



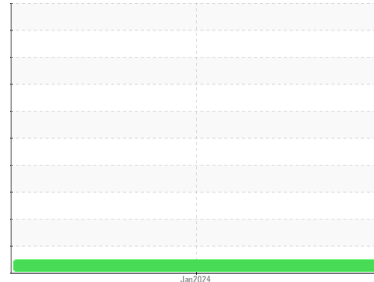
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
Byron Center CAT 3 BYCM03BE
 Component
Biogas Engine
 Fluid
CHEVRON HDAX 9500 GAS ENGINE OIL 40 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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		WC0877086	---	---
Sample Date	Client Info		30 Jan 2024	---	---
Machine Age	hrs	Client Info	66593	---	---
Oil Age	hrs	Client Info	264	---	---
Oil Changed	Client Info		N/A	---	---
Sample Status			NORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	---	---
Water	WC Method	>0.1	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

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

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<1	---	---
Barium	ppm	ASTM D5185m	<1	---	---
Molybdenum	ppm	ASTM D5185m	<1	---	---
Manganese	ppm	ASTM D5185m	<1	---	---
Magnesium	ppm	ASTM D5185m	8	---	---
Calcium	ppm	ASTM D5185m	1595	---	---
Phosphorus	ppm	ASTM D5185m	240	---	---
Zinc	ppm	ASTM D5185m	295	---	---
Sulfur	ppm	ASTM D5185m	1805	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >181	67	---	---
Sodium	ppm	ASTM D5185m	0	---	---
Potassium	ppm	ASTM D5185m >20	<1	---	---

INFRA-RED

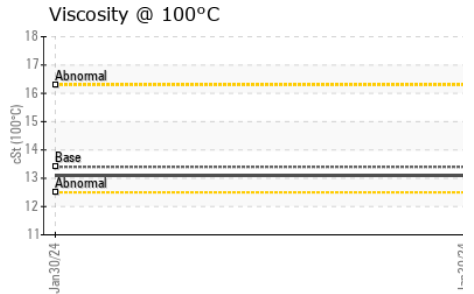
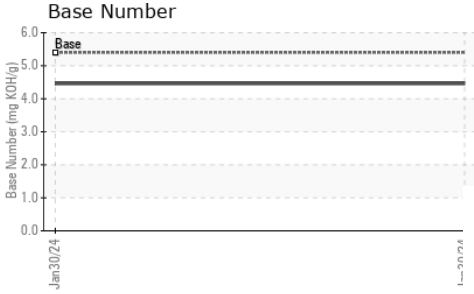
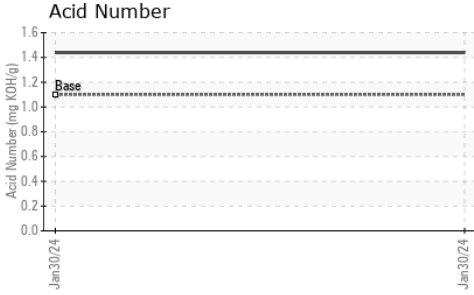
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	---	---
Nitration	Abs/cm	*ASTM D7624 >20	4.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	16.2	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	7.9	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045 1.1	1.44	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 5.4	4.46	---	---



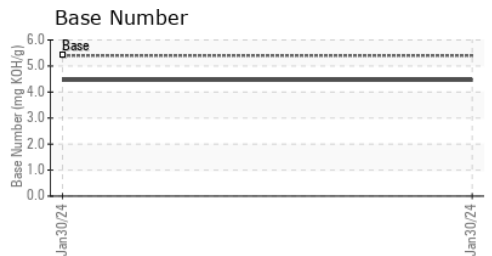
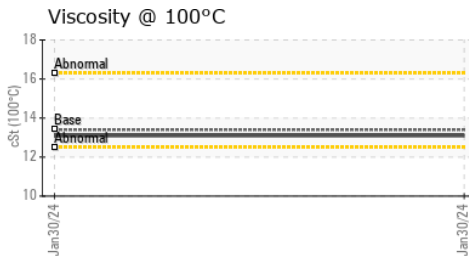
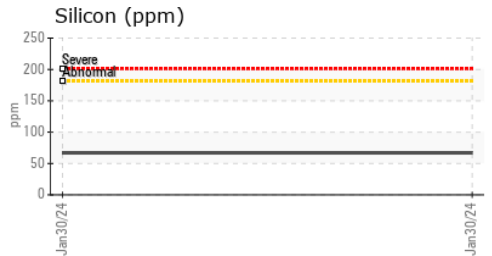
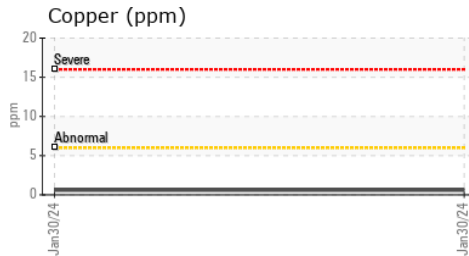
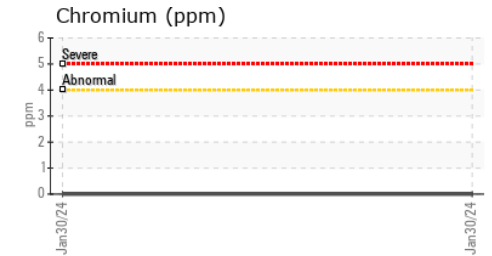
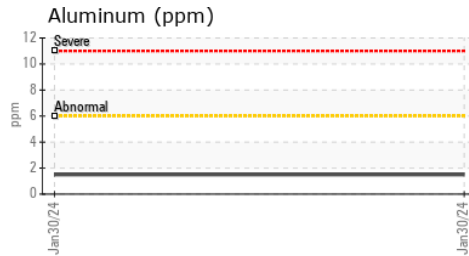
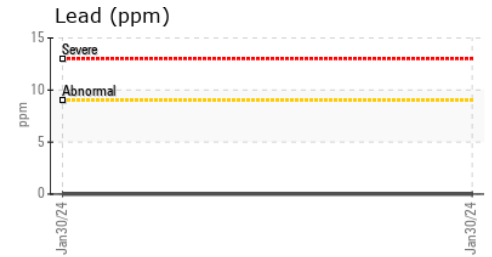
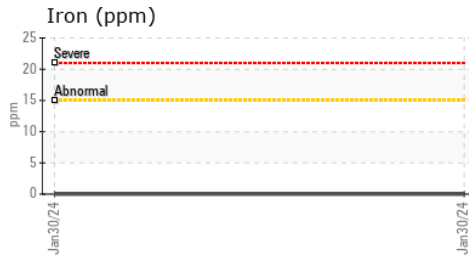
OIL ANALYSIS REPORT



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

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

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0877086
 Lab Number : 06077055
 Unique Number : 10859146
 Test Package : MOB 2

Received : 01 Feb 2024
 Tested : 02 Feb 2024
 Diagnosed : 02 Feb 2024 - Sean Felton

EDL NA Recips-Byron Center
 Byron Center Powerstation, 10310 South Kent Road
 Byron Center, MI
 US 49315
 Contact: Jake Ripke
 Jake.Ripke@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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