MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
CHARLIE M EVERHART
Machine Id
[CHARLIE M EVERHART] 003 534782-3
Component
Starboard Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (30 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

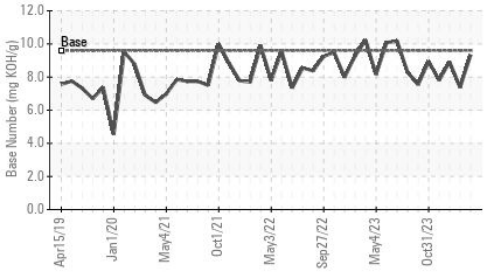
There is no indication of any contamination in the oil.

FLUID CONDITION

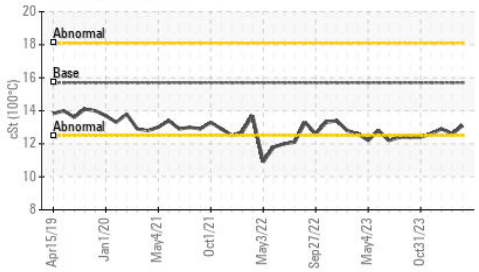
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0064469	MW0055288	MW0042997
Sample Date		Client Info		01 Mar 2024	01 Feb 2024	01 Jan 2024
Machine Age	hrs	Client Info		13932	13326	12591
Oil Age	hrs	Client Info		165	926	190
Filter Age	hrs	Client Info		165	440	190
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>75	10	8	6
Chromium	ppm	ASTM D5185m	>8	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>3	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	7	3	3
Lead	ppm	ASTM D5185m	>18	14	18	▲ 21
Copper	ppm	ASTM D5185m	>80	51	28	25
Tin	ppm	ASTM D5185m	>14	<1	0	<1
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	>20	9	5	5
Potassium	ppm	ASTM D5185m	>20	<1	0	<1
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	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.4	7.2	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	23.4	22.6
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	>75	3	1	<1
Boron	ppm	ASTM D5185m		534	395	321
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		183	114	114
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		930	606	619
Calcium	ppm	ASTM D5185m		2158	1412	1516
Phosphorus	ppm	ASTM D5185m	1200	1064	719	789
Zinc	ppm	ASTM D5185m	1300	1233	847	886
Sulfur	ppm	ASTM D5185m	3200	3818	2428	2688
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.8	17.5	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	9.33	7.37	8.92
Visc @ 100°C	cSt	ASTM D445	15.7	13.1	12.6	12.9

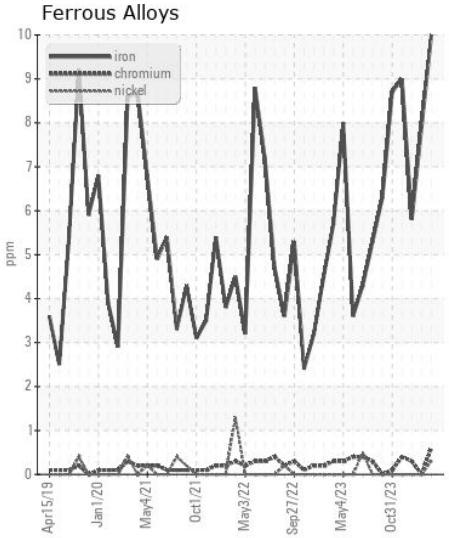
Base Number



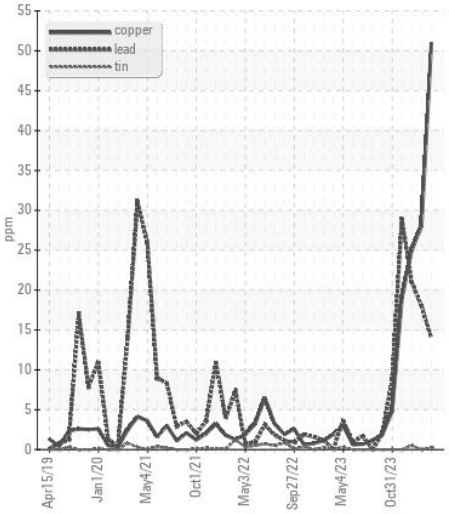
Viscosity @ 100°C



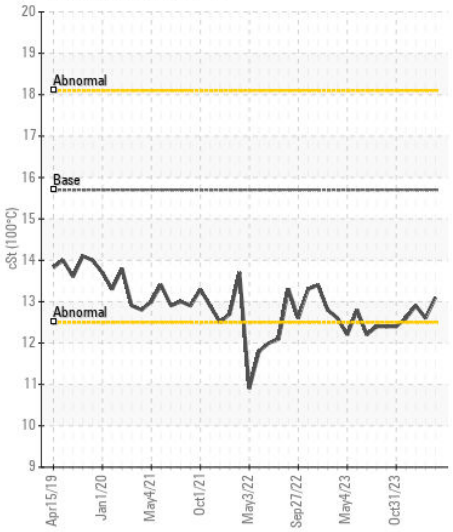
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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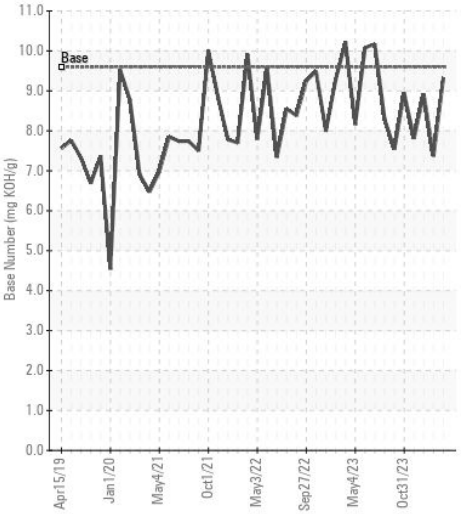

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0064469
Lab Number : 06121513
Unique Number : 10930346
Test Package : MAR 2

Received : 18 Mar 2024
Tested : 19 Mar 2024
Diagnosed : 21 Mar 2024 - Jonathan Hester

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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