

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id SJNM02BE Component

Biogas Engine

CHEVRON HDAX 6500 LFG GAS ENGINE OIL (--- 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.

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0764396	WC0764432	WC0764421
Sample Date		Client Info		25 Aug 2023	18 Aug 2023	11 Aug 2023
Machine Age	hrs	Client Info		110226	110057	109891
Oil Age	hrs	Client Info		1024	855	689
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	SEVERE	ABNORMAL
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Glycol		WC Method	2 1.0	NEG	NEG	NEG
,			line it //s e e e			
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		3	3	3
Chromium	ppm	ASTM D5185m		<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	. E	0	0	0
Silver	ppm	ASTM D5185m ASTM D5185m		0	0	0 <1
Aluminum	ppm		>6	2	<1	
Lead	ppm	ASTM D5185m		7	5	4
Copper	ppm	ASTM D5185m		4	4	2
Tin	ppm		>4	4	4	4
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
-						_
Boron	ppm	ASTM D5185m		7	6	5
Barium	ppm	ASTM D5185m		0	0	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		0 9	0 9	0 8
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		0 9 <1	0 9 <1	0 8 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 9 <1 25	0 9 <1 21	0 8 <1 19
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 9 <1 25 2121	0 9 <1 21 1918	0 8 <1 19 1982
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 9 <1 25 2121 335	0 9 <1 21 1918 291	0 8 <1 19 1982 308
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 9 <1 25 2121 335 406	0 9 <1 21 1918 291 366	0 8 <1 19 1982 308 372
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 9 <1 25 2121 335	0 9 <1 21 1918 291	0 8 <1 19 1982 308 372 2604
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	0 9 <1 25 2121 335 406 3023 current	0 9 <1 21 1918 291 366 2257 history1	0 8 <1 19 1982 308 372 2604 history2
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		0 9 <1 25 2121 335 406 3023 current 243	0 9 <1 21 1918 291 366 2257 history1 ◆ 214	0 8 <1 19 1982 308 372 2604 history2 ▲ 188
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 method ASTM D5185m	>181	0 9 <1 25 2121 335 406 3023 current 243 2	0 9 <1 21 1918 291 366 2257 history1 214 0	0 8 <1 19 1982 308 372 2604 history2 ▲ 188 <1
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	>181	0 9 <1 25 2121 335 406 3023 current 243	0 9 <1 21 1918 291 366 2257 history1 ◆ 214	0 8 <1 19 1982 308 372 2604 history2 ▲ 188
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 method ASTM D5185m	>181	0 9 <1 25 2121 335 406 3023 current 243 2	0 9 <1 21 1918 291 366 2257 history1 214 0	0 8 <1 19 1982 308 372 2604 history2 ▲ 188 <1 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>181 >20	0 9 <1 25 2121 335 406 3023 current 243 2 3	0 9 <1 21 1918 291 366 2257 history1 ● 214 0 3	0 8 <1 19 1982 308 372 2604 history2 ▲ 188 <1 2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	>181 >20 limit/base	0 9 <1 25 2121 335 406 3023 current 243 2 3 3	0 9 <1 21 1918 291 366 2257 history1 • 214 0 3 3 } history1	0 8 <1 19 1982 308 372 2604 history2 ▲ 188 <1 2 188 <1 2 history2 0 7.0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	>181 >20 limit/base	0 9 <1 25 2121 335 406 3023 current 243 2 3 3 current 0	0 9 <1 21 1918 291 366 2257 history1 ◆ 214 0 3 3 history1 0	0 8 <1 19 1982 308 372 2604 history2 ▲ 188 <1 2 188 <1 2 18s 0
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	>181 >20 limit/base >20	0 9 <1 25 2121 335 406 3023 <u>current</u> 243 2 3 <u>current</u> 0 7.7	0 9 <1 21 1918 291 366 2257 history1 ◆ 214 0 3 3 history1 0 7.4	0 8 <1 19 1982 308 372 2604 history2 ▲ 188 <1 2 188 <1 2 history2 0 7.0
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	>181 >20 limit/base >20 >30	0 9 <1 25 2121 335 406 3023 <u>current</u> 243 2 3 <u>current</u> 0 7.7 22.4	0 9 <1 21 1918 291 366 2257 history1 214 0 3 3 history1 0 7.4 21.4	0 8 <1 19 1982 308 372 2604 history2 188 <1 2 188 <1 2 history2 0 7.0 20.4
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 ASTM D7844 *ASTM D7624 *ASTM D7415	>181 >20 limit/base >20 >30 limit/base >25	0 9 <1 25 2121 335 406 3023 current 243 2 3 current 0 7.7 22.4 current	0 9 31 21 1918 291 366 2257 history1 ◆ 214 0 3 3 history1 0 7.4 21.4	0 8 3 19 1982 308 372 2604 history2 188 <1 2 188 <1 2 2 history2 0 7.0 20.4 bistory2
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 D7624 *ASTM D7415	>181 >20 limit/base >20 >30 limit/base >25	0 9 <1 25 2121 335 406 3023 <u>current</u> 243 2 3 <u>current</u> 0 7.7 22.4 <u>current</u>	0 9 31 21 1918 291 366 2257 history1 214 0 3 3 history1 0 7.4 21.4 21.4 history1 16.0	0 8 3 19 1982 308 372 2604 history2 188 <1 2 188 <1 2 188 <1 2 0 history2 0 7.0 20.4 history2 14.2



