

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 troubleshooting.

The Matrix Chart is divided into 3 chapters.

When troubleshooting, check Chapter 1 first. If instructions are given in Chapter 1 to proceed to Chapter 2 or 3, proceed as instructed.

- 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.

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 | IN-28 |
| No up-shift (3rd → O/D) | 1. O/D main switch & O/D OFF indicator circuit 2. O/D cancel signal circuit 3. ECM | DI-400 DI-397 IN-28 |
| No down-shift (O/D → 3rd) | 1. O/D main switch & O/D OFF indicator circuit 2. O/D cancel signal circuit 3. ECM | DI-400 DI-397 IN-28 |
| No down-shift (A particular gear, from 1st to 3rd gear, is not –down shifted) | 1. ECM | IN-28 |
| No lock-up | 1. ECM | IN-28 |
| No lock-up off | 1. ECM | IN-28 |
| Shift point too high or too low | 1. Pattern select switch circuit 2. ECM | DI-406 IN-28 |
| Up-shift to O/D from 3rd while O/D main switch is OFF | 1. O/D main switch & O/D OFF indicator circuit 2. ECM | DI-400 IN-28 |
| Up-shift to O/D from 3rd while engine is cold | 1. ECM | IN-28 |
| No kick-down | 1. ECM | IN-28 |
| Engine stalls when starting off or stopping | 1. ECM | IN-28 |
| No pattern select | 1. Pattern select switch circuit 2. ECM | DI-406 IN-28 |

2. CHAPTER 2: ON-VEHICLE REPAIR**(★: A340E, A340F, A340H AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM391U)****(★: A340F, A343F AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM479U)**

| Symptom | Suspect Area | See page |
|---|---|--------------------------------------|
| Vehicle does not move in any forward position and reverse position | 1. Throttle cable 2. Transmission control rod 3. Manual valve 4. Primary regulator valve 5. Parking lock pawl 6. Off-vehicle repair matrix chart | DI-342 DI-342 ★ ★ ★ – |
| Vehicle does not move in R position | 1. Off-vehicle repair matrix chart | – |
| Vehicle does not move in particular position or positions (except R position) | 1. 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 → O/D) | 1. 3–4 shift valve 2. Off-vehicle repair matrix chart | ★ – |
| No down-shift (O/D → 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. Off-vehicle repair matrix chart | ★ – |
| Harsh engagement (Lock-up) | 1. Lock-up control valve 2. Lock-up relay valve 3. Off-vehicle repair matrix chart | ★ ★ – |
| Harsh engagement (N → R) | 1. Accumulator control valve 2. C ₂ accumulator 3. Off-vehicle repair matrix chart | ★ ★ – |
| Harsh engagement (N → L) | 1. Low coast modulator valve | ★ |
| Harsh engagement (1st → 2nd / D position) | 1. Accumulator control valve 2. B ₂ accumulator | ★ ★ |
| Harsh engagement (1st → 2nd / 2 position) | 1. Accumulator control valve 2. B ₂ accumulator | ★ ★ |
| Harsh engagement (1st → 2nd → 3rd → O/D) | 1. Accumulator control valve 2. Throttle valve | ★ ★ |
| Harsh engagement (2nd → 3rd) | 1. Accumulator control valve 2. C ₂ accumulator 3. Off-vehicle repair matrix chart | ★ ★ – |

DIAGNOSTICS – AUTOMATIC TRANSMISSION (A340E, A340F)

| | | |
|---------------------------------------|---|---------------------------------|
| Harsh engagement (3rd → O/D) | 1. Accumulator control valve 2. Solenoid modulator valve 3. Off-vehicle repair matrix chart | ★ ★ – |
| Harsh engagement (O/D → 3rd) | 1. Accumulator control valve 2. C ₀ accumulator 3. Off-vehicle repair matrix chart | ★ ★ – |
| Slip or shudder (Forward and reverse) | 1. Throttle cable 2. Transmission control rod 3. Oil strainer 4. Pressure relief valve 5. Off-vehicle repair matrix chart | DI-342 DI-342 ★ ★ – |
| Slip or shudder (Particular position) | 1. Throttle cable 2. Transmission control rod 3. Off-vehicle repair matrix chart | DI-342 DI-342 – |
| No engine braking (1st / L position) | 1. Low coast modulator valve 2. Off-vehicle repair matrix chart | ★ – |
| No engine braking (2nd / 2 position) | 1. 2nd coast modulator valve 2. Off-vehicle repair matrix chart | ★ – |
| No kick-down | 1. 1–2 shift valve 2. 2–3 shift valve | ★ ★ |

