



Machine Id  
**HBR**  
Component  
**Starboard Genset**  
Fluid  
**CHEVRON URSA SUPER PLUS 40 (5 GAL)**

**RECOMMENDATION**

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW05745129</b>	MW05718326	MW05685050
Sample Date		Client Info		<b>19 Jan 2023</b>	14 Dec 2022	03 Nov 2022
Machine Age	hrs	Client Info		<b>17099</b>	16662	16160
Oil Age	hrs	Client Info		<b>437</b>	502	415
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>ATTENTION</b>	ATTENTION	ATTENTION

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	<b>4</b>	5	5
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
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>	4	3
Lead	ppm	ASTM D5185m	>10	<b>0</b>	1	<1
Copper	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185m	>5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</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 no indication of any contamination in the oil.

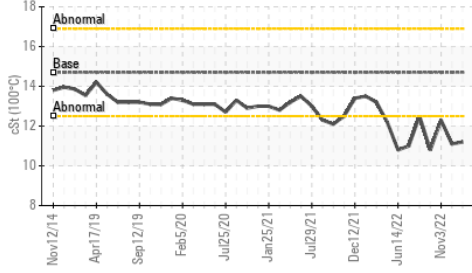
Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	1.1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.7	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.2</b>	25.9	24.5
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**

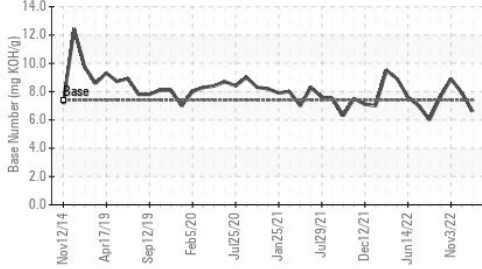
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Boron	ppm	ASTM D5185m		<b>370</b>	294	353
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>94</b>	102	116
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>447</b>	525	630
Calcium	ppm	ASTM D5185m		<b>1287</b>	1336	1614
Phosphorus	ppm	ASTM D5185m	1000	<b>696</b>	646	768
Zinc	ppm	ASTM D5185m	1090	<b>803</b>	749	901
Sulfur	ppm	ASTM D5185m		<b>2636</b>	2532	3160
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.0</b>	23.8	18.4
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	<b>6.6</b>	7.9	8.9
Visc @ 100°C	cSt	ASTM D445	14.7	<b>11.2</b>	11.1	12.3

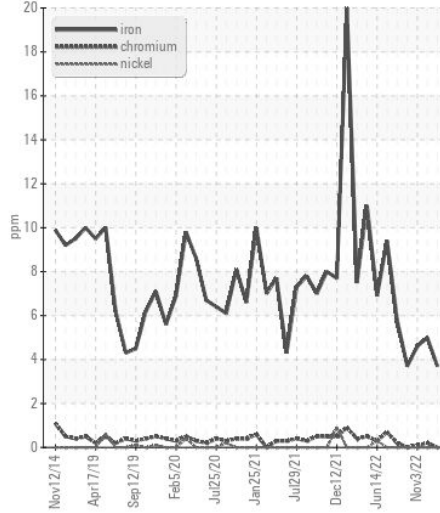
● Viscosity @ 100°C



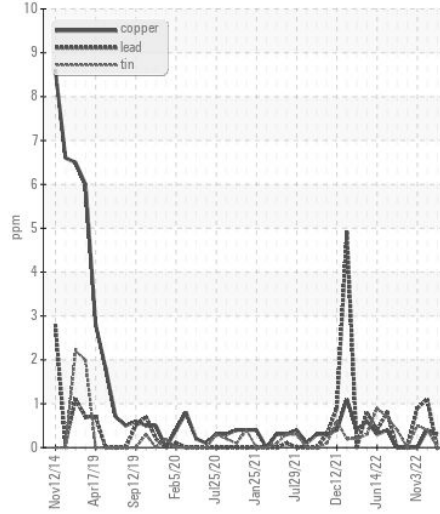
Base Number



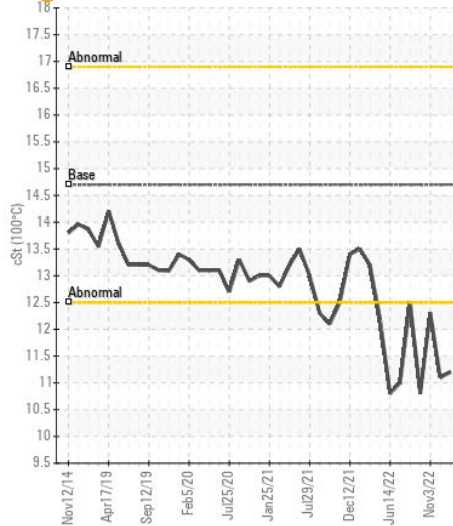
Ferrous Alloys



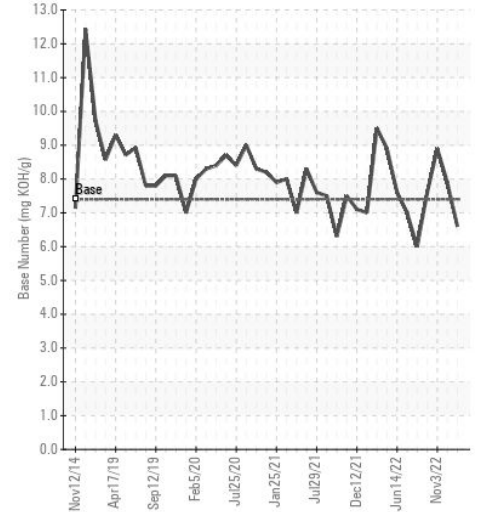
Non-ferrous Metals



● Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW05745129  
**Lab Number** : 05745129  
**Unique Number** : 10299728  
**Test Package** : MAR 2  
**Received** : 20 Jan 2023  
**Tested** : 23 Jan 2023  
**Diagnosed** : 24 Jan 2023 - Angela Borella

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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)