



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		MW06017177	MW05981759	MW05934677
Sample Date		Client Info		23 Nov 2023	16 Oct 2023	24 Aug 2023
Machine Age	hrs	Client Info		20450	20077	19680
Oil Age	hrs	Client Info		373	393	467
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				MARGINAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	6	8	7
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	3	4	2
Lead	ppm	ASTM D5185m	>17	0	<1	0
Copper	ppm	ASTM D5185m	>70	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

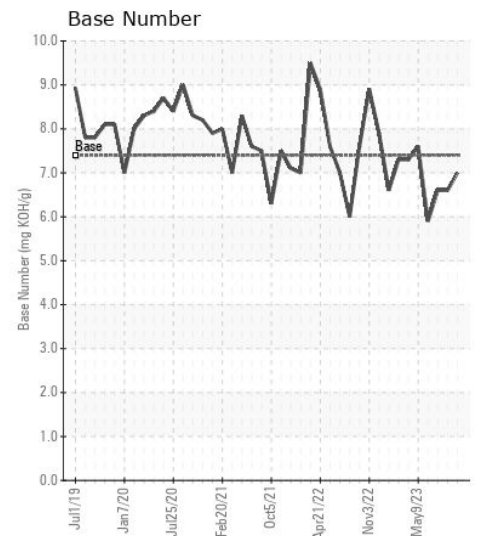
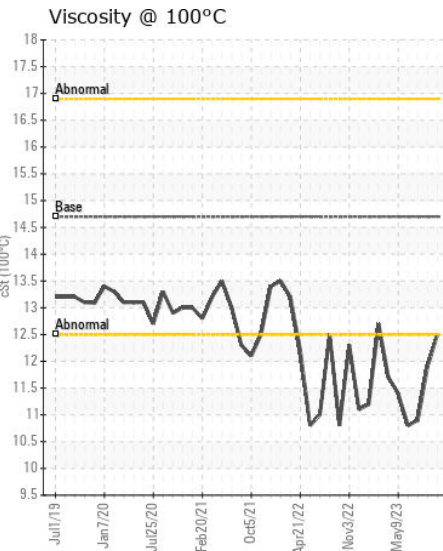
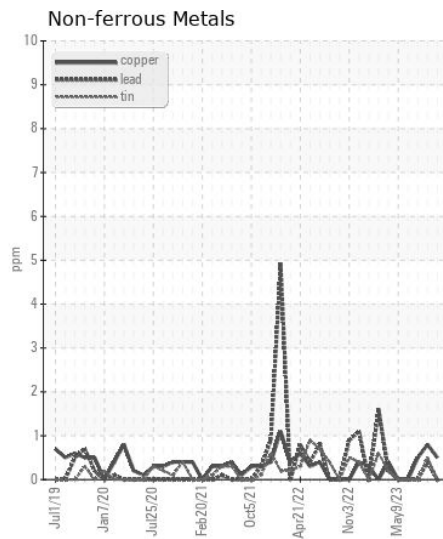
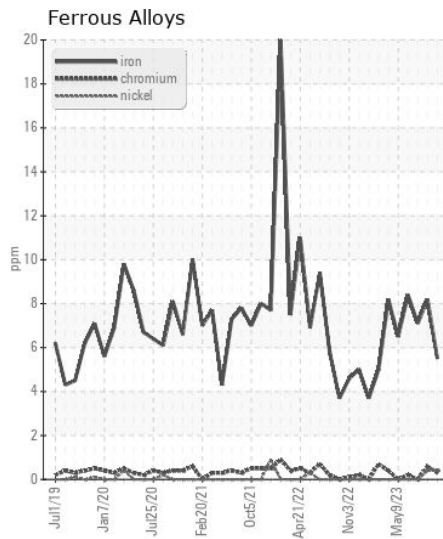
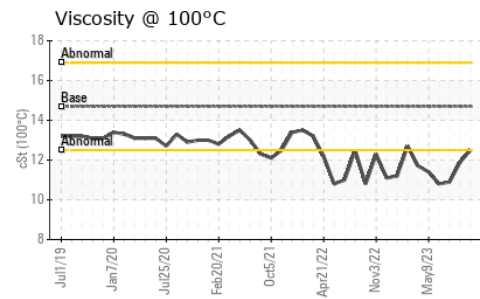
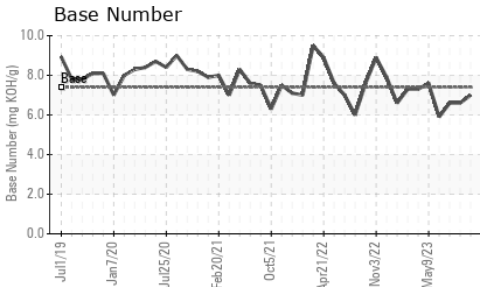
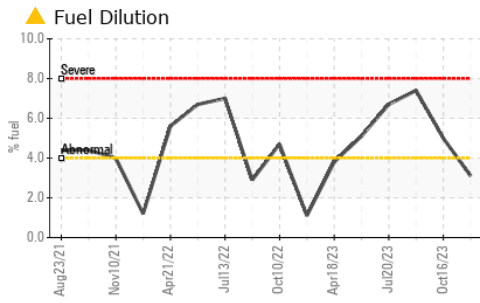
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	5	4	4
Potassium	ppm	ASTM D5185m	>20	2	3	0
Fuel	%	ASTM D3524	>4.0	▲ 3.1	▲ 5.0	▲ 7.4
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	5.4	6.6	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	22.7	24.3
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	<1	2
Boron	ppm	ASTM D5185m		329	326	304
Barium	ppm	ASTM D5185m		0	11	0
Molybdenum	ppm	ASTM D5185m		74	88	108
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		284	363	541
Calcium	ppm	ASTM D5185m		1984	1771	1642
Phosphorus	ppm	ASTM D5185m	1000	650	770	797
Zinc	ppm	ASTM D5185m	1090	878	897	959
Sulfur	ppm	ASTM D5185m		2953	2686	3096
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	20.1	23.3
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	7.0	6.6	6.6
Visc @ 100°C	cSt	ASTM D445	14.7	12.5	▲ 11.9	▲ 10.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06017177
Lab Number : 06017177
Unique Number : 10756321
Test Package : MAR 2 (Additional Tests: PercentFuel)

Received : 24 Nov 2023
Tested : 28 Nov 2023
Diagnosed : 28 Nov 2023 - Wes Davis

ILLINOIS MARINE TOWING
 PO BOX 391
 LEMONT, IL
 US 60439

Contact: RHETT DANIEL
 rdaniel@imtowing.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)

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