

OIL ANALYSIS REPORT

Sample Rating Trend

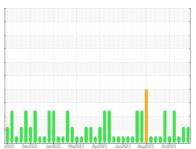
DEGRADATION



Grand Blanc CAT 6 GBLM06BE

Component
Biogas Engine

CHEVRON HDAX 6500 LFG GAS ENGINE OIL (--- GAL)





DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. Resample at the next service interval to monitor. (Customer Sample Comment: 600hr Oil Sample)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

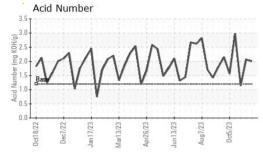
Fluid Condition

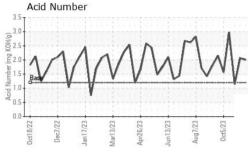
The BN level is low. The AN level is acceptable for this fluid.

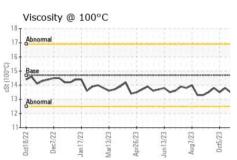
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0870032	WC0870033	WC0824978
Sample Date		Client Info		14 Nov 2023	11 Nov 2023	29 Oct 2023
Machine Age	hrs	Client Info		89569	89394	89141
Oil Age	hrs	Client Info		600	0	0
Oil Changed		Client Info		Not Changd	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL
CONTAMINATION	٧	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	>15	<1	3	<1
Chromium	ppm	ASTM D5185m	>4	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>6	2	3	<1
Lead	ppm	ASTM D5185m	>9	1	1	0
Copper	ppm	ASTM D5185m	>6	<1	1	<1
Tin	ppm	ASTM D5185m	>4	2	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	<1
Barium	ppm	ASTM D5185m		0	6	0
Molybdenum	ppm	ASTM D5185m		0	2	1
Manganese	1-1-					
3	mag	ASTM D5185m		<1	0	<1
Magnesium	ppm mag	ASTM D5185m ASTM D5185m		<1 8		
Magnesium Calcium	ppm	ASTM D5185m		8	0 12	<1 2
Calcium	ppm	ASTM D5185m ASTM D5185m		8 1894	0 12 1866	<1 2 1681
Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		8 1894 284	0 12 1866 325	<1 2 1681 231
Calcium	ppm	ASTM D5185m ASTM D5185m		8 1894	0 12 1866	<1 2 1681
Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	8 1894 284 356	0 12 1866 325 336	<1 2 1681 231 291
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >181	8 1894 284 356 3352	0 12 1866 325 336 3389	<1 2 1681 231 291 2569
Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m		8 1894 284 356 3352 current 109	0 12 1866 325 336 3389 history1	<1 2 1681 231 291 2569 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method		8 1894 284 356 3352 current	0 12 1866 325 336 3389 history1	<1 2 1681 231 291 2569 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	>181	8 1894 284 356 3352 current 109 <1	0 12 1866 325 336 3389 history1 98	<1 2 1681 231 291 2569 history2 54
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	>181 >20	8 1894 284 356 3352 current 109 <1 2	0 12 1866 325 336 3389 history1 98 0 1	<1 2 1681 231 291 2569 history2 54 1 1
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m	>181 >20 limit/base	8 1894 284 356 3352 current 109 <1 2 current	0 12 1866 325 336 3389 history1 98 0 1 history1	<1 2 1681 231 291 2569 history2 54 1 1 history2 0
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	>181 >20 limit/base	8 1894 284 356 3352 current 109 <1 2	0 12 1866 325 336 3389 history1 98 0 1	<1 2 1681 231 291 2569 history2 54 1 1
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	>181 >20 limit/base >20	8 1894 284 356 3352 current 109 <1 2 current 0.1 5.8	0 12 1866 325 336 3389 history1 98 0 1 history1 0 5.5	<1 2 1681 231 291 2569 history2 54 1 1 1 history2 0 5.5
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D78185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	>181 >20 limit/base >20 >30 limit/base	8 1894 284 356 3352 current 109 <1 2 current 0.1 5.8 26.4 current	0 12 1866 325 336 3389 history1 98 0 1 history1 0 5.5 25.3 history1	<1 2 1681 231 291 2569 history2 54 1 1 history2 0 5.5 21.2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm Attion	ASTM D5185m ASTM D76185m method *ASTM D7844 *ASTM D7624 *ASTM D7614 *ASTM D7415 method *ASTM D7414	>181 >20 limit/base >20 >30 limit/base >25	8 1894 284 356 3352 current 109 <1 2 current 0.1 5.8 26.4 current 17.6	0 12 1866 325 336 3389 history1 98 0 1 history1 0 5.5 25.3 history1 16.3	<1 2 1681 231 291 2569 history2 54 1 1 history2 0 5.5 21.2 history2 12.5
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/.1mm	ASTM D5185m ASTM D78185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	>181 >20 limit/base >20 >30 limit/base	8 1894 284 356 3352 current 109 <1 2 current 0.1 5.8 26.4 current	0 12 1866 325 336 3389 history1 98 0 1 history1 0 5.5 25.3 history1	<1 2 1681 231 291 2569 history2 54 1 1 history2 0 5.5 21.2 history2



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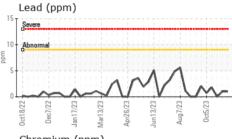


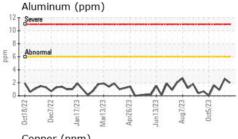


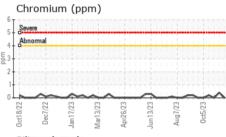
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

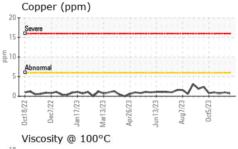
FLUID PROPER	TIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.7	14.0	13.8	13.5

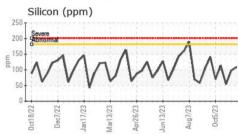
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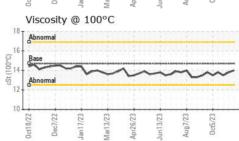


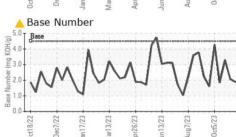
















Certificate L2367

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

: WC0870032 : 06012617 : 10751761

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

Received : 20 Nov 2023 : 21 Nov 2023 Diagnosed Diagnostician : Sean Felton

EDL NA Recips-Grand Blanc Grand Blanc Powerstation, 2361 West Grand Blanc Road Grand Blanc, MI

US 48439 Contact: Tony Saint Marie tony.saintmarie@edlenergy.com T:

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)

Report Id: EDLGRA [WUSCAR] 06012617 (Generated: 11/21/2023 17:29:28) Rev: 1

Submitted By: DARREL HILTZ

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