MAR II

WEAR CHECK Inland Marine Oil Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
MV WILLIAM B
Component
Starboard Main Engine
Fluid
CHEVRON 15W40 (18 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

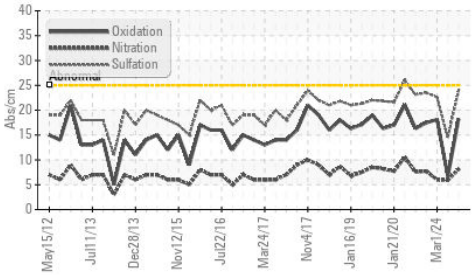
There is no indication of any contamination in the oil.

FLUID CONDITION

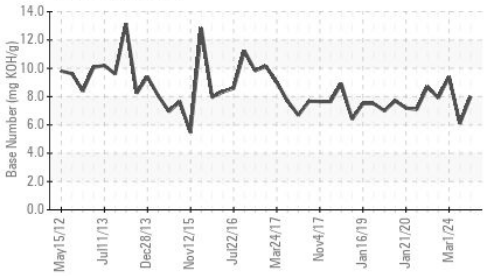
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0062703	MW0057063	MW0057085
Sample Date		Client Info		21 Jun 2024	01 May 2024	01 Mar 2024
Machine Age	hrs	Client Info		5781	5080	4301
Oil Age	hrs	Client Info		0	500	500
Filter Age	hrs	Client Info		0	500	500
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>120	10	18	5
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	4	3
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>300	11	▲ 307	50
Tin	ppm	ASTM D5185m	>10	<1	<1	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	4	6	3
Potassium	ppm	ASTM D5185m	>20	3	2	0
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		0.3	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.1	5.9	6.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.9	14.5	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	>50	7	10	0
Boron	ppm	ASTM D5185m		219	356	255
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		107	131	86
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		670	642	605
Calcium	ppm	ASTM D5185m		1583	1521	1492
Phosphorus	ppm	ASTM D5185m		892	764	721
Zinc	ppm	ASTM D5185m		1096	876	848
Sulfur	ppm	ASTM D5185m		3444	2679	2278
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	6.7	18.1
Base Number (BN)	mg KOH/g	ASTM D2896		8.0	6.1	9.4
Visc @ 100°C	cSt	ASTM D445	14.4	13.5	13.3	13.4

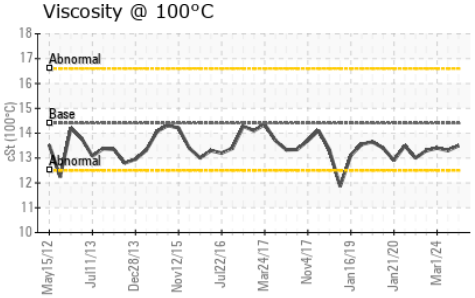
FT-IR (Direct Trend)



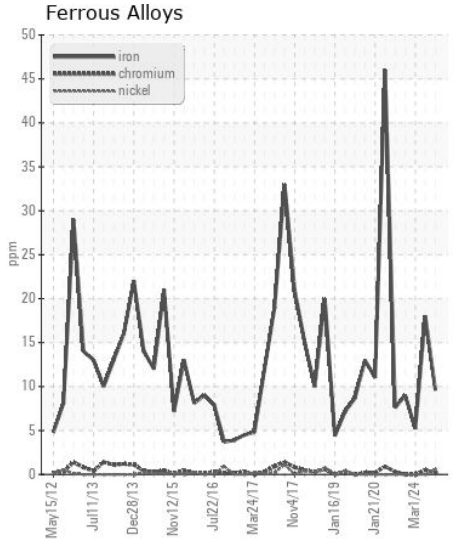
Base Number



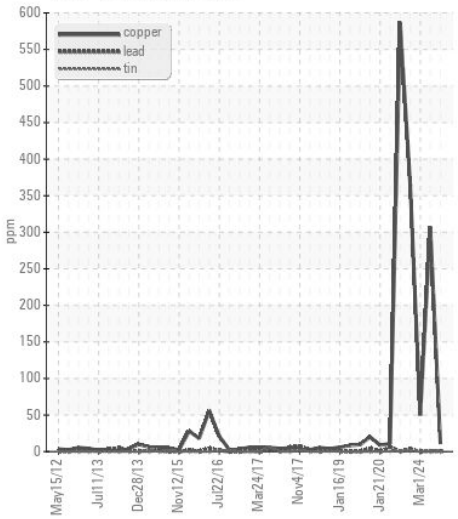
Viscosity @ 100°C



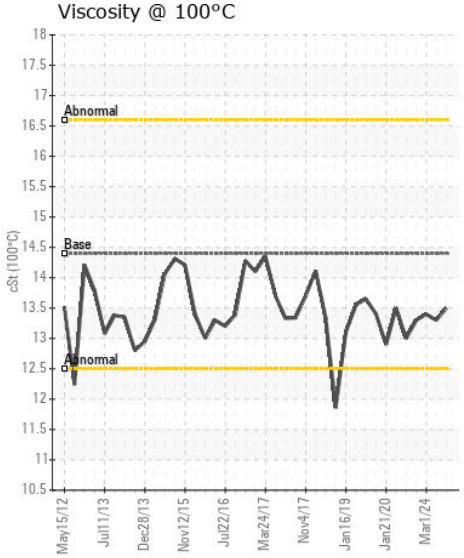
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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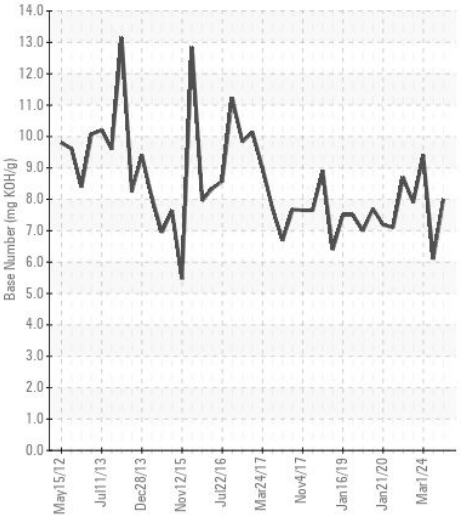

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0062703
Lab Number : 06222955
Unique Number : 11101152
Test Package : MAR 2

Received : 27 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 28 Jun 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)

C & B MARINE
50 E RIVERCENTER BLVD, SUITE 1180
COVINGTON, KY
US 41011
Contact: DAVID WESTRICH
dwestrich@carlislebray.com
T: (812)290-4063
F: (859)655-7504