Abnorma

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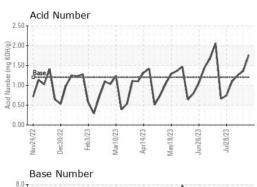
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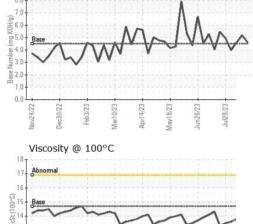
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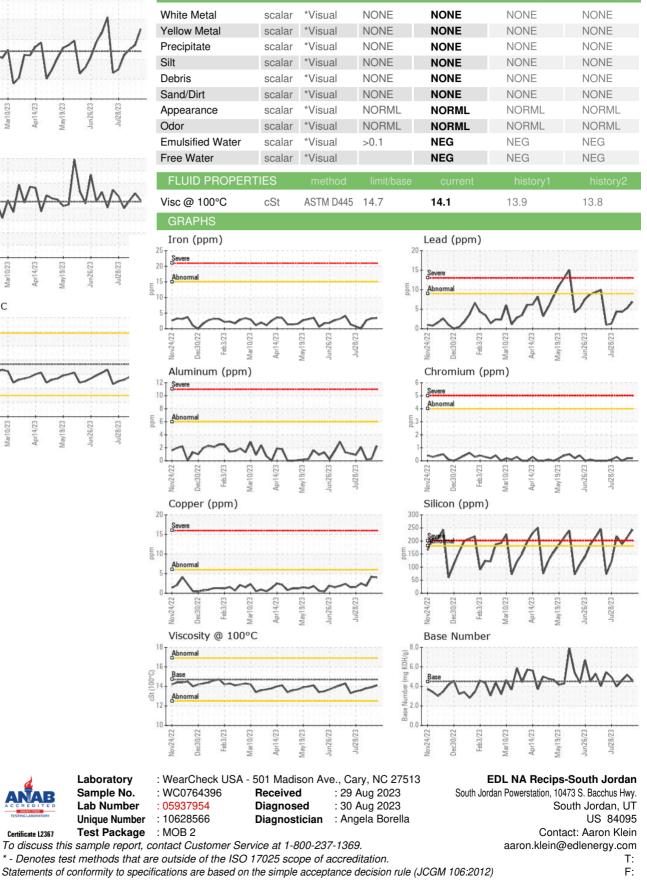
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