

# VehicleMRI™

## Report Provided By

**DENSO Products and Services America, Inc. - Connected Vehicle Services**

3900 Via Oro Avenue  
Long Beach, CA 90810  
(310) 952-7459

|               |         |
|---------------|---------|
| Report Price: | \$25.00 |
| Subtotal:     | \$25.00 |



2004 Buick Rainier

CXL L6 GAS

| Report Summary |                       |
|----------------|-----------------------|
| Report Name    | Advanced Health Check |
| Report Number  | 313923                |
| Report Time    | 10/18/2018 2:56:52 PM |
| Time Zone      | Eastern Standard Time |
| Performed By   | Walter Vanegas        |
| Company ID     | 211                   |

| Vehicle Information |                   |
|---------------------|-------------------|
| VIN                 | 5GADT13S842245877 |
| Year                | 2004              |
| Make                | Buick             |
| Model               | Rainier           |
| Engine              | L6                |

| Other Summary    |                |
|------------------|----------------|
| Items Checked    | 333            |
| Duration         | 00:03:01       |
| Device           | EASE_MBT6-0001 |
| Firmware Version | 64Q            |
| Script Version   | 12             |
| App Version      | 2.0.0.0010     |
| Database Version | 10/15/2018     |

**Critical Alert(s) detected. Refer to page 2 for details.**

| Category Details             |                |                |                |
|------------------------------|----------------|----------------|----------------|
| Category                     | Overall        | Key on         | Engine Running |
| Report Preconditions         | ✓ CHECKED      | ✓ CHECKED      | ✓ CHECKED      |
| Vehicle Information          | ✓ CHECKED      | ✓ CHECKED      | N/A            |
| MIL / DTC / IM / Dash Lights | POSSIBLE ISSUE | POSSIBLE ISSUE | POSSIBLE ISSUE |
| Battery                      | ✓ CHECKED      | N/A            | ✓ CHECKED      |
| Powertrain Misc.             | POSSIBLE ISSUE | POSSIBLE ISSUE | CONDITIONAL    |
| Oxygen Sensors               | ✓ CHECKED      | ✓ CHECKED      | ✓ CHECKED      |
| Evaporative System           | N/A            | NOT GRADED     | NOT SUPPORTED  |
| Temperatures                 | ✓ CHECKED      | ✓ CHECKED      | ✓ CHECKED      |
| Fuel Trim                    | ✓ CHECKED      | N/A            | ✓ CHECKED      |
| Fuel / Pressure & Rates      | N/A            | NOT GRADED     | NOT GRADED     |
| Load / Torque                | N/A            | NOT GRADED     | NOT GRADED     |
| Throttle / Accelerator       | N/A            | CONDITIONAL    | N/A            |









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|   |   |   |   |
|---|---|---|---|
|  Misfire / Injectors |  CHECKED |  CHECKED |  CHECKED |
|  Transmission        |  CHECKED |  CHECKED |  CHECKED |


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|----------------|-----------------------|
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|---------------------|-------------------|
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| Year                | 2004              |
| Make                | Buick             |
| Model               | Rainier           |
| Engine              | L6                |

| Other Summary    |                |
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| Items Checked    | 333            |
| Duration         | 00:03:01       |
| Device           | EASE_MBT6-0001 |
| Firmware Version | 64Q            |
| Script Version   | 12             |
| App Version      | 2.0.0.0010     |
| Database Version | 10/15/2018     |

| Critical Alerts: |   |
|------------------|---|
| OIL LEVEL ALERT: | Check Oil Level Immediately! Check engine for leak and/or check oil for burning smell/color. Possible Engine Harm Can/Will Occur if Issue Ignored |

| Items for Verification  |          |                |  |
|---|----------|----------------|--|
| Test  | Value    | Result         | Note   |
|  MIL / DTC / IM / Dash Lights - POSSIBLE ISSUE |          |                |  |
| Commanded MIL   | ON       | POSSIBLE ISSUE | Check for DTCs and repair issues.  |
| Generic Stored DTCs   | 1        | POSSIBLE ISSUE | 1 Stored Error Codes/DTCs Present. Check Service information for cause. Identification of the root cause of the DTC is determined by using diagnostic procedures and is not implied by the DTC message.      |
| Stored DTCs   | P0455    | POSSIBLE ISSUE | P0455 - Evaporative Emission Control System Leak Detected (gross leak)   |
| Generic Pending DTCs  | 1        | CONDITIONAL    | 1 Pending Error Codes/DTCs Present. Check Service information for cause.   |
| Pending DTCs  | P0455    | CONDITIONAL    | P0455 - Evaporative Emission Control System Leak Detected (gross leak)   |
| Freeze Frame  | YES      | POSSIBLE ISSUE | Freeze frame data/Error codes present, use diagnostic tool for details.  |
| Distance Traveled While MIL was Activated   | 13.05 mi | CONDITIONAL    | Vehicle has been driven with the MIL ON.   |
| Emissions Readiness   | FAIL     | POSSIBLE ISSUE | If you register this vehicle in a state/county with an emissions inspection program, it will likely fail the Emissions test. Please review the other data in this report to assist in determining the cause. |

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|  |   |    |                       |   |
|--|---|----|-----------------------|---|
| <b>Enhanced DTC Scan (All Systems)</b>   |   | 10 | <b>POSSIBLE ISSUE</b> | If any of the DTCs contain a Failure Byte you can <a href="#">click here</a> to decode it. A DTC contains a Failure Byte if it is 7 characters long.  |
| ABS  | <b>History</b> <ul style="list-style-type: none"> <li>• C0035</li> <li>• C0055</li> </ul> <b>Warning Lamp</b> <ul style="list-style-type: none"> <li>• C0035</li> <li>• C0055</li> </ul>  |    | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• C0035 - Left Front Wheel Speed Sensor Circuit</li> <li>• C0055 - Rear Wheel Speed Sensor Circuit Malfunction</li> </ul>  |
| DRIVER SEAT MODULE   | <b>History</b> <ul style="list-style-type: none"> <li>• U1000</li> <li>• U1064</li> <li>• U1152</li> </ul>  |    | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• U1000 - Class 2 Data Link Malfunction</li> <li>• U1064 - Lost Communications With BCM</li> <li>• U1152 - Lost Communications With HVAC Control System</li> </ul> |
| NAV, NAVIGATION RADIO  | <b>Current</b> <ul style="list-style-type: none"> <li>• B1025</li> <li>• B1055</li> </ul> <b>History</b> <ul style="list-style-type: none"> <li>• B1025</li> <li>• B1055</li> <li>• U1000</li> </ul>                            |    | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• B1025 - Audio Output 1 Left Front Circuit</li> <li>• B1055 - Audio Output 4 Right Rear Circuit</li> <li>• U1000 - Class 2 Data Link Malfunction</li> </ul>       |
| POWERTRAIN   | <b>History</b> <ul style="list-style-type: none"> <li>• U1000</li> </ul>  |    | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• U1000 - CAN Bus Communication</li> <li>• U1000 - Class 2 Data Link Malfunction</li> </ul>  |
| POWERTRAIN-ENGINE (DELPHI P10)   | <b>Current</b> <ul style="list-style-type: none"> <li>• P0455</li> </ul> <b>History</b> <ul style="list-style-type: none"> <li>• P0455</li> </ul> <b>Warning Lamp</b> <ul style="list-style-type: none"> <li>• P0455</li> </ul> |    | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• P0455 - Evaporative Emission (EVAP) System Large Leak Detected</li> </ul>  |
|  <b>MIL / DTC / IM / Dash Lights (KOER) - POSSIBLE ISSUE</b> |   |    |                       |   |
| <b>Non-Continuous Monitors (Mode \$06)</b>   |   | 1  | <b>POSSIBLE ISSUE</b> | One or more tests have failed. Use a Diagnostic tool for details.   |
|  <b>Powertrain Misc. - POSSIBLE ISSUE</b>                    |   |    |                       |   |
| <b>Oil Life</b>  |   |    | <b>POSSIBLE ISSUE</b> |   |
| Engine Oil Life Remaining  | 4.65 %  |    | <b>POSSIBLE ISSUE</b> | Oil Change Recommended. If the Oil life was not reset after the last change, it may need to be reset  |
| <b>Fluid Levels</b>  |   |    | <b>POSSIBLE ISSUE</b> |   |

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|                  |     |                       |   |
|------------------|-----|-----------------------|---|
| Oil Level Status | LOW | <b>POSSIBLE ISSUE</b> | (OIL LEVEL ALERT) Check Oil Level Immediately! Check engine for leak and/or check oil for burning smell/color. Possible Engine Harm Can/Will Occur if Issue Ignored |
|------------------|-----|-----------------------|---|



## Powertrain Misc. (KOER) - CONDITIONAL

|                                   |            |                    |                                       |
|-----------------------------------|------------|--------------------|---------------------------------------|
| <b>Manifold Absolute Pressure</b> |            | <b>CONDITIONAL</b> |                                       |
| Peak-To-Peak                      | 2.07 in Hg | <b>CONDITIONAL</b> | Engine has a stable manifold pressure |
| <b>Engine Vacuum</b>              |            | <b>CONDITIONAL</b> |                                       |
| Peak-To-Peak                      | 2.36 in Hg | <b>CONDITIONAL</b> | Engine has a stable vacuum            |



## Throttle / Accelerator - CONDITIONAL

|                                   |      |                    |  |
|-----------------------------------|------|--------------------|--|
| <b>Absolute Throttle Position</b> | 29 % | <b>CONDITIONAL</b> |  |
|-----------------------------------|------|--------------------|--|



## Report Details

| Test | Value | Result | Note |
|------|-------|--------|------|
|------|-------|--------|------|



## Report Preconditions - CHECKED

|                        |       |                |                                    |
|------------------------|-------|----------------|------------------------------------|
| <b>Preconditions</b>   |       | <b>CHECKED</b> | All Procedure Preconditions PASSED |
| Engine Speed (Generic) | 0 RPM |                |                                    |



## Report Preconditions (KOER) - CHECKED

|                                    |             |                |                                    |
|------------------------------------|-------------|----------------|------------------------------------|
| <b>Extended KOER Preconditions</b> |             | <b>CHECKED</b> | All Procedure Preconditions PASSED |
| Engine Coolant Temp                | 183 °F      |                |                                    |
| Vehicle Speed                      | 0 mph       |                |                                    |
| Engine Speed (Generic)             | 698.3 RPM   |                |                                    |
| Fuel System 1                      | CLOSED LOOP |                |                                    |
| Fuel System 2                      | NOT USED    |                |                                    |



## Vehicle Information - CHECKED

|                        |                   |                |   |
|------------------------|-------------------|----------------|---|
| <b>Mode \$09 - VIN</b> |                   | <b>CHECKED</b> | Valid VIN(s) retrieved matches recorded VIN |
| PCM                    | 5GADT13S842245877 | <b>CHECKED</b> | Valid VIN(s) retrieved matches recorded VIN |

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|                            |                        |  |  |  |
|----------------------------|------------------------|--|--|--|
| <b>Mode \$09 - CALID's</b> |                        |  |  | It is always a good idea to ensure the software in your vehicles computer systems are up to date. Please consult a qualified technician and visit our <a href="#">Tech Info</a> page for more information. |
|                            | PCM                    | 1258760812588424125884<br>3212577636125884421257<br>7594 |  |  |
| <b>Part Numbers</b>        |                        |  |  |  |
|                            | Base Model Part Number | 0  |  |  |
|                            | Base Model Part Number | 00E801A3   |  |  |
|                            | Base Model Part Number | 0  |  |  |
|                            | End Model Part Number  | 009E06A4   |  |  |
|                            | End Model Part Number  | 00E624BF   |  |  |
|                            | Boot Software Suffix   | 17985  |  |  |
|                            | Boot Software Suffix   | FA   |  |  |
|                            | Boot Software Suffix   | FA   |  |  |
|                            | Julian Date            | 2  |  |  |
|                            | Julian Date            | 302  |  |  |
|                            | Julian Date            | 295  |  |  |
|                            | Julian Date            | 305  |  |  |
|                            | Julian Date            | 245  |  |  |
|                            | Julian Date            | 300  |  |  |
|                            | Julian Date            | 287  |  |  |
|                            | Year Module Built      | 3  |  |  |
|                            | Year Module Built      | 3  |  |  |
|                            | Year Module Built      | 3  |  |  |
|                            | Year Module Built      | 3  |  |  |
|                            | Year Module Built      | 3  |  |  |

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|  |          |                |  |
|--|----------|----------------|--|
| Year Module Built                          | 3        |                |  |
| Year Module Built                          | 3        |                |  |
| <b>Calibration Part Numbers</b>            |          | <b>CHECKED</b> |  |
| ABS Calibration                            | 00E63158 |                |  |
| ABS Calibration                            | 009E06A4 |                |  |
| ABS Calibration                            | 009E06A9 |                |  |
| DOOR MODULE - DRIVER Calibration           | 00E8019A |                |  |
| DOOR MODULE - DRIVER Calibration           | 00E7A0C1 |                |  |
| DOOR MODULE - PASSENGER Calibration        | 00E8019B |                |  |
| DOOR MODULE - PASSENGER Calibration        | 00E801A3 |                |  |
| DOOR MODULE - PASSENGER Calibration        | 00E7A0C1 |                |  |
| DRIVER SEAT MODULE Calibration             | 00E78832 |                |  |
| DRIVER SEAT MODULE Calibration             | 00E80995 |                |  |
| HVAC CONTROL MODULE Calibration            | 00E624BF |                |  |
| HVAC CONTROL MODULE Calibration            | 00E7F527 |                |  |
| HVAC CONTROL MODULE Calibration            | 00E624C3 |                |  |
| NAV, NAVIGATION RADIO Calibration          | 00E6FE8B |                |  |
| POWERTRAIN-ENGINE (DELPHI P10) Calibration | 12587293 |                |  |



## MIL / DTC / IM / Dash Lights - POSSIBLE ISSUE

|                            |    |                       |   |
|----------------------------|----|-----------------------|---|
| <b>Commanded MIL</b>       | ON | <b>POSSIBLE ISSUE</b> | Check for DTCs and repair issues.   |
| <b>Generic Stored DTCs</b> | 1  | <b>POSSIBLE ISSUE</b> | 1 Stored Error Codes/DTCs Present. Check Service information for cause. Identification of the root cause of the DTC is determined by using diagnostic procedures and is not implied by the DTC message. |

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|  |                                   |                       |  |
|--|-----------------------------------|-----------------------|--|
| Stored DTCs                                      | P0455                             | <b>POSSIBLE ISSUE</b> | P0455 - Evaporative Emission Control System Leak Detected (gross leak)   |
| <b>Generic Pending DTCs</b>                      | 1                                 | <b>CONDITIONAL</b>    | 1 Pending Error Codes/DTCs Present. Check Service information for cause.   |
| Pending DTCs                                     | P0455                             | <b>CONDITIONAL</b>    | P0455 - Evaporative Emission Control System Leak Detected (gross leak)   |
| <b>Permanent DTCs</b>                            | 0                                 | <b>CHECKED</b>        | No Permanent Emissions related Error Codes detected.   |
| <b>Freeze Frame</b>                              | YES                               | <b>POSSIBLE ISSUE</b> | Freeze frame data/Error codes present, use diagnostic tool for details.  |
| <b>IM Readiness Status</b>                       | 0                                 | <b>CHECKED</b>        | All Supported Monitors are Complete  |
| Misfire  | COMPLETE                          | <b>CHECKED</b>        |  |
| Fuel System                                      | COMPLETE                          | <b>CHECKED</b>        |  |
| Comprehensive component                          | COMPLETE                          | <b>CHECKED</b>        |  |
| Catalyst   | COMPLETE                          | <b>CHECKED</b>        |  |
| Evaporative System                               | COMPLETE                          | <b>CHECKED</b>        |  |
| Secondary Air System                             | COMPLETE                          | <b>CHECKED</b>        |  |
| Oxygen Sensor                                    | COMPLETE                          | <b>CHECKED</b>        |  |
| Oxygen Sensor Heater                             | COMPLETE                          | <b>CHECKED</b>        |  |
| <b>Commanded Secondary AIR Status</b>            | Pump Commanded on for Diagnostics |                       |  |
| <b>OBD Support Level</b>                         | OBD and OBD II                    |                       |  |
| <b>Distance Traveled While MIL was Activated</b> | 13.05 mi                          | <b>CONDITIONAL</b>    | Vehicle has been driven with the MIL ON.   |
| <b>Emissions Readiness</b>                       | FAIL                              | <b>POSSIBLE ISSUE</b> | If you register this vehicle in a state/county with an emissions inspection program, it will likely fail the Emissions test. Please review the other data in this report to assist in determining the cause. |
| <b>Enhanced DTC Scan (All Systems)</b>           | 10                                | <b>POSSIBLE ISSUE</b> | If any of the DTCs contain a Failure Byte you can <a href="#">click here</a> to decode it. A DTC contains a Failure Byte if it is 7 characters long.   |



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|                          |  |   |                       |   |
|--------------------------|--|---|-----------------------|---|
| ABS                      | <b>History</b> <ul style="list-style-type: none"> <li>• C0035</li> <li>• C0055</li> </ul> <b>Warning Lamp</b> <ul style="list-style-type: none"> <li>• C0035</li> <li>• C0055</li> </ul>             | 0 | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• C0035 - Left Front Wheel Speed Sensor Circuit</li> <li>• C0055 - Rear Wheel Speed Sensor Circuit Malfunction</li> </ul>  |
| AIRBAG, SIR              |  | 0 | <b>CHECKED</b>        |   |
| BODY CONTROL MODULE      |  | 0 | <b>CHECKED</b>        |   |
| DOOR MODULE - DRIVER     |  | 0 | <b>CHECKED</b>        |   |
| DOOR MODULE - PASSENGER  |  | 0 | <b>CHECKED</b>        |   |
| DRIVER SEAT MODULE       | <b>History</b> <ul style="list-style-type: none"> <li>• U1000</li> <li>• U1064</li> <li>• U1152</li> </ul>   | 0 | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• U1000 - Class 2 Data Link Malfunction</li> <li>• U1064 - Lost Communications With BCM</li> <li>• U1152 - Lost Communications With HVAC Control System</li> </ul> |
| HVAC CONTROL MODULE      |  | 0 | <b>CHECKED</b>        |   |
| HVAC CONTROL MODULE      |  | 0 | <b>CHECKED</b>        |   |
| INSTRUMENT PANEL CLUSTER |  | 0 | <b>CHECKED</b>        |   |
| MEMORY SEAT MODULE       |  | 0 | <b>CHECKED</b>        |   |
| NAV, NAVIGATION RADIO    | <b>Current</b> <ul style="list-style-type: none"> <li>• B1025</li> <li>• B1055</li> </ul> <b>History</b> <ul style="list-style-type: none"> <li>• B1025</li> <li>• B1055</li> <li>• U1000</li> </ul> | 0 | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• B1025 - Audio Output 1 Left Front Circuit</li> <li>• B1055 - Audio Output 4 Right Rear Circuit</li> <li>• U1000 - Class 2 Data Link Malfunction</li> </ul>       |
| OnStar                   |  | 0 | <b>CHECKED</b>        |   |
| POWERTRAIN               | <b>History</b> <ul style="list-style-type: none"> <li>• U1000</li> </ul>   | 0 | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>• U1000 - CAN Bus Communication</li> <li>• U1000 - Class 2 Data Link Malfunction</li> </ul>  |

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|                                   |  |                       |  |
|-----------------------------------|--|-----------------------|--|
| POWERTRAIN-ENGINE<br>(DELPHI P10) | <b>Current</b><br><ul style="list-style-type: none"> <li>P0455</li> </ul> <b>History</b><br><ul style="list-style-type: none"> <li>P0455</li> </ul> <b>Warning Lamp</b><br><ul style="list-style-type: none"> <li>P0455</li> </ul> | <b>POSSIBLE ISSUE</b> | <ul style="list-style-type: none"> <li>P0455 - Evaporative Emission (EVAP) System Large Leak Detected</li> </ul> |
|-----------------------------------|--|-----------------------|--|

|  |          |                    |  |
|--|----------|--------------------|--|
| <b>MIL &amp; DTC Information</b>         |          |                    |  |
| Distance Traveled While MIL is Activated | 13.05 mi | <b>CONDITIONAL</b> | Vehicle has been driven with the MIL ON. |
| # of DTCs stored in this ECU             | 1        |                    |  |

 **MIL / DTC / IM / Dash Lights (KOER) - POSSIBLE ISSUE**

|  |                 |                       |   |
|--|-----------------|-----------------------|---|
| <b>Non-Continuous Monitors (Mode \$06)</b> | 1               | <b>POSSIBLE ISSUE</b> | One or more tests have failed. Use a Diagnostic tool for details. |
| MODE06                                     | CHECKED : 29    |                       |   |
| MODE06                                     | PASS : 28       |                       |   |
| MODE06                                     | PASS (5%) : 11  |                       | Pass but within 5% of failing                                     |
| MODE06                                     | PASS (10%) : 11 |                       | Pass but within 10% of failing                                    |
| MODE06                                     | FAIL : 1        |                       |   |
| MODE06                                     | INCOMPLETE : 0  |                       |   |

 **Battery (KOER) - CHECKED**

|  |             |                |  |
|--|-------------|----------------|--|
| <b>Highest Voltage Since Power Up</b>        | 14.13       | <b>CHECKED</b> |  |
| <b>Lowest Battery Voltage During Crank</b>   | 11.64 V     | <b>CHECKED</b> |  |
| <b>Battery Voltage (No Load); Alternator</b> |             | <b>CHECKED</b> |  |
| MIN  | 13.96 Volts | <b>CHECKED</b> |  |
| MAX  | 14.12 Volts | <b>CHECKED</b> |  |
| AVG  | 14.03 Volts | <b>CHECKED</b> |  |
| Peak-To-Peak                                 | 0.15 Volts  | <b>CHECKED</b> |  |
| Standard Deviation                           | 0.33 Volts  |                |  |

