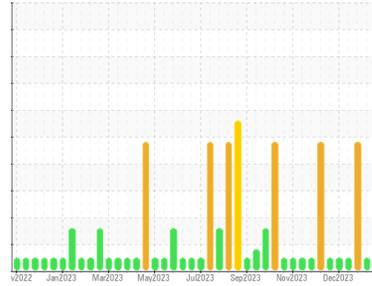




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



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

## 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		<b>WC0760890</b>	WC0760892	WC0760907
Sample Date	Client Info		<b>26 Jan 2024</b>	19 Jan 2024	08 Jan 2024
Machine Age	hrs	Client Info	<b>91194</b>	91032	90807
Oil Age	hrs	Client Info	<b>314</b>	152	427
Oil Changed	Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status			<b>SEVERE</b>	NORMAL	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>15	<b>5</b>	3	<1
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>6	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>9	<b>&lt;1</b>	1	2
Copper	ppm	ASTM D5185m	>6	<b>2</b>	1	1
Tin	ppm	ASTM D5185m	>4	<b>4</b>	3	5
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>22</b>	18	14
Barium	ppm	ASTM D5185m		<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>13</b>	11	9
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>65</b>	49	45
Calcium	ppm	ASTM D5185m		<b>2188</b>	1771	1842
Phosphorus	ppm	ASTM D5185m		<b>441</b>	341	293
Zinc	ppm	ASTM D5185m		<b>530</b>	399	415
Sulfur	ppm	ASTM D5185m		<b>2848</b>	1915	2004

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>181	<b>216</b>	116	<b>231</b>
Sodium	ppm	ASTM D5185m		<b>0</b>	2	13
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	<1

## INFRA-RED

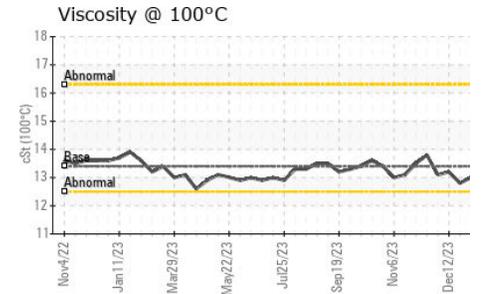
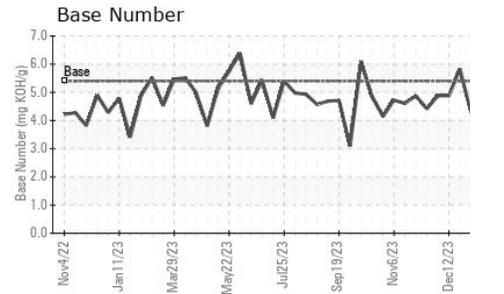
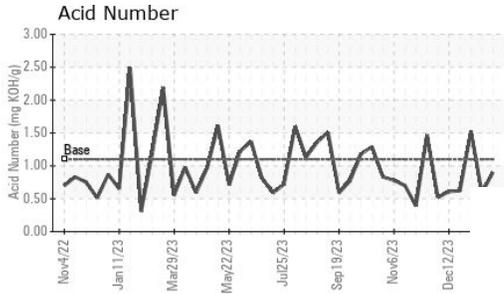
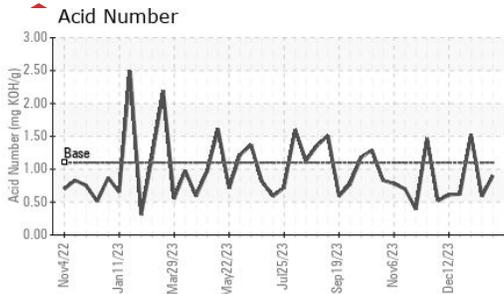
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.9</b>	5.6	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.6</b>	16.4	19.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>10.8</b>	9.5	14.5
Acid Number (AN)	mg KOH/g	ASTM D8045	1.1	<b>0.90</b>	0.59	1.53
Base Number (BN)	mg KOH/g	ASTM D2896	5.4	<b>4.52</b>	5.30	4.30



