

LAB NUMBER: E27032 **REPORT DATE:** 9/16/2010 CODE: 20/501

UNIT ID: 08 COBALT TC **CLIENT ID: 43097** PAYMENT: CC: Visa

MAKE/MODEL: GM 2.0L Turbocharged Ecotec FUEL TYPE: Gasoline (Unleaded) ADDITIONAL INFO:

**OIL TYPE & GRADE:** OIL USE INTERVAL:

Castrol Syntec 5W/30 5,000 Miles

Iam Broke

CLIENT

COMMENTS

TOM: The 2.0L in your Cobalt SS is wearing quite well at 45,000 miles. Universal averages for wear metals in the oil from this type of engine are based on a 4,800-mile oil change interval. You ran your oil 5,000 miles and wear metals were well below averages. The oil's viscosity was just a bit low for a 5W/30 but this didn't harm anything. Low insolubles and silicon show good oil and air filtration and no fuel or coolant was found. The TBN was 4.0, showing plenty of active additive left in the oil; less than 1.0 is too low for extended use. Try 7,000 miles for your next oil change.

OIL

Minink on Dnik 45,000 09/04/10 LOCATION AVERAGES ONVERSAL AVERAGES   Make Up Oil Added 0.5 qt AVERAGES AVERAGES   Make Up Oil Added 0.5 qt 1 1 4   CHROMIUM 1 1 1 1 1   IRON 8 8 1 1 1   COPPER 1 1 2 2 1   TIN 1 1 2 2 2   MALUMINUM 78 78 1 1 1   COPPER 1 1 1 1 1 1   MOLYBDENUM 78 78 1 1 1 1 1   MOLYBDENUM 78 78 1 1 1 1 1 1 1   MANGANESE 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </th <th></th> <th>MI/HR on Oil</th> <th>5,000</th> <th></th> <th></th> <th></th> <th></th>		MI/HR on Oil	5,000				
Sample Date O9/04/10 AVERAGES AVERAGES   Make Up Oil Added 0.5 qt </td <td></td> <td>MI/HR on Unit</td> <td>45,000</td> <td rowspan="2">LUCATION</td> <td></td> <td></td> <td>UNIVERSAL</td>		MI/HR on Unit	45,000	LUCATION			UNIVERSAL
Make Up Oil Added 0.5 qt 0 1		Sample Date	09/04/10				AVERAGES
COPPER 1 1 1 2 2 2   LEAD 1 1 1 1 2 3		Make Up Oil Added	0.5 qt				
COPPER 1 1 1 2 2 2   LEAD 1 1 1 2							
COPPER 1 1 1 2 2 2   LEAD 1 1 1 1 2 3	NC	ALUMINUM	3	3			4
COPPER 1 1 1 2 2 2   LEAD 1 1 1 1 2 3	Ľ	CHROMIUM	1	1			1
COPPER 1 1 1 2 2 2   LEAD 1 1 1 1 2 3	JIL	IRON	8	8			19
A TIN 1 0			1	1			2
MolyBDENUM 78 78 78 72   MOLYBDENUM 78 78 0 <td>Щ</td> <td>LEAD</td> <td>1</td> <td>1</td> <td></td> <td></td> <td>2</td>	Щ	LEAD	1	1			2
NICKEL 0 <td></td> <td></td> <td>1</td> <td>1</td> <td></td> <td></td> <td>1</td>			1	1			1
MANGANESE 0 0 2   SILVER 0	ΓS	MOLYBDENUM	78	78			72
SILVER 0 0 0 0 0 0   TITANIUM 0 <	R.	NICKEL	0	0			0
TITANIUM 0 0 0 0 0   POTASSIUM 1 1 1 3 3   BORON 20 20 41 3   SILICON 4 4 7 7   SODIUM 4 4 7 7   AGNESIUM 11 11 107 107   PHOSPHORUS 628 628 686 686	Ъд	MANGANESE	0	0			2
ITTANION 0 3<	Z	SILVER	0	0			0
CALCIUM 2337 2337 2282   MAGNESIUM 11 11 107   PHOSPHORUS 628 628 686		TITANIUM	0	0			0
CALCIUM 2337 2337 2282   MAGNESIUM 11 11 107   PHOSPHORUS 628 628 686	Ĕ		1	1			3
CALCIUM 2337 2337 2282   MAGNESIUM 11 11 107   PHOSPHORUS 628 628 686	Ш	BORON	20	20			41
CALCIUM 2337 2337 2282   MAGNESIUM 11 11 107   PHOSPHORUS 628 628 686	MI	SILICON	4	4			7
CALCIUM 2337 2337 2282   MAGNESIUM 11 11 107   PHOSPHORUS 628 628 686		SODIUM	4	4			7
PHOSPHORUS 628 628 686			2337	2337			
		MAGNESIUM	11	11			107
ZINC 637 637 823		PHOSPHORUS	628	628			686
		ZINC	637	637			823
BARIUM 1 1 0		BARIUM	1	1			0

## Values Should Be\*

			Chicala BC			
	SUS Viscosity @ 210°F	53.4	56-67			
S	cSt Viscosity @ 100°C	8.30	9.1-12.4			
	Flashpoint in °F	395	>365			
ΞE	Fuel %	<0.5	<2.0			
PROPERI	Antifreeze %	0.0	0.0			
	Water %	0.0	<0.1			
	Insolubles %	0.2	<0.6			
	TBN	4.0				
	TAN					
	ISO Code					

\* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

(260) 744-2380

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