Diagnosis – Function Test

Test Drive Evaluation [1)]

Determine if transmission shifts into all 5 gears during test drive.

A. Allow vehicle to reach highest gear.
   1. Place selector lever in transmission range (TR) “4.”
   2. Maintain a vehicle speed of 56 mph (90 km/h).
   3. Release accelerator pedal.
   4. Immediately moved selector lever from TR “4” into TR “D”.
   5. The transmission should shift 4 → 5.
   6. Move selector lever from TR “D” to TR “4,” transmission should downshift from 5 → 4.
   7. Move selector lever from TR “4” to TR “3,” transmission should downshift from 4 → 3.
   8. If both downshifts occur, all gears are in operating condition.
   9. If only one downshift occurs, a gear (4GR or 5GR) is not functioning properly.

B. Determine engine rpm vs. transmission gear ratio.
   10. Maintain vehicle speed at 62 mph (100 km/h).
   11. Check engine rpm with selector lever in transmission ranges (TR) “3,” “4,” and “D.”

   On vehicles with 3.69 rear axle ratio:
   TR “3” = approximately 4300 rpm
   TR “4” = approximately 3000 rpm
   TR “D” = approximately 2200 rpm

   On vehicles with 3.46 rear axle ratio:
   TR “3” = approximately 4000 rpm
   TR “4” = approximately 2800 rpm
   TR “D” = approximately 2100 rpm

   Non-functioning gear can be determined by checking corresponding engine rpm.

1) MBUSA neither recommends nor requires testing on public roads which exceeds posted speed limits. In those states or provinces where the recommended vehicle speed exceeds posted speed limits, testing should be conducted on a test rack or a dynamometer.