CVT System Symptom Troubleshooting Index

NOTE: Do an all DTC check with the HDS, and troubleshoot any DTCs first before following the repair procedures listed in the index.

When you turn the		
	 F-CAN communication line error 	Check the F-CAN communication line.
ignition switch to ON (II), or press the engine start/ stop button to select the ON mode, the D indicator comes on and stays on in all shift lever positions, or it never	 Gauge control module defective PCM defective 	 Check the A/T gear position indicator drive circuit in the gauge control module (tach) by using the gauge control module self-diagnostic function.
comes on at all A/T gear position	F-CAN communication line error	Check the F-CAN communication line.
indicator does not come		Check the A/T gear position indicator drive circuit in the
on with the shift lever in that position	 Gauge control module defective Transmission range switch 	gauge control module (tach) by using the gauge control
triat position	defective or out of adjustment	module self-diagnostic function.
	Shift cable broken or out of	 Inspect the transmission range switch.
	adjustment	 Check for a loose shift cable at the shift lever and the transmission control lever.
	PCM defective	transmission control level.
Shift lever cannot be moved from P while	 Shift lock solenoid defective 	 Inspect the APP sensor signal.
pressing on the brake	Shift lock solenoid control circuit	 Troubleshoot the shift lock system circuit.
pedal	 Shift lock mechanism defective 	 Test the shift lock solenoid.
	Brake switch circuit	 Inspect the transmission range switch.
	Brake switch defective	Reset the PCM.
	 Accelerator pedal position sensor circuit 	
	 Accelerator pedal position sensor defective 	
	Throttle body defective	
	 Transmission range switch ATPP switch stuck OFF 	
	 Transmission range switch ATPP switch line opened 	
	 Relative throttle position (TP) sensor value too high 	
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.
When you press the paddle shifter - (downshift switch) in D and S, the transmission does not upshift	A problem in the paddle shifter - (downshift switch) circuit	Check the paddle shifter - (downshift switch) circuit.
M indicator does not come on even though the paddle shifter is	F-CAN communication line error	Check the F-CAN communication line.
	Gauge control module defective	Check the F-CAN communication line by using the
operated in sequential	PCM defective	gauge control module self-diagnostic function.
sportshift mode.	Transmission range switch defective	 Check the indicator drive circuit in the gauge control module by using the gauge control module self-
		diagnostic function.

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Symptom	Probable cause(s)	Notes
HDS does not	 DLC circuit error 	Troubleshooting the DLC circuit.
communicate with the PCM	PCM defective	
Engine does not start	Shift cable broken or out of adjustment	 Check for a loose shift cable at the shift lever and the transmission control lever.
	Transmission range switch	 Inspect the transmission range switch.
	defective Torque converter assembly	 Inspect the torque converter assembly for wear and damage.
	defective • Drive plate defective	
Engine runs, but vehicle	Drive pulley, driven pulley, pulley	Check the drive pulley, the driven pulley, the pulley
does not move in any position	shaft, steel belt, and pulley related parts worn or damaged	shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the
	 Transmission fluid feed pipe worn, 	transmission housing assembly.
	damaged, or out of round Input shaft worn or damaged	 Check the transmission fluid feed pipe for wear, damage, and out of round.
	Secondary drive gear or secondary driven gear worn or damaged	 Inspect the input shaft assembly for wear and damage. If the input shaft is worn or damaged, replace it and also
	Final driven gear worn or damaged	check the related part of the input shaft assembly for wear and damage.
	Sun gear worn or damaged	Check the secondary drive gear, the secondary driven
	Control shaft assembly worn or damaged	gear, and the final driven gear for wear and damage. • Check the final driven gear for wear and damage.
	Control lever worn or damaged	Check the sun gear for wear and damage. Check the sun gear for wear and damage. If the sun
	Park pawl and pawl shaft worn or damaged	gear is worn or damaged, replace it and also check the planetary carrier pinion gears, the forward clutch, and the drive pulley shaft splines for wear and damage.
	Manual valve lever and lever pin worp or damaged.	Check the control shaft assembly for wear and damage.
	worn or damaged Transmission fluid pump worn,	Check the control lever for wear and damage.
	binding, or foreign material in transmission fluid pump	Check the park pawl and the pawl shaft for wear and damage. If the park pawl or the pawl shaft are worn or
	damaged, replace them and also check the park gear for wear and damage.	
	drive/driven sprocket worn or damaged	 Check the manual valve lever and the lever pin for wear and damage.
	Low transmission fluid (HCF-2) level	 Check the transmission fluid pump assembly for wear and damage. If the transmission fluid pump assembly is
	 Transmission fluid strainer or transmission fluid filter clogged 	 worn or damaged, replace it as an assembly. Check the transmission fluid pump drive chain and the transmission fluid pump drive/driven sprocket for wear
	Valve body defective	
	Transmission range switch	and damage.Check the transmission fluid (HCF-2) level.
	defective or out of adjustment	Check the transmission fluid (NOT-2) level. Check the transmission fluid strainer and the
	Torque converter assembly defective	transmission fluid filter for debris. If the transmission fluid strainer or the transmission fluid filter is clogged,
	Engine output low States shoft were as demanded.	find the damaged components that caused debris.
	Stator shaft worn or damaged Ayla damaged or worn	Check the valve body for wear and damage.
	Axle damaged or worn	Inspect the transmission range switch
		 Inspect the torque converter assembly for wear and damage.
		Check the stator shaft for wear and damage.

Symptom	Probable cause(s)	Notes
Vehicle does not move in	Forward clutch assembly defective	Inspect the clearance between the forward clutch end-
D and L	Reverse brake piston stuck	plate and the top disc.
	Sun gear worn or damaged	 Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the
	 Shift cable broken or out of adjustment 	clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake
	 Manual valve lever and lever pin worn or damaged 	discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If
	 Valve body defective 	they are OK, adjust the clearance with the brake end- plate.
	 Transmission range switch defective 	Check the sun gear for wear and damage. If the sun gear is worn or damaged, replace it and also check the
	Engine output low	planetary carrier pinion gears, the forward clutch, and
	 Stator shaft worn or damaged 	the drive pulley shaft splines for wear and damage.
	 Check for a loose shift cable at the shift lever and the transmission control lever. 	
		 Check the manual valve lever and the lever pin for wear and damage.
		Check the valve body for wear and damage.
		 Inspect the transmission range switch.
		Check the stator shaft for wear and damage.

Symptom	Probable cause(s)	Notes
Vehicle does not move in	Forward clutch assembly defective	Inspect the clearance between the forward clutch end-
R	Reverse brake defective	plate and the top disc.
	Reverse brake piston stuck	 Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the
	Planetary carrier worn or damaged	clearance between the brake end-plate and the top disc.
	 Sun gear worn or damaged 	If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and
	 Ring gear worn or damaged 	plates are worn or damaged, replace them as a set. If
	Thrust needle bearing on planetary carrier seized, worn, or damaged	they are OK, adjust the clearance with the brake end- plate.
	 Thrust washer on planetary carrier seized, worn, or damaged 	Check the planetary carrier for wear and damage. If the planetary carrier is worn or damaged, replace it and also
	 Shift cable broken or out of adjustment 	check the planetary carrier pinion gears, the reverse brake, and the drive pulley shaft splines for wear and damage.
	 Manual valve lever and lever pin worn or damaged 	Check the sun gear for wear and damage. If the sun gear is worn or damaged, replace it and also check the
	Valve body defective	planetary carrier pinion gears, the forward clutch, and
	 Transmission range switch defective 	 the drive pulley shaft splines for wear and damage. Check the ring gear for wear and damage. If the ring
Stator shaft worn or damaged	Stator shaft worn or damaged	gear is worn or damaged, replace it and also check the planetary carrier and the reverse brake for wear and damage.
		 Check the thrust needle bearing and the thrust washers on the planetary carrier for wear and damage. If the thrust needle bearing or the thrust washer are worn or damaged, replace them and adjust the clearance with the thrust shim.
		 Check for a loose shift cable at the shift lever and the transmission control lever.
		 Check the manual valve lever and the lever pin for wear and damage.
		Check the valve body for wear and damage.
		 Inspect the transmission range switch.
		 Check the stator shaft for wear and damage.
Engine stops when shifted to D from N	 Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged Reverse brake defective 	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly.
	 Reverse brake piston stuck Torque converter assembly defective Engine output low 	• Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate.
		 Inspect the torque converter assembly for wear and damage.

Symptom	Probable cause(s)	Notes
Engine stops when shifted to R from N	 Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged Forward clutch assembly defective Planetary carrier worn or damaged Thrust needle bearing on planetary carrier seized, worn, or damaged Thrust washer on planetary carrier seized, worn, or damaged Torque converter assembly defective Engine output low 	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly. Inspect the clearance between the forward clutch endplate and the top disc. Check the planetary carrier for wear and damage. If the planetary carrier is worn or damaged, replace it and also check the planetary carrier pinion gears, the reverse brake, and the drive pulley shaft splines for wear and damage. Check the thrust needle bearing and the thrust washers on the planetary carrier for wear and damage. If the thrust needle bearing or the thrust washer are worn or damaged, replace them and adjust the clearance with the thrust shim. Inspect the torque converter assembly for wear and
		damage.
No shift to higher ratio or lower ratio	 Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged Transmission fluid feed pipe worn, damaged, or out of round Transmission fluid pump worn, binding, or foreign material in transmission fluid pump Low transmission fluid (HCF-2) level Transmission fluid strainer or transmission fluid filter clogged Valve body defective Stator shaft worn or damaged Solenoid wire harness worn or damaged PCM defective 	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly. Check the transmission fluid feed pipe for wear, damage, and out of round. Check the transmission fluid pump assembly for wear and damage. If the transmission fluid pump assembly is worn or damaged, replace it as an assembly. Check the transmission fluid (HCF-2) level. Check the transmission fluid strainer and the transmission fluid filter for debris. If the transmission fluid strainer or the transmission fluid filter is clogged, find the damaged components that caused debris. Check the valve body for wear and damage. Check the stator shaft for wear and damage. Inspect the solenoid wire harness for open and short.
Poor acceleration	Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related	Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear
	parts worn or damaged Transmission fluid feed pipe worn, damaged, or out of round Transmission fluid pump worn, binding, or foreign material in	 and damage. If there are worn or damaged, replace the transmission housing assembly. Check the transmission fluid feed pipe for wear, damage, and out of round. Check the transmission fluid pump assembly for wear
	transmission fluid pump	and damage. If the transmission fluid pump assembly is
	Valve body defective	worn or damaged, replace it as an assembly. • Check the valve body for wear and damage.
	CVT drive pulley speed sensor defective	Check the CVT drive pulley speed sensor for wear and
	Torque converter assembly defective	damage, and also check the O-ring for wear and damage.
	Engine output low	 Inspect the torque converter assembly for wear and damage.
	Stator shaft worn or damaged	Check the stator shaft for wear and damage.
	 Solenoid wire harness worn or damaged 	Inspect the solenoid wire harness for open and short.
	 PCM defective 	

Symptom	Probable cause(s)	Notes
Engine revs up abnormally high while driving, and no acceleration	 Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged Transmission fluid feed pipe worn, damaged, or out of round Forward clutch assembly defective Reverse brake defective Reverse brake piston stuck Transmission fluid pump worn, binding, or foreign material in transmission fluid pump Transmission fluid pump drive chain or transmission fluid pump drive/driven sprocket worn or damaged Valve body defective Stator shaft worn or damaged Solenoid wire harness worn or damaged PCM defective 	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly. Check the transmission fluid feed pipe for wear, damage, and out of round. Inspect the clearance between the forward clutch endplate and the top disc. Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate. Check the transmission fluid pump assembly for wear and damage. If the transmission fluid pump assembly is worn or damaged, replace it as an assembly. Check the transmission fluid pump drive chain and the transmission fluid pump drive/driven sprocket for wear and damage. Check the valve body for wear and damage. Check the stator shaft for wear and damage.
		 Inspect the solenoid wire harness for open and short.
Excessive shock when accelerating and decelerating	 Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged Transmission fluid feed pipe worn, damaged, or out of round Forward clutch assembly defective Reverse brake defective Reverse brake piston stuck Low transmission fluid (HCF-2) level Transmission fluid (HCF-2) deteriorated Valve body defective Torque converter assembly defective Stator shaft worn or damaged PCM defective 	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly. Check the transmission fluid feed pipe for wear, damage, and out of round. Inspect the clearance between the forward clutch endplate and the top disc. Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate. Check the transmission fluid (HCF-2) level. Check the transmission fluid (HCF-2) condition. If necessary, replace the transmission fluid (HCF-2). Check the valve body for wear and damage. Inspect the torque converter assembly for wear and damage. Check the stator shaft for wear and damage.

Symptom	Probable cause(s)	Notes
No engine braking	 Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged Transmission fluid feed pipe worn, damaged, or out of round 	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly. Check the transmission fluid feed pipe for wear,
	Valve body defective	damage, and out of round.
	 Stator shaft worn or damaged 	Check the valve body for wear and damage.
	 Solenoid wire harness worn or damaged 	 Check the stator shaft for wear and damage. Inspect the solenoid wire harness for open and short.
	PCM defective	
Vehicle does not creep on a flat road in D, S, and L	Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly.
	Transmission fluid feed pipe worn, damaged, or out of round	Check the transmission fluid feed pipe for wear, damage, and out of round.
	 Transmission fluid pump worn, binding, or foreign material in transmission fluid pump 	Check the transmission fluid pump assembly for wear and damage. If the transmission fluid pump assembly is
	 Low transmission fluid (HCF-2) level 	 worn or damaged, replace it as an assembly. Check the transmission fluid (HCF-2) level.
	 Transmission fluid strainer or transmission fluid filter clogged 	 Check the transmission fluid strainer and the transmission fluid filter for debris. If the transmission
	Valve body defective	fluid strainer or the transmission fluid filter is clogged, find the damaged components that caused debris.
	 CVT drive pulley speed sensor defective 	Check the valve body for wear and damage.
	Stator shaft worn or damaged	Check the stator shaft for wear and damage.
	 Solenoid wire harness worn or 	Inspect the solenoid wire harness for open and short.
	damaged	 Inspect the torque converter assembly for wear and damage.
	 Torque converter assembly defective 	
	Engine output low	
	PCM defective	
Vehicle moves in N, shift	Forward clutch assembly defective	Inspect the clearance between the forward clutch end-
cable is properly adjusted	 Reverse brake defective 	plate and the top disc.
	 Reverse brake piston stuck 	 Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the
	 Reverse brake return springs/ retainer worn or damaged 	clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake
	 Input shaft thrust needle bearing seized, worn or damaged 	discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If
	 Manual valve lever and lever pin worn or damaged 	they are OK, adjust the clearance with the brake end- plate.
	Stator shaft worn or damaged	 Check the manual valve lever and the lever pin for wear and damage.
		 Check the stator shaft for wear and damage.

Symptom	Probable cause(s)	Notes
Late shift after shifting from N to D, and return	Forward clutch assembly defective	Inspect the clearance between the forward clutch end- Inspect the clearance between the clearance betwe
to N	 Shift cable broken or out of adjustment 	 plate and the top disc. Check for a loose shift cable at the shift lever and the
	Manual valve lever and lever pin	transmission control lever.
	worn or damaged	 Check the manual valve lever and the lever pin for wear and damage.
	Low transmission fluid (HCF-2) level	Check the transmission fluid (HCF-2) level.
	 Transmission fluid strainer or transmission fluid filter clogged 	 Check the transmission fluid strainer and the transmission fluid filter for debris. If the transmission
	 Valve body defective 	fluid strainer or the transmission fluid filter is clogged,
	 Transmission fluid feed pipe worn, damaged, or out of round 	find the damaged components that caused debris. • Check the valve body for wear and damage.
	Transmission range switch	 Check the transmission fluid feed pipe for wear, damage, and out of round.
	defectiveStator shaft worn or damaged	 Inspect the transmission range switch.
	Torque converter turbine speed	Check the stator shaft for wear and damage.
	sensor defective	Check the torque converter turbine speed sensor for
	PCM defective	wear and damage, and also check the O-ring for wear and damage.
Late shift after shifting from N to R, and return	 Reverse brake defective 	• Inspect the reverse brake piston and the O-rings. Check
to N	 Reverse brake piston stuck 	the spring retainer for wear and damage. <u>Inspect the</u> clearance between the brake end-plate and the top disc.
	 Shift cable broken or out of adjustment 	If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and
	Manual valve lever and lever pin worn or damaged	plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-
	 Low transmission fluid (HCF-2) 	plate.
	level	 Check for a loose shift cable at the shift lever and the transmission control lever.
	 Transmission fluid strainer or transmission fluid filter clogged 	 Check the manual valve lever and the lever pin for wear and damage.
	Valve body defective	 Check the transmission fluid (HCF-2) level.
	 Transmission fluid feed pipe worn, damaged, or out of round 	Check the transmission fluid strainer and the transmission fluid filter for debris. If the transmission
	 Transmission range switch defective 	fluid strainer or the transmission fluid filter is clogged, find the damaged components that caused debris.
	Stator shaft worn or damaged	Check the valve body for wear and damage.
	 Torque converter turbine speed sensor defective 	 Check the transmission fluid feed pipe for wear, damage, and out of round.
	 PCM defective 	 Inspect the transmission range switch.
		Check the stator shaft for wear and damage.
		 Check the torque converter turbine speed sensor for wear and damage, and also check the O-ring for wear and damage.

Symptom	Probable cause(s)	Notes
Unstable engine speed	 Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged Transmission fluid feed pipe worn, damaged, or out of round Forward clutch assembly defective Reverse brake defective Transmission fluid pump worn, binding, or foreign material in transmission fluid pump Low transmission fluid (HCF-2) level Transmission fluid strainer or transmission fluid filter clogged Transmission fluid (HCF-2) deteriorated Valve body defective CVT drive pulley pressure control solenoid valve defective CVT clutch pressure control solenoid valve defective CVT clutch pressure control solenoid valve defective CVT lock-up clutch control solenoid valve defective Shift solenoid valve B defective Torque converter turbine speed sensor defective PCM defective 	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly. Check the transmission fluid feed pipe for wear, damage, and out of round. Inspect the clearance between the forward clutch endplate and the top disc. Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate. Check the transmission fluid pump assembly for wear and damage. If the transmission fluid pump assembly is worn or damaged, replace it as an assembly. Check the transmission fluid (HCF-2) level. Check the transmission fluid strainer and the transmission fluid filter for debris. If the transmission fluid strainer or the transmission fluid filter is clogged, find the damaged components that caused debris. Check the valve body for wear and damage. Inspect the CVT drive pulley pressure control solenoid valve. Inspect the CVT driven pulley pressure control solenoid valve. Inspect the CVT clutch pressure control solenoid valve. Inspect shift solenoid valve B. Check the torque converter turbine speed sensor for wear and damage, and also check the O-ring for wear
Excessive shock when starting off	 Transmission fluid feed pipe worn, damaged, or out of round Forward clutch assembly defective Reverse brake defective Reverse brake piston stuck Low transmission fluid (HCF-2) level Transmission fluid strainer or transmission fluid filter clogged Transmission fluid (HCF-2) deteriorated Valve body defective PCM defective 	 Check the transmission fluid feed pipe for wear, damage, and out of round. Inspect the clearance between the forward clutch endplate and the top disc. Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake endplate. Check the transmission fluid (HCF-2) level. Check the transmission fluid strainer and the transmission fluid filter for debris. If the transmission fluid strainer or the transmission fluid filter is clogged, find the damaged components that caused debris. Check the transmission fluid (HCF-2) condition. If necessary, replace the transmission fluid (HCF-2). Check the valve body for wear and damage.

Symptom	Probable cause(s)	Notes
Vibration in all positions	 Input shaft worn or damaged Torque converter turbine speed sensor defective 	 Inspect the input shaft assembly for wear and damage. If the input shaft is worn or damaged, replace it and also check the related part of the input shaft assembly for wear and damage.
	Engine output low	 Check the torque converter turbine speed sensor for wear and damage, and also check the O-ring for wear and damage.
Excessive idle vibration in D, S, L, and R	 Drive pulley, driven pulley, pulley shaft, steel belt, and pulley related parts worn or damaged Forward clutch assembly defective Input shaft worn or damaged 	 Check the drive pulley, the driven pulley, the pulley shafts, the steel belt, and pulley related parts for wear and damage. If there are worn or damaged, replace the transmission housing assembly. Inspect the clearance between the forward clutch endplate and the top disc.
	 Reverse brake defective Reverse brake piston stuck Thrust needle bearing on planetary carrier seized, worn, or damaged 	 Inspect the input shaft assembly for wear and damage. If the input shaft is worn or damaged, replace it and also check the related part of the input shaft assembly for wear and damage.
	 Valve body defective Transmission fluid feed pipe worn, damaged, or out of round Torque converter turbine speed sensor defective Engine output low 	• Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end- plate.
	Solenoid wire harness worn or damagedPCM defective	 Check the thrust needle bearing and the thrust washers on the planetary carrier for wear and damage. If the thrust needle bearing or the thrust washer are worn or damaged, replace them and adjust the clearance with the thrust shim.
		Check the valve body for wear and damage.
		 Check the transmission fluid feed pipe for wear, damage, and out of round.
		 Check the torque converter turbine speed sensor for wear and damage, and also check the O-ring for wear and damage.
		 Inspect the solenoid wire harness for open and short.
Excessive idle vibration in N and P	 Forward clutch assembly defective Input shaft worn or damaged Reverse brake defective 	 Inspect the clearance between the forward clutch end-plate and the top disc. Inspect the input shaft assembly for wear and damage.
	Torque converter turbine speed sensor defective	If the input shaft is worn or damaged, replace it and also check the related part of the input shaft assembly for wear and damage.
	Engine output lowPCM defective	• Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end- plate.
		 Check the torque converter turbine speed sensor for wear and damage, and also check the O-ring for wear and damage.

Symptom	Probable cause(s)	Notes
Noise from transmission in N and P	Forward clutch assembly defective	Inspect the clearance between the forward clutch end-
	 Input shaft worn or damaged 	plate and the top disc.
	Reverse brake defective	 Inspect the input shaft assembly for wear and damage. If the input shaft is worn or damaged, replace it and also
	Planetary carrier worn or damaged	check the related part of the input shaft assembly for
	Sun gear worn or damaged	wear and damage.
	Ring gear worn or damaged	 Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the
	 Thrust needle bearing on planetary carrier seized, worn, or damaged 	clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake
	 Thrust washer on planetary carrier seized, worn, or damaged 	discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If
	 Transmission fluid pump worn, binding, or foreign material in transmission fluid pump PCM defective 	they are OK, adjust the clearance with the brake end- plate.
		 Check the planetary carrier for wear and damage. If the planetary carrier is worn or damaged, replace it and als check the planetary carrier pinion gears, the reverse brake, and the drive pulley shaft splines for wear and damage.
		 Check the sun gear for wear and damage. If the sun gear is worn or damaged, replace it and also check the planetary carrier pinion gears, the forward clutch, and the drive pulley shaft splines for wear and damage.
		 Check the ring gear for wear and damage. If the ring gear is worn or damaged, replace it and also check the planetary carrier and the reverse brake for wear and damage.
		 Check the thrust needle bearing and the thrust washers on the planetary carrier for wear and damage. If the thrust needle bearing or the thrust washer are worn or damaged, replace them and adjust the clearance with the thrust shim.
		 Check the transmission fluid pump assembly for wear and damage. If the transmission fluid pump assembly is worn or damaged, replace it as an assembly.

Symptom	Probable cause(s)	Notes
Stall speed high	Forward clutch assembly defective Input shaft worn or damaged Reverse brake defective Transmission fluid pump worn, binding, or foreign material in transmission fluid pump Low transmission fluid (HCF-2) level Transmission fluid (HCF-2) deteriorated Valve body defective Transmission fluid feed pipe worn, damaged, or out of round Torque converter turbine speed sensor defective Stator shaft worn or damaged PCM defective	 Inspect the clearance between the forward clutch endplate and the top disc. Inspect the input shaft assembly for wear and damage. If the input shaft is worn or damaged, replace it and also check the related part of the input shaft assembly for wear and damage. Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake endplate. Check the transmission fluid pump assembly for wear and damage. If the transmission fluid pump assembly is worn or damaged, replace it as an assembly. Check the transmission fluid (HCF-2) level. Check the transmission fluid (HCF-2) level. Check the transmission fluid (HCF-2) ondition. If necessary, replace the transmission fluid (HCF-2). Check the valve body for wear and damage. Check the transmission fluid feed pipe for wear, damage, and out of round. Check the torque converter turbine speed sensor for wear and damage, and also check the O-ring for wear and damage.
Stall speed low	 Valve body defective Transmission fluid feed pipe worn, damaged, or out of round Torque converter turbine speed sensor defective Engine output low Stator shaft worn or damaged PCM defective 	 Check the stator shaft for wear and damage. Check the valve body for wear and damage. Check the transmission fluid feed pipe for wear, damage, and out of round. Check the torque converter turbine speed sensor for wear and damage, and also check the O-ring for wear and damage. Check the stator shaft for wear and damage.
Judder when starting off	 Transmission fluid pump worn, binding, or foreign material in transmission fluid pump Low transmission fluid (HCF-2) level Transmission fluid strainer or transmission fluid filter clogged Transmission fluid (HCF-2) deteriorated Valve body defective Transmission fluid feed pipe worn, damaged, or out of round 	 Check the transmission fluid pump assembly for wear and damage. If the transmission fluid pump assembly is worn or damaged, replace it as an assembly. Check the transmission fluid (HCF-2) level. Check the transmission fluid strainer and the transmission fluid filter for debris. If the transmission fluid strainer or the transmission fluid filter is clogged, find the damaged components that caused debris. Check the transmission fluid (HCF-2) condition. If necessary, replace the transmission fluid (HCF-2). Check the valve body for wear and damage. Check the transmission fluid feed pipe for wear, damage, and out of round.

Symptom	Probable cause(s)	Notes
Noise from transmission in D, S, and L	 Input shaft worn or damaged Secondary drive gear or secondary driven gear worn or damaged Final driven gear worn or damaged Control shaft assembly worn or damaged Park pawl and pawl shaft worn or damaged 	 Inspect the input shaft assembly for wear and damage. If the input shaft is worn or damaged, replace it and also check the related part of the input shaft assembly for wear and damage. Check the secondary drive gear, the secondary driven gear, and the final driven gear for wear and damage. Check the final driven gear for wear and damage. Check the control shaft assembly for wear and damage. Check the park pawl and the pawl shaft for wear and damage. If the park pawl or the pawl shaft are worn or damaged, replace them and also check the park gear for wear and damage.
Noise from transmission in R	 Input shaft worn or damaged Reverse brake defective Reverse brake piston stuck Reverse brake return springs/retainer worn or damaged Input shaft thrust needle bearing seized, worn, or damaged Planetary carrier worn or damaged Sun gear worn or damaged Ring gear worn or damaged Thrust needle bearing on planetary carrier seized, worn, or damaged Thrust washer on planetary carrier seized, worn, or damaged Control shaft assembly worn or damaged Park pawl and pawl shaft worn or damaged 	 Inspect the input shaft assembly for wear and damage. If the input shaft is worn or damaged, replace it and also check the related part of the input shaft assembly for wear and damage. Inspect the reverse brake piston and the O-rings. Check the spring retainer for wear and damage. Inspect the clearance between the brake end-plate and the top disc. If the clearance is out of tolerance, inspect the brake discs and plates for wear and damage. If the discs and plates are worn or damaged, replace them as a set. If they are OK, adjust the clearance with the brake end-plate. Check the planetary carrier for wear and damage. If the planetary carrier is worn or damaged, replace it and also check the planetary carrier pinion gears, the reverse brake, and the drive pulley shaft splines for wear and damage. Check the sun gear for wear and damage. If the sun gear is worn or damaged, replace it and also check the planetary carrier pinion gears, the forward clutch, and the drive pulley shaft splines for wear and damage. Check the ring gear for wear and damage. If the ring gear is worn or damaged, replace it and also check the planetary carrier and the reverse brake for wear and damage. Check the thrust needle bearing and the thrust washers on the planetary carrier for wear and damage. If the thrust needle bearing or the thrust washer are worn or damaged, replace them and adjust the clearance with the thrust shim. Check the park pawl and the pawl shaft for wear and damage. If the park pawl or the pawl shaft are worn or damaged, replace them and also check the park gear for wear and damage.

Symptom	Probable cause(s)	Notes
Shift lever does not operate smoothly	 Control shaft assembly worn or damaged 	Check the control shaft assembly for wear and damage.
		Check the control lever for wear and damage.
	 Control lever worn or damaged Park pawl and pawl shaft worn or damaged 	 Check the park pawl and the pawl shaft for wear and damage. If the park pawl or the pawl shaft are worn or damaged, replace them and also check the park gear
	 Shift cable broken or out of adjustment Manual valve lever and lever pin worn or damaged Transmission range switch 	 for wear and damage. Check for a loose shift cable at the shift lever and the transmission control lever. Check the manual valve lever and the lever pin for wear and damage.
	defective	 Inspect the transmission range switch.
	Stator shaft worn or damaged	 Check the stator shaft for wear and damage.
Transmission will not shift into P, or transmission cannot shift out of P	 Control shaft assembly worn or damaged Control lever worn or damaged Park pawl and pawl shaft worn or damaged Parking gear worn or damaged Shift cable broken or out of adjustment Manual valve lever and lever pin worn or damaged Valve body defective Transmission range switch defective Stator shaft worn or damaged PCM defective 	 Check the control shaft assembly for wear and damage. Check the control lever for wear and damage. Check the park pawl and the pawl shaft for wear and damage. If the park pawl or the pawl shaft are worn or damaged, replace them and also check the park gear for wear and damage. Check the parking gear for wear and damage. Check for a loose shift cable at the shift lever and the transmission control lever. Check the manual valve lever and the lever pin for wear and damage. Check the valve body for wear and damage. Inspect the transmission range switch. Check the stator shaft for wear and damage.
A/T gear position indicator does not indicate shift lever positions	Control shaft assembly worn or damaged Shift cable broken or out of adjustment Transmission range switch defective	 Check the control shaft assembly for wear and damage. Check for a loose shift cable at the shift lever and the transmission control lever. Inspect the transmission range switch.

PCM defective