

ROAD TEST

NOTICE: Perform the test at normal operating fluid temperature 50–80°C (122–176°F).

1. D POSITION TEST IN NORM AND PWR PATTERN POSITIONS

Shift into the D position and hold the accelerator pedal constant at the full throttle valve opening position.

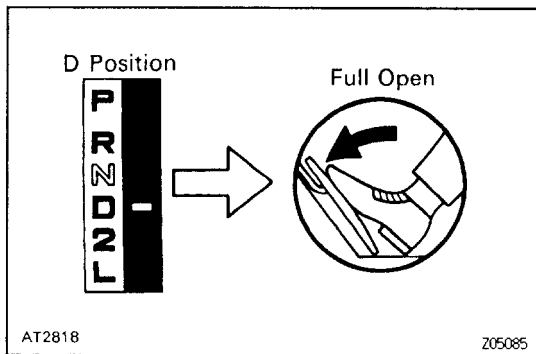
HINT: When the 2nd start switch is on, there is no 1 2 up-shift and 2 1 down-shift.

Check the following:

- (a) 1–2, 2–3 and 3–O/D up-shifts should take place, and shift points should conform to those shown in the automatic shift schedule.

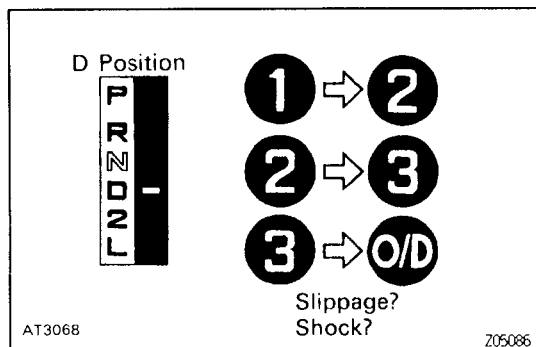
Conduct a test under both Normal and Power patterns.

HINT: There is no O/D up-shift or lock-up when the coolant temperature is below 55°C (131°F).



EVALUATION

- (1) If there is no 1→2 up-shift:
 - Shift solenoid valve No.2 is stuck.
 - 1–2 shift valve is stuck.
- (2) If there is no 2→3 up-shift:
 - Shift solenoid valve No.1 is stuck.
 - 2–3 shift valve is stuck.
- (3) If there is no 3→O/D up-shift:
 - 3–4 shift valve is stuck.
- (4) If the shift point is defective:
 - Throttle valve, 1–2 shift valve, 2–3 shift valve, 3–4 shift valve etc., are defective.
- (5) If the lock-up is defective:
 - Lock-up solenoid is stuck.
 - Lock-up control valve is stuck.
 - Lock-up signal value is stuck.

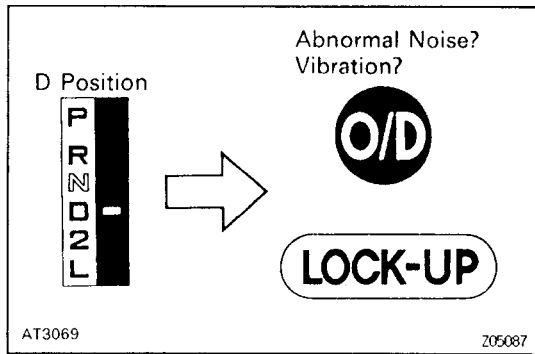


- (b) In the same manner, check the shock and slip at the 1→2, 2→3, and 3→O/D up-shifts.

