MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR GM02
Component
Biogas Engine
Fluid
MAHLER Q8 Mahler G8 SAE 40 (--- GAL)

RECOMMENDATION

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Cylinder, crank, or cam shaft wear is indicated.

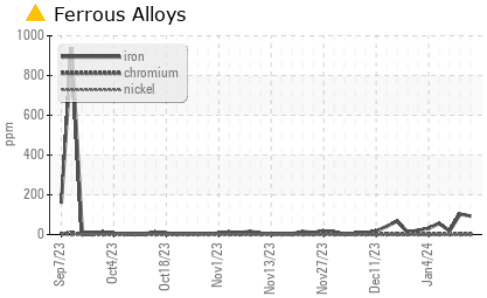
CONTAMINATION

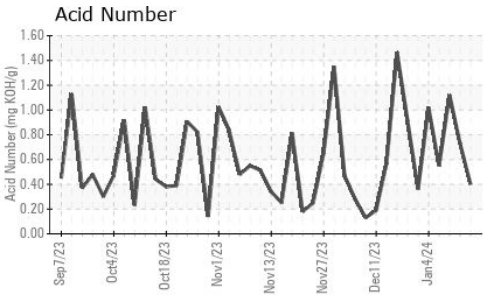
There is no indication of any contamination in the oil.

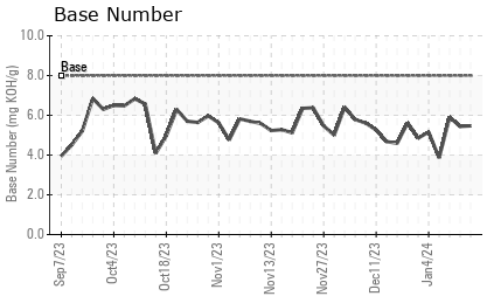
FLUID CONDITION

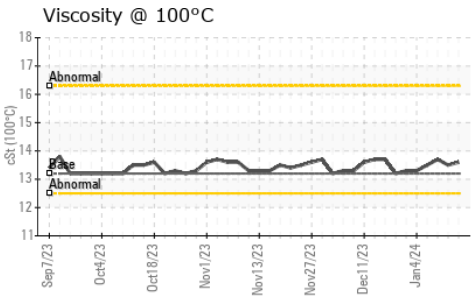
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid.

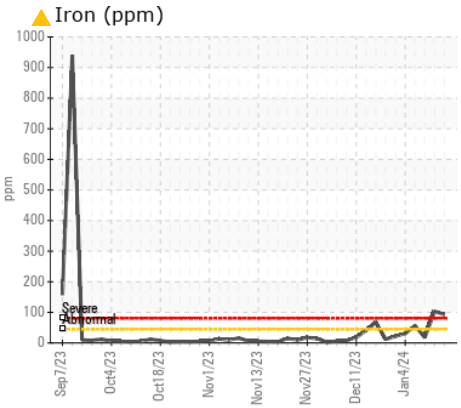
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0870509	WC0870507	WC0870569
Sample Date		Client Info		08 Feb 2024	06 Feb 2024	31 Jan 2024
Machine Age	hrs	Client Info		67612	67563	67448
Oil Age	hrs	Client Info		177	129	14
Filter Age	hrs	Client Info		177	129	14
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>45	▲ 93	▲ 103	18
Chromium	ppm	ASTM D5185m	>2	2	1	0
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>5	0	0	<1
Aluminum	ppm	ASTM D5185m	>10	3	3	2
Lead	ppm	ASTM D5185m	>5	2	1	<1
Copper	ppm	ASTM D5185m	>14	3	2	<1
Tin	ppm	ASTM D5185m	>13	2	1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>200	126	97	18
Potassium	ppm	ASTM D5185m	>20	0	0	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		0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	5.7	5.3	4.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.1	15.7	14.8
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		28	29	23
Boron	ppm	ASTM D5185m		<1	<1	1
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		1	1	0
Manganese	ppm	ASTM D5185m		1	1	<1
Magnesium	ppm	ASTM D5185m		3	2	11
Calcium	ppm	ASTM D5185m		1417	1404	1266
Phosphorus	ppm	ASTM D5185m		350	389	357
Zinc	ppm	ASTM D5185m		441	448	422
Sulfur	ppm	ASTM D5185m		2057	1959	1731
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.1	10.1	8.4
Acid Number (AN)	mg KOH/g	ASTM D8045		0.40	0.729	1.12
Base Number (BN)	mg KOH/g	ASTM D2896	8.0	5.47	5.44	5.90
Visc @ 100°C	cSt	ASTM D445	13.2	13.6	13.5	13.7

