



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
E-1 (S/N 1144685)
 Component
Biogas Engine
 Fluid
MAHLER Q8 Mahler G8 SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0852907	WC0852904	WC0852903
Sample Date		Client Info		03 Jan 2024	26 Dec 2023	18 Dec 2023
Machine Age	hrs	Client Info		46709	46531	46340
Oil Age	hrs	Client Info		1924	1746	1555
Filter Age	hrs	Client Info		1924	1746	1555
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>45	2	1	<1
Chromium	ppm	ASTM D5185m	>2	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	3	3	2
Lead	ppm	ASTM D5185m	>5	<1	<1	0
Copper	ppm	ASTM D5185m	>14	2	3	<1
Tin	ppm	ASTM D5185m	>13	3	3	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

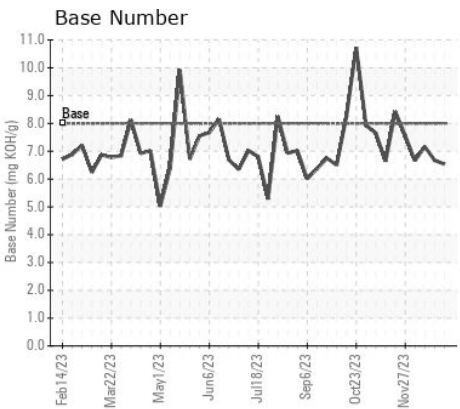
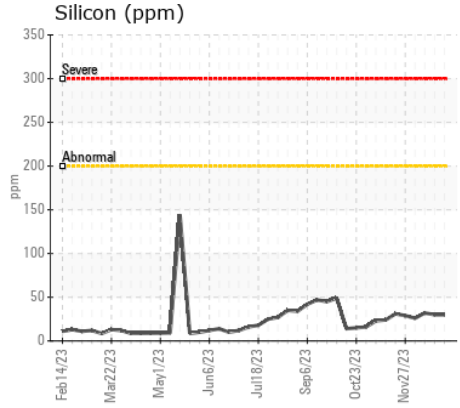
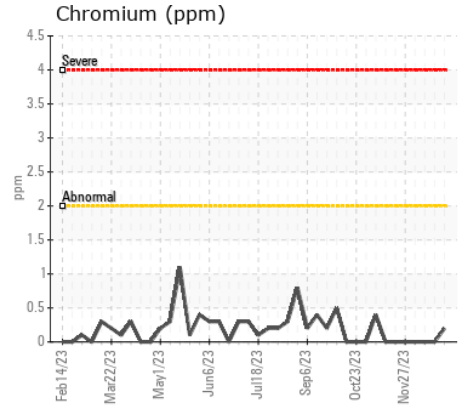
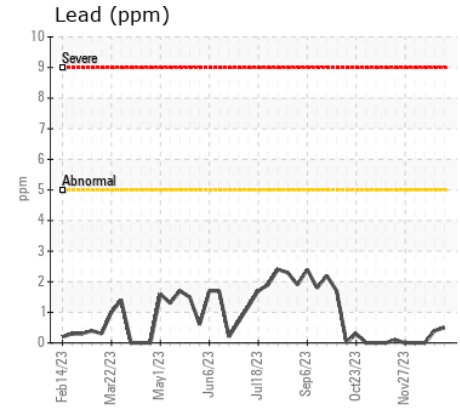
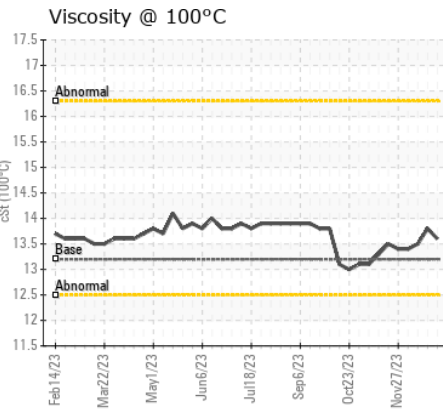
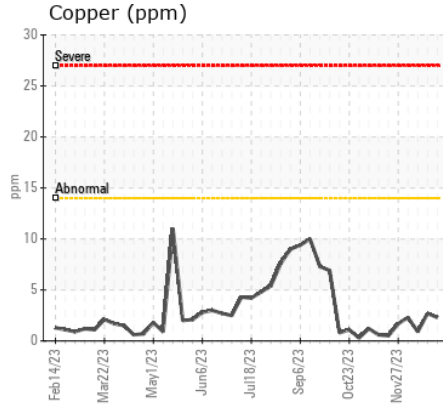
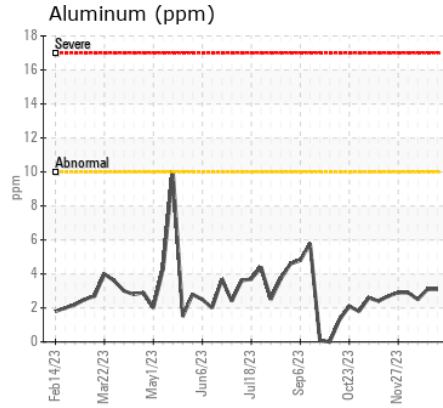
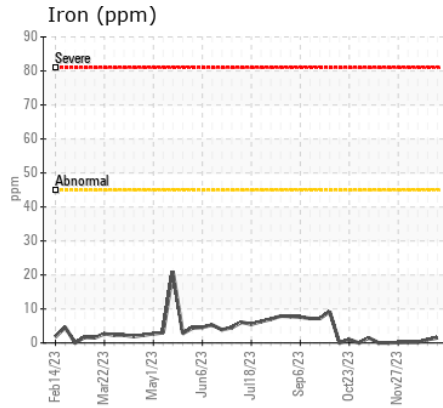
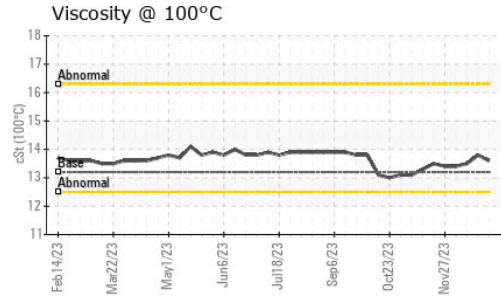
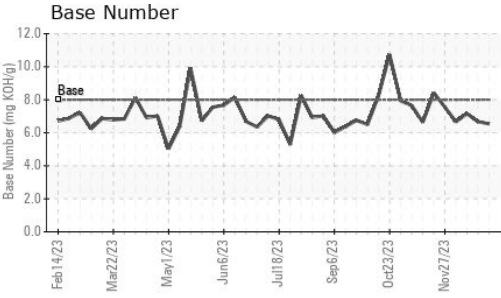
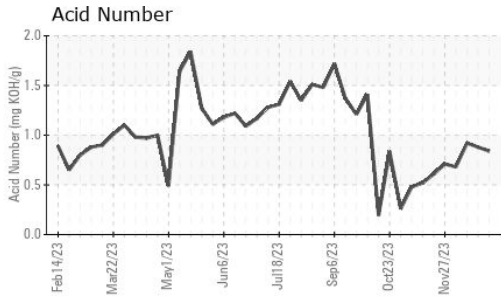
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>200	30	30	32
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	0	0
Nitration	Abs/cm	*ASTM D7624	>20	7.2	7.1	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.2	17.9	17.8
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

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.

Sodium	ppm	ASTM D5185m		<1	2	0
Boron	ppm	ASTM D5185m		0	<1	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		1	0	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		12	12	12
Calcium	ppm	ASTM D5185m		2236	2267	2220
Phosphorus	ppm	ASTM D5185m		482	430	438
Zinc	ppm	ASTM D5185m		528	521	523
Sulfur	ppm	ASTM D5185m		2856	2617	2606
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.2	12.8	12.6
Acid Number (AN)	mg KOH/g	ASTM D8045		0.84	0.88	0.92
Base Number (BN)	mg KOH/g	ASTM D2896	8.0	6.54	6.67	7.16
Visc @ 100°C	cSt	ASTM D445	13.2	13.6	13.8	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0852907 Recieved : 08 Jan 2024
 Lab Number : 06054084 Diagnosed : 09 Jan 2024
 Unique Number : 10820033 Diagnostician : Sean Felton
 Test Package : MOB 2

OAK GROVE GA
 967 CARL-BETHLEHEM RD
 WINDER, GA
 US 30680
 Contact: MATT DICKENS

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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