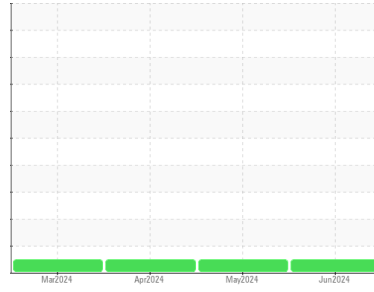




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
QUANTUM
 Machine Id
4205
 Component
Biogas Engine
 Fluid
LO-ASH ENGINE OIL SAE 40 (115 GAL)

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 condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			AO0000401	AO0000399	AO0000396
Sample Date	Client Info			05 Jun 2024	07 May 2024	05 Apr 2024
Machine Age	hrs	Client Info		39947	39309	38651
Oil Age	hrs	Client Info		6724	6086	38651
Oil Changed	Client Info			Filtered	Filtered	Filtered
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	1	<1	3
Chromium	ppm	ASTM D5185m	>2	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>10	1	1	2
Lead	ppm	ASTM D5185m	>5	<1	<1	1
Copper	ppm	ASTM D5185m	>14	<1	0	<1
Tin	ppm	ASTM D5185m	>13	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	<1

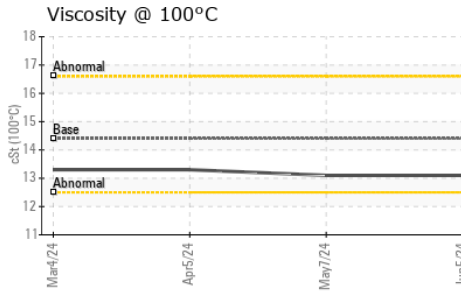
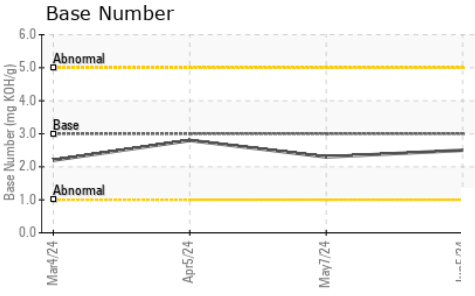
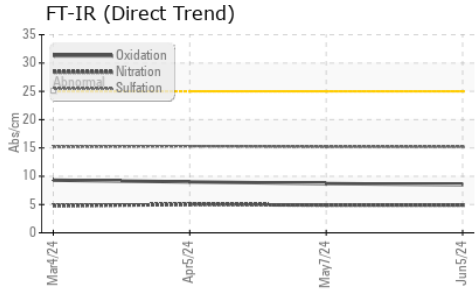
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	37	0	0	0
Barium	ppm	ASTM D5185m	12	0	0	0
Molybdenum	ppm	ASTM D5185m	200	3	2	4
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	5	0	23	16
Calcium	ppm	ASTM D5185m	1600	1352	1335	1351
Phosphorus	ppm	ASTM D5185m	300	272	300	301
Zinc	ppm	ASTM D5185m	400	330	367	379
Sulfur	ppm	ASTM D5185m	2600	3061	3308	3008

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>200	1	1	2
Sodium	ppm	ASTM D5185m		2	1	0
Potassium	ppm	ASTM D5185m	>20	<1	2	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	4.9	4.9	5.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.2	15.2	15.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	8.5	8.7	9.0
Base Number (BN)	mg KOH/g	ASTM D2896	3.0	2.5	2.3	2.8

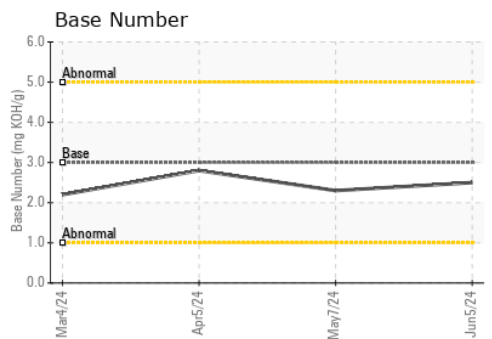
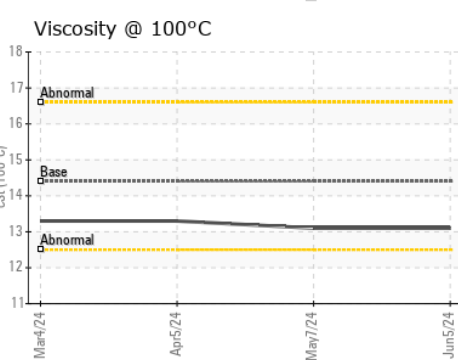
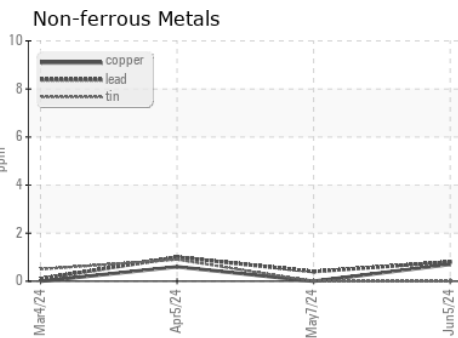
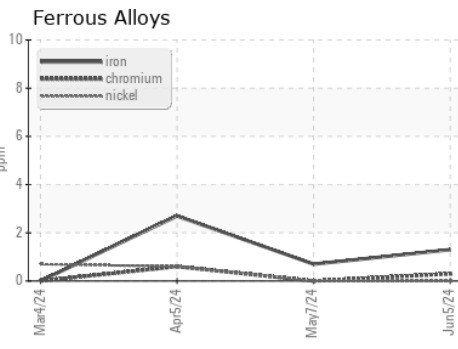
OIL ANALYSIS REPORT



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	14.4	13.1	13.1	13.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : AO0000401 **Received** : 10 Jun 2024
Lab Number : **06204281** **Tested** : 11 Jun 2024
Unique Number : 11071742 **Diagnosed** : 12 Jun 2024 - Sean Felton
Test Package : FLEET

MOMENTUM MIDSTREAM - LONGVIEW
 540 PR 2297
 LONGVIEW, TX
 US 75604
 Contact: KEVIN MILLER
 kevin.miller@momentummidstream.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)