

Diagnosis By Symptom

Diagnosis by Symptom gives the technician diagnostic information and direction, and suggests possible components using a symptom as a starting point. All routines start out with any potential electrical components that can cause or contribute to the symptom described. The routines then list all possible hydraulic or mechanical components that can cause or contribute the symptom described.

Diagnosis by Symptom Chart Directions

1. Using Diagnosis by Symptom, select the condition that best describes the condition.
2. Refer to the routine indicated in the Diagnosis by Symptom Index.
3. Always begin diagnosis of a symptom with:
 1. preliminary inspections.
 2. verifications of condition.
 3. checking the fluid levels.
 4. carrying out other test procedures as directed.
4. **NOTE:** *Not all concerns and conditions with electrical components set a DTC. Be aware that the components listed may still be the cause. Verify correct function of these components prior to proceeding to the Hydraulic/Mechanical Routine listed.*

NOTE: *When the battery is disconnected or a new battery is installed, certain transmission operating parameters can be lost. The PCM must relearn these parameters. During this learning process, the vehicle may exhibit slightly firm, delayed or early shifts. This operation is considered normal and will not affect the function of the transmission. Normal operation returns once these parameters are stored by the PCM.*

Begin Diagnosis by Symptom with the Routines, if indicated. Follow the reference or action required statements. Always perform the OBD tests as required. Never skip steps. Repair as required. If the concern is still present after electrical diagnosis, proceed to the Hydraulic/Mechanical Routine listed.

5. The list contains only possible hydraulic or mechanical components that may cause or contribute to the concern. These components are listed in the removal sequence and by most probable cause. Inspect all listed components to make sure that repairs are complete.

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Diagnostic Routines

Engagement Concerns: No Forward in D

Possible Component	Reference/Action
201 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new filter assembly.
Selector Lever Linkage	
<ul style="list-style-type: none"> Selector lever linkage — damage or incorrectly adjusted 	<ul style="list-style-type: none"> INSPECT and REPAIR as required. VERIFY transmission selector lever cable adjustment. REFER to Section 307-05. ADJUST transmission selector lever cable as necessary.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle harness, main control molded leadframe or <u>SSA</u> . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	
<ul style="list-style-type: none"> Defective manual valve 	<ul style="list-style-type: none"> INSPECT manual valve linkage.
<ul style="list-style-type: none"> Defective clutch (A) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Front pump adapter seal — cracked, leaking or damaged 	<ul style="list-style-type: none"> INSTALL a new front pump adapter seal.
Clutch Plates	
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.
<ul style="list-style-type: none"> Low <u>OWC</u> assembly — failure 	<ul style="list-style-type: none"> INSPECT the <u>OWC</u> assembly for damage. The <u>OWC</u> must rotate counterclockwise and lock clockwise. INSTALL a new <u>OWC</u> . REFER to Transmission.
Pump	

Possible Component	Reference/Action
<ul style="list-style-type: none"> Pump gear — failure 	<ul style="list-style-type: none"> INSTALL a new pump assembly. REFER to Pump Assembly.

Engagement Concerns: No Reverse

Possible Component	Reference/Action
202 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new filter assembly.
Selector Lever Linkage	
<ul style="list-style-type: none"> Selector lever linkage — damage or incorrectly adjusted 	<ul style="list-style-type: none"> INSPECT and REPAIR as required. VERIFY transmission selector lever cable adjustment. REFER to Section 307-05. ADJUST transmission selector lever cable as necessary.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle harness, main control molded leadframe or SSB . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEQ and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	
<ul style="list-style-type: none"> Defective clutch (B) or clutch (D) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Front pump adapter seal — cracked, leaking or damaged 	<ul style="list-style-type: none"> INSTALL a new front pump adapter seal.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Low/reverse clutch (D) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the low/reverse clutch assembly for damage. REPAIR as required. REFER to Low/Reverse Clutch Assembly.
Pump	
<ul style="list-style-type: none"> Pump gear — failure 	<ul style="list-style-type: none"> INSTALL a new pump assembly. REFER to Pump Assembly.

Engagement Concerns: Harsh Reverse

Possible Component	Reference/Action
203 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
Powertrain Control System	

Possible Component	Reference/Action
<ul style="list-style-type: none"> PCM, external vehicle harness, main control molded leadframe or SSB . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
Driveline	
<ul style="list-style-type: none"> Engine driveline looseness in the driveshaft, U-joints or the engine mounts 	<ul style="list-style-type: none"> REPAIR as required.

Engagement Concerns: Harsh Forward

Possible Component	Reference/Action
204 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle harness, main control molded leadframe or SSA . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	
<ul style="list-style-type: none"> Defective clutch (A) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (A) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.
<ul style="list-style-type: none"> Low OWC assembly — failure 	<ul style="list-style-type: none"> INSPECT the OWC assembly for damage. The OWC must rotate counterclockwise and lock clockwise. INSTALL a new OWC . REFER to Transmission.
Driveline	
<ul style="list-style-type: none"> Engine driveline looseness in the driveshaft, U-joints or the engine mounts 	<ul style="list-style-type: none"> REPAIR as required.

Engagement Concerns: Delayed/Soft Reverse

Possible Component	Reference/Action
205 — ROUTINE	
Transmission Fluid	

Possible Component	Reference/Action
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new filter assembly.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle harness, main control molded leadframe or <u>SSB</u> . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, <u>GO to Pinpoint Test A</u>.
Main Control	
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Front pump adapter seal — cracked, leaking or damaged 	<ul style="list-style-type: none"> INSTALL a new front pump adapter seal.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
Pump Assembly	
<ul style="list-style-type: none"> Gear Delayed park to reverse or forward 	<ul style="list-style-type: none"> INSPECT for damage. REPLACE as required. VERIFY pump output, REFER to Special Testing Procedures.

Engagement Concerns: Delayed/Soft Forward

Possible Component	Reference/Action
206 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new filter assembly.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle harness, main control molded leadframe or a defective <u>SSA</u> . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, <u>GO to Pinpoint Test A</u>.
Main Control	
<ul style="list-style-type: none"> Defective clutch (A) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Front pump adapter seal — cracked, leaking or damaged 	<ul style="list-style-type: none"> INSTALL a new front pump adapter seal.
Clutch Plates	
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.
Pump Assembly	
<ul style="list-style-type: none"> Gear 	<ul style="list-style-type: none"> INSPECT for damage. REPLACE as required.

Possible Component	Reference/Action
<ul style="list-style-type: none"> Delayed park to reverse or forward 	<ul style="list-style-type: none"> VERIFY pump output, REFER to Special Testing Procedures.

Engagement Concerns: No Forward and No Reverse

Possible Component	Reference/Action
207 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new filter assembly.
Main Control	
<ul style="list-style-type: none"> Defective manual valve 	<ul style="list-style-type: none"> INSPECT connection to shift linkage.
<ul style="list-style-type: none"> Front pump adapter seal — cracked, leaking or damaged Converter release regulator valve 	<ul style="list-style-type: none"> INSTALL a new front pump adapter seal. INSPECT for converter release regulator valve stuck in spring compressed position or broken spring. CLEAN or REPLACE main control as required. REFER to Main Control.
Pump	
<ul style="list-style-type: none"> Pump gear — failure 	<ul style="list-style-type: none"> INSTALL a new pump assembly. REFER to Pump Assembly.

Engagement Concerns: Harsh Forward and Harsh Reverse

Possible Component	Reference/Action
208 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new filter assembly.
Powertrain Control System	
<ul style="list-style-type: none"> PCM electrical inputs/outputs, external vehicle wiring harnesses, main control molded leadframe, TR sensor, SSA or PCA 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A. If engine control DTCs return, REFER to Powertrain Control/Emissions Diagnosis (PC/ED) manual.
<ul style="list-style-type: none"> Multiple shift missing (more than one gear) 	<ul style="list-style-type: none"> If some shifts are missing, DETERMINE which shifts do not occur. REFER to Clutch and Solenoid Application Charts. MONITOR appropriate PIDs as listed in diagnostics. REFER to Routine 210.
<ul style="list-style-type: none"> Gears 4-6 default to 5th gear and gears 1-3 default to 3rd gear 	<ul style="list-style-type: none"> RETRIEVE DTCs.

Engagement Concerns: Delayed Forward and Delayed Reverse

Possible Component	Reference/Action
209 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new transmission fluid filter assembly.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses or main control molded leadframe 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs.
Main Control	
<ul style="list-style-type: none"> Front pump adapter seal — cracked, leaking or damaged 	<ul style="list-style-type: none"> INSTALL a new front pump adapter seal.

Shift Concerns: Some/All Shifts Missing

Possible Component	Reference/Action
210 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new transmission fluid filter assembly. REFER to Fluid Pan, Gasket and Filter.
Selector Lever Linkage Damaged or Incorrectly Adjusted	
<ul style="list-style-type: none"> Selector lever cable 	<ul style="list-style-type: none"> INSPECT and REPAIR as required. VERIFY selector lever cable adjustment. REFER to Section 307-05. ADJUST selector lever cable as necessary.
Powertrain Control System	
<ul style="list-style-type: none"> PCM electrical inputs/outputs, external vehicle wiring harnesses, main control molded leadframe, TR sensor, SSA or PCA 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A. If engine control DTCs return, REFER to Powertrain Control/Emissions Diagnosis (PC/ED) manual.
<ul style="list-style-type: none"> Multiple shift missing (more than one gear) 	<ul style="list-style-type: none"> If some shifts are missing, DETERMINE which shifts do not occur. REFER to Clutch Application and Solenoid Operation Charts. MONITOR appropriate PIDs as listed in diagnostics.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (A) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.

Possible Component	Reference/Action
<ul style="list-style-type: none"> Defective clutch (A) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (C) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (E) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (E) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure or Low <u>QWC</u> assembly — failure 	<ul style="list-style-type: none"> For 1st, 2nd, 3rd or 4th gear concerns, INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> For 3rd or 5th gear concerns, INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Intermediate clutch (C) friction and steel plate — failure 	<ul style="list-style-type: none"> For 2nd or 6th gear concerns, INSPECT the intermediate clutch assembly for damage. REPAIR as required. REFER to Intermediate Clutch Assembly.
<ul style="list-style-type: none"> Overdrive clutch assembly — failure 	<ul style="list-style-type: none"> INSPECT the overdrive clutch for damage. INSTALL a new overdrive clutch. REFER to Transmission.

Shift Concerns: Timing — Early/Late

Possible Component	Reference/Action
211 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM electrical inputs/outputs, external vehicle wiring harnesses or main control molded leadframe 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If engine control DTCs return, REFER to Powertrain Control/Emissions Diagnosis (PC/ED) manual.
<ul style="list-style-type: none"> Engine driveability concerns 	<ul style="list-style-type: none"> REFER to Section 303-00.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Bolts not tightened to specification 	<ul style="list-style-type: none"> TIGHTEN to specification.
<ul style="list-style-type: none"> Main control unit contaminated, solenoid(s) damaged, stuck or bore damaged. Manual valve damaged, stuck or bore damaged 	<ul style="list-style-type: none"> REFER to Main Control.
Incorrect Pressures	
<ul style="list-style-type: none"> Application pressures are incorrect 	<ul style="list-style-type: none"> Incorrect application pressures may be due to non-transmission components, main control assembly or internal transmission damage. REPAIR all non-transmission components then CONTINUE with this routine.
Other	

Possible Component	Reference/Action
<ul style="list-style-type: none"> Tire size change, axle ratio change 	<ul style="list-style-type: none"> VERIFY that the vehicle has the original equipment. REFER to the certification label. Changes in tire size and axle ratio will affect shift timing.

Shift Concerns: Timing — Erratic/Hunting

Possible Component	Reference/Action
212 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Condition 	<ul style="list-style-type: none"> CARRY OUT the fluid level check in Preliminary Inspection.
<ul style="list-style-type: none"> Transmission fluid over temperature condition 	<ul style="list-style-type: none"> REFER to Other Concerns: Transmission Overheating.
Powertrain Control System	
<ul style="list-style-type: none"> PCM electrical inputs/outputs, external vehicle wiring harnesses or main control molded leadframe 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEQ and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If engine control DTCs return, REFER to Powertrain Control/Emissions Diagnosis (PC/ED) manual.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Torque Converter Concerns	
<ul style="list-style-type: none"> Torque converter 	<ul style="list-style-type: none"> REFER to Torque Converter Operation Concerns: Cycling/Chatter.

Feel Concerns: — Soft or Slipping (Some or All)

Possible Component	Reference/Action
213 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new transmission fluid filter assembly. REFER to Fluid Pan, Gasket and Filter.
Powertrain Control System	
<ul style="list-style-type: none"> PCM electrical inputs/outputs, external vehicle wiring harnesses, main control molded leadframe or TFT sensor. 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEQ and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test B.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Main control molded leadframe 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.

Possible Component	Reference/Action
<ul style="list-style-type: none"> Front pump adapter seal — cracked, leaking or damaged 	<ul style="list-style-type: none"> INSTALL a new front pump adapter seal.
<ul style="list-style-type: none"> Bolts not tightened to specification 	<ul style="list-style-type: none"> TIGHTEN to specification.
<ul style="list-style-type: none"> Main control contaminated, solenoid(s) damaged, stuck or bore damaged. Manual valve damaged, stick or bore damaged 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, INSTALL a new main control assembly. REFER to Main Control.

Feel Concerns: Harsh (Some/All)

Possible Component	Reference/Action
214 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new transmission fluid filter assembly. REFER to Fluid Pan, Gasket and Filter.
Powertrain Control System	
<ul style="list-style-type: none"> PCM electrical inputs/outputs, external vehicle wiring harnesses, main control molded leadframe or solenoid body information does not match PCM information 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If solenoid body and PCM information does not match, REPROGRAM the PCM with the latest calibration. PERFORM the Solenoid Body Strategy Data Download. REFER to Solenoid Body Strategy. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test. ROAD TEST and CHECK for DTCs.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Bolts not tightened to specification 	<ul style="list-style-type: none"> TIGHTEN bolts to specification.
<ul style="list-style-type: none"> Main control contaminated, solenoid(s) damaged, solenoids stuck or bore damaged 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, INSTALL a new main control assembly. REFER to Main Control.
<ul style="list-style-type: none"> Manual valve damaged, stuck or bore damaged 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, INSTALL a new main control assembly. REFER to Main Control.

Feel Concerns: No 1st Gear, Engages in a Higher Gear

Possible Component	Reference/Action
215 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses or main control molded leadframe 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Clutch Plates	

Possible Component	Reference/Action
<ul style="list-style-type: none"> Low <u>OWC</u> assembly — failure 	<ul style="list-style-type: none"> INSPECT the <u>OWC</u> assembly for damage. The <u>OWC</u> must rotate counterclockwise and lock clockwise. INSTALL a new <u>OWC</u> . REFER to Transmission.
Incorrect Gear	
<ul style="list-style-type: none"> Transmission failure 	<ul style="list-style-type: none"> DETERMINE which gear the transmission is in. REFER to the Clutch Application and Solenoid Operation Charts.

Feel Concerns: No Manual 1st Gear

Possible Component	Reference/Action
216 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new transmission fluid filter assembly. REFER to Fluid Pan, Gasket and Filter.
Selector Lever Linkage	
<ul style="list-style-type: none"> Selector lever cable system — damaged, misaligned 	<ul style="list-style-type: none"> INSPECT and REPAIR as necessary. VERIFY selector lever cable adjustment. REFER to Section 307-05.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle harness, main control molded leadframe or <u>SSA</u> . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs, CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
Clutch Plates	
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.
<ul style="list-style-type: none"> Low/reverse clutch (D) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the low/reverse clutch assembly for damage. REPAIR as required. REFER to Low/Reverse Clutch Assembly.
<ul style="list-style-type: none"> Low <u>OWC</u> assembly — failure 	<ul style="list-style-type: none"> If below 3 mph, INSPECT the <u>OWC</u> assembly for damage. The <u>OWC</u> must rotate counterclockwise and lock clockwise. INSTALL a new <u>OWC</u> . REFER to Transmission.
Pump	
<ul style="list-style-type: none"> Pump gear — failure 	<ul style="list-style-type: none"> INSTALL a new pump assembly. REFER to Pump Assembly.

Feel Concerns: No Manual 2nd Gear

Possible Component	Reference/Action
217 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new transmission fluid filter assembly.
Selector Lever Linkage	
<ul style="list-style-type: none"> Selector lever cable system — damaged, misaligned 	<ul style="list-style-type: none"> INSPECT and REPAIR as necessary. VERIFY selector lever cable adjustment. REFER to Section 307-05.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe or SSA 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
Clutch Plates	
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.
<ul style="list-style-type: none"> Intermediate clutch (C) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the intermediate clutch assembly for damage. REPAIR as required. REFER to Intermediate Clutch Assembly.
Pump	
<ul style="list-style-type: none"> Pump gear — failure 	<ul style="list-style-type: none"> INSTALL a new pump assembly. REFER to Pump Assembly.

Feel Concerns: No Manual 3rd Gear

Possible Component	Reference/Action
218 — ROUTINE	
Selector Lever Linkage	
<ul style="list-style-type: none"> Selector lever cable system — damaged, misaligned 	<ul style="list-style-type: none"> INSPECT and REPAIR as necessary. VERIFY selector lever cable adjustment. REFER to Section 307-05.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe or SSB . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.

Possible Component	Reference/Action
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
Clutch Plates	
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
Pump	
<ul style="list-style-type: none"> Pump gear — failure 	<ul style="list-style-type: none"> INSTALL a new pump assembly. REFER to Pump Assembly.

Feel Concerns: No 1-2 Shift (Automatic)

Possible Component	Reference/Action
220 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new transmission fluid filter assembly. REFER to Fluid Pan, Gasket and Filter.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe, SSC or SSD . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (C) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.

Possible Component	Reference/Action
Clutch Plates	
<ul style="list-style-type: none"> Intermediate clutch (C) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the intermediate clutch assembly for damage. REPAIR as required. REFER to Intermediate Clutch Assembly.
<ul style="list-style-type: none"> Low/reverse clutch (D) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the low/reverse clutch assembly for damage. REPAIR as required. REFER to Low/Reverse Clutch Assembly.
<ul style="list-style-type: none"> Low <u>OWC</u> assembly — failure 	<ul style="list-style-type: none"> INSPECT the <u>OWC</u> assembly for damage. The <u>OWC</u> must rotate counterclockwise and lock clockwise. INSTALL a new <u>OWC</u> . REFER to Transmission.

Feel Concerns: No 2-3 Shift (Automatic)

Possible Component	Reference/Action
221 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission fluid filter and seal assembly — plugged, damaged 	<ul style="list-style-type: none"> INSTALL a new transmission fluid filter assembly. REFER to Fluid Pan, Gasket and Filter.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe, <u>SSB</u> or <u>SSC</u> . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (C) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Intermediate clutch (C) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the intermediate clutch assembly for damage. REPAIR as required. REFER to Intermediate Clutch Assembly.

Feel Concerns: No 3-4 Shift (Automatic)

Possible Component	Reference/Action
222 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe, SSB , SSD or SSE . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (E) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective solenoid multiplex valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Overdrive clutch (E) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the overdrive clutch assembly for damage. REPAIR as required. REFER to Overdrive Clutch Assembly.

Feel Concerns: No 4-3 Shift (Automatic)

Possible Component	Reference/Action
223 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe, SSB or SSD . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.

Possible Component	Reference/Action
<ul style="list-style-type: none"> Defective clutch (E) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (E) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Solenoid multiplex valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Drive enable valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Overdrive clutch (E) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the overdrive clutch assembly for damage. REPAIR as required. REFER to Overdrive Clutch Assembly.

Feel Concerns: No 3-2 Shift (Automatic)

Possible Component	Reference/Action
224 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe, SSB or SSC . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (C) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Intermediate clutch (C) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the intermediate clutch assembly for damage. REPAIR as required. REFER to Intermediate Clutch Assembly.

Feel Concerns: No 2-1 Shift (Automatic)

Possible Component	Reference/Action
225 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe or <u>SSC</u> . 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
<ul style="list-style-type: none"> Verify transmission strategy is correct 	<ul style="list-style-type: none"> REFER to Solenoid Body Strategy.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (C) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Intermediate clutch (C) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the intermediate clutch assembly for damage. REPAIR as required. REFER to Intermediate Clutch Assembly.
<ul style="list-style-type: none"> Low <u>OWC</u> assembly — failure 	<ul style="list-style-type: none"> INSPECT the <u>OWC</u> assembly for damage. The <u>OWC</u> must rotate counterclockwise and lock clockwise. INSTALL a new <u>OWC</u> . REFER to Transmission.

Torque Converter Operation Concerns: No Apply

Possible Component	Reference/Action
240 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid condition 	<ul style="list-style-type: none"> CHECK transmission fluid condition. REFER to Preliminary Inspection.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, external vehicle wiring harnesses, main control molded leadframe or <u>TCC</u> solenoid. 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the <u>TCC</u> solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Main control assembly contaminated, solenoid(s) damaged, stuck or bore 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, install a new main control assembly. REFER to Main Control.

Possible Component	Reference/Action
damaged. Manual valve damaged, stuck or bore damaged	
<ul style="list-style-type: none"> Defective torque converter apply regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective torque converter release regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Main control assembly bolts — not tightened to specification 	<ul style="list-style-type: none"> TIGHTEN to specification.
Torque Converter	
<ul style="list-style-type: none"> Torque converter components 	<ul style="list-style-type: none"> REMOVE the transmission, REFER to Transmission. INSPECT torque converter for damage. INSTALL a new or remanufactured torque converter. If a new or remanufactured torque converter is installed, use the scan tool and follow the on-screen instructions and perform the Misfire Monitor Neutral Profile Correction procedure.