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## Powertrain Misc. - POSSIBLE ISSUE

|  |             |                |   |
|--|-------------|----------------|---|
| Engine Speed                           | 0 RPM       | CHECKED        |   |
| Vehicle Speed Sensor                   | 0 mph       | CHECKED        |   |
| Manifold Absolute Pressure             | 28.94 in Hg | CHECKED        |   |
| Engine Vacuum                          | 0.89 in Hg  |                |   |
| Ignition Timing Advance for Cylinder 1 | 6 deg       |                |   |
| Oil Life                               |             | POSSIBLE ISSUE |   |
| Engine Oil Life Remaining              | 4.65 %      | POSSIBLE ISSUE | Oil Change Recomend. If the Oil life was not reset after the last change, it may need to be reset   |
| Fluid Levels                           |             | POSSIBLE ISSUE |   |
| Oil Level Status                       | LOW         | POSSIBLE ISSUE | (OIL LEVEL ALERT) Check Oil Level Immediately! Check engine for leak and/or check oil for burning smell/color. Possible Engine Harm Can/Will Occur if Issue Ignored |

## Powertrain Misc. (KOER) - CONDITIONAL

|                            |             |             |                                 |
|----------------------------|-------------|-------------|---------------------------------|
| Engine Speed               |             | CHECKED     |                                 |
| MIN                        | 610 RPM     | CHECKED     |                                 |
| MAX                        | 635.3 RPM   | CHECKED     |                                 |
| AVG                        | 622.79 RPM  | CHECKED     | Within normal idle range        |
| Peak-To-Peak               | 25.3 RPM    | CHECKED     | The engine is running smoothly  |
| Standard Deviation         | 33.43 RPM   |             |                                 |
| Desired Idle Speed         | 3 RPM       | CHECKED     |                                 |
| Desired Idle Speed         | 613 RPM     |             |                                 |
| Engine Speed               | 616 RPM     |             |                                 |
| Manifold Absolute Pressure |             | CONDITIONAL |                                 |
| MIN                        | 8.27 in Hg  | CHECKED     |                                 |
| MAX                        | 10.34 in Hg | CHECKED     |                                 |
| AVG                        | 9.54 in Hg  | CHECKED     | Pressure is within normal range |

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|   |                                |             |             |                                       |
|---|--------------------------------|-------------|-------------|---------------------------------------|
|   | Peak-To-Peak                   | 2.07 in Hg  | CONDITIONAL | Engine has a stable manifold pressure |
|   | Standard Deviation             | 3.65 in Hg  |             |                                       |
| <b>Ignition Timing Advance for Cylinder 1</b> |                                |             |             |                                       |
|   | MIN                            | 13 deg      |             |                                       |
|   | MAX                            | 27 deg      |             |                                       |
|   | AVG                            | 21.93 deg   |             |                                       |
|   | Peak-To-Peak                   | 14 deg      |             |                                       |
|   | Standard Deviation             | 22.24 deg   |             |                                       |
| <b>Engine Vacuum</b>                          |                                |             | CONDITIONAL |                                       |
|   | MIN                            | 19.19 in Hg | CHECKED     |                                       |
|   | MAX                            | 21.56 in Hg | CHECKED     |                                       |
|   | AVG                            | 20.61 in Hg | CHECKED     | Vacuum is within normal range.        |
|   | Peak-To-Peak                   | 2.36 in Hg  | CONDITIONAL | Engine has a stable vacuum            |
|   | Freq. of AVG                   | 0 Hz        |             |                                       |
|   | Standard Deviation             | 4.64 in Hg  |             |                                       |
| <b>Vehicle Speed Sensor</b>                   |                                |             | CHECKED     |                                       |
|   | MIN                            | 0 mph       |             |                                       |
|   | MAX                            | 0 mph       | CHECKED     |                                       |
|   | AVG                            | 0 mph       | CHECKED     |                                       |
|   | Peak-To-Peak                   | 0 mph       |             |                                       |
|   | Standard Deviation             | 0 mph       |             |                                       |
| <b>Oil Pressure Status</b>                    |                                | OK          |             |                                       |
| <b>Desired Fan Speed</b>                      |                                | 304 RPM     |             |                                       |
| <b>A/C System</b>                             |                                |             |             |                                       |
|   | A/C High Side Pressure         | 79.63 psi   |             |                                       |
|   | A/C High Side Pressure Voltage | 0.86 V      |             |                                       |

|  <b>Oxygen Sensors - CHECKED</b>          |                                     |             |                |  |
|--|-------------------------------------|-------------|----------------|--|
| <b>O2 Locations</b>  |                                     | 36L-1S      | <b>CHECKED</b> |  |
|  | \$13 Location of O2 Sensors         | 3           |                |  |
| <b>O2 Sensor Voltage (Location 0x13)</b>   |                                     |             |                |  |
|  | 0x13, 0x1D - O2 Volts, B1 S1        | 0.14 V      |                |  |
|  | 0x13, 0x1D - O2 Volts, B1 S2        | 0 V         |                |  |
| <b>O2 Locations Support</b>  |                                     |             |                |  |
|  | O2 Bank 1 - Sensor 1 present (0x13) | Present     |                |  |
|  | O2 Bank 1 - Sensor 2 present (0x13) | Present     |                |  |
|  | O2 Bank 1 - Sensor 3 present (0x13) | Not Present |                |  |
|  | O2 Bank 1 - Sensor 4 present (0x13) | Not Present |                |  |
|  | O2 Bank 2 - Sensor 1 present (0x13) | Not Present |                |  |
|  | O2 Bank 2 - Sensor 2 present (0x13) | Not Present |                |  |
|  | O2 Bank 2 - Sensor 3 present (0x13) | Not Present |                |  |
|  | O2 Bank 2 - Sensor 4 present (0x13) | Not Present |                |  |
|  <b>Oxygen Sensors (KOER) - CHECKED</b> |                                     |             |                |  |
| <b>Fuel System Status</b>  |                                     |             |                |  |
|  | Fuel System 1                       | CLOSED LOOP | <b>CHECKED</b> | Closed loop: using oxygen sensor(s) as feedback for fuel control |
|  | Fuel System 2                       | NOT USED    |                |  |
| <b>O2 Bank 1 Sensor 1 (0x13)</b>   |                                     |             | <b>CHECKED</b> |  |
|  | MIN                                 | 0.04 Volts  | <b>CHECKED</b> |  |
|  | MAX                                 | 0.91 Volts  | <b>CHECKED</b> |  |