3. CHAPTER 3: OFF-VEHICLE REPAIR**(★: A340E, A340F, A340H AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM391U)****(★: A340F, A343F AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM479U)**

| Symptom | Suspect Area | See page |
|--|---|-----------------------|
| Vehicle does not move in any forward position and reverse position | 1. O/D one-way clutch (F ₀) 2. O/D direct clutch (C ₀) 3. O/D brake (B ₀) 4. O/D planetary gear unit 5. Torque converter clutch | ★ ★ ★ ★ ★ |
| Vehicle does not move in R position | 1. 2nd coast brake (B ₁) 2. Front and rear planetary gear unit 3. Direct clutch (C ₂) 4. 1st & reverse brake (B ₃) 5. O/D direct clutch (C ₀) | ★ ★ ★ ★ ★ |
| Vehicle does not move in D, 2 and L positions | 1. Forward clutch (C ₂) | ★ |
| Vehicle does not move in D, 2 positions | 1. No.2 one-way clutch (F ₂) | ★ |
| Vehicle does not move in 2 position | 1. 1st & reverse (B ₃) | ★ |
| Vehicle does not move in L position | 1. 2nd brake (B ₂) 2. 2nd coast brake (B ₁) 3. Direct clutch (C ₂) | ★ ★ ★ |
| No up-shift (1st → 2nd) | 1. 2nd brake (B ₂) 2. No. 1 one-way clutch (F ₁) | ★ ★ |
| No up-shift (2nd → 3rd) | 1. Direct clutch (C ₂) | ★ |
| No up-shift (3rd → O/D) | 1. O/D brake (B ₀) | ★ |
| No down-shift (2nd → 1st) | 1. 2nd coast brake (B ₁) 2. 2nd brake (B ₂) | ★ ★ |
| No lock-up or No lock-up off | 1. Torque converter clutch | ★ |
| Harsh engagement (N → D) | 1. Forward clutch (C ₁) | ★ |
| Harsh engagement (N → R) | 1. Direct clutch (C ₂) 2. 1st and reverse brake (B ₃) | ★ ★ |
| Harsh engagement (2nd → 3rd) | 1. 2nd coast brake (B ₁) | ★ |
| Harsh engagement (3rd → O/D) | 1. O/D direct clutch (C ₀) 2. O/D brake (B ₀) 3. O/D planetary gear unit | ★ ★ ★ |
| Harsh engagement (O/D → 3rd) | 1. O/D brake (B ₀) | ★ |
| Harsh engagement (Lock-up) | 1. Torque converter clutch | ★ |
| Slip or shudder (Forward and reverse / After warm-up) | 1. Torque converter clutch 2. O/D one-way clutch (F ₀) 3. O/D direct clutch (C ₀) | ★ ★ ★ |
| Slip or shudder (Forward and reverse / Just after engine starts) | 1. Torque converter clutch | ★ |
| Slip or shudder (R position) | 1. Direct clutch (C ₂) 2. 1st & reverse brake (B ₃) | ★ ★ |
| Slip or shudder (1st) | 1. Forward clutch (C ₁) 2. No. 2 one-way clutch (F ₂) | ★ ★ |
| Slip or shudder (2nd) | 1. 2nd brake (B ₂) 2. 2nd coast brake (B ₁) 3. No. 1 one-way clutch (F ₁) | ★ ★ ★ |
| Slip or shudder (3rd) | 1. Direct clutch (C ₂) | ★ |
| Slip or shudder (O/D) | 1. O/D brake (B ₀) | ★ |
| No engine braking (1st ~ 3rd: D position) | 1. O/D direct clutch (C ₀) | ★ |

DIAGNOSTICS – AUTOMATIC TRANSMISSION (A340E, A340F)

| | | |
|---|--|---|
| No engine braking (1st: L position) | 1. 1st & reverse brake (B ₃) | ★ |
| No engine braking (2nd: 2 position) | 1. 2nd coast brake (B ₁) | ★ |
| Poor acceleration (All position) | 1. Torque converter clutch | ★ |
| Poor acceleration (O/D) | 1. O/D direct clutch (C ₀) | ★ |
| | 2. O/D planetary gear unit | ★ |
| Poor acceleration (other than O/D) | 1. O/D brake (B ₀) | ★ |
| Poor acceleration (other than 2nd) | 1. 2nd coast brake (B ₁) | ★ |
| | 2. 2nd brake (B ₂) | ★ |
| Poor acceleration (1st and 2nd) | 1. Direct clutch (C ₂) | ★ |
| Poor acceleration (L and R positions) | 1. 1st & reverse brake (B ₃) | ★ |
| Poor acceleration (R position) | 1. Forward clutch (C ₁) | ★ |
| Engine stalls when starting off or stopping | 1. Torque converter clutch | ★ |