Torque Converter Operation Concerns: Cycling/Chatter

Possible Component	Reference/Action
241 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid condition 	<ul style="list-style-type: none"> CHECK transmission fluid condition. REFER to Preliminary Inspection.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, main control molded leadframe, TCC solenoid or TFT sensor 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A for TCC solenoid diagnosis and GO to Pinpoint Test B for TFT sensor diagnosis.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the TCC solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Main control assembly contaminated, solenoid(s) damaged, stuck or bore damaged. Manual valve damaged, stuck or bore damaged 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, install a new main control assembly. REFER to Main Control.
<ul style="list-style-type: none"> Defective torque converter apply regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Main control assembly bolts — not tightened to specification 	<ul style="list-style-type: none"> TIGHTEN to specification.
Torque Converter	

Possible Component	Reference/Action
<ul style="list-style-type: none"> Torque converter components 	<ul style="list-style-type: none"> REMOVE the transmission, REFER to Transmission. INSPECT for damage. INSTALL a new or remanufactured torque converter. If a new or remanufactured torque converter is installed, use the scan tool and follow the on-screen instructions and perform the Misfire Monitor Neutral Profile Correction procedure.

Torque Converter Operation Concerns: Always Applied/Stalls Vehicle

Possible Component	Reference/Action
242 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Fluid condition 	<ul style="list-style-type: none"> CHECK transmission fluid condition. REFER to Preliminary Inspection.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, main control molded leadframe, TCC solenoid or IFT sensor 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A for TCC solenoid diagnosis and GO to Pinpoint Test B for IFT sensor diagnosis.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the TCC solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Main control assembly contaminated, solenoid(s) damaged, stuck or bore damaged. Manual valve damaged, stuck or bore damaged 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, install a new main control assembly. REFER to Main Control.
<ul style="list-style-type: none"> Main control assembly bolts — not tightened to specification 	<ul style="list-style-type: none"> TIGHTEN to specification.
Torque Converter	
<ul style="list-style-type: none"> Torque converter components 	<ul style="list-style-type: none"> REMOVE the transmission, REFER to Transmission. INSPECT for damage. INSTALL a new or remanufactured torque converter. If a new or remanufactured torque converter is installed, use the scan tool and follow the on-screen instructions and perform the Misfire Monitor Neutral Profile Correction procedure.

Other Concerns: External Leaks

Possible Component	Reference/Action
252 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
<ul style="list-style-type: none"> Transmission case vent — damaged, case porosity 	<ul style="list-style-type: none"> REPAIR as necessary.

Possible Component	Reference/Action
<ul style="list-style-type: none"> Leakage at gaskets, seals, electrical connector 	<ul style="list-style-type: none"> REFER to Leakage Inspection, Fluid Leakage in Torque Converter Area and Leak Check Test with A Black Light. REMOVE all traces of lubricant on exposed surface of the transmission. REPAIR as necessary.
Fluid Cooler Tubes	
<ul style="list-style-type: none"> Cooler tube fittings 	<ul style="list-style-type: none"> LOCATE leak source. REPAIR as required. REFER to Section 307-02A.
<ul style="list-style-type: none"> Cooler tube O-rings, cooler tubes 	<ul style="list-style-type: none"> LOCATE leak source. REPAIR as required. REFER to Section 307-02A.
Torque Converter	
<ul style="list-style-type: none"> Torque converter studs 	<ul style="list-style-type: none"> INSTALL a new torque converter.
<ul style="list-style-type: none"> Torque converter hub seal 	<ul style="list-style-type: none"> INSTALL a new torque converter hub seal.
<ul style="list-style-type: none"> Torque converter weld 	<ul style="list-style-type: none"> INSTALL a new torque converter. If a new or remanufactured torque converter is installed, use the scan tool and follow the on-screen instructions and perform the Misfire Monitor Neutral Profile Correction procedure.
Transmission Case	
<ul style="list-style-type: none"> Case — leaking 	<ul style="list-style-type: none"> INSTALL a new transmission case. REFER to Transmission.
<ul style="list-style-type: none"> Transmission electrical connector 	<ul style="list-style-type: none"> INSTALL a new transmission electrical connector O-ring.
<ul style="list-style-type: none"> Transmission fluid fill plug 	<ul style="list-style-type: none"> INSTALL a new transmission fluid fill plug.
<ul style="list-style-type: none"> Output shaft seal 	<ul style="list-style-type: none"> INSTALL a new output shaft seal. REFER to Output Shaft Seal.
<ul style="list-style-type: none"> Manual control lever seal 	<ul style="list-style-type: none"> INSTALL a new seal.
<ul style="list-style-type: none"> Transmission fluid pan gasket 	<ul style="list-style-type: none"> INSTALL a new gasket.
Fluid Pump	
<ul style="list-style-type: none"> Fluid pump O-ring 	<ul style="list-style-type: none"> INSTALL a new O-ring. REFER to Pump Assembly.
<ul style="list-style-type: none"> Fluid pump seal ring 	<ul style="list-style-type: none"> INSTALL a new seal ring. REFER to Pump Assembly.

Other Concerns: Noise/Vibration in Forward or Reverse

NOTE: NVH symptoms should be identified using the diagnostic tools that are available. For a list of these tools, an explanation of their uses and a glossary of common terms, refer to [Section 100-04](#). Since it is possible any one of multiple systems may be the cause of a symptom, it may be necessary to use a process of elimination type of diagnostic approach to pinpoint the responsible system. If this is not the causal system for the symptom, refer back to [Section 100-04](#) for the next likely system and continue diagnosis.

Possible Component	Reference/Action
254 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level (low) pump cavitation 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
Fluid Cooler Tubes	

Possible Component	Reference/Action
<ul style="list-style-type: none"> Cooler line grounding out 	<ul style="list-style-type: none"> ADJUST or REPOSITION cooler tubes.
Selector Lever Cable	
<ul style="list-style-type: none"> Selector lever cable incorrectly routed 	<ul style="list-style-type: none"> Section 307-05, Selector Lever Cable and Bracket
Torque Converter	
<ul style="list-style-type: none"> Check the torque converter components/balance weight 	<ul style="list-style-type: none"> LOCATE source of disturbance, REPAIR as required.
Engine Driveline	
<ul style="list-style-type: none"> Engine drive accessories 	<ul style="list-style-type: none"> REFER to Section 303-00.

Other Concerns: Engine Will Not Crank

Possible Component	Reference/Action
255 — ROUTINE	
Selector Lever Cable System	
<ul style="list-style-type: none"> Selector lever cable system — damaged, misaligned 	<ul style="list-style-type: none"> INSPECT and REPAIR as necessary. REFER to Section 307-05.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, engine starting and charging system, main control molded leadframe or <u>TR</u> sensor 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test C.
Torque Converter	
<ul style="list-style-type: none"> Flexplate — damaged 	<ul style="list-style-type: none"> REPAIR as necessary.
Vehicle Starter	
<ul style="list-style-type: none"> Starter system concerns 	<ul style="list-style-type: none"> INSPECT and REPAIR as necessary. REFER to Section 303-06.
Fluid Pump Assembly	
<ul style="list-style-type: none"> Internal parts seized 	<ul style="list-style-type: none"> REPAIR as necessary.

Other Concerns: No Park (P) Range

Possible Component	Reference/Action
256 — ROUTINE	
Selector Lever Cable	
<ul style="list-style-type: none"> Selector lever cable system — damaged, misaligned 	<ul style="list-style-type: none"> INSPECT and REPAIR as necessary. REFER to Section 307-05.
<ul style="list-style-type: none"> Manual control lever assembly damaged, manual valve inner lever pin bent, manual valve inner lever damaged, spring rod damaged, park pawl pin loose or damaged, park rod actuating plate loose, damaged or missing 	<ul style="list-style-type: none"> REPAIR as necessary.
<ul style="list-style-type: none"> Transmission case assembly 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, REPAIR as necessary.

Possible Component	Reference/Action
<ul style="list-style-type: none"> Park gear, park pawl, park pawl return spring, part or guide, park actuating rod, park pawl shaft, manual lever 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, REPAIR as necessary.
<ul style="list-style-type: none"> External linkages/brackets — damaged 	<ul style="list-style-type: none"> REPAIR as necessary.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, main control molded leadframe or <u>IR</u> sensor 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, <u>GO to Pinpoint Test C</u>.
IR Sensor Assembly Damaged	
<ul style="list-style-type: none"> Manual lever detent spring 	<ul style="list-style-type: none"> REPAIR as necessary.
<ul style="list-style-type: none"> <u>IR</u> assembly 	<ul style="list-style-type: none"> INSTALL a new main control assembly. REFER to <u>Main Control</u>.

