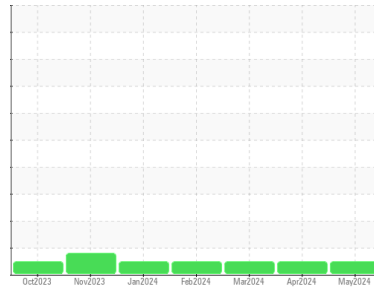


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
2422
 Component
Biogas Engine
 Fluid
LO-ASH ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. 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			PCA0111239	PCA0111216	PCA0111213
Sample Date	Client Info			16 May 2024	16 Apr 2024	07 Mar 2024
Machine Age	hrs	Client Info		53510	52952	51938
Oil Age	hrs	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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	11	12	16
Chromium	ppm	ASTM D5185m	>2	0	<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	1	2	2
Lead	ppm	ASTM D5185m	>5	2	3	1
Copper	ppm	ASTM D5185m	>14	7	8	10
Tin	ppm	ASTM D5185m	>13	<1	<1	0
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	37	0	0	0
Barium	ppm	ASTM D5185m	12	0	0	0
Molybdenum	ppm	ASTM D5185m	200	3	2	2
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	5	28	26	29
Calcium	ppm	ASTM D5185m	1600	1428	1369	1306
Phosphorus	ppm	ASTM D5185m	300	337	339	302
Zinc	ppm	ASTM D5185m	400	412	408	394
Sulfur	ppm	ASTM D5185m	2600	2773	2678	2440

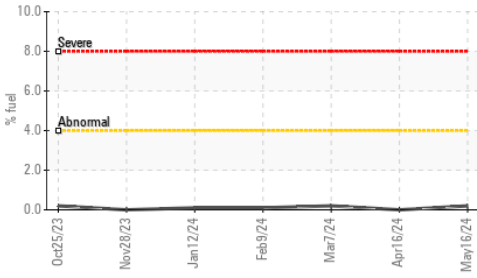
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>200	1	2	2
Sodium	ppm	ASTM D5185m		1	0	<1
Potassium	ppm	ASTM D5185m	>20	0	1	<1
Fuel	%	ASTM D3524	>4.0	0.2	0.0	0.2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	5.1	4.9	4.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.8	16.5	16.2

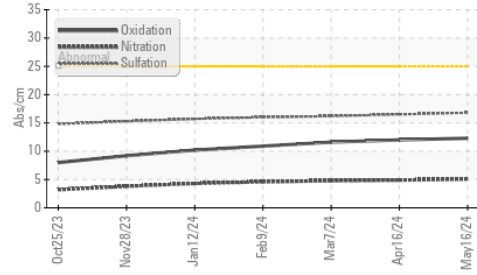
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.3	12.0	11.6
Acid Number (AN)	mg KOH/g	ASTM D8045		1.30	0.895	0.80
Base Number (BN)	mg KOH/g	ASTM D2896	3.0	3.31	3.26	3.10

OIL ANALYSIS REPORT

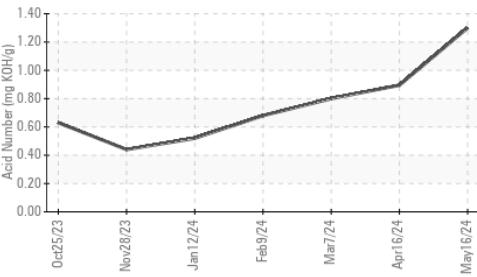
Fuel Dilution



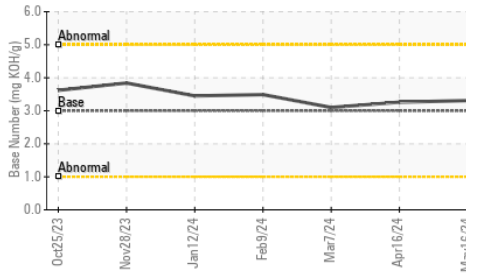
FT-IR (Direct Trend)



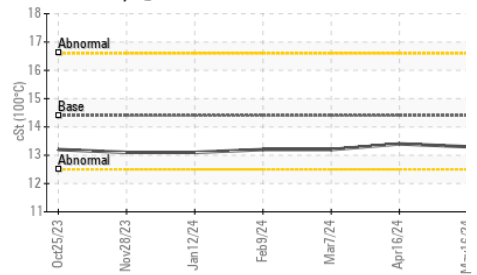
Acid Number



Base Number



Viscosity @ 100°C

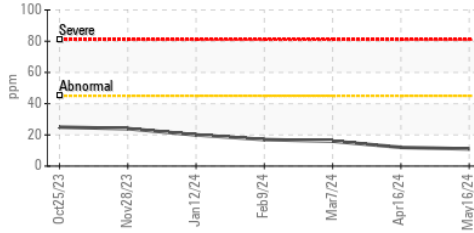


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

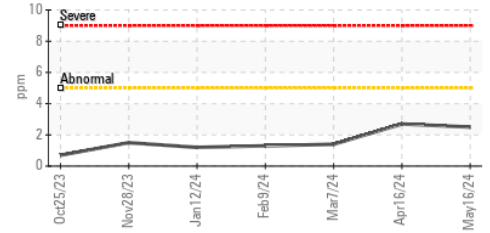
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	13.4	13.2

GRAPHS

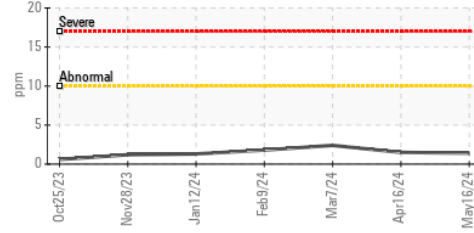
Iron (ppm)



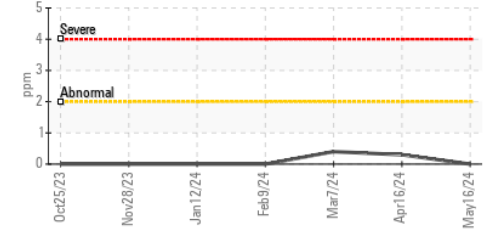
Lead (ppm)



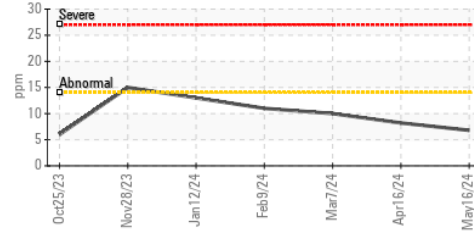
Aluminum (ppm)



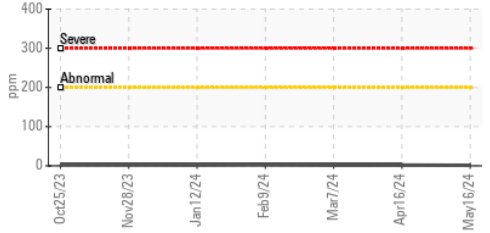
Chromium (ppm)



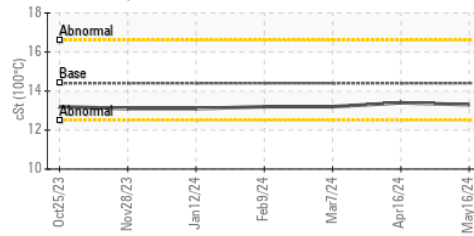
Copper (ppm)



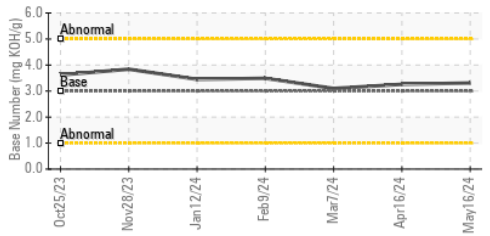
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : PCA0111239

Lab Number : 06195621

Unique Number : 11057744

Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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)

Received : 30 May 2024

Tested : 03 Jun 2024

Diagnosed : 03 Jun 2024 - Sean Felton

USA COMPRESSION

375 S MAIN STREET

MANSFIELD, PA

US 16933

Contact: JASON KUZNESKI

jkuzneski@usacompression.com

T:

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