MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
Coopersville CAT 3 CPVM03BE
Component
Biogas Engine
Fluid
CHEVRON HDAX 9500 GAS ENGINE OIL 40 (105 GAL)

RECOMMENDATION

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

WEAR

The tin level is abnormal.

CONTAMINATION

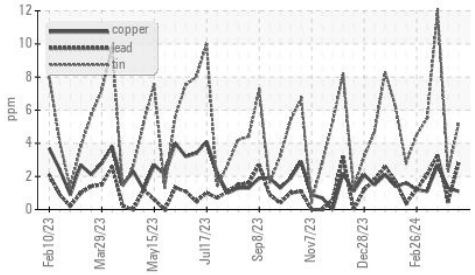
There is no indication of any contamination in the oil.

FLUID CONDITION

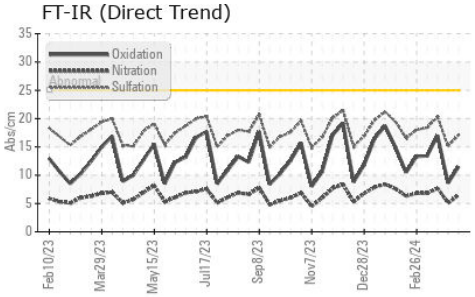
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0871558	WC0871587	WC0871502
Sample Date		Client Info		03 Apr 2024	21 Mar 2024	13 Mar 2024
Machine Age	hrs	Client Info		23506	23200	23021
Oil Age	hrs	Client Info		306	1	831
Filter Age	hrs	Client Info		306	1	831
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				ABNORMAL	NORMAL	SEVERE
Iron	ppm	ASTM D5185m	>15	2	<1	5
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m		<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>6	2	2	4
Lead	ppm	ASTM D5185m	>9	3	<1	3
Copper	ppm	ASTM D5185m	>6	1	1	3
Tin	ppm	ASTM D5185m	>4	▲ 5	2	▲ 12
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>181	103	44	▲ 304
Potassium	ppm	ASTM D5185m	>20	3	4	2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>.11	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0.1
Nitration	Abs/cm	*ASTM D7624		6.5	5.1	7.7
Sulfation	Abs/.1mm	*ASTM D7415		17.1	15.1	20.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	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	>.11	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>21	<1	2	<1
Boron	ppm	ASTM D5185m		5	3	4
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	3	4
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		31	8	14
Calcium	ppm	ASTM D5185m		1855	1615	2792
Phosphorus	ppm	ASTM D5185m		299	268	439
Zinc	ppm	ASTM D5185m		362	306	556
Sulfur	ppm	ASTM D5185m		2152	1844	3203
Oxidation	Abs/.1mm	*ASTM D7414		11.5	8.6	17.0
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	1.08	0.38	1.84
Base Number (BN)	mg KOH/g	ASTM D2896	5.4	4.20	5.20	4.20
Visc @ 100°C	cSt	ASTM D445	13.4	13.6	13.3	14.0

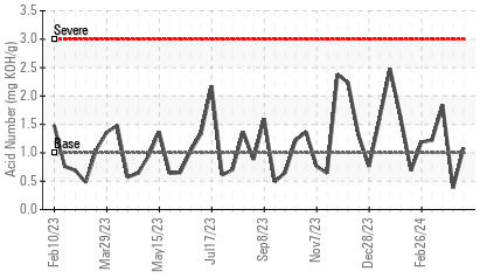
Non-ferrous Metals



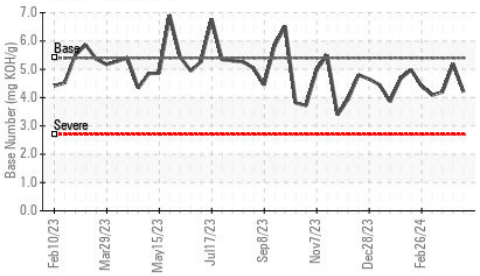
FT-IR (Direct Trend)



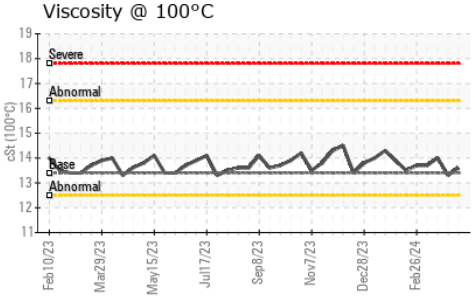
Acid Number



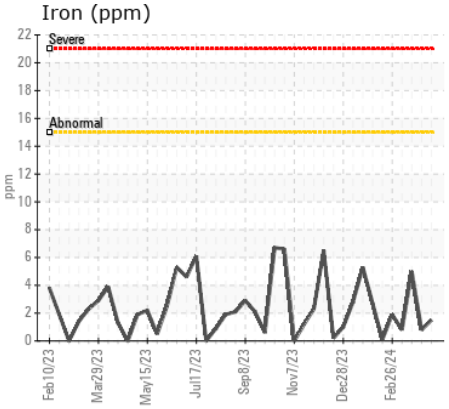
Base Number



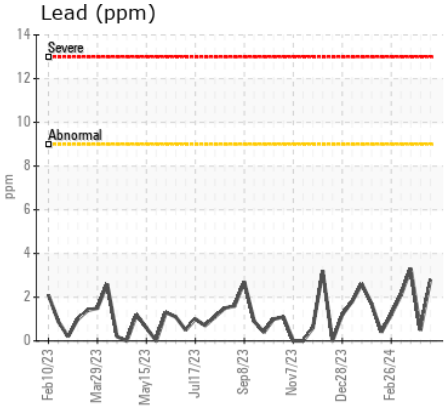
Viscosity @ 100°C



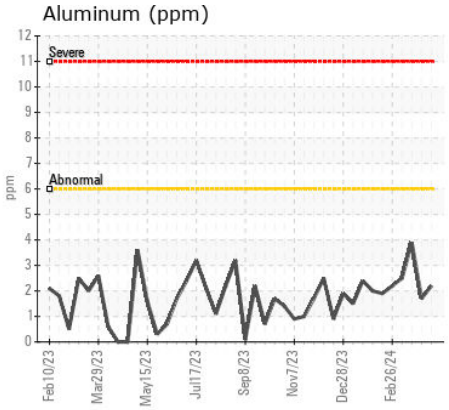
Iron (ppm)



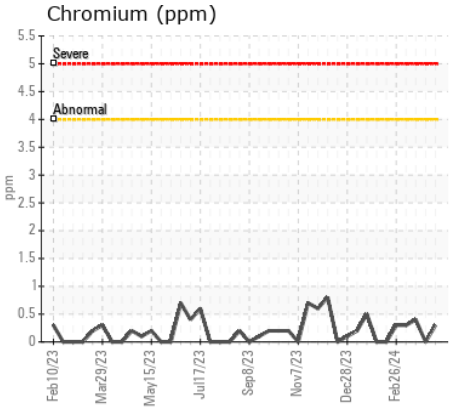
Lead (ppm)



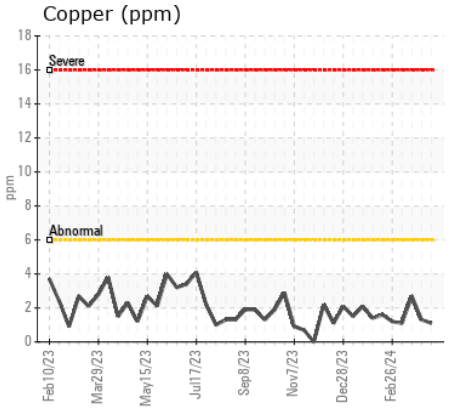
Aluminum (ppm)



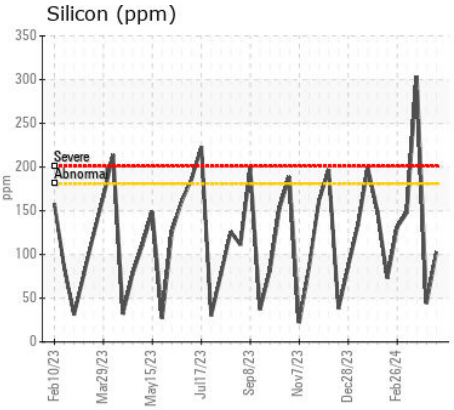
Chromium (ppm)



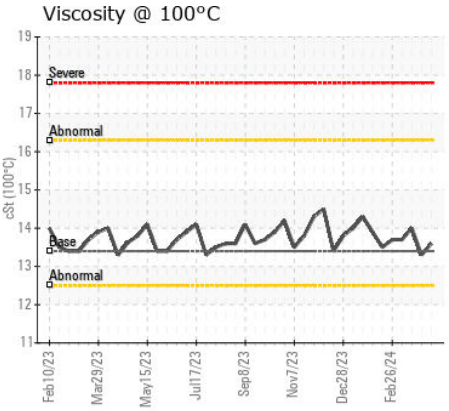
Copper (ppm)



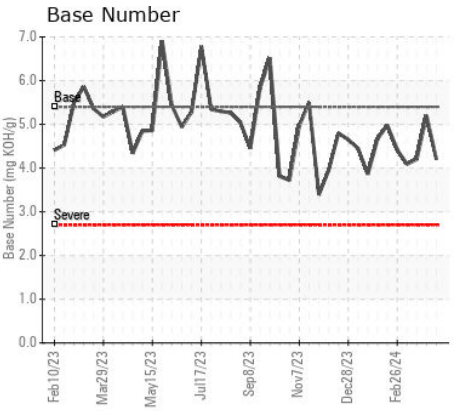
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0871558
Lab Number : 06147526
Unique Number : 10977604
Test Package : MOB 2

Received : 12 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 16 Apr 2024 - Sean Felton

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