DIAGNOSIS BY SYMPTOM

Condition	Possible Causes	Action
Engine does not start in Park and/or Neutral.	• Gearshift lever and cable out of adjustment. • Transmission Range (TR) switch does not operate. • TR switch not correctly aligned with the transaxle.	• Confirm gear selector or cable adjustment and operation. • Adjust the TR switch.
Engine starts in gearshift lever positions other than Park or Neutral.	• Gearshift lever or cable damaged or out of adjustment. • TR switch damaged or out of adjustment.	• Check gearshift lever or cable adjustment and operation. • Confirm TR switch adjustment and operation.
Vehicle moves in Park or transaxle stays in Park when shifted to another gear.	• Gearshift lever and cable out of adjustment. • Parking pawl damaged.	• Check the gearshift lever and cable adjustments and operation. • Inspect the parking pawl. Repair or replace as necessary.
Vehicle moves in Neutral.	• Gearshift lever and cable out of adjustment. • Torque converter damaged. • Forward/direct clutch damaged.	• Check the gearshift lever and cable adjustment and operation. • Inspect the torque converter. • Inspect the forward/direct clutch. Repair or replace as necessary.
Vehicle does not move in any forward gear position or reverse.	• Shift cable damaged. • Automatic transmission fluid level. • Oil pump broken or damaged seals. • Torque converter damaged.	• Inspect the shift cable. Repair or replace as necessary. • Check the fluid level and fill as necessary. • Inspect the oil pump. Repair or replace as necessary. • Inspect the torque converter. Replace as necessary.
Vehicle does not move in any forward gear position, reverse is OK.	• ATF level. • Solenoid valves for shifting. • Forward/direct clutch worn or damaged. • One–way clutch worn or damaged. • Oil flow to forward/direct clutch blocked.	• Check the fluid level and fill as necessary. • Inspect the solenoid valves. Replace as necessary. • Inspect the one–way clutch. Replace as necessary. • Inspect the clutch. Replace as necessary. • Perform clutch operation test.
Vehicle does not move in reverse, forward gear positions OK.	• Low/reverse clutch worn or damaged.	• Inspect the low/reverse clutch. Check the clutch pack clearance.
Noise in Park or Neutral, does not stop in Drive	• Loose flywheel–to–converter nuts. • Oil pump worn. • Torque converter failure.	• Tighten nuts to specifications. • Inspect the oil pump. Replace as necessary. • Inspect the torque converter. Replace as necessary.

Condition	Possible Causes	Action
Noise in all gears, changes with acceleration to deceleration.	• Automatic transmission fluid level. • Front wheel driveshaft and joint. • Differential gear set worn.	• Check the fluid level and fill as necessary. • Inspect the driveshaft and joint. Replace as necessary. • Inspect the differential gear set. Repair or replace as necessary.
Harsh shifts in all gears	• Engine mounts loose. • Front wheel driveshaft and joint. • Line pressure incorrect. • Main control valve body. • Sticking accumulator piston.	• Replace/repair as necessary. • Replace/repair as necessary. • Perform line pressure test. • Inspect valve body. Repair or replace as necessary. • Inspect accumulator piston.
Soft shifts in all gears.	• ATF level. • Line pressure incorrect. • Sticking accumulator piston. • Main control valve body. • Oil pump worn. • Internal fluid leak. • Primary regulator valve failure.	• Check the fluid level and fill as necessary. • Perform line pressure test. • Inspect accumulator piston. Repair or replace as necessary. • Inspect valve body. Repair or replace as necessary. • Inspect the oil pump. Repair or replace as necessary. • Inspect the transmission. • Inspect the primary regulator valve.
Erratic shifting or incorrect shifting points.	• ATF level and quality. • Throttle Position (TP) sensor of range. • Line pressure. • Solenoid valves. • Clutches slipping.	• Check the fluid level and condition and fill as necessary. • Check the TP sensor signal. Replace as necessary. • Perform line pressure test. • Inspect the solenoid valves. • Inspect the clutches.
Improper torque converter lockup	• Throttle position (TP) sensor out of range. • Solenoid valves.	• Check the TP sensor signal. • Inspect the solenoid valves. Replace as required. • Inspect the torque converter. Replace as necessary.
Skipping Gears.	• Transmission fluid temperature (TFT) sensor. • Main control valve body. • Solenoid valves.	• Inspect TFT sensor. Replace as necessary. • Inspect the valve body. Replace as necessary. • Inspect the solenoid valves. Replace as necessary.
Transaxle overheating.	• ATF level. • Restriction in fluid cooler lines. • Worn clutches.	• Check fluid level and fill as necessary. • Repair or replace the cooler lines. • Inspect the clutches.

Condition	Possible Causes	Action
Engine stalls when put in gear.	• Main control valve body. • Solenoid valves. • Torque converter. • Oil pump.	• Inspect the clutches. • Inspect the main control valve body. • Inspect the solenoid valves. • Inspect the torque converter. Replace as necessary. • Inspect the oil pump. Repair or replace as necessary.
No kickdown	• Main control valve body.	• Inspect the main control body.
Poor fuel economy.	• Linear solenoid valve.	• Inspect the liner solenoid valve. Replace as necessary.
Surges while cruising.	• Linear solenoid valve. • Main control valve body.	• Inspect the linear solenoid valve. Replace as necessary. • Inspect the main control valve body. Repair or replace as necessary.
No 1– 2 upshift.	• Solenoid valve. • Main control valve body. • One–way clutch.	• Inspect the main control valve body. Repair or replace as necessary. • Inspect the solenoid valves. • Inspect the one–way clutch. Replace as necessary.
No 2– 3 upshift	• Solenoid valve. • Main control valve body. • One–way clutch.	• Inspect the main control valve body. Repair or replace as necessary. • Inspect the solenoid valves. Replace as necessary. • Inspect the one–way clutch. Replace as necessary.
No 3– 4 upshift	• Solenoid valve. • Main control valve body. • TFT sensor.	• Inspect the main control valve body. Repair or replace as necessary. • Inspect the solenoid valves. Replace as necessary. • Inspect the TFT sensor. Replace as necessary.
No 4– 3 downshift	• Solenoid valve. • Main control valve body. • One–way clutch.	• Inspect the main control valve body. Repair or replace as necessary. • Inspect the solenoid valves. Replace as necessary. • Inspect the one–way clutch.

Condition	Possible Causes	Action
No 3– 2 downshift	• Solenoid valve. • Main control valve body. • Coast clutch.	• Inspect the main control valve body. Repair or replace as necessary. • Inspect the solenoid valves. Replace as necessary. • Inspect the coast clutch.
No 2– 1 downshift.	• Solenoid valve. • Main control valve body.	• Inspect the main control valve body. Repair or replace as necessary. • Inspect the solenoid valves. Replace as necessary.

DIAGNOSTIC TROUBLE CODE CHART

DTC	DESCRIPTION	TYPE	Illuminate MIL
P0604	Internal Control Module Random Access Memory (RAM) Error	B	Yes
P1790	Internal Control Module Random Memory Checksum Error	B	Yes
P0705	Transmission Range Sensor Circuit Malfunction	B	Yes
P0722	Output Speed Sensor Circuit No Signal	B	Yes
P0727	Engine Speed Input Sensor Circuit No Signal	D	No
P0741	TCC System Stuck off	B	Yes
P0742	TCC System Stuck on	B	Yes
P0743	Torque Converter Clutch System (SL) Electrical	B	Yes
P0751	Shift Solenoid A (S1) Performance	B	Yes
P0753	Shift Solenoid A (S1) Electrical	A	Yes
P0756	Shift Solenoid B (S2) Performance	B	Yes
P0758	Shift Solenoid B (S2) Electrical	A	Yes
P0717	Input/Turbine Speed Sensor Circuit No Signal	B	Yes
P0712	Transmission Fluid Temperature Sensor Circuit – Low Input	C2	No*1
P0713	Transmission Fluid Temperature Sensor Circuit – Highr Input	C2	No*1
P0748	Pressure Control Solenoid (STH) Electrical	C1	No*1
P1791	TPS Signal Malfunction	A	Yes
P1701	WT Signal Malfunction	D	No
P1702	Torque Control Signal Malfunction	C1	No*1

*1 : Illuminate Power Lamp on Instrument Cluster

DTC P0604 – INTERNAL TRANSMISSION CONTROL MODULE(TCM) RANDOM ACCESS MEMORY (RAM) ERROR

Conditions for Setting the DTC

- The transmission control module (TCM) cannot carry out the four RAM initialization routines within 20 milliseconds after ignition ON.

Action Taken When the DTC Sets

- The TCM illuminates the malfunction indicator lamp MIL) after two consecutive ignition cycles with a failure reported.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive ignition cycles without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it can carry out the four RAM initialization routines within 20 milliseconds after ignition ON.

DTC P0604 – Internal Transmission Control Module (TCM) Random Access Memory (RAM) Error

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 scan tool. 3. With the engine OFF, turn the ignition switch to the ON position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Cycle the ignition two times. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect Transmission Control Module (TCM) wiring harness and connector for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0604 displayed?		Replace the Transmission Control Module (TCM).	Inspect Transmission Control Module (TCM) wiring harness and connector for signs of an intermittent condition. Repair as necessary.

DTC P0705 – TRANSMISSION RANGE (TR) SENSOR CIRCUIT MALFUNCTION (PRNDL INPUT)

Conditions for Setting the DTC

- The transmission control module (TCM) cannot detect a signal from the Transmission Range (TR) sensor circuit for 50 seconds continuously.
- Vehicle speed is greater than 30 Km/h (mph).
- Engine rpm is greater than 1500.
- No OSS DTC P0722.
- No engine speed input sensor DTC P0727.
- The TCM detects more than two equal signals from the TR sensor circuit for 30 seconds continuously.

Action Taken When the DTC Sets

- The TCM illuminates the malfunction indicator lamp (MIL) after two consecutive trips with a failure reported.
- No TCC lockup control.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects one TR sensor signal for greater than 50 seconds.

DTC P0705 – Transmission Range (TR) Sensor Circuit Malfunction (PRNDL Input)

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 scan tool. 3. With the engine OFF, turn the ignition switch to the ON position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the Transmission Control Module (TCM) connector, Transmission Range (TR) sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0705 displayed?		Go to Step 3.	Inspect the TCM connector, TR sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
3	1. Select Transmission Data Display from the Data Display Menu. 2. Move the shift control lever through all of the gear ranges (P, R, N, D, 3, L) while observing the Range Status. Does the scan tool display the correct gear ranges?		Go to Step 4.	Check the adjustment of the TR sensor. Refer to ”On–Vehicle Service” in this section. If the TR sensor is adjusted properly, replace the TR sensor.

Step	Action	Value(s)	Yes	No
4	1. Turn the ignition OFF. 2. Disconnect the Transmission Range (TR) sensor connector. 3. With the engine OFF, turn the ignition switch to the ON position. 4. Measure the voltage at pin 4 (PNK) of the TR sensor female connector. Is the measurement within the specified value?	12 volts	Go to Step 5.	Check Fuse F14 (10A) for an open. If Fuse is OK, Repair open circuit between Fuse F14 and the TR sensor female connector.
5	Measure the voltage of the TR sensor at the transmission control module (TCM) connector with the shift control lever in the positions shown below. Shift Control TCM Level Position Connector Pin P 10 R 2 N 25 D 24 3 9 L 1 Are the measurements within the specified value?	12 volts	Replace the Transmission Control Module (TCM).	If one or more of measurements are not within specifications, repair the circuit(s) as necessary. If all measurements are not within specifications, replace the transmission range (TR) sensor.

DTC P0712 – TRANSMISSION FLUID TEMPERATURE(TFT) SENSOR CIRCUIT LOW INPUT

Conditions for Setting the DTC

- The transmission control module (TCM) detects that the voltage of the transmission fluid temperature (TFT) sensor signal is less than 50 mV for 5 minutes continuously.

Action Taken When the DTC Sets

- The TCM illuminates the power lamp after two consecutive trips with a failure reported.
- No increase in line pressure at low temperature.
- No auto mode change at high temperature.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the power lamp after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects that the ATF temperature is between 0_C and 150_C for 15 minutes continuously.

DTC P0712 – Transmission Fluid Temperature (TFT) Sensor Circuit Low Input

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the POWER Lamp ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110), transmission fluid temperature (TFT) sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0712 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110), transmission fluid temperature (TFT) sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Select Transmission Data Display from the Data Display Menu. 3. With the TCM sensor (C110) connector disconnected, observe the Transmission Fluid Temperature. Does the scan tool display the specified value?	Less than – 40˚C	Go to Step 4.	Go to Step 6.
4	Jumper pin 3 (GRN/WHT) to pin 9 (GRY/WHT) in the female TCM sensor (C110) connector and observe the Transmission Fluid Temperature. Does the scan tool display the specified value?	Greater than + 175˚C	Go to Step 5.	Go to Step 6.
5	1. Disconnect the transmission fluid temperature TFT) sensor connector. 2. Measure the resistance between pin 4 (ORN) of the male TCM sensor (C110) connector and pin 2 (ORN) of the TFT sensor connector. 3. Measure the resistance between pin 10 (ORN) of the male TCM sensor (C110) connector and pin 1 (ORN) of the TFT sensor connector. Are the measurements within the specified value?	5 ohms or less	Replace the transmission fluid temperature (TFT) sensor.	Repair the circuit(s) as necessary.
6	1. Disconnect the transmission control module TCM) connector. 2. Measure the resistance between pin 3 (GRN/WHT) of the female TCM sensor (C110) connector and ground. 3. Measure the resistance between pin 9 (GRY/WHT) of the female TCM sensor (C110) connector and ground. Are the measurements within the specified value?	5 ohms or less	Repair the circuit(s) as necessary.	Replace the transmission control module (TCM).

DTC P0713 – TRANSMISSION FLUID TEMPERATURE (TFT) SENSOR CIRCUIT HIGH INPUT

Conditions for Setting the DTC

- The transmission control module (TCM) detects the voltage difference of the transmission fluid temperature (TFT) sensor signal is less than 75 mV 15 minutes after ignition ON.

Action Taken When the DTC Sets

- The TCM illuminates the power lamp after two consecutive trips with a failure reported.
- No increase in line pressure at low temperature.
- No auto mode change at high temperature.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the power lamp after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects that the ATF temperature is between 0˚C and 150˚C for 15 minutes continuously.

DTC P0713 – Transmission Fluid Temperature (TFT) Sensor Circuit High Input

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the POWER Lamp ON?		Go to Step 2.	Inspect the transmission control module TCM) connector, transmission control module TCM) sensor connector (C110), transmission fluid temperature TFT) sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0713 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110), transmission fluid temperature (TFT) sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Select Transmission Data Display from the Data Display Menu. 3. With the TCM sensor (C110) connector disconnected, observe the Transmission Fluid Temperature. Does the scan tool display the specified value?	Less than –40˚C	Go to Step 4.	Go to Step 6.
4	Jumper pin 3 (GRN/WHT) to pin 9 (GRY/WHT) in the female TCM sensor (C110) connector and observe the Transmission Fluid Temperature. Does the scan tool display the specified value?	Greater than +175˚C	Go to Step 5.	Go to Step 6.
5	1. Disconnect the transmission fluid temperature (TFT) sensor connector. 2. Measure the resistance between pin 4 (ORN) of the male TCM sensor (C110) connector and pin 2 (ORN) of the TFT sensor connector. 3. Measure the resistance between pin 10 (ORN) of the male TCM sensor (C110) connector and pin 1 (ORN) of the TFT sensor connector. Are the measurements within the specified value?	5 ohms or less	Replace the transmission fluid temperature (TFT) sensor.	Repair the circuit(s) as necessary.
6	1. Disconnect the transmission control module TCM) connector. 2. Measure the resistance between pin 3 (GRN/WHT) of the female TCM sensor (C110) connector and pin 31 (GRN/WHT) of the TCM connector. 3. Measure the resistance between pin 9 (GRY/WHT) of the female TCM sensor (C110) connector and pin 30 (GRY/WHT) of the TCM connector. Are the measurements within the specified value?	5 ohms or less	Replace the transmission control module (TCM).	Repair the circuit(s) as necessary.

DTC P0717 – INPUT SHAFT SPEED (ISS) SENSOR CIRCUIT NO SIGNAL

Conditions for Setting the DTC

- The transmission control module (TCM) cannot detect a pulse from the input shaft speed (ISS) sensor while it detects 6 pulses of the output shaft speed (OSS) sensor signal 500 times continuously.
- Output shaft speed (OSS) sensor signal is greater than 7 Km/h (4 mph) in 1st gear, 13 Km/h (8 mph) in 2nd gear, 18 Km/h (11 mph) in 3rd gear or 26 Km/h (16 mph) in 4th gear.
- 10 seconds after Neutral to Drive shift.
- 2.5 seconds after Neutral to Drive shift and Transmission Fluid Temperature (TFT) is greater than 0˚C.
- ISS sensor signal is greater than 66 Km/h (41 mph) 2.5 seconds after Neutral to Drive shift.
- Engine rpm is 400 or greater.
- No TR sensor DTC P0705.
- No TFT sensor DTC P0712 or P0713.
- No engine speed input DTC P0727.

Action Taken When the DTC Sets

- The TCM illuminates the malfunction indicator lamp (MIL) after two consecutive trips with a failure reported.
- No TCC lockup control.
- No torque converter reduction control.
- No line pressure reduction control.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects that the ISS signal is greater than 10 Km/h (mph) for 30 seconds continuously.

DTC P0717 – Input Shaft Speed (ISS) Sensor Circuit No Signal

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the ON position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0717 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the Transmission Control Module (TCM) connector. 3. Measure the resistance between pin 15 (ORN) and pin 29 (WHT) of the TCM connector. Is the measurement within the specified value?	300–600 ohms	Replace the Transmission Control Module (TCM).	Go to Step 4.
4	1. Disconnect the input shaft speed (ISS) sensor connector. 2. Measure the resistance across the pins of the ISS sensor. Is the measurement within the specified value?	300–600 ohms	Go to Step 5.	Replace the input shaft speed (ISS) sensor.
5	1. Measure the resistance between pin 15 (ORN) of the TCM connector and pin 2 (YEL/BLK) of the ISS sensor connector. 2. Measure the resistance between pin 29 (WHT) of the TCM connector and pin 1 (LT GRN) of the ISS sensor connector. Are the measurements within the specified value?	5 ohms or less	Go to Step 7.	Go to Step 6.
6	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 15 (ORN) of the TCM connector and pin 2 (ORN) of the TCM sensor connector (C110). 3. Measure the resistance between pin 29 (WHT) of the TCM connector and pin 8 (WHT) of the TCM sensor connector (C110). Are the measurements within the specified value?	5 ohms or less	Repair the circuit(s) as necessary between the TCM sensor connector and the ISS connector.	Repair the circuit(s) as necessary between the TCM connector and the TCM sensor connector.
7	1. Measure the resistance between pin 15 (ORN) of the TCM connector and ground. 2. Measure the resistance between pin 29 (WHT) of the TCM connector and ground. Are the measurements within the specified value?	5 ohms or less	Go to Step 8..	Replace the Transmission Control Module (TCM).
8	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Measure the resistance between pin 2 (ORN) of the TCM sensor connector (C110) and ground. 3. Measure the resistance between pin 8 (WHT) of the TCM sensor connector (C110) and ground. Are the measurements within the specified value?	5 ohms or less	Repair the circuit(s) as necessary between the TCM sensor connector and the ISS connector.	Repair the circuit(s) as necessary between the TCM connector and the TCM sensor connector.

DTC P0722 – OUTPUT SHAFT SPEED (OSS) SENSOR CIRCUIT NO SIGNAL

Conditions for Setting the DTC

- The transmission control module (TCM) cannot detect a pulse from the output shaft speed (OSS) sensor while it detects 10 pulses of the input shaft speed (ISS) sensor signal 500 times continuously.
- Input shaft speed (ISS) sensor signal is greater than 4 Km/h (2 mph).
- 10 seconds after Neutral to Drive shift.
- 2.5 seconds after Neutral to Drive shift and ATF temperature is greater than 0˚C.
- OSS sensor signal is greater than 66 Km/h (41 mph) 2.5 seconds after Neutral to Drive shift.
- No TR sensor DTC P0705.
- No TFT sensor DTC P0712 or P0713.

Action Taken When the DTC Sets

- The TCM illuminates the malfunction indicator lamp (MIL) after two consecutive trips with a failure reported.
- The TCM selects ISS signal for vehicle speed.
- No TCC lockup control.
- No torque converter reduction control.
- No line pressure reduction control.

Conditions for Setting the DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects that the OSS signal is greater than 10 Km/h (mph) for 30 seconds continuously.

DTC P0722 – Output Shaft Speed (OSS) Sensor Circuit No Signal

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0722 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the Transmission Control Module (TCM) connector. 3. Measure the resistance between pin 16 (BLU/GRN) and pin 17 (BLU/YEL) of the TCM connector. Is the measurement within the specified value?	300–600 ohms	Replace the Transmission Control Module (TCM).	Go to Step 4.
4	1. Disconnect the Output Shaft Speed (OSS) sensor connector. 2. Measure the resistance across the pins of the OSS sensor. Is the measurement within the specified value?	300–600 ohms	Go to Step 5.	Replace the output shaft speed (OSS) sensor.
5	1. Measure the resistance between pin 16 (BLU/GRN) of the TCM connector and pin 2 (YEL) of the OSS sensor connector. 2. Measure the resistance between pin 17 (BLU/YEL) of the TCM connector and pin 1 (GRY) of the OSS sensor connector. Are the measurements within the specified value?	5 ohms or less	Go to Step 7.	Go to Step 6.
6	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Measure the resistance between pin 16 (BLU/GRN) of the TCM connector and pin 1 (BLU/GRN) of the TCM sensor connector (C110). 3. Measure the resistance between pin 17 (BLU/YEL) of the TCM connector and pin 7 (BLU/YEL) of the TCM sensor connector (C110). Are the measurements within the specified value?	5 ohms or less	Repair the circuit(s) as necessary between the TCM sensor connector and the OSS connector.	Repair the circuit(s) as necessary between the TCM connector and the TCM sensor connector.
7	1. Measure the resistance between pin 16 (BLU/GRN) of the TCM connector and ground. 2. Measure the resistance between pin 17 (BLU/YEL) of the TCM connector and ground. Are the measurements within the specified value?	5 ohms or less	Go to Step 8.	Replace the Transmission Control Module (TCM).
8	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 1 (BLU/GRN) of the TCM sensor connector (C110) and ground. 3. Measure the resistance between pin 7 (BLU/YEL) of the TCM sensor connector (C110) and ground. Are the measurements within the specified value?	5 ohms or less	Repair the circuit(s) as necessary between the TCM sensor connector and the OSS connector.	Repair the circuit(s) as necessary between the TCM connector and the TCM sensor connector.

DTC P0727 – ENGINE SPEED INPUT CIRCUIT NO SIGNAL

Conditions for Setting the DTC

- The Transmission Control Module (TCM) detects no pulse of the engine speed input sensor while detecting the correct TP sensor signal for 10 seconds continuously.
- No TP sensor DTC P1791.

Action Taken When the DTC Sets

- The TCM stores DTC P0727 after two consecutive trips with a failure reported.

Conditions for Setting the DTC

- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects that the engine speed sensor signal is greater than 40 rpm for 20 seconds continuously.

DTC P0727 – Engine Speed Input Circuit No Signal

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. 9. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 10. Request DTC by Status. Is DTC P0727 displayed?		Go to Step 2.	Inspect the transmission control module (TCM) connector, engine control module (ECM) J2 (white) connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Disconnect the Engine Control Module (ECM) white connector. 4. Measure the resistance between pin 32 (WHT) of the TCM connector and pin C10 (WHT) of the ECM J2 (white) connector. Is the measurement within the specified value?	5 ohms or less	Go to Step 3.	Repair the circuit as necessary.
3	1. Measure the resistance between pin 32 (WHT) of the TCM connector and ground. Is the measurement within the specified value?	5 ohms or less	Repair the circuit as necessary.	Go to Step 4.
4	1. Connect the ECM white connector. 2. Start the engine. 3. Measure the voltage at pin 32 (WHT) of the TCM connector. Is the measurement within the specified value?	12 volts	Replace the transmission control module (TCM).	Replace the powertrain control module (PCM).

DTC P0741 – TORQUE CONVERTER CLUTCH (TCC) CIRCUIT STUCK OFF

Conditions for Setting the DTC

- The transaxle is in 4th gear and the transmission control module (TCM) is commanding the torque converter clutch (TCC) solenoid ON.
- The throttle opening is between 8 and 100%.
- The vehicle speed is between 5 km/h (2 mph) and 100 km/h (62 mph).
- 20 seconds have passed since transaxle was placed in D.
- The brake switch is OFF.
- Engine Coolant Temperature (ECT) is normal.
- Transmission Fluid Temperature (TFT) is greater than 20˚C.
- Engine rpm is greater than 400.
- No TR sensor DTC P0705.
- No TFT sensor DTC P0712.
- No TFT sensor DTC P0713.
- No 1SS sensor DTC P0717.
- No OSS sensor DTC P0722.
- No engine revolution DTC P0727.
- No TCC Solenoid DTC P0743.
- No SS1 DTC P0753.
- No SS2 DTC P0758.
- No ECT sensor DTC P1701.

Action Taken When the DTC Sets

- The TCM illuminates the Malfunction Indicator Lamp (MIL) after two consecutive trips with a failure reported.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history 2 seconds after the transaxle is placed in D.

DTC P0741 – Torque Converter Clutch (TCC) Circuit Stuck Off (Unleaded Fuel Vehicles)

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0741 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the Transmission Control Module (TCM) connector. 3. Measure the resistance between pin 22 (GRN) of the TCM connector and ground. Is the measurement within the specified value?	11–15 ohms	Replace the transmission control module (TCM).	Go to Step 4.
4	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 8 (YEL) of the male TCM sensor (C110) connector and ground. Is the measurement within the specified value?	11–15 ohms	Go to Step 5.	Repair the circuit GRN) between the TCM connector and the female TCM sensor (C110) connector.
5	1. Remove the valve body cover. 2. Disconnect the lockup solenoid connector. 3. Measure the resistance between the lockup solenoid and ground. Is the measurement within the specified value?	11–15 ohms	Repair the circuit (YEL) between the male TCM sensor (C110) connector and the lockup solenoid.	Replace the lockup solenoid.

DTC P0742 – TORQUE CONVERTER CLUTCH (TCC) CIRCUIT STUCK ON

Conditions for Setting the DTC

- The transaxle is in 2nd or 3rd gear and the transmission control module (TCM) is not commanding the torque converter clutch (TCC) solenoid ON.
- The throttle opening is between 20 and 100%.
- The vehicle speed is between 5 km/h (2 mph) and 70 km/h (43 mph).
- 20 seconds have passed since transaxle was placed in D.
- The brake switch is OFF.
- Engine Coolant Temperature (ECT) is normal.
- Transmission Fluid Temperature (TFT) is greater than 20˚C.
- Engine rpm is greater than 400.
- No TR sensor DTC P0705.
- No TFT sensor DTC P0712.
- No TFT sensor DTC P0713.
- No 1SS sensor DTC P0717.
- No OSS sensor DTC P0722.
- No engine revolution DTC P0727.
- No TCC Solenoid DTC P0743.
- No SS1 DTC P0753.
- No SS2 DTC P0758.
- No ECT sensor DTC P1701.

Action Taken When the DTC Sets

- The TCM illuminates the Malfunction Indicator Lamp (MIL) after two consecutive trips with a failure reported.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history 2 seconds after the transaxle is placed in D.

DTC P0742 – Torque Converter Clutch (TCC) Circuit Stuck On

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0742 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary. 3

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Measure the resistance between pin 22 (GRN) of the TCM connector and ground. Is the measurement within the specified value?	11–15 ohms	Replace the transmission control module (TCM).	Go to Step 4.
4	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Measure the resistance between pin 8 (YEL) of the male TCM sensor (C110) connector and ground. Is the measurement within the specified value?	11–15 ohms	Go to Step 5.	Repair the circuit (GRN) between the TCM connector and the female TCM sensor (C110) connector.
5	1. Remove the valve body cover. 2. Disconnect the lockup solenoid connector. 3. Measure the resistance between the lockup solenoid and ground. Is the measurement within the specified value?	11–15 ohms	Repair the circuit between the male TCM sensor (C110) connector and the lockup solenoid.	Replace the lockup solenoid.

DTC P0743 – TORQUE CONVERTER CLUTCH (TCC) CIRCUIT ELECTRICAL

Conditions for Setting the DTC

- The transmission control module (TCM) detects an OFF signal from the lockup solenoid monitor for 630 milliseconds when the lockup solenoid driver outputs the ON signal.
- The TCM detects an ON signal from the lockup solenoid monitor for 500 milliseconds when the lockup solenoid driver outputs the OFF signal.

Action Taken When the DTC Sets

- The TCM illuminates the Malfunction Indicator Lamp (MIL) after two consecutive trips with a failure reported.
- No TCC lockup control.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it does not detect a failure for 1 second.

DTC P0743 – Torque Converter Clutch (TCC) Circuit Electrical

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0743 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Measure the resistance between pin 22 (GRN) of the TCM connector and ground. Is the measurement within the specified value?	11–15 ohms	Replace the transmission control module (TCM).	Go to Step 4.

Step	Action	Value(s)	Yes	No
4	1. Remove the valve body cover. 2. Disconnect the lockup solenoid connector. 3. Measure the resistance between the lockup solenoid connector and pin 22 (GRN) of the TCM connector. Measure the resistance between the lockup solenoid connector and ground.	5 ohms or less	Go to Step 6.	Go to Step 5.
5	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Measure the resistance between pin 8 (YEL) of the male TCM sensor (C110) connector and the lockup solenoid connector. Is the measurement within the specified value?	5 ohms or less	Repair the circuit between the TCM connector and the female TCM sensor (C110) connector.	Repair the circuit between the male TCM sensor C110) connector and the lockup solenoid connector.
6	1. Measure the resistance between pin 22 (GRN) of the TCM connector and ground. Is the measurement within the specified value?	5 ohms or less	Go to Step 7.	Replace the lockup solenoid.
7	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 8 (YEL) of the male TCM sensor (C110) connector and ground. Is the measurement within the specified value?	5 ohms or less	Repair the circuit between the male TCM sensor (C110) connector and the lockup solenoid connector.	Repair the circuit between the TCM connector and the female TCM sensor (C110) connector.

DTC P0748 – PRESSURE CONTROL SOLENOID (PCS) ELECTRICAL

Conditions for Setting the DTC

- The transmission control module (TCM) detects that the current of the pressure control (linear) solenoid is less than 10 mA for 12.5 seconds continuously when the TCM output current is greater than 60 mA.
- The TCM detects that the current of the linear solenoid is greater than 1.4A for 0.5 second continuously.

Action Taken When the DTC Sets

- The TCM illuminates the power lamp after a failure report.
- 4th gear is held in ”D”range
- 4th gear is held in ”2”range.
- 1st gear is held in ”L”range.
- No TCC lockup control.
- Full line pressure.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL when no further failures detected for three consecutive ignition cycles.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history when it detects that the current of the pressure control (linear) solenoid is between 0.1 and 1.4A for 12.5 seconds continuously.

DTC P0748 – Pressure Control Solenoid (PCS) Electrical

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform one vehicle drive cycle. Is the power lamp ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0748 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Measure the resistance between pin 5 (ORN/BLK) and pin 6 (YEL/BLK) of the TCM connector. Is the measurement within the specified value?	2–6 ohms	Replace the transmission control module (TCM).	Go to Step 4.
4	1. Remove the valve body cover. 2. Disconnect the pressure control (linear) solenoid connector. 3. Measure the resistance between pin 1 (BRN) of the linear solenoid and pin 6 (YEL/BLK) of the TCM connector. 4. Measure the resistance between pin 2 (BLU) of the linear solenoid and pin 5 (ORN/BLK) of the TCM connector. Is the measurement within the specified value?	5 ohms or less	Go to Step 6.	Go to Step 5.
5	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 1 (BRN) of the linear solenoid and pin 3 (BRN) of the male TCM sensor connector. 3. Measure the resistance between pin 2 (BLU) of the linear solenoid and pin 9 (BLU) of the male TCM sensor connector. Are the measurements within the specified value?	5 ohms or less	Repair the circuit(s) between the TCM connector and the female TCM sensor connector.	Repair the circuit(s) between the male TCM sensor connector and the linear solenoid.
6	1. Measure the resistance between pin 1 (BRN) of the linear solenoid and ground. 2. Measure the resistance between pin 2 (BLU) of the linear solenoid and ground. Is the measurement within the specified value?	2–6 ohms	Go to Step 7.	Go to Step 8.
7	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 1 (BRN) of the linear solenoid and ground. 3. Measure the resistance between pin 2 (BLU) of the linear solenoid ground. Are the measurements within the specified value?	5 ohms or less	Repair the circuit(s) between the male TCM sensor connector and the linear solenoid.	Repair the circuit(s) between the TCM connector and the female TCM sensor connector.

Step	Action	Value(s)	Yes	No
8	1. Measure the voltage between pin 1 (BRN) of the linear solenoid and 6 (YEL/BLK) of the TCM connector. 2. Measure the voltage between pin 2 (BLU) of the linear solenoid and pin 5 (ORN/BLK) of the TCM connector. Are the measurements within the specified value?	12 volts	Go to Step 9.	Replace the linear solenoid.
7	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the voltage between pin 1 (BRN) of the linear solenoid and pin 3 (BRN) of the male TCM sensor connector. 3. Measure the voltage between pin 2 (BLU) of the linear solenoid and pin 9 (BLU) of the male TCM sensor connector. Are the measurements within the specified value?	12 volts	Repair the circuit(s) between the male TCM sensor connector and the linear solenoid.	Repair the circuit(s) between the TCM connector and the female TCM sensor connector.

DTC P0751 – SHIFT SOLENOID 1 (SS1) STUCK OFF

Conditions for Setting the DTC

- The transaxle is in 2nd or 3rd gear.
- The throttle opening is between 8 and 100%.
- The vehicle speed is between 5 km/h (2 mph) and 100 km/h (62 mph).
- 20 seconds have passed since transaxle was placed in D.
- The brake switch is OFF.
- Engine Coolant Temperature (ECT) is normal.
- Transmission Fluid Temperature (TFT) is greater than 20˚C.
- Engine rpm is greater than 400.
- No TR sensor DTC P0705.
- No TFT sensor DTC P0712.
- No TFT sensor DTC P0713.
- No 1SS sensor DTC P0717.
- No OSS sensor DTC P0722.
- No engine revolution DTC P0727.
- No TCC Solenoid DTC P0743.
- No SS1 DTC P0753.
- No SS2 DTC P0758.
- No ECT sensor DTC P1701.

Action Taken When the DTC Sets

- TCM will request the illumination of MIL and store DTC when TCM detects failures on two consecutive ignition cycle.
- No TCC lockup control.
- No torque control reduction.
- No line pressure reduction control.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL when no further failures detected for three consecutive ignition cycles.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history memory after forty consecutive ignition cycles without fault while 2 seconds have passed since the transaxle is placed in D.

DTC P0751 – Shift Solenoid 1 (SS1) Stuck Off

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0751 displayed?		Go to Step 3.	Inspect the transmission control module TCM) connector, transmission control module TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Measure the resistance between pin 8 (RED) of the TCM connector and ground. Is the measurement within the specified value?	11–15 ohms	Replace the transmission control module TCM).	Go to Step 4.
4	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Measure the resistance between pin 1 (WHT) of the male TCM sensor (C110) connector and ground. Is the measurement within the specified value?	11–15 ohms	Go to Step 5.	Repair the circuit (RED) between the TCM connector and the female TCM sensor (C110) connector.
5	1. Remove the valve body cover. 2. Disconnect the shift solenoid 1 connector. 3. Measure the resistance between the shift solenoid 1 and ground. Is the measurement within the specified value?	11–15 ohms	Repair the circuit (WHT) between the male TCM sensor (C110) connector and the shift solenoid 1.	Replace the shift solenoid 1.

DTC P0753 – SHIFT SOLENOID 1 (SS1) ELECTRICAL

Conditions for Setting the DTC

- The transmission control module (TCM) detects an OFF signal from the shift solenoid 1 (SS1) monitor for 300 milliseconds when the SS1 driver outputs the ON signal.
- The TCM detects an ON signal from the SS1 monitor for 500 milliseconds when the SS1 driver outputs the OFF signal.

Action Taken When the DTC Sets

- The TCM illuminates the Malfunction Indicator Lamp (MIL) after two consecutive trips with a failure reported.
- 4th gear is held in ”D”range.
- 4th gear is held in ”2”range.
- 1st gear is held in ”L”range.
- No TCC lockup control.
- Full line pressure.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it does not detect a failure for 1 second.

DTC P0753 – Shift Solenoid 1 (SS1) Electrical

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform one vehicle drive cycle. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0753 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Measure the resistance between pin 8 (RED) of the TCM connector and ground. Is the measurement within the specified value?	11–15 ohms	Replace the transmission control module (TCM).	Go to Step 4.

Step	Action	Value(s)	Yes	No
4	1. Remove the valve body cover. 2. Disconnect the shift solenoid 1 (SS1) connector. 3. Measure the resistance between the SS1 connector and pin 8 (RED) of the TCM connector. Is the measurement within the specified value?	5 ohms or less	Go to Step 6.	Go to Step 5.
5	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Measure the resistance between pin 1 (WHT) of the male TCM sensor (C110) connector and the SS1 connector. Is the measurement within the specified value?	5 ohms or less	Repair the circuit (RED) between the TCM connector and the female TCM sensor (C110) connector.	Repair the circuit (WHT) between the male TCM sensor (C110) connector and the shift solenoid 1 connector.
6	Measure the resistance between pin 8 (RED) of the TCM connector and ground. Is the measurement within the specified value?	5 ohms or less	Repair the circuit (WHT) between the SS1 connector and the male TCM sensor connector (C110).	Replace the shift solenoid 1.
7	1. Disconnect the transmission control module TCM) sensor (C110) connector. 2. Measure the resistance between pin 1 (WHT) of the male TCM sensor (C110) connector and ground. Is the measurement within the specified value?	5 ohms or less	Repair the circuit (WHT) between the male TCM sensor (C110) connector and the shift solenoid 1 connector.	Repair the circuit RED) between the TCM connector and the female TCM sensor (C110) connector.

DTC P0756 – SHIFT SOLENOID 2 (SS2) STUCK OFF

Conditions for Setting the DTC

- The transaxle is in 1st or 2nd gear.
- The throttle opening is between 8 and 100%.
- The vehicle speed is between 5 km/h (2 mph) and 100 km/h (62 mph).
- 20 seconds have passed since transaxle was placed in D.
- The brake switch is OFF.
- Engine Coolant Temperature (ECT) is normal.
- Transmission fluid temperature (TFT) is greater than 20˚C.
- Engine rpm is greater than 400.
- No TR sensor DTC P0705.
- No TFT sensor DTC P0712.
- No TFT sensor DTC P0713.
- No TFT sensor DTC P0713.
- No OSS sensor DTC P0722.
- No engine revolution DTC P0727.
- No TCC Solenoid DTC P0743.
- No SS1 DTC P0753.
- No SS2 DTC P0758.
- No ECT sensor DTC P1701.

Action Taken When the DTC Sets

- The TCM illuminates the Malfunction Indicator Lamp (MIL) after two consecutive trips with a failure reported.
- No TCC lockup control.
- No torque control reduction.
- No line pressure reduction control.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history 2 seconds after the transaxle is placed in D.

DTC P0756 – Shift Solenoid 2 (SS2) Stuck Off

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.2
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0756 displayed?		Go to Step 3.	Inspect the transmission control module TCM) connector, transmission control module TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Measure the resistance between pin 7 (WHT) of the TCM connector and ground. Is the measurement within the specified value?	11–15 ohms	Replace the transmission control module (TCM).	Go to Step 4.
4	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 7 (BLK) of the male TCM sensor (C110) connector and ground. Is the measurement within the specified value?	11–15 ohms	Go to Step 5.	Repair the circuit (WHT) between the TCM connector and the female TCM sensor (C110) connector.
5	1. Remove the valve body cover. 2. Disconnect the shift solenoid 2 connector. 3. Measure the resistance between the shift solenoid 2 and ground. Is the measurement within the specified value?	11–15 ohms	Repair the circuit (BLK) between the male TCM sensor (C110) connector and the shift solenoid 2.	Replace the shift solenoid 2.

DTC P0758 – SHIFT SOLENOID 2 (SS2) ELECTRICAL

Conditions for Setting the DTC

- The transmission control module (TCM) detects an OFF signal from the shift solenoid 2 (SS2) monitor for 300 milliseconds when the SS2 driver outputs the ON signal.
- The TCM detects an ON signal from the SS2 monitor for 500 milliseconds when the SS2 driver outputs the OFF signal.

Action Taken When the DTC Sets

- The TCM illuminates the Malfunction Indicator Lamp (MIL) after two consecutive trips with a failure reported.
- 4th gear is held in ”D”range.
- 4th gear is held in ”2”range.
- 1st gear is held in ”L”range.
- No TCC lockup control.
- Full line pressure.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it does not detect a failure for 1 second.

DTC P0758 – Shift Solenoid 2 (SS2) Electrical

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform one vehicle drive cycle. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P0758 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Measure the resistance between pin 7 (WHT) of the TCM connector and ground. Is the measurement within the specified value?	11–15 ohms	Replace the transmission control module (TCM).	Go to Step 4.

Step	Action	Value(s)	Yes	No
4	1. Remove the valve body cover. 2. Disconnect the Shift Solenoid 2 (SS2) connector. 3. Measure the resistance between the SS2 connector and pin 7 (WHT) of the TCM connector. Is the measurement within the specified value?	5 ohms or less	Go to Step 6.	Go to Step 5.
5	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 7 (BLK) of the male TCM sensor (C110) connector and the SS2 connector. Is the measurement within the specified value?	5 ohms or less	Repair the circuit (WHT) between the TCM connector and the female TCM sensor (C110) connector.	Repair the circuit (BLK) between the male TCM sensor (C110) connector and the shift solenoid 2 connector.
6	Measure the resistance between pin 7 (WHT) of the TCM connector and ground. Is the measurement within the specified value?	5 ohms or less	Go to Step 7.	Replace the shift solenoid 2.
7	1. Disconnect the transmission control module (TCM) sensor (C110) connector. 2. Measure the resistance between pin 7 (BLK) of the male TCM sensor (C110) connector and ground. Is the measurement within the specified value?	5 ohms or less	Repair the circuit (BLK) between the male TCM sensor (C110) connector and the shift solenoid 2 connector.	Repair the circuit (WHT) between the TCM connector and the female TCM sensor (C110) connector.

DTC P1701 – ENGINE COOLANT TEMPERATURE (ECT) SENSOR CIRCUIT MALFUNCTION

Conditions for Setting the DTC

- The transmission control module (TCM) detects no engine coolant temperature (ECT) signal for 2.5 seconds continuously.

Conditions for Clearing the MIL/Power Lamp/DTC

- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects an ECT signal for 2.5 seconds continuously.

DTC P1701 – Engine Coolant Temperature (ECT) Sensor Circuit

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. 9. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 10. Request DTC by Status. Is DTC P1701 displayed?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110), transmission fluid temperature (TFT) sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Disconnect the engine control module (ECM) J2 (red) connector. 4. Measure the resistance between pin 33 (BRN) of the TCM connector and pin A16 (BRN) of the ECM J2 (red) connector. Is the measurement within the specified value?	5 ohms or less	Go to Step 3.	Repair the circuit as necessary.
3	Measure the resistance between pin 33 (BRN) of the TCM connector and ground. Is the measurement within the specified value?	5 ohms or less	Repair the circuit as necessary.	Go to Step 4.
4	1. Connect the ECM J2 (red) connector. 2. Start the engine. 3. Measure the voltage at pin 33 (BRN) of the TCM connector. Is the measurement within the specified value?	0.2 volts	Replace the transmission control module (TCM).	Replace the powertrain control module (PCM).

DTC P1702 – TORQUE CONVERTER CLUTCH(TCC) CIRCUIT MALFUNCTION

Conditions for Setting the DTC

- The transmission control module (TCM) detects that the voltage of the torque control line is ground level when the TCM doesn't output the torque control signal for 2.5 seconds continuously.

Action Taken When the DTC Sets

- The TCM illuminates the power lamp after a trip with a failure reported.
- 4th gear is held in "D"range.
- 4th gear is held in "2"range.
- 1st gear is held in "L"range.
- No TCC lockup control.
- Full line pressure.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the power lamp after a trip without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects that the voltage of the torque control line is not ground level when the TCM doesn't output the torque control signal for 2.5 seconds continuously.

DTC P1702 – Torque Converter Clutch (TCC) Circuit Malfunction

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform one vehicle drive cycle. Is the POWER Lamp ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P1702 displayed?		Go to Step 3.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110) and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Disconnect the engine control module (ECM) (blue) connector. 4. Measure the resistance between pin 18 (GRY) of the TCM connector and pin F1 (GRYN) of the ECM (blue) connector. Is the measurement within the specified value?	5 ohms or less	Go to Step 4.	Repair the circuit as necessary.
4	Measure the resistance between pin 18 (GRY) of the TCM connector and ground. Is the measurement within the specified value?	5 ohms or less	Repair the circuit as necessary.	Go to Step 5.
5	1. Connect the ECM blue connector. 2. Start the engine. 3. Measure the voltage at pin 18 (GRY) of the TCM connector. Is the measurement within the specified value?	12 volts	Replace the transmission control module (TCM).	Replace the powertrain control module (PCM).

DTC P1790 – INTERNAL TRANSMISSION CONTROL MODULE(TCM) RANDOM ACCESS MEMORY (RAM) CHECKSUM ERROR

Conditions for Setting the DTC

- The transmission control module (TCM) detects a difference between the calculated checksum data and the real checksum data.

Action Taken When the DTC Sets

- The TCM illuminates the malfunction indicator lamp (MIL) after two consecutive trips with a failure reported.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after three consecutive trips without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects that the calculated checksum data is the same as the real checksum data.

DTC P1790 – Internal Transmission Control Module (TCM) Random Access Memory (RAM) Checksum Error

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform two vehicle drive cycles. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect Transmission Control Module (TCM) wiring harness and connector for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P1790 displayed?		Replace the Transmission Control Module (TCM).	Inspect Transmission Control Module (TCM) wiring harness and connector for signs of an intermittent condition. Repair as necessary.

DTC P1791 – THROTTLE POSITION (TP) SENSOR CIRCUIT MALFUNCTION

Conditions for Setting the DTC

- The transmission control module (TCM) detects a malfunction of the throttle position (TP) sensor signal.
- No TP sensor signal.
- TP sensor duty ratio is less than 2.0%.
- TP sensor duty ratio is more than 98.0%.
- Engine speed is greater than 400 rpm.

Action Taken When the DTC Sets

- The TCM illuminates the malfunction indicator lamp (MIL) after a trip with a failure reported.
- 4th gear is held in ”D”range.
- 4th gear is held in ”2”range.
- 1st gear is held in ”L”range.
- No TCC lockup control.
- Full line pressure.

Conditions for Clearing the MIL/Power Lamp/DTC

- The TCM turns off the MIL after a trip without a failure reported.
- The Scan–100 scan tool can clear the DTC from the TCM history.
- The TCM clears the DTC from the TCM history if it detects that the TP sensor duty ratio is between 2.0% and 98.0% for 4 seconds continuously.

DTC P1791 – Throttle Position (TP) Sensor Circuit Malfunction

Step	Action	Value(s)	Yes	No
1	1. Turn the ignition OFF. 2. Install the Scan–100 Scan tool. 3. With the engine OFF, turn the ignition switch to the RUN position. 4. Select Store Freeze Frame/Failure Records from the Diagnostic Trouble Codes Information menu. 5. Store Freeze Frame/Failure Records. 6. Select Clear DTC Information from the Diagnostic Trouble Codes Information menu. 7. Clear DTC Information. 8. Perform one vehicle drive cycle. Is the Malfunction Indicator Lamp (MIL) ON?		Go to Step 2.	Inspect the transmission control module (TCM) connector, transmission control module (TCM) sensor connector (C110), transmission fluid temperature (TFT) sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.
2	1. Select Request DTC by Status from the Diagnostic Trouble Codes Information menu. 2. Request DTC by Status. Is DTC P1791 displayed?		Go to Step 3.	Inspect the transmission control module TCM) connector, transmission control module TCM) sensor connector (C110), transmission fluid temperature TFT) sensor connector and the wiring harnesses for signs of an intermittent condition. Repair as necessary.

Step	Action	Value(s)	Yes	No
3	1. Turn the ignition OFF. 2. Disconnect the transmission control module (TCM) connector. 3. Disconnect the engine control module (ECM) J2 (red) connector. 4. Measure the resistance between pin 20 (LT GRN) of the TCM connector and pin A11 (LT GRN) of the ECM J2 (red) connector. Is the measurement within the specified value?	5 ohms or less	Go to Step 4.	Repair the circuit as necessary.
4	Measure the resistance between pin 20 (LT GRN) of the TCM connector and ground. Is the measurement within the specified value?	5 ohms or less	Repair the circuit as necessary.	Go to Step 5.
5	1. Connect the ECM red connector. 2. Start the engine. 3. Measure the voltage at pin 20 (LT GRN) of the TCM connector. Is the measurement within the specified value?	0.2 volts	Replace the transmission control module (TCM).	Replace the powertrain control module (PCM).