

9. General Diagnostic Table

Symptom	Problem parts																														
	Inhibitor switch	Control module	Vehicle speed sensor 1	Vehicle speed sensor 2	Select cable	Select lever	FWD switch	Starter motor and harness	Throttle position sensor	Diagnosis switch	Accumulator ("N" — "D")	Accumulator (2A)	Accumulator (4A)	Accumulator (3R)	ATF temperature sensor	Strainer	Duty solenoid A	Duty solenoid B	Shift solenoid 1	Shift solenoid 2	Shift solenoid 3	Control valve	Detent spring	Manual plate	Transfer clutch	Transfer valve	Transfer pipe	Duty solenoid C	Forward clutch		
Starter does not rotate when select lever is in "P" or "N."; starter rotates when select lever is "R", "D", "3" or "2."	X				X	X		X																							
Abnormal noise when select lever is in "P" or "N."																X													X		
Hissing noise occurs during standing starts.																X															
Noise occurs while driving in "D ₁ " range.																															
Noise occurs while driving in "D ₂ " range.																															
Noise occurs while driving in "D ₃ " range.																															
Noise occurs while driving in "D ₄ " range.																															
Engine stalls while shifting from one range to another.																						X									
Vehicle moves when select lever is in "N."																													X		
Shock occurs when select lever is moved from "N" to "D."		X									X											X									
Excessive time lag occurs when select lever is moved from "N" to "D."																						X							X		
Shock occurs when select lever is moved from "N" to "R."		X										X										X									
Excessive time lag occurs when select lever is moved from "N" to "R."																						X									
Vehicle does not start in any shift range (engine revving up).																X						X									
Vehicle does not start in any shift range (engine stall).																															
Vehicle does not start in "R" range only (engine revving up).					X	X																X									
Vehicle does not start in "R" range only (engine stall).																														X	
Vehicle does not start in "D" or "3" range (engine revving up).																														X	
Vehicle does not start in "D", "3" or "2" range (engine revving up).																														X	
Vehicle does not start in "D", "3" or "2" range (engine stall).																															
Vehicle starts in "R" range only (engine revving up).																						X									
Acceleration during standing starts is poor (high stall rpm).																						X								X	
Acceleration during standing starts is poor (low stall rpm).																															
Acceleration is poor when select lever is in "D", "3" or "2" range (normal stall rpm).		X																				X									
Acceleration is poor when select lever is in "R" (normal stall rpm).																						X									
No shift occurs from 1st to 2nd gear.		X	X	X					X											X	X	X									
No shift occurs from 2nd to 3rd gear.		X																				X									
No shift occurs from 3rd to 4th gear.		X											X	X								X	X								
No "kick-down" shifts occur.		X							X																						
Engine brake is not effected when select lever is in "3" range.	X	X							X													X									

30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	Problem parts	Symptom
																													Starter does not rotate when select lever is in "P" or "N."; starter rotates when select lever is "R", "D", "3" or "2."	
							X												X					X				Abnormal noise when select lever is in "P" or "N."		
																								X				Hissing noise occurs during standing starts.		
					X											X	X								X			Noise occurs while driving in "D ₁ " range.		
					X											X	X								X			Noise occurs while driving in "D ₂ " range.		
					X											X	X								X			Noise occurs while driving in "D ₃ " range.		
					X											X	X							X				Noise occurs while driving in "D ₄ " range.		
																					X				X			Engine stalls while shifting from one range to another.		
																												Vehicle moves when select lever is in "N."		
																							X					Shock occurs when select lever is moved from "N" to "D."		
																							X					Excessive time lag occurs when select lever is moved from "N" to "D."		
																							X					Shock occurs when select lever is moved from "N" to "R."		
									X	X																		Excessive time lag occurs when select lever is moved from "N" to "R."		
X	X	X	X			X									X	X	X		X					X				Vehicle does not start in any shift range (engine revving up).		
																										X		Vehicle does not start in any shift range (engine stall).		
									X	X																		Vehicle does not start in "R" range only (engine revving up).		
								X								X												Vehicle does not start in "R" range only (engine stall).		
										X																		Vehicle does not start in "D" or "3" range (engine revving up).		
											X																	Vehicle does not start in "D", "3" or "2" range (engine revving up).		
											X																	Vehicle does not start in "D", "3" or "2" range (engine stall).		
											X														X			Vehicle starts in "R" range only (engine revving up).		
											X														X			Acceleration during standing starts is poor (high stall rpm).		
							X												X						X			Acceleration during standing starts is poor (low stall rpm).		
							X	X									X											Acceleration is poor when select lever is in "D", "3" or "2" range (normal stall rpm).		
X							X	X									X											Acceleration is poor when select lever is in "R" (normal stall rpm).		
								X																				No shift occurs from 1st to 2nd gear.		
								X				X																No shift occurs from 2nd to 3rd gear.		
								X																				No shift occurs from 3rd to 4th gear.		
																												No "kick-down" shifts occur.		
																												Engine brake is not effected when select lever is in "3" range.		

Symptom	Problem parts																												
	Inhibitor switch	Control module	Vehicle speed sensor 1	Vehicle speed sensor 2	Select cable	Select lever	FWD switch	Starter motor and harness	Throttle position sensor	Diagnosis switch	Accumulator ("N" — "D")	Accumulator (2A)	Accumulator (4A)	Accumulator (3R)	ATF temperature sensor	Strainer	Duty solenoid A	Duty solenoid B	Shift solenoid 1	Shift solenoid 2	Shift solenoid 3	Control valve	Detent spring	Manual plate	Transfer clutch	Transfer valve	Transfer pipe	Duty solenoid C	Forward clutch
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Engine brake is not effected when select lever is in "3" or "2" range.																													
Engine brake is not effected when select lever is in "1" range.																							X						
Shift characteristics are erroneous.	X	X	X	X					X													X							
No lock-up occurs.		X							X						X							X							
Vehicle cannot be set in "D" range power mode.		X							X																				
"D" range power mode cannot be released.		X							X						X														
Parking brake is not effected.					X	X																							
Shift lever cannot be moved or is hard to move from "P" range.					X	X																							
Select lever is hard to move.					X	X																		X	X				
Select lever is too light to move (unreasonable resistance).																							X	X					
ATF spurts out.																													
Differential oil spurts out.																													
Differential oil level changes excessively.																													
Odor is produced from oil supply pipe.																										X			X
Shock occurs when select lever is moved from "1" to "2" range.		X							X			X			X		X					X							
Slippage occurs when select lever is moved from "1" to "2" range.		X							X			X			X		X					X							
Shock occurs when select lever is moved from "2" to "3" range.		X							X				X	X	X		X					X							
Slippage occurs when select lever is moved from "2" to "3" range.		X							X				X	X	X		X					X							
Shock occurs when select lever is moved from "3" to "4" range.		X							X			X	X	X	X		X					X							
Slippage occurs when select lever is moved from "3" to "4" range.		X							X			X	X	X	X		X					X							
Shock occurs when select lever is moved from "3" to "2" range.		X							X						X		X					X							
Shock occurs when select lever is moved from "D" to "1" range.		X							X						X		X					X							
Shock occurs when select lever is moved from "2" to "1" range.		X							X						X		X					X							
Shock occurs when accelerator pedal is released at medium speeds.		X							X						X		X					X							
Vibration occurs during straight-forward operation.		X																	X										
Select lever slips out of position during acceleration or while driving on rough terrain.					X	X																	X	X					
Vibration occurs during turns (tight corner "braking" phenomenon).		X	X	X					X						X										X	X		X	X
Front wheel slippage occurs during standing starts.		X		X			X		X						X							X			X	X	X	X	X
Vehicle is not set in FWD mode.		X					X																		X	X		X	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	Problem parts	Symptom
X																													Engine brake is not effected when select lever is in "3" or "2" range.	
									X																				Engine brake is not effected when select lever is in "1" range.	
																													Shift characteristics are erroneous.	
																					X						X		No lock-up occurs.	
																													Vehicle cannot be set in "D" range power mode.	
																													"D" range power mode cannot be released.	
																											X		Parking brake is not effected.	
																											X		Shift lever cannot be moved or is hard to move from "P" range.	
																													Select lever is hard to move.	
																													Select lever is too light to move (unreasonable resistance).	
																								X					ATF spurts out.	
																									X				Differential oil spurts out.	
					X									X															Differential oil level changes excessively.	
X							X	X	X	X											X		X						Odor is produced from oil supply pipe.	
								X															X						Shock occurs when select lever is moved from "1" to "2" range.	
								X																					Slippage occurs when select lever is moved from "1" to "2" range.	
							X	X															X			X			Shock occurs when select lever is moved from "2" to "3" range.	
							X	X																					Slippage occurs when select lever is moved from "2" to "3" range.	
X								X																X			X		Shock occurs when select lever is moved from "3" to "4" range.	
								X																					Slippage occurs when select lever is moved from "3" to "4" range.	
X								X																	X				Shock occurs when select lever is moved from "3" to "2" range.	
																									X				Shock occurs when select lever is moved from "D" to "1" range.	
									X																				Shock occurs when select lever is moved from "2" to "1" range.	
																										X			Shock occurs when accelerator pedal is released at medium speeds.	
																						X	X						Vibration occurs during straight-forward operation.	
																													Select lever slips out of position during acceleration or while driving on rough terrain.	
																											X		Vibration occurs during turns (tight corner "braking" phenomenon).	
																													Front wheel slippage occurs during standing starts.	
																													Vehicle is not set in FWD mode.	