MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
E-4 - RICHLAND CREEK
Component
Biogas Engine
Fluid
MAHLER Q8 Mahler G8 SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

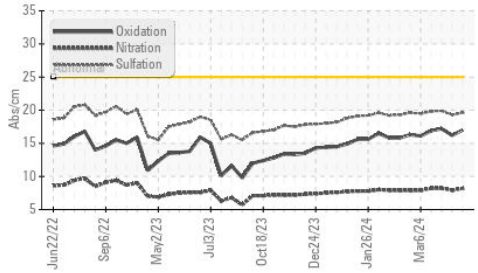
There is no indication of any contamination in the oil.

FLUID CONDITION

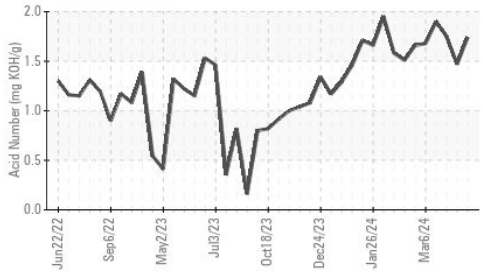
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0914263	WC0914268	WC0914244
Sample Date		Client Info		06 May 2024	23 Apr 2024	15 Apr 2024
Machine Age	hrs	Client Info		47562	47377	0
Oil Age	hrs	Client Info		0	5714	0
Filter Age	hrs	Client Info		0	677	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>45	6	6	6
Chromium	ppm	ASTM D5185m	>2	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	4	4	4
Lead	ppm	ASTM D5185m	>5	<1	<1	<1
Copper	ppm	ASTM D5185m	>14	4	4	6
Tin	ppm	ASTM D5185m	>13	7	6	8
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>200	49	46	49
Potassium	ppm	ASTM D5185m	>20	<1	0	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		0.1	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	8.2	7.9	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	19.3	19.9
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		3	3	3
Boron	ppm	ASTM D5185m		1	<1	2
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		2	2	2
Manganese	ppm	ASTM D5185m		<1	<1	2
Magnesium	ppm	ASTM D5185m		12	14	17
Calcium	ppm	ASTM D5185m		2438	2548	2598
Phosphorus	ppm	ASTM D5185m		412	442	470
Zinc	ppm	ASTM D5185m		490	507	570
Sulfur	ppm	ASTM D5185m		2613	2881	3266
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	16.2	17.2
Acid Number (AN)	mg KOH/g	ASTM D8045		1.74	1.47	1.75
Base Number (BN)	mg KOH/g	ASTM D2896	8.0	5.85	6.21	5.73
Visc @ 100°C	cSt	ASTM D445	13.2	14.1	13.9	14.1

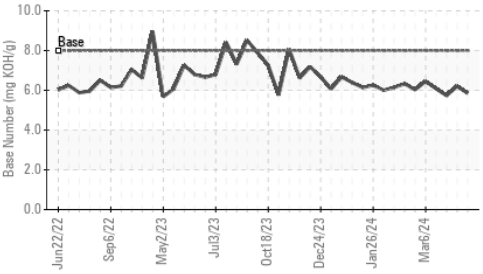
FT-IR (Direct Trend)



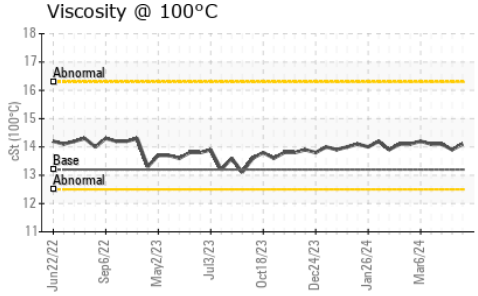
Acid Number



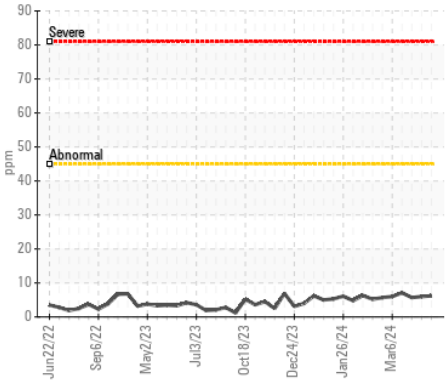
Base Number



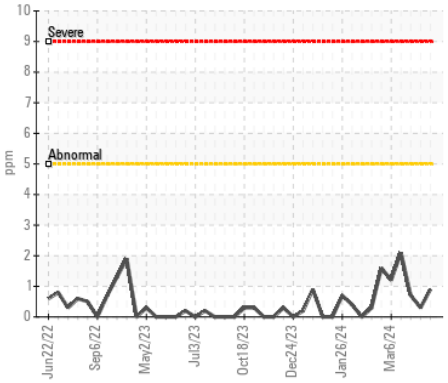
Viscosity @ 100°C



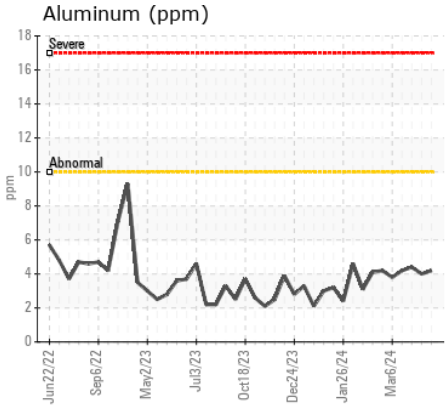
Iron (ppm)



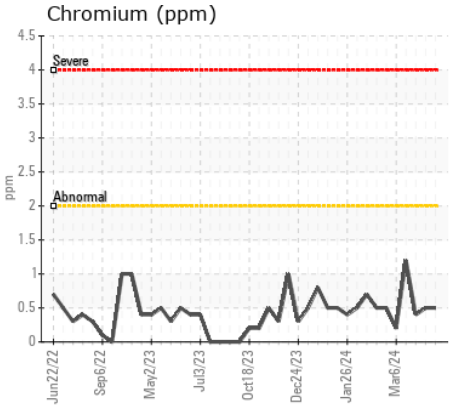
Lead (ppm)



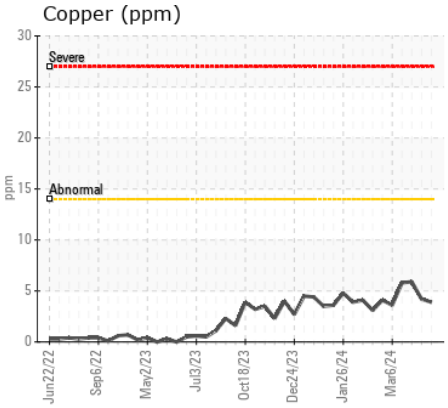
Aluminum (ppm)



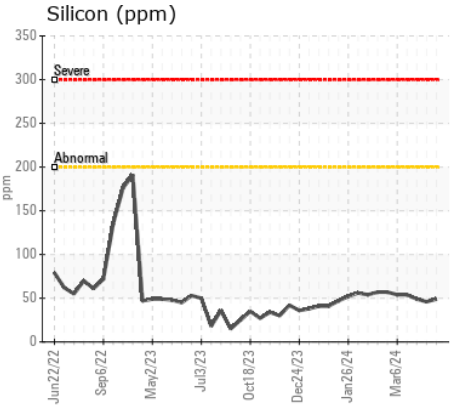
Chromium (ppm)



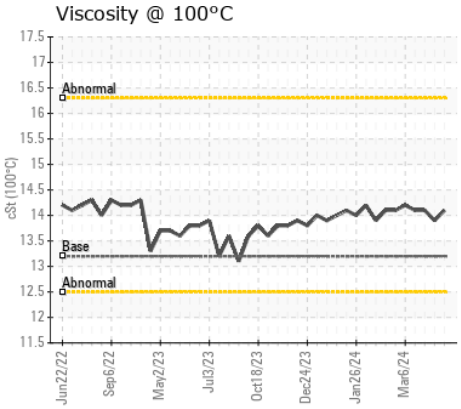
Copper (ppm)



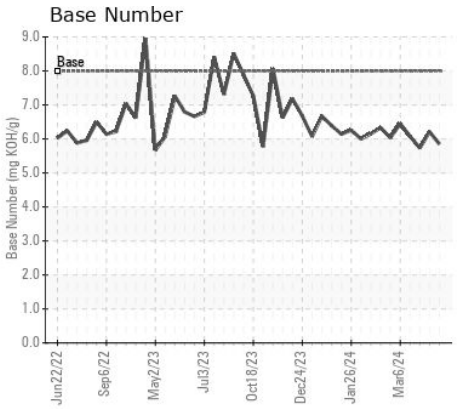
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0914263
Lab Number : 06175698
Unique Number : 11021751
Test Package : MOB 2

Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 13 May 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)

CUBE DISTRICT ENERGY - MAS GEORGIA LFG PLANT SITE
5691 S RICHLAND CREEK RD
BUFORD, GA
US 30518
Contact: RYAN INGALLS
ryan.ingalls@cubedistrictenergy.com
T:
F: