

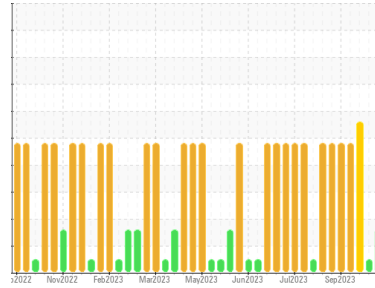


OIL ANALYSIS REPORT



Machine Id
DECM01BE (S/N ZBA01290)
 Component
Biogas Engine
 Fluid
CHEVRON HDAX 6500 LFG GAS ENGINE OIL (100 GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 No corrective action is recommended at this time. Resample at the next service interval to monitor.

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 condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0732917	WC0732915	WC0732912
Sample Date	Client Info		30 Oct 2023	23 Oct 2023	13 Oct 2023
Machine Age	hrs	Client Info	55022	54853	54622
Oil Age	hrs	Client Info	303	134	975
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	NORMAL	SEVERE

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	10	2	▲ 19
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>6	2	<1	4
Lead	ppm	ASTM D5185m	>9	<1	0	4
Copper	ppm	ASTM D5185m	>14	2	<1	2
Tin	ppm	ASTM D5185m	>4	1	<1	2
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	<1

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		5	5	5
Barium	ppm	ASTM D5185m		<1	0	3
Molybdenum	ppm	ASTM D5185m		3	2	2
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		20	17	15
Calcium	ppm	ASTM D5185m		1799	1738	2004
Phosphorus	ppm	ASTM D5185m		302	290	331
Zinc	ppm	ASTM D5185m		386	346	436
Sulfur	ppm	ASTM D5185m		2521	1725	2443

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>181	▲ 186	124	◆ 403
Sodium	ppm	ASTM D5185m		1	0	3
Potassium	ppm	ASTM D5185m	>20	3	0	6

INFRA-RED

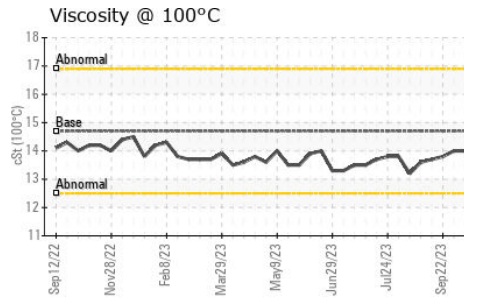
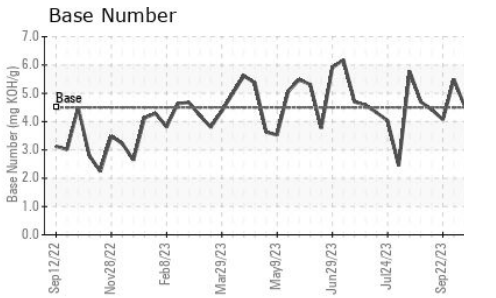
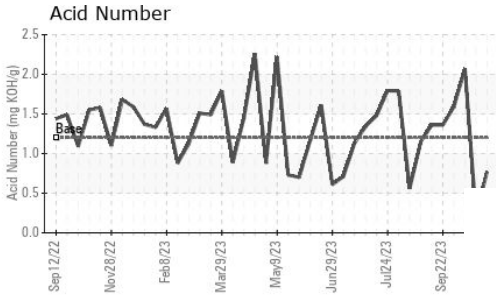
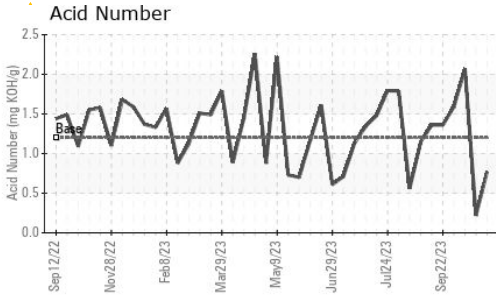
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.1	5.7	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	16.5	23.2

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.5	9.6	16.8
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	0.77	0.22	2.07
Base Number (BN)	mg KOH/g	ASTM D2896	4.5	3.52	5.09	4.52



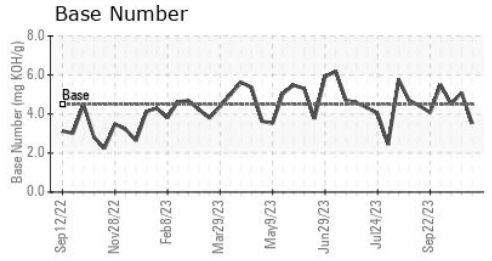
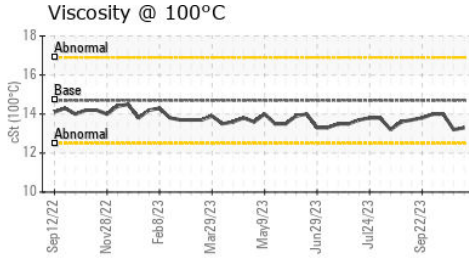
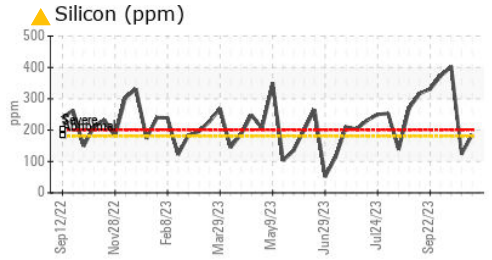
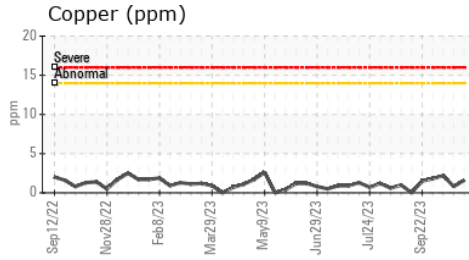
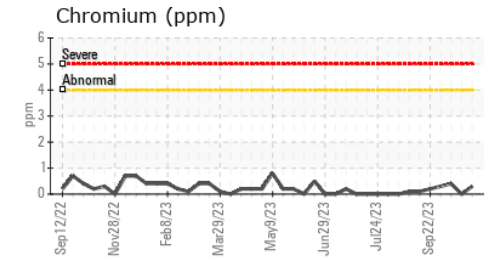
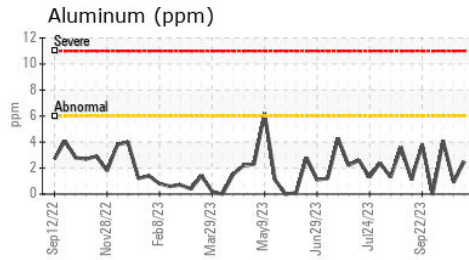
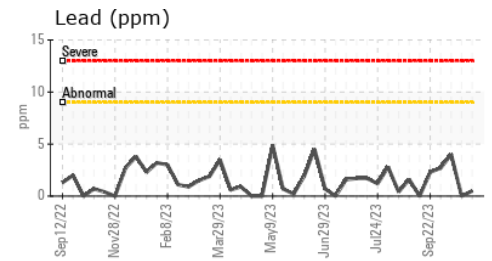
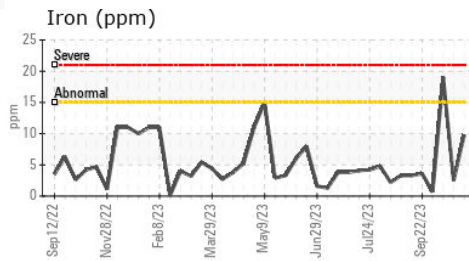
OIL ANALYSIS REPORT



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	13.3	13.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0732917 Received : 01 Nov 2023
 Lab Number : 05995864 Diagnosed : 03 Nov 2023
 Unique Number : 10724224 Diagnostician : Don Baldrige
 Test Package : MOB 2

EDL NA Recips-Decatur
 620 LANDFILL DRIVE
 TRINITY, AL
 US 35673

Contact: JEFF SUMMERS
 jeff.summers@energydevelopments.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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