MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR GM01 - DA LUBRICANT BLUE FLAME HB-5 SAE 40 (S/N LGS00177)
Component
Biogas Engine
Fluid
D-A Lubricant Blue Flame HB-5 40W (140 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

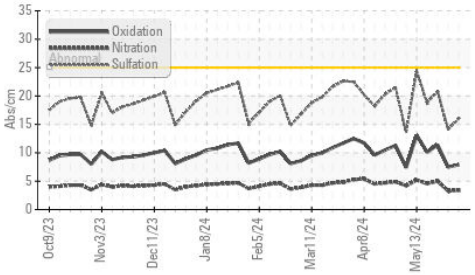
There is no indication of any contamination in the oil.

FLUID CONDITION

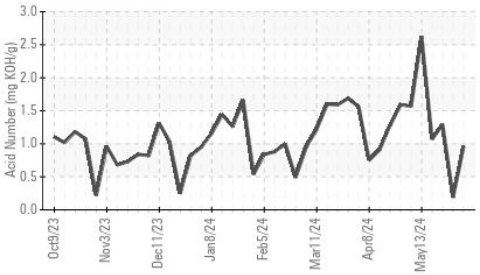
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0880168	WC0880167	WC0880166
Sample Date		Client Info		17 Jun 2024	11 Jun 2024	28 May 2024
Machine Age	hrs	Client Info		80617	80484	80412
Oil Age	hrs	Client Info		132	1	352
Filter Age	hrs	Client Info		132	1	352
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	MARGINAL
Iron	ppm	ASTM D5185m	>45	5	8	▲ 43
Chromium	ppm	ASTM D5185m	>2	0	0	2
Nickel	ppm	ASTM D5185m	>2	0	0	1
Titanium	ppm	ASTM D5185m		0	0	2
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	1	3
Lead	ppm	ASTM D5185m	>5	0	<1	<1
Copper	ppm	ASTM D5185m	>14	<1	<1	5
Tin	ppm	ASTM D5185m	>13	0	0	3
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>200	57	8	158
Potassium	ppm	ASTM D5185m	>20	0	1	2
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
Soot %	%	*ASTM D7844		0	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	3.4	3.3	5.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.0	14.1	20.8
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	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		2	<1	1
Boron	ppm	ASTM D5185m		0	<1	7
Barium	ppm	ASTM D5185m		0	0	1
Molybdenum	ppm	ASTM D5185m		2	3	4
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		19	22	18
Calcium	ppm	ASTM D5185m		1399	1479	2608
Phosphorus	ppm	ASTM D5185m		337	372	489
Zinc	ppm	ASTM D5185m		412	471	577
Sulfur	ppm	ASTM D5185m		3746	3612	6366
Oxidation	Abs/.1mm	*ASTM D7414	>25	7.9	7.5	11.4
Acid Number (AN)	mg KOH/g	ASTM D8045		0.96	0.19	1.29
Base Number (BN)	mg KOH/g	ASTM D2896		3.83	4.94	3.58
Visc @ 100°C	cSt	ASTM D445		12.6	13.16	13.3

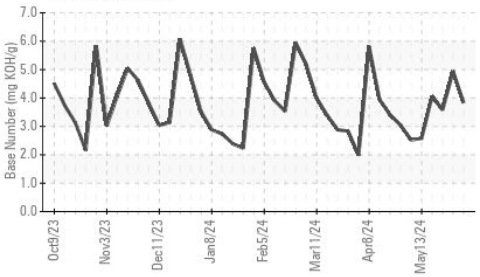
FT-IR (Direct Trend)



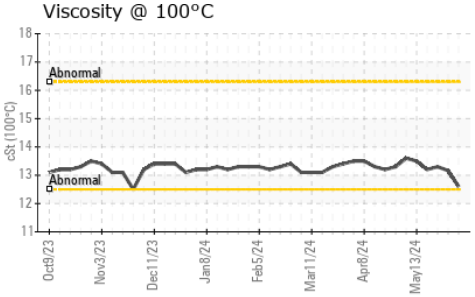
Acid Number



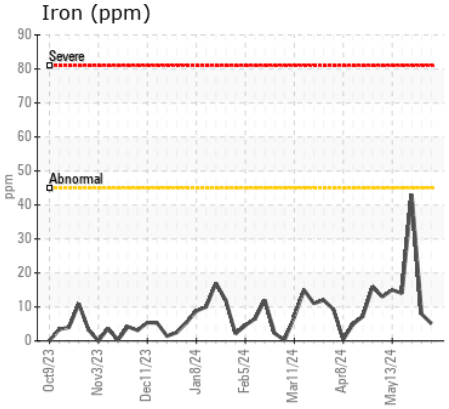
Base Number



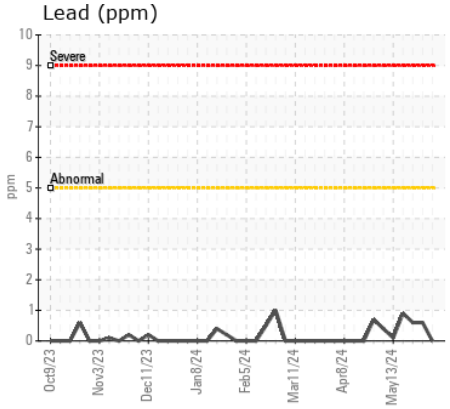
Viscosity @ 100°C



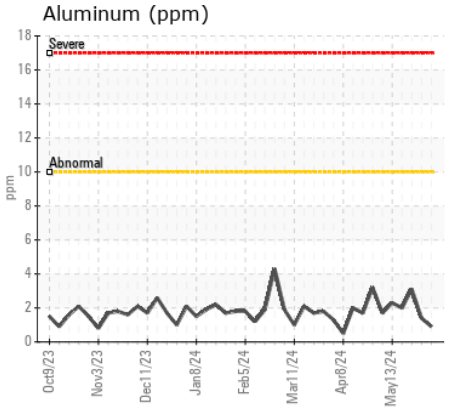
Iron (ppm)



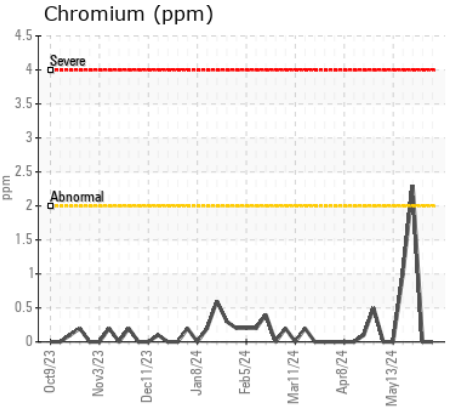
Lead (ppm)



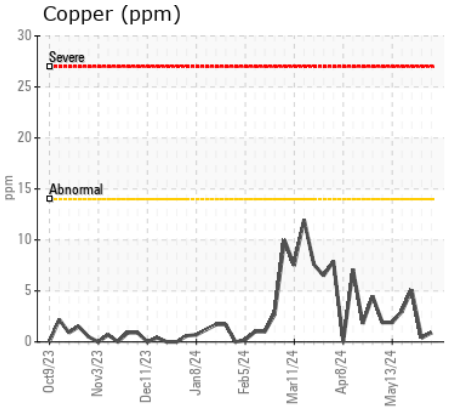
Aluminum (ppm)



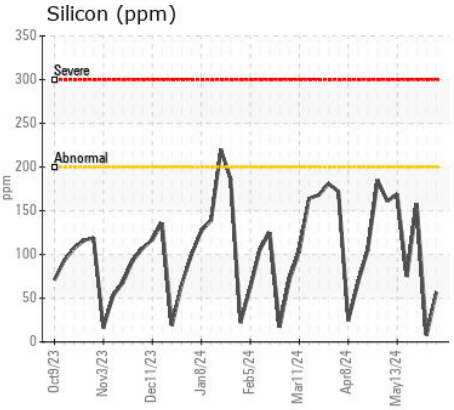
Chromium (ppm)



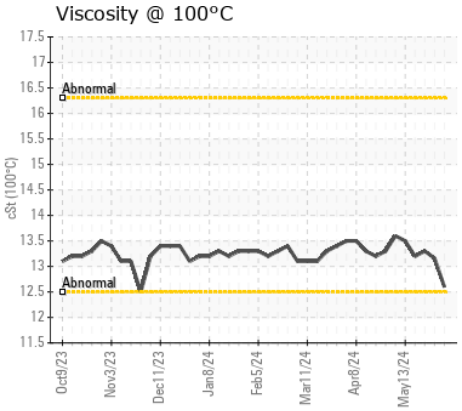
Copper (ppm)



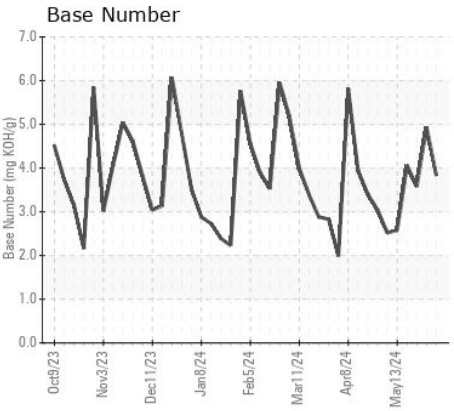
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0880168
Lab Number : 06213659
Unique Number : 11086523
Test Package : MOB 2

Received : 18 Jun 2024
Tested : 20 Jun 2024
Diagnosed : 20 Jun 2024 - Sean Felton

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)

ONSLOW
465 MEADOWVIEW RD
JACKSONVILLE, NC
US 28540
Contact: THOMAS BURTON
thomas.burton@cubedistrictenergy.com
T:
F: