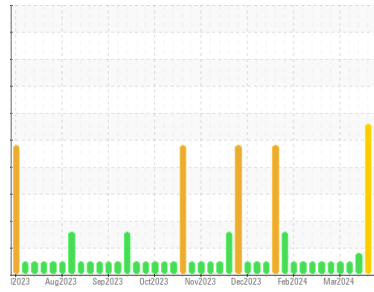




# OIL ANALYSIS REPORT

Sample Rating Trend



**DIRT**



Machine Id  
**SJNM03BE**  
 Component  
**Biogas Engine**  
 Fluid  
**CHEVRON HDAX 9500 GAS ENGINE OIL 40 (--- GAL)**

## DIAGNOSIS

- Recommendation**  
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.
- Wear**  
The tin level is abnormal. All other 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>WC0865739</b>	WC0865695	WC0865726
Sample Date	Client Info		<b>16 Apr 2024</b>	11 Apr 2024	04 Apr 2024
Machine Age	hrs	Client Info	<b>116109</b>	115822	115822
Oil Age	hrs	Client Info	<b>1025</b>	905	738
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status			<b>SEVERE</b>	SEVERE	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method		<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 >14	<b>3</b>	4	1
Chromium	ppm	ASTM D5185m >3	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >5	<b>1</b>	1	1
Lead	ppm	ASTM D5185m >8	<b>2</b>	1	1
Copper	ppm	ASTM D5185m >5	<b>4</b>	6	5
Tin	ppm	ASTM D5185m >3	<b>5</b>	2	4
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>4</b>	1	2
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>5</b>	5	4
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>26</b>	20	27
Calcium	ppm	ASTM D5185m	<b>1966</b>	1837	1834
Phosphorus	ppm	ASTM D5185m	<b>293</b>	246	265
Zinc	ppm	ASTM D5185m	<b>360</b>	297	347
Sulfur	ppm	ASTM D5185m	<b>2482</b>	2106	1864

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >180	<b>231</b>	209	174
Sodium	ppm	ASTM D5185m >20	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m >20	<b>2</b>	2	3

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	<b>6.1</b>	6.1	5.4
Sulfation	Abs/.1mm	*ASTM D7415	<b>18.7</b>	18.4	20.4

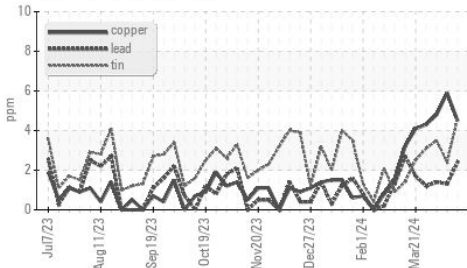
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	<b>12.0</b>	11.5	10.1
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	<b>1.16</b>	0.998	0.89
Base Number (BN)	mg KOH/g	ASTM D2896 5.4	<b>4.05</b>	4.20	15.25

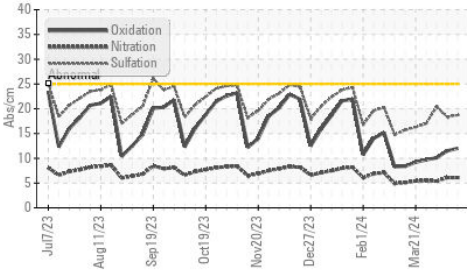


# OIL ANALYSIS REPORT

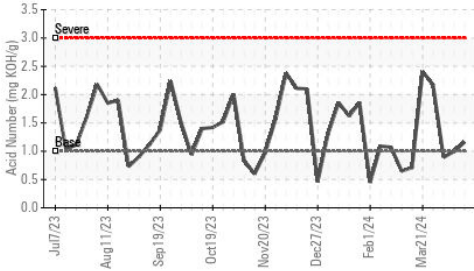
## Non-ferrous Metals



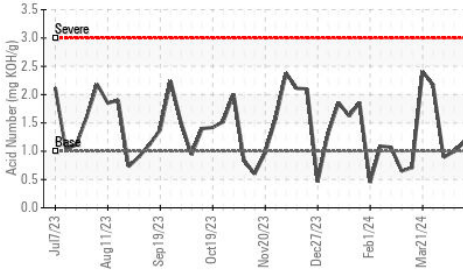
## FT-IR (Direct Trend)



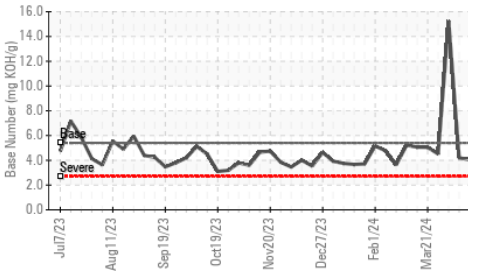
## Acid Number



## Acid Number



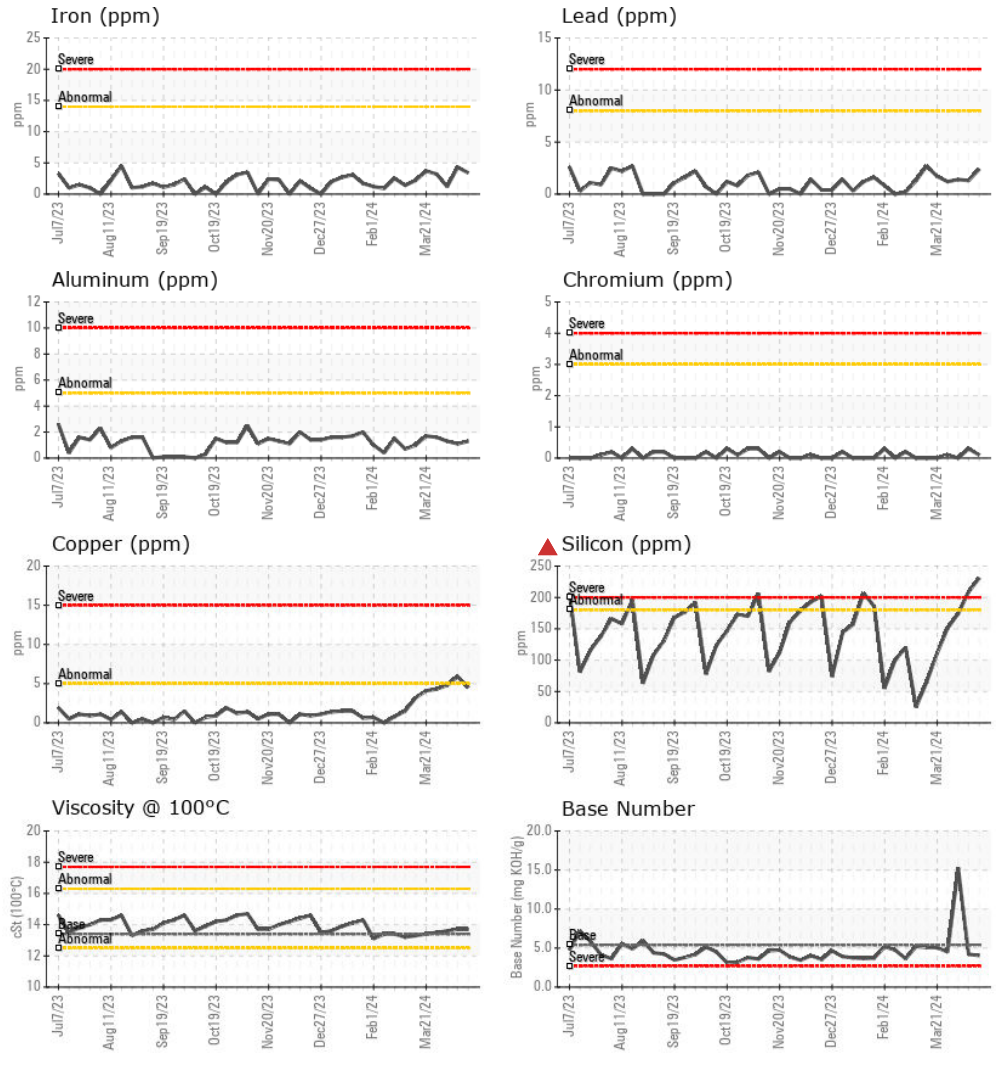
## Base Number



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	13.7	13.6

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0865739  
 Lab Number : 06157084  
 Unique Number : 10992507  
 Test Package : MOB 2

Received : 22 Apr 2024  
 Tested : 23 Apr 2024  
 Diagnosed : 25 Apr 2024 - Jonathan Hester

EDL NA Recips-South Jordan  
 South Jordan Powerstation, 10473 S. Bacchus Hwy.  
 South Jordan, UT  
 US 84095

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)

Contact: Aaron Klein  
 aaron.klein@edlenergy.com

T:  
 F: