

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id WVTM01BE Component

Component Biogas Engine

Fluid MOBIL Pegasus™ 605 Ultra 40 (--- GAL)

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.

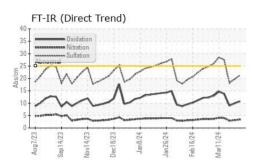
Fluid Condition

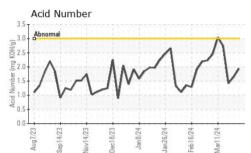
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

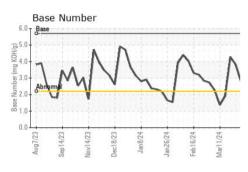
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0895555	WC0895533	WC0895531
Sample Date		Client Info		29 Mar 2024	25 Mar 2024	22 Mar 2024
Machine Age	hrs	Client Info		115094	115005	114928
Oil Age	hrs	Client Info		262	173	96
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	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
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 66	history1 98	history2 118
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	66	98	118
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	66 0 0 <1	98 0	118 0 1 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	66 0 0 <1 11	98 0 1 0 17	118 0 1 <1 17
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	66 0 0 <1 11 1635	98 0 1 0 17 1569	118 0 1 <1 17 1541
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	66 0 0 <1 11 1635 386	98 0 1 0 17 1569 399	118 0 1 <1 17 1541 422
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	66 0 0 <1 11 1635 386 550	98 0 1 0 17 1569 399 550	118 0 1 <1 17 1541 422 531
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		66 0 0 <1 11 1635 386	98 0 1 0 17 1569 399	118 0 1 <1 17 1541 422
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	66 0 0 <1 11 1635 386 550	98 0 1 0 17 1569 399 550	118 0 1 <1 17 1541 422 531
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		66 0 2 <1 11 1635 386 550 5269	98 0 1 0 17 1569 399 550 4631	118 0 1 <1 17 1541 422 531 4796
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	66 0 0 <1 11 1635 386 550 5269 current	98 0 1 0 17 1569 399 550 4631 history1	118 0 1 <1 17 1541 422 531 4796 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	66 0 0 <1 11 1635 386 550 5269 current 101	98 0 1 0 17 1569 399 550 4631 history1 70	118 0 1 <1 17 1541 422 531 4796 history2 51
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >180 >20	66 0 0 <1 11 1635 386 550 5269 <u>current</u> 101 1	98 0 1 0 17 1569 399 550 4631 history1 70 <1	118 0 1 <1 17 1541 422 531 4796 history2 51 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	limit/base >180 >20 >20	66 0 0 <1 11 1635 386 550 5269 current 101 1 1 0	98 0 1 0 17 1569 399 550 4631 history1 70 <1 1	118 0 1 <1 17 1541 422 531 4796 history2 51 2 2 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >180 >20 >20	66 0 0 <1 11 1635 386 550 5269 current 101 1 0 current	98 0 1 0 17 1569 399 550 4631 history1 70 <1 1 history1	118 0 1 <1 17 1541 422 531 4796 history2 51 2 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	limit/base >180 >20 >20	66 0 0 <1 11 1635 386 550 5269 current 101 1 1 0 current 0	98 0 1 0 17 1569 399 550 4631 history1 70 <1 1 1 history1 0	118 0 1 <1 17 1541 422 531 4796 history2 51 2 <1 2 <1 history2 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >180 >20 >20	66 0 0 <1 11 1635 386 550 5269 <i>current</i> 101 1 101 1 0 <i>current</i> 0 3.4	98 0 1 0 17 1569 399 550 4631 history1 70 <1 1 history1 0 3.2	118 0 1 <1 17 1541 422 531 4796 history2 51 2 51 2 <1 history2 0 2.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >180 >20 >20 >20 limit/base	66 0 0 <1 11 1635 386 550 5269 <i>current</i> 101 1 0 <i>current</i> 0 3.4 21.3	98 0 1 1 0 17 1569 399 550 4631 history1 70 <1 1 1 history1 0 3.2 19.7	118 0 1 <1 17 1541 422 531 4796 history2 51 2 <1 2 <1 history2 0 2.9 18.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	limit/base >180 >20 >20 >20 limit/base	66 0 0 <1 11 1635 386 550 5269 <i>current</i> 101 1 1 0 <i>current</i> 0 3.4 21.3 <i>current</i>	98 0 1 1 0 17 1569 399 550 4631 history1 70 <1 1 1 history1 0 3.2 19.7 history1	118 0 1 <1 17 1541 422 531 4796 history2 51 2 <1 2 <1 history2 0 2.9 18.3 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	limit/base >180 >20 >20 limit/base limit/base	66 0 0 <1 11 1635 386 550 5269 <i>current</i> 101 1 101 1 0 <i>current</i> 0 3.4 21.3 <i>current</i> 10.8	98 0 1 1 0 17 1569 399 550 4631 history1 70 <1 1 1 history1 0 3.2 19.7 history1 10.0	118 0 1 <1 17 1541 422 531 4796 history2 51 2 <1 51 2 <1 history2 0 2.9 18.3 history2 9.0

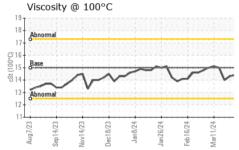


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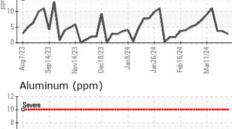


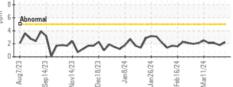


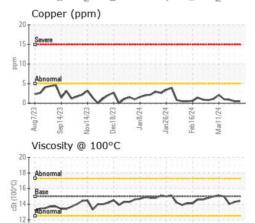


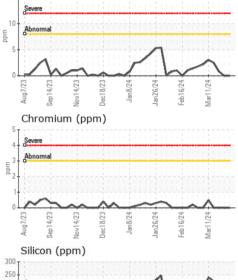


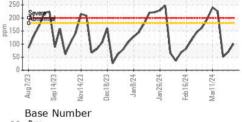
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual		NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15	14.4	14.3	14.0
GRAPHS						
Iron (ppm)				Lead (ppm)		
25 20 Severe			1	Severe		
15 - Abnormal				0 - Abnormal		
10 1		1	a udd			

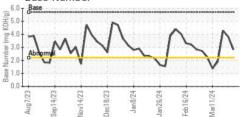












Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **EDL NA Recips-Watervliet** Sample No. : WC0895555 Received : 02 Apr 2024 Watervliet Powerstation, 3563 Hennessey Road Ĕ Lab Number : 06136531 Tested : 03 Apr 2024 Watervliet, MI Unique Number : 10955996 Diagnosed : 04 Apr 2024 - Sean Felton US 49098 Test Package : MOB 2 Contact: Scott Eastman Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. scott.eastman@edlenergy.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Т:

an8/24

Jan 26/24 Feb 16/24 Mar11/24

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Dec18/73

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Aug7/23 -

Sep 14/23 Vov14/23

Report Id: EDLWAT [WUSCAR] 06136531 (Generated: 04/09/2024 12:08:23) Rev: 1

Submitted By: Scott Eastman

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