

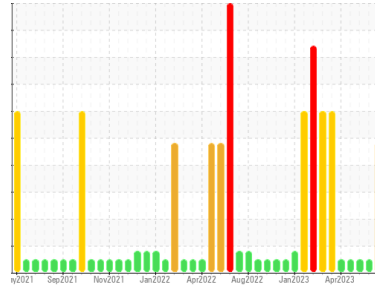


# OIL ANALYSIS REPORT



Machine Id  
**COVM06BE (S/N GZJ00183)**  
 Component  
**Biogas Engine**  
 Fluid  
**CHEVRON HDAX 6500 LFG GAS ENGINE OIL (141 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		<b>WC0816129</b>	WC0816095	WC0722580
Sample Date	Client Info		<b>09 Aug 2023</b>	21 Jul 2023	16 May 2023
Machine Age	hrs	Client Info	<b>635084</b>	126182	125897
Oil Age	hrs	Client Info	<b>969</b>	125582	125582
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status			<b>SEVERE</b>	NORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >15	<b>8</b>	4	3
Chromium	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m >5	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >6	<b>6</b>	3	2
Lead	ppm	ASTM D5185m >9	<b>7</b>	1	<1
Copper	ppm	ASTM D5185m >6	<b>3</b>	2	<1
Tin	ppm	ASTM D5185m >4	<b>5</b>	2	1
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>4</b>	5	7
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>8</b>	7	11
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>40</b>	34	54
Calcium	ppm	ASTM D5185m	<b>2055</b>	1866	1844
Phosphorus	ppm	ASTM D5185m	<b>329</b>	301	310
Zinc	ppm	ASTM D5185m	<b>423</b>	359	354
Sulfur	ppm	ASTM D5185m	<b>2650</b>	2408	2040

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >181	<b>302</b>	160	103
Sodium	ppm	ASTM D5185m	<b>2</b>	<1	50
Potassium	ppm	ASTM D5185m >20	<b>2</b>	0	0

## INFRA-RED

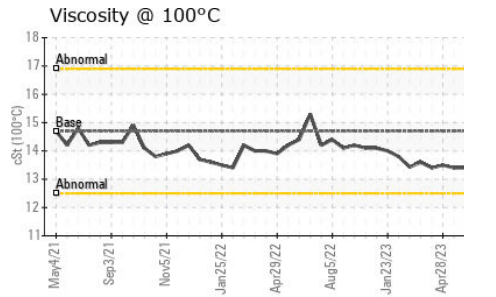
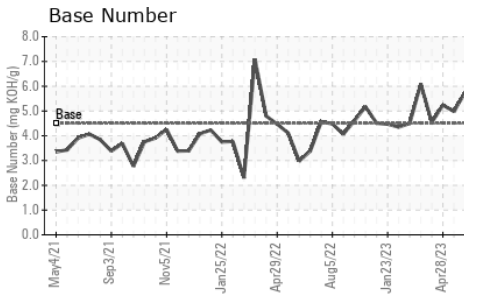
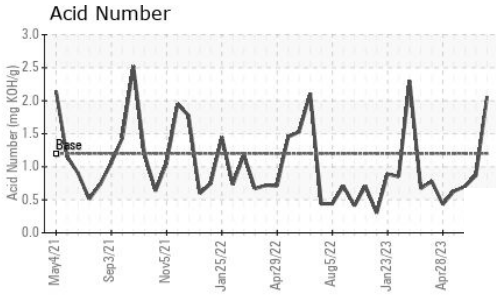
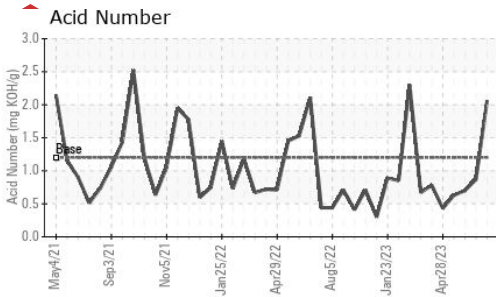
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0.1</b>	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.5</b>	5.5	5.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.3</b>	17.7	17.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>17.1</b>	10.6	9.4
Acid Number (AN)	mg KOH/g	ASTM D8045 1.2	<b>2.06</b>	0.87	0.70
Base Number (BN)	mg KOH/g	ASTM D2896 4.5	<b>5.05</b>	5.43	5.74



