MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
SUSAN JOHNSON
Machine Id
[SUSAN JOHNSON] 008 569359-8
Component
Starboard Genset
Fluid
CHEVRON DELO 400 XLE 15W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

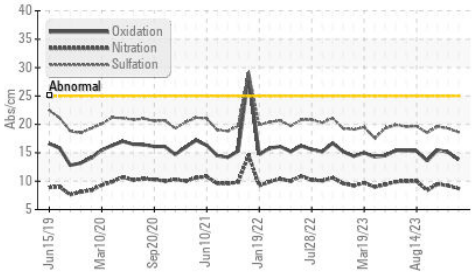
There is no indication of any contamination in the oil.

FLUID CONDITION

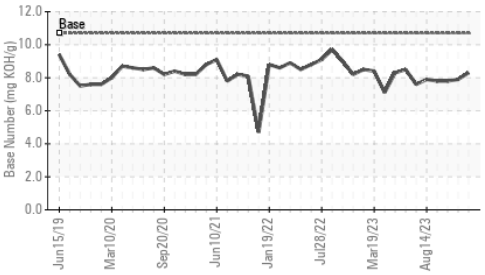
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0064773	MW0058682	MW0060159
Sample Date		Client Info		25 Apr 2024	07 Dec 2023	31 Oct 2023
Machine Age	hrs	Client Info		12250	11864	11476
Oil Age	hrs	Client Info		386	369	400
Filter Age	hrs	Client Info		386	369	400
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>50	13	13	16
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		16	15	16
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>12	2	1	2
Lead	ppm	ASTM D5185m	>17	<1	<1	<1
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
Silicon	ppm	ASTM D5185m	>25	5	5	6
Potassium	ppm	ASTM D5185m	>20	5	2	4
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	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.7	9.2	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.6	19.3	19.6
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		<1	<1	0
Boron	ppm	ASTM D5185m		106	89	77
Barium	ppm	ASTM D5185m		0	0	5
Molybdenum	ppm	ASTM D5185m		36	33	33
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		695	713	674
Calcium	ppm	ASTM D5185m		1538	1499	1535
Phosphorus	ppm	ASTM D5185m	760	707	619	763
Zinc	ppm	ASTM D5185m	830	849	834	819
Sulfur	ppm	ASTM D5185m	2770	3407	3014	3431
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	15.1	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.7	8.3	7.9	7.8
Visc @ 100°C	cSt	ASTM D445	14.9	13.4	13.6	13.7

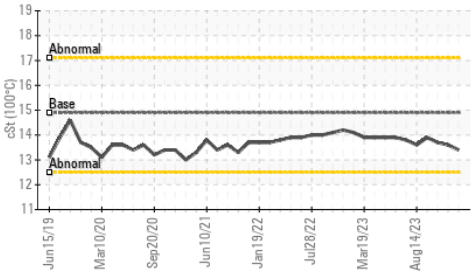
FT-IR (Direct Trend)



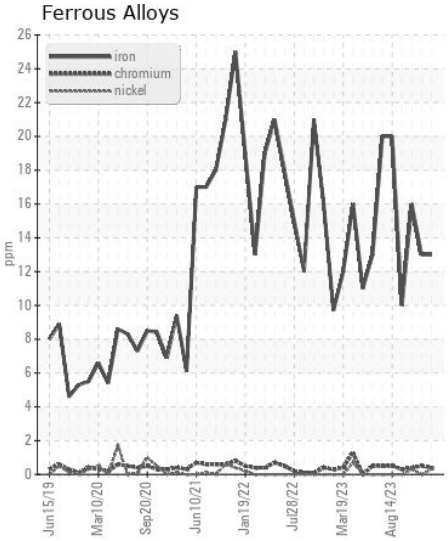
Base Number



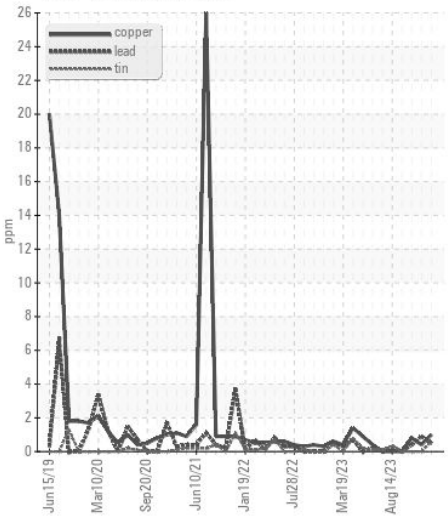
Viscosity @ 100°C



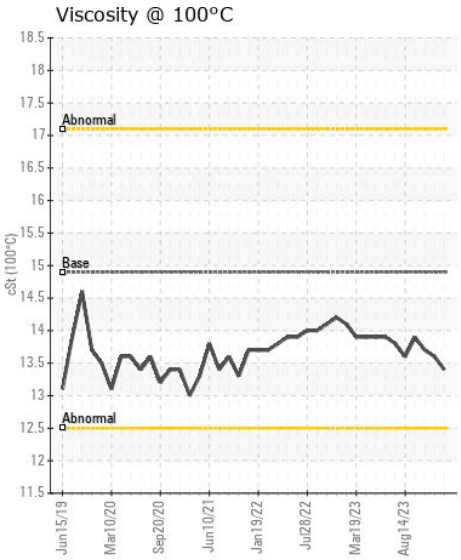
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0064773
Lab Number : 06178139
Unique Number : 11029465
Test Package : MAR 2

Received : 13 May 2024
Tested : 14 May 2024
Diagnosed : 15 May 2024 - Sean Felton

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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