

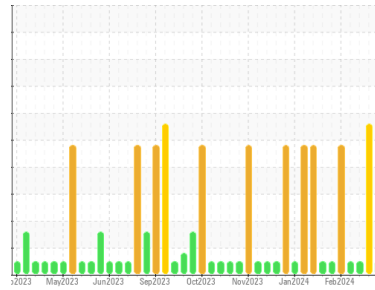


OIL ANALYSIS REPORT



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

Sample Rating Trend



NORMAL

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 acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	WC0760867	WC0760877	WC0760880
Sample Date	Client Info	05 Apr 2024	29 Mar 2024	21 Mar 2024
Machine Age	hrs	92545	92421	92235
Oil Age	hrs	22	451	265
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd
Sample Status		NORMAL	SEVERE	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	0	2	4
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	1	2	2
Lead	ppm ASTM D5185m >8	0	1	1
Copper	ppm ASTM D5185m >5	0	1	1
Tin	ppm ASTM D5185m >3	<1	▲ 4	4
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	7	11	13
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	7	10	11
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m	33	43	41
Calcium	ppm ASTM D5185m	1712	1775	1751
Phosphorus	ppm ASTM D5185m	284	320	328
Zinc	ppm ASTM D5185m	351	387	387
Sulfur	ppm ASTM D5185m	1243	2301	2274

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >180	36	▲ 211	163
Sodium	ppm ASTM D5185m >20	1	1	2
Potassium	ppm ASTM D5185m >20	0	0	2

INFRA-RED

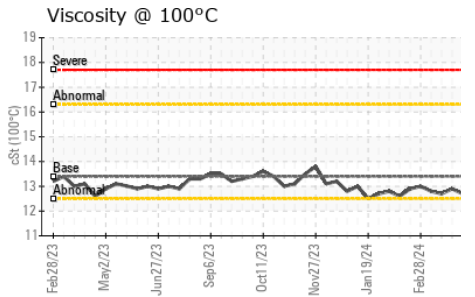
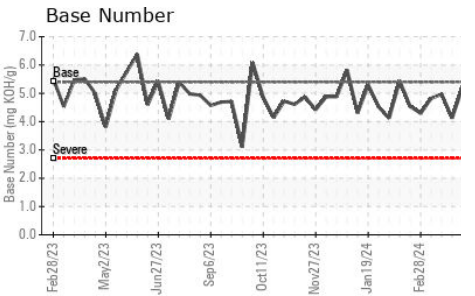
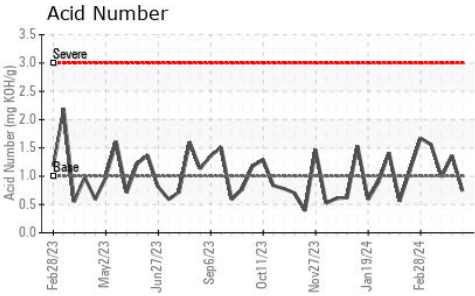
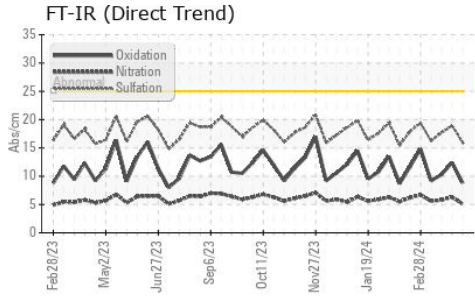
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0	0
Nitration	Abs/cm *ASTM D7624	5.1	6.3	5.8
Sulfation	Abs/.1mm *ASTM D7415	16.0	18.9	17.7

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414	8.8	12.4	10.3
Acid Number (AN)	mg KOH/g ASTM D8045 1.0	0.74	1.36	0.99
Base Number (BN)	mg KOH/g ASTM D2896 5.4	5.23	4.12	4.97



