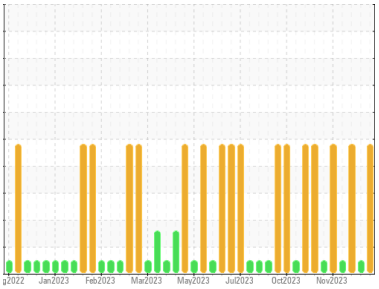
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
SAVM01BE (S/N GZJ00645)
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		**WC0788902**	WC0788899	WC0788894
Sample Date		Client Info		**20 Feb 2024**	07 Feb 2024	10 Jan 2024
Machine Age	hrs	Client Info		**1114565**	1114267	1113764
Oil Age	hrs	Client Info		**511**	213	568
Oil Changed		Client Info		**Not Changd**	Not Changd	Not Changd
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	**6**	2	3
Chromium	ppm	ASTM D5185m	>4	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	1
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	**4**	0	1
Copper	ppm	ASTM D5185m	>6	**4**	<1	4
Tin	ppm	ASTM D5185m	>4	**3**	<1	3
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**3**	0	0
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		**14**	8	19
Calcium	ppm	ASTM D5185m		**1487**	1871	1638
Phosphorus	ppm	ASTM D5185m		**227**	273	275
Zinc	ppm	ASTM D5185m		**293**	346	362
Sulfur	ppm	ASTM D5185m		**1793**	1882	2337

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>181	**215**	132	216
Sodium	ppm	ASTM D5185m		**0**	<1	4
Potassium	ppm	ASTM D5185m	>20	**4**	<1	4

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0	0
Nitration	Abs/cm	*ASTM D7624	>20	**6.9**	6.0	5.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.5**	17.1	19.0

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.1**	11.1	11.9
Acid Number (AN)	mg KOH/g	ASTM D8045	1.1	**1.15**	0.25	0.68
Base Number (BN)	mg KOH/g	ASTM D2896	5.4	**4.27**	5.14	4.26

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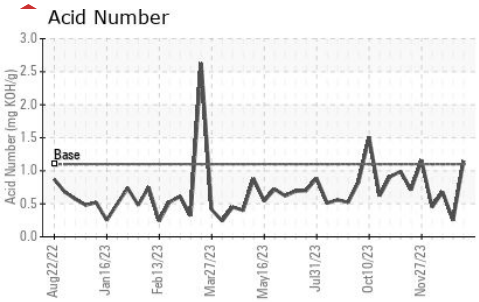
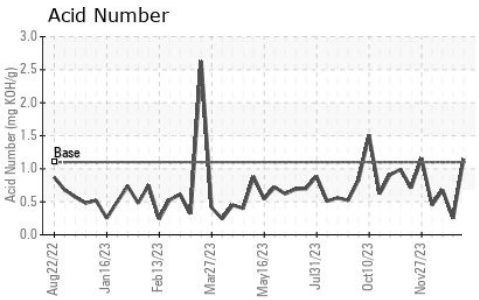
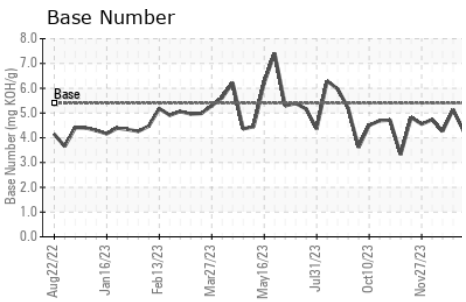
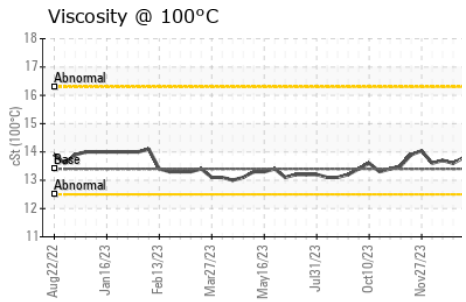




