



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW05904216	MW05843068	MW05823788
Sample Date		Client Info		20 Jul 2023	09 May 2023	18 Apr 2023
Machine Age	hrs	Client Info		19213	18355	17919
Oil Age	hrs	Client Info		858	436	415
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

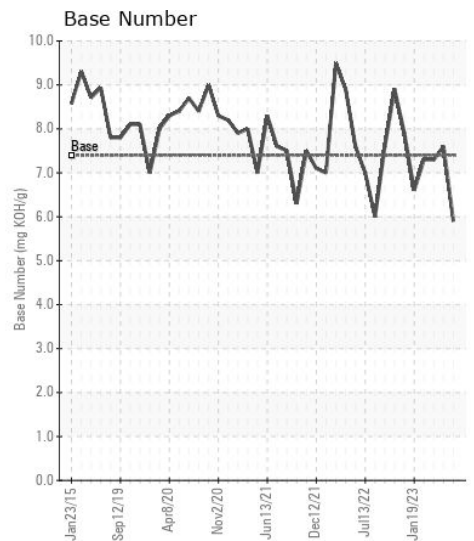
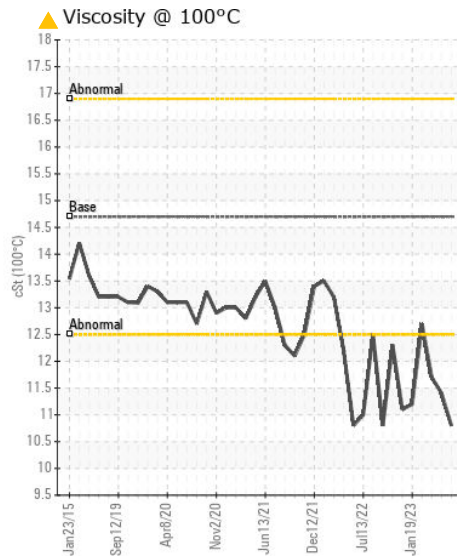
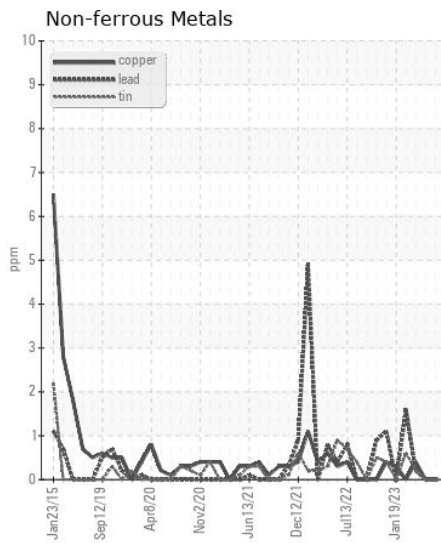
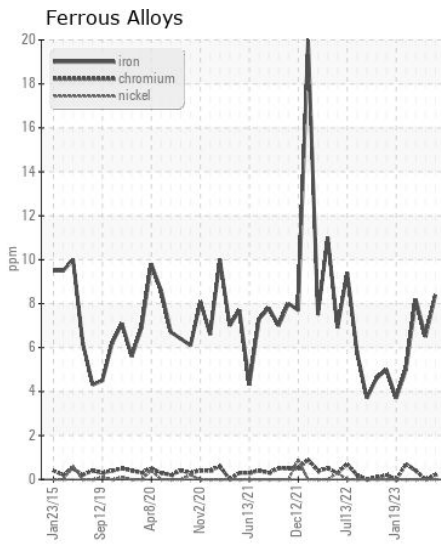
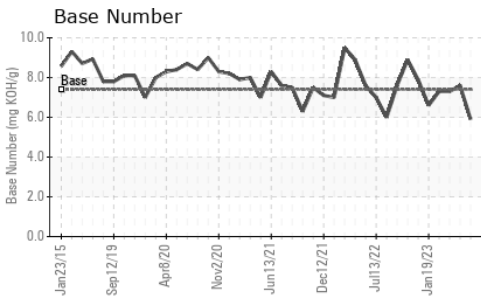
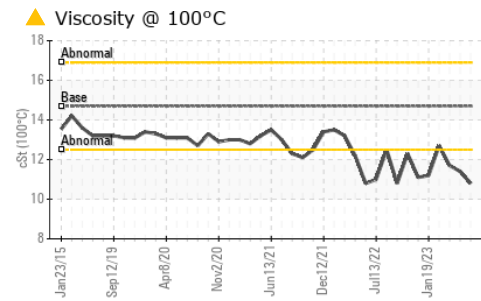
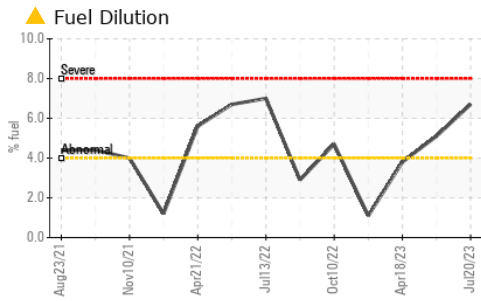
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	4	4	6
Potassium	ppm	ASTM D5185m	>20	0	<1	2
Fuel	%	ASTM D3524	>4.0	▲ 6.7	▲ 5.1	▲ 3.8
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.9	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.3	6.6	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.1	22.8	22.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	1	<1
Boron	ppm	ASTM D5185m		326	294	353
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		100	● 96	● 92
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		512	● 499	● 414
Calcium	ppm	ASTM D5185m		1672	1858	1994
Phosphorus	ppm	ASTM D5185m	1000	914	790	792
Zinc	ppm	ASTM D5185m	1090	1116	973	968
Sulfur	ppm	ASTM D5185m		3470	2867	2813
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.1	15.0	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	5.9	7.6	7.3
Visc @ 100°C	cSt	ASTM D445	14.7	▲ 10.8	▲ 11.4	▲ 11.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW05904216 **Received** : 21 Jul 2023
Lab Number : 05904216 **Tested** : 24 Jul 2023
Unique Number : 10565572 **Diagnosed** : 24 Jul 2023 - Angela Borella
Test Package : MAR 2 (Additional Tests: PercentFuel)

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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)