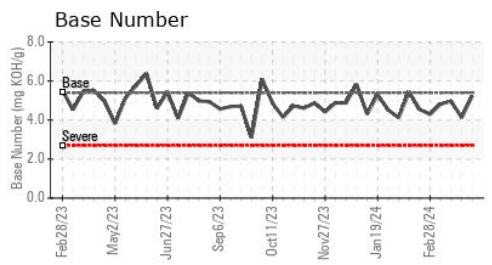
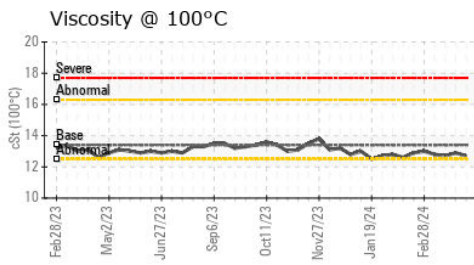
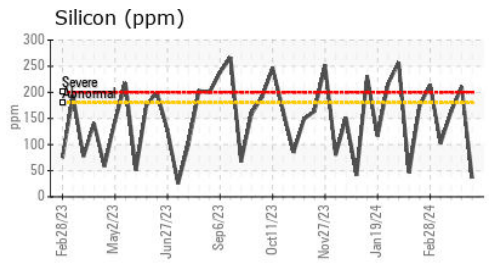
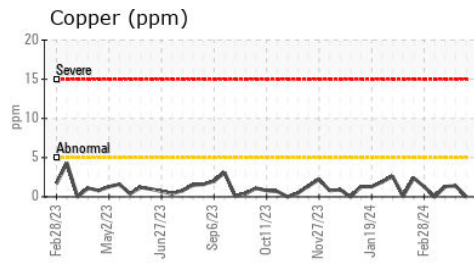
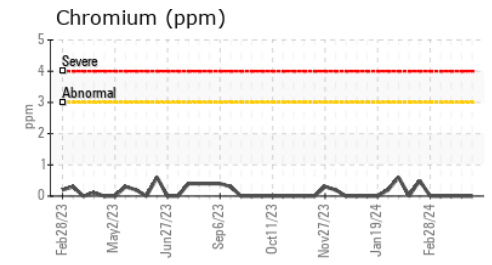
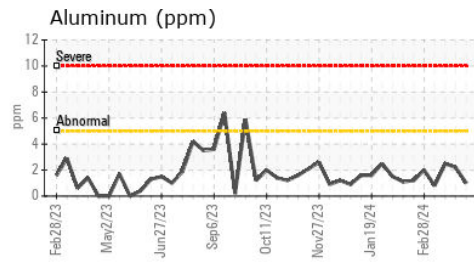
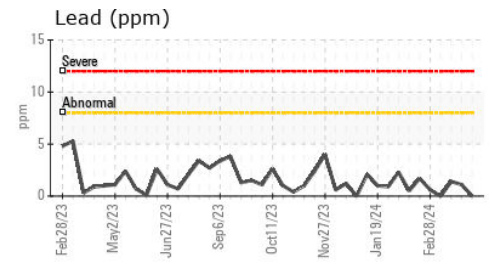
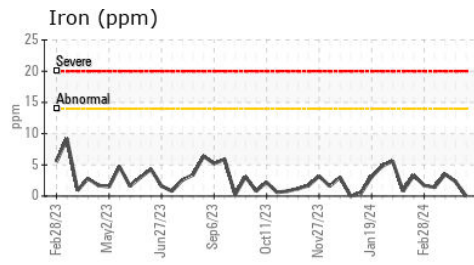
OIL ANALYSIS REPORT



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	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	12.7	12.9

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0760867
Lab Number : 06143250
Unique Number : 10968058
Test Package : MOB 2

Received : 09 Apr 2024
Tested : 10 Apr 2024
Diagnosed : 10 Apr 2024 - Jonathan Hester

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)