

**9. General Diagnostic Table**

| Symptom   | Problem parts    |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
|---|------------------|----------------|------------------------|------------------------|--------------|--------------|------------|---------------------------|--------------------------|------------------|-------------------------|------------------|------------------|------------------|------------------------|----------|-----------------|-----------------|------------------|------------------|------------------|---------------|---------------|--------------|-----------------|----------------|---------------|-----------------|----------------|--|
|   | Inhibitor switch | Control module | Vehicle speed sensor 1 | Vehicle speed sensor 2 | Select cable | Select lever | FWD switch | Starter motor and harness | Throttle position sensor | Diagnosis switch | Accumulator ("N" — "D") | Accumulator (2A) | Accumulator (4A) | Accumulator (3R) | ATF temperature sensor | Strainer | Duty solenoid A | Duty solenoid B | Shift solenoid 1 | Shift solenoid 2 | Shift solenoid 3 | Control valve | Detent spring | Manual plate | Transfer clutch | Transfer valve | Transfer pipe | Duty solenoid C | Forward clutch |  |
| Starter does not rotate when select lever is in "P" or "N."; starter rotates when select lever is "R", "D", "3" or "2." | X                |                |                        |                        | X            | X            |            | X                         |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Abnormal noise when select lever is in "P" or "N."  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        | X        |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 | X              |  |
| Hissing noise occurs during standing starts.  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        | X        |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Noise occurs while driving in "D <sub>1</sub> " range.  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Noise occurs while driving in "D <sub>2</sub> " range.  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Noise occurs while driving in "D <sub>3</sub> " range.  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Noise occurs while driving in "D <sub>4</sub> " range.  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Engine stalls while shifting from one range to another.   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| Vehicle moves when select lever is in "N."  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 | X              |  |
| Shock occurs when select lever is moved from "N" to "D."  |                  | X              |                        |                        |              |              |            |                           |                          |                  | X                       |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| Excessive time lag occurs when select lever is moved from "N" to "D."   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 | X              |  |
| Shock occurs when select lever is moved from "N" to "R."  |                  | X              |                        |                        |              |              |            |                           |                          |                  |                         | X                |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| Excessive time lag occurs when select lever is moved from "N" to "R."   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| Vehicle does not start in any shift range (engine revving up).  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        | X        |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| Vehicle does not start in any shift range (engine stall).   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Vehicle does not start in "R" range only (engine revving up).   |                  |                |                        |                        | X            | X            |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| Vehicle does not start in "R" range only (engine stall).  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 | X              |  |
| Vehicle does not start in "D" or "3" range (engine revving up).   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 | X              |  |
| Vehicle does not start in "D", "3" or "2" range (engine revving up).  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 | X              |  |
| Vehicle does not start in "D", "3" or "2" range (engine stall).   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 | X              |  |
| Vehicle starts in "R" range only (engine revving up).   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| Acceleration during standing starts is poor (high stall rpm).   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 | X              |  |
| Acceleration during standing starts is poor (low stall rpm).  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Acceleration is poor when select lever is in "D", "3" or "2" range (normal stall rpm).                                  |                  | X              |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| Acceleration is poor when select lever is in "R" (normal stall rpm).  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |
| No shift occurs from 1st to 2nd gear.   |                  | X              | X                      | X                      |              |              |            |                           | X                        |                  |                         |                  |                  |                  |                        |          |                 |                 |                  | X                | X                | X             |               |              |                 |                |               |                 |                |  |
| No shift occurs from 2nd to 3rd gear.   |                  | X              |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               | X             |              |                 |                |               |                 |                |  |
| No shift occurs from 3rd to 4th gear.   |                  | X              |                        |                        |              |              |            |                           |                          |                  |                         |                  | X                | X                |                        |          |                 |                 |                  |                  |                  | X             | X             |              |                 |                |               |                 |                |  |
| No "kick-down" shifts occur.  |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |  |
| Engine brake is not effected when select lever is in "3" range.   | X                | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |  |



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| Symptom   | Problem parts    |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
|---|------------------|----------------|------------------------|------------------------|--------------|--------------|------------|---------------------------|--------------------------|------------------|-------------------------|------------------|------------------|------------------|------------------------|----------|-----------------|-----------------|------------------|------------------|------------------|---------------|---------------|--------------|-----------------|----------------|---------------|-----------------|----------------|
|   | Inhibitor switch | Control module | Vehicle speed sensor 1 | Vehicle speed sensor 2 | Select cable | Select lever | FWD switch | Starter motor and harness | Throttle position sensor | Diagnosis switch | Accumulator ("N" — "D") | Accumulator (2A) | Accumulator (4A) | Accumulator (3R) | ATF temperature sensor | Strainer | Duty solenoid A | Duty solenoid B | Shift solenoid 1 | Shift solenoid 2 | Shift solenoid 3 | Control valve | Detent spring | Manual plate | Transfer clutch | Transfer valve | Transfer pipe | Duty solenoid C | Forward clutch |
|   | 1                | 2              | 3                      | 4                      | 5            | 6            | 7          | 8                         | 9                        | 10               | 11                      | 12               | 13               | 14               | 15                     | 16       | 17              | 18              | 19               | 20               | 21               | 22            | 23            | 24           | 25              | 26             | 27            | 28              | 29             |
| Engine brake is not effected when select lever is in "3" or "2" range.                    |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
| Engine brake is not effected when select lever is in "1" range.                           |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               | X             |              |                 |                |               |                 |                |
| Shift characteristics are erroneous.  | X                | X              | X                      | X                      |              |              |            |                           | X                        |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| No lock-up occurs.  |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  | X                      |          |                 |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Vehicle cannot be set in "D" range power mode.  |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
| "D" range power mode cannot be released.  |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  | X                      |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
| Parking brake is not effected.  |                  |                |                        |                        | X            | X            |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
| Shift lever cannot be moved or is hard to move from "P" range.                            |                  |                |                        |                        | X            | X            |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
| Select lever is hard to move.   |                  |                |                        |                        | X            | X            |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               | X            | X               |                |               |                 |                |
| Select lever is too light to move (unreasonable resistance).                              |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               | X             | X            |                 |                |               |                 |                |
| ATF spurts out.   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
| Differential oil spurts out.  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
| Differential oil level changes excessively.   |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 |                |               |                 |                |
| Odor is produced from oil supply pipe.  |                  |                |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              |                 | X              |               |                 | X              |
| Shock occurs when select lever is moved from "1" to "2" range.                            |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         | X                |                  |                  | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Slippage occurs when select lever is moved from "1" to "2" range.                         |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         | X                |                  |                  | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Shock occurs when select lever is moved from "2" to "3" range.                            |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  | X                | X                | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Slippage occurs when select lever is moved from "2" to "3" range.                         |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  | X                | X                | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Shock occurs when select lever is moved from "3" to "4" range.                            |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         | X                | X                | X                | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Slippage occurs when select lever is moved from "3" to "4" range.                         |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         | X                | X                | X                | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Shock occurs when select lever is moved from "3" to "2" range.                            |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Shock occurs when select lever is moved from "D" to "1" range.                            |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Shock occurs when select lever is moved from "2" to "1" range.                            |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Shock occurs when accelerator pedal is released at medium speeds.                         |                  | X              |                        |                        |              |              |            |                           | X                        |                  |                         |                  |                  |                  | X                      |          | X               |                 |                  |                  |                  | X             |               |              |                 |                |               |                 |                |
| Vibration occurs during straight-forward operation.                                       |                  | X              |                        |                        |              |              |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 | X                |                  |                  |               |               |              |                 |                |               |                 |                |
| Select lever slips out of position during acceleration or while driving on rough terrain. |                  |                |                        |                        | X            | X            |            |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               | X             | X            |                 |                |               |                 |                |
| Vibration occurs during turns (tight corner "braking" phenomenon).                        |                  | X              | X                      | X                      |              |              |            |                           | X                        |                  |                         |                  |                  |                  | X                      |          |                 |                 |                  |                  |                  |               |               |              | X               | X              |               |                 | X              |
| Front wheel slippage occurs during standing starts.                                       |                  | X              |                        | X                      |              |              | X          |                           | X                        |                  |                         |                  |                  |                  | X                      |          |                 |                 |                  |                  |                  | X             |               |              | X               | X              | X             | X               | X              |
| Vehicle is not set in FWD mode.   |                  | X              |                        |                        |              |              | X          |                           |                          |                  |                         |                  |                  |                  |                        |          |                 |                 |                  |                  |                  |               |               |              | X               | X              |               |                 | X              |
|   | 1                | 2              | 3                      | 4                      | 5            | 6            | 7          | 8                         | 9                        | 10               | 11                      | 12               | 13               | 14               | 15                     | 16       | 17              | 18              | 19               | 20               | 21               | 22            | 23            | 24           | 25              | 26             | 27            | 28              | 29             |

| 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | Problem parts   | Symptom |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---------|
| X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Engine brake is not effected when select lever is in "3" or "2" range.                    |         |
|    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Engine brake is not effected when select lever is in "1" range.                           |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    | Shift characteristics are erroneous.  |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    | No lock-up occurs.  |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Vehicle cannot be set in "D" range power mode.  |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    | "D" range power mode cannot be released.  |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    | Parking brake is not effected.  |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    | Shift lever cannot be moved or is hard to move from "P" range.                            |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Select lever is hard to move.   |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Select lever is too light to move (unreasonable resistance).                              |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    | ATF spurts out.   |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    | Differential oil spurts out.  |         |
|    |    |    |    |    | X  |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Differential oil level changes excessively.   |         |
| X  |    |    |    |    |    |    | X  | X  | X  | X  |    |    |    |    |    |    |    |    |    |    | X  | X  |    |    |    |    |    |    | Odor is produced from oil supply pipe.  |         |
|    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | Shock occurs when select lever is moved from "1" to "2" range.                            |         |
|    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Slippage occurs when select lever is moved from "1" to "2" range.                         |         |
|    |    |    |    |    |    |    | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | Shock occurs when select lever is moved from "2" to "3" range.                            |         |
|    |    |    |    |    |    |    | X  | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Slippage occurs when select lever is moved from "2" to "3" range.                         |         |
| X  |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | Shock occurs when select lever is moved from "3" to "4" range.                            |         |
|    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Slippage occurs when select lever is moved from "3" to "4" range.                         |         |
| X  |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | Shock occurs when select lever is moved from "3" to "2" range.                            |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | Shock occurs when select lever is moved from "D" to "1" range.                            |         |
|    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | Shock occurs when select lever is moved from "2" to "1" range.                            |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    | Shock occurs when accelerator pedal is released at medium speeds.                         |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  | X  |    |    |    |    |    | Vibration occurs during straight-forward operation.                                       |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Select lever slips out of position during acceleration or while driving on rough terrain. |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | Vibration occurs during turns (tight corner "braking" phenomenon).                        |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Front wheel slippage occurs during standing starts.                                       |         |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Vehicle is not set in FWD mode.   |         |