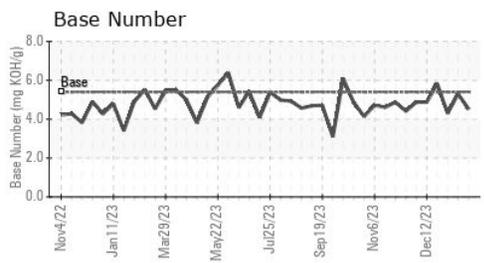
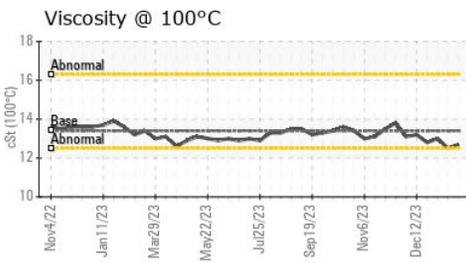
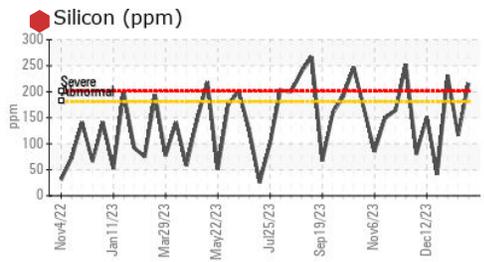
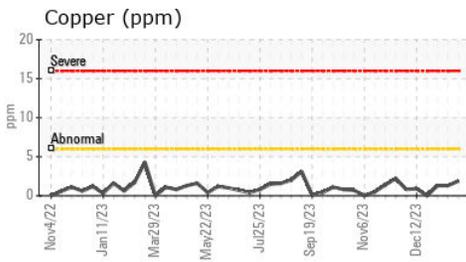
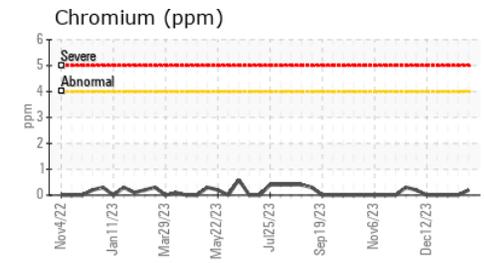
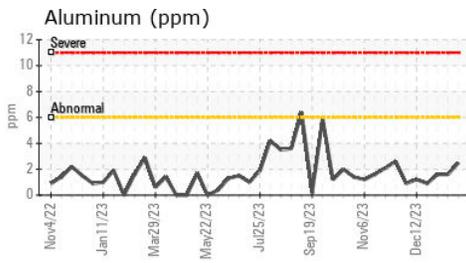
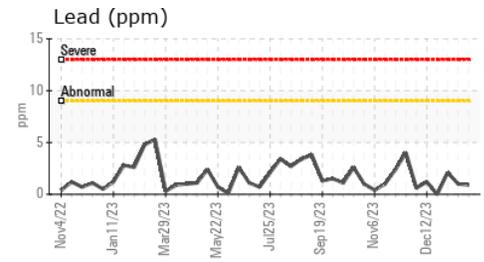
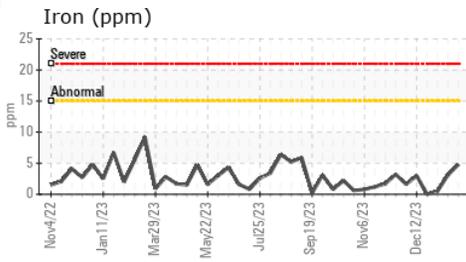
# OIL ANALYSIS REPORT



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	13.4	12.7	12.5

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0760890 **Received** : 30 Jan 2024  
**Lab Number** : 06074982 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857073 **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)

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