

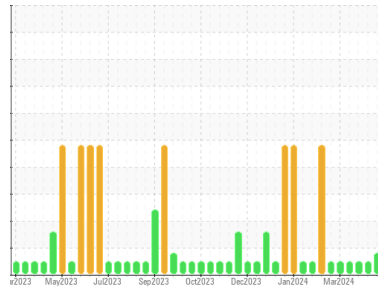


OIL ANALYSIS REPORT



Machine Id
BRCM02BE (S/N GZJ00357)
 Component
Biogas Engine
 Fluid
CHEVRON HDAX 9500 GAS ENGINE OIL 40 (--- GAL)

Sample Rating Trend



WEAR



DIAGNOSIS

▲ Recommendation

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

▲ Wear

The tin level is abnormal.

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		WC0760870	WC0760866	WC0760876
Sample Date	Client Info		12 Apr 2024	05 Apr 2024	29 Mar 2024
Machine Age	hrs	Client Info	74730	74609	74486
Oil Age	hrs	Client Info	245	124	0
Oil Changed	Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status			ABNORMAL	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	3	0	0
Chromium	ppm	ASTM D5185m >3	0	0	0
Nickel	ppm	ASTM D5185m	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >5	2	1	1
Lead	ppm	ASTM D5185m >8	<1	0	0
Copper	ppm	ASTM D5185m >5	3	<1	0
Tin	ppm	ASTM D5185m >3	▲ 4	2	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	8	7	8
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	9	8	6
Manganese	ppm	ASTM D5185m	1	<1	<1
Magnesium	ppm	ASTM D5185m	36	34	28
Calcium	ppm	ASTM D5185m	1886	1721	1686
Phosphorus	ppm	ASTM D5185m	330	294	292
Zinc	ppm	ASTM D5185m	394	359	345
Sulfur	ppm	ASTM D5185m	2283	1337	1770

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >180	143	70	23
Sodium	ppm	ASTM D5185m >20	2	1	<1
Potassium	ppm	ASTM D5185m >20	1	0	<1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0
Nitration	Abs/cm	*ASTM D7624	6.0	5.1	5.0
Sulfation	Abs/.1mm	*ASTM D7415	17.1	16.2	14.5

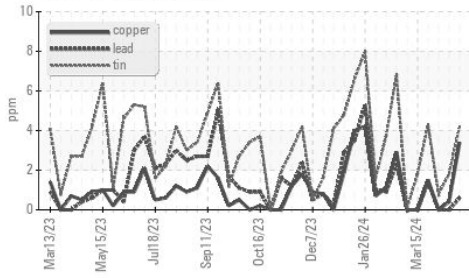
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	10.2	8.9	7.9
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	0.54	0.68	1.169
Base Number (BN)	mg KOH/g	ASTM D2896 5.4	4.79	4.86	5.57

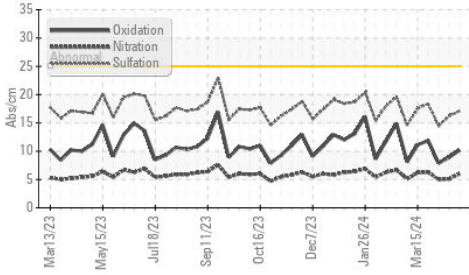


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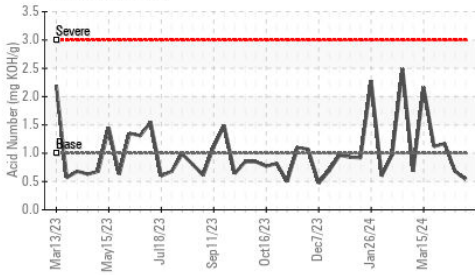
Non-ferrous Metals



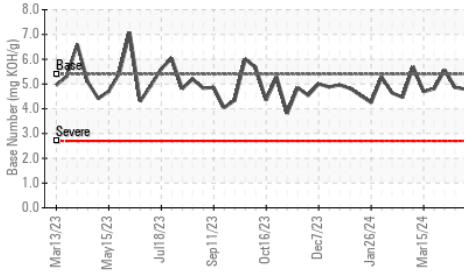
FT-IR (Direct Trend)



