

**2009 Kia Borrego EX**

2009-10 DTC INDEX Borrego + 2010 Canadian

**2009-10 DTC INDEX****Borrego + 2010 Canadian****ASSIST DOOR MODULE DTCS****ASSIST DOOR MODULE DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>          | <b>Description</b>                         |
|---------------------|--------------------------------------------|
| <b><u>B1603</u></b> | CAN Bus error                              |
| <b><u>B1912</u></b> | Right OSM horizontal motor or sensor error |
| <b><u>B1913</u></b> | Right OSM vertical motor or sensor error   |
| <b><u>B1952</u></b> | OSRVM defogger error                       |
| <b><u>B2332</u></b> | Assist door unlock actuator error          |
| <b><u>B2333</u></b> | Assist door unlock actuator error          |
| <b><u>B2533</u></b> | Assist door courtesy lamp error            |

**AUTOMATIC TRANSAXLE SYSTEM (A5SR2) DTCS****AUTOMATIC TRANSAXLE SYSTEM (A5SR2) DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>          | <b>Description</b>                                                                  |
|---------------------|-------------------------------------------------------------------------------------|
| <b><u>P0601</u></b> | Internal Control Module Memory Check Sum Error                                      |
| <b><u>P0641</u></b> | Sensor Reference Voltage 'A' Circuit/Open                                           |
| <b><u>P0705</u></b> | Transmission Range Sensor Circuit Malfunction (PRNDL Input)                         |
| <b><u>P0711</u></b> | Transmission Fluid Temperature Sensor 'A' circuit Range/Performance                 |
| <b><u>P0712</u></b> | Transmission Fluid Temperature Sensor 'A' Circuit Low Input                         |
| <b><u>P0713</u></b> | Transmission Fluid Temperature Sensor 'A' Circuit High Input                        |
| <b><u>P0716</u></b> | Input/Turbine Speed Sensor 'A' Circuit Range/Performance                            |
| <b><u>P0717</u></b> | Input/Turbine Speed Sensor 'A' Circuit No Signal                                    |
| <b><u>P0721</u></b> | Output Speed Sensor Circuit Range/Performance                                       |
| <b><u>P0731</u></b> | Gear 1 Incorrect Ratio                                                              |
| <b><u>P0732</u></b> | Gear 2 Incorrect Ratio                                                              |
| <b><u>P0733</u></b> | Gear 3 Incorrect Ratio                                                              |
| <b><u>P0734</u></b> | Gear 4 Incorrect Ratio                                                              |
| <b><u>P0735</u></b> | Gear 5 Incorrect Ratio                                                              |
| <b><u>P0741</u></b> | Torque Converter Clutch Circuit Stuck Off (SOL6)                                    |
| <b><u>P0743</u></b> | Torque Converter Clutch Circuit - Short to battery (SOL6)                           |
| <b><u>P0748</u></b> | Pressure Control Solenoid Valve 'A' - Short to Battery (SOL5 - Normal/High)         |
| <b><u>P0753</u></b> | Shift Control Solenoid Valve 'A' - Short to battery (SOL1 - Clutch 'A': Normal/Low) |
| <b><u>P0758</u></b> | Shift Control Solenoid Valve 'B' - Short to battery (SOL2 - Clutch B: Normal/High)  |
| <b><u>P0763</u></b> | Shift Control Solenoid Valve 'C' - Short to battery (SOL3 - Brake 'C' : Normal/Low) |
| <b><u>P0768</u></b> | Shift Control Solenoid Valve 'D' - Short to battery (SOL4 - Brake 'D' : Clutch 'E'  |

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|              |                                                                                    |
|--------------|------------------------------------------------------------------------------------|
|              | Normal/High)                                                                       |
| <b>P0773</b> | Shift Control Solenoid Valve 'E' - Short to battery (SOL7 - ON/OFF : Normal/Close) |
| <b>P0819</b> | Up and Down Shift Switch to Transmission Range Correlation                         |
| <b>U0001</b> | High Speed CAN Communication Bus off                                               |
| <b>U0100</b> | Lost Communication With ECM/PCM 'A'                                                |

**AUTOMATIC TRANSAXLE SYSTEM (6HP26) DTCS****AUTOMATIC TRANSAXLE SYSTEM (6HP26) DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>                                                  |
|--------------|---------------------------------------------------------------------|
| <b>P0120</b> | Throttle/Pedal Position Sensor/Switch 'A' Circuit                   |
| <b>P0219</b> | Engine Overspeed Condition                                          |
| <b>P0603</b> | Internal Control Module Keep Alive Memory (KAM) Error               |
| <b>P0605</b> | Internal Control Module Read Only Memory (ROM) Error                |
| <b>P0607</b> | Control Module Performance                                          |
| <b>P0616</b> | Starter Relay Circuit Low                                           |
| <b>P0634</b> | PCM/ECM/TCM Internal Temperature Too High                           |
| <b>P0641</b> | Sensor Reference Voltage 'A' Circuit/Open                           |
| <b>P0642</b> | Sensor Reference Voltage 'A' Circuit Low                            |
| <b>P0666</b> | PCM/ECM/TCM Internal Temperature Sensor Circuit                     |
| <b>P0667</b> | PCM/ECM/TCM Internal Temperature Sensor Range/Performance           |
| <b>P0703</b> | Stop Lamp (Brake) Switch Circuit Malfunction                        |
| <b>P0705</b> | Transmission Range Sensor Circuit Malfunction (PRNDL Input)         |
| <b>P0706</b> | Transmission Range Sensor Circuit Range/Performance                 |
| <b>P0707</b> | Transmission Range Sensor Circuit Low Input                         |
| <b>P0708</b> | Transmission Range Sensor Circuit High Input                        |
| <b>P0710</b> | Transmission Fluid Temperature Sensor 'A' Circuit                   |
| <b>P0711</b> | Transmission Fluid Temperature Sensor 'A' Circuit Range/Performance |
| <b>P0712</b> | Transmission Fluid Temperature Sensor 'A' Circuit Low Input         |
| <b>P0713</b> | Transmission Fluid Temperature Sensor 'A' Circuit High Input        |
| <b>P0716</b> | Input/Turbine Speed Sensor 'A' Circuit Range/Performance            |
| <b>P0717</b> | Input/Turbine Speed Sensor 'A' Circuit No Signal                    |
| <b>P0721</b> | Output Speed Sensor Circuit Range/Performance                       |
| <b>P0722</b> | Output Speed Sensor Circuit No Signal                               |
| <b>P0727</b> | Engine Speed Input Circuit No Signal                                |
| <b>P0729</b> | Gear 6 Incorrect Ratio                                              |
| <b>P0731</b> | Gear 1 Incorrect Ratio                                              |
| <b>P0732</b> | Gear 2 Incorrect Ratio                                              |
| <b>P0733</b> | Gear 3 Incorrect Ratio                                              |
| <b>P0734</b> | Gear 4 Incorrect Ratio                                              |

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|                     |                                                                                                         |
|---------------------|---------------------------------------------------------------------------------------------------------|
| <b><u>P0735</u></b> | Gear 5 Incorrect Ratio                                                                                  |
| <b><u>P0736</u></b> | Reverse Incorrect Ratio                                                                                 |
| <b><u>P0741</u></b> | Torque Converter Clutch Circuit Stuck Off (SOL6)                                                        |
| <b><u>P0743</u></b> | Torque Converter Clutch Circuit - Short to battery (SOL6)                                               |
| <b><u>P0744</u></b> | Torque Converter Clutch Circuit - Open or short to ground (SOL6)                                        |
| <b><u>P0746</u></b> | Pressure Control Solenoid Valve 'A' Performance or Stuck Off (SOL5)                                     |
| <b><u>P0748</u></b> | Pressure Control Solenoid Valve 'A' - Short to Battery (SOL5 - Normal/High)                             |
| <b><u>P0749</u></b> | Pressure Control Solenoid Valve 'A' - Short to ground (SOL5 - Normal/High)                              |
| <b><u>P0751</u></b> | Shift Control Solenoid valve 'A' Performance or Stuck Off (SOL1 - Clutch 'A' : Normal/Low)              |
| <b><u>P0753</u></b> | Shift Control Solenoid Valve 'A' - Short battery (SOL1 - Clutch 'A' : Normal/Low)                       |
| <b><u>P0754</u></b> | Shift Control Solenoid Valve 'A' - Open or Short to ground (SOL1 - Clutch 'A' - Normal/Low)             |
| <b><u>P0756</u></b> | Shift Control Solenoid Valve 'B' Performance or Stuck Off (SOL2)                                        |
| <b><u>P0758</u></b> | Shift Control Solenoid Valve 'B' - Short to battery (SOL2-Clutch B : Normal/High)                       |
| <b><u>P0759</u></b> | Shift Control Solenoid Valve 'B' Intermittent (SOL2)                                                    |
| <b><u>P0761</u></b> | Shift Control Solenoid Valve 'C' Performance or Stuck Off (SOL3)                                        |
| <b><u>P0763</u></b> | Shift Control Solenoid Valve 'C' - Short to battery (SOL3 - Brake 'C' : Normal/Low)                     |
| <b><u>P0764</u></b> | Shift Control Solenoid Valve 'C' - Open or Short to ground (SOL3 - Brake 'C' : Normal/Low)              |
| <b><u>P0766</u></b> | Shift Control Solenoid Valve 'D' Performance or Stuck Off (SOL4)                                        |
| <b><u>P0768</u></b> | Shift Control Solenoid Valve 'D' - Short to battery (SOL4 - Brake 'D', Clutch 'E' - Normal/High)        |
| <b><u>P0769</u></b> | Shift Control Solenoid Valve 'D' - Open or Short to ground (SOL4 - Brake 'D', Clutch 'E' : Normal/High) |
| <b><u>P0771</u></b> | Shift Control Solenoid Valve 'E' - Open (SOL 7 - ON/OFF : Normal/Close)                                 |
| <b><u>P0773</u></b> | Shift Control Solenoid Valve 'E' - Short to battery (SOL 7 - ON/OFF : Normal/Close)                     |
| <b><u>P0774</u></b> | Shift Control Solenoid Valve 'E' - Short to ground (SOL 7 - ON/OFF : Normal/Close)                      |
| <b><u>P0781</u></b> | 1-2 Shift                                                                                               |
| <b><u>P0782</u></b> | 2-3 Shift                                                                                               |
| <b><u>P0783</u></b> | 3-4 Shift                                                                                               |
| <b><u>P0784</u></b> | 4-5 Shift                                                                                               |
| <b><u>P0829</u></b> | 5-6 Shift                                                                                               |
| <b><u>P0880</u></b> | TCM Power Signal Error Open/Short (GND)                                                                 |
| <b><u>P0889</u></b> | TCM Power Supply to Solenoid Circuit Range/Performance                                                  |
| <b><u>P0890</u></b> | TCM Power Relay Circuit Low                                                                             |
| <b><u>P0891</u></b> | TCM Power Relay Circuit High                                                                            |

