Symptom Troubleshooting Index

Symptom	Probable cause(s)	Notes
When you turn the ignition switch to ON (II), the D indicator comes on and stays on in all shift lever positions, or it never comes on at all	• F-CAN communication line error • Gauge control module defective • PCM defective	• Check the F-CAN communication line for a DTC (see page 22-284). • Check the indicator drive circuit in the gauge control module by using the gauge control module self-diagnostic function (see page 22-274).
A/T gear position indicator does not come on while the shift lever is in that position	• F-CAN communication line error • Gauge control module defective • PCM defective • Transmission range switch defective	• Check the F-CAN communication line for a DTC (see page 22-284). • Check the indicator drive circuit in the gauge control module by using the gauge control module self-diagnostic function (see page 22-274). • Inspect the transmission range switch (see page 14-226).
Shift lever cannot be moved from P while pressing on the brake pedal	• Accelerator pedal position sensor circuit • Accelerator pedal position sensor defective • Brake pedal position switch circuit • Brake pedal position switch defective • Shift lock solenoid defective • Shift lock solenoid control circuit • Shift lock mechanism defective • Throttle body defective • Transmission range switch ATPP switch stuck OFF • Transmission range switch ATPP switch line open	• Inspect the APP sensor signal (see page 11-250). • Troubleshoot the shift lock system circuit (see page 14-237). • Test the shift lock solenoid (see page 14-240). • Inspect the transmission range switch (see page 14-226).
Ignition switch cannot be moved from ACCESSORY (I) to LOCK (0) (key is pushed in, the shift lever in P)	• Interlock control system circuit • Key interlock solenoid stuck ON • Park pin switch stuck ON • Transmission range switch	• Troubleshoot the key interlock system circuit (see page 22-80). • Inspect the transmission range switch (see page 14-226).
HDS does not communicate with the PCM	DLC circuit error	Troubleshoot the DLC circuit (see page 11-193).
Shift indicator does not work	• F-CAN communication line error • Gauge control module defective • PCM defective • Transmission range switch defective	• Check the F-CAN communication line for a DTC (see page 22-284). • Check the F-CAN communication line by using the gauge control module self-diagnostic function (see page 22-274). • Check the indicator drive circuit in the gauge control module by using the gauge control module self-diagnostic function (see page 22-274).
When you press the paddle shifter + (upshift switch) in D and S, the transmission does not upshift	A problem in the paddle shifter + (upshift switch) circuit	Check the paddle shifter + (upshift switch) circuit (see page 14-230).

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
When you press the paddle shifter — (downshift switch) in D and S, the transmission does not downshift	A problem in the paddle shifter — (downshift switch) circuit	Check the paddle shifter — (downshift switch) circuit (see page 14-231).
M indicator does not come on even when the paddle shifter + (upshift switch) or paddle shifter — (downshift switch) is operated in sequential sportshift mode	• F-CAN communication line error • Gauge control module defective • PCM defective	• Check the F-CAN communication line for a DTC (see page 22-284). • Check the indicator drive circuit in the gauge control module by using the gauge control module self-diagnostic function (see page 22-274).
Engine runs, but vehicle does not move in any gear	• Low ATF level • Shift cable broken or out of adjustment • Connection between shift cable and transmission or body is worn • ATF pump worn or binding • Regulator valve stuck or spring worn • ATF strainer clogged • Mainshaft worn or damaged • Final gears worn or damaged • Transmission-to-engine assembly error • Axle disengaged	• Check the ATF level, and check the ATF cooler lines for leaks and loose connections. If necessary, clean the ATF cooler lines. • Check for a loose shift cable at the shift lever and the transmission control lever. • Check the stall speed. • Check the line pressure. • Improper alignment of ATF pump and torque converter housing may cause the ATF pump to seize. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Be careful not to damage the torque converter housing when replacing the main ball bearing. You may also damage the ATF pump when you torque down the main valve body. This will cause the ATF pump to seize. • Install the main seal flush with the torque converter housing when replacing the main seal. If you push it into the torque converter housing until it bottoms out, it will block the fluid return passage and result in damage. • Check the regulator valve in the regulator valve body for free movement, and check the valve spring for wear and damage. • Check the ATF strainer for debris. If the strainer is clogged, find the damaged components that caused the debris. If no cause for contamination is found, replace the torque converter. • Inspect the differential pinion gears for wear. If the differential pinion gears are worn, replace the differential assembly, replace the ATF strainer, thoroughly clean the transmission, and clean the ATF cooler and cooler lines. • Replace the torque converter. • Inspect the countershaft and secondary shaft for wear and damage. • Check for a misinstalled transmission.

Symptom	Probable cause(s)	Notes
Vehicle moves in 2 and R, but not in D, D3, S, or 1	• 1st accumulator defective • 1st gears worn or damaged • 1st clutch defective	• Check the 1st clutch pressure. • Inspect the 1st accumulator piston, O-ring, and spring for wear and damage in the servo body. • Inspect the countershaft, secondary shaft, and 1st clutch for wear and damage. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage, and inspect the clutch wave-plate height. If the discs and plates are worn or damaged, replace them as a set. If the wave-plate height is out of tolerance, replace the wave-plate. If they are OK, adjust the clearance with the clutch end-plate.
Vehicle moves in D, D3, S, 1, and R, but not in 2, or in 2nd in S	• 2nd accumulator defective • 2nd gears worn or damaged • 2nd clutch defective	• Check the 2nd clutch pressure. • Inspect the 2nd accumulator piston, O-ring, and spring for wear and damage in the servo body. • Inspect the countershaft, secondary shaft, and 2nd clutch for wear and damage. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage, and inspect the clutch wave-plate height. If the discs and plates are worn or damaged, replace them as a set. If the wave-plate height is out of tolerance, replace the wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the 2nd clutch feed pipe. If the 2nd clutch feed pipe is scored, replace the end cover. • Replace the secondary shaft if the bushing for the 2nd clutch feed pipe is loose or damaged.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Vehicle moves in D, D3, S, 2, and 1, but not in R	• Shift solenoid valve D defective • Shift fork shaft stuck • Shift valve D defective • 5th/reverse accumulator defective • 5th clutch defective • Reverse gears worn or damaged	• Check for a stored DTC, and check for loose connections. • Test the shift solenoid valve function with the HDS. • Inspect the O-rings, and check the shift solenoid valve for seizure. • Check the 5th clutch pressure. • Check for a missing shift fork bolt on the shift fork shaft. • Inspect the servo valve O-ring. • Check the shift fork shaft detent for wear and damage. • Inspect the 5th accumulator piston, O-ring, and spring for wear and damage in the servo body. • Inspect the mainshaft and 5th clutch for wear and damage. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage, and inspect the clutch wave-plate height. If the discs and plates are worn or damaged, replace them as a set. If the wave-plate height is out of tolerance, replace the wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the reverse selector gear teeth chamfers, and inspect the engagement teeth chamfers of the countershaft 5th gear and reverse gear. Replace the reverse gears and the reverse selector if they are worn or damaged. If the transmission makes a clicking, grinding, or whirring noise, also replace the mainshaft 5th gear, reverse idler gear, and countershaft 5th gear.
Poor acceleration; engine revs up abnormally high when starting off in D, D3, S, 2, 1, and R; stall speed high in D, D3, S, 2, and 1 (D, D3, and S in 1st and 2nd)	• Low ATF level • Shift cable broken or out of adjustment • ATF pump worn or binding • Regulator valve stuck or spring worn • ATF strainer clogged • Torque converter check valve defective	• Check the line pressure. • Check the ATF level and check the ATF lines for leaks and loose connections. If necessary, clean the ATF lines. • Check for a loose shift cable at the shift lever and the transmission control lever. • Improper alignment of ATF pump and torque converter housing may cause the ATF pump to seize. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Check the ATF strainer for debris. If the strainer is clogged, find the damaged components that caused the debris. If no cause for contamination is found, replace the torque converter. • Inspect the differential pinion gears for wear. If the differential pinion gears are worn, replace the differential assembly, replace the ATF strainer, thoroughly clean the transmission, and clean the ATF cooler and ATF lines. • Check the torque converter check valve in the main valve body for free movement, and check the valve spring for wear and damage.

Symptom	Probable cause(s)	Notes
Poor acceleration; engine revs up abnormally high when starting off in D, D3, S, 2, and R; stall speed high when starting off in 2, and in 2nd in S	2nd clutch defective	• Check the 2nd clutch pressure. • Inspect the secondary shaft and 2nd clutch for wear and damage. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage, and inspect the clutch wave-plate height. If the discs and plates are worn or damaged, replace them as a set. If the wave-plate height is out of tolerance, replace the wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the 2nd clutch feed pipe. If the 2nd clutch feed pipe is scored, replace the end cover. • Replace the secondary shaft if the bushing for the 2nd clutch feed pipe is loose or damaged.
Poor acceleration; engine revs up abnormally high when starting off in D, D3, S, 2, 1, and R; stall speed high in R	• Shift cable broken or out of adjustment • 5th clutch defective	• Check for a loose shift cable at the shift lever and the transmission control lever. • Check the 5th clutch pressure. • Inspect the mainshaft and 5th clutch for wear and damage. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage, and inspect the clutch wave-plate height. If the discs and plates are worn or damaged, replace them as a set. If the wave-plate height is out of tolerance, replace the wave-plate. If they are OK, adjust the clearance with the clutch end-plate.
Poor acceleration; stall speed low in D, D3, S, 2, and 1 (D, D3, and S in 1st and 2nd)	• Shift solenoid valve D defective • Torque converter one-way clutch defective • Engine output low • Torque converter clutch piston defective • Lock-up shift valve defective	• Check for a stored DTC, and check for loose connections. • Test the shift solenoid valve function with the HDS. • Inspect the O-rings, and check the shift solenoid valve for seizure. • Replace the torque converter assembly. • Check the lock-up shift valve in the regulator valve body for free movement, and check the valve spring for wear and damage. • Check the engine control system.
Poor acceleration; stall speed low in R	• Torque converter one-way clutch defective • Engine output low • Torque converter clutch piston defective • Lock-up shift valve defective	• Check the engine control system. • Replace the torque converter assembly. • Check the lock-up shift valve in the regulator valve body for free movement, and check the valve spring for wear and damage.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Engine idle vibration	• Low ATF level • Shift solenoid valve D defective • Drive plate defective or transmission misassembled • Engine output low • Torque converter clutch piston defective • ATF pump worn or damaged • Lock-up shift valve defective • Misassembled engine or transmission mount	• Check the ATF level and check the ATF lines for leaks and loose connections. If necessary, clean the ATF lines. • Check for a stored DTC, and check for loose connections. • Test the shift solenoid valve function with the HDS. • Inspect the O-rings, and check the shift solenoid valve for seizure. • Check for a misinstalled/damaged drive plate, replace the drive plate if it is worn or damaged. • Check the engine control system. • Replace the torque converter assembly. • Check the line pressure. • Improper alignment of ATF pump and torque converter housing may cause the ATF pump to seize. The symptoms are mostly an rpm-related ticking noise or a high pitched squeak. • Check the lock-up shift valve in the regulator valve body for free movement, and check the valve spring for wear and damage. • Adjust the transmission and engine mounts.

Symptom	Probable cause(s)	Notes
Vehicle moves in N	• Excessive ATF • Foreign material in separator plate orifice • Relief valve defective • 1st clutch defective • 2nd clutch defective • 3rd clutch defective • 4th clutch defective • 5th clutch defective • Clearance between the clutch end-plate and the top disc is incorrect • Needle bearing seized, worn, or damaged • Thrust washer seized, worn, or damaged	• Check the ATF level, and drain the ATF if it is over-filled. • Check the 1st, 2nd, 3rd, 4th, and 5th clutch pressures. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check the ATF strainer for debris. If the strainer is clogged with particles of steel or aluminum, inspect the ATF pump. If the ATF pump is OK, find the damaged components that caused the debris. If no cause for contamination is found, replace the torque converter. • Check the relief valve in the main valve body for free movement, and check the valve spring for wear and damage. • Inspect the mainshaft, secondary shaft, 1st, 2nd, 3rd, 4th, and 5th clutches for wear and damage. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage, and inspect the clutch wave-plate height. If the discs and plates are worn or damaged, replace them as a set. If the wave-plate height is out of tolerance, replace the wave-plate. If they are OK, adjust the clearance with the clutch end-plate. • Inspect the 2nd, 3rd, and 4th clutch feed pipes. • If the 2nd clutch feed pipe is scored, replace the end cover. • If the 3rd or 4th clutch feed pipe is scored, replace it and the O-rings under the feed pipe flange. • Replace the secondary shaft if the bushing for the 2nd clutch feed pipe or 4th clutch feed pipe is loose or damaged. • Replace the mainshaft if the bushing for the 3rd clutch feed pipe is loose or damaged.

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Symptom Troubleshooting Index (cont'd)

Symptom	Probable cause(s)	Notes
Late shift after shifting from N to D, D3, and S, or excessive shock when shifted into D, D3, and S	• Shift solenoid valve D defective • A/T clutch pressure control solenoid valve A defective • A/T clutch pressure control solenoid valve B defective • A/T clutch pressure control solenoid valve C defective • Shift cable broken or out of adjustment • Connection between shift cable and transmission or body is worn • Input shaft (mainshaft) speed sensor defective • Output shaft (countershaft) speed sensor defective • ATF temperature sensor defective • Foreign material in separator plate orifice • Servo control valve defective • 1st accumulator defective • 1st check ball stuck • Lock-up shift valve defective • 1st clutch defective	• Check for a stored DTC, and check for loose connections. • Test the solenoid valve function with the HDS. • Inspect the A/T clutch pressure control solenoid valve body gasket, ATF feed pipes, and O-rings, for wear and damage. • Inspect the shift solenoid valve O-rings, and check for shift solenoid valve seizure. • Check for a loose shift cable at the shift lever and the transmission control lever. • Check the input shaft (mainshaft) speed sensor and output shaft (countershaft) speed sensor installation. • Inspect the sensor O-ring for wear and damage. • Check for a clogged orifice in the separator plate. If the orifice is clogged, remove it and clean the separator plate orifice. • Check the 1st clutch pressure. • Check the servo control valve in the main valve body for free movement, and check the valve spring for wear and damage. • Inspect the 1st accumulator piston, O-ring, and spring for wear and damage in the regulator valve body. • Check the 1st check ball for being stuck in the main valve body. • Check the lock-up shift valve in the regulator valve body for free movement, and check the valve spring for wear and damage. • Inspect the secondary shaft and 1st clutch for wear and damage. • Inspect the clutch piston, clutch piston check valve, and O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the clutch end-plate and the top disc. If the clearance is out of tolerance, inspect the clutch discs and plates for wear and damage, and inspect the clutch wave-plate height. If the discs and plates are worn or damaged, replace them as a set. If the wave-plate height is out of tolerance, replace the wave-plate. If they are OK, adjust the clearance with the clutch end-plate.