MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
CHARLIE M EVERHART
Machine Id
[CHARLIE M EVERHART] 001 534782-1
Component
Port Main Engine
Fluid
CHEVRON DELO 400 LE 15W40 (30 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The copper level is abnormal. All other component wear rates are normal.

CONTAMINATION

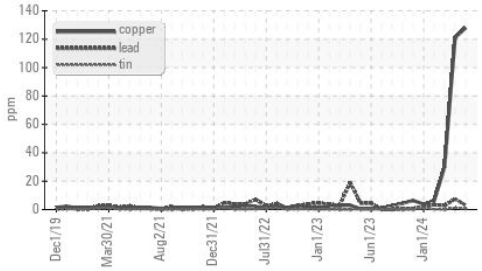
There is no indication of any contamination in the oil.

FLUID CONDITION

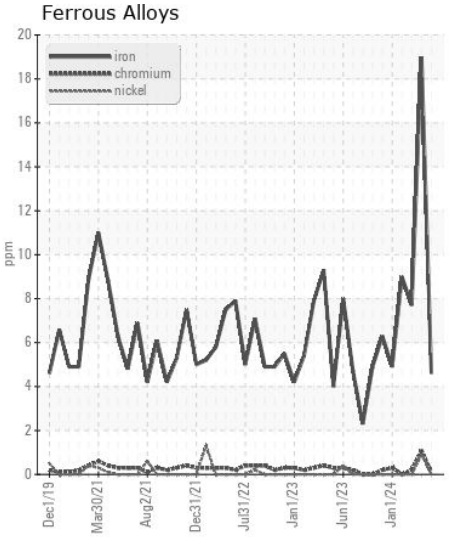
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0062865	MW0062856	MW0064468
Sample Date		Client Info		01 May 2024	18 Apr 2024	01 Mar 2024
Machine Age	hrs	Client Info		4642	3924	3178
Oil Age	hrs	Client Info		178	971	165
Filter Age	hrs	Client Info		178	971	165
Oil Changed		Client Info		Not Changd	N/A	Changed
Filter Changed		Client Info		Not Changd	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>75	5	19	8
Chromium	ppm	ASTM D5185m	>8	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>3	<1	1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	6	3
Lead	ppm	ASTM D5185m	>18	3	8	3
Copper	ppm	ASTM D5185m	>80	▲ 128	▲ 121	30
Tin	ppm	ASTM D5185m	>14	<1	1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	5	11	7
Potassium	ppm	ASTM D5185m	>20	0	3	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		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.6	7.3	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	23.7	22.8
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	<1	2	<1
Boron	ppm	ASTM D5185m		381	659	388
Barium	ppm	ASTM D5185m		1	2	0
Molybdenum	ppm	ASTM D5185m		119	194	122
Manganese	ppm	ASTM D5185m		<1	1	0
Magnesium	ppm	ASTM D5185m		627	934	617
Calcium	ppm	ASTM D5185m		1451	2330	1522
Phosphorus	ppm	ASTM D5185m	1200	736	1084	807
Zinc	ppm	ASTM D5185m	1300	812	1294	878
Sulfur	ppm	ASTM D5185m	3200	2745	4124	2779
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	17.4	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	9.69	9.37	10.08
Visc @ 100°C	cSt	ASTM D445	15.7	13.0	12.6	12.9

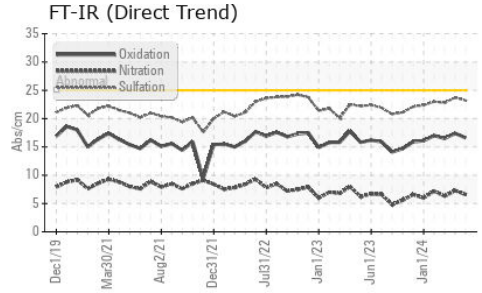
Non-ferrous Metals



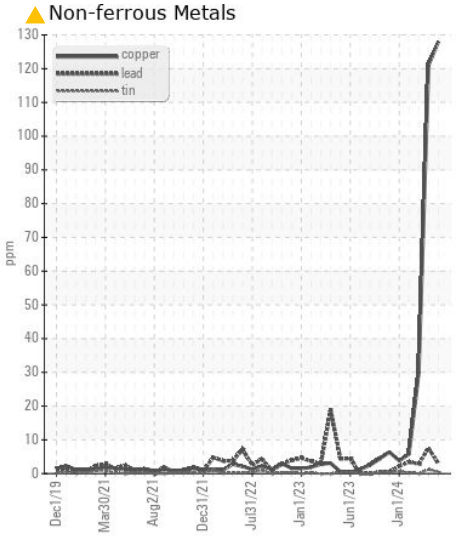
Ferrous Alloys



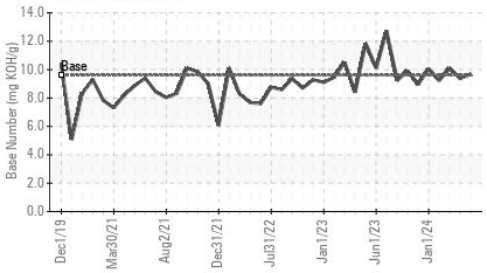
FT-IR (Direct Trend)



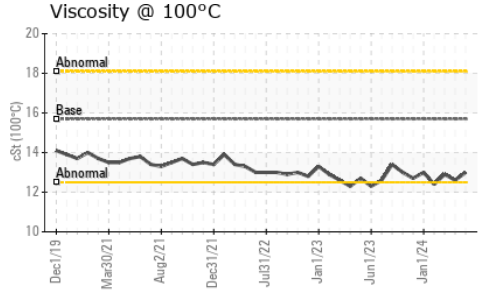
Non-ferrous Metals



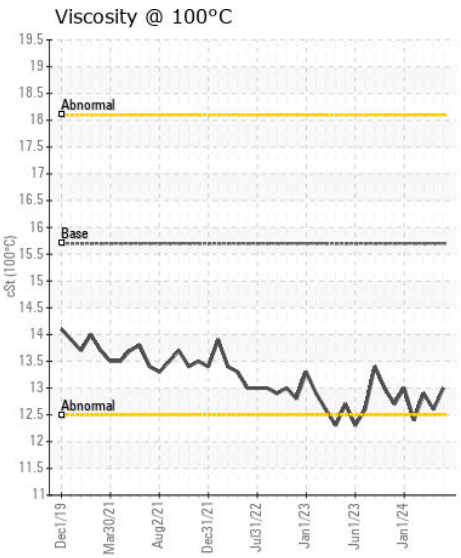
Base Number



Viscosity @ 100°C



Viscosity @ 100°C



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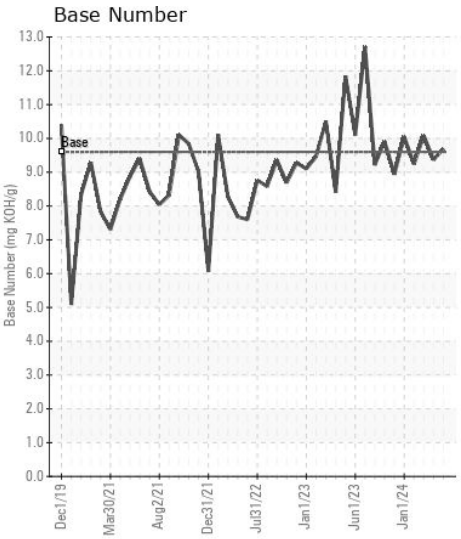

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0062865
Lab Number : 06177902
Unique Number : 11029228
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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