Other Concerns: Transmission Overheating

Possible Component	Reference/Action
257 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK transmission fluid level. ADJUST transmission fluid to correct level. REFER to <u>Transmission Fluid Level Check</u>.
<ul style="list-style-type: none"> Fluid condition 	<ul style="list-style-type: none"> CHECK transmission fluid condition. REFER to <u>Preliminary Inspection</u>.
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, main control molded leadframe, <u>ICC</u> solenoid or <u>TFT</u> sensor 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, <u>GO to Pinpoint Test A</u> for <u>ICC</u> solenoid diagnosis and <u>GO to Pinpoint Test B</u> for <u>TFT</u> sensor diagnosis.
Torque Converter Not Engaging	
<ul style="list-style-type: none"> Torque converter 	<ul style="list-style-type: none"> INSTALL a new torque converter. If a new or remanufactured torque converter is installed, use the scan tool and follow the on-screen instructions and perform the Misfire Monitor Neutral Profile Correction procedure.
Case Vent Damaged	
<ul style="list-style-type: none"> Transmission case assembly 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, REPAIR as necessary.
Other	
<ul style="list-style-type: none"> Restriction in transmission cooling system 	<ul style="list-style-type: none"> CHECK transmission cooling system efficiency. REFER to <u>Section 307-02A</u>.
<ul style="list-style-type: none"> Vehicle heat shield — missing or damaged 	<ul style="list-style-type: none"> REPAIR as necessary.
<ul style="list-style-type: none"> Vehicle airflow is restricted 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, REPAIR as necessary.
<ul style="list-style-type: none"> Thermal bypass valve — missing or damaged 	<ul style="list-style-type: none"> REPAIR as necessary. REFER to <u>Main Control</u>.

Other Concerns: Fluid Venting/Foaming

Possible Component	Reference/Action
261 — ROUTINE	
Transmission Fluid	
<ul style="list-style-type: none"> Incorrect level 	<ul style="list-style-type: none"> CHECK the transmission fluid level. ADJUST transmission fluid to correct level. REFER to Transmission Fluid Level Check.
Case Vent Damaged	
<ul style="list-style-type: none"> Transmission case assembly 	<ul style="list-style-type: none"> INSPECT for damage. If damaged, REPAIR as necessary.

Feel Concerns: No 4-5 Shift (Automatic)

Possible Component	Reference/Action
270 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, main control molded leadframe, <u>SSA</u> solenoid or <u>SSB</u> sensor 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (A) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (A) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.

Feel Concerns: No 5-4 Shift (Automatic)

Possible Component	Reference/Action
271 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, main control molded leadframe or <u>SSB</u> 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the <u>KOEO</u> and <u>KOER</u> self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	

Possible Component	Reference/Action
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (A) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Forward clutch (A) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the forward clutch assembly for damage. REPAIR as required. REFER to Forward Clutch Assembly.

Feel Concerns: No 5-6 Shift (Automatic)

Possible Component	Reference/Action
272 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, main control molded leadframe, SSB or SSC 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEO and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (C) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Intermediate clutch (C) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the intermediate clutch assembly for damage. REPAIR as required. REFER to Intermediate Clutch Assembly.

Feel Concerns: No 6-5 Shift (Automatic)

Possible Component	Reference/Action
273 — ROUTINE	
Powertrain Control System	
<ul style="list-style-type: none"> PCM, vehicle wiring harnesses, main control molded leadframe or SSC 	<ul style="list-style-type: none"> If DTCs are set, CLEAR the DTCs. CARRY OUT the KOEQ and KOER self-test. ROAD TEST the vehicle and CHECK for DTCs. If the DTCs return, GO to Pinpoint Test A.
Main Control	
<ul style="list-style-type: none"> Leadframe — contamination 	<ul style="list-style-type: none"> REMOVE the main control assembly, REFER to Main Control. INSPECT and CLEAN the shift solenoid terminals on the main control molded leadframe for metallic contamination. Follow Pinpoint Test A5 and INSTALL a new solenoid or molded leadframe as required, GO to Pinpoint Test A. INSTALL the main control assembly. REFER to Main Control. PERFORM Road Test — Adaptive Drive Cycle, REFER to Shift Point Road Test.
<ul style="list-style-type: none"> Defective clutch (B) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (B) latch valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
<ul style="list-style-type: none"> Defective clutch (C) regulator valve 	<ul style="list-style-type: none"> INSPECT main control assembly for stuck valves or contamination. REFER to Main Control.
Clutch Plates	
<ul style="list-style-type: none"> Direct clutch (B) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the direct clutch assembly for damage. REPAIR as required. REFER to Direct Clutch Assembly.
<ul style="list-style-type: none"> Intermediate clutch (C) friction and steel plate — failure 	<ul style="list-style-type: none"> INSPECT the intermediate clutch assembly for damage. REPAIR as required. REFER to Intermediate Clutch Assembly.