



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

Machine Id  
**MRC**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON URSA SUPER PLUS 40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW06017169</b>	MW05981734	MW05934673
Sample Date		Client Info		<b>23 Nov 2023</b>	16 Oct 2023	24 Aug 2023
Machine Age	hrs	Client Info		<b>6867</b>	6433	5141
Oil Age	hrs	Client Info		<b>434</b>	470	822
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>	ABNORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>3</b>	10	6
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	1	<1
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>3</b>	3	<1
Lead	ppm	ASTM D5185m	>17	<b>1</b>	▲ 20	0
Copper	ppm	ASTM D5185m	>70	<b>1</b>	22	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
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**

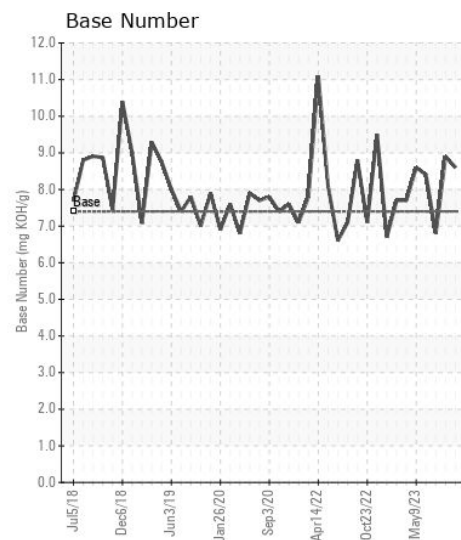
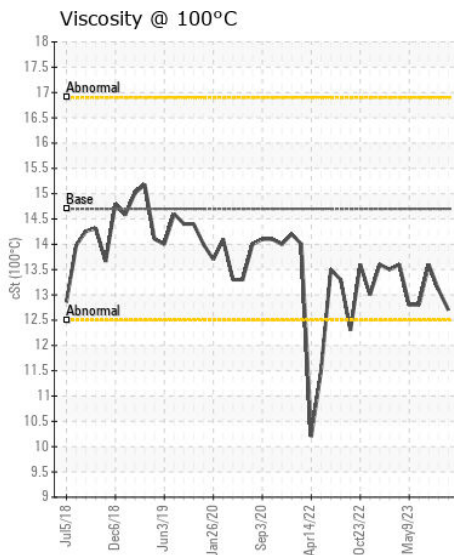
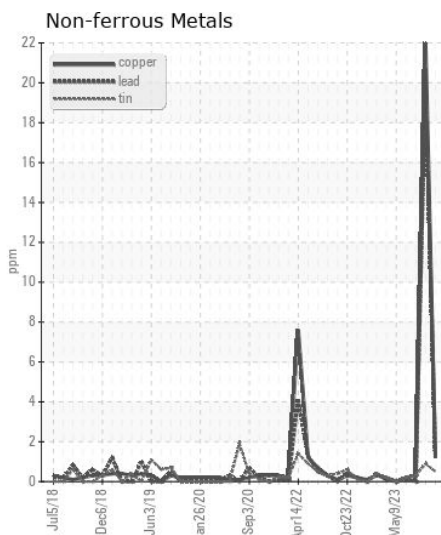
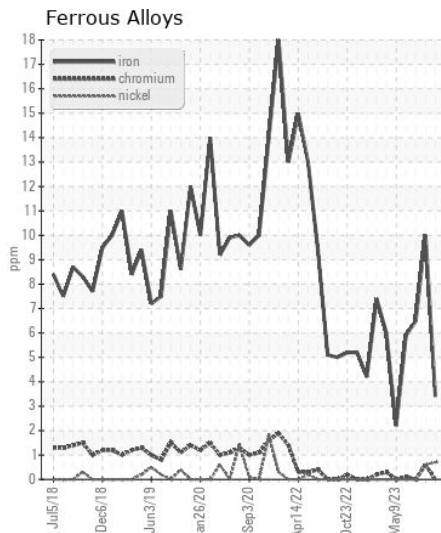
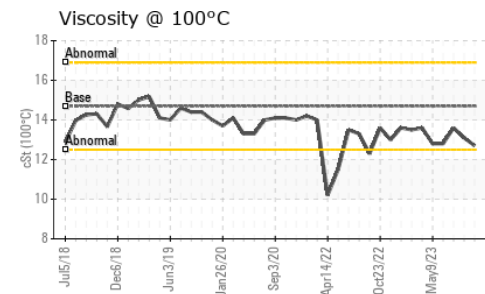
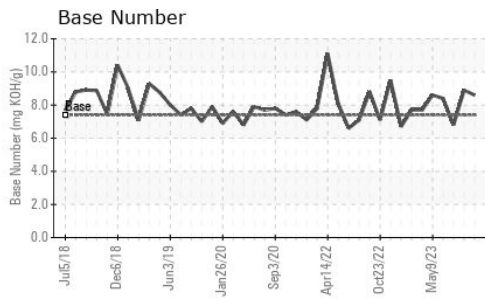
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	32	0
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		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.1</b>	7.2	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.5</b>	21.3	18.2
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		<b>16</b>	197	2
Boron	ppm	ASTM D5185m		<b>327</b>	305	331
Barium	ppm	ASTM D5185m		<b>0</b>	10	0
Molybdenum	ppm	ASTM D5185m		<b>115</b>	120	71
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>599</b>	492	277
Calcium	ppm	ASTM D5185m		<b>1478</b>	1614	2229
Phosphorus	ppm	ASTM D5185m	1000	<b>785</b>	747	752
Zinc	ppm	ASTM D5185m	1090	<b>872</b>	873	928
Sulfur	ppm	ASTM D5185m		<b>2564</b>	2578	3266
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.1</b>	15.4	11.7
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	<b>8.6</b>	8.9	6.8
Visc @ 100°C	cSt	ASTM D445	14.7	<b>12.7</b>	13.1	13.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : MW06017169

**Lab Number** : 06017169

**Unique Number** : 10756313

**Test Package** : MAR 2

**Received** : 24 Nov 2023

**Tested** : 28 Nov 2023

**Diagnosed** : 28 Nov 2023 - Wes Davis

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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)