

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL NORMAL



COVM04BE (S/N GZJ00185) Component

Biogas Engine

CHEVRON HDAX 6500 LFG GAS ENGINE OIL (141 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

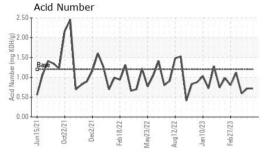
Fluid Condition

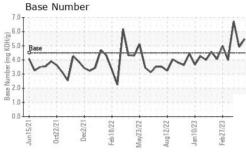
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

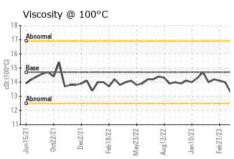
		n2021 Oct20	21 Dec2021 Feb2022	May2022 Aug2022 Jan2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0816098	WC0618636	WC0722601
Sample Date		Client Info		10 Jul 2023	18 Apr 2023	10 Apr 2023
Machine Age	hrs	Client Info		124798	802067	124531
Oil Age	hrs	Client Info		124467	242	124467
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>15	8	2	<1
Chromium	ppm	ASTM D5185m	>4	<1	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>6	2	1	<1
Lead	ppm	ASTM D5185m	>9	<1	0	<1
Copper	ppm	ASTM D5185m	>6	2	<1	2
Tin	ppm	ASTM D5185m	>4	2	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 7	history1 4	history2 5
	ppm		limit/base			5 <1
Boron		ASTM D5185m	limit/base	7	4	5
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	7 2	4 0	5 <1
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 2 7	4 0 6	5 <1 7
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 2 7 <1	4 0 6 1	5 <1 7 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 2 7 <1 30	4 0 6 1 32	5 <1 7 <1 35
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 2 7 <1 30 1769	4 0 6 1 32 1489	5 <1 7 <1 35 1704
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 2 7 <1 30 1769 281	4 0 6 1 32 1489 253	5 <1 7 <1 35 1704 275
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	7 2 7 <1 30 1769 281 371	4 0 6 1 32 1489 253 299	5 <1 7 <1 35 1704 275 314
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m		7 2 7 <1 30 1769 281 371 2462	4 0 6 1 32 1489 253 299 1757	5 <1 7 <1 35 1704 275 314 1896
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	7 2 7 <1 30 1769 281 371 2462 current	4 0 6 1 32 1489 253 299 1757 history1	5 <1 7 <1 35 1704 275 314 1896 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	7 2 7 <1 30 1769 281 371 2462 current 102	4 0 6 1 32 1489 253 299 1757 history1	5 <1 7 <1 35 1704 275 314 1896 history2 36
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >181	7 2 7 <1 30 1769 281 371 2462 current 102 <1	4 0 6 1 32 1489 253 299 1757 history1 87 <1	5 <1 7 <1 35 1704 275 314 1896 history2 36 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >181 >20	7 2 7 <1 30 1769 281 371 2462 current 102 <1	4 0 6 1 32 1489 253 299 1757 history1 87 <1	5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >181 >20 limit/base	7 2 7 <1 30 1769 281 371 2462 current 102 <1 1	4 0 6 1 32 1489 253 299 1757 history1 87 <1 0	5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >181 >20 limit/base	7 2 7 <1 30 1769 281 371 2462 current 102 <1 1 current 0.1	4 0 6 1 32 1489 253 299 1757 history1 87 <1 0 history1	5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >181 >20 limit/base >20	7 2 7 <1 30 1769 281 371 2462 current 102 <1 1 current 0.1 5.5	4 0 6 1 32 1489 253 299 1757 history1 87 <1 0 history1 0 5.0	5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D5185m *ASTM D7624 *ASTM D7624 *ASTM D76145	limit/base >181 >20 limit/base >20 >30	7 2 7 <1 30 1769 281 371 2462 current 102 <1 1 current 0.1 5.5 17.6	4 0 6 1 32 1489 253 299 1757 history1 87 <1 0 history1 0 5.0 15.6	5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7624 *ASTM D7624 *ASTM D7615 method	limit/base >181 >20 limit/base >20 >30 limit/base	7 2 7 <1 30 1769 281 371 2462 current 102 <1 1 current 0.1 5.5 17.6 current	4 0 6 1 32 1489 253 299 1757 history1 87 <1 0 history1 0 5.0 15.6 history1	5



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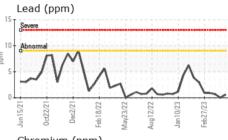


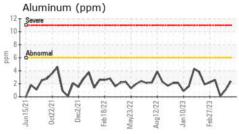


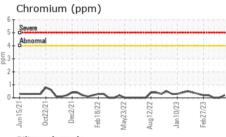
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

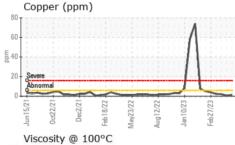
FLUID PROPER	THES	method			riistory i	riistoryz
Visc @ 100°C	cSt	ASTM D445	14.7	13.5	13.4	13.3

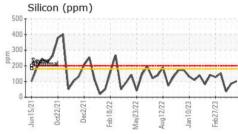
Seven	е						
Abno	mal						
	Л	- /				$ \sqrt{} $	
~	1	/	M	~	N		~
-12/51 mr	Oct22/21	2/21	Feb18/22	3/22 -	2/22	1/23	103
-	55	Dec2/	5	May23/2.	Aug12/2	Jan 10	Feb27/

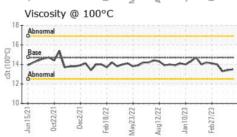


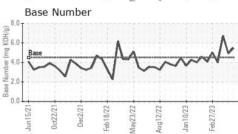
















Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : MOB 2

: WC0816098 : 05898741 : 10560097

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 14 Jul 2023 Diagnosed : 17 Jul 2023 : Don Baldridge Diagnostician

EDL NA Recips-Covel COVEL GARDENS POWER STATION, 8611 COVEL ROAD

SAN ANTONIO, TX US 78252

Contact: ARIEL CARRION ariel.carrion@edlenergy.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)

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F: