MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
HB STEWART
Machine Id
[HB STEWART] 008 629508-8
Component
Starboard Genset
Fluid
CHEVRON DELO 400 LE 15W40 (5 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

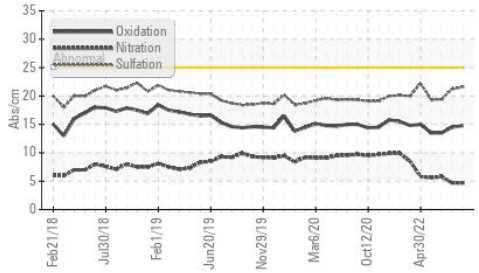
There is no indication of any contamination in the oil.

FLUID CONDITION

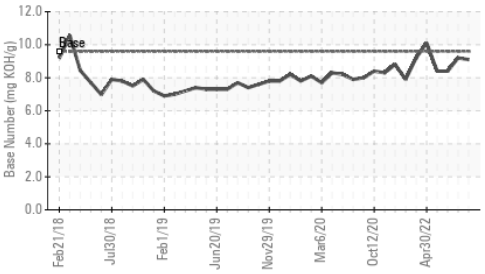
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0070910	MW0058840	MW0058492
Sample Date		Client Info		30 Apr 2024	06 Nov 2023	01 Aug 2023
Machine Age	hrs	Client Info		35537	33352	32184
Oil Age	hrs	Client Info		0	4	110
Filter Age	hrs	Client Info		0	4	110
Oil Changed		Client Info		Changed	N/A	Not Changd
Filter Changed		Client Info		Changed	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>50	1	1	2
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	3	3	<1
Lead	ppm	ASTM D5185m	>17	<1	0	<1
Copper	ppm	ASTM D5185m	>70	<1	0	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	13	5	4
Potassium	ppm	ASTM D5185m	>20	2	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	0	0
Nitration	Abs/cm	*ASTM D7624	>20	4.7	4.7	5.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	21.2	19.4
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
Sodium	ppm	ASTM D5185m		0	1	<1
Boron	ppm	ASTM D5185m		386	329	271
Barium	ppm	ASTM D5185m		2	5	0
Molybdenum	ppm	ASTM D5185m		124	105	97
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		640	553	510
Calcium	ppm	ASTM D5185m		1451	1327	1925
Phosphorus	ppm	ASTM D5185m	1200	798	614	583
Zinc	ppm	ASTM D5185m	1300	843	740	684
Sulfur	ppm	ASTM D5185m	3200	2804	2581	2768
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	14.5	13.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	9.1	9.2	8.4
Visc @ 100°C	cSt	ASTM D445	15.7	13.4	13.4	12.9

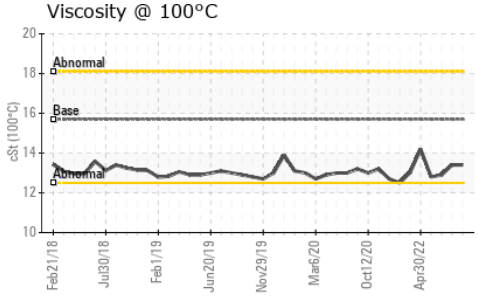
FT-IR (Direct Trend)



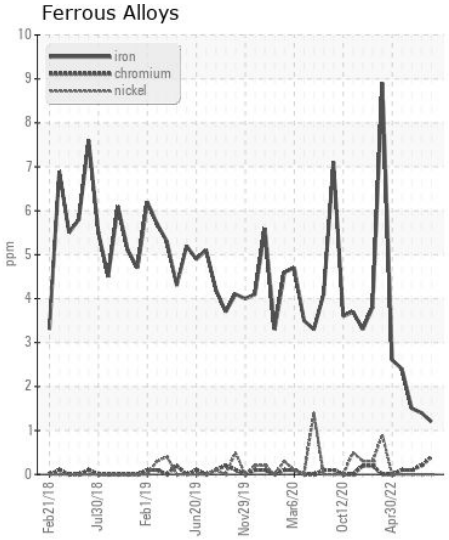
Base Number



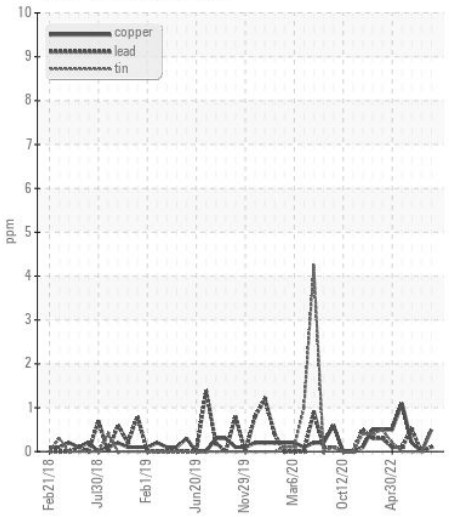
Viscosity @ 100°C



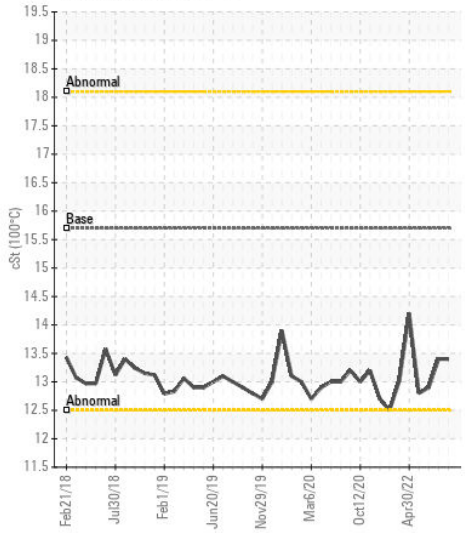
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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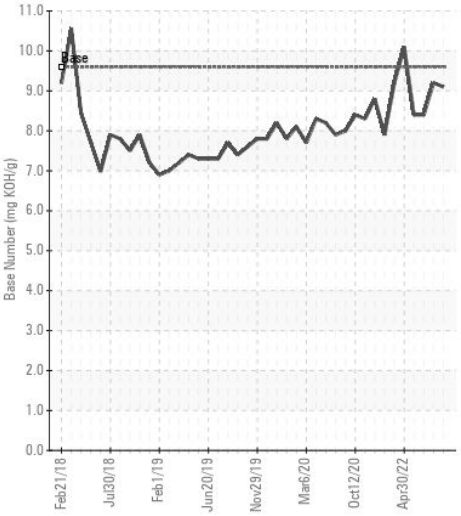

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0070910
Lab Number : 06176593
Unique Number : 11022646
Test Package : MAR 2

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

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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