MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

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

RECOMMENDATION

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

WEAR

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

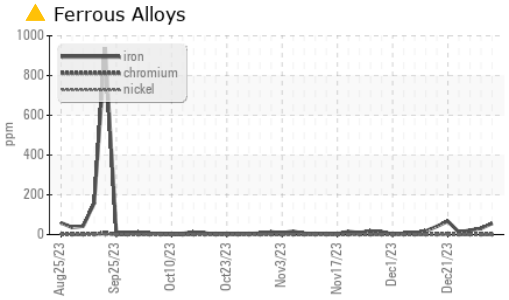
CONTAMINATION

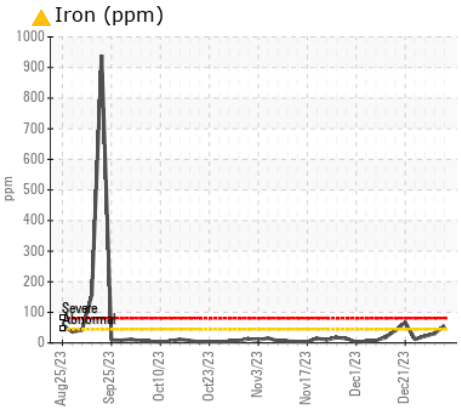
Elemental level of silicon (Si) above normal.

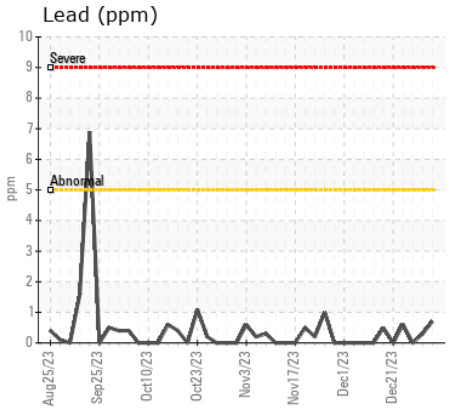
FLUID CONDITION

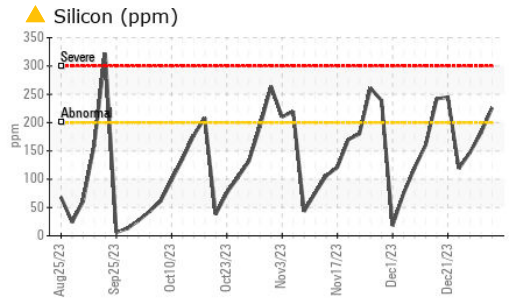
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

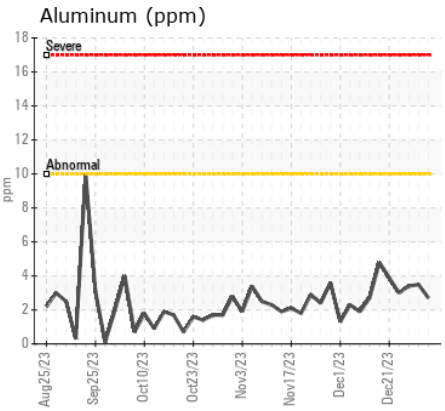
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0870566	WC0870522	WC0870520
Sample Date		Client Info		09 Jan 2024	04 Jan 2024	02 Jan 2024
Machine Age	hrs	Client Info		67396	67275	67228
Oil Age	hrs	Client Info		427	306	259
Filter Age	hrs	Client Info		427	306	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>45	▲ 56	31	22
Chromium	ppm	ASTM D5185m	>2	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	3	4	3
Lead	ppm	ASTM D5185m	>5	<1	<1	0
Copper	ppm	ASTM D5185m	>14	2	0	1
Tin	ppm	ASTM D5185m	>13	2	2	2
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>200	▲ 226	182	147
Potassium	ppm	ASTM D5185m	>20	2	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	0	0
Nitration	Abs/cm	*ASTM D7624	>20	5.9	5.7	5.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.5	15.9	15.6
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		0	0	0
Boron	ppm	ASTM D5185m		1	2	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		3	<1	2
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		11	11	0
Calcium	ppm	ASTM D5185m		1466	1424	1351
Phosphorus	ppm	ASTM D5185m		431	410	375
Zinc	ppm	ASTM D5185m		467	476	437
Sulfur	ppm	ASTM D5185m		2056	2027	1851
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.8	11.0	10.6
Acid Number (AN)	mg KOH/g	ASTM D8045		0.549	1.02	0.36
Base Number (BN)	mg KOH/g	ASTM D2896	8.0	3.86	5.16	4.85
Visc @ 100°C	cSt	ASTM D445	13.2	13.5	13.3	13.3

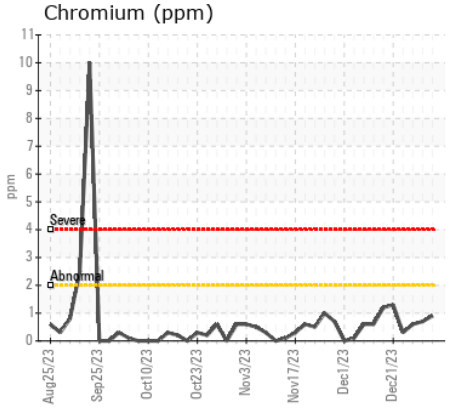


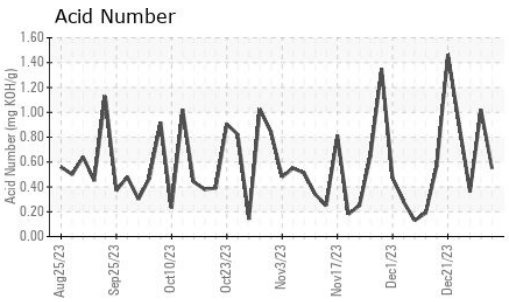


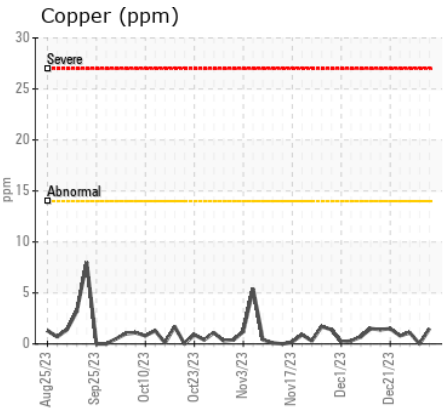


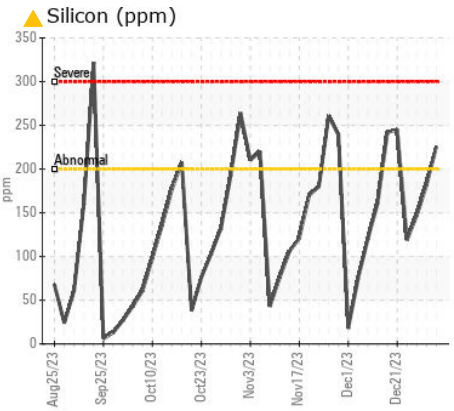


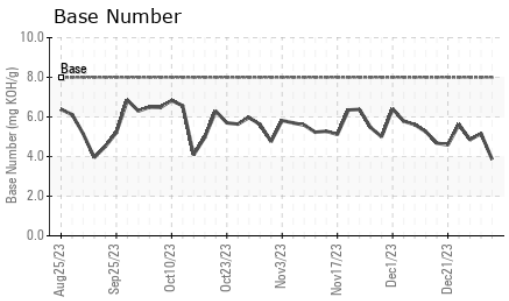


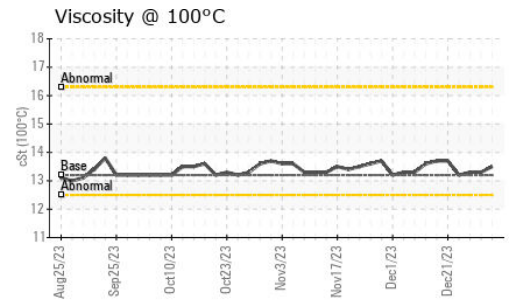


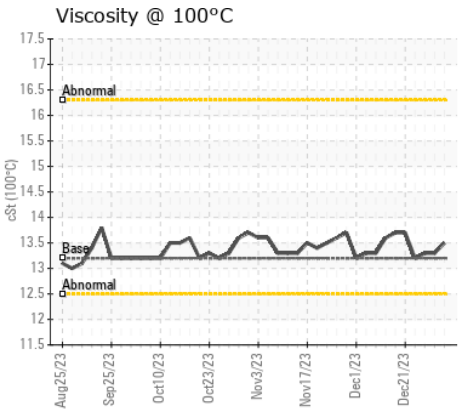


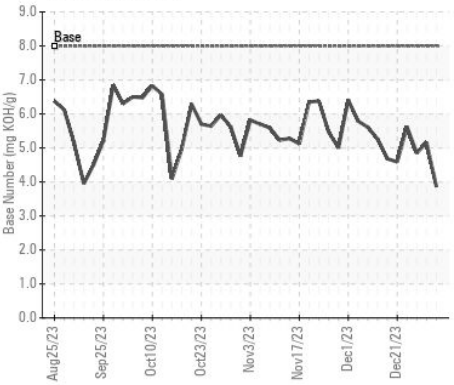












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0870566
Lab Number : 06057458
Unique Number : 10823407
Test Package : MOB 2

Recieved : 10 Jan 2024
Diagnosed : 12 Jan 2024
Diagnostician : 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)

OAK GROVE KS
1150 E 700TH AVE
ARCADIA, KS
US 66711
Contact: KALEB WEAVER
kaleb.weaver@cubedistrictenergy.com
T:
F: