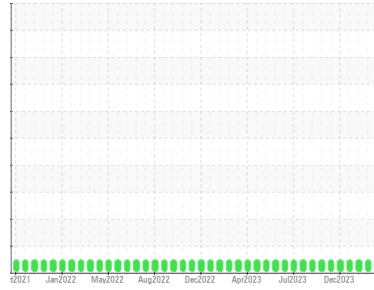




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
Wayne unit 1
 Component
Landfill Biogas Engine
 Fluid
D-A Lubricant Blue Flame HB-8 40W (180 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 INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0831461	WC0831463	WC0831456
Sample Date	Client Info			25 Mar 2024	08 Mar 2024	11 Jan 2024
Machine Age	hrs	Client Info		84022	83643	82421
Oil Age	hrs	Client Info		1147	768	2045
Oil Changed	Client Info			Not Changed	Not Changed	Not Changed
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		>.2	NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	6	3	7
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>15	6	4	8
Lead	ppm	ASTM D5185m	>20	<1	<1	<1
Copper	ppm	ASTM D5185m	>15	2	<1	<1
Tin	ppm	ASTM D5185m	>5	1	<1	1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		7	2	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		6	3	4
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		34	20	29
Calcium	ppm	ASTM D5185m		2375	2150	2290
Phosphorus	ppm	ASTM D5185m		341	257	358
Zinc	ppm	ASTM D5185m		420	355	433
Sulfur	ppm	ASTM D5185m		3672	2827	3195

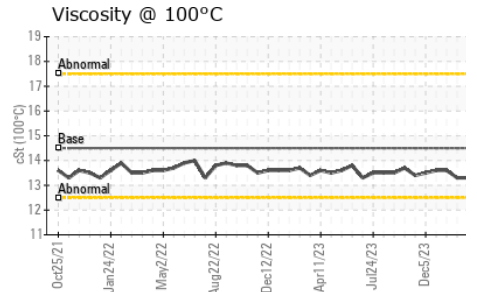
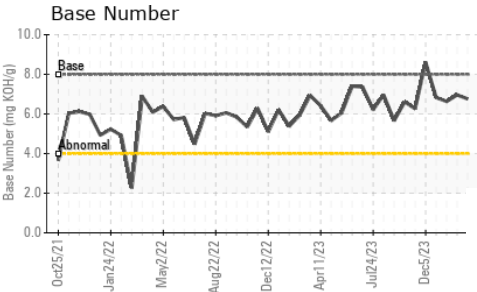
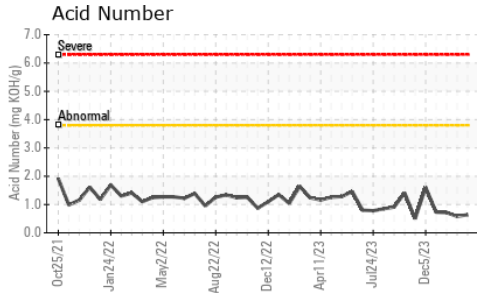
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>200	71	53	121
Sodium	ppm	ASTM D5185m	>20	2	0	<1
Potassium	ppm	ASTM D5185m	>20	2	1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>2	0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	5.7	5.4	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.3	15.6	17.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.0	9.5	11.5
Acid Number (AN)	mg KOH/g	ASTM D8045		0.64	0.58	0.715
Base Number (BN)	mg KOH/g	ASTM D2896	8	6.76	6.96	6.63



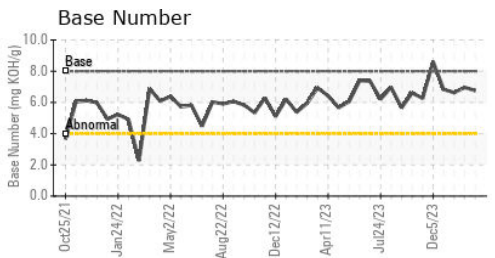
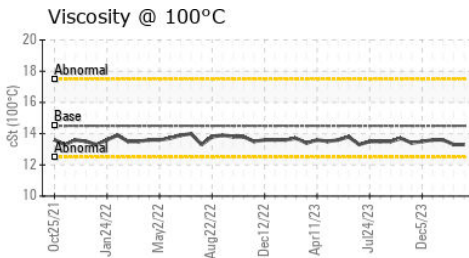
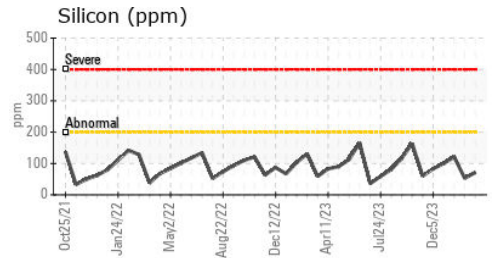
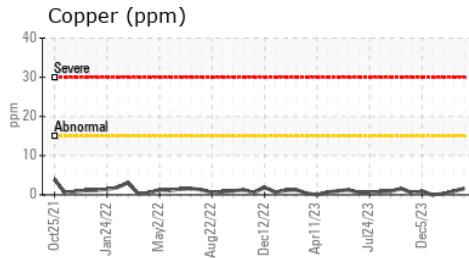
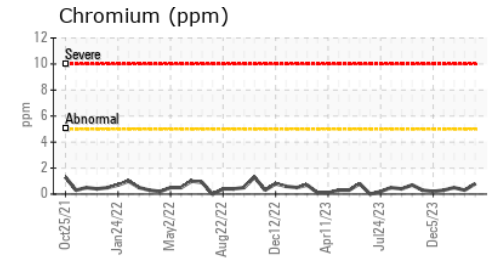
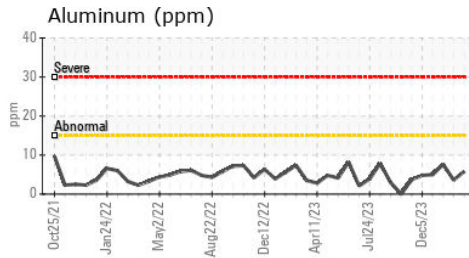
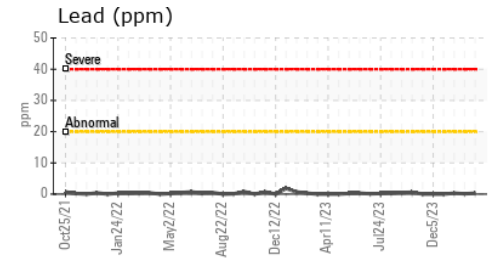
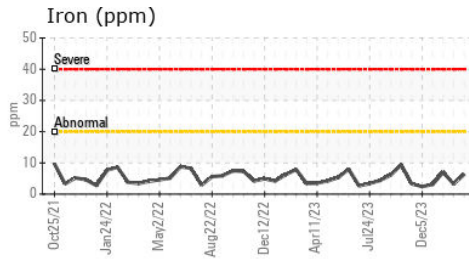
OIL ANALYSIS REPORT



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	>.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.5	13.3	13.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0831461
 Lab Number : 06134195
 Unique Number : 10953660
 Test Package : MOB 2

Received : 29 Mar 2024
 Tested : 01 Apr 2024
 Diagnosed : 03 Apr 2024 - Sean Felton

TERREVA WAYNE COUNTY
 460 SOUTH LANDFILL RD
 DUDLEY, NC
 US 28333

Contact: JASON CHENEY
 jcheney@terrevarenewables.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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