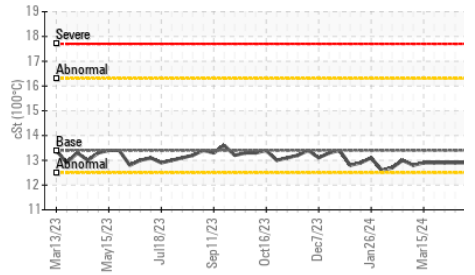
Acid Number



Base Number



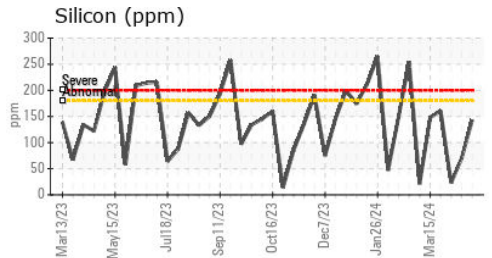
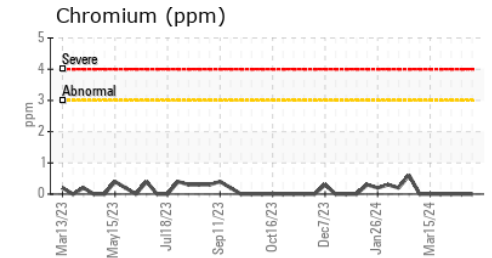
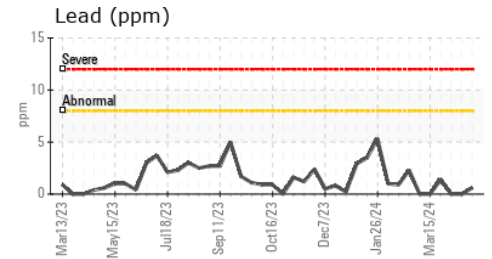
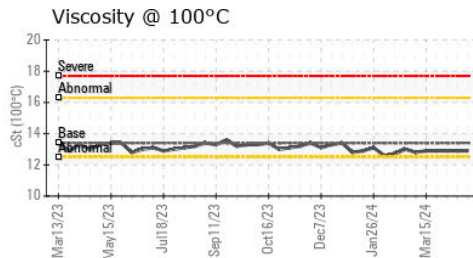
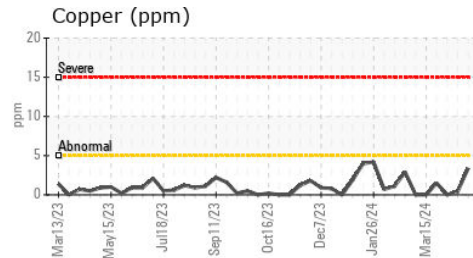
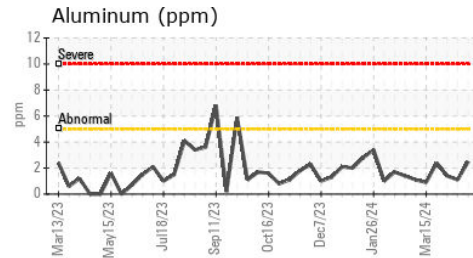
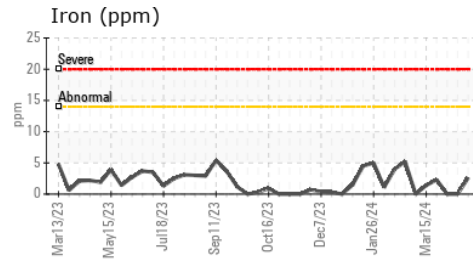
Viscosity @ 100°C



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	12.9	12.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0760870

Lab Number : 06150583

Unique Number : 10980661

Test Package : MOB 2

Received : 16 Apr 2024

Tested : 17 Apr 2024

Diagnosed : 18 Apr 2024 - Sean Felton

EDL NA Recips-Brown County

BROWN COUNTY POWER STATION, 9427 BEYERS RD

GEORGETOWN, OH

US 45121

Contact: MITCHELL BUTLER

Mitchell.Butler@edlenergy.com

T:

F:

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)