

PROBLEM SYMPTOMS TABLE

If a normal code is displayed during the diagnostic trouble code check but the trouble still occurs, check the circuits for each symptom in the order given in the charts on the following pages 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

When troubleshooting, check Chapter1 first. If instructions are given in Chapter1 to proceed to Chapter 2 or 3, proceed as instructed.

- (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 and replace the ECM.

1. Chapter 1: Electronic Circuit Matrix Chart

Symptom	Suspect Area	See page
No up-shift (A particular gear, from 1st to 3rd gear, is not up-shifted.)	1. ECM	DI-139
No up-shift (3rd → O/D)	1. O/D main switch circuit & O/D OFF indicator light circuit 2. O/D cancel signal circuit 3. ECM	DI-164 DI-169 DI-139
No down-shift (O/D → 3rd)	1. O/D main switch circuit & O/D OFF indicator light circuit 2. O/D cancel signal circuit 3. ECM	DI-164 DI-169 DI-139
No down-shift (A particular gear, from 1st to 3rd gear, is not down-shifted.)	1. ECM	DI-139
No lock-up	1. ECM	DI-139
No lock-up off	1. ECM	DI-139
Shift point too high or too low	1. ECM	DI-139
Up-shift to O/D from 3rd while O/D main switch is OFF	1. O/D main switch circuit & O/D OFF indicator light circuit 2. ECM	DI-164 DI-139
Up-shift to O/D from 3rd while engine is cold	1. ECM	DI-139
No kick-down	1. ECM	DI-139
Engine stalls when starting off or stopping	1. ECM	DI-139

2. Chapter 2: On-Vehicle Repair

(★: A241E, A244E, A245E, A246E, AUTOMATIC TRANSAXLE Repair Manual Pub. No. RM390U)

Symptom	Suspect Area	See page
Does not move in any forward position	1. Off-vehicle repair matrix chart	DI-140
Does not move in reverse position	1. Off-vehicle repair matrix chart	DI-140
Does not move in any position	1. Primary regulator valve 2. Manual valve 3. Throttle valve 4. Off-vehicle repair matrix chart	★ ★ ★ DI-140
No up-shift (1st → 2nd)	1. 1-2 shift valve 2. Off-vehicle repair matrix chart	★ DI-140
No up-shift (2nd → 3rd)	1. 2-3 shift valve 2. Off-vehicle repair matrix chart	★ DI-140

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No up-shift (3rd → O/D)	1. 3-4 shift valve 2. Off-vehicle repair matrix chart	★ DI-140
No down-shift (O/D → 3rd)	1. 3-4 shift valve 2. Off-vehicle repair matrix chart	★ DI-140
No down-shift (3rd → 2nd)	1. 2-3 shift valve 2. Off-vehicle repair matrix chart	★ DI-140
No down-shift (2nd → 1st)	1. 1-2 shift valve 2. Off-vehicle repair matrix chart	★ DI-140
Harsh engagement (N → R)	1. C ₂ accumulator 2. Off-vehicle repair matrix chart	★ DI-140
Harsh engagement (N → D)	1. C ₁ accumulator 2. Off-vehicle repair matrix chart	★ DI-140
Harsh engagement (N → L)	1. C ₁ accumulator 2. Low coast modulator valve 3. Off-vehicle repair matrix chart	★ ★ DI-140
Harsh engagement (1st → 2nd: D position)	1. Accumulator control valve 2. B ₂ accumulator 3. Off-vehicle repair matrix chart	★ ★ DI-140
Harsh engagement (1st → 2nd: 2 position)	1. B ₂ accumulator 2. Accumulator control valve 3. 2nd coast modulator valve 4. Off-vehicle repair matrix chart	★ ★ ★ DI-140
Harsh engagement (1st → 2nd → 3rd → O/D)	1. Throttle valve 2. Primary regulator valve	★ ★
Harsh engagement (2nd → 3rd)	1. C ₂ accumulator 2. Accumulator control valve 3. Off-vehicle repair matrix chart	★ ★ ★
Harsh engagement (3rd → O/D)	1. B ₂ accumulator 1. C ₃ accumulator 3. Off-vehicle repair matrix chart	★ ★ DI-140
Harsh engagement (O/D → 3rd)	1. B ₄ accumulator 2. Off-vehicle repair matrix chart	★ DI-140
Harsh engagement (3rd → 2nd)	1. C ₂ accumulator 2. Off-vehicle repair matrix chart	★ DI-140
Slip (Forward and reverse)	1. Primary regulator valve 2. Off-vehicle repair matrix chart	★ DI-140
Slip (R position)	1. Off-vehicle repair matrix chart	DI-140
Slip (1st position)	1. Off-vehicle repair matrix chart	DI-140
Slip (2nd position)	1. Off-vehicle repair matrix chart	DI-140
Slip (3rd position)	1. Off-vehicle repair matrix chart	DI-140
Slip (O/D position)	1. Off-vehicle repair matrix chart	DI-140
No engine braking (1st: L position)	1. Low coast modulator valve 2. Off-vehicle repair matrix chart	★ DI-140
No engine braking (2nd: 2 position)	1. 2nd coast modulator valve 2. Off-vehicle repair matrix chart	★ DI-140
No kick-down	1. 1-2 shift valve 2. 2-3 shift valve 3. 3-4 shift valve	★ ★ ★