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|                                    |              |              |  |
|------------------------------------|--------------|--------------|--|
| AVG                                | 0.5 Volts    | CHECKED      |  |
| Peak-To-Peak                       | 0.87 Volts   | CHECKED      |  |
| Freq. of AVG                       | 0 Hz         | CHECKED      |  |
| Cross count                        | 0            | CHECKED      |  |
| Standard Deviation                 | 2.45 Volts   |              |  |
| Lean to Rich Switch Time (Average) | UNDETERMINED | UNDETERMINED | O2 Sensor did not Switch from Lean to Rich |
| Rich to Lean Switch Time (Average) | UNDETERMINED | UNDETERMINED | O2 Sensor did not Switch from Rich to Lean |
| # Samples                          | 40           |              |  |
| O2 Histo - Lean                    | 0 %          |              |  |
| O2 Histo - Center Lean             | 0 %          |              |  |
| O2 Histo - Center                  | 42 %         |              |  |
| O2 Histo - Center Rich             | 58 %         |              |  |
| O2 Histo - Rich                    | 0 %          |              |  |
| <b>O2 Bank 1 Sensor 2 (0x13)</b>   |              |              |  |
| MIN                                | 0.82 Volts   |              |  |
| MAX                                | 0.84 Volts   |              |  |
| AVG                                | 0.83 Volts   |              |  |
| Peak-To-Peak                       | 0.01 Volts   |              |  |
| Freq. of AVG                       | 0 Hz         |              |  |
| Cross count                        | 0            |              |  |
| Standard Deviation                 | 0.02 Volts   |              |  |
| Lean to Rich Switch Time (Average) | UNDETERMINED | UNDETERMINED | O2 Sensor did not Switch from Lean to Rich |
| Rich to Lean Switch Time (Average) | UNDETERMINED | UNDETERMINED | O2 Sensor did not Switch from Rich to Lean |
| # Samples                          | 39           |              |  |

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|  |                        |                |                     |  |
|--|------------------------|----------------|---------------------|--|
|  | O2 Histo - Lean        | 0 %            |                     |  |
|  | O2 Histo - Center Lean | 0 %            |                     |  |
|  | O2 Histo - Center      | 0 %            |                     |  |
|  | O2 Histo - Center Rich | 100 %          |                     |  |
|  | O2 Histo - Rich        | 0 %            |                     |  |
| <b>Air Fuel Ratio</b>                  |                        | 14.6 :1        | <b>CHECKED</b>      |  |
| <b>HO2S 1 Heater Current</b>           |                        | 0.04 A         |                     |  |
| <b>Evaporative System - NOT GRADED</b> |                        |                |                     |  |
| <b>EVAP Tests</b>                      |                        |                |                     |  |
|  | EVAP Test Result       | NO RESULT      |                     |  |
|  | EVAP Test Abort Reason | NOT ABORTED    |                     |  |
|  | EVAP Test State        | WAIT FOR PURGE |                     |  |
| <b>Temperatures - CHECKED</b>          |                        |                |                     |  |
| <b>ECT to IAT Comparison</b>           |                        | UNDETERMINED   | <b>UNDETERMINED</b> | Vehicle is already warmed up, Unable to examine results. |
|  | Engine Coolant Temp    | 179.6 °F       | <b>CHECKED</b>      |  |
|  | Intake Air Temperature | 89.6 °F        | <b>CHECKED</b>      |  |
| <b>Intake Air Temperature</b>          |                        |                |                     |  |
|  | Intake Air Temperature | 89.6 °F        | <b>CHECKED</b>      |  |
| <b>Engine Coolant Temperature</b>      |                        | 179.6 °F       | <b>CHECKED</b>      |  |
| <b>Temperatures (KOER) - CHECKED</b>   |                        |                |                     |  |
| <b>Engine Coolant Temperature</b>      |                        |                | <b>CHECKED</b>      |  |
|  | MIN                    | 185 °F         | <b>CHECKED</b>      |  |
|  | MAX                    | 185 °F         | <b>CHECKED</b>      |  |
|  | AVG                    | 185 °F         | <b>CHECKED</b>      |  |
|  | Peak-To-Peak           | 0 °F           |                     |  |

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|  |                    |          |                |  |
|--|--------------------|----------|----------------|--|
|  | Standard Deviation | 0 °F     |                |  |
| <b>Intake Air Temperature</b>  |                    |          | <b>CHECKED</b> |  |
|  | MIN                | 82.4 °F  | <b>CHECKED</b> |  |
|  | MAX                | 82.4 °F  | <b>CHECKED</b> |  |
|  | AVG                | 82.4 °F  | <b>CHECKED</b> |  |
|  | Peak-To-Peak       | 0 °F     |                |  |
|  | Standard Deviation | 0 °F     |                |  |
| <b>Thermostat Check</b>  |                    | 188.6 °F | <b>CHECKED</b> |  |
|  <b>Fuel Trim (KOER) - CHECKED</b>                        |                    |          |                |  |
| <b>Short Term Fuel Trim B1</b>   |                    |          | <b>CHECKED</b> |  |
|  | MIN                | -6 %     | <b>CHECKED</b> |  |
|  | MAX                | 7 %      | <b>CHECKED</b> |  |
|  | AVG                | 0.64 %   | <b>CHECKED</b> |  |
|  | Peak-To-Peak       | 13 %     | <b>CHECKED</b> |  |
|  | Standard Deviation | 22.82 %  |                |  |
| <b>Long Term Fuel Trim B1</b>  |                    |          | <b>CHECKED</b> |  |
|  | MIN                | -4 %     | <b>CHECKED</b> |  |
|  | MAX                | -3 %     | <b>CHECKED</b> |  |
|  | AVG                | -3.74 %  | <b>CHECKED</b> |  |
|  | Peak-To-Peak       | 1 %      | <b>CHECKED</b> |  |
|  | Standard Deviation | 2.73 %   |                |  |
|  <b>Fuel / Pressure &amp; Rates - NOT GRADED</b>        |                    |          |                |  |
| <b>Fuel Tank Pressure</b>  |                    | 0 psig   |                |  |
| <b>Fuel Pressure</b>   |                    | 1.51 V   |                |  |
|  <b>Fuel / Pressure &amp; Rates (KOER) - NOT GRADED</b> |                    |          |                |  |
| <b>Fuel Tank Pressure</b>  |                    |          |                |  |



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|                    |        |  |  |
|--------------------|--------|--|--|
| MIN                | 0 psig |  |  |
| MAX                | 0 psig |  |  |
| AVG                | 0 psig |  |  |
| Peak-To-Peak       | 0 psig |  |  |
| Standard Deviation | 0 psig |  |  |
| # Samples          | 39     |  |  |

## Load / Torque - NOT GRADED

**Calculated Load Value** 0 %

**Engine Torque** 0 ft-lb

## Load / Torque (KOER) - NOT GRADED

**Calculated Load Value**

MIN 29.4 %

MAX 32.5 %

AVG 31.98 %

Peak-To-Peak 3.1 %

Standard Deviation 3.54 %

**Engine Torque**

MIN 16.23 ft-lb

MAX 22.13 ft-lb

AVG 19.18 ft-lb

Peak-To-Peak 5.9 ft-lb

Standard Deviation 7.6 ft-lb

# Samples 16

**MAP Analysis for Load Analysis** 8.56 in Hg

**RPM for Load Analysis** 604.3 RPM

## Throttle / Accelerator - CONDITIONAL

DENSO Products And Services Americas, inc

3900 Via Oro Avenue, Long Beach, California 90810, U.S.A.

Toll Free : 888-366-3273 Phone: 570-587-7080 Fax : 570-587-7081 Support: 570-587-7082

<http://www.vehiclemri.com>

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|  |      |                    |  |
|--|------|--------------------|--|
| <b>Absolute Throttle Position</b>            | 29 % | <b>CONDITIONAL</b> |  |
| <b>Accelerator Pedal Position</b>            |      |                    |  |
| Accelerator Pedal Position Indicated Angle   | 0 %  |                    |  |
| Accelerator Pedal Position 1 Indicated Angle | 0 %  |                    |  |
| Accelerator Pedal Position 2 Indicated Angle | 0 %  |                    |  |



## Misfire / Injectors - CHECKED


|                        |   |                |  |
|------------------------|---|----------------|--|
| <b>Misfire History</b> |   | <b>CHECKED</b> |  |
| MISFIRE HISTORY 1      | 0 | <b>CHECKED</b> |  |
| MISFIRE HISTORY 2      | 0 | <b>CHECKED</b> |  |
| MISFIRE HISTORY 3      | 0 | <b>CHECKED</b> |  |
| MISFIRE HISTORY 4      | 0 | <b>CHECKED</b> |  |
| MISFIRE HISTORY 5      | 0 | <b>CHECKED</b> |  |
| MISFIRE HISTORY 6      | 0 | <b>CHECKED</b> |  |




## Misfire / Injectors (KOER) - CHECKED

|                          |    |                |  |
|--------------------------|----|----------------|--|
| <b>Misfire Current 1</b> |    | <b>CHECKED</b> |  |
| MAX                      | 0  | <b>CHECKED</b> |  |
| # Samples                | 39 |                |  |
| <b>Misfire Current 2</b> |    | <b>CHECKED</b> |  |
| MAX                      | 0  | <b>CHECKED</b> |  |
| # Samples                | 38 |                |  |
| <b>Misfire Current 3</b> |    | <b>CHECKED</b> |  |
| MAX                      | 0  | <b>CHECKED</b> |  |
| # Samples                | 38 |                |  |
| <b>Misfire Current 4</b> |    | <b>CHECKED</b> |  |
| MAX                      | 0  | <b>CHECKED</b> |  |

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|   |                    |           |         |  |
|---|--------------------|-----------|---------|--|
|   | # Samples          | 39        |         |  |
| <b>Misfire Current 5</b>  |                    |           | CHECKED |  |
|   | MAX                | 0         | CHECKED |  |
|   | # Samples          | 37        |         |  |
| <b>Misfire Current 6</b>  |                    |           | CHECKED |  |
|   | MAX                | 0         | CHECKED |  |
|   | # Samples          | 38        |         |  |
| <b>Cycles of Misfire Data</b>   |                    | 28        |         |  |
| <b>Injector Pulse Width</b>   |                    |           |         |  |
|   | MIN                | 2.3 ms    |         |  |
|   | MAX                | 2.58 ms   |         |  |
|   | AVG                | 2.45 ms   |         |  |
|   | Peak-To-Peak       | 0.28 ms   |         |  |
|   | Standard Deviation | 0.49 ms   |         |  |
|   | # Samples          | 39        |         |  |
| <b>Engine RPM Durring Misfire Tests</b>   |                    |           |         |  |
|   | MIN                | 575.5 RPM |         |  |
|   | MAX                | 609.5 RPM |         |  |
|   | AVG                | 595.3 RPM |         |  |
|   | Peak-To-Peak       | 34 RPM    |         |  |
|   | Standard Deviation | 35.62 RPM |         |  |
|   | # Samples          | 15        |         |  |
|  <b>Transmission - CHECKED</b> |                    |           |         |  |
| <b>Transmission Slip Count</b>  |                    | 0         | CHECKED |  |
| <b>Shift Errors</b>   |                    |           | CHECKED |  |
|   | 1-2 SHIFT ERRORS   | 0 s       | CHECKED |  |

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|   |                                    |        |                |  |
|---|------------------------------------|--------|----------------|--|
| <b>Shift Times</b>  |                                    |        |                |  |
|   | 1-2 Shift Time                     | 0 s    |                |  |
|   | 2-3 Shift Time                     | 0 s    |                |  |
| <b>PC Solenoid</b>  |                                    |        | <b>CHECKED</b> |  |
|   | 1-2 Solenoid to Ground             | NO     | <b>CHECKED</b> |  |
|   | 2-3 Solenoid to Ground             | NO     | <b>CHECKED</b> |  |
|   | 3-2 Solenoid to Ground             | NO     | <b>CHECKED</b> |  |
|   | 1-2 Solenoid to Voltage            | NO     | <b>CHECKED</b> |  |
|   | 2-3 Solenoid to Voltage            | NO     | <b>CHECKED</b> |  |
|   | 3-2 Solenoid to Voltage            | NO     | <b>CHECKED</b> |  |
| <b>TCC System</b>   |                                    |        |                |  |
|   | TCC Duty Cycle                     | 0 %    |                |  |
|   | TCC Enable Open/Short to GND       | NO     |                |  |
|   | TCC Duty Cycle Open Shorted to GND | NO     |                |  |
| <b>4WD Information</b>  |                                    |        |                |  |
|   | 4WD Low Signal                     | CLOSED |                |  |
|   | 4WD Signal                         | CLOSED |                |  |
| <b>Current TAP Memory</b>   |                                    | 0      | <b>CHECKED</b> |  |
| <b>Gear Box Ratio</b>   |                                    | 1 :1   |                |  |
|  <b>Transmission (KOER) - CHECKED</b> |                                    |        |                |  |
| <b>Tap Cells</b>  |                                    |        | <b>CHECKED</b> |  |
|   | 1-2 TAP CELLS 4                    | 0 psig | <b>CHECKED</b> |  |
|   | 1-2 TAP CELLS 5                    | 0 psig | <b>CHECKED</b> |  |
|   | 1-2 TAP CELLS 6                    | 0 psig | <b>CHECKED</b> |  |
|   | 1-2 TAP CELLS 7                    | 0 psig | <b>CHECKED</b> |  |
|   | 1-2 TAP CELLS 8                    | 0 psig | <b>CHECKED</b> |  |

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|                    |        |         |  |
|--------------------|--------|---------|--|
| 1-2 TAP CELLS 9    | 0 psig | CHECKED |  |
| 1-2 TAP CELLS 10   | 0 psig | CHECKED |  |
| 1-2 TAP CELLS 11   | 0 psig | CHECKED |  |
| 1-2 TAP CELLS 12   | 0 psig | CHECKED |  |
| 1-2 TAP CELLS 13   | 0 psig | CHECKED |  |
| 1-2 TAP CELLS 14   | 0 psig | CHECKED |  |
| 1-2 TAP CELLS 15   | 0 psig | CHECKED |  |
| 1-2 TAP CELLS 16   | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 4    | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 5    | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 6    | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 7    | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 8    | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 9    | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 10   | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 11   | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 12   | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 13   | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 14   | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 15   | 0 psig | CHECKED |  |
| 2-3 TAP CELLS 16   | 0 psig | CHECKED |  |
| Current TAP Cell   | 0      | CHECKED |  |
| <b>PC Solenoid</b> | 0 A    | CHECKED |  |

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|                                      |                        |         |         |   |
|--------------------------------------|------------------------|---------|---------|---|
|                                      | PC Sol. Actual Current | 0.99 A  | CHECKED | This parameter displays the actual current flow through the pressure control solenoid circuit, which is measured by the control module. High current flow results in low line pressure. Low current flow results in high line pressure. |
|                                      | PC Sol. Ref. Current   | 0.99 A  | CHECKED | This parameter displays the commanded current of the pressure control solenoid circuit. High current results in low line pressure. Low current results in high line pressure.   |
| <b>TCC System</b>                    |                        | 0 %     |         |   |
| <b>Torque converter slip desired</b> |                        | 603 RPM |         |   |

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|                    |   |                       |   |
|--------------------|---|-----------------------|---|
| <b>CHECKED</b>     | The test value was within acceptable range  | <b>POSSIBLE ISSUE</b> | The test value was outside of the acceptable range.   |
| <b>CONDITIONAL</b> | Test was slightly out of range, but not so much so that the CHECKED or VERIFY tag would be appropriate. Also may represent not enough information is available and further diagnostics are required.  | <b>NOT SUPPORTED</b>  | The test item is not supported by the vehicle or the vehicle interface  |
| <b>NOT GRADED</b>  | Data was collected for the test item, but no determination was made   | <b>UNDETERMINED</b>   | The value/result of the test item could not be determined, either not enough information was known or information was missing |
| <b>CRITICAL</b>    | The test was outside of the acceptable range and is of higher importance than a normal VERIFY condition. There are three categories: A parameter is a critical value, a CALID was identified as needing an update, or a DTC was identified as high importance | <b>N/A</b>            | The test item was not defined in the procedure being run  |

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