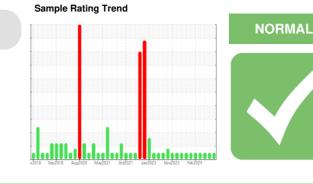


OIL ANALYSIS REPORT





TAYM04BE (S/N 1207234) Component Biogas Engine Fluid

CHEVRON HDAX 9500 GAS ENGINE OIL 40 (180 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Area EDLTAY

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

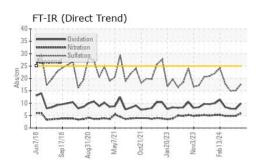
Fluid Condition

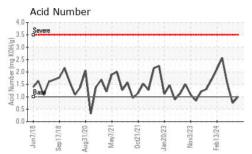
The BN result indicates that there is suitable alkalinity remaining in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

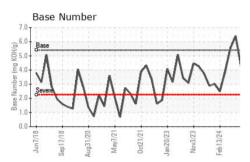
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0901602	WC0901595	WC0901587
Sample Date		Client Info		03 Apr 2024	27 Mar 2024	21 Mar 2024
Machine Age	hrs	Client Info		255116	255116	255116
Oil Age	hrs	Client Info		335	167	23
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>14	0	4	1
Chromium	ppm	ASTM D5185m	>3	0	<1	0
Nickel	ppm	ASTM D5185m		0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>5	1	2	0
Lead	ppm	ASTM D5185m	>6	0	0	0
Copper	ppm	ASTM D5185m	>5	0	<1	0
Tin	ppm	ASTM D5185m	>6	1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1 <1	history2 0
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	0	<1	0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	<1 0	0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 2	<1 0 3	0 0 2
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 2 <1	<1 0 3 <1	0 0 2 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 2 <1 16	<1 0 3 <1 7	0 0 2 <1 7
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 2 <1 16 1771	<1 0 3 <1 7 1748	0 0 2 <1 7 1799
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	limit/base	0 0 2 <1 16 1771 242	<1 0 3 <1 7 1748 245	0 0 2 <1 7 1799 257
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 2 <1 16 1771 242 309	<1 0 3 <1 7 1748 245 321	0 2 <1 7 1799 257 307 1863 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method		0 0 2 <1 16 1771 242 309 2159 2159 current 4	<1 0 3 <1 7 1748 245 321 1896 history1 9	0 0 2 <1 7 1799 257 307 1863 history2 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >180	0 0 2 <1 16 1771 242 309 2159 2159 current 4 2	<1 0 3 <1 7 1748 245 321 1896 history1 9 1	0 0 2 <1 7 1799 257 307 1863 history2 7 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base >180	0 0 2 <1 16 1771 242 309 2159 2159 current 4	<1 0 3 <1 7 1748 245 321 1896 history1 9	0 0 2 <1 7 1799 257 307 1863 history2 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >180	0 0 2 <1 16 1771 242 309 2159 <u>current</u> 4 2 2 <u>current</u>	<1 0 3 <1 7 1748 245 321 1896 history1 9 1 4 4 history1	0 0 2 <1 7 1799 257 307 1863 history2 7 <1 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	limit/base >180 >20 limit/base >2	0 0 2 <1 16 1771 242 309 2159 2159 current 4 2 2	<1 0 3 <1 7 1748 245 321 1896 history1 9 1 4 4 history1 0	0 0 2 <1 7 1799 257 307 1863 history2 7 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >180 >20 limit/base >2	0 0 2 <1 16 1771 242 309 2159 <u>current</u> 4 2 2 2	<1 0 3 <1 7 1748 245 321 1896 history1 9 1 4 4 history1	0 0 2 <1 7 1799 257 307 1863 history2 7 <1 <1 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	limit/base >180 >20 limit/base >2	0 0 2 <1 16 1771 242 309 2159 <u>current</u> 4 2 2 2 <u>current</u> 0	<1 0 3 <1 7 1748 245 321 1896 history1 9 1 4 4 history1 0	0 0 2 <1 7 1799 257 307 1863 history2 7 <1 <1 history2 0
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 ASTM D5185m	limit/base >180 >20 limit/base >2 >20	0 0 2 <1 16 1771 242 309 2159 <i>current</i> 4 2 2 2 <i>current</i> 0 5.9	<1 0 3 <1 7 1748 245 321 1896 history1 9 1 4 4 history1 0 4.9	0 0 2 <1 7 1799 257 307 1863 history2 7 <1 <1 <1 <1 history2 0 4.9
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 ASTM D5185m	Imit/base >180 >20 Imit/base >20 ≥2 >20 >20 >30	0 0 2 <1 16 1771 242 309 2159 <u>current</u> 4 2 2 <u>current</u> 0 5.9 17.6	<1 0 3 <1 7 1748 245 321 1896 history1 9 1 4 4 history1 0 4.9 15.1	0 0 2 <1 7 1799 257 307 1863 history2 7 <1 <1 <1 history2 0 4.9 14.9
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 ASTM D7844 *ASTM D7624	limit/base >180 >20 limit/base >20 >20 >30 limit/base	0 0 2 <1 16 1771 242 309 2159 current 4 2 2 2 current 0 5.9 17.6	<1 0 3 <1 7 1748 245 321 1896 history1 9 1 4 4 history1 0 4.9 15.1 history1	0 0 2 <1 7 1799 257 307 1863 history2 7 <1 <1 <1 <1 history2 0 4.9 14.9 14.9 history2
Boron Barium Molybdenum Manganese Magnesium 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 ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	limit/base >180 >20 limit/base >2 >20 s30 limit/base >30	0 0 2 <1 16 1771 242 309 2159 current 4 2 2 2 current 0 5.9 17.6 current 9.9	<1 0 3 <1 7 1748 245 321 1896 history1 9 1 4 <u>history1</u> 0 4.9 15.1 history1 7.7	0 0 2 <1 7 1799 257 307 1863 history2 7 <1 <1 <1 <1 history2 0 4.9 14.9 14.9 history2 7.8

