

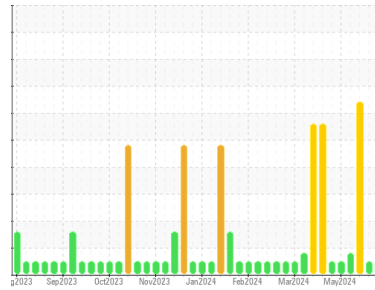


# OIL ANALYSIS REPORT



Machine Id  
**SJNM03BE**  
 Component  
**Biogas Engine**  
 Fluid  
**CHEVRON HDAX 9500 GAS ENGINE OIL 40 (--- 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 suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0865736</b>	WC0865717	WC0865734
Sample Date	Client Info		<b>13 Jun 2024</b>	07 Jun 2024	30 May 2024
Machine Age	hrs	Client Info	<b>117375</b>	117236	117116
Oil Age	hrs	Client Info	<b>259</b>	120	1007
Oil Changed	Client Info		<b>Not Chngd</b>	Not Chngd	Changed
Sample Status			<b>NORMAL</b>	NORMAL	SEVERE

## 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
PQ	ASTM D8184		<b>15</b>	---	---
Iron	ppm	ASTM D5185m >14	<b>&lt;1</b>	1	0
Chromium	ppm	ASTM D5185m >3	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >5	<b>2</b>	2	2
Lead	ppm	ASTM D5185m >8	<b>1</b>	1	▲ 10
Copper	ppm	ASTM D5185m >5	<b>2</b>	1	3
Tin	ppm	ASTM D5185m >3	<b>2</b>	2	▲ 5
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>2</b>	0	0
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>1</b>	2	4
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>12</b>	11	21
Calcium	ppm	ASTM D5185m	<b>1826</b>	1778	1965
Phosphorus	ppm	ASTM D5185m	<b>281</b>	268	286
Zinc	ppm	ASTM D5185m	<b>336</b>	337	367
Sulfur	ppm	ASTM D5185m	<b>2251</b>	1931	2337

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >180	<b>88</b>	55	▲ 238
Sodium	ppm	ASTM D5185m >20	<b>2</b>	0	<1
Potassium	ppm	ASTM D5185m >20	<b>3</b>	2	0

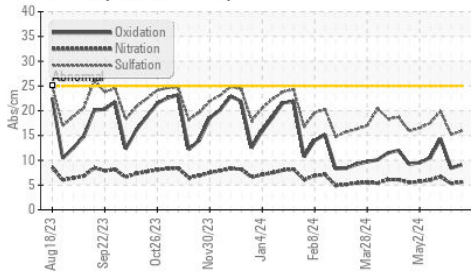
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	<b>5.6</b>	5.3	6.7
Sulfation	Abs/.1mm	*ASTM D7415	<b>15.9</b>	15.2	19.9

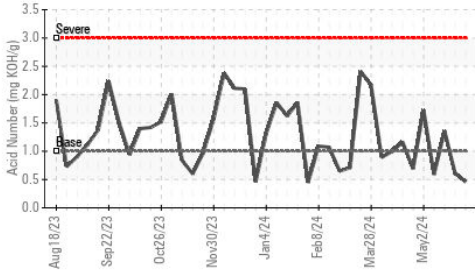


# OIL ANALYSIS REPORT

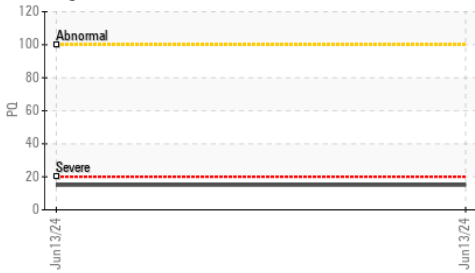
FT-IR (Direct Trend)



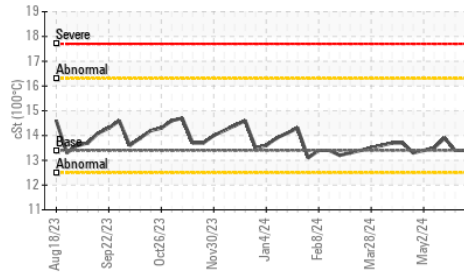
Acid Number



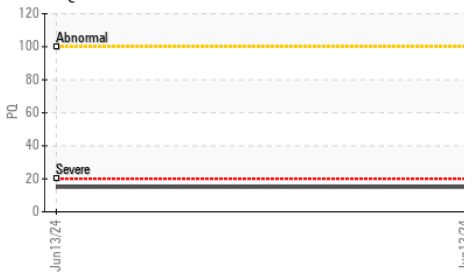
PQ



Viscosity @ 100°C



PQ



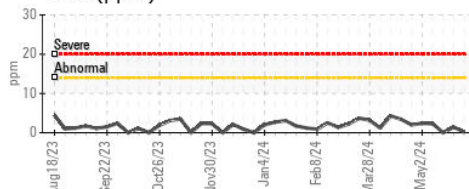
FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	*ASTM D7414	<b>9.1</b>	8.4	14.3
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>1.0</b>	0.61	1.36
Base Number (BN)	mg KOH/g	ASTM D2896	<b>5.4</b>	5.07	4.31

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	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG	NEG

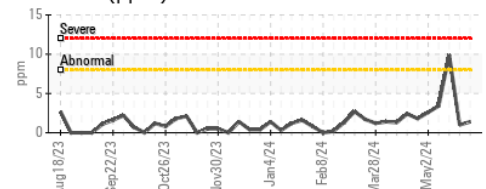
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	<b>13.4</b>	13.4	13.9

## GRAPHS

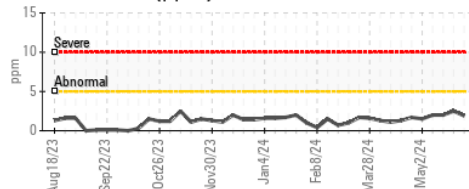
Iron (ppm)



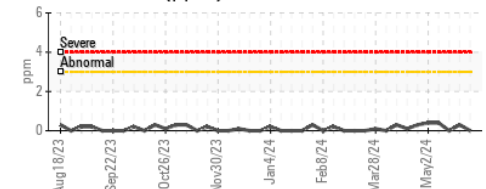
Lead (ppm)



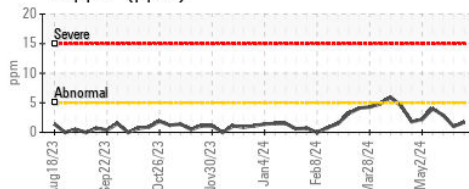
Aluminum (ppm)



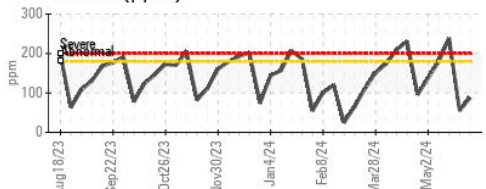
Chromium (ppm)



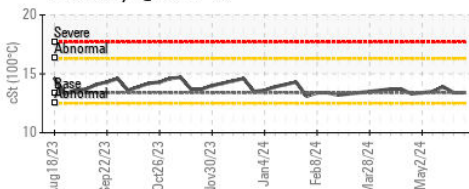
Copper (ppm)



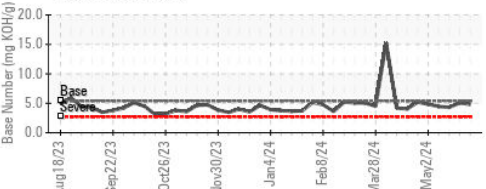
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : WC0865736  
 Lab Number : 06211929  
 Unique Number : 11084793  
 Test Package : MOB 2 ( Additional Tests: PQ )

Received : 17 Jun 2024  
 Tested : 21 Jun 2024  
 Diagnosed : 21 Jun 2024 - Jonathan Hester

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

Contact: Aaron Klein  
 aaron.klein@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)

T:  
 F: