



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

Machine Id  
**HBR**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON URSA SUPER PLUS 40 (5 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		<b>MW05934677</b>	MW05904216	MW05843068
Sample Date		Client Info		<b>24 Aug 2023</b>	20 Jul 2023	09 May 2023
Machine Age	hrs	Client Info		<b>19680</b>	19213	18355
Oil Age	hrs	Client Info		<b>467</b>	858	436
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>ABNORMAL</b>	ABNORMAL	ABNORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	<b>7</b>	8	6
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	3	5
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Tin	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

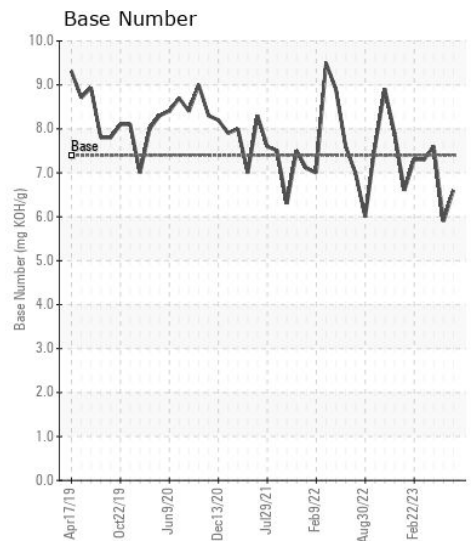
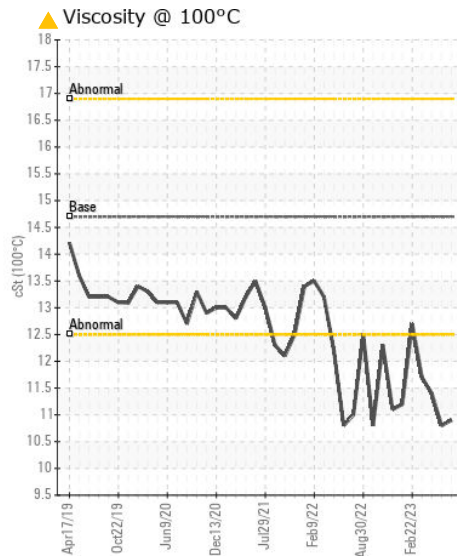
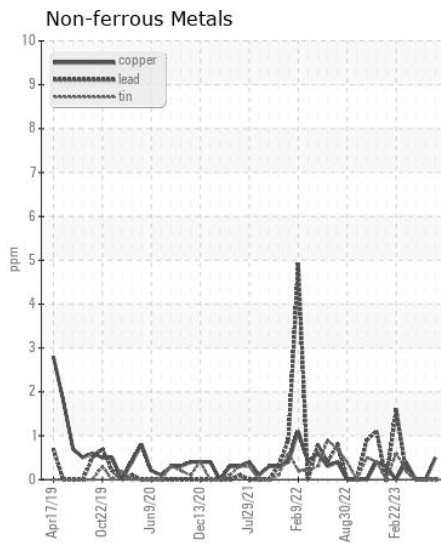
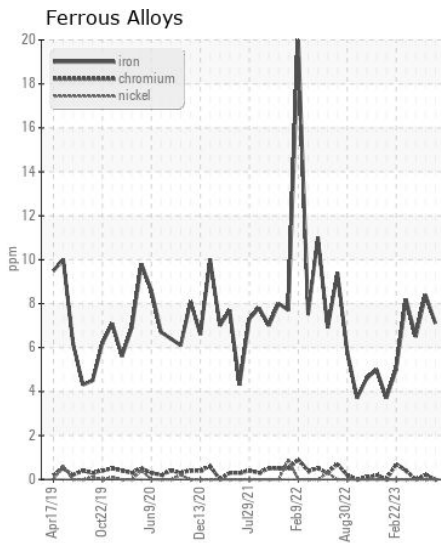
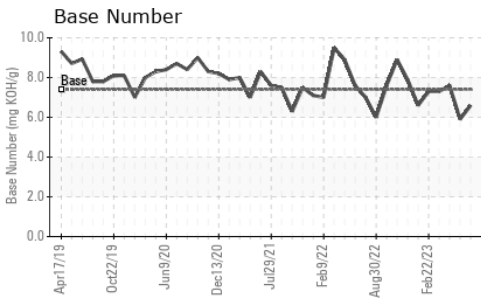
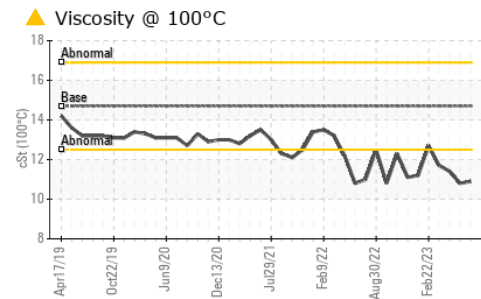
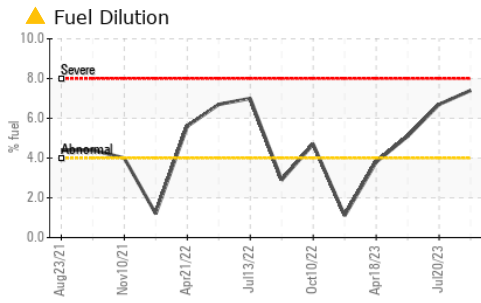
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Fuel	%	ASTM D3524	>4.0	<b>▲ 7.4</b>	▲ 6.7	▲ 5.1
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>	0.2	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	7.3	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.3</b>	25.1	22.8
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>2</b>	1	1
Boron	ppm	ASTM D5185m		<b>304</b>	326	294
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>108</b>	100	96
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>541</b>	512	499
Calcium	ppm	ASTM D5185m		<b>1642</b>	1672	1858
Phosphorus	ppm	ASTM D5185m	1000	<b>797</b>	914	790
Zinc	ppm	ASTM D5185m	1090	<b>959</b>	1116	973
Sulfur	ppm	ASTM D5185m		<b>3096</b>	3470	2867
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.3</b>	25.1	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	<b>6.6</b>	5.9	7.6
Visc @ 100°C	cSt	ASTM D445	14.7	<b>▲ 10.9</b>	▲ 10.8	▲ 11.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW05934677  
**Lab Number** : 05934677  
**Unique Number** : 10619948  
**Test Package** : MAR 2 ( Additional Tests: PercentFuel )

**Received** : 25 Aug 2023  
**Tested** : 28 Aug 2023  
**Diagnosed** : 28 Aug 2023 - Wes Davis

**ILLINOIS MARINE TOWING**  
 PO BOX 391  
 LEMONT, IL  
 US 60439  
 Contact: RHETT DANIEL  
 rdaniel@imtowing.com  
 T: (630)280-4926  
 F: (630)739-2041

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)