46/47RE 1998-Up Diesel
Lock-up and or 4th Gear Hunt, No Codes

In 1998, Dodge began using an Accelerator Pedal Position Sensor APPS instead of a Throttle Position Sensor TPS in the 5.9L Diesel Pick-ups. There are three major differences between the APPS and TPS.

1. Cost
2. The addition of two idle switches and
3. The APPS signal enters the Engine Control Module ECM then exits as the TPS signal to the Powertrain Control Module PCM.

Concern: Lock-up and or 4th gear hunting with no codes present. Scan data shows hunt is commanded with no other parameters varying.

Cause: The most frequent failures occur either inside the ECM or in the wiring between the ECM and the PCM. The APPS input circuit H102 enters the ECM as a good signal, but the TPS output circuit K22 to the PCM is erratic. Transmission operation is affected because it is the primary job of the PCM to control its operation.

Repair: Jumper an additional wire into circuit H102. Cut the wire at circuit K22 at the PCM connector C1 terminal 23. Connect the jumper wire from circuit H102 to terminal 23 on PCM connector C1 and retest.
46/47RE 1998-Up Diesel
Lock-up and or 4th Gear Hunt No Codes
(continued)
46/47RE 1998-Up Diesel
Lock-up and or 4th Gear Hunt No Codes (continued)

Accelerator Pedal Position Sensor

<table>
<thead>
<tr>
<th>APPS (Accelerator Pedal Position Sensor)</th>
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<tbody>
<tr>
<td>IDLE</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>K101 DB/WT</td>
</tr>
<tr>
<td>42</td>
</tr>
<tr>
<td>APP Sensor Signal</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Idle Validation Switch #1</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>K103 BK/YL</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>K104 BK/LB</td>
</tr>
</tbody>
</table>

Run a new wire from the APPS to the PCM

Cut wire here

Throttle Position Sensor Signal

POWERTRAIN CONTROL MODULE
46/47RE 1998-Up Diesel
Lock-up and or 4th Gear Hunt No Codes (continued)

1 B+
2 Idle Switch No. 2
3 Accelerator Pedal Position Sensor Signal
4 Accelerator Pedal Position Sensor Ground
5 Accelerator Pedal Position Sensor Supply
6 Idle Switch No. 1

The ECM is located behind the water separator.
46/47RE 1998-Up Diesel
Lock-up and or 4th Gear Hunt No Codes (continued)

Pin 6 TPS signal to PCM from ECM

Make sure connection is good and no corrosion is evident.
46/47RE 1998-Up Diesel
Lock-up and or 4th Gear Hunt No Codes (continued)

Pin 23-Throttle Position Sensor

Engine Control Module

1  Idle Valve Switch No. 1
11  B+
16  Idle Valve Switch No. 2
25  Accelerator Pedal Position Sensor Signal
32  Accelerator Pedal Position Sensor Ground
31  Accelerator Pedal Position Sensor Supply