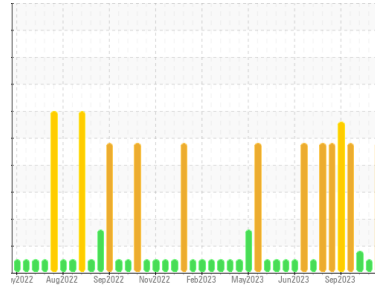




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
BRCM01BE (S/N GZJ00658)
 Component
Biogas Engine
 Fluid
CHEVRON HDAX 6500 LFG GAS ENGINE OIL (--- GAL)

DIAGNOSIS

Recommendation
 We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear
 All 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 oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0760815	WC0760964	WC0760968
Sample Date	Client Info		11 Oct 2023	02 Oct 2023	27 Sep 2023
Machine Age	hrs	Client Info	72065	71894	71803
Oil Age	hrs	Client Info	354	183	92
Oil Changed	Client Info		Not Chngd	N/A	N/A
Sample Status			SEVERE	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>15	4	<1	2
Chromium	ppm	ASTM D5185m	>4	0	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	>6	2	<1	▲ 6
Lead	ppm	ASTM D5185m	>9	2	<1	1
Copper	ppm	ASTM D5185m	>6	0	<1	0
Tin	ppm	ASTM D5185m	>4	4	2	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		7	7	10
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	3	6
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		18	27	28
Calcium	ppm	ASTM D5185m		1840	1777	1848
Phosphorus	ppm	ASTM D5185m		283	289	332
Zinc	ppm	ASTM D5185m		381	397	386
Sulfur	ppm	ASTM D5185m		2435	2196	2001

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>181	202	108	81
Sodium	ppm	ASTM D5185m		<1	0	<1
Potassium	ppm	ASTM D5185m	>20	<1	0	0

INFRA-RED

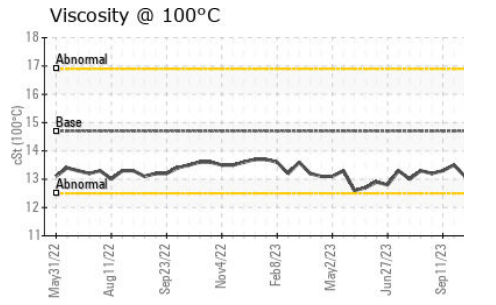
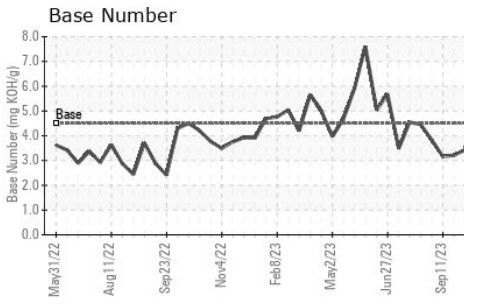
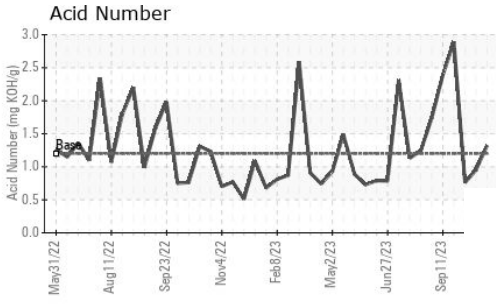
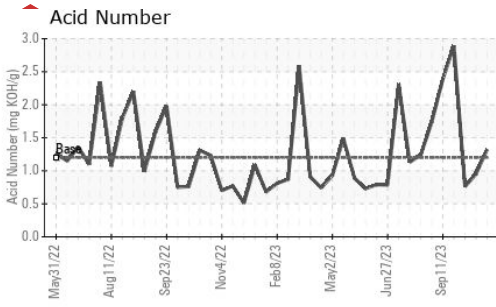
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	5.5	5.2	4.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	17.5	15.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.0	8.6	7.6
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	1.32	0.952	0.76
Base Number (BN)	mg KOH/g	ASTM D2896	4.5	3.96	5.94	3.43