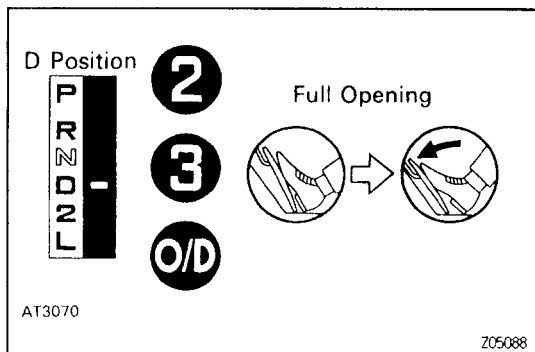
EVALUATION

If the shock is excessive:

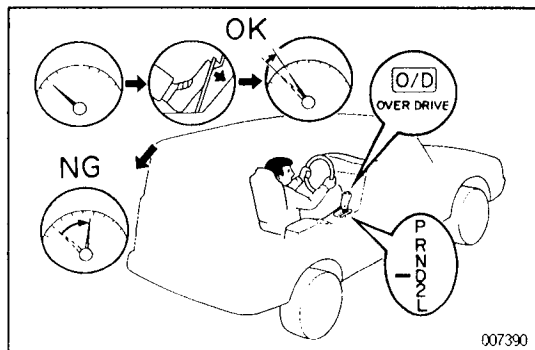
- Line pressure is too high.
- Accumulator is defective.
- Check ball is defective.



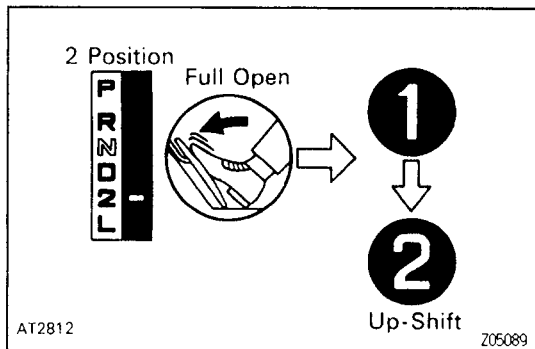
- (c) Run at the D position lock-up or O/D gear and check for abnormal noise and vibration.
HINT: The check for the cause of abnormal noises and vibration must be made with extreme care as it could also be due to loss of balance in the propeller shaft, differential, torque converter clutch, etc.



- (d) While running in the D position, 2nd, 3rd and O/D gears, check to see that the possible kick-down vehicle speed limits for 2→1, 3→2 and O/D→3 kick-downs conform to those indicated on the automatic shift schedule.
(e) Check for abnormal shock and slip at kick-down.



- (f) Check for the lock-up mechanism.
(1) Drive in D position, O/D gear, at a steady speed (lock-up ON) of about 95 km/h (59 mph).
(2) Lightly depress the accelerator pedal and check that the engine RPM does not change abruptly.
If there is a big jump in engine RPM, there is no lock-up.



2. 2 POSITION TEST

Shift into the 2 position and, while driving with the accelerator pedal held constantly at the full throttle valve opening position, push in one of the pattern selectors and check on the following points.

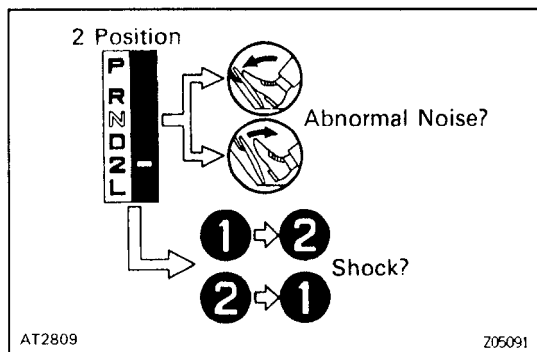
HINT: When the 2nd start switch is on, there is no 1→2 up-shift and 2→1 down-shift.

- (a) Check to see that the 1→2 up-shift takes place and that the shift point conforms to that shown on the automatic shift schedule.
HINT: There is no O/D up-shift and lock-up in the 2 position.
(b) While running in the 2 position and 2nd gear, release the accelerator pedal and check the engine braking effect.

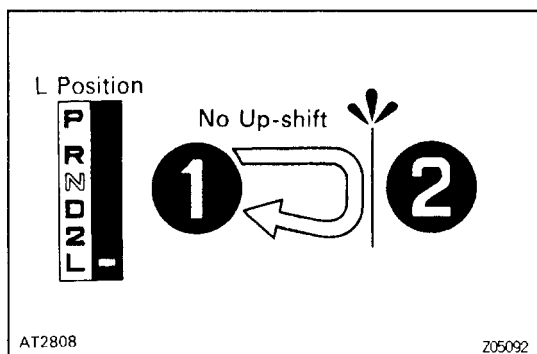
EVALUATION

If there is no engine braking effect:

- Second coast brake is defective.

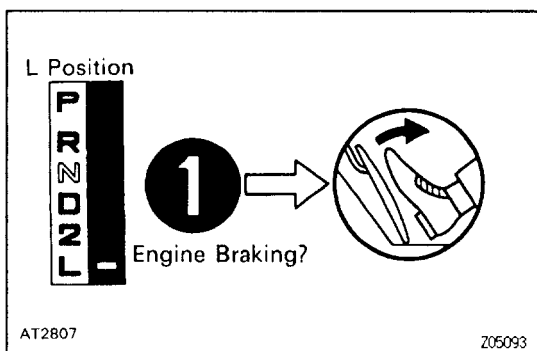


- (c) Check for abnormal noise at acceleration and deceleration, and for shock at up-shift and down-shift.



3. L POSITION TEST

- (a) While running in the L position, check to see that there is no up-shift to 2nd gear.

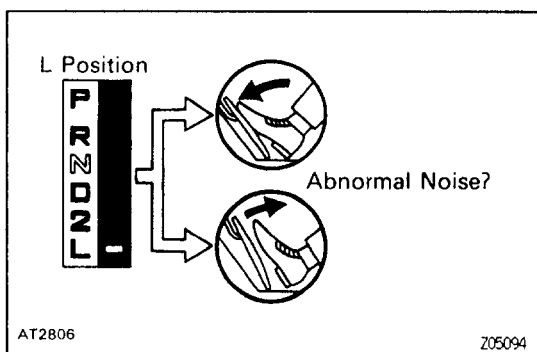


- (b) While running in the L position, release the accelerator pedal and check the engine braking effect.

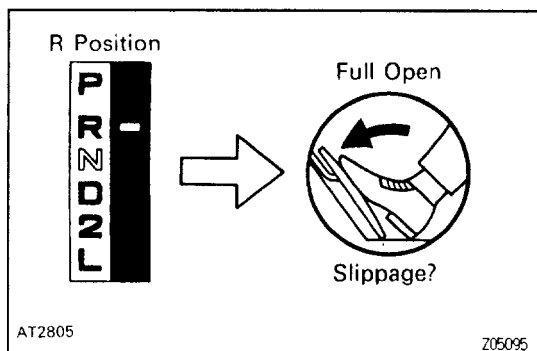
EVALUATION

If there is no engine braking effect:

- First and reverse brake is defective.

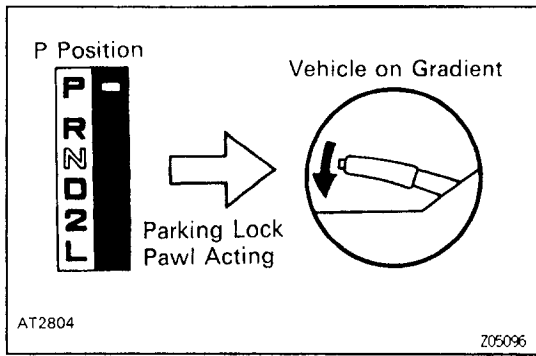


- (c) Check for abnormal noise during acceleration and deceleration.



4. R POSITION TEST

Shift into the R position and, while starting at full throttle, check for slipping.

**5. P POSITION TEST**

Stop the vehicle on a gradient (more than 5°) and after shifting into the P position, release the parking brake. Then check to see that the parking lock pawl holds the vehicle in place.