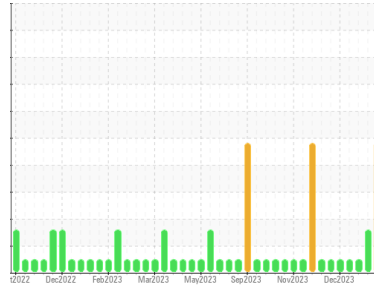




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Machine Id  
**MTNM01BE**  
Component  
**Biogas Engine**  
Fluid  
**SHELL SHELL MYSELLA S3 N 40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Elemental level of silicon (Si) above normal.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0775302</b>	WC0775295	WC0775294
Sample Date	Client Info		<b>08 Jan 2024</b>	03 Jan 2024	26 Dec 2023
Machine Age	hrs	Client Info	<b>40558</b>	40454	40277
Oil Age	hrs	Client Info	<b>736</b>	632	455
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status			<b>SEVERE</b>	ABNORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>15	<b>5</b>	7	7
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>6	<b>4</b>	3	3
Lead	ppm	ASTM D5185m	>9	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>6	<b>1</b>	1	1
Tin	ppm	ASTM D5185m	>4	<b>5</b>	4	3
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>3</b>	3	3
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>3</b>	3	3
Manganese	ppm	ASTM D5185m		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m		<b>21</b>	20	17
Calcium	ppm	ASTM D5185m		<b>1830</b>	1818	1661
Phosphorus	ppm	ASTM D5185m		<b>346</b>	359	391
Zinc	ppm	ASTM D5185m		<b>491</b>	470	432
Sulfur	ppm	ASTM D5185m		<b>3442</b>	3510	3597

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>181	<b>237</b>	198	174
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1

## INFRA-RED

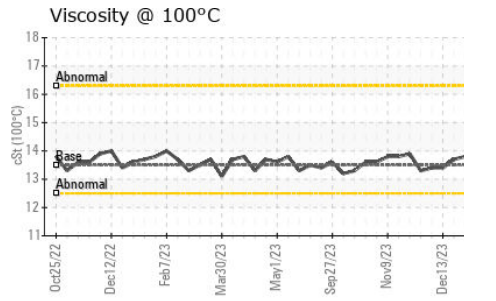
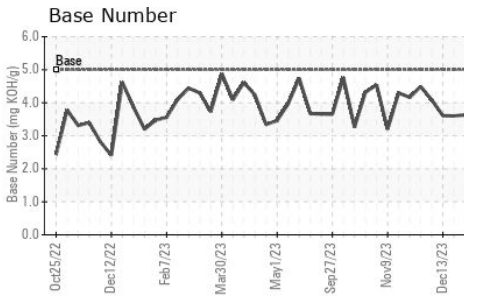
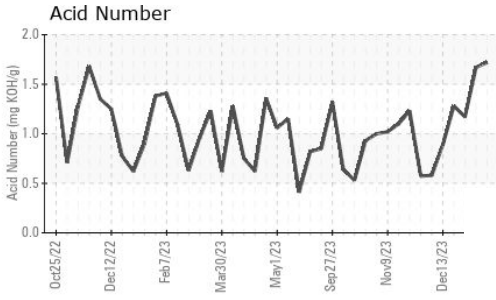
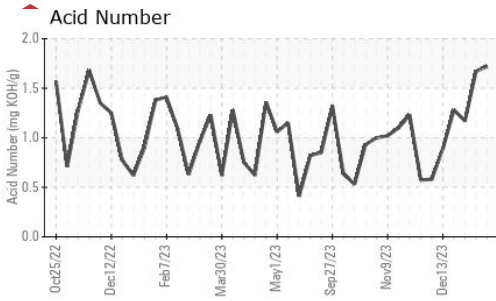
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.8</b>	5.6	5.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.3</b>	23.9	22.8

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.9</b>	17.7	16.5
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.72</b>	1.67	1.17
Base Number (BN)	mg KOH/g	ASTM D2896	5	<b>3.33</b>	3.18	3.63



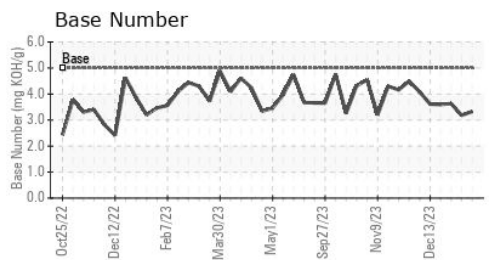
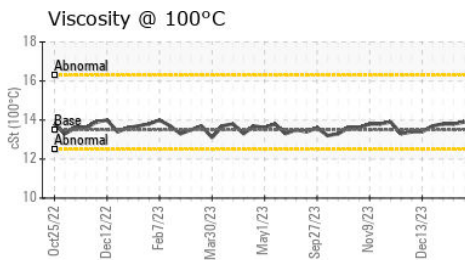
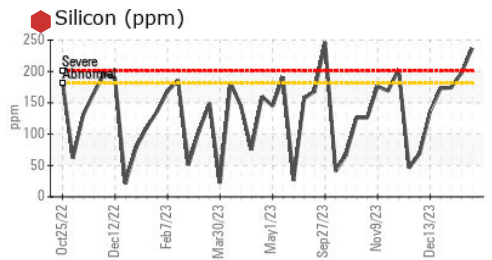
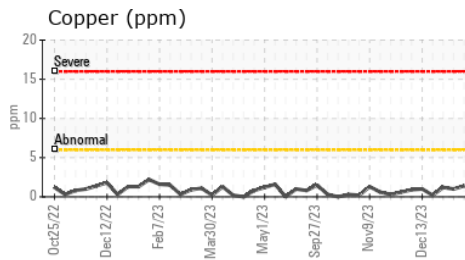
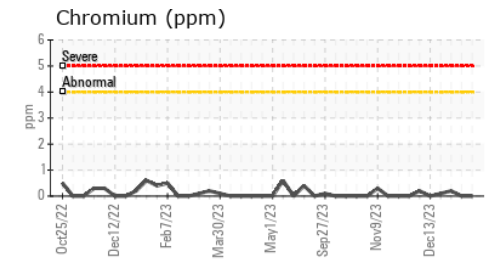
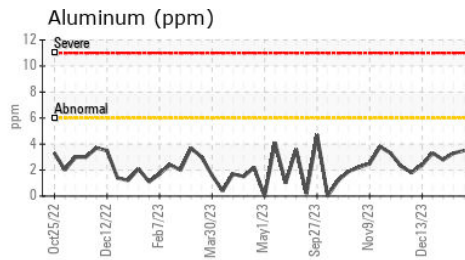
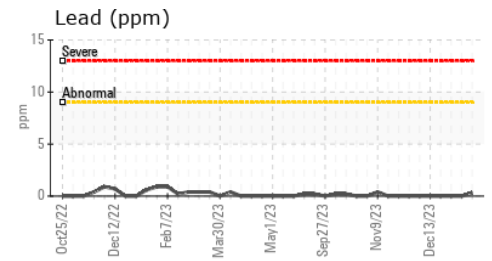
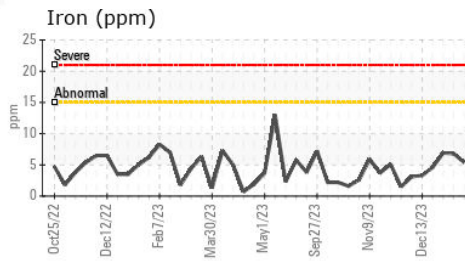
# OIL ANALYSIS REPORT



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.5	13.9	13.8

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0775302      Recieved : 11 Jan 2024  
 Lab Number : 06058309      Diagnosed : 12 Jan 2024  
 Unique Number : 10829691      Diagnostician : Sean Felton  
 Test Package : MOB 2

**EDL NA Recips-Morgantown**  
 Morgantown Powerstation, 950 Shiloh  
 Morgantown, PA  
 US 19543  
 Contact: ARON GUNN  
 aron.gunn@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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F: