



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
JENBACHER E2 - LEE COUNTY
 Component
Biogas Engine
 Fluid
CONOCO EL MAR LA4 EXD (180 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0896463	WC0896461	WC0896467
Sample Date		Client Info		08 Jul 2024	28 Jun 2024	12 Jun 2024
Machine Age	hrs	Client Info		28966	28764	28566
Oil Age	hrs	Client Info		281	79	7701
Filter Age	hrs	Client Info		281	79	7701
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Not Changed	Changed	Not Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<1	2	4
Chromium	ppm	ASTM D5185m	>5	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>15	3	4	9
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>15	0	<1	<1
Tin	ppm	ASTM D5185m	>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

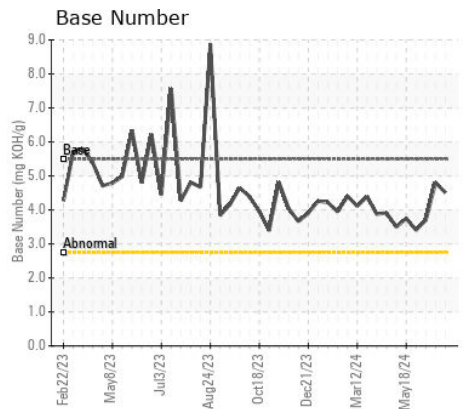
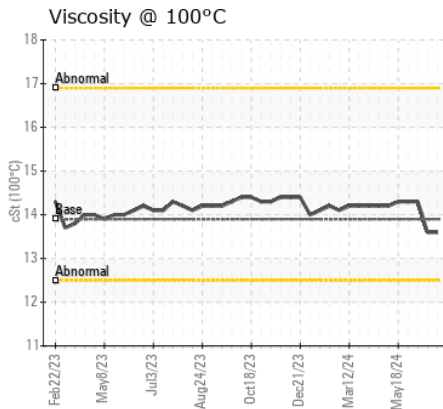
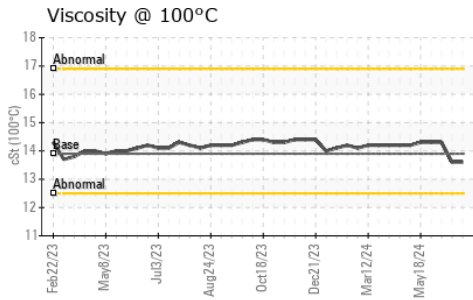
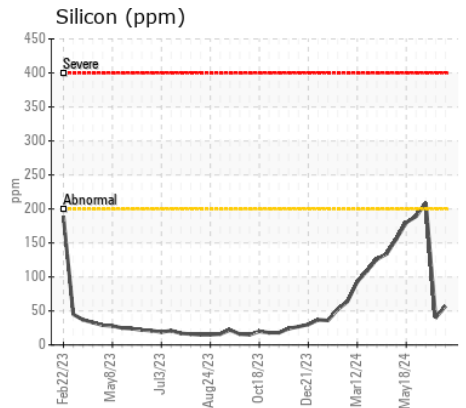
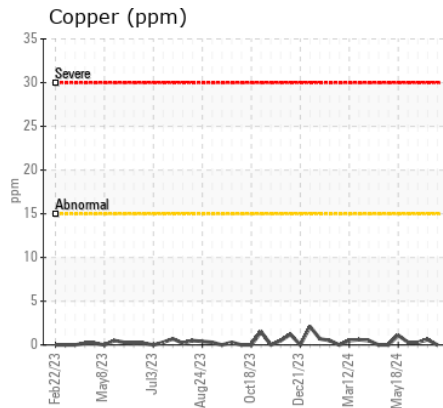
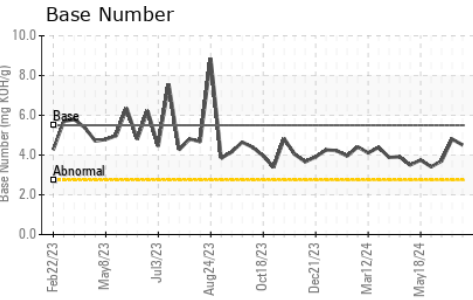
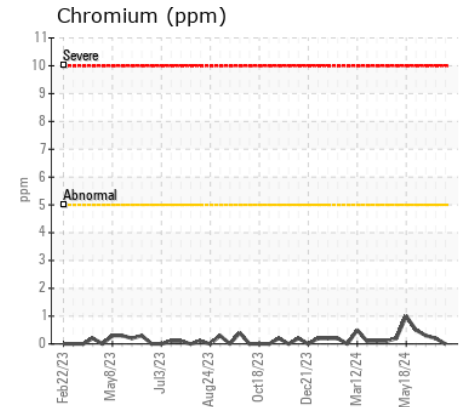
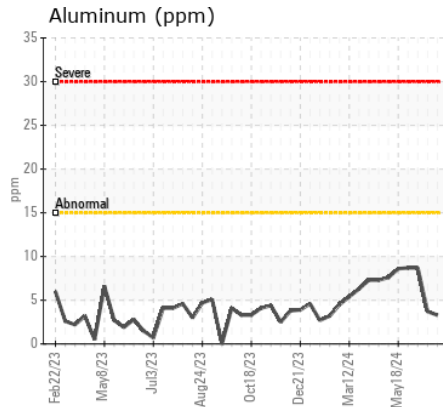
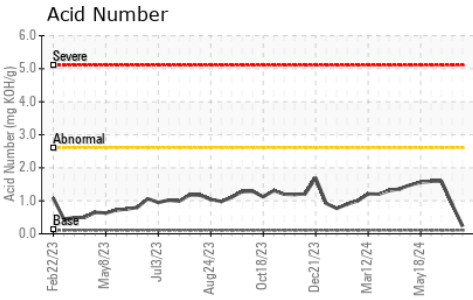
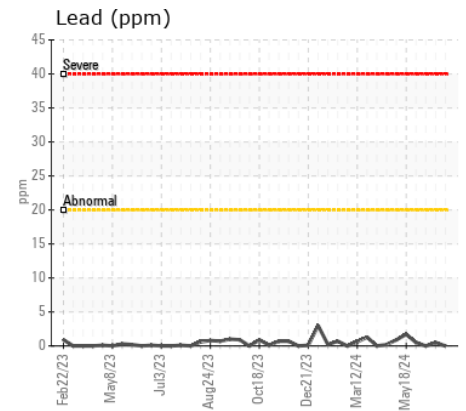
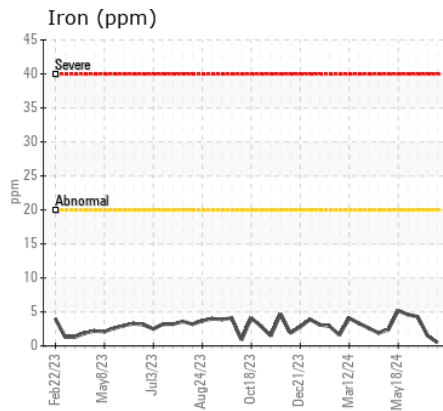
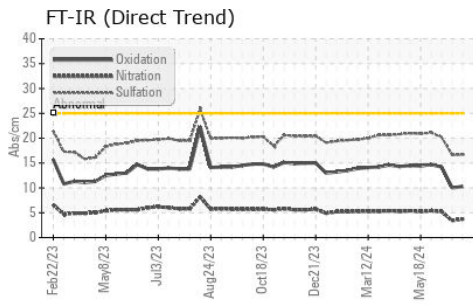
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>200	57	40	▲ 209
Potassium	ppm	ASTM D5185m	>20	<1	2	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>2	0	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	3.7	3.4	5.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.7	16.6	20.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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	>.2	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m	>20	2	<1	3
Boron	ppm	ASTM D5185m		<1	2	0
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		5	5	6
Calcium	ppm	ASTM D5185m	1500	1650	1549	2081
Phosphorus	ppm	ASTM D5185m	280	300	322	336
Zinc	ppm	ASTM D5185m	330	355	399	440
Sulfur	ppm	ASTM D5185m		3533	4014	3861
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.3	10.0	14.2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.11	0.23	0.89	1.59
Base Number (BN)	mg KOH/g	ASTM D2896	5.5	4.51	4.80	3.70
Visc @ 100°C	cSt	ASTM D445	13.9	13.6	13.6	14.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0896463
Lab Number : 06232387
Unique Number : 11115880
Test Package : MOB 2

SANTEE COOPER / LEE COUNTY LANDFILL
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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)