

ROAD TEST

1. PROBLEM SYMPTOM CONFIRMATION

- (a) Taking into consideration the results of the customer problem analysis, try to reproduce the symptoms of the trouble. If the problem is that the transaxle does not shift up, shift down, or the shift point is too high or too low conduct the following road test referring to the automatic shift schedule and simulate the problem symptoms.

2. PERFORM ROAD TEST

NOTICE:

Conduct the test at normal operating ATF temperature 50 to 80 °C (122 to 176 °F).

- (a) D position test

Shift into the D position and fully depress the accelerator pedal and check the following points:

- (1) Check up-shift operation.

Check that 1 → 2, 2 → 3 and 3 → O/D up-shift takes place, and that the shift points conform to the automatic shift schedule (See page 03-36).

HINT:

O/D Gear Up-shift Prohibition Control

- Coolant temp. is 60 °C (140 °F) or less.
- ATF temp. is 10 °C (68 °F) or less.

O/D and 3rd Gear Lock-up Prohibition Control

- Brake pedal is depressed.
- Accelerator pedal is released.
- Coolant temp. is 60 °C (140 °F) or less.

3rd Gear Lock-up Prohibition Control

- O/D main switch off (O/D ON)

- (2) Check for shift shock and slip.

Check for shock and slip at the 1 → 2, 2 → 3 and 3 → O/D up-shift.

- (3) Check for abnormal noises and vibration.

Run in D position lock-up or O/D gear and check for abnormal noises and vibration.

HINT:

The check for the cause of abnormal noises and vibration must be done very thoroughly as it could also be sure to loss of balance in the differential, torque converter, etc.

- (4) Check kick-down operation.

Check that the possible kick-down vehicle speed limits for 2nd to 1st, 3rd to 2nd, O/D to 3rd kick-downs conform to those indicated on the automatic shift schedule while driving through all gears with the shift lever in the D position (See page 03-36).

- (5) Check for abnormal shock and slip at kick-down.

- (6) Check the lock-up mechanism.

- Drive in D position O/D gear, at a steady speed (lock-up ON) of about 60 km/h (37 mph).
- Lightly depress the accelerator pedal and check that the engine speed does not change abruptly.

If there is a big jump in engine speed, there is no lock-up.

- (b) 2 position test

Shift into the 2 position and fully depress the accelerator pedal and check the following points:

- (1) Check up-shift operation.

Check that the 1 → 2 up-shift takes place and that the shift point conforms to the automatic shift schedule (See page 03-36).

HINT:

There is no O/D up-shift and lock-up in the 2 position.

- (2) Check engine braking.
While running in the 2 position and 2nd gear, release the accelerator pedal and check the engine braking effect.
- (3) Check for abnormal noises during acceleration and deceleration, and for shock at up-shift and down-shift.
- (c) L position test
Shift into the L position and fully depress the accelerator pedal and check the following points:
 - (1) Check no up-shift.
While running in the L position, check that there is no up-shift to 2nd gear.
 - (2) Check engine braking.
While running in the L position, release the accelerator pedal and check the engine braking effect.
 - (3) Check for abnormal noises during acceleration and deceleration.
- (d) R position test
Shift into the R position and fully depress the accelerator pedal and check for slipping.

CAUTION:

Before conducting this test ensure that the test area is free from people and obstruction.

- (e) P position test
Stop the vehicle on a grade (more than 5°), shift into the P position and release the parking brake. Check that the vehicle does not move.