

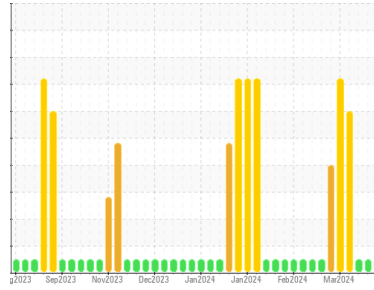


OIL ANALYSIS REPORT



Machine Id
WVTM01BE
 Component
Biogas Engine
 Fluid
MOBIL Pegasus™ 605 Ultra 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			WC0895555	WC0895533	WC0895531
Sample Date	Client Info			29 Mar 2024	25 Mar 2024	22 Mar 2024
Machine Age	hrs	Client Info		115094	115005	114928
Oil Age	hrs	Client Info		262	173	96
Oil Changed	Client Info			Not Chngd	Not Chngd	Not Chngd
Sample Status				NORMAL	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>14	3	4	4
Chromium	ppm	ASTM D5185m	>3	0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	2	2	2
Lead	ppm	ASTM D5185m	>8	0	0	<1
Copper	ppm	ASTM D5185m	>5	<1	<1	<1
Tin	ppm	ASTM D5185m	>3	2	1	2
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		66	98	118
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	1	1
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		11	17	17
Calcium	ppm	ASTM D5185m		1635	1569	1541
Phosphorus	ppm	ASTM D5185m		386	399	422
Zinc	ppm	ASTM D5185m		550	550	531
Sulfur	ppm	ASTM D5185m		5269	4631	4796

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>180	101	70	51
Sodium	ppm	ASTM D5185m	>20	1	<1	2
Potassium	ppm	ASTM D5185m	>20	0	1	<1

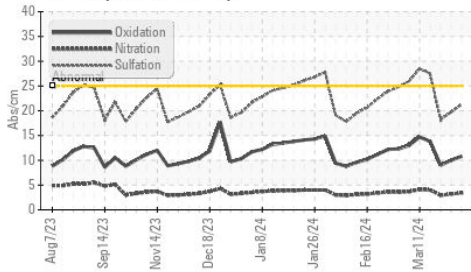
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624		3.4	3.2	2.9
Sulfation	Abs/.1mm	*ASTM D7415		21.3	19.7	18.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		10.8	10.0	9.0
Acid Number (AN)	mg KOH/g	ASTM D8045		1.94	1.65	1.42
Base Number (BN)	mg KOH/g	ASTM D2896	5.7	2.83	3.82	4.28

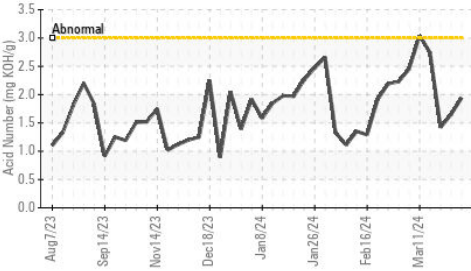


OIL ANALYSIS REPORT

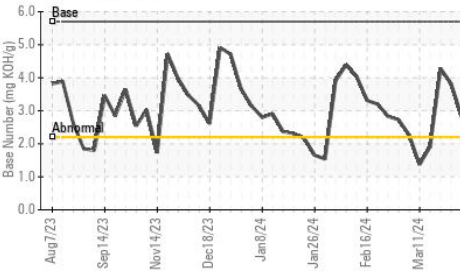
FT-IR (Direct Trend)



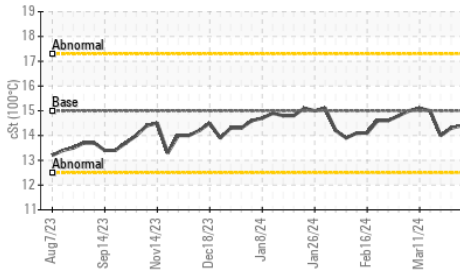
Acid Number



Base Number



Viscosity @ 100°C

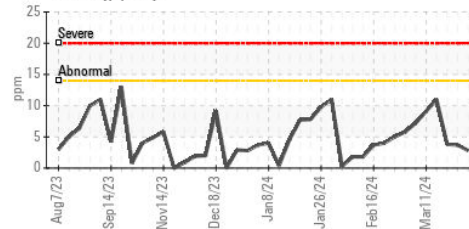


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

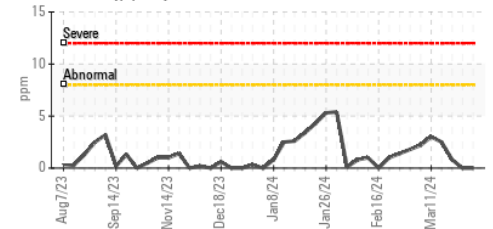
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 15	14.4	14.3	14.0

GRAPHS

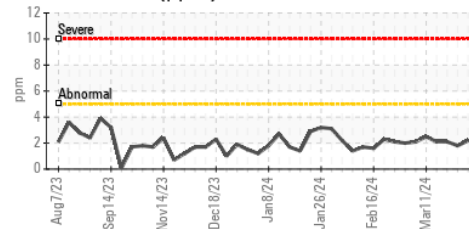
Iron (ppm)



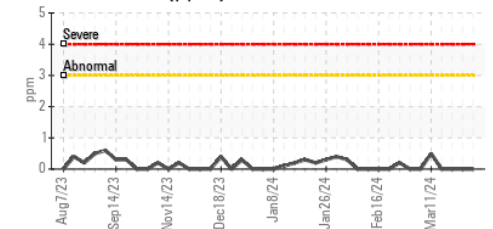
Lead (ppm)



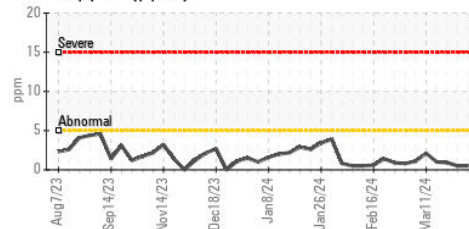
Aluminum (ppm)



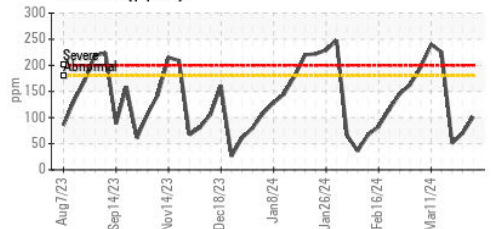
Chromium (ppm)



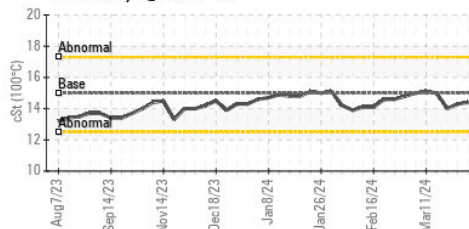
Copper (ppm)



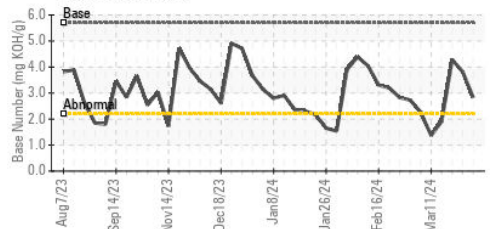
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0895555

Lab Number : 06136531

Unique Number : 10955996

Test Package : MOB 2

Received : 02 Apr 2024

Tested : 03 Apr 2024

Diagnosed : 04 Apr 2024 - Sean Felton

EDL NA Recips-Watervliet

Watervliet Powerstation, 3563 Hennessey Road

Watervliet, MI

US 49098

Contact: Scott Eastman

scott.eastman@edlenergy.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)