



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

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

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		MW0062702	MW0062696	MW0057084
Sample Date		Client Info		22 Jun 2024	01 May 2024	01 Mar 2024
Machine Age	hrs	Client Info		6134	5428	4645
Oil Age	hrs	Client Info		1000	500	500
Filter Age	hrs	Client Info		1000	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	12	13	12
Chromium	ppm	ASTM D5185m	>5	<1	<1	0
Nickel	ppm	ASTM D5185m	>3	<1	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>5	<1	0	0
Aluminum	ppm	ASTM D5185m	>7	4	3	3
Lead	ppm	ASTM D5185m	>6	<1	<1	0
Copper	ppm	ASTM D5185m	>175	▲ 439	39	6
Tin	ppm	ASTM D5185m	>8	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

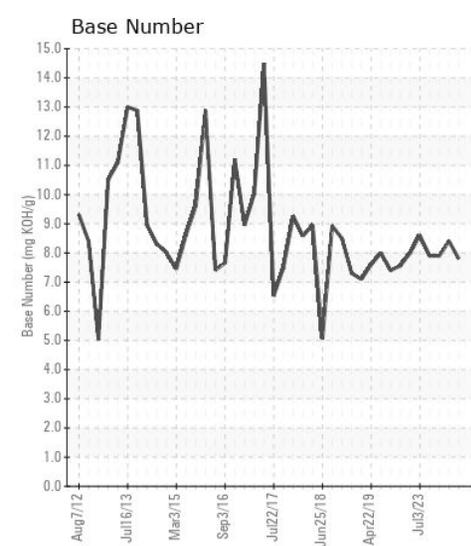
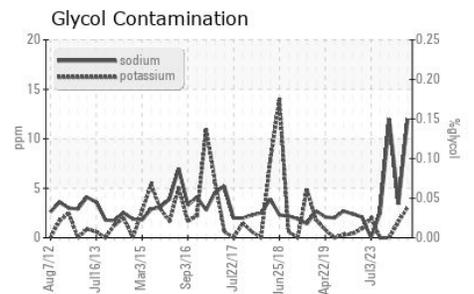
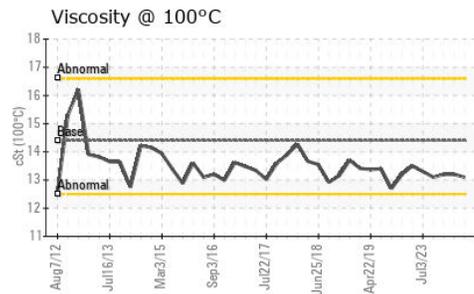
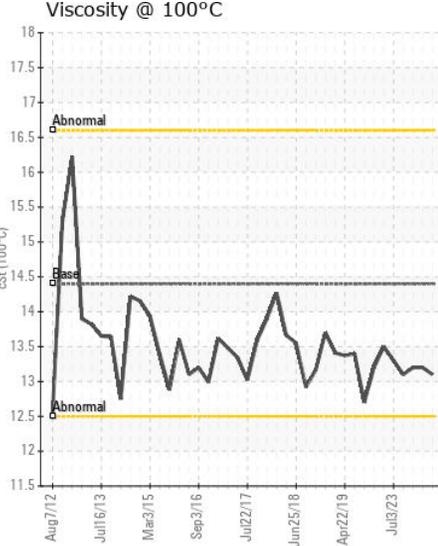
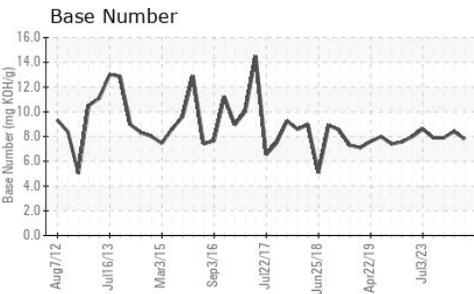
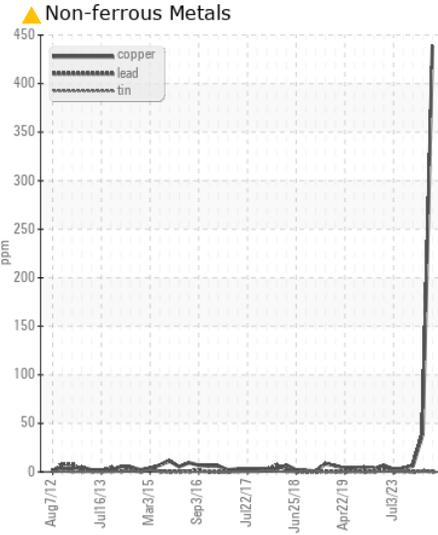
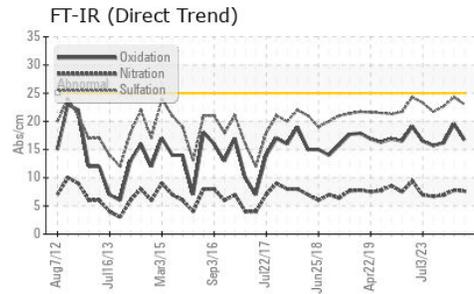
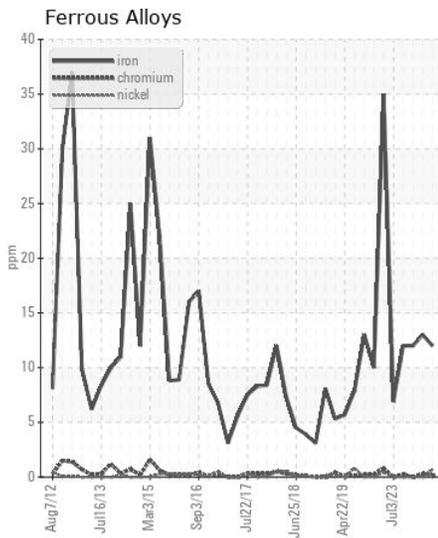
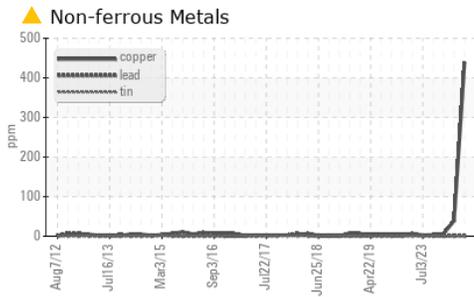
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	4
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	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.6	0.2	0.5
Nitration	Abs/cm	*ASTM D7624	>20	7.6	7.8	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.0	24.3	22.7
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

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.

Sodium	ppm	ASTM D5185m	>50	12	3	12
Boron	ppm	ASTM D5185m		266	227	318
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		121	100	125
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		681	624	578
Calcium	ppm	ASTM D5185m		1519	1584	1490
Phosphorus	ppm	ASTM D5185m		770	810	642
Zinc	ppm	ASTM D5185m		920	930	789
Sulfur	ppm	ASTM D5185m		3095	2768	2365
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	19.5	16.2
Base Number (BN)	mg KOH/g	ASTM D2896		7.8	8.4	7.9
Visc @ 100°C	cSt	ASTM D445	14.4	13.1	13.2	13.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : MW0062702
Lab Number : 06222985
Unique Number : 11101182
Test Package : MAR 2 (Additional Tests: Glycol)

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

Certificate L2367
 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)