

MATRIX CHART OF PROBLEM SYMPTOMS

If a normal code is displayed during the diagnostic code check but the trouble still occurs, check the circuits for each symptom in the order given in the charts shown on next page and proceed to the page given for troubleshooting.

The Matrix Chart is divided into 3 chapters.

Chapter 1: Electronic Circuit Matrix Chart

Chapter 2: On-vehicle Repair Matrix Chart

Chapter 3: Off-vehicle Repair Matrix Chart

In troubleshooting, check Chapter 1 first. If instructions are given in Chapter 1 to proceed to Chapter 2 or 3, proceed to it.

1. If the instruction "Proceed to next circuit inspection shown on matrix chart" is given in the flow chart for each circuit, proceed to the circuit with the next highest number in the table to continue the check.
2. If the trouble still occurs even though there are no abnormalities in any of the other circuits, then check or replace the Engine & ECT ECU.

Chapter 1. Electronic Circuit

Symptom	Suspect Area					
	See Page					
Vehicle does not move in any forward range and reverse range						
Vehicle does not move in particular range or ranges						
No up-shift	1st → 2nd	3		4	1	2
	2nd → 3rd	3		4	1	2
	3rd → O/D	3		4	2	5
	O/D → 3rd	3		4	1	2
No down-shift	3rd → 2nd	3		4	1	2
	2nd → 1st	3		4	1	2
No lockup		3		4	1	2
No lockup off		3		4	1	2
Shift point too high or too low		3		4		1
Upshifts to 2nd while in L range Upshifts to 3rd while in L range						
Upshifts to O/D from 3rd while O/D switch is OFF						
Upshifts to O/D from 3rd while engine is cold						
Harsh engagement	N → D		2		1	3 4
	Lockup	3		4	1	2
	Any driving range	5	2	6	1	3 4
Slip or Shudder	Forward and reverse Particular range					
No engine braking						
Poor acceleration		3		4	5 6	2
No kickdown		3			4	2
No pattern select						
Large shift shock or Engine stalls when starting off or stopping.					1	

										Neutral start switch circuit	AT-100	
										Kickdown switch circuit	AT-98	
										Stop light switch circuit	AT-102	
										Pattern select switch circuit	AT-104	
										O/D switch O/D OFF indicator light circuit	AT-106	
										O/D cancel signal circuit	AT-110	
										Water temperature switch circuit	AT-68	
										Engine & ECT ECU	IN-32	
									1	On-Vehicle repair matrix chart	AT-68	
									2	OFF-Vehicle repair matrix chart	AT-70	
6										8	5	7
6										8	5	7
6				1	7	8	11	9	10			
							6	5	-			
							6	5	-			
							7	5	6			
7	6	5				8	11	9	10			
		5				8	6	7				
						5	-	-				
1					1	2	-	-				
						2	-	-				
						4	2	3				
5						8	6	7				
						7	5	6				
						9	7	8				
							1	2				
								2				
								1	2			
								1	2			
	1					8	-	7				
	1					6	5	-				
			1			2	-	-				
		2				4	-	3				

Chapter 2. On-Vehicle Repair (*: A340E, A341E AUTOMATIC TRANSMISSION Repair Manual Pub No. RM235U)

See page		AT-50	AT-50	AT-19	AT-21	AT-80	AT-82	AT-85	AT-82
Suspect Area		Throttle cable	Transmission control rod	Oil strainer	Parking lock pawl	Manual valve	Reverse control valve	1-2 shift valve	2-3 shift valve
Symptom									
Vehicle does not move in any forward range and reverse range		1	2		4	3			
Vehicle does not move in R range							1		
Vehicle does not move in particular range or ranges (except R range)									
No up-shift	1st → 2nd							1	
	2nd → 3rd								1
	3rd → O/D								
No down-shift	O/D → 3rd								
	3rd → 2nd								1
	2nd → 1st						1		
No lockup or No lockup off									
Harsh engagement	N → D								
	Lockup								
	N → R								
	N → L								
	1st → 2nd (D range)								
	1st → 2nd (2 range)								
	1st → 2nd → 3rd → O/D								
	2nd → 3rd								
	3rd → O/D								
	O/D → 3rd								
Slip or Shudder	Forward and Reverse	1	2	3					
	Particular range	1	2						
No engine braking	1st								
	2nd								
No kickdown								1	2

[illegible]

Chapter 3. Off-Vehicle Repair (*: A340E, A341E AUTOMATIC TRANSMISSION Repair Manual Pub No. RM235U)

See Page		AT-40	AT-48	AT-40	AT-40	AT-27	AT-74
Suspect Area		O/D one-way clutch (F ₀)	O/D brake (B ₀)	O/D direct clutch (C ₀)	O/D planetary gear unit	Torque converter	1st and reverse brake (B ₁)
Symptom							
Vehicle does not move in any forward range and reverse range		1	2	3	4	5	
Vehicle does not move in R range				5			4
Vehicle does not move in	D, 2 and L ranges						
	D and 2 ranges						
	2 range						1
	L range						
No up-shift	1st → 2nd						
	2nd → 3rd						
	3rd → O/D		1				
No down-shift	2nd → 1st						
No lockup or No lockup off						1	
Harsh engagement	N → D						
	N → R						2
	2nd → 3rd						
	3rd → O/D		2	1	3		
	O/D → 3rd		1				
	Lockup					1	
Slip or Shudder	Forward & Reverse (After warm-up)	2		3		1	
	Forward & Reverse (Just after engine starts)					1	
	R range						2
	1st						
	2nd						
	3rd						
	O/D		1				
No engine braking	1st ~ 3rd			1			
	1st						1
	2nd						
Poor acceleration	All range					1	
	O/D			1	2		
	Other than O/D		1				
	Other than 2nd						
	1st and 2nd						
	1st and R range						1
	R range						
Engine stalls when starting off or stopping						1	

			1																		2nd coast brake (B ₁)	AT-37
				1																	Direct clutch (C ₂)	AT-52
																					Front and rear planetary gear unit	AT-52
																					Forward clutch (C ₁)	AT-67
																					No. 2 one-way clutch (F ₂)	AT-69
				2																	2nd brake (B ₂)	AT-86
																					No. 1 one-way clutch (F ₁)	AT-82