



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

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		MW06225760	MW06166390	MW06132971
Sample Date		Client Info		01 Jul 2024	30 Apr 2024	28 Mar 2024
Machine Age	hrs	Client Info		23286	22633	22304
Oil Age	hrs	Client Info		653	329	406
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				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

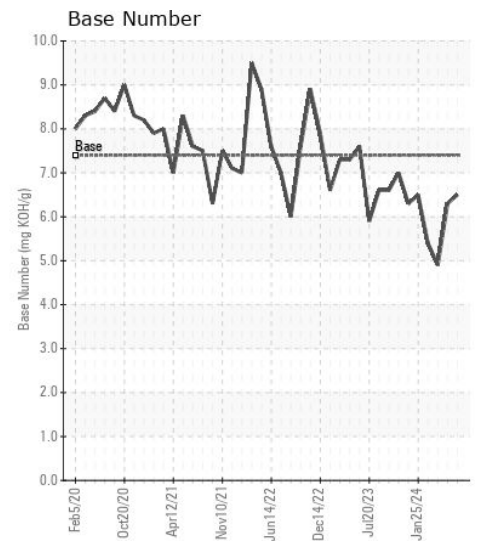
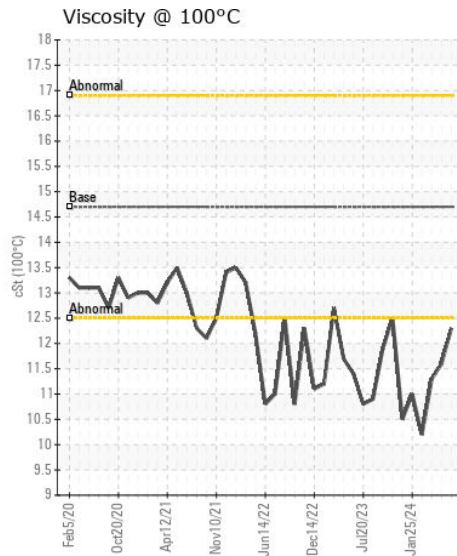
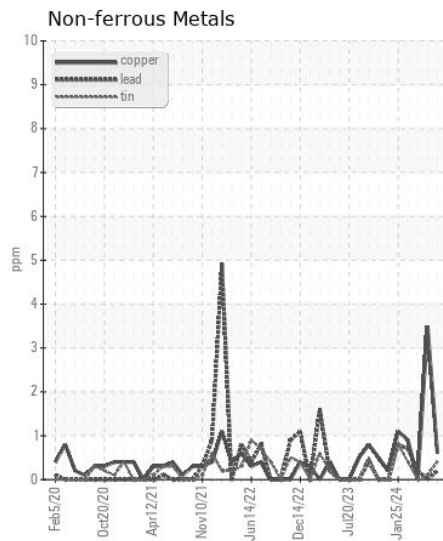
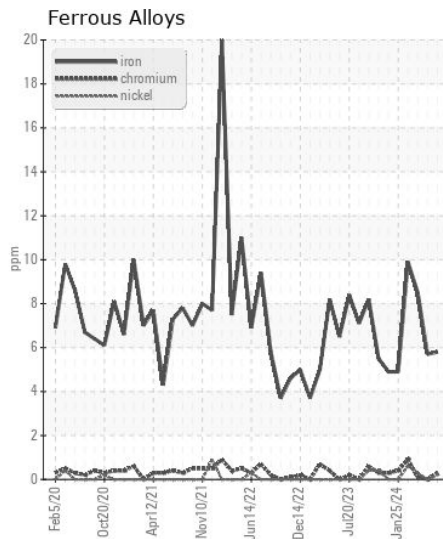
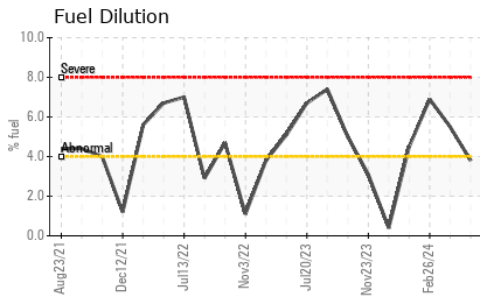
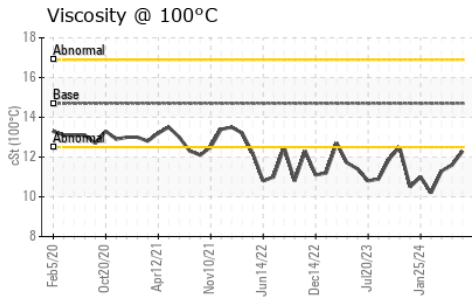
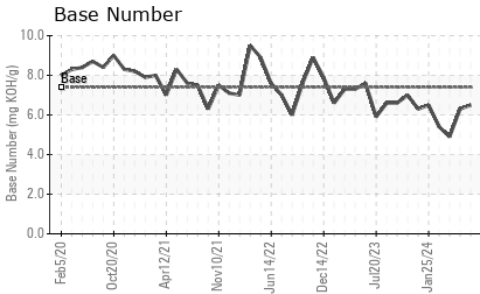
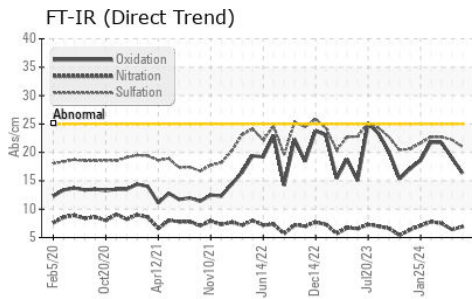
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	3	4
Potassium	ppm	ASTM D5185m	>20	3	0	1
Fuel	%	ASTM D3524	>4.0	<1.0	▲ 3.8	▲ 5.5
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.9	6.4	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.0	22.2	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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	<1	<1
Boron	ppm	ASTM D5185m		245	322	180
Barium	ppm	ASTM D5185m		<1	<1	0
Molybdenum	ppm	ASTM D5185m		64	61	37
Manganese	ppm	ASTM D5185m		<1	2	0
Magnesium	ppm	ASTM D5185m		296	281	130
Calcium	ppm	ASTM D5185m		1750	1822	2253
Phosphorus	ppm	ASTM D5185m	1000	874	955	732
Zinc	ppm	ASTM D5185m	1090	1096	1108	896
Sulfur	ppm	ASTM D5185m		2801	3543	3410
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	19.0	21.7
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	6.5	6.3	4.9
Visc @ 100°C	cSt	ASTM D445	14.7	12.3	▲ 11.6	▲ 11.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW06225760
Lab Number : 06225760
Unique Number : 11103957
Test Package : MAR 2 (Additional Tests: FuelDilution)

Received : 02 Jul 2024
Tested : 03 Jul 2024
Diagnosed : 03 Jul 2024 - Jonathan Hester

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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