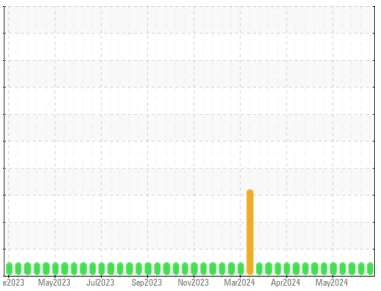
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
JENBACHER GM02 (S/N 1144713)
Component
Biogas Engine
Fluid
MAHLER Q8 Mahler G8 SAE 40 (--- GAL)

DIAGNOSIS

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0944676**	WC0914303	WC0914300
Sample Date		Client Info		**24 Jun 2024**	18 Jun 2024	10 Jun 2024
Machine Age	hrs	Client Info		**51408**	51402	51389
Oil Age	hrs	Client Info		**1610**	1604	1591
Oil Changed		Client Info		**N/A**	N/A	N/A
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	**8**	8	9
Chromium	ppm	ASTM D5185m	>5	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>2	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m	>5	**0**	0	0
Aluminum	ppm	ASTM D5185m	>15	**4**	3	3
Lead	ppm	ASTM D5185m	>20	**0**	0	<1
Copper	ppm	ASTM D5185m	>15	**4**	3	4
Tin	ppm	ASTM D5185m	>5	**4**	5	6
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**<1**	<1	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	1
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**12**	6	8
Calcium	ppm	ASTM D5185m		**2522**	2363	2442
Phosphorus	ppm	ASTM D5185m		**449**	398	405
Zinc	ppm	ASTM D5185m		**522**	465	505
Sulfur	ppm	ASTM D5185m		**3164**	2886	2947

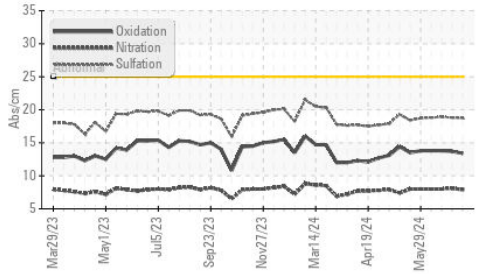
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>200	**75**	71	82
Sodium	ppm	ASTM D5185m	>20	**17**	15	14
Potassium	ppm	ASTM D5185m	>20	**8**	6	10

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>2	**0.1**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**7.9**	8.1	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.7**	18.8	18.9

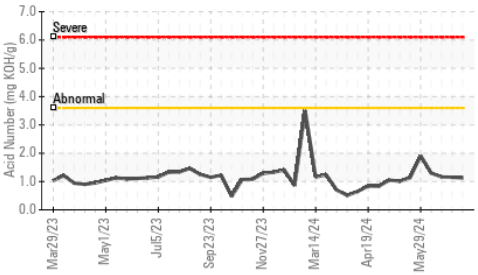
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**13.4**	13.7	13.8
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.13**	1.15	1.16
Base Number (BN)	mg KOH/g	ASTM D2896	8.0	**5.79**	5.86	5.58

OIL ANALYSIS REPORT

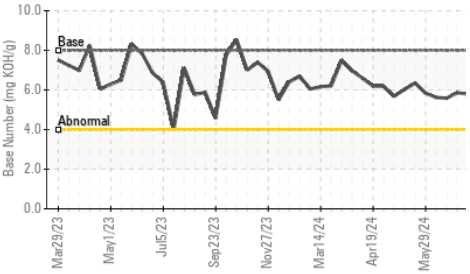
FT-IR (Direct Trend)



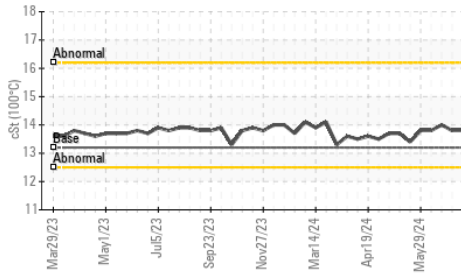
Acid Number



Base Number



Viscosity @ 100°C

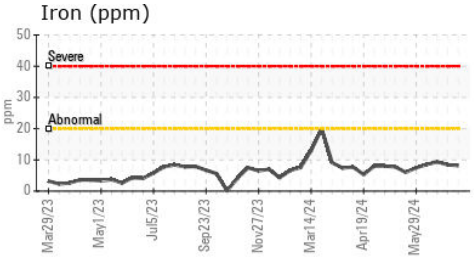


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

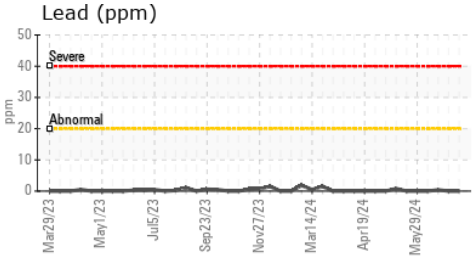
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.2	**13.8**	13.8	14.0

GRAPHS

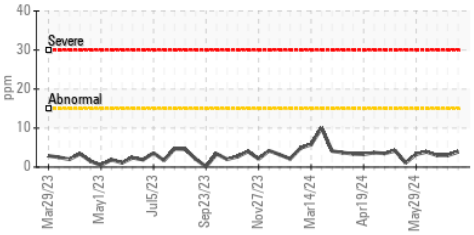
Iron (ppm)



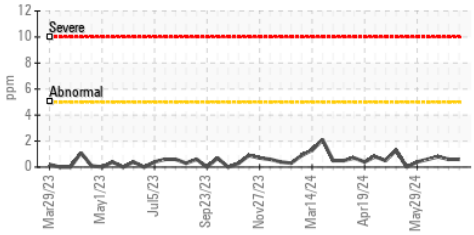
Lead (ppm)



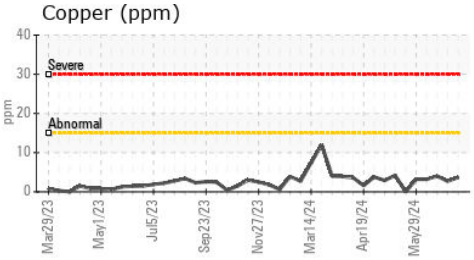
Aluminum (ppm)



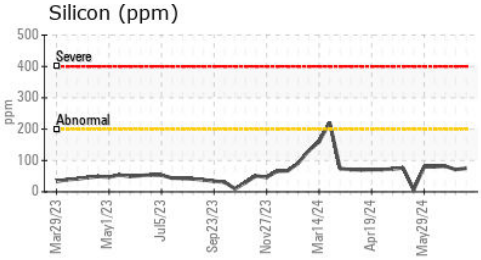
Chromium (ppm)



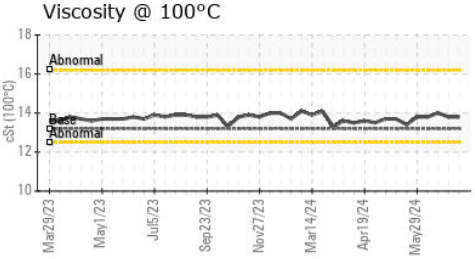
Copper (ppm)



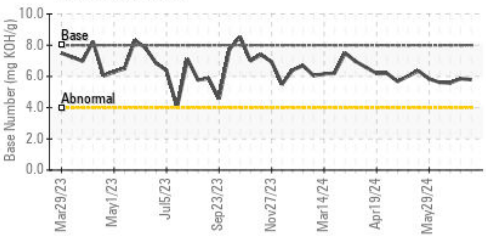
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0944676
Lab Number : 06219904
Unique Number : 11098101
Test Package : MOB 2

Received : 25 Jun 2024
Tested : 26 Jun 2024
Diagnosed : 26 Jun 2024 - Sean Felton

Certificate L2367

PINE RIDGE
105 BAILEY JESTER RD
GRIFFIN, GA
US 30224
Contact: STEPHEN SAVAGE
stephen.savage@cubedistrictenergy.com
T:
F:

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)