



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
Coopersville CAT 7 CPVM07BE
Component
Biogas Engine
Fluid
CHEVRON HDAX 9500 GAS ENGINE OIL 40 (125 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0871430	WC0871577	WC0871570
Sample Date		Client Info		12 Jul 2024	14 May 2024	02 May 2024
Machine Age	hrs	Client Info		110180	108841	108556
Oil Age	hrs	Client Info		1	497	212
Filter Age	hrs	Client Info		1	497	212
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184		15	---	---
Iron	ppm	ASTM D5185m	>14	<1	<1	0
Chromium	ppm	ASTM D5185m	>3	<1	0	<1
Nickel	ppm	ASTM D5185m		<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	3	2	2
Lead	ppm	ASTM D5185m	>8	<1	<1	<1
Copper	ppm	ASTM D5185m	>5	2	2	<1
Tin	ppm	ASTM D5185m	>3	<1	▲ 4	▲ 4
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

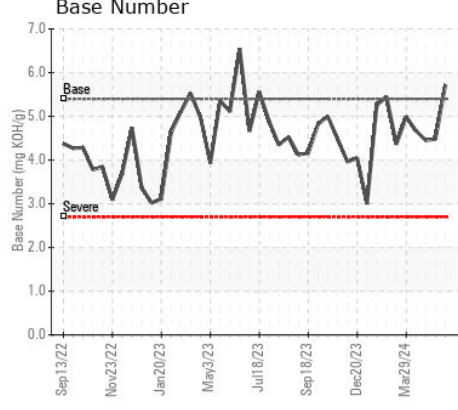
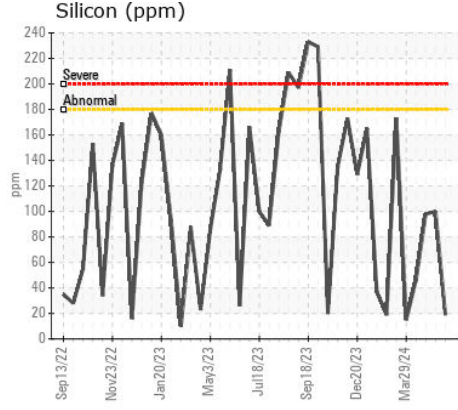
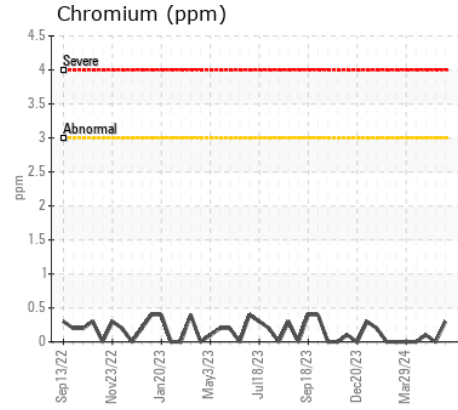
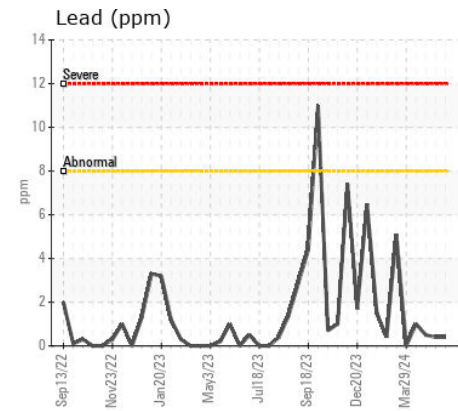
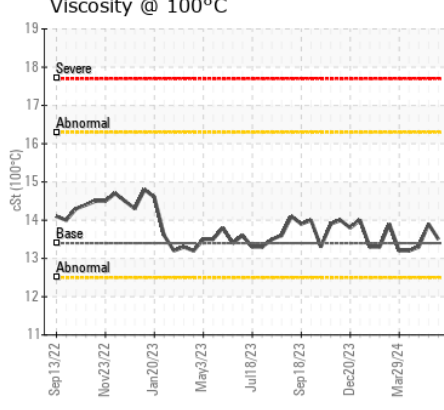
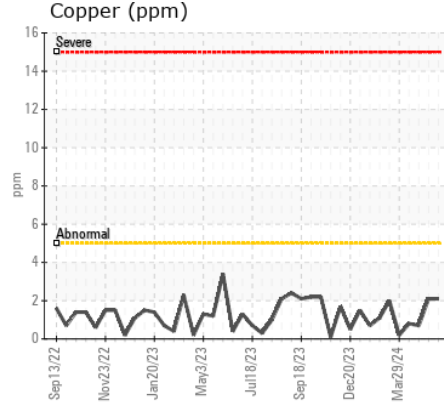
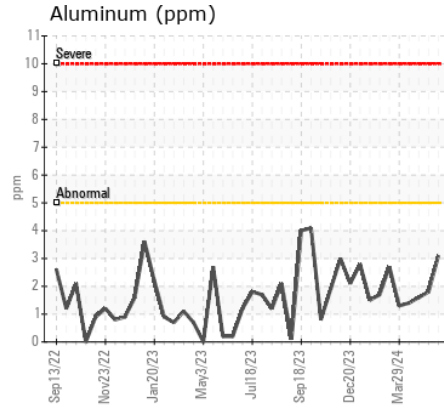
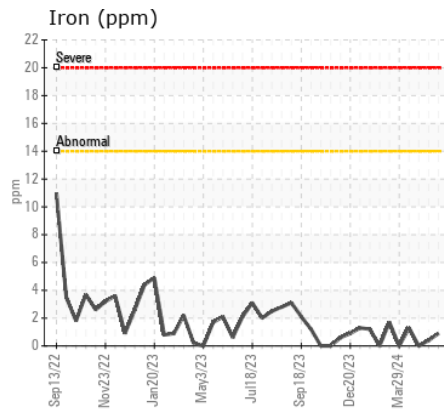
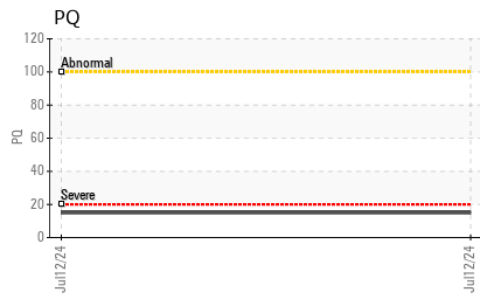
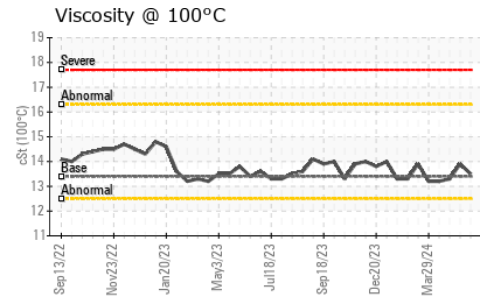
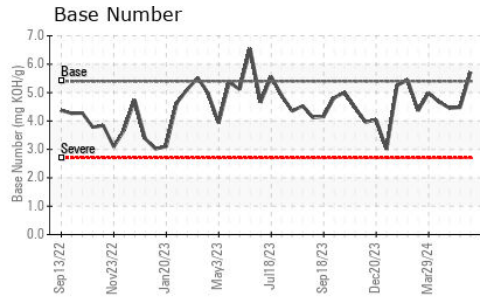
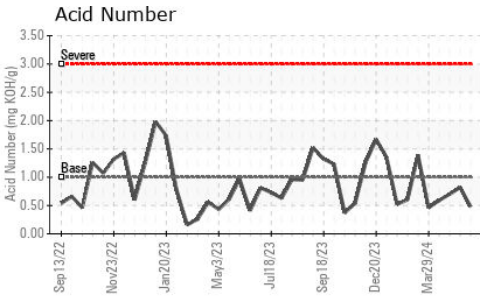
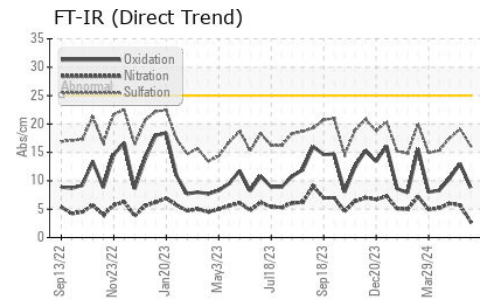
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>180	19	100	98
Potassium	ppm	ASTM D5185m	>20	2	0	<1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624		2.8	5.7	6.0
Sulfation	Abs/.1mm	*ASTM D7415		16.2	19.1	17.5
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual		NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m	>20	0	<1	0
Boron	ppm	ASTM D5185m		161	75	3
Barium	ppm	ASTM D5185m		<1	0	<1
Molybdenum	ppm	ASTM D5185m		5	4	1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		25	0	5
Calcium	ppm	ASTM D5185m		1440	1648	1791
Phosphorus	ppm	ASTM D5185m		413	343	270
Zinc	ppm	ASTM D5185m		523	412	320
Sulfur	ppm	ASTM D5185m		3161	2960	2392
Oxidation	Abs/.1mm	*ASTM D7414		8.8	13.0	10.4
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	0.48	0.82	0.70
Base Number (BN)	mg KOH/g	ASTM D2896	5.4	5.72	4.48	4.45
Visc @ 100°C	cSt	ASTM D445	13.4	13.5	13.9	13.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0871430 **Received** : 17 Jul 2024
Lab Number : 06239307 **Tested** : 18 Jul 2024
Unique Number : 11128141 **Diagnosed** : 19 Jul 2024 - Sean Felton
Test Package : MOB 2 (Additional Tests: PQ)

EDL NA Recips-Coopersville
 Coopersville Powerstation, 15362 68th Avenue
 Coopersville, MI
 US 49404
 Contact: Daniel Young
 daniel.young@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)