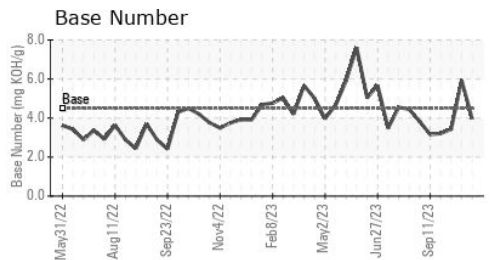
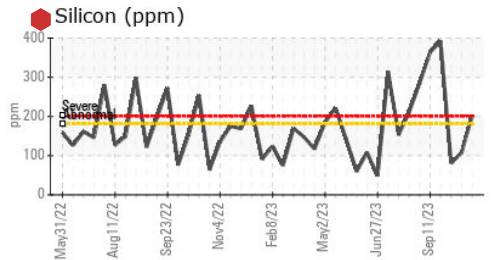
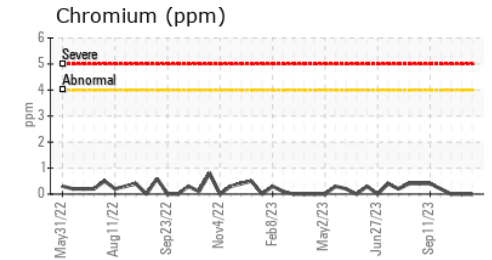
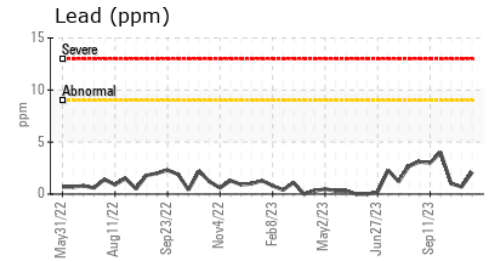
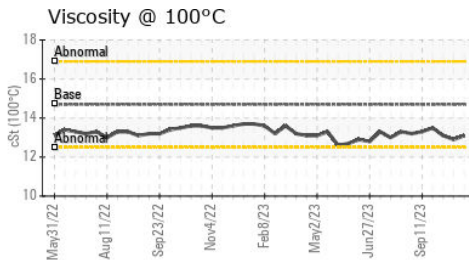
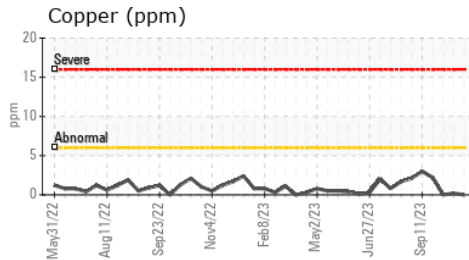
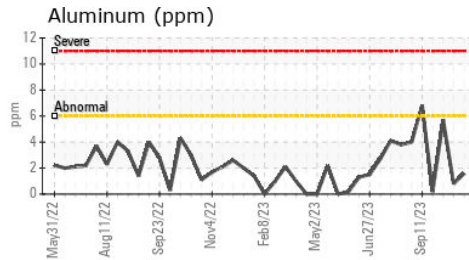
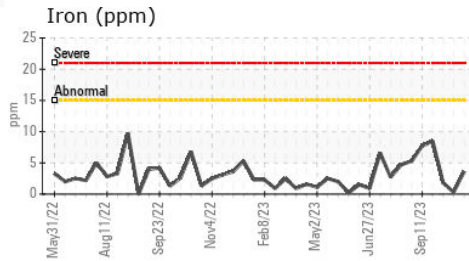
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.7	13.1	12.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0760815 Received : 16 Oct 2023
 Lab Number : 05979914 Diagnosed : 17 Oct 2023
 Unique Number : 10697209 Diagnostician : Sean Felton
 Test Package : MOB 2

EDL NA Recips-Brown County
 BROWN COUNTY POWER STATION, 9427 BEYERS RD
 GEORGETOWN, OH
 US 45121
 Contact: MITCHELL BUTLER
 Mitchell.Butler@edlenergy.com

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)

T:
F: