

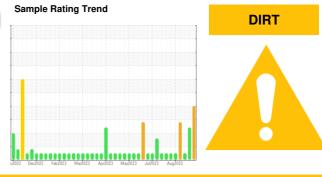
OIL ANALYSIS REPORT



Machine Id WVTM02BE Component

Biogas Engine

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



Sample NumberClient InfoWC0629360WC0629360Sample DateClient Info29 Sep 202326 Sep 2Machine AgehrsClient Info4041240316Oil AgehrsClient Info538442Oil ChangedClient InfoChangedNot ChaSample StatusImather of the second s	2023 14 Sep 2023 40055 181 angd Not Changd
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Titanium ppm ASTM D5185m <1 0 Silver ppm ASTM D5185m >5 0 0 Aluminum ppm ASTM D5185m >6 <1	0 0 3 <1 <1 2 0
Silver ppm ASTM D5185m >5 0 0 Aluminum ppm ASTM D5185m >6 <1 4 Lead ppm ASTM D5185m >9 5 5 Copper ppm ASTM D5185m >6 <1 <1 Tin ppm ASTM D5185m >4 5 5 Vanadium ppm ASTM D5185m >4 5 5 Qadmium ppm ASTM D5185m >4 5 5 ADDITIVES method limit/base current hist Boron ppm ASTM D5185m 0 0 0	0 3 <1 <1 2 0
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Aluminum ppm ASTM D5185m >6 <1 4 Lead ppm ASTM D5185m >9 5 5 Copper ppm ASTM D5185m >6 <1	<1 <1 2 0
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CadmiumppmASTM D5185m00ADDITIVESmethodlimit/basecurrenthistBoronppmASTM D5185m00	
ADDITIVES method limit/base current hist Boron ppm ASTM D5185m 0 0	
Boron ppm ASTM D5185m 0 0	ory1 history2
	0
	0
Molybdenum ppm ASTM D5185m 1 1	1
Manganese ppm ASTM D5185m <1 <1	<1
Magnesium ppm ASTM D5185m 7 7	8
Calcium ppm ASTM D5185m 1920 1860	
Phosphorus ppm ASTM D5185m 285 278	250
Zinc ppm ASTM D5185m 346 326	310
Sulfur ppm ASTM D5185m 3803 3703	2912
CONTAMINANTS method limit/base current hist	ory1 history2
Silicon ppm ASTM D5185m >181 166	69
Sodium ppm ASTM D5185m <1 <1	0
Potassium ppm ASTM D5185m >20 <1 0	<1
INFRA-RED method limit/base current hist	ory1 history2
Soot % % *ASTM D7844 0 0	
	0.1
Nitration Abs/cm *ASTM D7624 >20 5.2 5.2	0.1 5.2
Nitration Abs/cm *ASTM D7624 >20 5.2 5.2 Sulfation Abs/.1mm *ASTM D7415 >30 27.1 26.4	
Sulfation Abs/.1mm *ASTM D7415 >30 27.1 26.4	5.2 18.5
Sulfation Abs/.1mm *ASTM D7415 >30 27.1 26.4	5.2 18.5
Sulfation Abs/.1mm *ASTM D7415 >30 27.1 26.4 FLUID DEGRADATION method limit/base current hist	5.2 18.5 ory1 history2

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: Oil and filter changed)

Wear

All component wear rates are normal.

Contamination

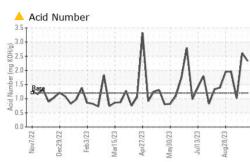
Elemental level of silicon (Si) above normal indicating ingress of seal material.

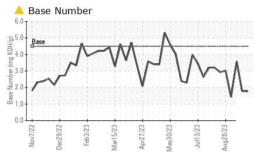
Fluid Condition

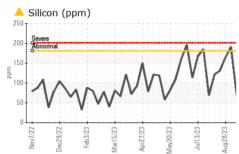
The BN level is low. The AN level is at the top-end of the recommended limit.

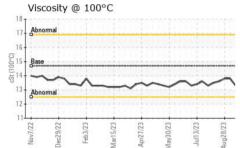


OIL ANALYSIS REPORT









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scalar scalar scalar scalar scalar scalar TIES cSt	*Visual *Visual *Visual *Visual *Visual *Visual *Visual Method ASTM D445	NONE NONE NONE NORML >0.1	NONE NONE NONE NORML NORML NEG NEG Current 13.7 Lead (ppm)	NONE NONE NORML NORML NEG NEG history1 13.6	NONE NONE NONE NORML NEG history2 13.3
scalar scalar scalar scalar scalar scalar TIES cSt	*Visual *Visual *Visual *Visual *Visual *Visual *Visual Method ASTM D445	NONE NONE NONE NORML >0.1	NONE NONE NONE NORML NORML NEG NEG current 13.7 Lead (ppm)	NONE NONE NORML NORML NEG NEG history1 13.6	NONE NONE NORML NORML NEG history2 13.3
scalar scalar scalar scalar scalar scalar TIES cSt	*Visual *Visual *Visual *Visual *Visual *Visual Method ASTM D445	NONE NONE NORML NORML >0.1	NONE NONE NONE NORML NORML NEG NEG current 13.7 Lead (ppm)	NONE NONE NORML NORML NEG history1 13.6	NONE NONE NORML NORML NEG history2 13.3
scalar scalar scalar scalar scalar TIES cSt	*Visual *Visual *Visual *Visual *Visual method ASTM D445	NONE NORML NORML >0.1	NONE NORML NORML NORML NEG NEG Current 13.7 Lead (ppm)	NONE NORML NORML NEG NEG history1 13.6	NONE NORML NORML NEG NEG history2 13.3
scalar scalar scalar scalar TIES cSt	*Visual *Visual *Visual *Visual Method ASTM D445	NONE NORML >0.1 14.7	NONE NORML NORML NEG NEG current 13.7 Lead (ppm)	NONE NORML NEG NEG history1 13.6	NONE NORML NEG NEG history2 13.3
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scalar scalar TIES cSt	*Visual *Visual method ASTM D445	>0.1 limit/base 14.7	NEG NEG current 13.7 Lead (ppm)	NEG NEG history1 13.6 EZIZIJIEM	NEG NEG 13.3
scalar TIES cSt	*Visual method ASTM D445	limit/base 14.7	NEG current 13.7 Lead (ppm) Severe Abnormal CZ/K02 Chromium (p	NEG history1 13.6 EZI/Z ^{Jue} W	NEG history2 13.3
	Method ASTM D445		Current 13.7 Lead (ppm)	history1 13.6 EZIZJUEW	history2 13.3
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Api21/23	M		Lead (ppm) Severe Abnormal 22//s23-0 Chromium (p	Mart5r23 Apr27/23 May30/23 \$	$\sim \sim$
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	May 20/23	••••••••••••••••••••••••••••••••••••••	ZZ/6224 Chromium (p		Juli323
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	800-237-136	-		scott.eastman@	edlenergy.com
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To discuss this sample * - 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)

Certificate L2367

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