

PROBLEM SYMPTOMS TABLE

If a normal code is displayed during the diagnostic trouble code check although the trouble still occurs, check the electrical 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

- 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.
- If the trouble still occurs even though there are no abnormalities in any of the other circuits, then check and replace the ECM.

Chapter 1: Electronic Circuit Matrix Chart

HINT:

*1: When a malfunction is on the circuit *1 mark is attached, DTC is output.

Symptom	Suspect Area	See page
No up-shift (A particular gear, from 1st to 4th gear, is not up-shifted)	1. Shift solenoid valve (S1) circuit *1 2. Shift solenoid valve (S2) circuit *1 3. ECM	DI-302 DI-305 IN-36
No up-shift (4th → 5th)	1. Transmission control switch circuit (D – 4) *1 2. Engine coolant temp. sensor circuit *1 3. Speed sensor NT circuit *1 4. Shift solenoid valve (SL1) circuit *1 5. Shift solenoid valve (SL2) circuit *1 6. Shift solenoid valve (SR) circuit *1 7. ECM	DI-268 DI-22 DI-279 DI-284 DI-296 DI-308 IN-36
No up-shift (3rd → 4th)	1. Engine coolant temp. sensor circuit *1 2. Shift solenoid valve (S2) circuit *1 3. ECM	DI-22 DI-305 IN-36
No up-shift (1st → 2nd)	1. Transmission control switch circuit (2 – L) *1 2. Shift solenoid valve (S2) circuit *1 3. ECM	DI-268 DI-305 IN-36
No down-shift (5th → 4th)	1. Transmission control switch circuit (D – 4) *1 2. Shift solenoid valve (SL1) circuit *1 3. Shift solenoid valve (SL2) circuit *1 4. Shift solenoid valve (SR) circuit *1 5. ECM	DI-268 DI-284 DI-296 DI-308 IN-36
No down-shift (2nd → 1st)	1. Transmission control switch circuit (2 – L) *1 2. Shift solenoid valve (S2) circuit *1 3. ECM	DI-268 DI-305 IN-36
No down-shift (A particular gear, from 1st to 4th gear, is not down-shifted)	1. Shift solenoid valve (S1) circuit *1 2. Shift solenoid valve (S2) circuit *1 3. ECM	DI-302 DI-305 IN-36
No lock-up	1. ATF temperature sensor circuit *1 2. Transfer L4 position switch circuit *1 3. Stop light switch circuit *1 4. Speed sensor NT circuit *1 5. Shift solenoid valve (SLU) circuit *1 6. ECM	DI-273 DI-311 DI-283 DI-279 DI-321 IN-36
No lock-up off	ECM	IN-36

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Shift point too high or too low	1. Shift solenoid valve (SLT) circuit *1 2. Speed sensor NT circuit *1 3. Speed sensor SP2 circuit *1 4. Throttle position sensor circuit *1 5. ATF temperature sensor circuit *1 6. Pattern select switch circuit (PWR mode switch) 7. Transfer L4 position switch circuit *1 8. ECM	DI-316 DI-279 DI-281 DI-22 DI-273 DI-324 DI-311 IN-36
Up-shift to 5th from 4th while shift lever is 4 position	1. Transmission control switch circuit (D – 4) *1 2. ECM	DI-268 IN-36
Up-shift to 5th from 4th while engine is cold	1. Engine coolant temp. sensor circuit *1 2. ECM	DI-22 IN-36
Up-shift to 4th from 3rd while shift lever is 3 position	1. Park/neutral position switch circuit *1 2. ECM	DI-268 IN-36
Up-shift to 3rd from 2nd while shift lever is 2 position	1. Park/neutral position switch circuit *1 2. ECM	DI-268 IN-36
Up-shift to 2nd from 1st while shift lever is L position	1. Transmission control switch circuit (2 – L) *1 2. ECM	DI-268 IN-36
Harsh engagement (N → D)	1. Speed sensor NT circuit *1 2. Shift solenoid valve (SL1) circuit *1 3. Shift solenoid valve (SLT) circuit *1 4. ECM	DI-279 DI-284 DI-316 IN-36
Harsh engagement (Lock-up)	1. Speed sensor NT circuit *1 2. Speed sensor SP2 circuit *1 3. Shift solenoid valve (SLU) circuit *1 4. ECM	DI-279 DI-281 DI-321 IN-36
Harsh engagement (Any driving position)	ECM	IN-36
Poor acceleration	ECM	IN-36
No engine braking	ECM	IN-36
No kick-down	ECM	IN-36
Engine stalls when starting off or stopping	ECM	IN-36
No pattern select (PWR)	1. Pattern select switch circuit (PWR mode switch) 2. ECM	DI-324 IN-36
No 2nd start	1. Pattern select switch circuit (2nd start switch) 2. Transmission control switch circuit (2 – L) *1 3. ECM	DI-326 DI-268 IN-36
AT Oil Temp. warning light remains on	1. ATF temperature sensor No.2 circuit	DI-329
Shift point too high	2. ECM	IN-36
A/T.P. indicator light does not light up	1. A/T.P. indicator light circuit 2. Combination meter circuit 3. ECM	DI-332 BE-77 IN-36