Poor acceleration	1. Primary regulator valve 2. Off-vehicle repair matrix chart	★ DI-140
No lock-up	1. Lock-up relay valve 2. Off-vehicle repair matrix chart	★ DI-140

3. Chapter 3: Off-Vehicle Repair

(★: A241E, A244E, A245E, A246E, AUTOMATIC TRANSAXLE Repair Manual Pub. No. RM390U)

Symptom	Suspect Area	See page
Does not move in any forward position	1. Forward clutch (C ₁)	★
Does not move in reverse position	1. Direct clutch (C ₂) 2. 1st and reverse brake (B ₃) 3. U/D brake (B ₄)	★ ★ ★
Does not move in any position	1. Torque converter clutch 2. Oil pump 3. U/D one-way clutch (F ₃) 4. Front planetary gear 5. Rear planetary gear 6. On-vehicle repair matrix chart	AX-21 ★ ★ ★ ★ DI-140
No up-shift (1st → 2nd)	1. 2nd brake (B ₂) 2. No. 1 one-way clutch (F ₁) 3. On-vehicle repair matrix chart	★ ★ ★
No up-shift (2nd → 3rd)	1. Direct clutch (C ₂) 2. On-vehicle repair matrix chart	★ ★
No up-shift (3rd → O/D)	1. U/D clutch (C ₃) 2. On-vehicle repair matrix chart	★ ★
No down-shift (O/D → 3rd)	1. U/D brake (B ₄) 2. U/D one-way clutch (F ₃) 3. On-vehicle repair matrix chart	★ ★ ★
No up-shift (3rd → 2nd)	1. No.1 one-way clutch (F ₁) 2. On-vehicle repair matrix chart	★ ★
No up-shift (2nd → 1st)	1. No. 2 one-way clutch (F ₂) 2. On-vehicle repair matrix chart	★ ★
Harsh engagement (N → R)	1. Direct clutch (C ₂) 2. 1st and reverse brake (B ₃) 3. On-vehicle repair matrix chart	★ ★ ★
Harsh engagement (N → D)	1. Forward clutch (C ₁) 2. On-vehicle repair matrix chart	★ ★
Harsh engagement (N → L)	1. Forward clutch (C ₁) 2. 1st and reverse brake (B ₃) 3. On-vehicle repair matrix chart	★ ★ ★
Harsh engagement 1st → 2nd (D position)	1. 2nd brake (B ₂) 2. No.1 one-way clutch (F ₁) 3. On-vehicle repair matrix chart	★ ★ DI-140

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Harsh engagement 1st → 2nd (2 position)	1. 2nd coast brake (B ₁) 2. 2nd brake (B ₂) 3. No.1 one-way clutch (F ₁) 4. On-vehicle repair matrix chart	★ ★ ★ DI-140
Harsh engagement (1st → 2nd → 3rd → O/D)	1. On-vehicle repair matrix chart	DI-140
Harsh engagement (2nd → 3rd)	1. Direct clutch (C ₂) 2. On-vehicle repair matrix chart	★ DI-140
Harsh engagement (3rd → O/D)	1. U/D clutch (C ₃) 2. On-vehicle repair matrix chart	★ DI-140
Harsh engagement (O/D → 3rd)	1. U/D brake (B ₄) 2. On-vehicle repair matrix chart	★ DI-140
Harsh engagement (3rd → 2nd)	1. Direct clutch (C ₂) 2. On-vehicle repair matrix chart	★ DI-140
Harsh engagement Lock-up	1. Torque converter clutch	AX-21
Slip (Forward & Reverse)	1. Torque converter clutch 2. Oil pump 3. On-vehicle repair matrix chart	AX-21 ★ DI-140
Slip (R position)	1. Direct clutch (C ₂) 2. 1st and reverse brake (B ₃)	★ ★
Slip (1st)	1. Forward clutch (C ₁) 2. No. 2 one-way clutch (F ₂) 3. U/D one-way clutch (F ₃)	★ ★ ★
Slip (2nd)	1. Forward clutch (C ₁) 2. 2nd brake (B ₂) 3. No. 1 one-way clutch (F ₁) 4. U/D one-way clutch (F ₃)	★ ★ ★ ★
Slip (3rd)	1. Forward clutch (C ₁) 2. Direct clutch (C ₂) 3. U/D one-way clutch (F ₃)	★ ★ ★
Slip (O/D)	1. Forward clutch (C ₁) 2. Direct clutch (C ₂) 3. U/D clutch (C ₃)	★ ★ ★
No engine braking (1st: L position)	1. 2nd coast brake (B ₁) 2. On-vehicle repair matrix chart	★ DI-140
No engine braking (2nd: 2 position)	1. 2nd coast brake (B ₃) 2. On-vehicle repair matrix chart	★ DI-140
No kick-down	1. On-vehicle repair matrix chart	DI-140
Poor acceleration	1. Torque converter clutch 2. Forward clutch (C ₁) 3. On-vehicle repair matrix chart	★ ★ DI-140
No lock-up	1. Torque converter clutch 2. On-vehicle repair matrix chart	AX-21 DI-140
Engine stalls when starting off or stopping	1. Torque converter clutch	AX-21