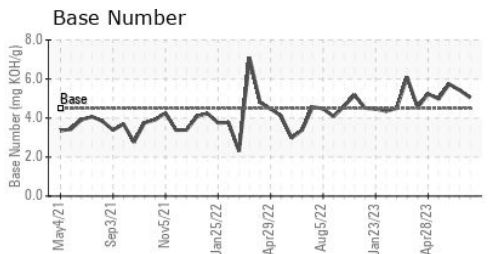
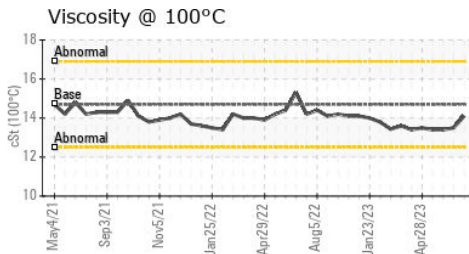
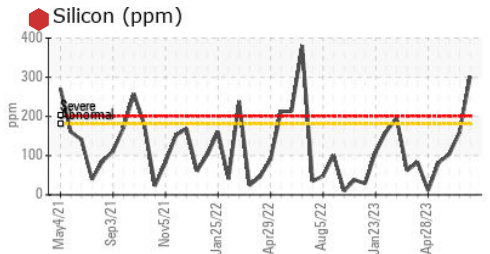
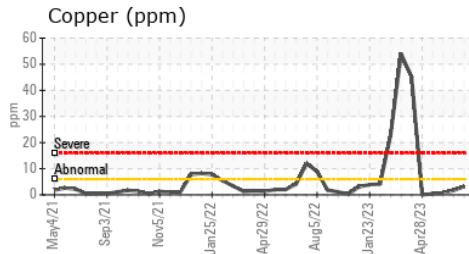
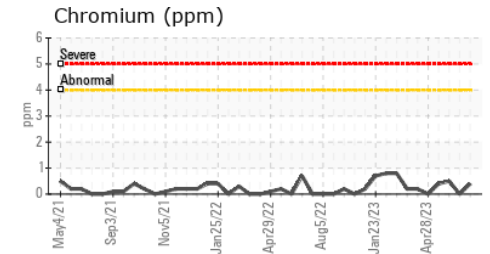
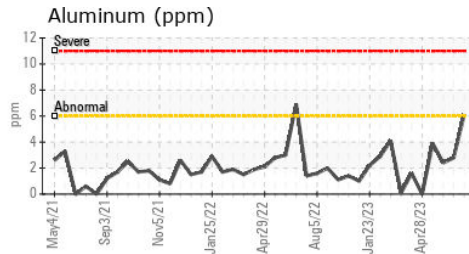
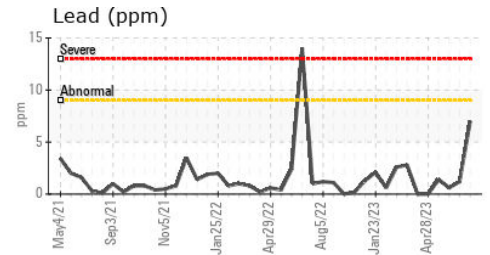
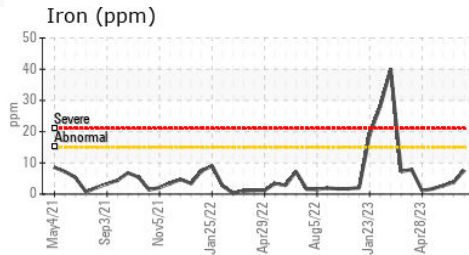
# OIL ANALYSIS REPORT



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	13.5	13.4

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0816129 Received : 11 Aug 2023  
 Lab Number : 05922388 Diagnosed : 14 Aug 2023  
 Unique Number : 10602335 Diagnostician : Don Baldrige  
 Test Package : MOB 2

**EDL NA Recips-Covel**  
 COVEL GARDENS POWER STATION, 8611 COVEL ROAD  
 SAN ANTONIO, TX  
 US 78252  
 Contact: ARIEL CARRION  
 ariel.carrion@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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F: