



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

A J MORRIS

Machine Id

[A J MORRIS] 008 550220-8

Component

Starboard Genset

Fluid

CHEVRON DELO 400 LE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0066128	MW0049868	MW0062836
Sample Date		Client Info		01 May 2024	11 Apr 2024	01 Mar 2024
Machine Age	hrs	Client Info		25527	25279	27907
Oil Age	hrs	Client Info		0	100	144
Filter Age	hrs	Client Info		0	100	144
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	MARGINAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	2	6	3
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	<1
Aluminum	ppm	ASTM D5185m	>12	3	4	4
Lead	ppm	ASTM D5185m	>17	<1	<1	<1
Copper	ppm	ASTM D5185m	>70	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
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.

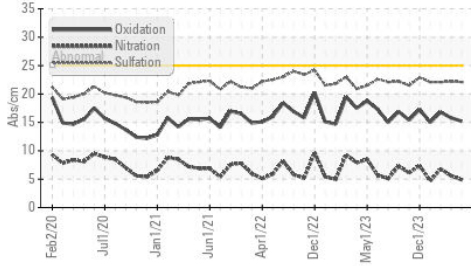
Silicon	ppm	ASTM D5185m	>25	8	6	7
Potassium	ppm	ASTM D5185m	>20	2	2	2
Fuel		WC Method	>4.0	<1.0	▲ 2.2	▲ 4.6
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	4.9	5.6	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	22.2	22.1
Silt	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

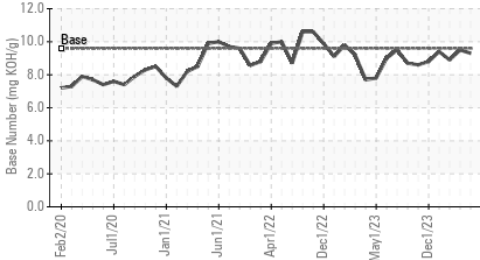
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	3	2
Boron	ppm	ASTM D5185m		429	420	362
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		131	119	122
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m		636	627	621
Calcium	ppm	ASTM D5185m		1537	1538	1512
Phosphorus	ppm	ASTM D5185m	1200	724	701	634
Zinc	ppm	ASTM D5185m	1300	793	791	755
Sulfur	ppm	ASTM D5185m	3200	2701	2879	2530
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.2	15.8	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	9.3	9.5	8.9
Visc @ 100°C	cSt	ASTM D445	15.7	13.6	12.8	▲ 12.3

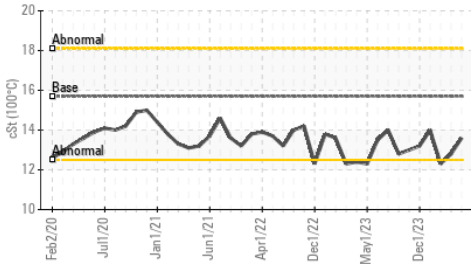
FT-IR (Direct Trend)



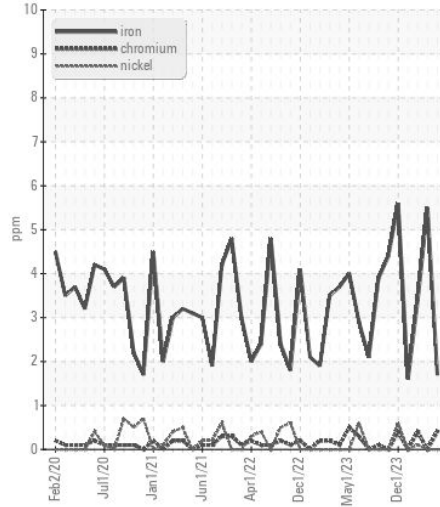
Base Number



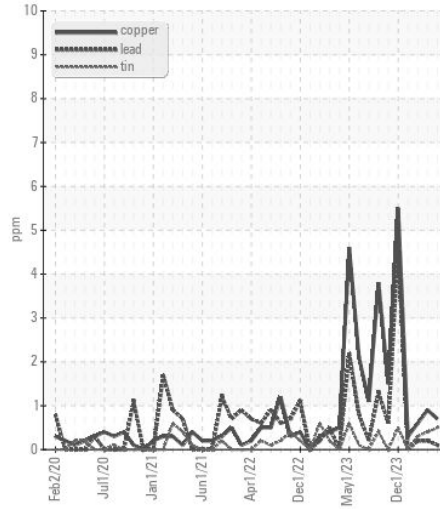
Viscosity @ 100°C



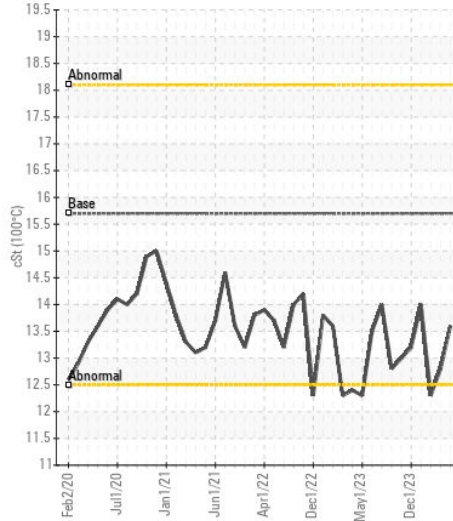
Ferrous Alloys



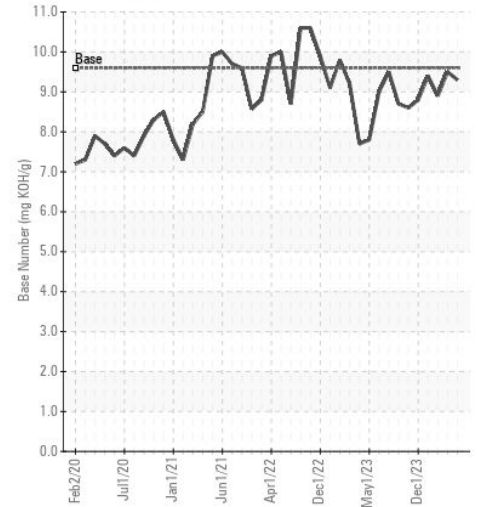
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0066128
Lab Number : 06176629
Unique Number : 11022682
Test Package : MAR 2

Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 13 May 2024 - Wes Davis

INGRAM BARGE
 900 S 3RD ST
 PADUCAH, KY
 US 42003

Contact: ANTHONY VAN CURA
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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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