



# Technical Service Information

## 2000 & LATER ISUZU NPR; CHEVY FORWARD; GMC TILTMASTER

### TPS RELEARN PROCEDURE

**COMPLAINT:** The transmission is stacked shifting and has no kickdown. Code 21, for a TPS circuit fault is stored. All TPS circuits check within specs and adjusting the TPS does not allow code 21 to be cleared or the complaints to disappear.

**CAUSE:** These vehicles require a TPS relearn procedure whenever the engine, injection pump, accelerator cable, throttle linkage, throttle position sensor or kickdown switch are replaced. Failure to do so will result in the above complaints.

**CORRECTION:** The following procedure is used for the TPS voltage relearn:

#### Clearing TCM Memory of Current TPS Voltage

1. Turn starter switch to the "ON" position.
  2. Turn the overdrive switch to the "ON" position.
  3. Place the selector lever in the manual "1" range.
  4. Depress the accelerator pedal fully, listen for the kickdown switch click.
  5. Depress the brake pedal, (brake switch "ON").
- If the memory is successfully cleared, the "Check Trans" lamp flashes 5 times.*

#### Preparation For Relearn

1. Turn the starter switch to the "ON" position.
2. Connect terminals 4 and 11 of the Data Link Connector as seen in Figure 1, the "Check Trans" lamp begins flashing at 0.4 second intervals.
3. Place selector lever in the "P" range.

#### WOT Voltage Relearn

1. Depress accelerator pedal fully.
2. With the accelerator pedal still at WOT, depress brake pedal for more than 3 seconds.
3. The "Check Trans" lamp should now flash intermittently, then illuminate for 3 seconds, then flash 6 times slowly, then flash intermittently again. At this time, release the brake and accelerator pedals. The "Check Trans" lamp should illuminate for 3 seconds. If it does not, do the "Clear Memory" procedure above and repeat the WOT relearn procedure beginning with item 2 under "Preparation".

#### Idle Position Voltage Relearn

1. Start the engine.
2. Depress the accelerator pedal slowly 3 times.
3. Remove the jumper wire from the Data Link Connector. At this time the "Check Trans" lamp should stop flashing. If it does not, or there is mis-operation, begin the procedure again from the start.



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**CORRECTION:** Confirmation of Relearn

*continued:*

*Stop the engine. Turn the starter switch to the "ON" position, the "Check Trans" lamp should begin flashing again. Depress the accelerator pedal fully and release the pedal slowly.*

**NOTE:** *If the WOT voltage is out of spec, or the TCM did not learn any value, the "Check Trans" lamp will continue to flash continuously. In this case begin the relearn procedure over again. If the relearn was successful, The flashing will stop.*

**NOTE:** This manual relearn procedure is complicated at best. If it must be done multiple times because of unsuccessful attempts, it may be wise to have it done at the dealer or by a TECH II or Mastertech scan tool that you have or can acquire.

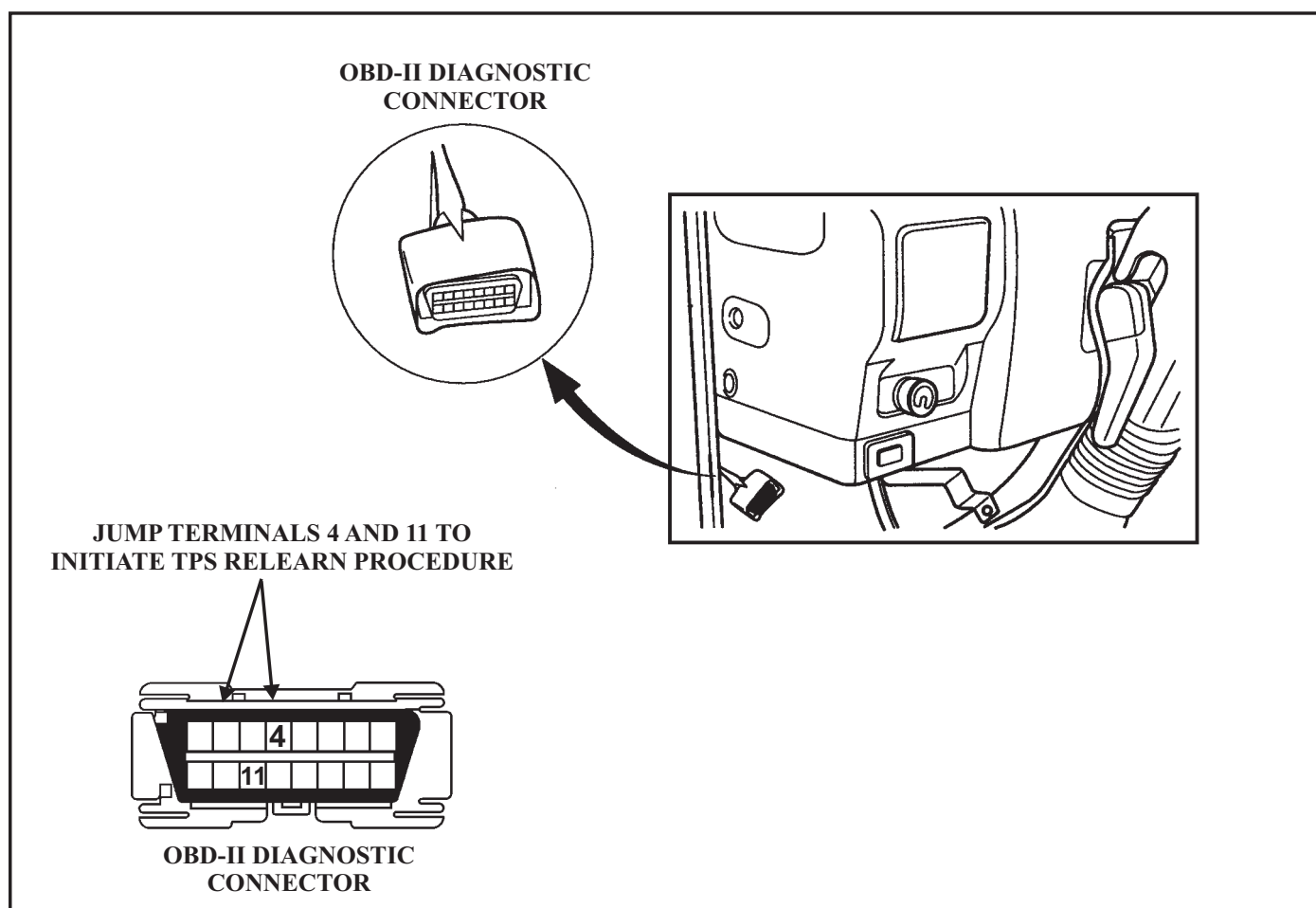


Figure 1