Chapter 2: On-Vehicle Repair**(★: A750E, A750F AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM999U)**

Symptom	Suspect Area	See page
Vehicle does not move in any forward position and reverse positions	1. Transmission control rod 2. Manual valve 3. Parking lock pawl 4. Off-vehicle repair matrix chart	DI-242 ★ ★ –
Vehicle does not move in R position	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No up-shift (1st → 2nd)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No up-shift (2nd → 3rd)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No up-shift (3rd → 4th)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No up-shift (4th → 5th)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No down-shift (5th → 4th)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No down-shift (4th → 3rd)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No down-shift (3rd → 2nd)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No down-shift (2nd → 1st)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No lock-up or No lock-up off	1. Shift solenoid valve (SLU) 2. Valve body assy 3. Off-vehicle repair matrix chart	DI-319 AT-8 –
Harsh engagement (N → D)	1. Shift solenoid valve (SL1) 2. Valve body assy 3. C ₁ accumulator 4. Off-vehicle repair matrix chart	DI-292 AT-8 ★ –
Harsh engagement (Lock-up)	1. Shift solenoid valve (SLU) 2. Valve body assy 3. Off-vehicle repair matrix chart	DI-319 AT-8 –
Harsh engagement (N → R)	1. Shift solenoid valve (SLT) 2. Shift solenoid valve (SLU) 3. Valve body assy 4. C ₃ accumulator 5. Off-vehicle repair matrix chart	DI-314 DI-319 AT-8 ★ –
Harsh engagement (1st → 2nd → 3rd → 4th → 5th)	1. Shift solenoid valve (SLT) 2. Shift solenoid valve (SL1) 3. Valve body assy	DI-314 DI-292 AT-8
Harsh engagement (1st → 2nd)	1. Valve body assy 2. B ₃ accumulator 3. Off-vehicle repair matrix chart	AT-8 ★ –
Harsh engagement (2nd → 3rd)	1. Valve body assy 2. C ₃ accumulator 3. Off-vehicle repair matrix chart	AT-8 ★ –
Harsh engagement (3rd → 4th)	1. Valve body assy 2. C ₂ accumulator 3. Off-vehicle repair matrix chart	AT-8 ★ –

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Harsh engagement (4th → 5th)	1. Shift solenoid valve (SL1) 2. Shift solenoid valve (SL2) 3. Valve body assy 4. Off-vehicle repair matrix chart	DI-292 DI-294 AT-8 –
Harsh engagement (5th → 4th)	1. Shift solenoid valve (SL1) 2. Shift solenoid valve (SL2) 3. Valve body assy 4. Off-vehicle repair matrix chart	DI-292 DI-294 AT-8 –
Slip or shudder (Forward and reverse)	1. Transmission control rod 2. Valve body assy 3. Oil strainer 4. Off-vehicle repair matrix chart	DI-242 AT-8 AT-8 –
No engine braking (1st: L position)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No engine braking (2nd: 2 position)	1. Valve body assy 2. Off-vehicle repair matrix chart	AT-8 –
No kick-down	Valve body assy	AT-8
Shift point too high or too low	1. Shift solenoid valve (SLT) 2. Shift solenoid valve (SL1) 3. Valve body assy	DI-314 DI-292 AT-8
Poor acceleration	1. Shift solenoid valve (SLT) 2. Valve body assy	DI-314 AT-8
Engine stalls when starting off or stopping	1. Shift solenoid valve (SLU) 2. Valve body assy	DI-319 AT-8

