

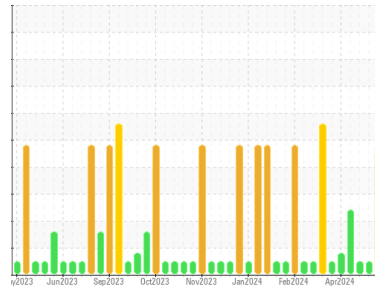


OIL ANALYSIS REPORT



Machine Id
BRCM03BE (S/N 6ZJ00395)
 Component
Biogas Engine
 Fluid
CHEVRON HDAX 9500 GAS ENGINE OIL 40 (150 GAL)

Sample Rating Trend



DIRT



DIAGNOSIS

▲ 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.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0760842	WC0760830	WC0760827
Sample Date	Client Info		10 May 2024	03 May 2024	26 Apr 2024
Machine Age	hrs	Client Info	93334	93182	93020
Oil Age	hrs	Client Info	339	187	25
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			SEVERE	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >14	4	2	1
Chromium	ppm	ASTM D5185m >3	0	0	<1
Nickel	ppm	ASTM D5185m	0	0	<1
Titanium	ppm	ASTM D5185m	<1	0	<1
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >5	2	2	1
Lead	ppm	ASTM D5185m >8	0	<1	<1
Copper	ppm	ASTM D5185m >5	4	<1	<1
Tin	ppm	ASTM D5185m >3	2	2	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	8	8
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	6	5	5
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	23	26	23
Calcium	ppm	ASTM D5185m	1937	1907	1624
Phosphorus	ppm	ASTM D5185m	300	314	294
Zinc	ppm	ASTM D5185m	362	364	339
Sulfur	ppm	ASTM D5185m	2435	2427	1950

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >180	▲ 208	134	26
Sodium	ppm	ASTM D5185m >20	2	<1	0
Potassium	ppm	ASTM D5185m >20	0	1	2

INFRA-RED

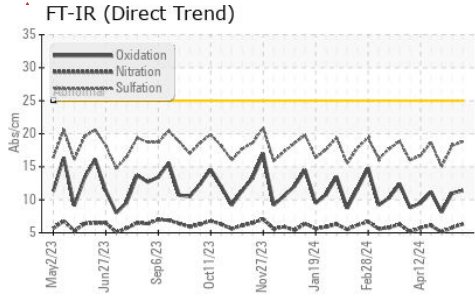
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0
Nitration	Abs/cm	*ASTM D7624	6.3	5.8	5.1
Sulfation	Abs/.1mm	*ASTM D7415	18.8	18.2	15.0

FLUID DEGRADATION

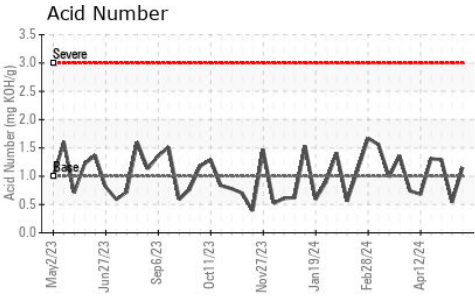
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	11.4	11.0	8.1
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	1.15	0.54	1.288
Base Number (BN)	mg KOH/g	ASTM D2896 5.4	4.07	4.50	5.59



