

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 ₁ " range. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Noise occurs while driving in "D ₂ " range. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Noise occurs while driving in "D ₃ " range. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Noise occurs while driving in "D ₄ " 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 | | | | | | | | |

| 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 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Problem parts | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | X | | | | | | | | | | | | X | | | | | X | | | | | | Starter does not rotate when select lever is in "P" or "N.," starter rotates when select lever is "R," "D," "3" or "2." |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Abnormal noise when select lever is in "P" or "N." |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Hissing noise occurs during standing starts. |
| | | | | X | | | | | | | | | | | | X | X | | | | | | | X | | | | | | Noise occurs while driving in "D ₁ " range. |
| | | | | X | | | | | | | | | | | | X | X | | | | | | | X | | | | | | Noise occurs while driving in "D ₂ " range. |
| | | | | X | | | | | | | | | | | | X | | | | | | | | X | | | | | | Noise occurs while driving in "D ₃ " range. |
| | | | | X | | | | | | | | | | | | X | X | | | | | | | X | | | | | | Noise occurs while driving in "D ₄ " range. |
| | | | | | | | | | | | | | | | | | | | | | X | | | | X | | | | | Engine stalls while shifting from one range to another. |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Vehicle moves when select lever is in "N." |
| | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | Shock occurs when select lever is moved from "N" to "D." |
| | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | Excessive time lag occurs when select lever is moved from "N" to "D." |
| | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | Shock occurs when select lever is moved from "N" to "R." |
| | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | Excessive time lag occurs when select lever is moved from "N" to "R." |
| X | X | X | X | | | X | | | | | | | | | X | X | X | | X | | | | | X | | | | | | Vehicle does not start in any shift range (engine revving up). |
| | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | Vehicle does not start in any shift range (engine stall). |
| | | | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | Vehicle does not start in "R" range only (engine revving up). |
| | | | | | | | | 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 | | | | | | | | | | | | X | | | | | Vehicle does not start in "D", "3" or "2" range (engine stall). |
| | | | | | | | | | | | X | | | | | | | | | | | | | | X | | | | | Vehicle starts in "R" range only (engine revving up). |
| | | | | | | | | | | | X | | | | | | | | | | | | | | X | | | | | Acceleration during standing starts is poor (high stall rpm). |
| | | | | | | | X | | | | | | | | | | | | X | | | | | | X | | | | | Acceleration during standing starts is poor (low stall rpm). |
| | | | | | | | X | X | | | | | | | | | X | | | | | | | | | | | | | Acceleration is poor when select lever is in "D", "3" or "2" range (normal stall rpm). |
| X | | | | | | | X | 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 | | | | | | | | | | | | | | | | | | No shift occurs from 2nd to 3rd gear. |
| | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | No shift occurs from 3rd to 4th gear. |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | No "kick-down" shifts occur. |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Engine brake is not effected when select lever is in "3" range. |
| 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 | | |

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 |
| | 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. | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Shift characteristics are erroneous. |
| | | | | | | | | | | | | | | | | | | | | | | X | | | | | X | | | No lock-up occurs. | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Vehicle cannot be set in "D" range power mode. |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | "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 | | | 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 | | 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 | | 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. |