056IN–25

# PROBLEM SYMPTOMS TABLE

HINT:

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.

1. **Chapter 1: Electronic Circuit Matrix Chart**

- Refer to the table below when the trouble cause is considered to be electrical.
- If the instruction ”Proceed to next circuit inspection shown on matrix chart” is given in the flow chart of 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, check and replace the ECM.

HINT:

*1: When the circuit on which mark *1 is attached is defective, DTC could be output (see page 05–955).

| Symptom | Suspected Area | See page |
|---|---|---|
| No up–shift (1st → 2nd) | ECM | 01–36 |
| No up–shift (2nd → 3rd) | ECM | 01–36 |
| No up–shift (3rd → O/D) | 1. Transmission control switch circuit *1<br>2. ECM | 05–957<br>01–36 |
| No down–shift (O/D → 3rd) | 1. Transmission control switch circuit *1<br>2. ECM | 05–957<br>01–36 |
| No down–shift (3rd → 2nd) | ECM | 01–36 |
| No down–shift (2nd → 1st) | ECM | 01–36 |
| No lock–up or No lock–up off | 1. Stop light switch circuit *1<br>2. L4 position switch circuit<br>3. Engine coolant temp. sensor circuit *1<br>4. ECM | 05–995<br>05–1004<br>05–29<br>01–36 |
| Shift point too high or too low | ECM | 01–36 |
| Up–shift to 2nd while in L position | 1. Park/neutral position switch circuit *1<br>2. ECM | 05–957<br>01–36 |
| Up–shift to 3rd while in 2 position | 1. Park/neutral position switch circuit *1<br>2. ECM | 05–957<br>01–36 |
| Up–shift to O/D from 3rd while shift lever is 3 position | 1. Transmission control switch circuit *1<br>2. ECM | 05–957<br>01–36 |
| Up–shift to O/D from 3rd while engine is cold | ECM | 01–36 |
| Poor acceleration | ECM | 01–36 |
| No kick–down | ECM | 01–36 |
| Engine stalls when starting off or stopping | ECM | 01–36 |
| No 2nd start | 1. Pattern select switch circuit (2nd start switch)<br>2. Park/neutral position switch circuit *1<br>3. ECM | 05–997<br>05–957<br>01–36 |
| A/T.P. indicator light does not light up | 1. A/T.P. indicator light circuit<br>2. Combination meter circuit | 05–1000<br>05–1416 |
| Malfunction in shifting | 1. Park/neutral position switch circuit *1<br>2. ECM | 05–957<br>01–36 |

## 2. Chapter 2: On–Vehicle Repair
## (★: A340E, A340F, A343F AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM998U)
## (●:LANDCRUISER PRADO Repair Manual Pub. No. RM990E, page 40–68)

| Symptom | Suspect Area | See page |
|---|---|---|
| Vehicle does not move in any forward position and reverse position | 1. Shift solenoid valve SLT<br>2. Transmission control cable<br>3. Manual valve<br>4. Parking lock pawl<br>5. Off–vehicle repair matrix chart | 05–984<br>●<br>★<br>★<br>– |
| Vehicle does not move in R position | Off–vehicle repair matrix chart | – |
| Vehicle does not move in particular position or positions (except R position) | Off–vehicle repair matrix chart | – |
| No up–shift (1st → 2nd) | 1. 1–2 shift valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| No up–shift (2nd → 3rd) | 1. 2–3 shift valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| No up–shift (3rd → O/D) | 1. 3–4 shift valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| No down–shift (O/D → 3rd) | 1. 3–4 shift valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| No down–shift (3rd → 2nd) | 1. 2–3 shift valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| No down–shift (2nd → 1st) | 1. 1–2 shift valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| No lock–up or No lock–up off | 1. Lock–up control valve<br>2. Lock–up relay valve<br>3. Off–vehicle repair matrix chart | ★<br>★<br>– |
| Harsh engagement (N → D) | 1. Accumulator control valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| Harsh engagement (Lock–up) | 1. Lock–up control valve<br>2. Lock–up relay valve<br>3. Off–vehicle repair matrix chart | ★<br>★<br>– |
| Harsh engagement (N → R) | 1. Accumulator control valve<br>2. $C_2$ accumulator<br>3. Off–vehicle repair matrix chart | ★<br>★<br>– |
| Harsh engagement (N → L) | Low coast modulator valve | ★ |
| Harsh engagement (1st → 2nd / D position) | 1. Accumulator control valve<br>2. $B_2$ accumulator | ★<br>★ |
| Harsh engagement (1st → 2nd / 2 position) | 1. Accumulator control valve<br>2. $B_2$ accumulator | ★<br>★ |
| Harsh engagement (1st → 2nd → 3rd → O/D) | 1. Accumulator control valve<br>2. Throttle valve | ★<br>★ |
| Harsh engagement (2nd → 3rd) | 1. Accumulator control valve<br>2. $C_2$ accumulator<br>3. Off–vehicle repair matrix chart | ★<br>★<br>– |
| Harsh engagement (3rd → O/D) | 1. Accumulator control valve<br>2. Solenoid modulator valve<br>3. Off–vehicle repair matrix chart | ★<br>★<br>– |
| Harsh engagement (O/D → 3rd) | 1. Accumulator control valve<br>2. $C_0$ accumulator<br>3. Off–vehicle repair matrix chart | ★<br>★<br>– |

| | | |
|---|---|---|
| Slip or shudder (Forward and reverse) | 1. Shift solenoid valve SLT<br>2. Transmission control cable<br>3. Oil strainer<br>4. Pressure relief valve<br>5. Off–vehicle repair matrix chart | 05–984<br>●<br>★<br>★<br>– |
| Slip or shudder (Particular position) | 1. Shift solenoid valve SLT<br>2. Transmission control cable<br>3. Off–vehicle repair matrix chart | 05–984<br>●<br>– |
| No engine braking (1st / L position) | 1. Low coast modulator valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| No engine braking (2nd / 2 position) | 1. 2nd coast modulator valve<br>2. Off–vehicle repair matrix chart | ★<br>– |
| No kick–down | 1. 1–2 shift valve<br>2. 2–3 shift valve | ★<br>★ |

## 3. Chapter 3: Off–Vehicle Repair
## (★: A340E, A340F, A343F AUTOMATIC TRANSMISSION Repair Manual Pub. No. RM998U)
## (●:LANDCRUISER PRADO Repair Manual Pub. No. RM990E, page 40–45)

| Symptom | Suspect Area | See page |
|---|---|---|
| Vehicle does not move in any forward position and reverse position | 1. O/D one–way clutch ($F_0$)<br>2. O/D direct clutch ($C_0$)<br>3. O/D brake ($B_0$)<br>4. O/D planetary gear unit<br>5. Torque converter clutch | ★<br>★<br>★<br>★<br>● |
| Vehicle does not move in R position | 1. 2nd coast brake ($B_1$)<br>2. Front and rear planetary gear unit<br>3. Direct clutch ($C_2$)<br>4. 1st & reverse brake ($B_3$)<br>5. O/D direct clutch ($C_0$) | ★<br>★<br>★<br>★<br>★ |
| Vehicle does not move in D, 2 and L positions | Forward clutch ($C_2$) | ★ |
| Vehicle does not move in D and 2 positions | No.2 one–way clutch ($F_2$) | ★ |
| Vehicle does not move in 2 position | 1st & reverse ($B_3$) | ★ |
| Vehicle does not move in L position | 1. 2nd brake ($B_2$)<br>2. 2nd coast brake ($B_1$)<br>3. Direct clutch ($C_2$) | ★<br>★<br>★ |
| No up–shift (1st → 2nd) | 1. 2nd brake ($B_2$)<br>2. No. 1 one–way clutch ($F_1$) | ★<br>★ |
| No up–shift (2nd → 3rd) | Direct clutch ($C_2$) | ★ |
| No up–shift (3rd → O/D) | O/D brake ($B_0$) | ★ |
| No down–shift (2nd → 1st) | 1. 2nd coast brake ($B_1$)<br>2. 2nd brake ($B_2$) | ★<br>★ |
| No lock–up or No lock–up off | Torque converter clutch | ● |
| Harsh engagement (N → D) | Forward clutch ($C_1$) | ★ |
| Harsh engagement (N → R) | 1. Direct clutch ($C_2$)<br>2. 1st & reverse brake ($B_3$) | ★<br>★ |
| Harsh engagement (2nd → 3rd) | 2nd coast brake ($B_1$) | ★ |
| Harsh engagement (3rd → O/D) | 1. O/D direct clutch ($C_0$)<br>2. O/D brake ($B_0$)<br>3. O/D planetary gear unit | ★<br>★<br>★ |
| Harsh engagement (O/D → 3rd) | O/D brake ($B_0$) | ★ |
| Harsh engagement (Lock–up) | Torque converter clutch | ● |
| Slip or shudder (Forward and reverse / After warm–up) | 1. Torque converter clutch<br>2. O/D one–way clutch ($F_0$)<br>3. O/D direct clutch ($C_0$) | ★<br>★<br>★ |
| Slip or shudder (Forward and reverse / Just after engine starts) | Torque converter clutch | ● |
| Slip or shudder (R position) | 1. Direct clutch ($C_2$)<br>2. 1st & reverse brake ($B_3$) | ★<br>★ |
| Slip or shudder (1st) | 1. Forward clutch ($C_1$)<br>2. No. 2 one–way clutch ($F_2$) | ★<br>★ |
| Slip or shudder (2nd) | 1. 2nd brake ($B_2$)<br>2. 2nd coast brake ($B_1$)<br>3. No. 1 one–way clutch ($F_1$) | ★<br>★<br>★ |
| Slip or shudder (3rd) | Direct clutch ($C_2$) | ★ |
| Slip or shudder (O/D) | O/D brake ($B_0$) | ★ |
| No engine braking (1st ~ 3rd: D position) | O/D direct clutch ($C_0$) | ★ |

| | | |
|---|---|---|
| No engine braking (1st: L position) | 1st & reverse brake ($B_3$) | ★ |
| No engine braking (2nd: 2 position) | 2nd coast brake ($B_1$) | ★ |
| Poor acceleration (All position) | Torque converter clutch | ● |
| Poor acceleration (O/D) | 1. O/D direct clutch ($C_0$)<br>2. O/D planetary gear unit | ★<br>★ |
| Poor acceleration (other than O/D) | O/D brake ($B_0$) | ★ |
| Poor acceleration (other than 2nd) | 1. 2nd coast brake ($B_1$)<br>2. 2nd brake ($B_2$) | ★<br>★ |
| Poor acceleration (1st and 2nd) | Direct clutch ($C_2$) | ★ |
| Poor acceleration (L and R positions) | 1st & reverse brake ($B_3$) | ★ |
| Poor acceleration (R position) | Forward clutch ($C_1$) | ★ |
| Engine stalls when starting off or stopping | Torque converter clutch | ● |