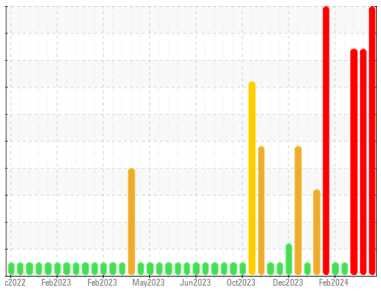
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
WVTM03BE
Component
Biogas Engine
Fluid
CHEVRON HDAX 9500 GAS ENGINE OIL 40 (--- GAL)

DIAGNOSIS

▲ Recommendation
Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for diagnostic comment updates. (Customer Sample Comment: Oil and filters changed)

▲ Wear
The iron level is severe. The tin level is abnormal.

▲ Contamination
Elemental level of silicon (Si) above normal.

▲ Fluid Condition
The AN level is above the recommended limit. The BN level is low. The oil is no longer serviceable.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0895564**	WC0895529	WC0895526
Sample Date		Client Info		**25 Mar 2024**	22 Mar 2024	18 Mar 2024
Machine Age	hrs	Client Info		**34319**	34245	34081
Oil Age	hrs	Client Info		**913**	164	713
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	**<1.0**	<1.0	<1.0
Water		WC Method	>.11	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>15	▲ **43**	▲ 36	▲ 23
Chromium	ppm	ASTM D5185m	>4	**<1**	<1	0
Nickel	ppm	ASTM D5185m		**0**	<1	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>6	**3**	3	2
Lead	ppm	ASTM D5185m	>9	**<1**	<1	0
Copper	ppm	ASTM D5185m	>6	**2**	2	<1
Tin	ppm	ASTM D5185m	>4	▲ **4**	4	2
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**3**	3	<1
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**2**	2	1
Manganese	ppm	ASTM D5185m		**0**	<1	0
Magnesium	ppm	ASTM D5185m		**7**	8	4
Calcium	ppm	ASTM D5185m		**1712**	1725	1777
Phosphorus	ppm	ASTM D5185m		**257**	268	266
Zinc	ppm	ASTM D5185m		**328**	318	322
Sulfur	ppm	ASTM D5185m		**4585**	5041	4899

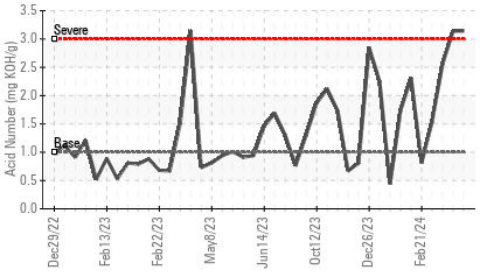
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>181	▲ **192**	173	123
Sodium	ppm	ASTM D5185m	>21	**6**	7	4
Potassium	ppm	ASTM D5185m	>20	**2**	2	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0**	0	0
Nitration	Abs/cm	*ASTM D7624		**4.9**	4.8	5.0
Sulfation	Abs/.1mm	*ASTM D7415		**28.1**	27.3	24.8

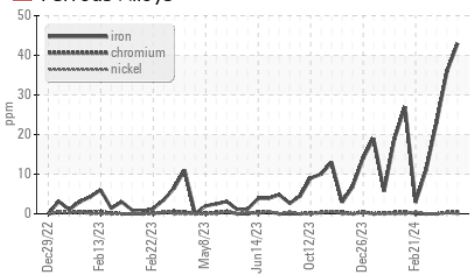
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**13.1**	12.6	11.6
Acid Number (AN)	mg KOH/g	ASTM D8045	1.0	▲ **3.14**	▲ 3.14	▲ 2.56
Base Number (BN)	mg KOH/g	ASTM D2896	5.4	▲ **0.87**	▲ 0.80	▲ 0.79

OIL ANALYSIS REPORT

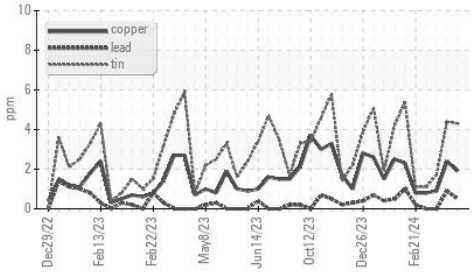
Acid Number



Ferrous Alloys



Non-ferrous Metals



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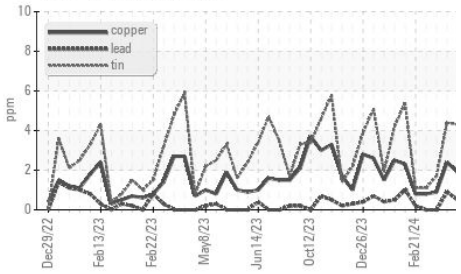
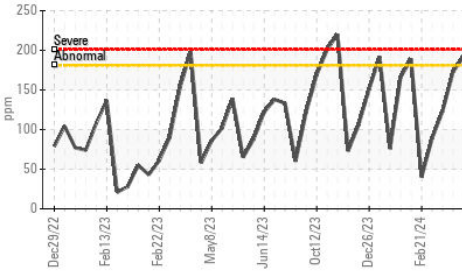


Silicon (ppm)

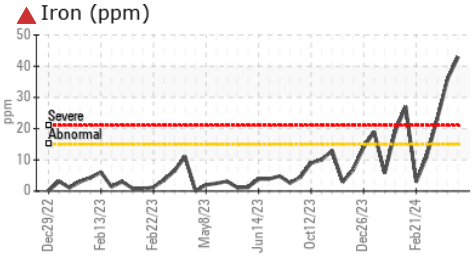


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>.11	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

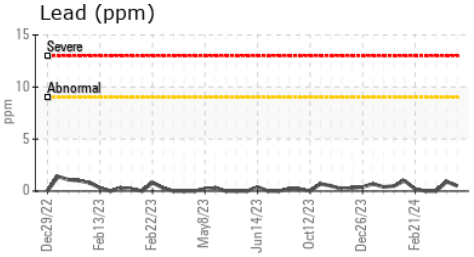
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.4	**13.6**	13.4	13.4

GRAPHS

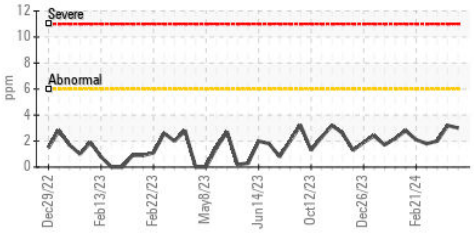
Iron (ppm)



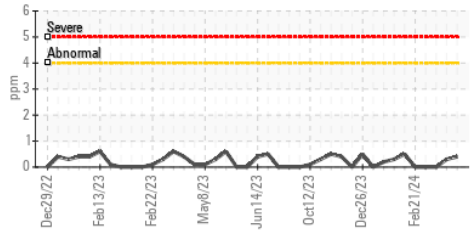
Lead (ppm)



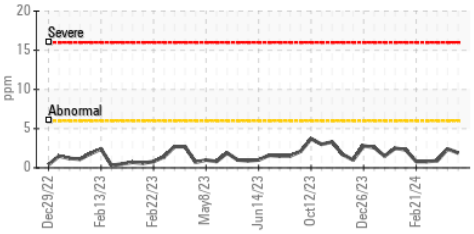
Aluminum (ppm)



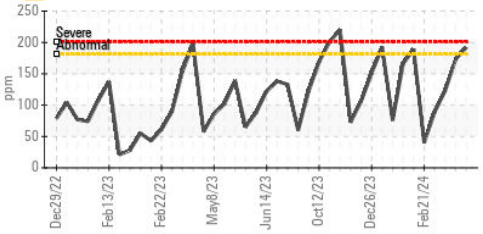
Chromium (ppm)



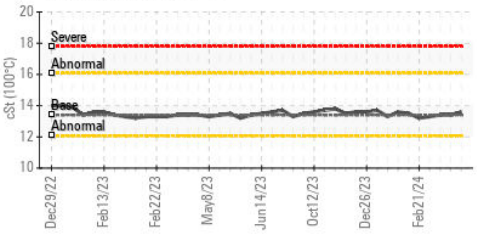
Copper (ppm)



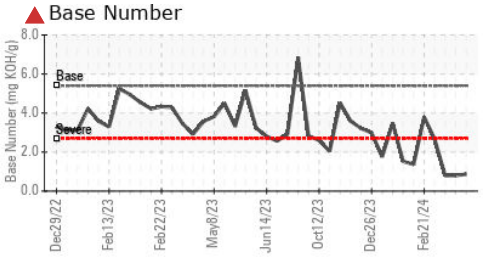
Silicon (ppm)



Viscosity @ 100°C



Base Number



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0895564
Lab Number : 06130802
Unique Number : 10950267
Test Package : MOB 2

Received : 27 Mar 2024
Tested : 28 Mar 2024
Diagnosed : 01 Apr 2024 - Doug Bogart

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)

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