DI2L7–04

PROBLEM SYMPTOMS TABLE

HINT:

If a normal code is displayed during the DTC 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 trouble-shooting.

The Matrix Chart is divided into 3 chapters.

- 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 Engine & ECT ECU.

CHAPTER 1: ELECTRONIC CIRCUIT MATRIX CHART

Symptom	Suspect Area	See page
No up–shift (A particular gear, from 1st to 4th gear, is not up–shifted)	1. Neutral start switch circuit*1 2. Engine & ECT ECU	DI–230 DI–235 IN–35
No up–shift (4th → 5th)	1. Transmission control switch circuit 2. Engine & ECT ECU	DI–242 IN–35
No down–shift (5th → 4th)	1. Transmission control switch circuit 2. Engine & ECT ECU	DI–242 IN–35
No down–shift (A particular gear, from 1st to 4th gear, is not up–shifted)	1. Neutral start switch circuit*1 2. Engine & ECT ECU	DI–230 DI–235 IN–35
No lock–up	Engine & ECT ECU	IN–35
No lock–up off	Engine & ECT ECU	IN–35
Shift point too high or too low	1. Pattern select switch circuit 2. Engine & ECT ECU	DI–240 IN–35
Up–shift to 5th from 4th while engine is cold	Engine & ECT ECU	IN–35
No kick–down	1. Kick–down switch circuit 2. Engine & ECT ECU	DI–245 IN–35
No pattern select	1. Pattern select switch circuit 2. Engine & ECT ECU	DI–240 IN–35
Engine stalls when starting off or stopping	Engine & ECT ECU	IN–35
No 2nd start	1. Pattern select switch circuit 2. Engine & ECT ECU	DI–240 IN–35
No steering shift system	1. Transmission control switch circuit 2. Pattern select switch circuit 3. Engine & ECT ECU	DI–242 DI–240 IN–35

CHAPTER 2: ON–VEHICLE REPAIR
(★: A650E AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM794U)

Symptom	Suspect Area	See page
Vehicle does not move in any forward range and reverse range	1. Transmission control rod 2. Manual valve 3. Parking lock pawl 4. Off–vehicle repair matrix chart	DI–170 ★ ★ –
Vehicle does not move in R range	1. Reverse control valve 2. Off–vehicle repair matrix chart	★ –
Vehicle does not move in particular range or ranges (Except R range)	Off–vehicle repair matrix chart	–
No up–shift (1st → 2nd)	1. 1–2 shift valve 2. Off–vehicle repair matrix chart	★ –
No up–shift (2nd → 3rd)	1. 2–3 shift valve 2. Off–vehicle repair matrix chart	★ –
No up–shift (3rd → 4th)	1. 3–4 shift valve 2. Off–vehicle repair matrix chart	★ –
No up–shift (4th → 5th)	1. 4–5 shift valve 2. Off–vehicle repair matrix chart	★ –
No down–shift (5th → 4th)	1. 4–5 shift valve 2. Off–vehicle repair matrix chart	★ –
No down–shift (4th → 3rd)	1. 3–4 shift valve 2. Off–vehicle repair matrix chart	★ –
No down–shift (3rd → 2nd)	1. 2–3 shift valve 2. Off–vehicle repair matrix chart	★ –
No down–shift (2nd → 1st)	1. 1–2 shift valve 2. Off–vehicle repair matrix chart	★ –
No lock–up or No lock–up off	1. Lock–up control valve 2. Lock–up relay valve 3. Off–vehicle repair matrix chart	★ ★ –
Harsh engagement (N → D)	1. Accumulator control valve 2. Solenoid modulator valve 3. C_1 accumulator 4. Orifice control valve 5. Off–vehicle repair matrix chart	★ ★ ★ ★ –
Harsh engagement (Lock–up)	1. Lock–up control valve 2. Lock–up relay valve 3. Solenoid relay valve 4. Off–vehicle repair matrix chart	★ ★ ★ –
Harsh engagement (N → R)	1. Accumulator control valve 2. C_2 accumulator 3. Solenoid modulator valve 4. Off–vehicle repair matrix chart	★ ★ ★ –
Harsh engagement (2 → L)	Coast brake control valve	★
Harsh engagement (2nd → 3rd → 4th → 5th)	1. Accumulator control valve 2. Solenoid modulator valve	★ ★
Harsh engagement (1st → 2nd)	1. Solenoid modulator valve 2. B_3 control valve 3. B_2 release control valve 4. Solenoid relay valve 5. Off–vehicle repair matrix chart	★ ★ ★ ★ –

Harsh engagement (2nd → 3rd)	1. Accumulator control valve 2. Solenoid modulator valve 3. B_2 accumulator 4. B_3 control valve 5. B_2 release control valve 6. Solenoid relay valve 7. Off–vehicle repair matrix chart	★ ★ ★ ★ ★ ★ –
Harsh engagement (3rd → 4th)	1. Accumulator control valve 2. Solenoid modulator valve 3. C_2 accumulator 4. Off–vehicle repair matrix chart	★ ★ ★ –
Harsh engagement (4th → 5th)	1. Accumulator control valve 2. Solenoid modulator valve 3. B_0 accumulator 4. Off–vehicle repair matrix chart	★ ★ ★ –
Harsh engagement (5th → 4th)	1. Accumulator control valve 2. Solenoid modulator valve 3. C_0 accumulator 4. Off–vehicle repair matrix chart	★ ★ ★ –
Slip or shudder (Forward and reverse)	1. Transmission control rod 2. Oil strainer 3. Pressure relief valve 4. Off–vehicle repair matrix chart	DI–170 ★ ★ –
Slip or shudder (Particular range)	1. Transmission control rod 2. Off–vehicle repair matrix chart	DI–170 –
No engine braking (1st: L range)	1. Coast brake control valve 2. B–4 relay valve 3. Off–vehicle repair matrix chart	★ ★ –
No engine braking (2nd: 2 range)	1. Coast brake control valve 2. Off–vehicle repair matrix chart	★ –
No kick–down	1. 1–2 shift valve 2. 2–3 shift valve 3. 3–4 shift valve	★ ★ ★

CHAPTER 3: OFF–VEHICLE REPAIR
(★: A650E AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM794U)

Symptom	Suspect Area	See page
Vehicle does not move in any forward range and reverse range	1. O/D one–way clutch (F_0) 2. O/D direct clutch (C_0) 3. O/D planetary gear unit 4. Torque converter	★ ★ ★ AT–40
Vehicle does not move in R range	1. Center and rear planetary gear unit 2. Direct clutch (C_2) 3. 1st & reverse brake (B_4) 4. O/D brake (B_0)	★ ★ ★ ★
No up–shift (1st → 2nd)	2nd brake (B_3)	★
No up–shift (2nd → 3rd)	1. 3rd brake (B_2) 2. One–way clutch No.1 (F_1)	★ ★
No up–shift (3rd → 4th)	Direct clutch	★
No up–shift (4th → 5th)	O/D brake (B_0)	★
No lock–up or No lock–up off	Torque converter	AT–40
Harsh engagement (N → D)	1. Forward clutch (C_1) 2. O/D one–way clutch (F_0) 3. One–way clutch No.2 (F_2)	★ ★ ★
Harsh engagement (N → R)	1. Direct clutch (C_2) 2. O/D brake (B_0) 3. 1st & reverse brake (B_4)	★ ★ ★
Harsh engagement (1st → 2nd)	2nd brake (B_3)	★
Harsh engagement (2nd → 3rd)	1. 3rd brake (B_2) 2. 2nd brake (B_3) 3. One–way clutch No.1 (F_1)	★ ★ ★
Harsh engagement (3rd → 4th)	Direct clutch (C_2)	★
Harsh engagement (4th → 5th)	1. O/D brake (B_0) 2. O/D direct clutch (C_0)	★ ★
Harsh engagement (Lock–up)	Torque converter	AT–40
Slip or shudder (Forward and reverse: After warm–up)	1. Torque converter 2. O/D one–way clutch (F_0) 3. O/D direct clutch (C_0)	AT–40 ★ ★
Slip or shudder (Particular range: Just after engine starts)	Torque converter	AT–40
Slip or shudder (R range)	1. Direct clutch (C_2) 2. O/D brake (B_0) 3. 1st & reverse brake (B_4)	★ ★ ★
Slip or shudder (1st)	1. Forward clutch (C_1) 2. No. 2 one–way clutch (F_2)	★ ★
Slip or shudder (2nd)	2nd brake (B_3)	★
Slip or shudder (3rd)	1. 3rd coast brake (B_1) 2. 3rd brake (B_2) 3. One–way clutch No.1 (F_1)	★ ★ ★
Slip or shudder (4th)	Direct clutch	★
Slip or shudder (5th)	O/D brake (B_0)	★
No engine braking (1st – 4th: D range)	O/C direct clutch (C_0)	★
No engine braking (1st: L range)	1st & reverse brake (B_4)	★
No engine braking (2nd: 2 range)	2nd brake (B_3)	★
No engine braking (3rd: 3 range)	3rd coast brake (B_1)	★

Poor acceleration (All ranges)	Torque converter	AT–40
Poor acceleration (5th)	1. O/D brake (B_0) 2. O/D planetary gear unit	★ ★
Engine stalls when starting off or stopping	Torque converter	AT–40