



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
RANDY HOOPER
Machine Id
[RANDY HOOPER] 008 622755-8
Component
Starboard Genset
Fluid
MOBIL DELVAC 1300 SUPER15W40 (7 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		MW0061241	MW0061285	MW0037355
Sample Date		Client Info		12 Dec 2023	12 Nov 2023	15 Oct 2023
Machine Age	hrs	Client Info		1645	1287	1052
Oil Age	hrs	Client Info		0	256	411
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	ATTENTION	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	5	7	10
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	3	2	5
Lead	ppm	ASTM D5185m	>17	<1	0	0
Copper	ppm	ASTM D5185m	>70	7	10	13
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

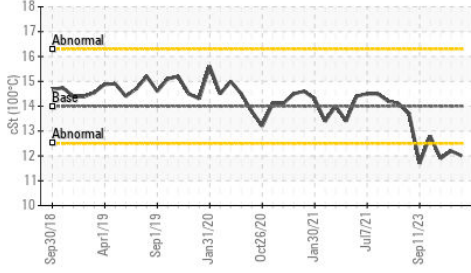
Silicon	ppm	ASTM D5185m	>25	6	9	9
Potassium	ppm	ASTM D5185m	>20	<1	2	3
Fuel		WC Method	>4.0	<1.0	<1.0	▲ 2.2
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.9	6.4	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	22.7	22.9
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

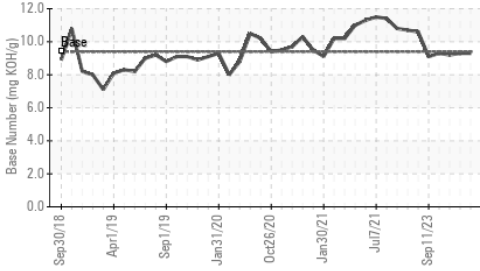
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<1	0	2
Boron	ppm	ASTM D5185m	0	292	383	▲ 337
Barium	ppm	ASTM D5185m	0	0	6	0
Molybdenum	ppm	ASTM D5185m	0	105	136	▲ 130
Manganese	ppm	ASTM D5185m		2	1	<1
Magnesium	ppm	ASTM D5185m	0	659	647	651
Calcium	ppm	ASTM D5185m		1432	1542	1401
Phosphorus	ppm	ASTM D5185m		646	704	757
Zinc	ppm	ASTM D5185m		741	827	833
Sulfur	ppm	ASTM D5185m		2220	2695	2858
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	16.6	17.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	9.3	9.3	9.2
Visc @ 100°C	cSt	ASTM D445	14	▲ 12.0	▲ 12.2	11.9

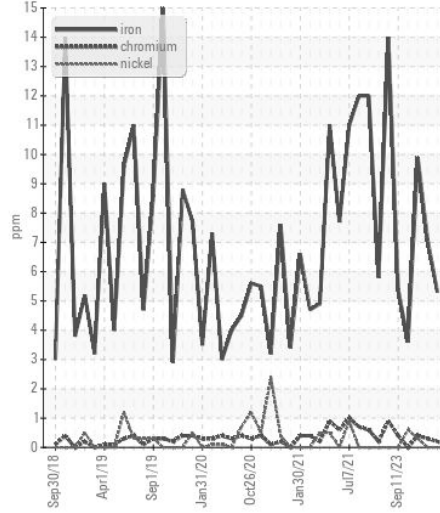
▲ Viscosity @ 100°C



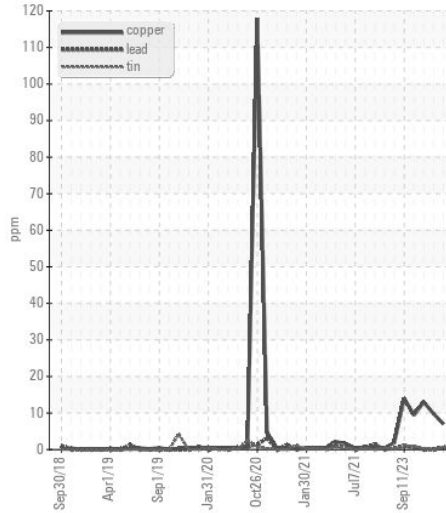
Base Number



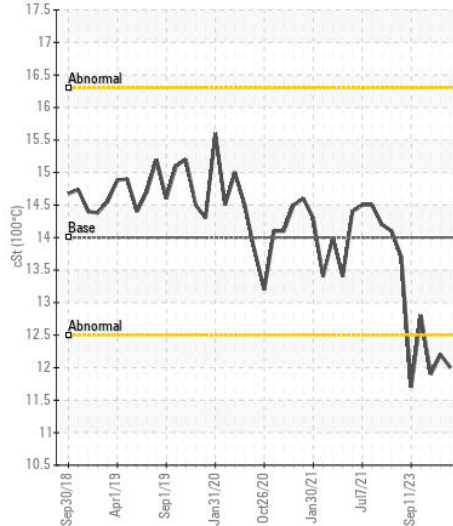
Ferrous Alloys



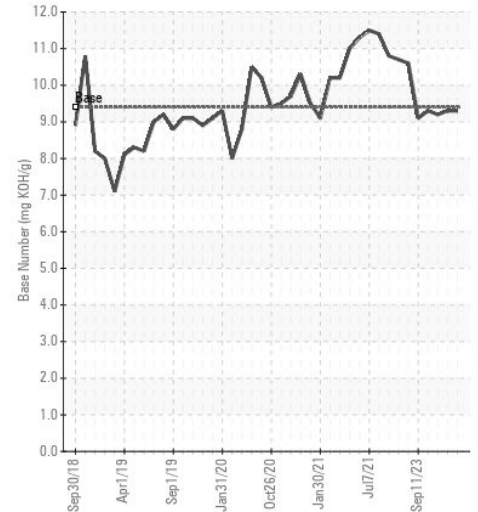
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : MW0061241

Lab Number : 06076344

Unique Number : 10858435

Test Package : MAR 2

Received : 31 Jan 2024

Tested : 01 Feb 2024

Diagnosed : 02 Feb 2024 - Don Baldrige

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)