



VehicleMRI™



2001 SATURN SL SERIES ANY 1.9 L4 (7) GAS

B-

Very Good

Report Summary	
Report Name	VehicleMRI Complete
Report Number	346
Report Time	02/02/2012 3:43 PM
Performed By	John Smith
Company ID	55

Vehicle Information	
VIN	1G8ZH52821Z284934
Year	2001
Make	SATURN
Model	SL SERIES
Engine	1.9 L4 (7)
Odometer	122701
Vehicle ID	VIN-MIS

Other Summary	
Items Checked	144
Duration	03:15 (Min:Sec)
Device	EVI-6
Firmware Version	EVI6_01_
Script Version	13
Applet Version	1.0.0.12
Database Version	1/9/2012

Category Details			
Category	Overall	Key On	Engine Running
Report Preconditions	✗ FAIL	✓ PASS	✗ FAIL
Vehicle Information	📄 COND FAIL	📄 COND FAIL	📄 N/A
MIL / DTC / IM / Dash Lights	✗ FAIL	✗ FAIL	📄 N/A
Battery	✓ PASS	✓ PASS	✓ PASS
Powertrain Misc.	✗ FAIL	✓ PASS	✗ FAIL
Oxygen Sensors	✗ FAIL	✓ PASS	✗ FAIL
Evaporative System	📄 NOT SUPPORTED	📄 NOT SUPPORTED	📄 NOT SUPPORTED
Temperatures	✓ PASS	✓ PASS	✓ PASS
Fuel Trim	✗ FAIL	✓ PASS	✗ FAIL
Fuel/Pressure & Rates	📄 NOT SUPPORTED	📄 NOT SUPPORTED	📄 NOT SUPPORTED
Load/Torque	📄 NOT GRADED	📄 NOT GRADED	📄 NOT GRADED
Throttle/Accelerator	✓ PASS	✓ PASS	📄 N/A
Misfire / Injectors	📄 N/A	📄 N/A	📄 N/A
Transmission	📄 N/A	📄 N/A	📄 N/A
ABS / Airbag	📄 N/A	📄 N/A	📄 N/A



Report Provided By
<p>demo</p> <p>Vehicle Research Center, Building 2 187 Commerce Drive Scott Township, PA 18447 1(570)241-0769</p>

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<http://www.vehiclemri.com>



Failed Items Details

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Script Version	13
Applet Version	1.0.0.12
Database Version	1/9/2012

CRITICAL ALERTS: NONE

Failed Items Details

Test	Value	Result	Note
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Report Preconditions (KOER) - FAIL

Extended KOER Preconditions		FAIL	Preconditions were skipped
Engine Speed (Generic)	913.0 RPM	FAIL	134 Failed Items
Additional Notes			

Vehicle Information - COND FAIL

Mode \$09 - VIN		COND FAIL	VIN Mismatch between entered VIN and controller VIN. Check for typos in VIN entry.
ECM	1G8ZH52862Z176317	COND FAIL	VIN Mismatch between entered VIN and controller VIN. Check for typos in VIN entry.
Additional Notes			

MIL / DTC / IM / Dash Lights - FAIL

IM Readiness Status	1	COND FAIL	It appears the DTCs were just cleared. Perform a test drive/Run Drive Cycle to COMPLETE monitor(s) and retest.
Evaporative System	NOT COMPLETE	COND FAIL	Run Drive Cycle to COMPLETE monitor(s) and retest. To properly test, Fuel level must be between 15% and 85%.
Additional Notes			

GM Enhanced DTC Scan	3	FAIL	
Engine Control Module (10)	P0444;P0562;P1599	FAIL	
Additional Notes			

Powertrain Misc. (KOER) - FAIL

Engine Speed		FAIL	
AVG	872.84 RPM	FAIL	Outside of normal idle range, too HIGH
Additional Notes			

Oxygen Sensors (KOER) - FAIL

O2 Bank 1 Sensor 1 (\$13)		FAIL	
Rich to Lean Switch Time (Average)	298.08 ms	FAIL	Sensor is switching too slow
Additional Notes			

Failed Items Details

Test	Value	Result	Note
O2 Bank 1 Sensor 2 (\$13)		COND FAIL	
MIN	0.8 Volts	COND FAIL	O2 Sensor has not reported a LEAN state. Sensor may still be ok, perform appropriate diagnostic tests to determine sensor condition.
AVG	0.81 Volts	COND FAIL	Engine running RICH.
Peak-To-Peak	0.01 Volts	COND FAIL	No or minimal sensor activity detected.
Additional Notes			

**Fuel Trim (KOER) - FAIL**

Short Term Fuel Trim B1		FAIL	
AVG	-22.46 %	FAIL	Subtracting too much fuel
Additional Notes			

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Report Details

Test	Value	Result	Note
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Report Preconditions - **PASS**

Preconditions		PASS	All Procedure Preconditions PASSED
Engine Speed (Generic)	0.0 RPM		
Additional Notes	Engine Speed should be 0 RPM		

Report Preconditions (KOER) - **FAIL**

Extended KOER Preconditions		FAIL	Preconditions were skipped
Engine Coolant Temp	140.0 RPM	PASS	0 Failed Items
Vehicle Speed	0.0 RPM	PASS	0 Failed Items
Engine Speed (Generic)	913.0 RPM	FAIL	134 Failed Items
Fuel System 1	CLOSED LOOP RPM	PASS	0 Failed Items
Fuel System 2	NOT USED RPM	PASS	0 Failed Items
Additional Notes			

Vehicle Information - **COND FAIL**

Mode \$09 - VIN		COND FAIL	VIN Mismatch between entered VIN and controller VIN. Check for typos in VIN entry.
ECM	1G8ZH52862Z176317	COND FAIL	VIN Mismatch between entered VIN and controller VIN. Check for typos in VIN entry.
Additional Notes			

Mode \$09 - CALID's			
ECM	21009255, 21009250		
Additional Notes			

MIL / DTC / IM / Dash Lights - **FAIL**

Commanded MIL	OFF	PASS	No Emissions related DTCs are active.
Additional Notes			

Generic Stored DTCs	0	PASS	No Emissions related Error Codes detected.
Additional Notes			

Generic Pending DTCs	0	PASS	No Emissions related Error Codes detected.
Additional Notes			

Permanent DTCs	0	PASS	No Permanent Emissions related Error Codes detected.
Additional Notes			

IM Readiness Status	1	COND FAIL	It appears the DTCs were just cleared. Perform a test drive/Run Drive Cycle to COMPLETE monitor(s) and retest.
Misfire	COMPLETE	PASS	
Fuel System	COMPLETE	PASS	
Comprehensive component	COMPLETE	PASS	
Catalyst	COMPLETE	PASS	
Heated Catalyst	NOT SUPPORTED	NOT SUPPORTED	NOT SUPPORTED

Report Details

Test	Value	Result	Note
Evaporative System	NOT COMPLETE	COND FAIL	Run Drive Cycle to COMPLETE monitor(s) and retest. To properly test, Fuel level must be between 15% and 85%.
Secondary Air System	COMPLETE	PASS	
Oxygen Sensor	COMPLETE	PASS	
Oxygen Sensor Heater	COMPLETE	PASS	
EGR System	COMPLETE	PASS	
Additional Notes			

Emissions Readiness	PASS	PASS	If you register this vehicle in a state/county with an emissions inspection program, this vehicle should PASS the Emissions test.
Additional Notes			

OBD Support Level	OBD II (California ARB)		
Additional Notes			

Commanded Secondary AIR Status	Atmosphere/OFF		
Additional Notes			

GM Enhanced DTC Scan	3	FAIL	
Restraint Controller(58)	0	PASS	
Engine Control Module (10)	P0444;P0562;P1599	FAIL	
Body Controller(40)	0	PASS	
Additional Notes			

Battery - PASS

Battery Voltage (No Load)		PASS	
MIN	11.72 Volts	PASS	
MAX	11.78 Volts		
AVG	11.75 Volts	PASS	
Peak-To-Peak	0.06 Volts		
Standard Deviation	0.01 Volts		
Additional Notes			

Battery Voltage Under Load		PASS	
MIN	10.71 Volts	PASS	
MAX	11.68 Volts		
AVG	11.35 Volts	PASS	
Peak-To-Peak	0.97 Volts		
Standard Deviation	0.07 Volts		
Additional Notes			

Highest Voltage Since Power Up	14.91 Volts	PASS	
Additional Notes			

Battery (KOER) - PASS

Battery Voltage (No Load); Alternator		PASS	
MIN	14.04 Volts	PASS	
MAX	14.33 Volts		
AVG	14.19 Volts	PASS	

Report Details

Test	Value	Result	Note
Standard Deviation	0.05 Volts		
Additional Notes			

Battery Voltage (Under Load); Alternator		Result	Note
		PASS	
MIN	13.34 Volts	PASS	
MAX	14.17 Volts	PASS	
AVG	13.91 Volts	PASS	Voltage is within normal range.
Peak-To-Peak	0.83 Volts	PASS	
Standard Deviation	0.09 Volts		
Additional Notes			

Lowest Battery Voltage During Crank		Result	Note
	8.1 V	PASS	
Additional Notes			

Powertrain Misc. - **PASS**

Engine Speed		Result	Note
	0.0 RPM	PASS	
Additional Notes			

Manifold Absolute Pressure		Result	Note
	28.35 in Hg		
Additional Notes			

Engine Vacuum		Result	Note
	1.57 in Hg		
Additional Notes			

Vehicle Speed Sensor		Result	Note
	0 mph		
Additional Notes			

Ignition Timing Advance for Cylinder 1		Result	Note
	0.0 deg		
Additional Notes			

Powertrain Misc. (KOER) - **FAIL**

Engine Speed		Result	Note
		FAIL	
MIN	860.0 RPM	PASS	
MAX	886.0 RPM	PASS	
AVG	872.84 RPM	FAIL	Outside of normal idle range, too HIGH
Peak-To-Peak	26.0 RPM	PASS	The engine is running smoothly
Standard Deviation	6.3 RPM		
Additional Notes			

Manifold Absolute Pressure		Result	Note
		PASS	
MIN	8.86 in Hg	PASS	
MAX	9.45 in Hg	PASS	
AVG	9.07 in Hg	PASS	Pressure is within normal range
Peak-To-Peak	0.59 in Hg	PASS	Engine has a very stable manifold pressure
Standard Deviation	0.25 in Hg		
Additional Notes			

Engine Vacuum		Result	Note
		PASS	
MIN	20.17 in Hg	PASS	
MAX	21.06 in Hg	PASS	

Report Details

Test	Value	Result	Note
AVG	20.8 in Hg	PASS	Vacuum is within normal range.
Peak-To-Peak	0.89 in Hg	PASS	Engine has a very stable vacuum
Freq. of AVG	2.1 Hz		
Standard Deviation	0.26 in Hg		
Additional Notes			

Ignition Timing Advance for Cylinder 1			
MIN	25.0 deg		
MAX	31.0 deg		
AVG	28.26 deg		
Peak-To-Peak	6.0 deg		
Standard Deviation	1.18 deg		
Additional Notes			

Vehicle Speed Sensor			
		PASS	
MIN	0 mph		
MAX	0 mph	PASS	
AVG	0 mph	PASS	
Peak-To-Peak	0 mph		
Standard Deviation	0 mph		
Additional Notes			

Oxygen Sensors - PASS

O2 Locations			
	34L-1S	PASS	
\$13 Location of O2 Sensors	3		
\$1D Location of O2 Sensors	NOT SUPPORTED	NOT SUPPORTED	
Additional Notes			

O2 Sensor Voltage (Location \$13)			
\$13, \$1D - O2 Volts, B1 S1	0.46 V		
\$13, \$1D - O2 Volts, B1 S2	0.46 V		
\$13 O2 Volts, B1 S3	NOT SUPPORTED	NOT SUPPORTED	
\$13 O2 Volts, B1 S4	NOT SUPPORTED	NOT SUPPORTED	
\$13 O2 Volts, B2 S1	NOT SUPPORTED	NOT SUPPORTED	
\$13 O2 Volts, B2 S2	NOT SUPPORTED	NOT SUPPORTED	
\$13 O2 Volts, B2 S3	NOT SUPPORTED	NOT SUPPORTED	
\$13 O2 Volts, B2 S4	NOT SUPPORTED	NOT SUPPORTED	
Additional Notes			

Oxygen Sensors (KOER) - FAIL

Fuel System Status			
	CLOSED LOOP	PASS	
Fuel System 1	CLOSED LOOP	PASS	Closed loop: using oxygen sensor(s) as feedback for fuel control
Fuel System 2	NOT USED		

Report Details

Test	Value	Result	Note
Additional Notes			
O2 Bank 1 Sensor 1 (\$13)		FAIL	
MIN	0.22 Volts	PASS	
MAX	0.88 Volts	PASS	
AVG	0.56 Volts	PASS	
Peak-To-Peak	0.66 Volts	PASS	
Freq. of AVG	0.8 Hz	PASS	
Cross count	16	PASS	
Standard Deviation	0.25 Volts		
Lean to Rich Switch Time (Average)	203.0 ms	PASS	
Rich to Lean Switch Time (Average)	298.08 ms	FAIL	Sensor is switching too slow
# Samples	75		
O2 Histo - Lean	0.0 %		
O2 Histo - Center Lean	32.17 %		
O2 Histo - Center	17.29 %		
O2 Histo - Center Rich	27.62 %		
O2 Histo - Rich	22.92 %		
Additional Notes			

O2 Bank 1 Sensor 2 (\$13)		COND FAIL	
MIN	0.8 Volts	COND FAIL	O2 Sensor has not reported a LEAN state. Sensor may still be ok, perform appropriate diagnostic tests to determine sensor condition.
MAX	0.81 Volts	PASS	
AVG	0.81 Volts	COND FAIL	Engine running RICH.
Peak-To-Peak	0.01 Volts	COND FAIL	No or minimal sensor activity detected.
Freq. of AVG	0.1 Hz		
Cross count	0		
Standard Deviation	0.0 Volts		
Lean to Rich Switch Time (Average)	UNDETERMINED		
Rich to Lean Switch Time (Average)	UNDETERMINED		
# Samples	76		
O2 Histo - Lean	0.0 %		
O2 Histo - Center Lean	0.0 %		
O2 Histo - Center	0.0 %		
O2 Histo - Center Rich	2.59 %		
O2 Histo - Rich	97.41 %		
Additional Notes			



Temperatures - PASS

Engine Coolant Temperature	35.6 °F	PASS	
Additional Notes			
Intake Air Temperature	32 °F	PASS	
Additional Notes			
ECT to IAT Comparison	3.6 °F	PASS	
Engine Coolant Temp	35.6 °F	PASS	
Intake Air Temperature	32 °F	PASS	

Report Details

Test	Value	Result	Note
Additional Notes			

Temperatures (KOER) - **PASS**

Engine Coolant Temperature		Result	Note
		PASS	
MIN	145.4 °F	PASS	
MAX	145.4 °F	PASS	
AVG	145.4 °F	PASS	
Peak-To-Peak	0 °F		
Standard Deviation	0 °F		
Additional Notes			

Intake Air Temperature		Result	Note
		PASS	
MIN	39.2 °F	PASS	
MAX	39.2 °F	PASS	
AVG		PASS	
Peak-To-Peak	0 °F		
Standard Deviation	0 °F		
Additional Notes			

Fuel Trim - **PASS**

Short Term Fuel Trim B1		Result	Note
0.0 %		PASS	
Additional Notes			

Long Term Fuel Trim B1		Result	Note
-5.47 %		PASS	
Additional Notes			

Fuel Trim (KOER) - **FAIL**

Short Term Fuel Trim B1		Result	Note
		FAIL	
MIN	-23.44 %	PASS	
MAX	-21.87 %	PASS	
AVG	-22.46 %	FAIL	Subtracting too much fuel
Peak-To-Peak	1.57 %	PASS	
Standard Deviation	0.53 %		
Additional Notes			

Long Term Fuel Trim B1		Result	Note
		PASS	
MIN	-5.47 %	PASS	
MAX	-5.47 %	PASS	
AVG	-5.47 %	PASS	
Peak-To-Peak	0.0 %	PASS	
Standard Deviation	0.0 %		
Additional Notes			

Load/Torque - **NOT GRADED**


Calculated Load Value		Result	Note
0.0 %			
Additional Notes			

Load/Torque (KOER) - **NOT GRADED**

Calculated Load Value		Result	Note

Report Details

Test	Value	Result	Note
MIN	36.86 %		
MAX	40.78 %		
AVG	38.78 %		
Peak-To-Peak	3.92 %		
Standard Deviation	1.19 %		
Additional Notes			

 **Throttle/Accelerator - PASS**

Absolute Throttle Position	0.0 %	PASS	
Additional Notes			

Absolute Throttle Position - Full Throttle Test			
MAX	96.47 %		
Additional Notes			

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