



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
ROBERT W TAYLOR
Machine Id
[ROBERT W TAYLOR] 008 568680-8
Component
Starboard Genset
Fluid
SHELL ROTELLA T 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0063175	MW0062965	MW0063119
Sample Date		Client Info		02 May 2024	01 Mar 2024	02 Jan 2024
Machine Age	hrs	Client Info		6676	5962	5264
Oil Age	hrs	Client Info		270	336	108
Filter Age	hrs	Client Info		270	336	108
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	5	3	14
Chromium	ppm	ASTM D5185m	>4	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	2	1	1
Lead	ppm	ASTM D5185m	>17	<1	0	0
Copper	ppm	ASTM D5185m	>70	1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

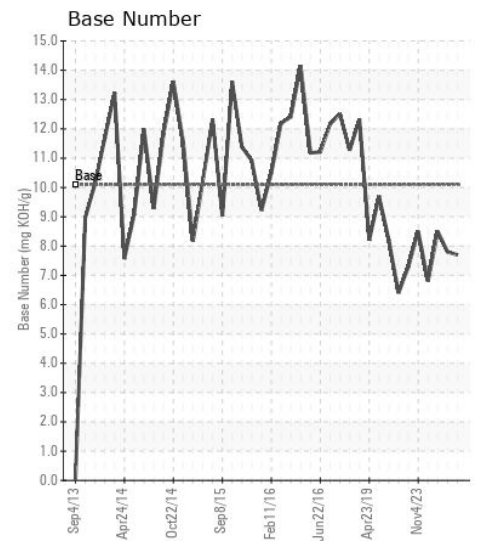
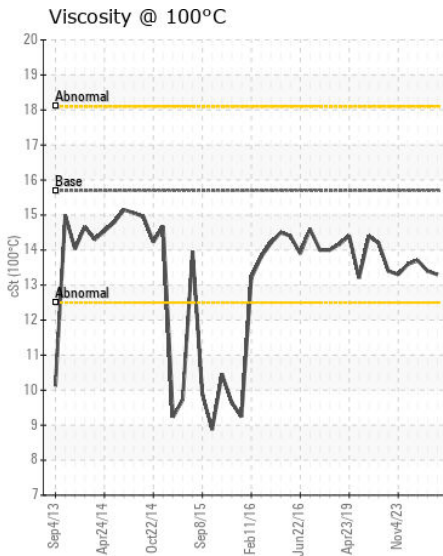
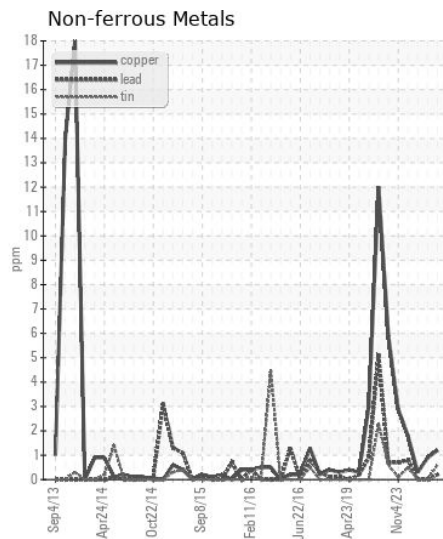
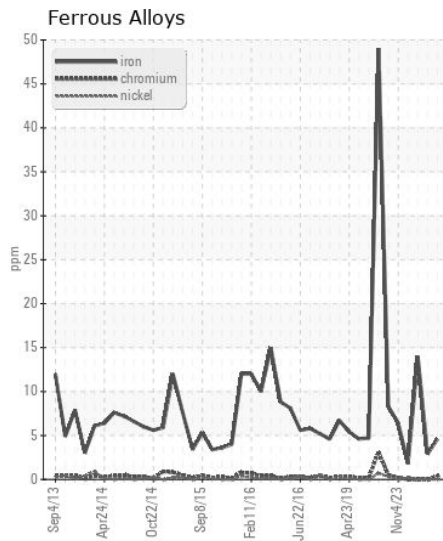
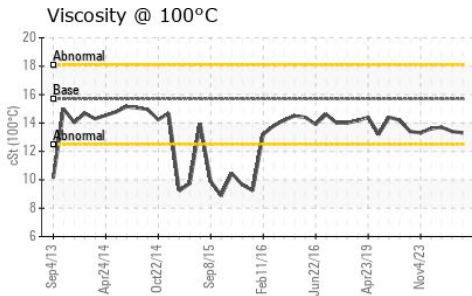
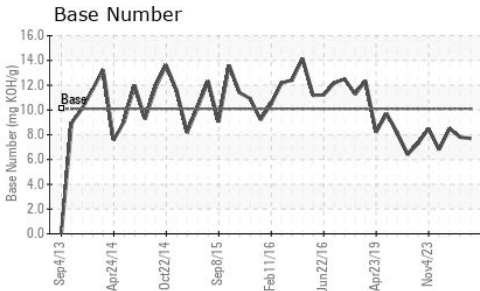
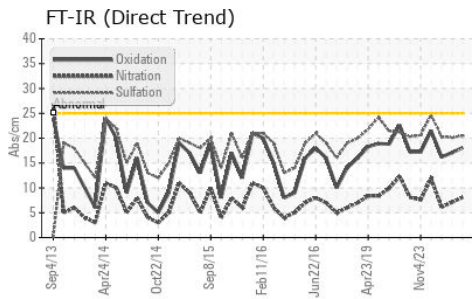
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	3	3
Potassium	ppm	ASTM D5185m	>20	10	4	6
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	8.1	7.1	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	20.1	20.3
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	2	1
Boron	ppm	ASTM D5185m	316	170	174	234
Barium	ppm	ASTM D5185m	0.0	1	0	0
Molybdenum	ppm	ASTM D5185m	1.2	10	22	21
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	24	62	137	133
Calcium	ppm	ASTM D5185m	2292	2131	2101	2069
Phosphorus	ppm	ASTM D5185m	1064	988	863	931
Zinc	ppm	ASTM D5185m	1160	1115	1073	1129
Sulfur	ppm	ASTM D5185m	4996	3572	3397	3447
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.1	17.1	16.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.7	7.8	8.5
Visc @ 100°C	cSt	ASTM D445	15.7	13.3	13.4	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : MW0063175

Lab Number : 06176607

Unique Number : 11022660

Test Package : MAR 2

Received : 10 May 2024

Tested : 13 May 2024

Diagnosed : 13 May 2024 - Wes Davis

INGRAM BARGE

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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)