



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CAIRO (S/N 60346927)
Component
Starboard Genset
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0062416	MW0062591	MW0062581
Sample Date		Client Info		19 May 2024	15 May 2024	10 Apr 2024
Machine Age	hrs	Client Info		12296	0	11900
Oil Age	hrs	Client Info		120	0	239
Filter Age	hrs	Client Info		120	0	239
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	3	5	4
Chromium	ppm	ASTM D5185m	>4	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		15	15	14
Silver	ppm	ASTM D5185m	>5	0	<1	0
Aluminum	ppm	ASTM D5185m	>12	1	2	0
Lead	ppm	ASTM D5185m	>17	0	<1	0
Copper	ppm	ASTM D5185m	>70	0	<1	0
Tin	ppm	ASTM D5185m	>15	<1	<1	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.

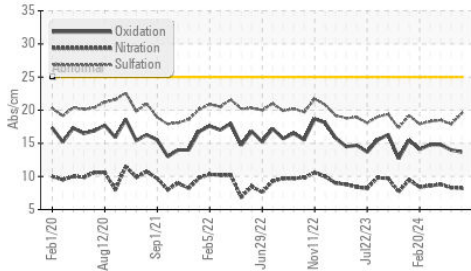
Silicon	ppm	ASTM D5185m	>25	4	4	2
Potassium	ppm	ASTM D5185m	>20	2	5	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.7	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.2	8.3	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	17.9	18.5
Silt	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

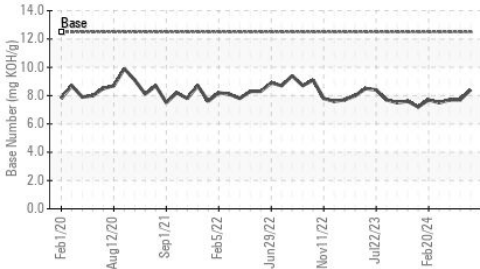
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	7	2
Boron	ppm	ASTM D5185m	151	103	86	82
Barium	ppm	ASTM D5185m	0.4	0	0	0
Molybdenum	ppm	ASTM D5185m	250	27	28	29
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	0	733	671	765
Calcium	ppm	ASTM D5185m	2046	1446	1421	1705
Phosphorus	ppm	ASTM D5185m	1043	707	709	775
Zinc	ppm	ASTM D5185m	943	791	796	901
Sulfur	ppm	ASTM D5185m	5012	3433	3348	3784
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	14.0	14.8
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	8.4	7.7	7.7
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.5	12.1

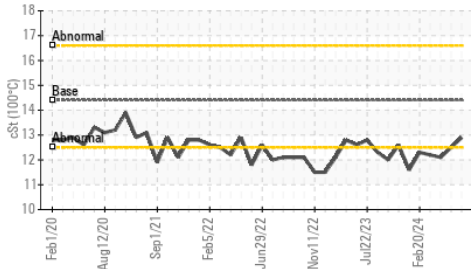
FT-IR (Direct Trend)



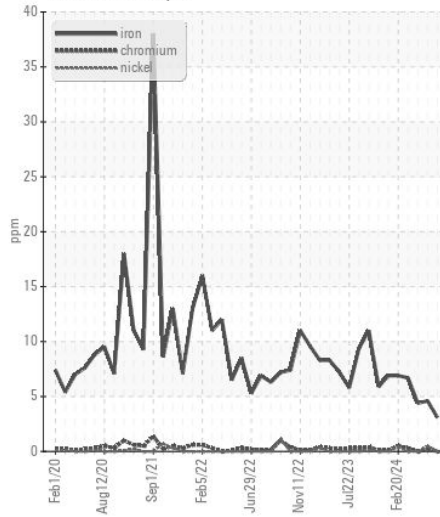
Base Number



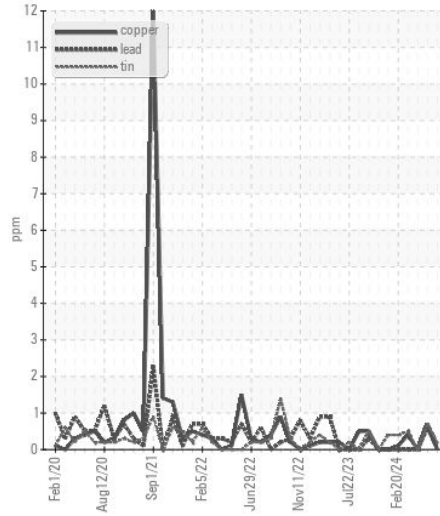
Viscosity @ 100°C



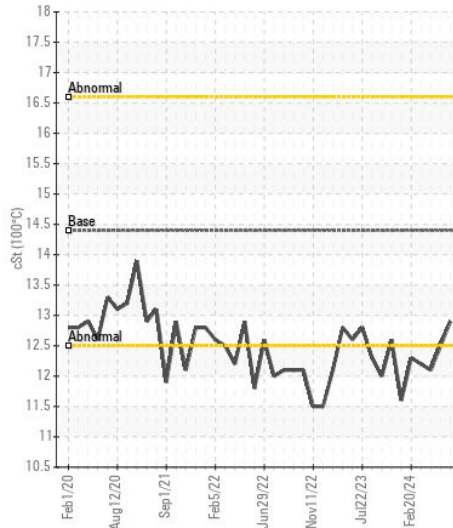
Ferrous Alloys



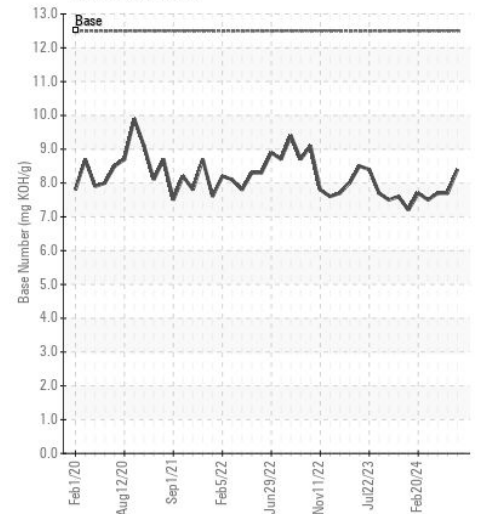
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0062416
Lab Number : 06188883
Unique Number : 11045635
Test Package : MAR 2

Received : 23 May 2024
Tested : 24 May 2024
Diagnosed : 24 May 2024 - Wes Davis

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 JEFFERSONVILLE, IN
 US 47130
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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)

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