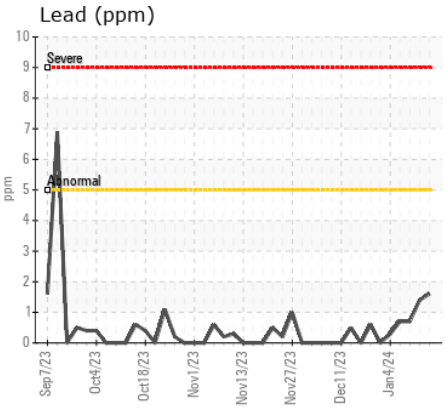


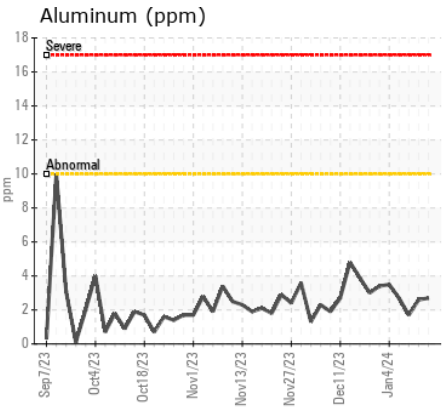


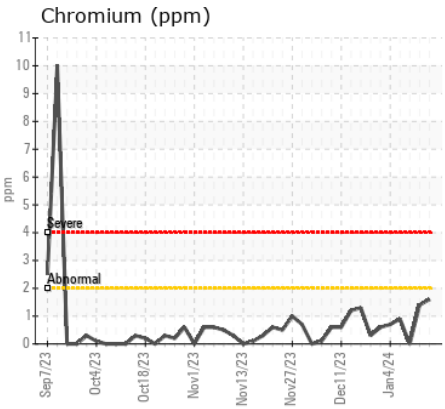


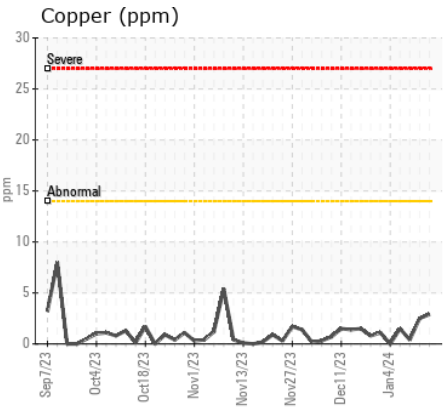


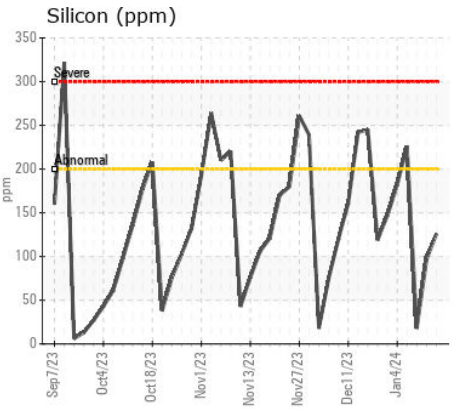


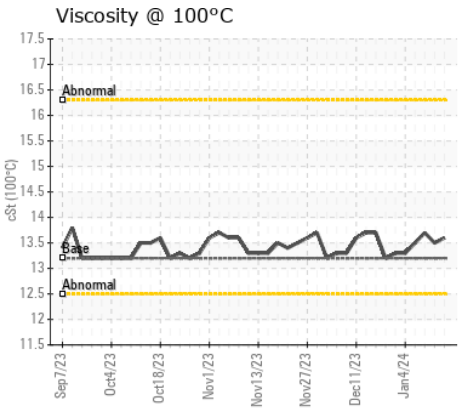


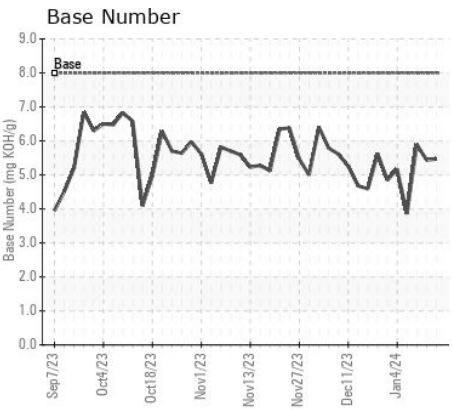












Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: WC0870509	**Received**	: 09 Feb 2024
Lab Number	: 06085447	**Tested**	: 12 Feb 2024
Unique Number	: 10872892	**Diagnosed**	: 13 Feb 2024 - Angela Borella
Test Package	: MOB 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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