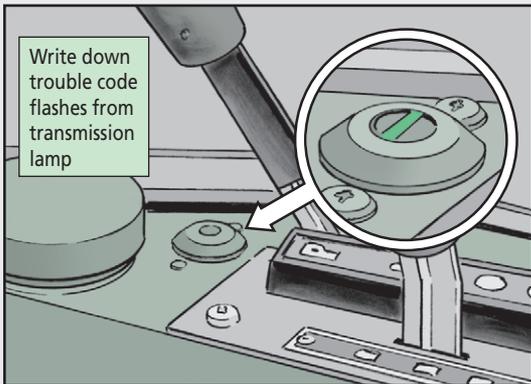


Dear Editor,

Your article on Pages 10-11 of PS 637 (Dec 05) for troubleshooting HMMWVs with the 4L80E electronic transmissions was very helpful. But we've come up with a few more things that can help save units a lot of time when troubleshooting.

Before you attempt to diagnose electronic transmission problems:

- Write down the trouble codes from the vehicle's computer as they flash over the transmission lamp located next to the shift lever. Remember, codes 12 and 63 will always appear and should be disregarded. Next, clear the codes and road test the vehicle. Then check to see which trouble codes are still reported. That eliminates false codes and saves troubleshooting time.



- Check all transmission sensor connections. Most problems are caused by loose or corroded wiring connections. After checking the connections, clear the trouble codes and road test the vehicle to see if that clears up the problems.

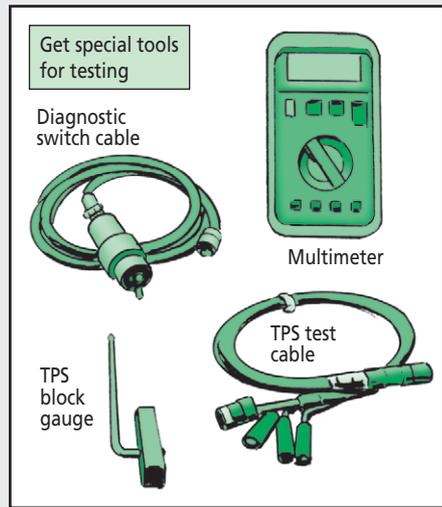
- When multiple codes are reported by the computer, always troubleshoot the lowest code first and then work your way up. The higher-numbered codes are sometimes the result of the lower-numbered codes. So if you fix the lower codes first, you'll often find some of the higher codes will disappear.

Before changing out an "inoperable" 4L80E transmission, do the following:

- Make sure you have all of the proper diagnostic test equipment you need. That includes a multimeter, the throttle positioning sensor (TPS) block gauge, NSN 4820-01-179-4869, and the special purpose tool kit, NSN 5180-01-410-8467. This kit includes the following:

Item	NSN
Diagnostic switch cable	6150-01-410-8215
TPS cable	6150-01-412-7774
Seal installer*	5120-01-414-1849
Seal installer*	5120-01-437-0480
Drive handle*	5120-01-026-1666

*These items are not required for diagnostic testing.

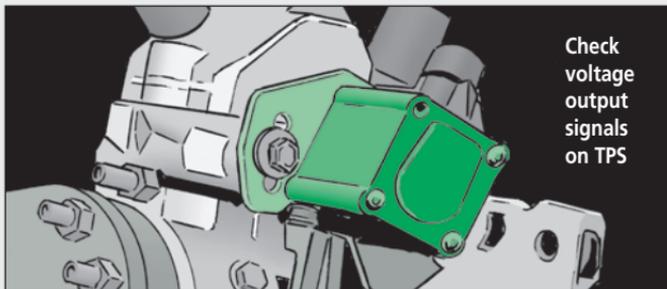


-- If you've never worked with this type of transmission, consult with an experienced mechanic or TACOM LAR to get the help you need.

-- If the truck's batteries have been serviced or replaced, it is important to properly reconnect the two power wires for the transmission control module (TCM). Do it wrong and the TCM gets 24 volts instead of the required 12. That burns up the TCM.

-- Eyeball the transmission relay harness, which is located next to the batteries. If this harness ends up on top of the panel that separates the batteries and the relays, it may get cut when the passenger's seat is taken out and put back in. This will result in a no-shift mode and the transmission will be unable to change gears.

-- Check the TPS voltage output signals. The TPS is used to send a signal to the TCM letting it know when to shift. The TPS may need to be adjusted or replaced.



A training video—*TVT 55-62, HMMWV A2 Electronic 4-speed Transmission*—is also available. The video focuses on the transmission's electronic components' location, function and interaction and includes a section on "common problems" that covers diagnostic test codes.

Check with your local TACOM LAR for a copy, or order it direct from the Defense Automated Visual Information System/Defense Instructional Technology Information System (DAVIS/DITIS) website:

<http://dodimagery.afis.osd.mil>

Click on PIN/ICN Search in the left-hand column. On the next page, enter 711363 in the PIN/ICN block and click Search. Click on the video title, add the item to your shopping cart and follow the instructions.

Jim Hillman
TACOM LAR
Korea

Editor's note: Whew! That's a lot of troubleshooting help, Mr. Hillman. And very much appreciated by mechanics everywhere!

