



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		MW06028304	MW06017177	MW05981759
Sample Date		Client Info		06 Dec 2023	23 Nov 2023	16 Oct 2023
Machine Age	hrs	Client Info		20868	20450	20077
Oil Age	hrs	Client Info		418	373	393
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				ATTENTION	MARGINAL	ABNORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

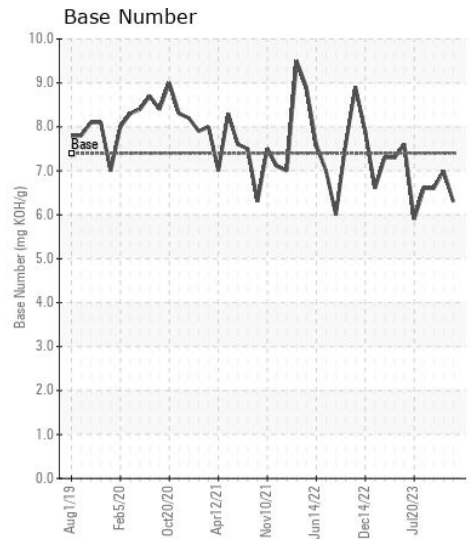
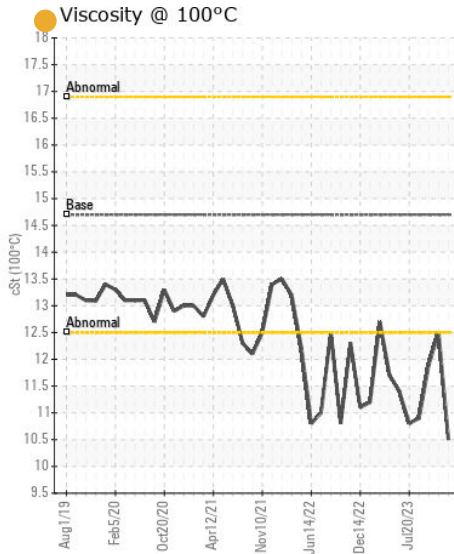
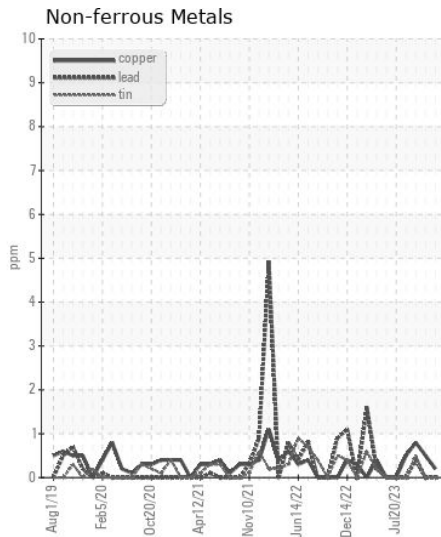
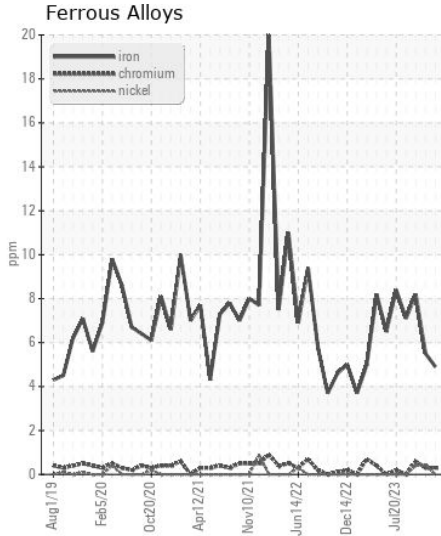
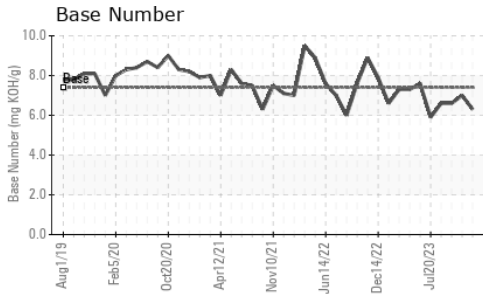
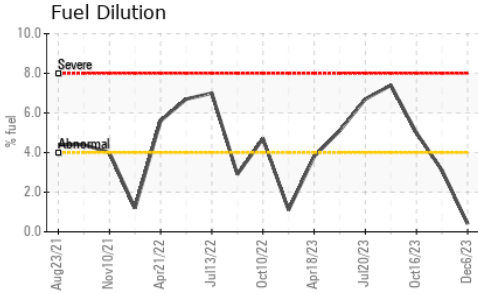
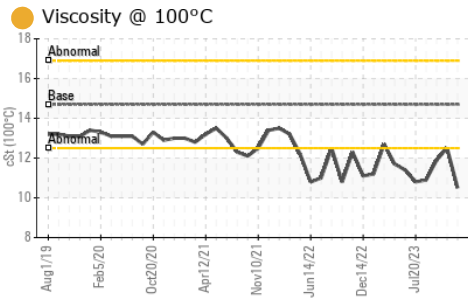
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	4
Potassium	ppm	ASTM D5185m	>20	2	2	3
Fuel	%	ASTM D3524	>4.0	0.4	▲ 3.1	▲ 5.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	6.4	5.4	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	20.4	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 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		<1	0	<1
Boron	ppm	ASTM D5185m		181	329	326
Barium	ppm	ASTM D5185m		5	0	11
Molybdenum	ppm	ASTM D5185m		54	74	88
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		237	284	363
Calcium	ppm	ASTM D5185m		2040	1984	1771
Phosphorus	ppm	ASTM D5185m	1000	857	650	770
Zinc	ppm	ASTM D5185m	1090	980	878	897
Sulfur	ppm	ASTM D5185m		3355	2953	2686
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.1	15.3	20.1
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	6.3	7.0	6.6
Visc @ 100°C	cSt	ASTM D445	14.7	● 10.5	12.5	▲ 11.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06028304
Lab Number : 06028304
Unique Number : 10778095
Test Package : MAR 2 (Additional Tests: FuelDilution, PercentFuel)

Received : 07 Dec 2023
Tested : 14 Dec 2023
Diagnosed : 14 Dec 2023 - Jonathan Hester

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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)