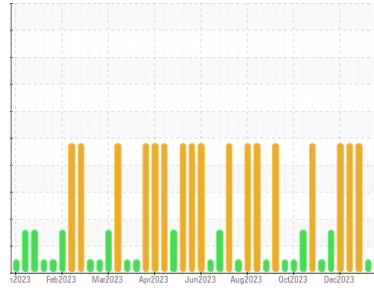




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
SAVM02BE (S/N GZJ00544)
 Component
Biogas Engine
 Fluid
CHEVRON HDAX 9500 GAS ENGINE OIL 40 (141 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		WC0788901	WC0788898	WC0788896
Sample Date	Client Info		20 Feb 2024	07 Feb 2024	23 Jan 2024
Machine Age	hrs	Client Info	76850	76552	76208
Oil Age	hrs	Client Info	575	277	778
Oil Changed	Client Info		Not Chngd	Not Chngd	Changed
Sample Status			SEVERE	NORMAL	SEVERE

CONTAMINATION

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

WEAR METALS

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

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		3	0	2
Barium	ppm	ASTM D5185m		5	0	0
Molybdenum	ppm	ASTM D5185m		7	5	4
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		10	7	17
Calcium	ppm	ASTM D5185m		1502	1900	1726
Phosphorus	ppm	ASTM D5185m		223	276	294
Zinc	ppm	ASTM D5185m		292	351	366
Sulfur	ppm	ASTM D5185m		1809	1934	2218

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>181	233	154	316
Sodium	ppm	ASTM D5185m		0	<1	2
Potassium	ppm	ASTM D5185m	>20	2	<1	4

INFRA-RED

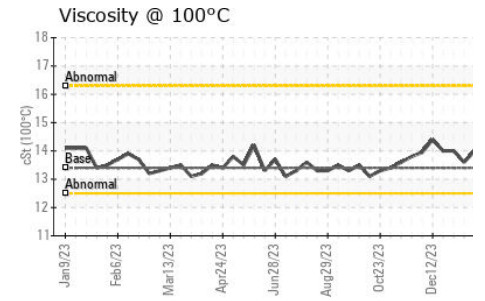
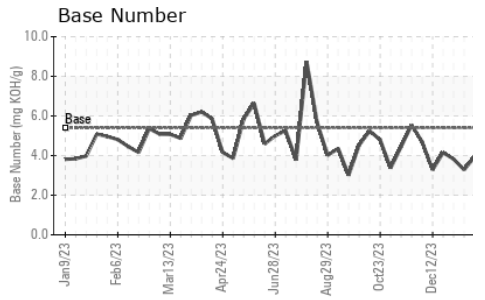
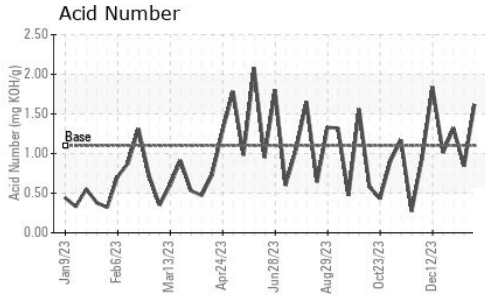
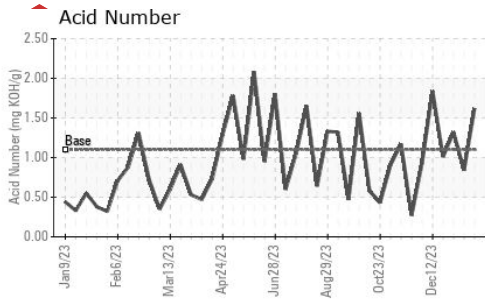
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	7.5	6.3	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	18.1	21.0

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.4	12.4	16.0
Acid Number (AN)	mg KOH/g	ASTM D8045	1.1	1.62	0.84	1.32
Base Number (BN)	mg KOH/g	ASTM D2896	5.4	3.94	3.28	3.82



