MAR II

WEAR CHECK
Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MARI LAMPTON
Component
Port Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (65 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

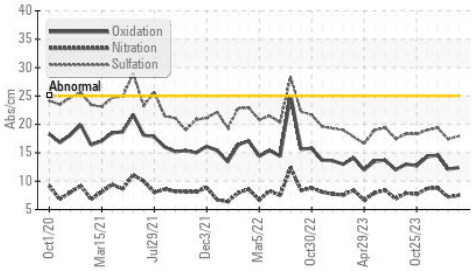
There is no indication of any contamination in the oil.

FLUID CONDITION

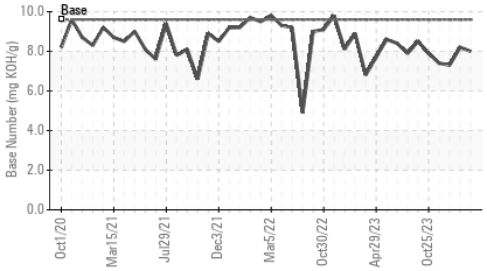
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0044311	MW0049271	MW0049248
Sample Date		Client Info		25 Apr 2024	20 Feb 2024	11 Dec 2023
Machine Age	hrs	Client Info		38423	37230	35948
Oil Age	hrs	Client Info		955	953	1365
Filter Age	hrs	Client Info		230	241	711
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	3	3	3
Chromium	ppm	ASTM D5185m	>8	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>3	16	14	14
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	2	<1	<1
Lead	ppm	ASTM D5185m	>18	<1	<1	<1
Copper	ppm	ASTM D5185m	>80	2	1	4
Tin	ppm	ASTM D5185m	>14	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	4	4	3
Potassium	ppm	ASTM D5185m	>20	4	2	3
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	7.5	7.2	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.9	17.4	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	>75	0	2	3
Boron	ppm	ASTM D5185m		114	96	71
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		32	30	31
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		660	723	696
Calcium	ppm	ASTM D5185m		1429	1528	1552
Phosphorus	ppm	ASTM D5185m	1200	714	689	687
Zinc	ppm	ASTM D5185m	1300	759	797	804
Sulfur	ppm	ASTM D5185m	3200	3151	3563	2972
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.4	12.1	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	8.0	8.2	7.3
Visc @ 100°C	cSt	ASTM D445	15.7	13.9	13.8	14.0

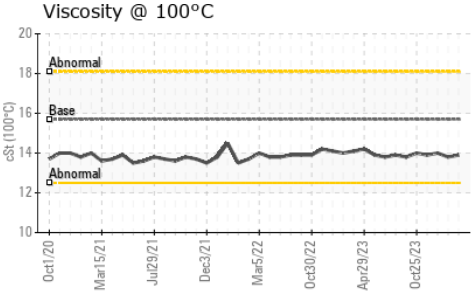
FT-IR (Direct Trend)



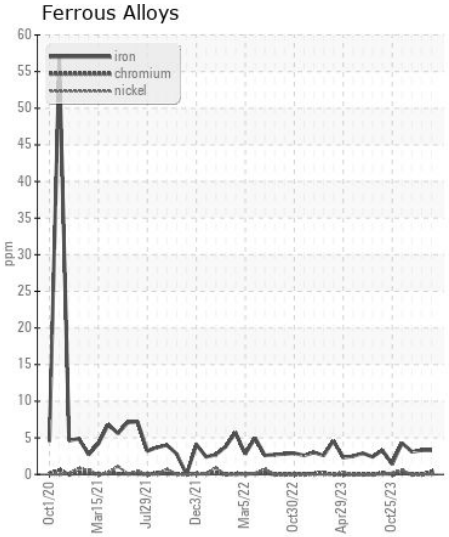
Base Number



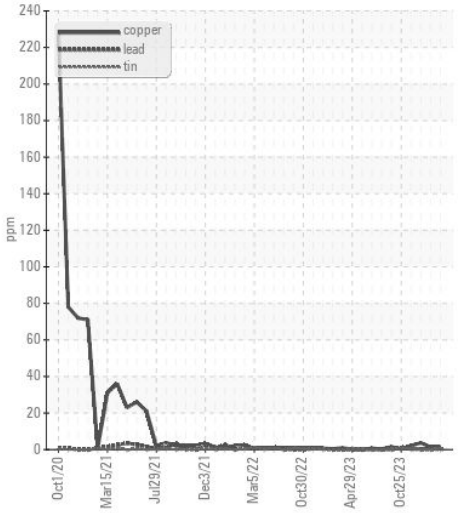
Viscosity @ 100°C



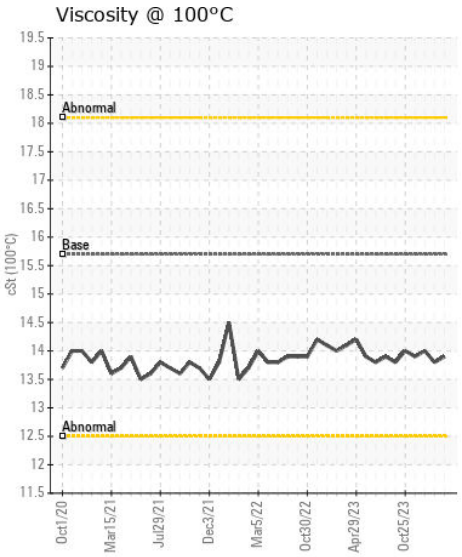
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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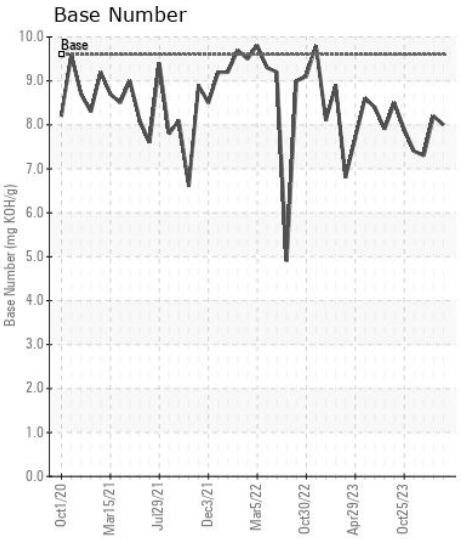

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0044311
Lab Number : 06176544
Unique Number : 11022597
Test Package : MAR 2

Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 14 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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