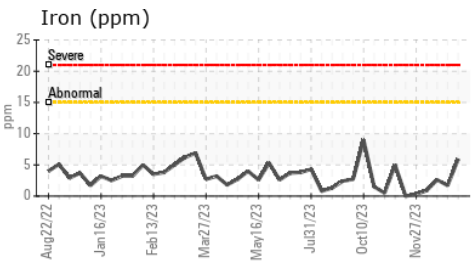


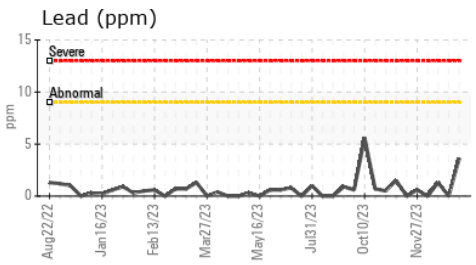


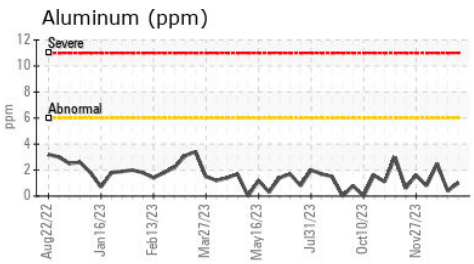
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

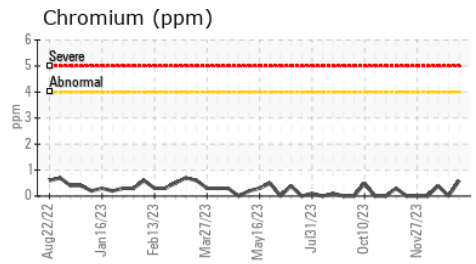
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.4	**13.8**	13.6	13.7

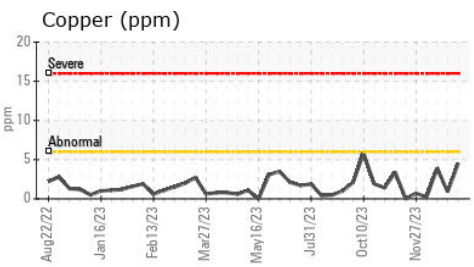
GRAPHS

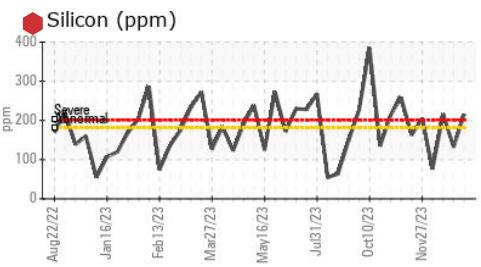


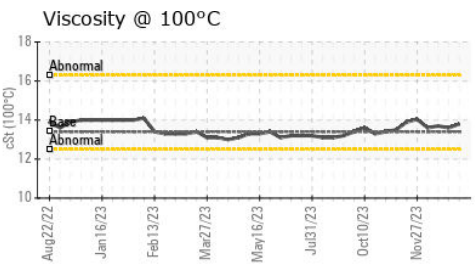


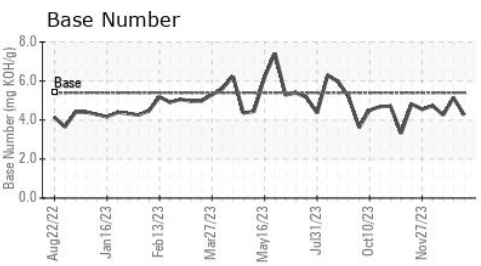












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0788902
Lab Number : 06097896
Unique Number : 10896126
Test Package : MOB 2

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

EDL NA Recips-Sand Valley
SAND VALLEY POWER STATION, 3345 COUNTY ROAD 209
COLLINSVILLE, AL
US 35961
Contact: BRANDON PEYTON
brandon.peyton@energydi.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)