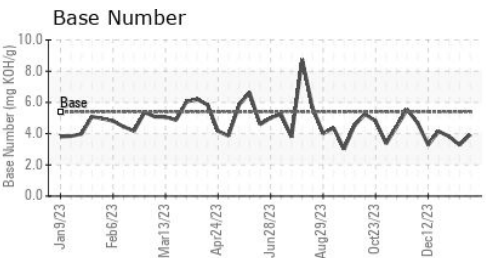
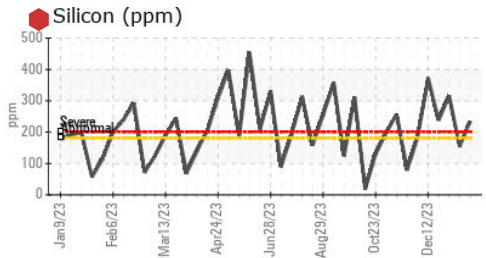
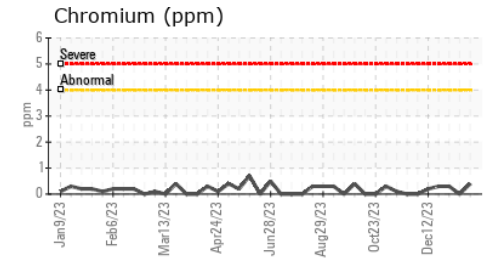
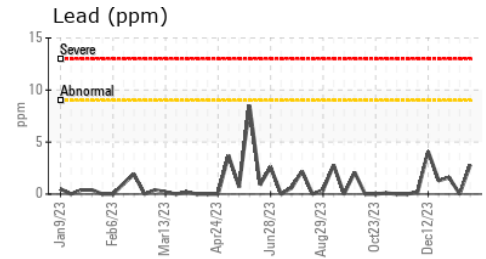
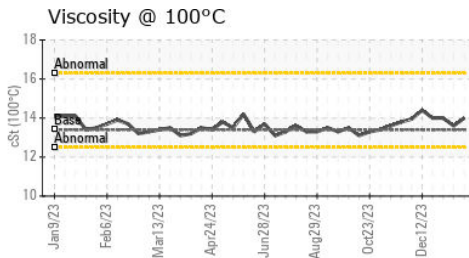
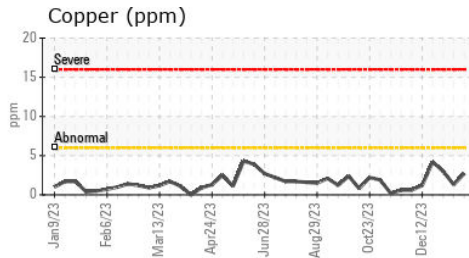
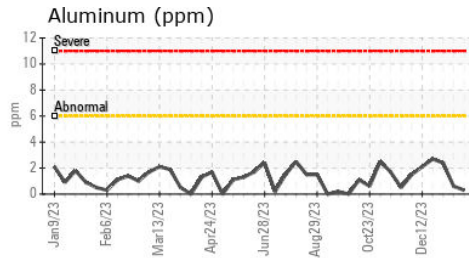
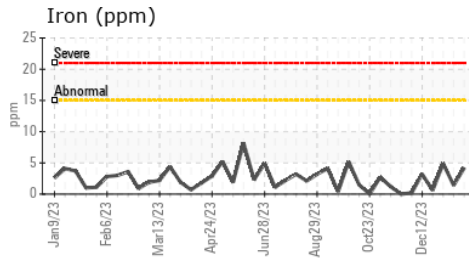
OIL ANALYSIS REPORT



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	13.4	14.0	13.6	14.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0788901
Lab Number : 06097898
Unique Number : 10896128
Test Package : MOB 2

Received : 22 Feb 2024
Tested : 23 Feb 2024
Diagnosed : 25 Feb 2024 - Don Baldrige

EDL NA Recips-Sand Valley
 SAND VALLEY POWER STATION, 3345 COUNTY ROAD 209
 COLLINSVILLE, AL
 US 35961

Contact: BRANDON PEYTON
 brandon.peyton@energydi.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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