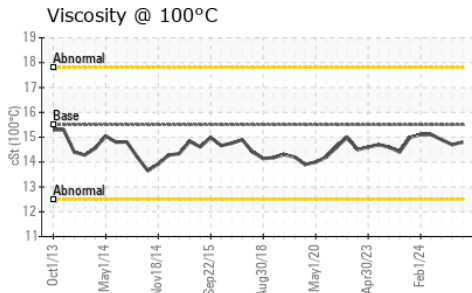
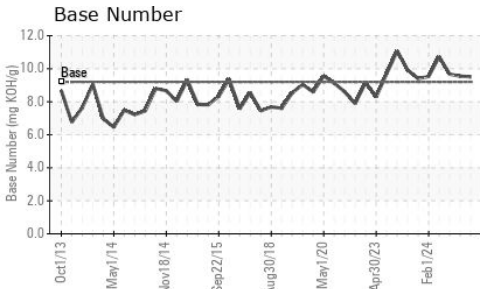
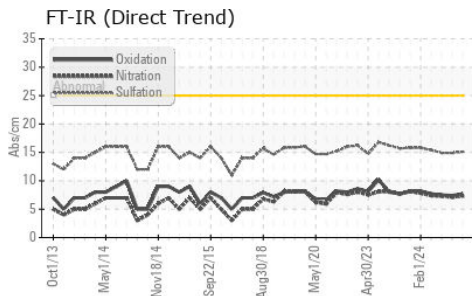
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>3</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	3
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.1	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>15.1</b>	14.9	14.9
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>0</b>	<1	<1
Boron	ppm	ASTM D5185m		<b>41</b>	39	47
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>46</b>	44	48
Manganese	ppm	ASTM D5185m		<b>2</b>	1	2
Magnesium	ppm	ASTM D5185m		<b>10</b>	13	11
Calcium	ppm	ASTM D5185m		<b>3443</b>	3409	3482
Phosphorus	ppm	ASTM D5185m		<b>8</b>	8	15
Zinc	ppm	ASTM D5185m	10	<b>5</b>	7	8
Sulfur	ppm	ASTM D5185m		<b>2155</b>	2603	2425
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>7.7</b>	7.4	7.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.2	<b>9.51</b>	9.55	9.67
Visc @ 100°C	cSt	ASTM D445	15.5	<b>14.8</b>	14.7	14.9



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0064330  
**Lab Number** : 06234041  
**Unique Number** : 11122875  
**Test Package** : MAR 2

**Received** : 11 Jul 2024  
**Tested** : 12 Jul 2024  
**Diagnosed** : 12 Jul 2024 - Wes Davis

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

Contact: JUSTIN WHEELER  
 justin.wheeler@ingrambarga.com

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)

T:  
 F: (615)695-3697