Chapter 3: Off-Vehicle Repair**(★: A750E, A750F AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM999U)**

Symptom	Suspect Area	See page
Vehicle does not move in any forward position and reverse positions	1. Rear planetary gear unit 2. Torque converter clutch	★ AT-35
Vehicle does not move in R position	Brake No. 4 (B ₄)	★
No up-shift (1st → 2nd)	1. Brake No. 3 (B ₃) 2. One-way clutch No.1 (F ₁) 3. One-way clutch No. 2 (F ₂)	★ ★ ★
No up-shift (2nd → 3rd)	Clutch No. 3 (C ₃)	★
No up-shift (3rd → 4th)	Clutch No. 2 (C ₂)	★
No up-shift (4th → 5th)	1. Brake No. 1 (B ₁) 2. Clutch No. 1 (C ₁)	★ ★
No lock-up or No lock-up off	Torque converter clutch	AT-35
Harsh engagement (N → D)	1. Clutch No. 1 (C ₁) 2. One-way clutch No.3 (F ₃)	★ ★
Harsh engagement (N → R)	1. Clutch No. 3 (C ₃) 2. Brake No. 4 (B ₄) 3. One-way clutch No.1 (F ₁)	★ ★ ★
Harsh engagement (1 → 2)	1. Brake No. 3 (B ₃) 2. One-way clutch No.1 (F ₁) 3. One-way clutch No. 2 (F ₂)	★ ★ ★
Harsh engagement (2 → 3)	Clutch No. 3 (C ₃)	★
Harsh engagement (3 → 4)	Clutch No. 2 (C ₂)	★
Harsh engagement (4 → 5th)	1. Brake No. 1 (B ₁) 2. Clutch No. 1 (C ₁)	★ ★
Harsh engagement (Lock-up)	Torque converter clutch	AT-35
Slip or shudder (Forward and reverse: After warm-up)	1. One-way clutch No.1 (F ₁) 2. Clutch No. 3 (C ₃) 3. Torque converter clutch	★ ★ ★
Slip or shudder (Particular position: Just after engine starts)	Torque converter clutch	AT-35
Slip or shudder (R position)	1. Brake No. 4 (B ₄) 2. One-way clutch No.1 (F ₁) 3. Clutch No. 3 (C ₃)	★ ★ ★
Slip or shudder (1st)	1. Clutch No. 1 (C ₁) 2. One-way clutch No.3 (F ₃)	★ ★
Slip or shudder (2nd)	1. Clutch No. 1 (C ₁) 2. Brake No. 3 (B ₃) 3. One-way clutch No.1 (F ₁) 4. One-way clutch No.2 (F ₂)	★ ★ ★ ★
Slip or shudder (3rd)	1. Clutch No. 1 (C ₁) 2. Clutch No. 3 (C ₃) 3. One-way clutch No.1 (F ₁)	★ ★ ★
Slip or shudder (4th)	1. Clutch No. 1 (C ₁) 2. Clutch No. 2 (C ₂)	★ ★
Slip or shudder (5th)	1. Clutch No. 2 (C ₂) 2. Clutch No. 3 (C ₃) 3. Brake No. 1 (B ₁)	★ ★ ★
No engine braking (1st – 4th: D position)	Clutch No. 1 (C ₁)	★
No engine braking (1st: L position)	Brake No. 4 (B ₄)	★
No engine braking (2nd: 2 position)	Brake No. 2 (B ₂)	★

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No engine braking (3rd: 3 position)	Brake No. 1 (B ₁)	★
Poor acceleration (All positions)	Torque converter clutch	AT-35
Poor acceleration (5th)	1. Clutch No. 1 (C ₁) 2. Clutch No. 3 (C ₃) 3. Brake No. 1 (B ₁) 4. Front planetary gear unit	★ ★ ★ ★
Engine stalls when starting off or stopping	Torque converter clutch	AT-35