



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
2
Component
Biogas Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0602741	WC0848278	WC0602738
Sample Date		Client Info		03 Feb 2024	09 Jan 2024	21 Aug 2023
Machine Age	hrs	Client Info		25671	62303	22015
Oil Age	hrs	Client Info		0	1764	450
Filter Age	hrs	Client Info		0	1764	450
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	11	2	7
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		47	<1	46
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	2	2
Lead	ppm	ASTM D5185m	>20	1	0	<1
Copper	ppm	ASTM D5185m	>15	2	<1	2
Tin	ppm	ASTM D5185m	>5	3	3	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

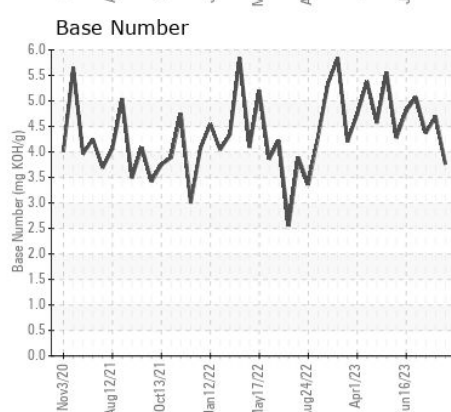
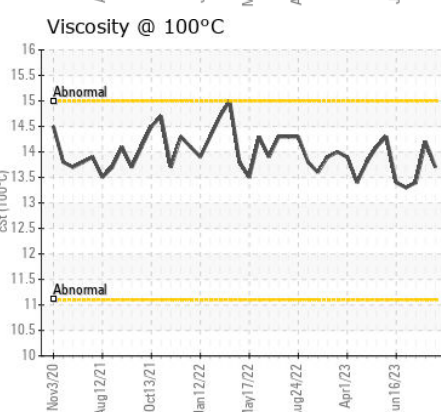
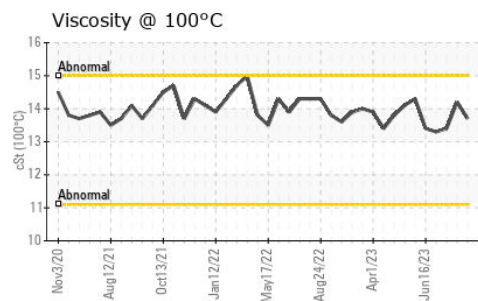
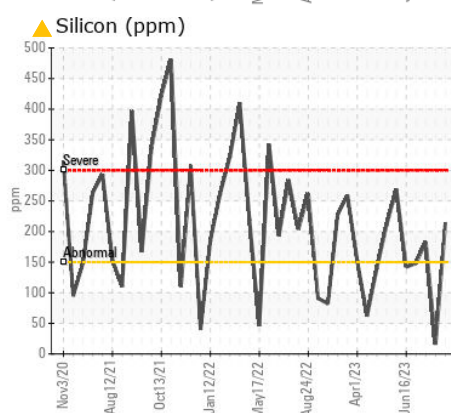
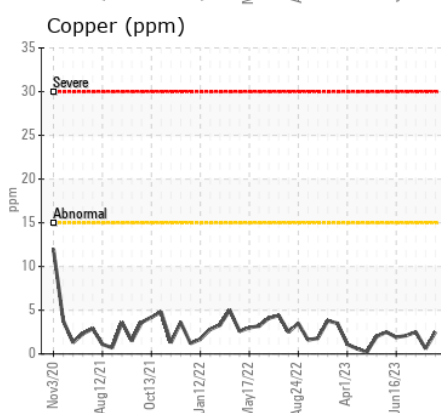
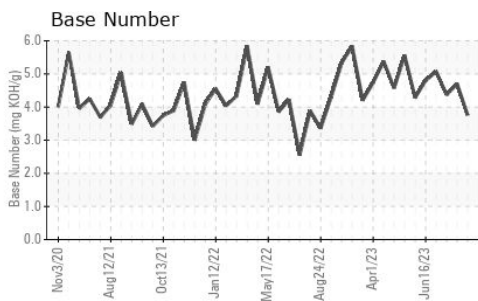
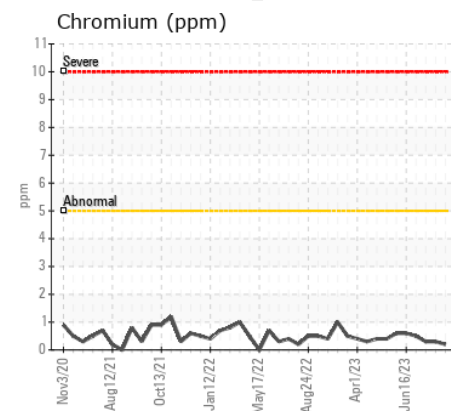
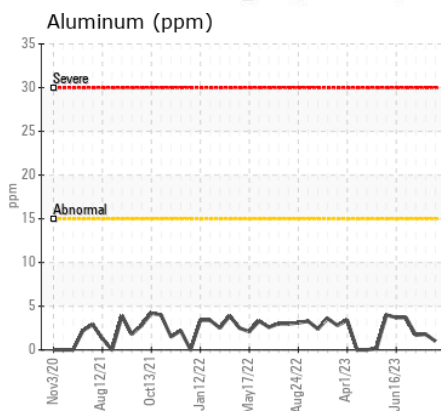
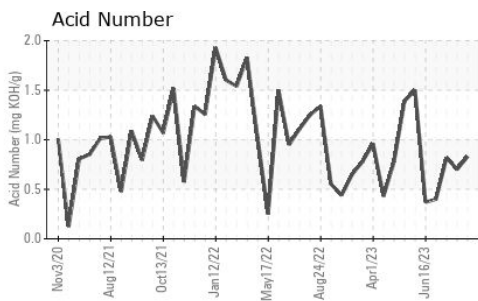
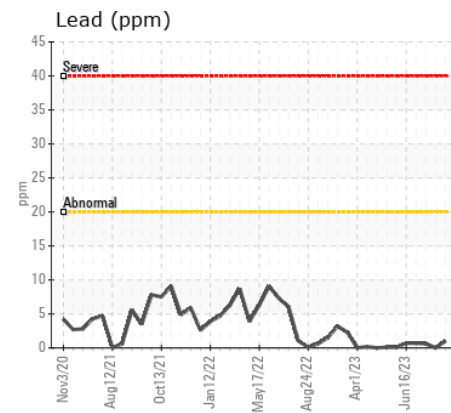
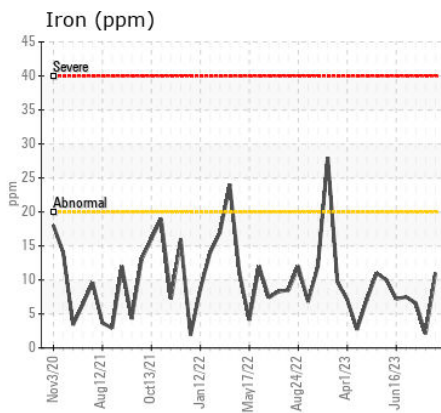
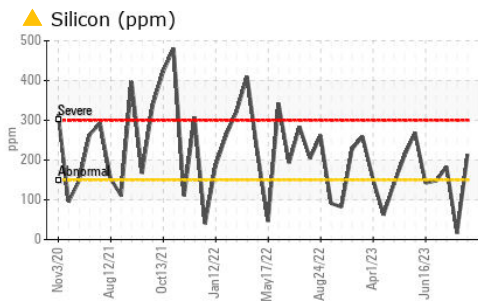
Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>150	▲ 214	16	▲ 183
Potassium	ppm	ASTM D5185m	>20	36	1	6
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	6.2	3.7	5.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	16.3	20.0
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
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.

Sodium	ppm	ASTM D5185m		9	0	7
Boron	ppm	ASTM D5185m		95	92	104
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		1	1	1
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		17	7	10
Calcium	ppm	ASTM D5185m		1313	1688	1510
Phosphorus	ppm	ASTM D5185m		289	483	343
Zinc	ppm	ASTM D5185m		32	585	29
Sulfur	ppm	ASTM D5185m		1518	4002	1634
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.9	10.2	15.0
Acid Number (AN)	mg KOH/g	ASTM D8045		0.83	0.70	0.82
Base Number (BN)	mg KOH/g	ASTM D2896		3.76	4.70	4.37
Visc @ 100°C	cSt	ASTM D445		13.7	14.2	13.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0602741

Lab Number : 06083815

Unique Number : 10871260

Test Package : MOB 2

Received : 08 Feb 2024

Tested : 09 Feb 2024

Diagnosed : 11 Feb 2024 - Don Baldrige

MONTAUK ENERGY CAPITAL LLC (TEXAS) LP

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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)