



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MRC
Component
Starboard Genset
Fluid
CHEVRON URSA SUPER PLUS 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW05877873	MW05843063	MW05823780
Sample Date		Client Info		19 Jun 2023	09 May 2023	18 Apr 2023
Machine Age	hrs	Client Info		5141	4594	4201
Oil Age	hrs	Client Info		547	393	401
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	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>25	6	2	6
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	2	5	0
Lead	ppm	ASTM D5185m	>10	<1	0	<1
Copper	ppm	ASTM D5185m	>20	<1	0	<1
Tin	ppm	ASTM D5185m	>5	<1	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

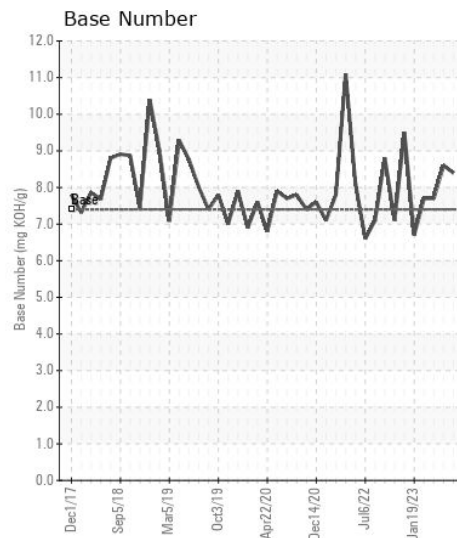
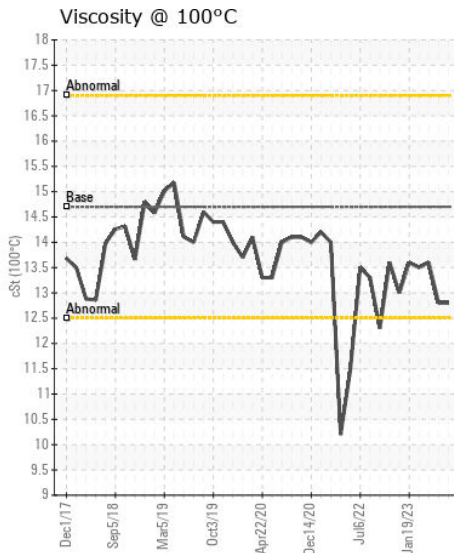
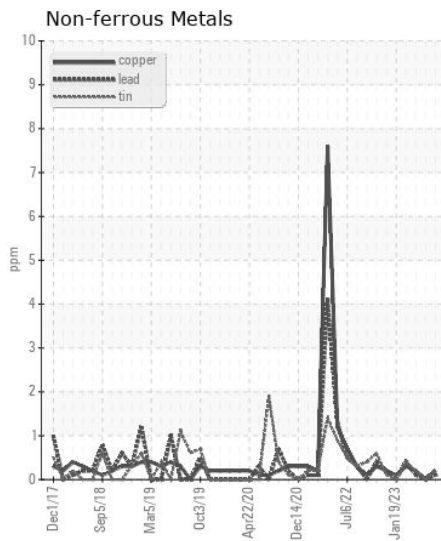
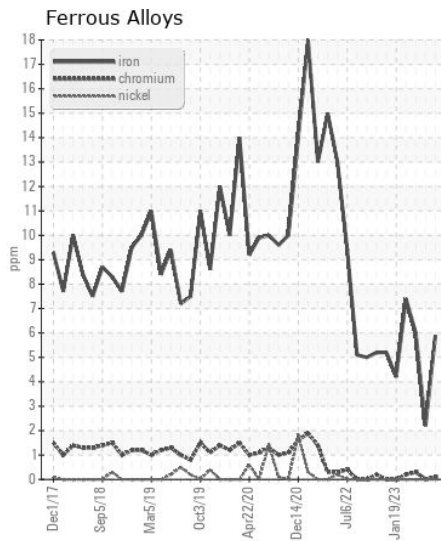
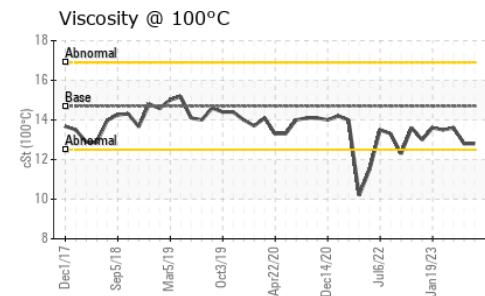
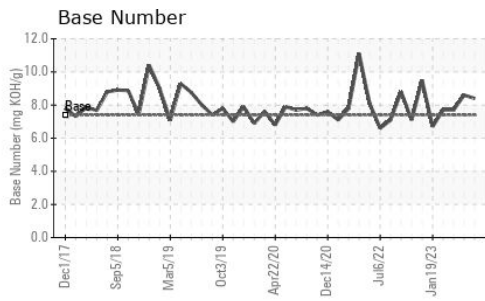
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	4	5
Potassium	ppm	ASTM D5185m	>20	1	<1	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.3	5.8	5.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	21.6	18.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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	<1
Boron	ppm	ASTM D5185m		346	318	405
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		105	102	68
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		499	553	221
Calcium	ppm	ASTM D5185m		1556	1748	2596
Phosphorus	ppm	ASTM D5185m	1000	815	779	841
Zinc	ppm	ASTM D5185m	1090	988	953	1025
Sulfur	ppm	ASTM D5185m		3057	2962	3229
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	15.2	11.3
Base Number (BN)	mg KOH/g	ASTM D2896	7.4	8.4	8.6	7.7
Visc @ 100°C	cSt	ASTM D445	14.7	12.8	12.8	13.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW05877873
Lab Number : 05877873
Unique Number : 10522976
Test Package : MAR 2

Received : 20 Jun 2023
Tested : 21 Jun 2023
Diagnosed : 21 Jun 2023 - Sean Felton

ILLINOIS MARINE TOWING
 PO BOX 391
 LEMONT, IL
 US 60439
 Contact: RHETT DANIEL
 rdaniel@imtowing.com
 T: (630)280-4926
 F: (630)739-2041

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)