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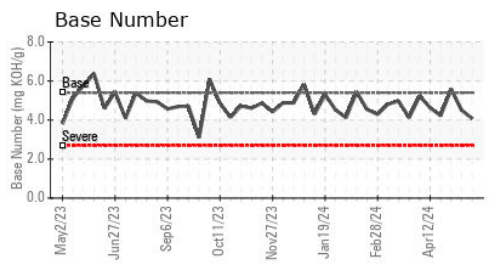
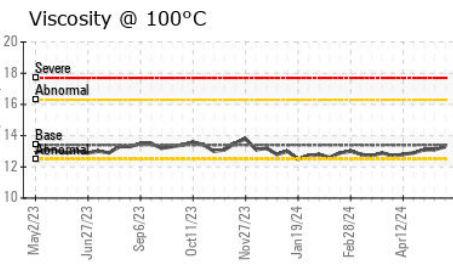
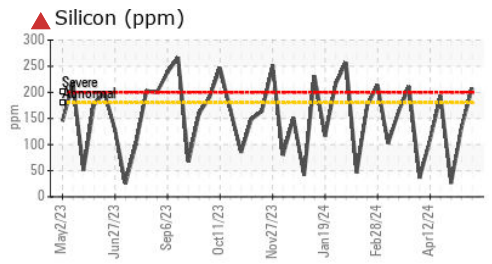
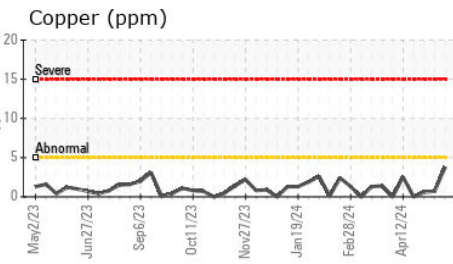
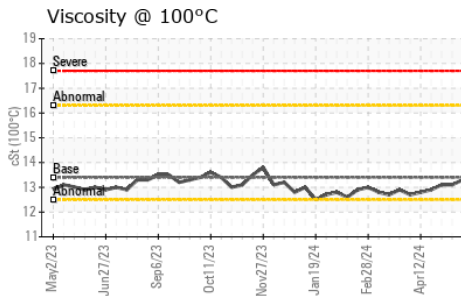
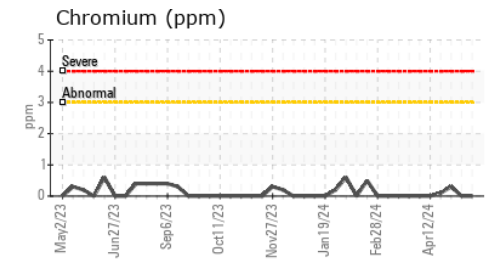
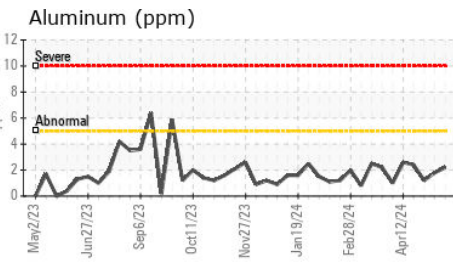
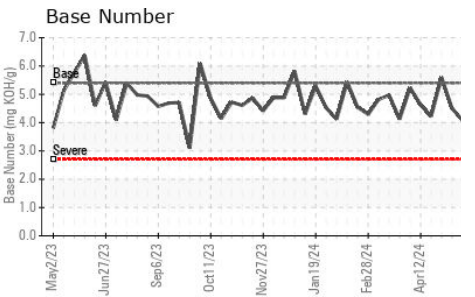
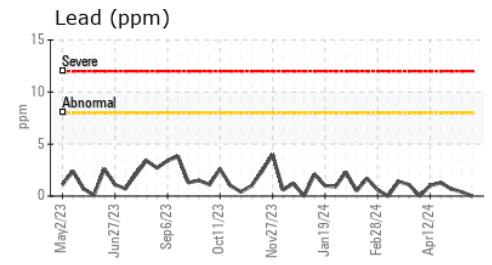
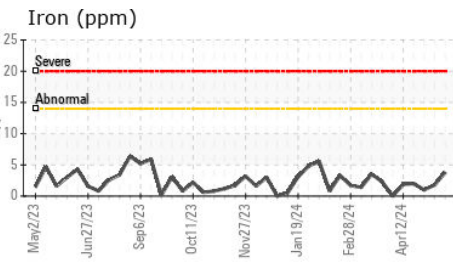
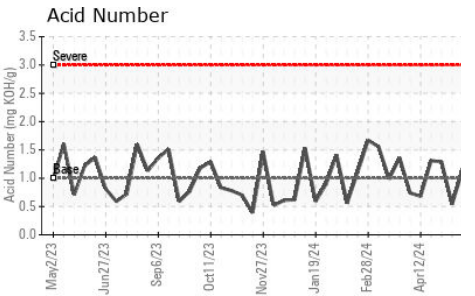


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.4	13.3	13.1

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0760842
Lab Number : 06178989
Unique Number : 11030315
Test Package : MOB 2
Received : 14 May 2024
Tested : 15 May 2024
Diagnosed : 16 May 2024 - Don Baldrige

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)