



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**ANDREW KOCH**  
Component  
**Port Main Engine**  
Fluid  
**MOBIL MOBILGARD 410 NC (400 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>MW0017701</b>	MW0017703	MW0017585
Sample Date		Client Info		<b>01 Dec 2023</b>	01 Jul 2023	29 Apr 2021
Machine Age	hrs	Client Info		<b>34766</b>	0	16387
Oil Age	hrs	Client Info		<b>34766</b>	29268	16387
Filter Age	hrs	Client Info		<b>0</b>	500	500
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>75	<b>16</b>	11	13
Chromium	ppm	ASTM D5185m	>8	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>15	<b>2</b>	3	1
Lead	ppm	ASTM D5185m	>18	<b>5</b>	4	4
Copper	ppm	ASTM D5185m	>80	<b>32</b>	28	22
Tin	ppm	ASTM D5185m	>14	<b>5</b>	5	4
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

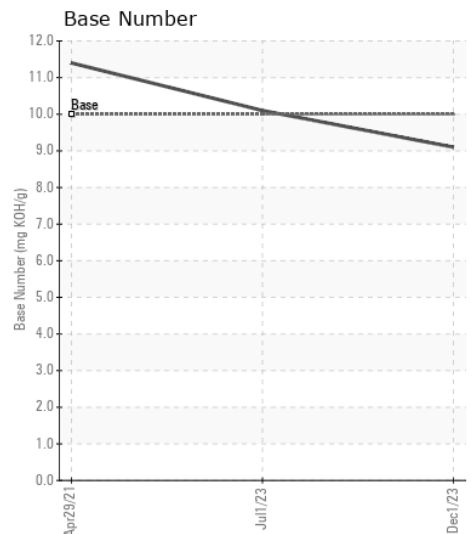
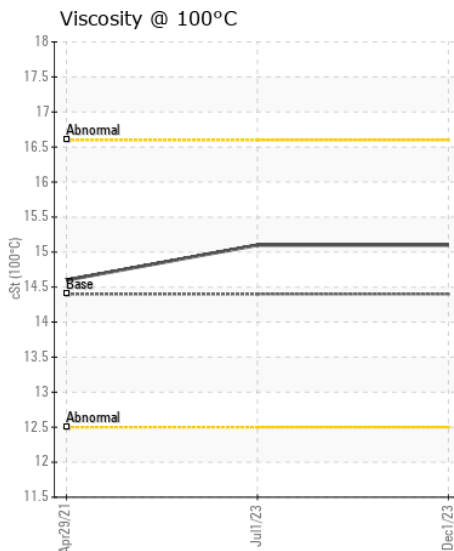
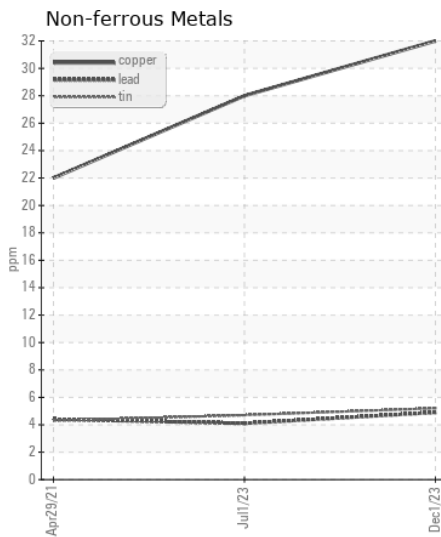
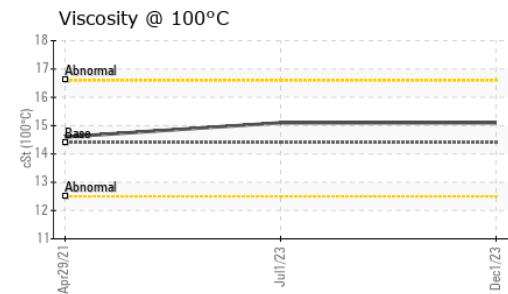
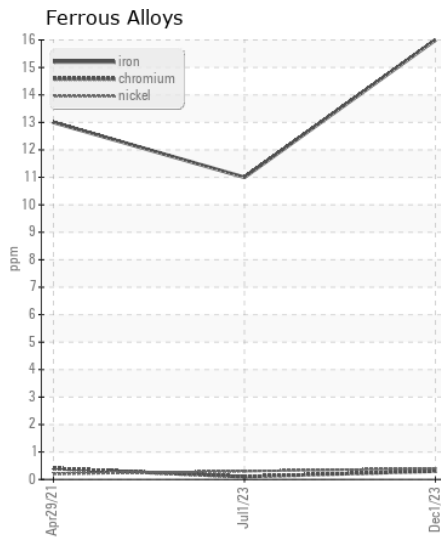
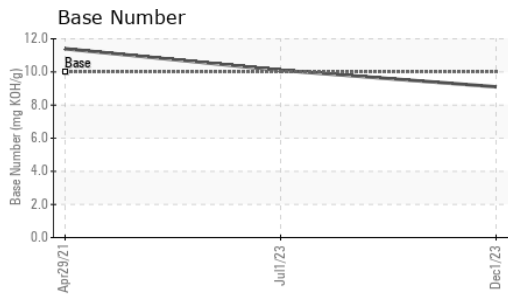
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>6</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	1
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.5</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.1</b>	10.8	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	19.6	21.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	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	>75	<b>0</b>	3	<1
Boron	ppm	ASTM D5185m		<b>12</b>	1	4
Barium	ppm	ASTM D5185m		<b>3</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>14</b>	4	3
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>9</b>	10	21
Calcium	ppm	ASTM D5185m		<b>3161</b>	3239	3106
Phosphorus	ppm	ASTM D5185m		<b>51</b>	8	10
Zinc	ppm	ASTM D5185m	10	<b>0</b>	1	0
Sulfur	ppm	ASTM D5185m		<b>4269</b>	5078	4169
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.0</b>	14.9	15.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>9.1</b>	10.1	11.4
Visc @ 100°C	cSt	ASTM D445	14.4	<b>15.1</b>	15.1	14.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : MW0017701 **Received** : 18 Jan 2024  
**Lab Number** : 06064130 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10835512 **Diagnostician** : Wes Davis  
**Test Package** : MAR 2

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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