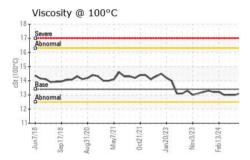


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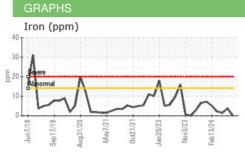


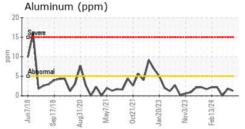


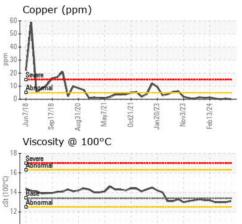


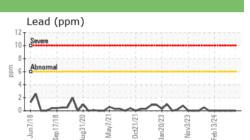


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual		NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.4	13.1	13.0	13.0

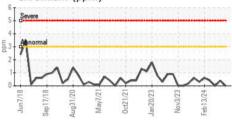


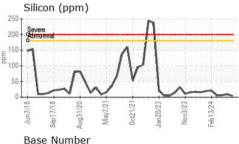






Chromium (ppm)





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 **EDL NA Recips-Taylor County** Sample No. : WC0901602 TAYLOR COUNTY POWER STATION, COUNTY ROAD 33 & STEWART ROAD Received : 09 Apr 2024 Lab Number : 06143238 Tested : 10 Apr 2024 MAUK, GA Unique Number : 10968046 Diagnosed : 10 Apr 2024 - Jonathan Hester US 31058 Test Package : MOB 2 Contact: STEVEN BABB Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. steven.babb@edlenergy.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Т:

Feb13/24

an 20/23 Nov3/23

10

Jun7/18 Sep17/18

ug31/20 Mav7/21

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: ENEMAU [WUSCAR] 06143238 (Generated: 04/10/2024 14:33:13) Rev: 1

Submitted By: Steven Sedler

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