

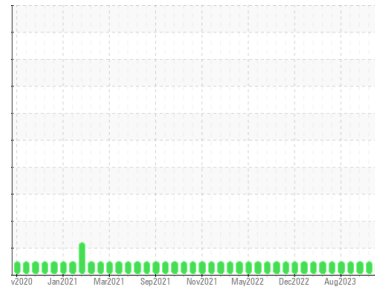


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR 2
 Component
Biogas Engine
 Fluid
MOBIL PEGASUS 805 (140 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		WC0850407	WC0850404	WC0850402
Sample Date	Client Info		31 May 2024	28 Mar 2024	08 Mar 2024
Machine Age	hrs	Client Info	111582	110065	109586
Oil Age	hrs	Client Info	1056	888	408
Oil Changed	Client Info		Changed	Not Changd	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	>0.1	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >45	3	<1	0
Chromium	ppm	ASTM D5185m >2	<1	<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 >10	4	4	2
Lead	ppm	ASTM D5185m >5	<1	<1	<1
Copper	ppm	ASTM D5185m >14	<1	<1	<1
Tin	ppm	ASTM D5185m >13	2	3	1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 80	0	0	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	<1	<1	0
Manganese	ppm	ASTM D5185m	0	<1	0
Magnesium	ppm	ASTM D5185m	6	6	5
Calcium	ppm	ASTM D5185m 1020	1290	1621	1349
Phosphorus	ppm	ASTM D5185m 220	298	355	299
Zinc	ppm	ASTM D5185m 230	353	404	350
Sulfur	ppm	ASTM D5185m 1000	2164	2775	2335

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >200	103	117	60
Sodium	ppm	ASTM D5185m	<1	0	0
Potassium	ppm	ASTM D5185m >20	<1	1	1

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0
Nitration	Abs/cm	*ASTM D7624 >20	6.8	7.0	6.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.6	19.2	17.0

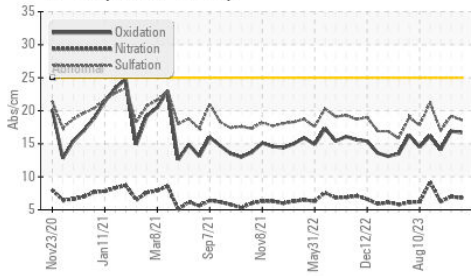
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.7	16.9	14.1
Acid Number (AN)	mg KOH/g	ASTM D8045 1.0	1.14	1.42	0.58
Base Number (BN)	mg KOH/g	ASTM D2896 6.4	3.15	3.06	4.17

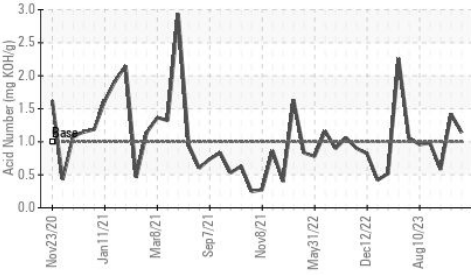


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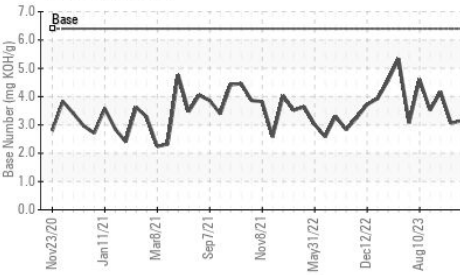
FT-IR (Direct Trend)



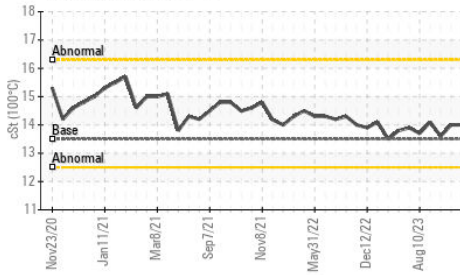
Acid Number



Base Number



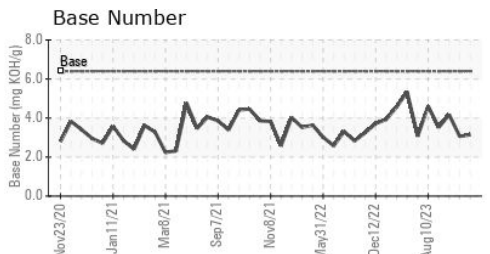
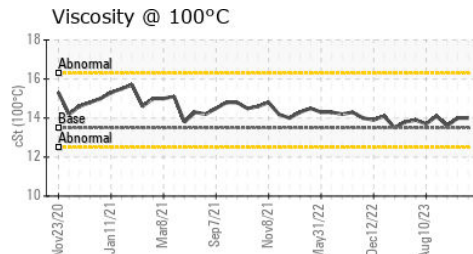
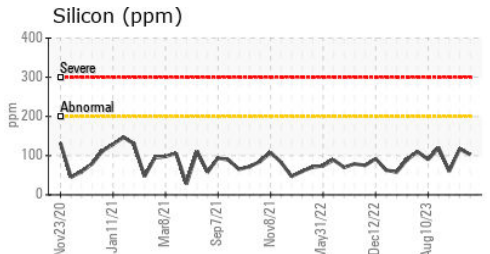
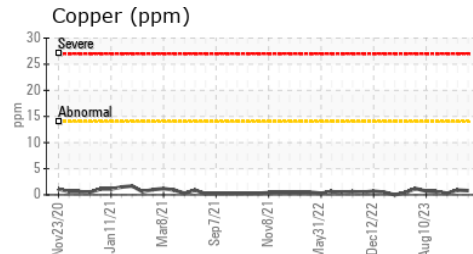
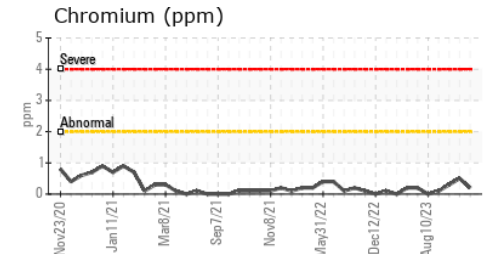
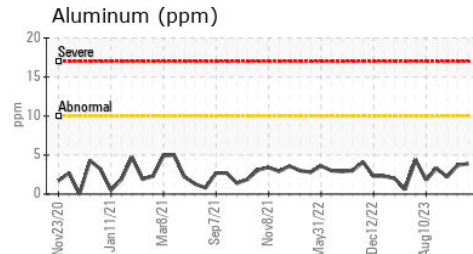
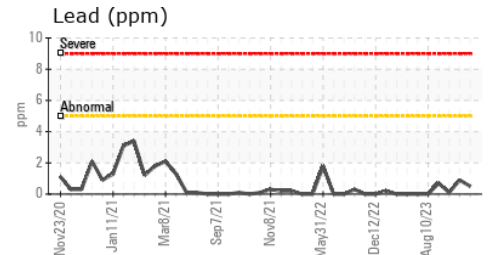
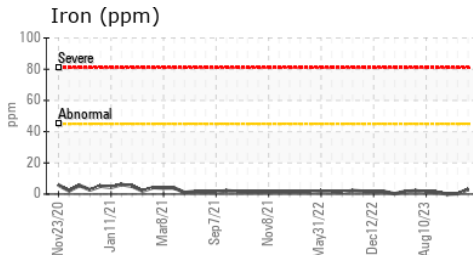
Viscosity @ 100°C



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.5	14.0	13.6

GRAPHS



Certificate L2367

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

Sample No. : WC0850407

Lab Number : 06198333

Unique Number : 11060456

Test Package : MOB 2

Received : 03 Jun 2024

Tested : 04 Jun 2024

Diagnosed : 05 Jun 2024 - Sean Felton

POWER SECURE

2080 HWY 247 S

KATHLEEN, GA

US 31047

Contact: DONALD STEVENS
donald.stevens@powersecure.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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F: