

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

CHEVROLET 24931-03

Gasoline Engine

{not provided} (--- GAL)

Recommendation

No corrective action is recommended at this time.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

Fluid Condition

The AN level is acceptable for this fluid.

Phosphorus ppm ASTM D5185m 678 Zinc ppm ASTM D5185m 835 Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16							
Sample Date Client Info 23 Apr 2024 Machine Age mls Client Info 0 Oil Age mls Client Info 0 Oil Changed Client Info N/A Sample Status NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method NEG Glycol WC Method NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >150 77 Chromium ppm ASTM D5185m >20 1 Nickel ppm ASTM D5185m >5 <1 Titanium ppm ASTM D5185m >4 10 Silver ppm ASTM D5185m >10 <1 Capper ppm ASTM D5185m >155 6 Vanadium ppm ASTM D5185m >155 6 Vanadium ppm ASTM D5185m >155 6 Vanadium ppm ASTM D5185m >10 <1 Vanadium ppm ASTM D5185m >10 <1 Vanadium ppm ASTM D5185m >10 <1 Vanadium ppm ASTM D5185m 2 ADDITIVES method limit/base current history1 history2 Barium ppm ASTM D5185m 21 ADDITIVES method limit/base current history1 history2 ASTM D5185m 542 ASTM D5185m 540 4 ASTM D5185m 20 4 INFRA-RED method	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Date Client Info 23 Apr 2024	Sample Number		Client Info		WCM2007283		
Machine Age mls Client Info 0 Oil Age mls Client Info 0 Oil Changed Client Info N/A Sample Status VC Method NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 1 Chromium ppm ASTM D5185m >20 1 Nikckel ppm ASTM D5185m >5 <1	•		Client Info		23 Apr 2024		
Colient Info N/A		mls	Client Info		0		
CONTAMINATION method limit/base current history1 history2	Oil Age	mls	Client Info		0		
Water WC Method Imit/base current history1 history2	Oil Changed		Client Info		N/A		
Water Glycol WC Method >0.2 NEG	Sample Status				NORMAL		
WEAR METALS	CONTAMINATIO	N	method	limit/base	current	history1	history2
WEAR METALS	Water		WC Method	>0.2	NEG		
ASTM D5185m ASTM D5185m	Glycol		WC Method		NEG		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>150	77		
Titanium	Chromium	ppm	ASTM D5185m	>20	1		
Silver	Nickel	ppm	ASTM D5185m	>5	<1		
Aluminum	Titanium	ppm	ASTM D5185m		<1		
Lead	Silver	ppm	ASTM D5185m	>2	0		
Copper ppm ASTM D5185m >155 6 Tin ppm ASTM D5185m >10 <1	Aluminum	ppm	ASTM D5185m	>40	10		
Tin	Lead	ppm	ASTM D5185m	>50	<1		
Vanadium ppm ASTM D5185m 2 Cadmium ppm ASTM D5185m <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 21 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 72 Manganese ppm ASTM D5185m 6 Magnesium ppm ASTM D5185m 542 Calcium ppm ASTM D5185m 678 Phosphorus ppm ASTM D5185m 835 Sulfur ppm ASTM D5185m 2612 Sulfur ppm ASTM D5185m >30 16 Solicon ppm ASTM D5185m >20 2	Copper	ppm	ASTM D5185m	>155	6		
ADDITIVES	Tin	ppm	ASTM D5185m	>10	<1		
ADDITIVES	Vanadium	ppm	ASTM D5185m		2		
Boron	Cadmium	ppm	ASTM D5185m		<1		
Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 72 Manganese ppm ASTM D5185m 6 Magnesium ppm ASTM D5185m 542 Calcium ppm ASTM D5185m 1134 Phosphorus ppm ASTM D5185m 678 Zinc ppm ASTM D5185m 835 Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Fuel % ASTM D5185m >20 2 Fuel % ASTM D7844	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 72 Magnesium ppm ASTM D5185m 6 Calcium ppm ASTM D5185m 542 Calcium ppm ASTM D5185m 1134 Phosphorus ppm ASTM D5185m 678 Zinc ppm ASTM D5185m 835 Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Fuel % ASTM D5185m >20 2 Fuel % ASTM D7844 0.1 INFRA-RED method limit/base	Boron	ppm	ASTM D5185m		21		
Manganese ppm ASTM D5185m 6 Magnesium ppm ASTM D5185m 542 Calcium ppm ASTM D5185m 1134 Phosphorus ppm ASTM D5185m 678 Zinc ppm ASTM D5185m 2612 Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % <t< td=""><td>Barium</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>0</td><td></td><td></td></t<>	Barium	ppm	ASTM D5185m		0		
Magnesium ppm ASTM D5185m 542 Calcium ppm ASTM D5185m 1134 Phosphorus ppm ASTM D5185m 678 Zinc ppm ASTM D5185m 835 Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D3524 >4.0 <1.0	Molybdenum	ppm	ASTM D5185m		72		
Calcium ppm ASTM D5185m 1134 Phosphorus ppm ASTM D5185m 678 Zinc ppm ASTM D5185m 835 Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 Nitration Abs/.1mm *ASTM D7415 >30 30.7 <td< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>6</td><td></td><td></td></td<>	Manganese	ppm	ASTM D5185m		6		
Phosphorus ppm ASTM D5185m 678 Zinc ppm ASTM D5185m 835 Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Sodium ppm ASTM D5185m >20 2 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D3185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7	Magnesium						
Zinc ppm ASTM D5185m 2612 Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D3524 >4.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8		ppm	ASTM D5185m		542		
Sulfur ppm ASTM D5185m 2612 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D5185m >20 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 3	Calcium						
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D3524 >4.0 <1.0		ppm	ASTM D5185m		1134		
Silicon ppm ASTM D5185m >30 16 Sodium ppm ASTM D5185m >400 4 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D3524 >4.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m		1134 678		
Sodium ppm ASTM D5185m >400 4 Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D3524 >4.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	Phosphorus Zinc	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		1134 678 835		
Potassium ppm ASTM D5185m >20 2 Fuel % ASTM D3524 >4.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	1134 678 835 2612	 	
Fuel % ASTM D3524 >4.0 <1.0 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method		1134 678 835 2612 current	 	 history2
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	>30	1134 678 835 2612 current	 history1 	 history2
Soot % % *ASTM D7844 0.1 Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	>30 >400	1134 678 835 2612 current 16	 history1 	 history2
Nitration Abs/cm *ASTM D7624 >20 16.7 Sulfation Abs/.1mm *ASTM D7615 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	>30 >400 >20	1134 678 835 2612 current 16 4	 history1 	 history2
Sulfation Abs/.1mm *ASTM D7415 >30 30.7 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>30 >400 >20 >4.0	1134 678 835 2612 current 16 4 2 <1.0	 history1 	 history2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 31.8	Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ss ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	>30 >400 >20 >4.0	1134 678 835 2612 current 16 4 2 <1.0	history1 history1	history2 history2 history2
Oxidation	Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 Method *ASTM D7844	>30 >400 >20 >4.0 limit/base	1134 678 835 2612 current 16 4 2 <1.0 current	history1 history1	history2 history2 history2
	Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624	>30 >400 >20 >4.0 limit/base	1134 678 835 2612 current 16 4 2 <1.0 current 0.1	history1 history1	history2 history2 history2
	Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 Method *ASTM D7844 *ASTM D7624 *ASTM D76145	>30 >400 >20 >4.0 limit/base >20 >30	1134 678 835 2612 current 16 4 2 <1.0 current 0.1 16.7 30.7	history1 history1 history1	history2 history2 history2
	Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	>30 >400 >20 >4.0 limit/base >20 >30	1134 678 835 2612 current 16 4 2 <1.0 current 0.1 16.7 30.7	history1 history1 history1 history1 history1	history2 history2 history2 history2 history2

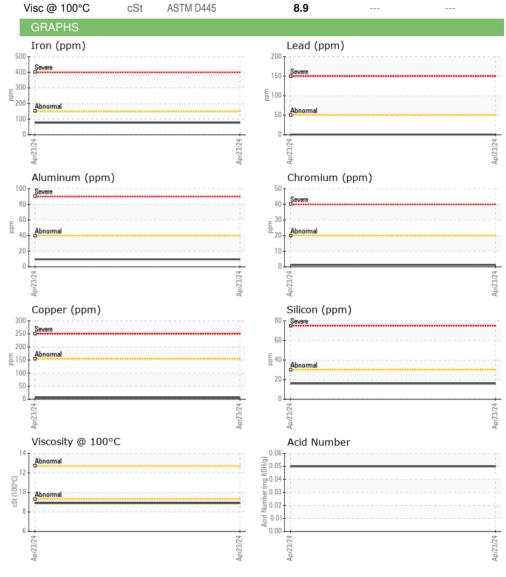


OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID DDODEDI			11 11 11		111	1::. 0

Acid Numbe	er	
0.06		
0.05		
0.05		
0.02		
0.03		
0.02		
0.01		
0.00		
Apr23/24		e e
Apri		
Viscosity @	100°C	
1111		
13 - Abnormal		
12		
§ 11		
© 11		







Sample No.

Lab Number : 06159299

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WCM2007283 $\textbf{Unique Number} \quad : 10994722$

Received **Tested** Diagnosed

: 24 Apr 2024 : 26 Apr 2024 : 26 Apr 2024 - Jonathan Hester

SOUTHERN AUTOMOTIVE CONSULTING P.O. BOX 730 CREEDMOOR, NC US 27522 Contact: ANDREW MORTON

andymorton711@yahoo.com

Certificate 12367

Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel)

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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