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|              |                                                                     |
|--------------|---------------------------------------------------------------------|
| <b>P0892</b> | TCM Power Supply to Solenoid Valve Circuit - Open                   |
| <b>P0905</b> | Gate Select Position Circuit Range/Performance                      |
| <b>P2637</b> | Torque Management Feedback Signal 'A'                               |
| <b>P2700</b> | Transmission Friction Element "A" Apply Time Range/Performance      |
| <b>P2701</b> | Transmission Friction Element "B" Apply Time Range/Performance      |
| <b>P2702</b> | Transmission Friction Element "C" Apply Time Range/Performance      |
| <b>P2703</b> | Transmission Friction Element "D" Apply Time Range/Performance      |
| <b>P2704</b> | Transmission Friction Element "E" Apply Time Range/Performance      |
| <b>U0001</b> | High-speed CAN Communication Bus off                                |
| <b>U0100</b> | Lost Communication With ECM/PCM 'A'                                 |
| <b>U0104</b> | Lost Communication With Cruise Control Module                       |
| <b>U0114</b> | Lost Communication With Four-Wheel Drive Clutch Control Module      |
| <b>U0121</b> | Lost Communication With Anti-Lock Brake System (ABS) Control Module |
| <b>U0122</b> | Lost Communication With Vehicle Dynamics Control Module             |
| <b>U0126</b> | Lost Communication With Steering Angle Sensor Module                |

**ABS/ESC SYSTEM DTCS****ABS/ESC SYSTEM DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>                                         |
|--------------|------------------------------------------------------------|
| <b>C1101</b> | Battery Voltage High                                       |
| <b>C1102</b> | Battery Voltage Low                                        |
| <b>C1112</b> | Sensor Source Voltage                                      |
| <b>C1200</b> | Wheel Speed Sensor Front-LH Open/Short                     |
| <b>C1201</b> | Wheel Speed Sensor Front-LH Range/Performance/Intermittent |
| <b>C1202</b> | Wheel Speed Sensor Front-LH Invalid/No signal              |
| <b>C1203</b> | Wheel Speed Sensor Front-RH Open/Short                     |
| <b>C1204</b> | Wheel Speed Sensor Front-RH Range/Performance/Intermittent |
| <b>C1205</b> | Wheel Speed Sensor Front-RH Invalid/No signal              |
| <b>C1206</b> | Wheel Speed Sensor Rear-LH Open/Short                      |
| <b>C1207</b> | Wheel Speed Sensor Rear-LH Range/Performance/Intermittent  |
| <b>C1208</b> | Wheel Speed Sensor Rear-LH Invalid/No signal               |
| <b>C1209</b> | Wheel Speed Sensor Rear-RH Open/Short                      |
| <b>C1210</b> | Wheel Speed Sensor Rear-RH Range/Performance/Intermittent  |
| <b>C1211</b> | Wheel Speed Sensor Rear-RH Invalid/No signal               |
| <b>C1235</b> | Primary Pressure Sensor - Electrical                       |
| <b>C1237</b> | Primary Pressure Sensor - Signal                           |
| <b>C1260</b> | Steering Angle Sensor Circuit - Signal                     |
| <b>C1261</b> | Steering Angle Sensor Not Calibrated                       |
| <b>C1274</b> | Longitudinal G Sensor Open/Short                           |
| <b>C1275</b> | Longitudinal G Sensor Range/Performance Error              |

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|              |                                          |
|--------------|------------------------------------------|
| <b>C1282</b> | Yaw Rate & Lateral G Sensor - Electrical |
| <b>C1283</b> | Yaw Rate & Lateral G Sensor - Signal     |
| <b>C1285</b> | Longitudinal G Sensor Not Calibrated     |
| <b>C1503</b> | TCS/ESC Switch Error                     |
| <b>C1513</b> | Brake Switch Error                       |
| <b>C1526</b> | DBC Switch Error                         |
| <b>C1604</b> | ECU Hardware Error                       |
| <b>C1605</b> | CAN Hardware Error                       |
| <b>C1611</b> | CAN Time-Out ECM                         |
| <b>C1612</b> | CAN Time-Out TCM                         |
| <b>C1613</b> | CAN Wrong Message                        |
| <b>C1616</b> | CAN Bus Off                              |
| <b>C1623</b> | CAN Time-out Steering Angle Sensor       |
| <b>C1627</b> | CAN Time-Out 4WD                         |
| <b>C1647</b> | CAN Hardware Error - Sensor Channel      |
| <b>C1702</b> | Variant Coding Error                     |
| <b>C2112</b> | Valve Relay Error                        |
| <b>C2130</b> | Brake Lamp Relay Error                   |
| <b>C2227</b> | Excessive Temperature of Brake Disc      |
| <b>C2380</b> | ABS/TCS/ESC Valve Error                  |
| <b>C2402</b> | Motor Failure                            |

**BODY CONTROL MODULE (BCM) DTCS****INSTRUMENT PANEL MODULE (IPM) DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>                       |
|--------------|------------------------------------------|
| <b>B1102</b> | Battery Voltage Low                      |
| <b>B1581</b> | Ignition Switch Error                    |
| <b>B1588</b> | FR Wiper/Washer MF SW                    |
| <b>B1589</b> | RR Wiper/Washer MF SW                    |
| <b>B1590</b> | Light MF SW Error                        |
| <b>B1591</b> | Turn Signal MF SW Error                  |
| <b>B1602</b> | CAN Bus Physical Bus Failure             |
| <b>B1605</b> | DDM COMM. Lost & bus Failure             |
| <b>B1606</b> | ADM COMM. Lost & bus Failure             |
| <b>B1607</b> | IMS COMM. Lost & bus Failure             |
| <b>B1608</b> | Lost Communication With SCM, Bus Failure |
| <b>B1609</b> | Lost Communication Between BCM and SMK   |
| <b>B1611</b> | FAM COMM. Lost & bus Failure             |
| <b>B1612</b> | RAM COMM. Lost & bus Failure             |
| <b>B1613</b> | CLU COMM. Lost & bus Failure             |

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|                     |                                        |
|---------------------|----------------------------------------|
| <b><u>B1624</u></b> | EEPROM Failure                         |
| <b><u>B1627</u></b> | EEPROM Corruption                      |
| <b><u>B1628</u></b> | Module CONF. Conflict                  |
| <b><u>B1646</u></b> | S/W Rescue Mode                        |
| <b><u>B1681</u></b> | Lost Communication Between BCM and PDM |

**BUTTON ENGINE START SYSTEM DTCS****BUTTON ENGINE START SYSTEM DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>          | <b>Description</b>        |
|---------------------|---------------------------|
| <b><u>B1602</u></b> | CAN ERR                   |
| <b><u>B1603</u></b> | CAN Communication Bus Off |
| <b><u>B1987</u></b> | Sub Micom Failed          |
| <b><u>B1988</u></b> | ESCL BAT Short To BAT     |
| <b><u>B1989</u></b> | ESCL GND Short To BAT     |
| <b><u>B1990</u></b> | ESCL BAT Short To GND     |
| <b><u>B1991</u></b> | IMMO TX Short To GND      |

**CONTROLLER (HVAC) DTCS****CONTROLLER (HVAC) DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>          | <b>Description</b>                             |
|---------------------|------------------------------------------------|
| <b><u>B1202</u></b> | Heater Water Temperature Sensor Open (High)    |
| <b><u>B1203</u></b> | Heater Water Temperature Sensor Short (Low)    |
| <b><u>B1204</u></b> | Air Mix Potentiometer Open (Low) - Passenger   |
| <b><u>B1205</u></b> | Air Mix Potentiometer Short (High) - Passenger |
| <b><u>B1208</u></b> | Intake Potentiometer Open (Low)                |
| <b><u>B1209</u></b> | Intake Potentiometer Short (High)              |
| <b><u>B1233</u></b> | In-Car Temperature Sensor Short (Low)          |
| <b><u>B1234</u></b> | In-Car Temperature Sensor Open (High)          |
| <b><u>B1237</u></b> | Ambient Temperature Sensor Short (Low)         |
| <b><u>B1238</u></b> | Ambient Temperature Sensor Open (High)         |
| <b><u>B1241</u></b> | Evaporator Sensor Short (Low)                  |
| <b><u>B1242</u></b> | Evaporator Sensor Open (High)                  |
| <b><u>B1245</u></b> | Air Mix Potentiometer Open (Low) - Driver      |
| <b><u>B1246</u></b> | Air Mix Potentiometer Short (High) - Driver    |
| <b><u>B1249</u></b> | Direction Potentiometer Open (Low) - Driver    |
| <b><u>B1250</u></b> | Direction Potentiometer Short (High) - Driver  |
| <b><u>B2406</u></b> | Air Mix Motor-Driver                           |
| <b><u>B2408</u></b> | Intake Motor                                   |
| <b><u>B2409</u></b> | Direction Control Motor-Driver                 |
|                     |                                                |

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**B2415**

Air Mix Door Motor-Passenger

**CRUISE CONTROL SYSTEM DTCS****NOTE:** Manufacturer only provided test procedure for P0564 for the 4.6L.**CRUISE CONTROL SYSTEM DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>          | <b>Description</b>                            |
|---------------------|-----------------------------------------------|
| <b>P0564</b> (3.8L) | Cruise Control Multi-Function Input A Circuit |
| <b>P0564</b> (4.6L) | Cruise Control Multi-Function Input A Circuit |
| <b>P0565</b>        | Cruise Control ON signal                      |
| <b>P0566</b>        | Cruise Control OFF Signal                     |
| <b>P0567</b>        | Cruise Control RESUME Signal                  |
| <b>P0568</b>        | Cruise Control SET Signal                     |

**DRIVER DOOR MODULE DTCS****DRIVER DOOR MODULE DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>                        |
|--------------|-------------------------------------------|
| <b>B1603</b> | CAN Bus error                             |
| <b>B1910</b> | Left OSM horizontal motor or sensor error |
| <b>B1911</b> | Left OSM vertical motor or sensor error   |
| <b>B1952</b> | OSRVM defogger error                      |
| <b>B2330</b> | Driver door lock actuator error           |
| <b>B2331</b> | Driver door unlock actuator error         |
| <b>B2529</b> | Drive door courtesy lamp error            |

**ENGINE CONTROL SYSTEM (3.8L) DTCS****ENGINE CONTROL SYSTEM (3.8L) DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>                                                          |
|--------------|-----------------------------------------------------------------------------|
| <b>P0011</b> | 'A' Camshaft Position-Timing Over-Advanced or System Performance (Bank 1)   |
| <b>P0012</b> | 'A' Camshaft Position-Timing Over-Retarded (Bank 1)                         |
| <b>P0014</b> | 'B' Camshaft Position - Timing Over-Advanced or System Performance (Bank 1) |
| <b>P0015</b> | 'B' Camshaft Position - Timing Over-Retarded (Bank 1)                       |
| <b>P0016</b> | Crankshaft Position-Camshaft Position Correlation (Bank 1 Sensor A)         |
| <b>P0017</b> | Crankshaft Position - Camshaft Position Correlation                         |

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|                     |                                                                                |
|---------------------|--------------------------------------------------------------------------------|
|                     | (Bank 1 Sensor B)                                                              |
| <b><u>P0018</u></b> | Crankshaft Position-Camshaft Position Correlation<br>(Bank 2 Sensor A)         |
| <b><u>P0019</u></b> | Crankshaft Position - Camshaft Position Correlation<br>(Bank 2 Sensor B)       |
| <b><u>P0021</u></b> | 'A' Camshaft Position-Timing Over-Advanced or<br>System Performance (Bank 2)   |
| <b><u>P0022</u></b> | 'A' Camshaft Position-Timing Over-Retarded (Bank<br>2)                         |
| <b><u>P0024</u></b> | 'B' Camshaft Position - Timing Over-Advanced or<br>System Performance (Bank 2) |
| <b><u>P0025</u></b> | 'B' Camshaft Position - Timing Over-Retarded<br>(Bank 2)                       |
| <b><u>P0026</u></b> | Intake Valve Control Solenoid Circuit<br>Range/Performance (Bank 1)            |
| <b><u>P0027</u></b> | Exhaust Valve Control Solenoid Circuit<br>Range/Performance (Bank 1)           |
| <b><u>P0028</u></b> | Intake Valve Control Solenoid Circuit<br>Range/Performance (Bank 2)            |
| <b><u>P0029</u></b> | Exhaust Valve Control Solenoid Circuit<br>Range/Performance (Bank 2)           |
| <b><u>P0030</u></b> | HO2S Heater Control Circuit (Bank 1/Sensor 1)                                  |
| <b><u>P0031</u></b> | HO2S Heater Control Circuit Low (Bank 1/Sensor<br>1)                           |
| <b><u>P0032</u></b> | HO2S Heater Control Circuit High (Bank 1/Sensor<br>1)                          |
| <b><u>P0036</u></b> | HO2S Heater Control Circuit (Bank 1/Sensor 2)                                  |
| <b><u>P0037</u></b> | HO2S Heater Control Circuit Low (Bank 1/Sensor<br>2)                           |
| <b><u>P0038</u></b> | HO2S Heater Control Circuit High (Bank 1/Sensor<br>2)                          |
| <b><u>P0050</u></b> | HO2S Heater Control Circuit (Bank 2/Sensor 1)                                  |
| <b><u>P0051</u></b> | HO2S Heater Control Circuit Low (Bank 2/Sensor<br>1)                           |
| <b><u>P0052</u></b> | HO2S Heater Control Circuit High (Bank 2/Sensor<br>1)                          |
| <b><u>P0056</u></b> | HO2S Heater Control Circuit (Bank 2/Sensor 2)                                  |
| <b><u>P0057</u></b> | HO2S Heater Control Circuit Low (Bank 2/Sensor<br>2)                           |
| <b><u>P0058</u></b> | HO2S Heater Control Circuit High (Bank 2/Sensor<br>2)                          |
| <b><u>P0076</u></b> | Intake Valve Control Solenoid Circuit-Low (Bank<br>1)                          |
|                     |                                                                                |

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|                     |                                                                          |
|---------------------|--------------------------------------------------------------------------|
| <b><u>P0077</u></b> | Intake Valve Control Solenoid Circuit-High (Bank 1)                      |
| <b><u>P0079</u></b> | Exhaust Valve Control Solenoid Circuit Low (Bank 1)                      |
| <b><u>P0080</u></b> | Exhaust Valve Control Solenoid Circuit High (Bank 1)                     |
| <b><u>P0082</u></b> | Intake Valve Control Solenoid Circuit-Low (Bank 2)                       |
| <b><u>P0083</u></b> | Intake Valve Control Solenoid Circuit-High (Bank 2)                      |
| <b><u>P0085</u></b> | Exhaust Valve Control Solenoid Circuit Low (Bank 2)                      |
| <b><u>P0086</u></b> | Exhaust Valve Control Solenoid Circuit High (Bank 2)                     |
| <b><u>P0101</u></b> | Mass or Volume Air Flow 'A' Circuit Range/Performance                    |
| <b><u>P0102</u></b> | Mass or Volume Air Flow 'A' Circuit Low Input                            |
| <b><u>P0103</u></b> | Mass or Volume Air Flow 'A' Circuit High Input                           |
| <b><u>P0105</u></b> | Manifold Absolute Pressure/Barometric Pressure Circuit                   |
| <b><u>P0106</u></b> | Manifold Absolute Pressure/Barometric Pressure Circuit Range/Performance |
| <b><u>P0107</u></b> | Manifold Absolute Pressure/Barometric Pressure Circuit Low Input         |
| <b><u>P0108</u></b> | Manifold Absolute Pressure/Barometric Pressure Circuit High Input        |
| <b><u>P0109</u></b> | Manifold Absolute Pressure/Barometric Pressure Circuit Intermittent      |
| <b><u>P0110</u></b> | Intake Air Temperature Sensor 1 Circuit                                  |
| <b><u>P0111</u></b> | Intake Air Temperature Sensor 1 Circuit Range/Performance                |
| <b><u>P0112</u></b> | Intake Air Temperature Sensor 1 Circuit Low Input                        |
| <b><u>P0113</u></b> | Intake Air Temperature Sensor 1 Circuit High Input                       |
| <b><u>P0115</u></b> | Engine Coolant Temperature Circuit                                       |
| <b><u>P0116</u></b> | Engine Coolant Temperature Circuit Range/Performance                     |
| <b><u>P0117</u></b> | Engine Coolant Temperature Circuit Low Input                             |
| <b><u>P0118</u></b> | Engine Coolant Temperature Circuit High Input                            |
| <b><u>P0122</u></b> | Throttle/Pedal Position Sensor/Switch 'A' Circuit Low Input              |
| <b><u>P0123</u></b> | Throttle/Pedal Position Sensor/Switch 'A' Circuit High Input             |
| <b><u>P0125</u></b> | Insufficient Coolant Temperature for Closed Loop                         |

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|                     | Fuel Control                                                                     |
|---------------------|----------------------------------------------------------------------------------|
| <b><u>P0128</u></b> | Coolant Thermostat (Coolant Temperature below Thermostat Regulating Temperature) |
| <b><u>P0131</u></b> | O2 Sensor Circuit Low Voltage (Bank 1/Sensor 1)                                  |
| <b><u>P0132</u></b> | O2 Sensor Circuit High Voltage (Bank 1/Sensor 1)                                 |
| <b><u>P0133</u></b> | O2 Sensor Circuit Slow Response (Bank 1/Sensor 1)                                |
| <b><u>P0134</u></b> | O2 Sensor Circuit No Activity Detected (Bank 1/Sensor 1)                         |
| <b><u>P0137</u></b> | O2 Sensor Circuit Low Voltage (Bank 1/Sensor 2)                                  |
| <b><u>P0138</u></b> | O2 Sensor Circuit High Voltage (Bank 1/Sensor 2)                                 |
| <b><u>P0139</u></b> | O2 Sensor Circuit Slow Response (Bank 1/Sensor 2)                                |
| <b><u>P0140</u></b> | O2 Sensor Circuit No Activity Detected (Bank 1/Sensor 2)                         |
| <b><u>P0151</u></b> | O2 Sensor Circuit Low Voltage (Bank 2/Sensor 1)                                  |
| <b><u>P0152</u></b> | O2 Sensor Circuit High Voltage (Bank 2/Sensor 1)                                 |
| <b><u>P0153</u></b> | O2 Sensor Circuit Slow Response (Bank 2/Sensor 1)                                |
| <b><u>P0154</u></b> | O2 Sensor Circuit No Activity Detected (Bank 2/Sensor 1)                         |
| <b><u>P0157</u></b> | O2 Sensor Circuit Low Voltage (Bank 2/Sensor 2)                                  |
| <b><u>P0158</u></b> | O2 Sensor Circuit High Voltage (Bank 2/Sensor 2)                                 |
| <b><u>P0159</u></b> | O2 Sensor Circuit Slow Response (Bank 2/Sensor 2)                                |
| <b><u>P0160</u></b> | O2 Sensor Circuit No Activity Detected (Bank 2/Sensor 2)                         |
| <b><u>P0171</u></b> | System Too Lean (Bank 1)                                                         |
| <b><u>P0172</u></b> | System Too Rich (Bank 1)                                                         |
| <b><u>P0174</u></b> | System Too Lean (Bank 2)                                                         |
| <b><u>P0175</u></b> | System Too Rich (Bank 2)                                                         |
| <b><u>P0196</u></b> | Engine oil Temperature Sensor-Range/Performance                                  |
| <b><u>P0197</u></b> | Engine Oil Temperature Sensor Low Input                                          |
| <b><u>P0198</u></b> | Engine Oil Temperature Sensor High Input                                         |
| <b><u>P0217</u></b> | Engine Coolant Over Temperature Condition                                        |
| <b><u>P0222</u></b> | Throttle/Pedal Position Sensor/Switch 'B' Circuit Low Input                      |
| <b><u>P0223</u></b> | Throttle/Pedal Position Sensor/Switch 'B' Circuit High Input                     |
| <b><u>P0230</u></b> | Fuel Pump Primary Circuit                                                        |
| <b><u>P0261</u></b> | Cylinder 1 Injector Circuit Low                                                  |
| <b><u>P0262</u></b> | Cylinder 1 Injector Circuit High                                                 |

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|                     |                                                                    |
|---------------------|--------------------------------------------------------------------|
| <b><u>P0264</u></b> | Cylinder 2 Injector Circuit Low                                    |
| <b><u>P0265</u></b> | Cylinder 2 Injector Circuit High                                   |
| <b><u>P0267</u></b> | Cylinder 3 Injector Circuit Low                                    |
| <b><u>P0268</u></b> | Cylinder 3 Injector Circuit High                                   |
| <b><u>P0270</u></b> | Cylinder 4 Injector Circuit Low                                    |
| <b><u>P0271</u></b> | Cylinder 4 Injector Circuit High                                   |
| <b><u>P0273</u></b> | Cylinder 5 Injector Circuit Low                                    |
| <b><u>P0274</u></b> | Cylinder 5 Injector Circuit High                                   |
| <b><u>P0276</u></b> | Cylinder 6 Injector Circuit Low                                    |
| <b><u>P0277</u></b> | Cylinder 6 Injector Circuit High                                   |
| <b><u>P0300</u></b> | Random/Multiple Cylinder Misfire Detected                          |
| <b><u>P0301</u></b> | Cylinder 1-Misfire Detected                                        |
| <b><u>P0302</u></b> | Cylinder 2-Misfire Detected                                        |
| <b><u>P0303</u></b> | Cylinder 3-Misfire Detected                                        |
| <b><u>P0304</u></b> | Cylinder 4-Misfire detected                                        |
| <b><u>P0305</u></b> | Cylinder 5-Misfire detected                                        |
| <b><u>P0306</u></b> | Cylinder 6-Misfire Detected                                        |
| <b><u>P0315</u></b> | Crankshaft Position system Variation Not Learned                   |
| <b><u>P0325</u></b> | Knock Sensor 1 Circuit (Bank 1 or Single Sensor)                   |
| <b><u>P0326</u></b> | Knock Sensor 1 Circuit Range/Performance (Bank 1 or Single Sensor) |
| <b><u>P0330</u></b> | Knock Sensor 2 Circuit (Bank 2)                                    |
| <b><u>P0331</u></b> | Knock Sensor 2 Circuit Range/Performance (Bank 2)                  |
| <b><u>P0335</u></b> | Crankshaft Position Sensor 'A' Circuit                             |
| <b><u>P0336</u></b> | Crankshaft Position Sensor 'A' Circuit Range/Performance           |
| <b><u>P0340</u></b> | Camshaft Position Sensor 'A' Circuit (Single Sensor)               |
| <b><u>P0341</u></b> | Camshaft Position Sensor A Circuit Range/Performance (Bank 1)      |
| <b><u>P0346</u></b> | Camshaft Position Sensor A Circuit Range/Performance (Bank 2)      |
| <b><u>P0351</u></b> | Ignition Coil 'A' Primary/Secondary Circuit                        |
| <b><u>P0352</u></b> | Ignition coil 'B' Primary/Secondary Circuit                        |
| <b><u>P0353</u></b> | Ignition Coil 'C' Primary/Secondary Circuit                        |
| <b><u>P0354</u></b> | Ignition Coil 'D' Primary/Secondary Circuit                        |
| <b><u>P0355</u></b> | Ignition Coil 'E' Primary/Secondary Circuit                        |
| <b><u>P0356</u></b> | Ignition Coil 'F' Primary/Secondary Circuit                        |
| <b><u>P0366</u></b> | Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 1)    |
| <b><u>P0391</u></b> | Camshaft Position Sensor 'B' Circuit                               |

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|              | Range/Performance (Bank 2)                                      |
|--------------|-----------------------------------------------------------------|
| <u>P0420</u> | Catalyst System Efficiency Below Threshold (Bank 1)             |
| <u>P0430</u> | Catalyst System Efficiency Below Threshold (Bank 2)             |
| <u>P0441</u> | Evaporative Emission System Incorrect Purge Flow                |
| <u>P0442</u> | Evaporative Emission System-Leak Detected (Small Leak)          |
| <u>P0444</u> | Evaporative Emission System-Purge Control Valve Circuit Open    |
| <u>P0445</u> | Evaporative Emission System-Purge Control Valve Circuit Shorted |
| <u>P0447</u> | Evaporative Emission System-Vent Control Circuit Open           |
| <u>P0448</u> | Evaporative Emission system-Vent Control Circuit Shorted        |
| <u>P0451</u> | Evaporative Emission System-Pressure Sensor Range/Performance   |
| <u>P0452</u> | Evaporative Emission System-Pressure Sensor Low Input           |
| <u>P0453</u> | Evaporative Emission system-Pressure Sensor High Input          |
| <u>P0454</u> | Evaporative Emission System-Pressure Sensor Intermittent        |
| <u>P0455</u> | Evaporative Emission System-Leak detected (Large leak)          |
| <u>P0456</u> | Evaporative Emission System-Leak detected (very small leak)     |
| <u>P0461</u> | Fuel Level Sensor 'A' Circuit Range/Performance                 |
| <u>P0462</u> | Fuel Level Sensor 'A' Circuit Low Input                         |
| <u>P0463</u> | Fuel Level Sensor 'A' Circuit High Input                        |
| <u>P0464</u> | Fuel Level Sensor 'A' Circuit Intermittent                      |
| <u>P0480</u> | Fan 1 Control Circuit                                           |
| <u>P0501</u> | Vehicle Speed Sensor 'A' Range/Performance                      |
| <u>P0504</u> | Brake Switch 'A'/'B' Correlation                                |
| <u>P0506</u> | Idle Air Control System-RPM Lower than Expected                 |
| <u>P0507</u> | Idle Air Control System-RPM Higher than Expected                |
| <u>P050B</u> | Cold Start Ignition Timing Performance                          |
| <u>P0532</u> | A/C Refrigerant Pressure Sensor 'A' Circuit Low Input           |
| <u>P0533</u> | A/C Refrigerant Pressure Sensor 'A' Circuit High Input          |
| <u>P0562</u> | System Voltage Low                                              |

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|                     |                                                             |
|---------------------|-------------------------------------------------------------|
| <b><u>P0563</u></b> | System Voltage High                                         |
| <b><u>P0564</u></b> | Cruise Control Multi-Function Input A Circuit               |
| <b><u>P0565</u></b> | Cruise Control On Signal                                    |
| <b><u>P0566</u></b> | Cruise Control Off Signal                                   |
| <b><u>P0567</u></b> | Cruise Control Resume Signal                                |
| <b><u>P0568</u></b> | Cruise Control Set Signal                                   |
| <b><u>P0571</u></b> | Brake Switch 'A' Circuit                                    |
| <b><u>P0601</u></b> | Internal Control Module Memory Check Sum Error              |
| <b><u>P0602</u></b> | Control Module Programming Error                            |
| <b><u>P0604</u></b> | Internal Control Module Random Access Memory (RAM) Error    |
| <b><u>P0606</u></b> | ECM/PCM Processor                                           |
| <b><u>P061B</u></b> | Internal Control Module Torque Calculation Performance      |
| <b><u>P0630</u></b> | VIN Not Programmed or Incompatible-ECM/PCM                  |
| <b><u>P0638</u></b> | Throttle Actuator Control Range/Performance (Bank 1)        |
| <b><u>P0641</u></b> | Sensor Reference Voltage 'A' Circuit/Open                   |
| <b><u>P0646</u></b> | A/C Clutch Relay Control Circuit Low                        |
| <b><u>P0647</u></b> | A/C Clutch Relay Control Circuit High                       |
| <b><u>P0650</u></b> | Malfunction Indicator Lamp (MIL) Control Circuit            |
| <b><u>P0660</u></b> | Intake Manifold Tuning Valve Control Circuit/Open (Bank 1)  |
| <b><u>P0685</u></b> | ECM/PCM Power Relay Control Circuit/Open                    |
| <b><u>P0700</u></b> | Transmission Control System (MIL Request)                   |
| <b><u>P1106</u></b> | Manifold Absolute Pressure Sensor Circuit Intermittent high |
| <b><u>P1107</u></b> | Manifold Absolute Pressure Sensor Circuit Intermittent low  |
| <b><u>P1111</u></b> | Intake Air Temperature Sensor Circuit Intermittent high     |
| <b><u>P1112</u></b> | Intake Air Temperature Sensor Circuit Intermittent low      |
| <b><u>P1114</u></b> | Engine Coolant Temperature Sensor Circuit Intermittent low  |
| <b><u>P1115</u></b> | Engine Coolant Temperature Sensor Circuit Intermittent high |
| <b><u>P1295</u></b> | Throttle Actuator Control System - Power Management         |
| <b><u>P1523</u></b> | Throttle Actuator Control System - Throttle Valve Stuck     |
| <b><u>P1610</u></b> | Non-Immobilizer-EMS Connected to an                         |

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|                     | Immobilizer                                                   |
|---------------------|---------------------------------------------------------------|
| <b><u>P161B</u></b> | ECM Torque Calculation Performance                            |
| <b><u>P1676</u></b> | Immobilizer-Smartra Message Error                             |
| <b><u>P1690</u></b> | Immobilizer-Smartra No Response                               |
| <b><u>P1695</u></b> | Immobilizer-EMS Memory Error                                  |
| <b><u>P1696</u></b> | Immobilizer-Authentication Fail                               |
| <b><u>P1699</u></b> | Immobilizer-Twice Overtrial                                   |
| <b><u>P2096</u></b> | Post Catalyst Fuel Trim System too Lean (Bank 1)              |
| <b><u>P2097</u></b> | Post Catalyst Fuel Trim System too Rich (Bank 1)              |
| <b><u>P2098</u></b> | Post Catalyst Fuel Trim System Too Lean (Bank 2)              |
| <b><u>P2099</u></b> | Post Catalyst Fuel Trim System Too Rich (Bank 2)              |
| <b><u>P2104</u></b> | Throttle Actuator Control System - Forced Idle                |
| <b><u>P2105</u></b> | Throttle Actuator Control System-Force Engine Shutdown        |
| <b><u>P2106</u></b> | Throttle Actuator Control System-Force Limited Power          |
| <b><u>P2122</u></b> | Throttle/Pedal Position Sensor/Switch 'D' Circuit Low Input   |
| <b><u>P2123</u></b> | Throttle/Pedal Position Sensor/Switch 'D' Circuit High Input  |
| <b><u>P2127</u></b> | Throttle/Pedal Position Sensor/Switch 'E' Circuit Low Input   |
| <b><u>P2128</u></b> | Throttle/Pedal Position Sensor/Switch 'E' Circuit-High Input  |
| <b><u>P2135</u></b> | Throttle/Pedal Position Sensor/Switch A/B Voltage Correlation |
| <b><u>P2138</u></b> | Throttle/Pedal Position Sensor/Switch D/E Voltage Correlation |
| <b><u>P2173</u></b> | Throttle Actuator Control System-High Air Flow Detected       |
| <b><u>P2187</u></b> | System too Lean at Idle (<--Additive) (Bank 1)                |
| <b><u>P2188</u></b> | System too Rich at Idle (Bank 1)                              |
| <b><u>P2189</u></b> | System too Lean at Idle (- Additive) (Bank 2)                 |
| <b><u>P2190</u></b> | System too Rich at Idle (Bank 2)                              |
| <b><u>P2195</u></b> | O2 Sensor Signal Stuck Lean (Bank 1 Sensor 1)                 |
| <b><u>P2196</u></b> | O2 Sensor Signal Stuck Rich (Bank 1 Sensor 1)                 |
| <b><u>P2197</u></b> | O2 Sensor Signal Stuck Lean (Bank 2 Sensor 1)                 |
| <b><u>P2198</u></b> | O2 Sensor Signal Stuck Rich (Bank 2 Sensor 1)                 |
| <b><u>P2270</u></b> | O2 Sensor Signal Stuck Lean (Bank 1 Sensor 2)                 |
| <b><u>P2271</u></b> | O2 Sensor Signal Stuck Rich (Bank 1 Sensor 2)                 |
| <b><u>P2272</u></b> | O2 Sensor Signal Stuck Lean (Bank 2 Sensor 2)                 |
| <b><u>P2273</u></b> | O2 Sensor Signal Stuck Rich (Bank 2 Sensor 2)                 |

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|                     |                                                       |
|---------------------|-------------------------------------------------------|
| <b><u>P2422</u></b> | Evaporative Emission System Vent Valve Stuck Closed   |
| <b><u>P2507</u></b> | ECM/PCM power Input Signal Low                        |
| <b><u>P2610</u></b> | ECM/PCM-Engine Off Timer Performance                  |
| <b><u>P2A00</u></b> | HO2S Not Ready (Bank 1/Sensor 1)                      |
| <b><u>P2A01</u></b> | HO2S Sensor Circuit Range/Performance (Bank1/Sensor2) |
| <b><u>P2A03</u></b> | HO2S Not Ready (Bank 2/Sensor 1)                      |
| <b><u>P2A04</u></b> | HO2S Sensor Circuit Range/Performance (Bank2/Sensor2) |
| <b><u>U0001</u></b> | High Speed CAN Communication Bus off                  |
| <b><u>U0101</u></b> | Lost Communication With TCM                           |

**ENGINE CONTROL SYSTEM (4.6L) DTCS****ENGINE CONTROL SYSTEM (4.6L) DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>          | <b>Description</b>                                                          |
|---------------------|-----------------------------------------------------------------------------|
| <b><u>P0011</u></b> | 'A' Camshaft Position-Timing Over-Advanced or System Performance (Bank 1)   |
| <b><u>P0014</u></b> | 'B' Camshaft Position - Timing Over-Advanced or System Performance (Bank 1) |
| <b><u>P0016</u></b> | Crankshaft Position-Camshaft Position Correlation (Bank 1 Sensor A)         |
| <b><u>P0017</u></b> | Crankshaft Position - Camshaft Position Correlation (Bank 1 Sensor B)       |
| <b><u>P0018</u></b> | Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor A)       |
| <b><u>P0019</u></b> | Crankshaft Position - Camshaft Position Correlation (Bank 2 Sensor B)       |
| <b><u>P0021</u></b> | 'A' Camshaft Position - Timing Over-Advanced or System Performance (Bank 2) |
| <b><u>P0024</u></b> | 'B' Camshaft Position - Timing Over-Advanced or System Performance (Bank 2) |
| <b><u>P0030</u></b> | HO2S Heater Control Circuit (Bank 1/Sensor 1)                               |
| <b><u>P0031</u></b> | HO2S Heater Control Circuit Low (Bank 1/Sensor 1)                           |
| <b><u>P0032</u></b> | HO2S Heater Control Circuit High (Bank 1/Sensor 1)                          |
| <b><u>P0036</u></b> | HO2S Heater Control Circuit (Bank 1/Sensor 2)                               |
| <b><u>P0037</u></b> | HO2S Heater Control Circuit Low (Bank 1/Sensor 2)                           |
| <b><u>P0038</u></b> | HO2S Heater Control Circuit High (Bank 1/Sensor 2)                          |
| <b><u>P0050</u></b> | HO2S Heater Control Circuit (Bank 2/Sensor 1)                               |
| <b><u>P0051</u></b> | HO2S Heater Control Circuit Low (Bank 2/Sensor 1)                           |
| <b><u>P0052</u></b> | HO2S Heater Control Circuit High (Bank 2/Sensor 1)                          |
| <b><u>P0056</u></b> | HO2S Heater Control Circuit (Bank 2/Sensor 2)                               |

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|---------------------|-------------------------------------------------------------------------------------|
| <b><u>P0057</u></b> | HO2S Heater Control Circuit Low (Bank 2/Sensor 2)                                   |
| <b><u>P0058</u></b> | HO2S Heater Control Circuit High (Bank 2/Sensor 2)                                  |
| <b><u>P0075</u></b> | Intake Valve Control Solenoid Circuit (Bank 2)                                      |
| <b><u>P0076</u></b> | Intake Valve Control Solenoid Circuit-Low (Bank 1)                                  |
| <b><u>P0077</u></b> | Intake Valve Control Solenoid Circuit-High (Bank 1)                                 |
| <b><u>P0078</u></b> | Exhaust Valve Control Solenoid Circuit (Bank 1)                                     |
| <b><u>P0079</u></b> | Exhaust Valve Control Solenoid Circuit Low (Bank 1)                                 |
| <b><u>P0080</u></b> | Exhaust Valve Control Solenoid Circuit High (Bank 1)                                |
| <b><u>P0081</u></b> | Intake Valve Control Solenoid Circuit (Bank 2)                                      |
| <b><u>P0082</u></b> | Intake Valve Control Solenoid Circuit-Low (Bank 2)                                  |
| <b><u>P0083</u></b> | Intake Valve Control Solenoid Circuit-High (Bank 2)                                 |
| <b><u>P0084</u></b> | Exhaust Valve Control Solenoid Circuit (Bank 2)                                     |
| <b><u>P0085</u></b> | Exhaust Valve Control Solenoid Circuit Low (Bank 2)                                 |
| <b><u>P0086</u></b> | Exhaust Valve Control Solenoid Circuit High (Bank 2)                                |
| <b><u>P0101</u></b> | Mass or Volume Air Flow 'A' Circuit Range/Performance                               |
| <b><u>P0102</u></b> | Mass or Volume Air Flow 'A' Circuit Low Input                                       |
| <b><u>P0103</u></b> | Mass or Volume Air Flow 'A' Circuit High Input                                      |
| <b><u>P0111</u></b> | Intake Air Temperature Sensor 1 Circuit Range/Performance                           |
| <b><u>P0112</u></b> | Intake Air Temperature Sensor 1 Circuit Low Input                                   |
| <b><u>P0113</u></b> | Intake Air Temperature Sensor 1 Circuit High Input                                  |
| <b><u>P0116</u></b> | Engine Coolant Temperature Circuit Range/Performance                                |
| <b><u>P0117</u></b> | Engine Coolant Temperature Circuit Low Input                                        |
| <b><u>P0118</u></b> | Engine Coolant Temperature Circuit High Input                                       |
| <b><u>P0119</u></b> | Engine Coolant Temperature Circuit Intermittent                                     |
| <b><u>P0121</u></b> | Throttle/Pedal Position Sensor/Switch 'A' Circuit Range/Performance                 |
| <b><u>P0122</u></b> | Throttle/Pedal Position Sensor/Switch 'A' Circuit Low Input                         |
| <b><u>P0123</u></b> | Throttle/Pedal Position Sensor/Switch 'A' Circuit High Input                        |
| <b><u>P0128</u></b> | Coolant Thermostat (Coolant Temperature below Thermostat<br>Regulating Temperature) |
| <b><u>P0130</u></b> | O2 Sensor Circuit (Bank 1/Sensor 1)                                                 |
| <b><u>P0131</u></b> | O2 Sensor Circuit Low Voltage (Bank 1/Sensor 1)                                     |
| <b><u>P0132</u></b> | O2 Sensor Circuit High Voltage (Bank 1/Sensor 1)                                    |
| <b><u>P0133</u></b> | O2 Sensor Circuit Slow Response (Bank 1/Sensor 1)                                   |
| <b><u>P0134</u></b> | O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 1)                            |
| <b><u>P0136</u></b> | O2 Sensor Circuit (Bank 1/Sensor 2)                                                 |
| <b><u>P0137</u></b> | O2 Sensor Circuit Low Voltage (Bank 1/Sensor 2)                                     |
| <b><u>P0138</u></b> | O2 Sensor Circuit High Voltage (Bank 1/Sensor 2)                                    |
| <b><u>P0139</u></b> | O2 Sensor Circuit Slow Response (Bank 1/Sensor 2)                                   |
| <b><u>P0140</u></b> | O2 Sensor Circuit No Activity Detected (Bank 1/Sensor 2)                            |
| <b><u>P0150</u></b> | O2 Sensor Circuit (Bank 2/Sensor 1)                                                 |
| <b><u>P0151</u></b> | O2 Sensor Circuit Log Voltage (Bank 2/Sensor 1)                                     |

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|                     |                                                                     |
|---------------------|---------------------------------------------------------------------|
| <b><u>P0152</u></b> | O2 Sensor Circuit High Voltage (Bank 2/Sensor 1)                    |
| <b><u>P0153</u></b> | O2 Sensor Circuit Slow Response (Bank 2/Sensor 1)                   |
| <b><u>P0154</u></b> | O2 Sensor Circuit No Activity Detected (Bank 2/Sensor 1)            |
| <b><u>P0156</u></b> | O2 Sensor Circuit (Bank 2/Sensor 2)                                 |
| <b><u>P0157</u></b> | O2 Sensor Circuit Low Voltage (Bank 2/Sensor 2)                     |
| <b><u>P0158</u></b> | O2 Sensor Circuit High Voltage (Bank 2/Sensor 2)                    |
| <b><u>P0159</u></b> | O2 Sensor Circuit Slow Response (Bank 2/Sensor 2)                   |
| <b><u>P0160</u></b> | O2 Sensor Circuit No Activity Detected (Bank 2/Sensor 2)            |
| <b><u>P0201</u></b> | Injector Circuit/Open-Cylinder 1                                    |
| <b><u>P0202</u></b> | Injector Circuit/Open-Cylinder 2                                    |
| <b><u>P0203</u></b> | Injector Circuit/Open - Cylinder 3                                  |
| <b><u>P0204</u></b> | Injector Circuit/Open-Cylinder 4                                    |
| <b><u>P0205</u></b> | Injector Circuit/Open-Cylinder 5                                    |
| <b><u>P0206</u></b> | Injector Circuit/Open-Cylinder 6                                    |
| <b><u>P0207</u></b> | Injector Circuit/Open - Cylinder 7                                  |
| <b><u>P0208</u></b> | Injector Circuit/Open - Cylinder 8                                  |
| <b><u>P0219</u></b> | Engine Overspeed Condition                                          |
| <b><u>P0221</u></b> | Throttle/Pedal Position Sensor/Switch 'B' Circuit Range/Performance |
| <b><u>P0222</u></b> | Throttle/Pedal Position Sensor/Switch 'B' Circuit Low Input         |
| <b><u>P0223</u></b> | Throttle/Pedal Position Sensor/Switch 'B' Circuit High Input        |
| <b><u>P0230</u></b> | Fuel Pump Primary Circuit                                           |
| <b><u>P0261</u></b> | Cylinder 1 Injector Circuit Low                                     |
| <b><u>P0262</u></b> | Cylinder 1 Injector Circuit High                                    |
| <b><u>P0264</u></b> | Cylinder 2 Injector Circuit Low                                     |
| <b><u>P0265</u></b> | Cylinder 2 Injector Circuit High                                    |
| <b><u>P0267</u></b> | Cylinder 3 Injector Circuit Low                                     |
| <b><u>P0268</u></b> | Cylinder 3 Injector Circuit High                                    |
| <b><u>P0270</u></b> | Cylinder 4 Injector Circuit Low                                     |
| <b><u>P0271</u></b> | Cylinder 4 Injector Circuit High                                    |
| <b><u>P0273</u></b> | Cylinder 5 Injector Circuit Low                                     |
| <b><u>P0274</u></b> | Cylinder 5 Injector Circuit High                                    |
| <b><u>P0276</u></b> | Cylinder 6 Injector Circuit Low                                     |
| <b><u>P0277</u></b> | Cylinder 6 Injector Circuit High                                    |
| <b><u>P0279</u></b> | Cylinder 7 Injector Circuit Low                                     |
| <b><u>P0280</u></b> | Cylinder 7 Injector Circuit High                                    |
| <b><u>P0282</u></b> | Cylinder 8 Injector Circuit Low                                     |
| <b><u>P0283</u></b> | Cylinder 8 Injector Circuit High                                    |
| <b><u>P0300</u></b> | Random/Multiple Cylinder Misfire Detected                           |
| <b><u>P0301</u></b> | Cylinder 1-Misfire detected                                         |
| <b><u>P0302</u></b> | Cylinder 2-Misfire detected                                         |
| <b><u>P0303</u></b> | Cylinder 3-Misfire detected                                         |

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|              |                                                                    |
|--------------|--------------------------------------------------------------------|
|              | Cylinder 4-Misfire detected                                        |
| <u>P0305</u> | Cylinder 5-Misfire detected                                        |
| <u>P0306</u> | Cylinder 6-Misfire detected                                        |
| <u>P0307</u> | Cylinder 7 Misfire Detected                                        |
| <u>P0308</u> | Cylinder 8 Misfire Detected                                        |
| <u>P0327</u> | Knock Sensor 1 Circuit Low (Bank 1 or Single Sensor)               |
| <u>P0328</u> | Knock Sensor 1 Circuit High (Bank 1 or Single Sensor)              |
| <u>P0332</u> | Knock Sensor 2 Circuit Low (Bank 1)                                |
| <u>P0333</u> | Knock Sensor 2 Circuit High (Bank 2)                               |
| <u>P032D</u> | Max error of DFP_KS3: Internal failure path number: knock sensor 3 |
| <u>P032C</u> | Min error of DFP_KS3: Internal failure path number: knock sensor 3 |
| <u>P033D</u> | max error of DFP_KS4: internal failure path number: knock sensor 4 |
| <u>P033C</u> | Min error of DFP_KS4: internal failure path number: knock sensor 4 |
| <u>P0335</u> | Crankshaft Position Sensor 'A' Circuit                             |
| <u>P0336</u> | Crankshaft Position Sensor 'A' Circuit Range/Performance           |
| <u>P0340</u> | Camshaft Position Sensor 'A' Circuit (Single Sensor)               |
| <u>P0341</u> | Camshaft Position Sensor A Circuit Range/Performance (Bank 1)      |
| <u>P0345</u> | Camshaft Position Sensor 'A' Circuit (Bank 2)                      |
| <u>P0346</u> | Camshaft Position Sensor A Circuit range/Performance (Bank 2)      |
| <u>P0365</u> | Camshaft Position Sensor B Circuit Malfunction (Bank 1)            |
| <u>P0366</u> | Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 1)    |
| <u>P0390</u> | Camshaft Position Sensor 'B' Circuit (Bank 2)                      |
| <u>P0391</u> | Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 2)    |
| <u>P0420</u> | Catalyst System Efficiency below Threshold (Bank 1)                |
| <u>P0430</u> | Catalyst System Efficiency Below Threshold (Bank 2)                |
| <u>P0442</u> | Evaporative Emission System-Leak detected (small leak)             |
| <u>P0444</u> | Evaporative Emission System-Purge Control Valve Circuit Open       |
| <u>P0447</u> | Evaporative Emission System-Vent Control Circuit Open              |
| <u>P0448</u> | Evaporative Emission System - Vent Control Circuit Shorted         |
| <u>P0449</u> | Evaporative Emission System-Vent Valve/Solenoid Circuit            |
| <u>P0450</u> | Evaporative Emission System Pressure Sensor/Switch                 |
| <u>P0451</u> | Evaporative Emission System-Pressure Sensor Range/Performance      |
| <u>P0452</u> | Evaporative Emission System-Pressure Sensor Low Input              |
| <u>P0453</u> | Evaporative Emission System-Pressure Sensor High Input             |
| <u>P0455</u> | Evaporative Emission System-Leak detected (Large leak)             |
| <u>P0456</u> | Evaporative Emission System-Leak detected (very small leak)        |
| <u>P0458</u> | Evaporative Emission System Purge Control Valve Circuit Low        |
| <u>P0459</u> | Evaporative Emission System Purge Control Valve Circuit High       |
| <u>P0461</u> | Fuel Level Sensor 'A' Circuit Range/Performance                    |
| <u>P0462</u> | Fuel Level Sensor 'A' Circuit Low Input                            |
| <u>P0463</u> | Fuel Level Sensor 'A' Circuit High Input                           |

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|              |                                                             |
|--------------|-------------------------------------------------------------|
|              | Evaporative Emission System High Purge Flow                 |
| <u>P0497</u> | Evaporative Emission System Low Purge Flow                  |
| <u>P0501</u> | Vehicle Speed Sensor 'A' Range/Performance                  |
| <u>P0502</u> | Vehicle Speed Sensor 'A' Circuit Low Input                  |
| <u>P0503</u> | Vehicle Speed Sensor A Intermittent/Erratic/High            |
| <u>P0504</u> | Brake Switch 'A'/'B' Correlation                            |
| <u>P0506</u> | Idle Air Control System-RPM Lower than Expected             |
| <u>P0507</u> | Idle Air Control System-RPM Higher than Expected            |
| <u>P0532</u> | A/C Refrigerant Pressure Sensor 'A' Circuit Low Input       |
| <u>P0533</u> | A/C Refrigerant Pressure Sensor 'A' Circuit High Input      |
| <u>P0552</u> | Power Steering Pressure Sensor/Switch Circuit Low input     |
| <u>P0553</u> | Power Steering Pressure Sensor/Switch Circuit High input    |
| <u>P0562</u> | System Voltage Low                                          |
| <u>P0563</u> | System Voltage High                                         |
| <u>P0564</u> | Cruise Control Multi-Function Input A Circuit               |
| <u>P0604</u> | Internal Control Module Random Access Memory (RAM) Error    |
| <u>P0605</u> | Internal Control Module Read Only Memory (ROM) Error        |
| <u>P0606</u> | ECM/PCM Processor                                           |
| <u>P0625</u> | Generator Field/F Terminal Circuit Low                      |
| <u>P0626</u> | Generator Field/F Terminal circuit High                     |
| <u>P0630</u> | VIN Not Programmed or Incompatible-ECM/PCM                  |
| <u>P0638</u> | Throttle Actuator Control Range/Performance (Bank 1)        |
| <u>P0642</u> | Sensor Reference Voltage 'A' Circuit Low                    |
| <u>P0645</u> | A/C Clutch Relay Control Circuit                            |
| <u>P0646</u> | A/C Clutch Relay Control Circuit Low                        |
| <u>P0647</u> | A/C Clutch Relay Control Circuit High                       |
| <u>P0650</u> | Malfunction Indicator Lamp (MIL) Control Circuit            |
| <u>P0652</u> | Sensor Reference Voltage 'B' Circuit Low                    |
| <u>P0660</u> | Intake Manifold Tuning Valve Control Circuit/Open (Bank 1)  |
| <u>P0661</u> | Intake Manifold Tuning Valve Control Circuit Low (Bank 1)   |
| <u>P0662</u> | Intake Manifold Tuning Valve Control Circuit High (Bank 1)  |
| <u>P0698</u> | Sensor Reference Voltage 'C' Circuit Low                    |
| <u>P0700</u> | Transmission Control System (MIL Request)                   |
| <u>P2096</u> | Post Catalyst Fuel Trim System too Lean (Bank 1)            |
| <u>P2097</u> | Post Catalyst Fuel Trim System too Rich (Bank 1)            |
| <u>P2098</u> | Post Catalyst Fuel Trim System Too Lean (Bank 2)            |
| <u>P2099</u> | Post Catalyst Fuel Trim System Too Rich (Bank 2)            |
| <u>P2101</u> | Throttle Actuator Control Motor Circuit Range/Performance   |
| <u>P2106</u> | Throttle Actuator Control System-Force Limited Power        |
| <u>P2118</u> | Throttle Actuator Control Motor Current Range/Performance   |
| <u>P2122</u> | Throttle/Pedal Position Sensor/Switch 'D' Circuit Low Input |

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|              |                                                               |
|--------------|---------------------------------------------------------------|
|              | Throttle/Pedal Position Sensor/Switch 'D' Circuit High Input  |
| <u>P2127</u> | Throttle/Pedal Position Sensor/Switch 'E' Circuit Low Input   |
| <u>P2128</u> | Throttle/Pedal Position Sensor/Switch 'E' Circuit-High Input  |
| <u>P2138</u> | Throttle/Pedal Position Sensor/Switch D/E Voltage Correlation |
| <u>P2187</u> | System too Lean at Idle (<--Additive) (Bank 1)                |
| <u>P2188</u> | System too Rich at Idle (Bank 1)                              |
| <u>P2189</u> | System too Lean at Idle (- Additive) (Bank 2)                 |
| <u>P2190</u> | System too Rich at Idle (Bank 2)                              |
| <u>P2191</u> | System too Lean at Higher Load (Multiple) (Bank 1)            |
| <u>P2192</u> | System too Rich at Higher Load (Bank 1)                       |
| <u>P2193</u> | System Too Lean at Higher Load (<--Multiple) (Bank 2)         |
| <u>P2194</u> | System Too Rich at Higher Load (Bank 2)                       |
| <u>P2610</u> | ECM/PCM-Engine Off Timer Performance                          |
| <u>U0001</u> | High Speed CAN Communication Bus off                          |
| <u>U0101</u> | Lost Communication With TCM                                   |
| <u>U0122</u> | CAN TCS Communication                                         |

**FRONT AREA MODULE DTCS****FRONT AREA MODULE DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>               |
|--------------|----------------------------------|
| <u>B1624</u> | EEPROM Failure                   |
| <u>B1627</u> | EEPROM Corruption                |
| <u>B1646</u> | S/W Rescue Mode                  |
| <u>B2119</u> | Windshield Defog Relay Fail      |
| <u>B2535</u> | Right T/Signal Lamp Short To GND |
| <u>B2537</u> | Right T/Signal Lamp Open         |
| <u>B2539</u> | Left T/Signal Lamp Short To GND  |
| <u>B2541</u> | Left T/Signal Lamp Open          |
| <u>B2543</u> | Right H/Lamp High Short To GND   |
| <u>B2545</u> | Right H/Lamp High Open           |
| <u>B2547</u> | Left H/Lamp High Short To GND    |
| <u>B2549</u> | Left H/Lamp High Open            |
| <u>B2551</u> | Right H/Lamp Low Short To GND    |
| <u>B2553</u> | Right H/Lamp Low Open            |
| <u>B2555</u> | Left H/Lamp Low Short To GND     |
| <u>B2557</u> | Left H/Lamp Low Open             |
| <u>B2559</u> | FR Fog Lamp Short To GND         |
| <u>B2561</u> | FR Fog Lamp Open                 |
| <u>B2563</u> | FL Fog Lamp Short To GND         |
| <u>B2565</u> | FL Fog Lamp Open                 |

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|              |                           |
|--------------|---------------------------|
| <u>B2571</u> | Right P/Lamp Short To GND |
| <u>B2573</u> | Right P/Lamp Open         |
| <u>B2575</u> | Left P/Lamp Short To GND  |
| <u>B2577</u> | Left P/Lamp Open          |

**IMMOBILIZER SYSTEM DTCS****IMMOBILIZER SYSTEM DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>          | <b>Description</b>                              |
|---------------------|-------------------------------------------------|
| <u>P1610</u>        | Non-Immobilizer-EMS connected to an immobilizer |
| <u>P1674</u>        | Transponder status error                        |
| <u>P1675</u>        | Transponder programming error                   |
| <u>P1676</u>        | SMARTRA message error                           |
| <u>P169A</u>        | SMARTRA fault                                   |
| <u>P1690</u>        | SMARTRA no response                             |
| <u>P1691</u>        | Antenna coil error                              |
| <u>P1692</u>        | Immobilizer lamp error                          |
| <u>P1693</u>        | Transponder no response error/Invalid response  |
| <u>P1694</u>        | EMS message error                               |
| <u>P1695</u>        | EMS memory error                                |
| <u>P1696</u>        | Authentication fail                             |
| P1697 (No DTC Test) | HI-SCAN message error                           |
| <u>P1699</u>        | Twice overtrial                                 |

**INTEGRATED MEMORY SYSTEM (IMS) DTCS****INTEGRATED MEMORY SYSTEM (IMS) DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>                      |
|--------------|-----------------------------------------|
| <u>B1954</u> | Slide Motor or Sensor Error             |
| <u>B1955</u> | Recline Motor Or Sensor Error           |
| <u>B1956</u> | Front Height Motor Or Sensor Error      |
| <u>B1957</u> | Right Rear Height Motor Or Sensor Error |

**REAR AREA MODULE DTCS****REAR AREA MODULE DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>           |
|--------------|------------------------------|
| <u>B1624</u> | EEPROM Failure               |
| <u>B1627</u> | EEPROM Corruption            |
| <u>B1646</u> | S/W Rescue Mode              |
| <u>B2115</u> | Rear Defog Relay Fail        |
| <u>B2441</u> | RR Wiper P. POS. Detect Fail |

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|              |                                  |
|--------------|----------------------------------|
| <u>B2535</u> | Right T/Signal Lamp Short To GND |
| <u>B2537</u> | Right T/Signal Lamp Open         |
| <u>B2539</u> | Left T/Signal Lamp Short To GND  |
| <u>B2541</u> | Left T/Signal Lamp Open          |
| <u>B2579</u> | RR Tail Marker Lamp Short To GND |
| <u>B2581</u> | RR Tail Marker Lamp Open         |
| <u>B2583</u> | RL Tail Marker Lamp Short To GND |
| <u>B2585</u> | RL Tail Marker Lamp Open         |
| <u>B2587</u> | Back Up Lamp Short To GND        |
| <u>B2589</u> | Back Up Lamp Open                |
| <u>B2599</u> | RR Blower SW ILLU. Short To GND  |

**SMART KEY SYSTEM DTCS****SMART KEY SYSTEM DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>             |
|--------------|--------------------------------|
| <u>B1602</u> | CAN Error                      |
| <u>B1603</u> | CAN Communication Bus Off      |
| <u>B1625</u> | ECM Communication data failure |
| <u>B1689</u> | CAN time-out PDM               |
| <u>B1971</u> | Parking Position Input Error   |
| <u>B1978</u> | ESCL Failure                   |

**SRS CONTROL MODULE (SRSCM) DTCS****SRS CONTROL MODULE (SRSCM) DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>                                       |
|--------------|----------------------------------------------------------|
| <u>B1101</u> | Battery voltage High                                     |
| <u>B1102</u> | Battery voltage Low                                      |
| <u>B1326</u> | FIS (Front Impact Sensor) -Driver short to Ground        |
| <u>B1327</u> | FIS (Front Impact Sensor) -Driver short to Battery       |
| <u>B1328</u> | FIS (Front Impact Sensor) -Driver defect                 |
| <u>B1329</u> | FIS (Front Impact Sensor) -Driver communication error    |
| <u>B1330</u> | FIS (Front Impact Sensor) -Driver Wrong ID               |
| <u>B1331</u> | FIS (Front Impact Sensor) -Passenger short to Ground     |
| <u>B1332</u> | FIS (Front Impact Sensor) -Passenger short to Battery    |
| <u>B1333</u> | FIS (Front Impact Sensor) -Passenger defect              |
| <u>B1334</u> | FIS (Front Impact Sensor) -Passenger communication error |
| <u>B1335</u> | FIS (Front Impact Sensor) -Passenger Wrong ID            |
| <u>B1346</u> | Driver airbag resistance too High (1st stage)            |
| <u>B1347</u> | Driver airbag resistance too Low (1st stage)             |
|              |                                                          |

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|                     |                                                                               |
|---------------------|-------------------------------------------------------------------------------|
| <b><u>B1348</u></b> | Driver airbag resistance circuit short to Ground (1st stage)                  |
| <b><u>B1349</u></b> | Driver airbag resistance circuit short to Battery (1st stage)                 |
| <b><u>B1352</u></b> | Passenger airbag resistance too High (1st stage)                              |
| <b><u>B1353</u></b> | Passenger airbag resistance too Low (1st stage)                               |
| <b><u>B1354</u></b> | Passenger airbag resistance circuit short to Ground (1st stage)               |
| <b><u>B1355</u></b> | Passenger airbag resistance circuit short to Battery (1st stage)              |
| <b><u>B1361</u></b> | Pretensioner front-Driver resistance too High                                 |
| <b><u>B1362</u></b> | Pretensioner front-Driver resistance too Low                                  |
| <b><u>B1363</u></b> | Pretensioner front-Driver resistance circuit short to Ground                  |
| <b><u>B1364</u></b> | Pretensioner front-Driver resistance circuit short to Battery                 |
| <b><u>B1367</u></b> | Pretensioner front-Passenger resistance too High                              |
| <b><u>B1368</u></b> | Pretensioner front-Passenger resistance too Low                               |
| <b><u>B1369</u></b> | Pretensioner front-Passenger resistance circuit short to Ground               |
| <b><u>B1370</u></b> | Pretensioner front-Passenger resistance circuit short to Battery              |
| <b><u>B1378</u></b> | Side airbag front-Driver resistance too High                                  |
| <b><u>B1379</u></b> | Side airbag front-Driver resistance too Low                                   |
| <b><u>B1380</u></b> | Side airbag front-Driver resistance circuit short to Ground                   |
| <b><u>B1381</u></b> | Side airbag front-Driver resistance circuit short to Battery                  |
| <b><u>B1382</u></b> | Side airbag front-Passenger resistance too High                               |
| <b><u>B1383</u></b> | Side airbag front-Passenger resistance too Low                                |
| <b><u>B1384</u></b> | Side airbag front-Passenger resistance circuit short to Ground                |
| <b><u>B1385</u></b> | Side airbag front-Passenger resistance circuit short to Battery               |
| <b><u>B1395</u></b> | Firing loops interconnection fault                                            |
| <b><u>B1412</u></b> | SIS (Side Impact Sensor) rear-Driver communication error                      |
| <b><u>B1413</u></b> | SIS (Side Impact Sensor) rear-Passenger communication error                   |
| <b><u>B1416</u></b> | SIS (Side Impact Sensor) rear-Driver Wrong ID                                 |
| <b><u>B1417</u></b> | SIS (Side Impact Sensor) rear-Passenger Wrong ID                              |
| <b><u>B1418</u></b> | SIS (Side Impact Sensor) rear-Driver defect                                   |
| <b><u>B1419</u></b> | SIS (Side Impact Sensor) rear-Passenger defect                                |
| <b><u>B1451</u></b> | SIS (Side Impact Sensor) rear-Driver circuit short to Ground                  |
| <b><u>B1452</u></b> | SIS (Side Impact Sensor) rear-Driver circuit short to Battery                 |
| <b><u>B1454</u></b> | SIS (Side Impact Sensor) rear-Passenger circuit short to Ground               |
| <b><u>B1455</u></b> | SIS (Side Impact Sensor) rear-Passenger circuit short to Battery              |
| <b><u>B1473</u></b> | Inflatable curtain airbag front-Driver resistance too High                    |
| <b><u>B1474</u></b> | Inflatable curtain airbag front-Driver resistance too Low                     |
| <b><u>B1475</u></b> | Inflatable curtain airbag front-Driver resistance circuit short to Ground     |
| <b><u>B1476</u></b> | Inflatable curtain airbag front-Driver resistance circuit short to Battery    |
| <b><u>B1477</u></b> | Inflatable curtain airbag front-Passenger resistance too High                 |
| <b><u>B1478</u></b> | Inflatable curtain airbag front-Passenger resistance too Low                  |
| <b><u>B1479</u></b> | Inflatable curtain airbag front-Passenger resistance circuit short to Ground  |
| <b><u>B1480</u></b> | Inflatable curtain airbag front-Passenger resistance circuit short to Battery |

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|                     |                                                                    |
|---------------------|--------------------------------------------------------------------|
|                     | Driver airbag resistance too High (2nd stage)                      |
| <b><u>B1482</u></b> | Driver airbag resistance too Low (2nd stage)                       |
| <b><u>B1483</u></b> | Driver airbag resistance circuit short to Ground (2nd stage)       |
| <b><u>B1484</u></b> | Driver airbag resistance circuit short to Battery (2nd stage)      |
| <b><u>B1485</u></b> | Passenger airbag resistance too High (2nd stage)                   |
| <b><u>B1486</u></b> | Passenger airbag resistance too Low (2nd stage)                    |
| <b><u>B1487</u></b> | Passenger airbag resistance circuit short to Ground (2nd stage)    |
| <b><u>B1488</u></b> | Passenger airbag resistance circuit short to Battery (2nd stage)   |
| <b><u>B1489</u></b> | PODS (Passenger Occupant Detecting System) ECU Defect              |
| <b><u>B1490</u></b> | PODS (Passenger Occupant Detecting System) Sensor (Bladder) Defect |
| <b><u>B1493</u></b> | PODS (Passenger Occupant Detecting System) Communication error     |
| <b><u>B1494</u></b> | PODS (Passenger Occupant Detecting System) Wrong ID                |
| <b><u>B1495</u></b> | BTS (Belt-Tension Sensor) Defect                                   |
| <b><u>B1496</u></b> | PODS (Passenger Occupant Detecting System) Not calibrated          |
| <b><u>B1511</u></b> | Buckle Switch Driver open or short to Battery                      |
| <b><u>B1512</u></b> | Buckle Switch Driver short or short to Ground                      |
| <b><u>B1513</u></b> | Buckle Switch Passenger open or short to Battery                   |
| <b><u>B1514</u></b> | Buckle Switch Passenger short or short to Ground                   |
| <b><u>B1515</u></b> | Buckle Switch Driver defect                                        |
| <b><u>B1516</u></b> | Buckle Switch Passenger defect                                     |
| <b><u>B1517</u></b> | Buckle Switch Driver instability                                   |
| <b><u>B1518</u></b> | Buckle Switch Passenger instability                                |
| <b><u>B1620</u></b> | Internal fault - Replace SRSCM                                     |
| <b><u>B1649</u></b> | Crash recorded - Rollover event (Replace ECU)                      |
| <b><u>B1650</u></b> | Crash recorded in 1st stage only (Frontal - Replace SRSCM)         |
| <b><u>B1651</u></b> | Crash recorded in front-Driver side airbag (Replace SRSCM)         |
| <b><u>B1652</u></b> | Crash recorded in front-Passenger side airbag (Replace SRSCM)      |
| <b><u>B1657</u></b> | Crash recorded in Belt pretensioner only                           |
| <b><u>B1658</u></b> | Belt pretensioner 6 times deployment                               |
| <b><u>B1670</u></b> | Crash recorded in full stage (Frontal - Replace SRSCM)             |
| <b><u>B1711</u></b> | Knee airbag -Driver resistance too High                            |
| <b><u>B1712</u></b> | Knee airbag -Driver resistance too Low                             |
| <b><u>B1713</u></b> | Knee airbag -Driver resistance circuit short to Ground             |
| <b><u>B1714</u></b> | Knee airbag -Driver resistance circuit short to Battery            |
| <b><u>B1738</u></b> | P-SIS front -Driver Wrong ID                                       |
| <b><u>B1739</u></b> | P-SIS front -Driver Defect                                         |
| <b><u>B1740</u></b> | P-SIS front -Driver Short to Ground                                |
| <b><u>B1741</u></b> | P-SIS front -Driver Short to Battery                               |
| <b><u>B1742</u></b> | P-SIS front -Driver Communication Error                            |
| <b><u>B1744</u></b> | P-SIS front - Passenger Wrong ID                                   |
| <b><u>B1745</u></b> | P-SIS front - Passenger Defect                                     |

**2009 Kia Borrego EX**

2009-10 DTC INDEX Borrego + 2010 Canadian

|              |                                             |
|--------------|---------------------------------------------|
|              | P-SIS front - Passenger Short to Ground     |
| <u>B1747</u> | P-SIS front - Passenger Short to Battery    |
| <u>B1748</u> | P-SIS front - Passenger Communication Error |
| <u>B2500</u> | Warning lamp Failure                        |
| <u>B2502</u> | Passenger airbag Telltale lamp Failure      |

**STEERING COLUMN MODULE DTCS****STEERING COLUMN MODULE DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>              |
|--------------|---------------------------------|
| <u>B1959</u> | Tilt Position Sensor Error      |
| <u>B1960</u> | Telescope Motor or Sensor Error |

**TIRE PRESSURE MONITORING SYSTEM DTCS****TIRE PRESSURE MONITORING SYSTEM DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| <b>DTC</b>   | <b>Description</b>                               |
|--------------|--------------------------------------------------|
| <u>C1121</u> | Sensor 1, Front Left Sensor Battery Voltage Low  |
| <u>C1122</u> | Sensor 2, Front Right Sensor Battery Voltage Low |
| <u>C1123</u> | Sensor 3, Rear Left Sensor Battery Voltage Low   |
| <u>C1124</u> | Sensor 4, Rear Right Sensor Battery Voltage Low  |
| <u>C1126</u> | TPMS ECU Battery Voltage Low                     |
| <u>C1127</u> | TPMS ECUBattery Voltage High                     |
| <u>C1212</u> | First Speed Input Fault                          |
| <u>C1240</u> | Second Speed Input Fault                         |
| <u>C1300</u> | LF/RF External Interference Failure              |
| <u>C1306</u> | RF Internal Interference Failure                 |
| <u>C1312</u> | Front Left Sensor RF channel Failure             |
| <u>C1313</u> | Front Right Sensor RF channel Failure            |
| <u>C1314</u> | Rear Left Sensor RF channel Failure              |
| <u>C1315</u> | Rear Right Sensor RF channel Failure             |
| <u>C1322</u> | Front left Sensor Over Temperature               |
| <u>C1323</u> | Front Right Sensor Over Temperature              |
| <u>C1324</u> | Rear left Sensor Over Temperature                |
| <u>C1325</u> | Rear Right Sensor Over Temperature               |
| <u>C1660</u> | Receiver Radio Frequency Circuit Failure         |
| <u>C1661</u> | Receiver EEPROM Failure                          |
| <u>C1668</u> | Internal failure detection                       |
| <u>C2510</u> | TREAD LAMP open/short circuit                    |