

Author: Jeff Parlee

Total Pages: 1

Preventing 48RE Transmission Throttle Valve Actuator Codes

In 2005, Dodge started using a transmission throttle valve actuator (TTVA) instead of a TV cable on the 48RE Diesel 2500 and 3500 Ram trucks. The actuator, mounted to the case above the throttle valve shaft, includes two potentiometers which provide input to the ECM as well as a DC motor that responds to ECM output. The bottom of the TTVA shaft features a D-shaped opening that fits onto the throttle shaft, allowing the actuator to mechanically stoke the TV valve and ultimately control transmission throttle pressure.

There are no adjustments for the TTVA, it must be initialized when replaced or removed and reinstalled on the transmission. Every time the ignition is cycled on, the ECM performs the internal calibration procedure to find the current "zero" position. To initialize the TTVA, the ignition must be held in the "on" position for at least 30 seconds.

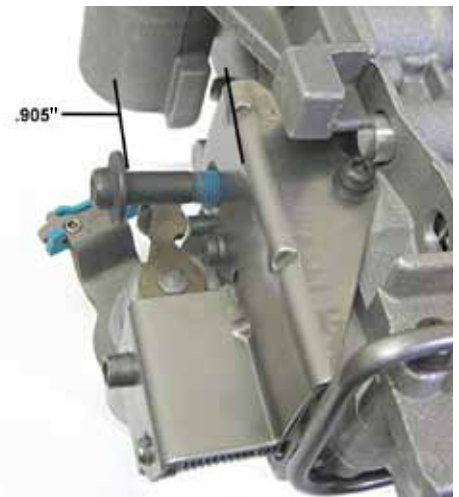
During the calibration procedure, the ECM is looking for at least 48 degrees of movement from minimum to maximum span and to establish a minimum range value. Both of these parameters can be affected by the throttle shaft adjustment bolt on the pressure regulator spring retaining bracket. The distance between the bracket and the inside edge of the adjustment bolt head should be .905". A shorter distance will not allow the TV shaft to travel far enough to satisfy calibration parameters and will set a code P1751 and/or P1752.

Here is where you can easily get into trouble. Some of the cable-activated throttle valve brackets have as little as .820" between the bracket and the inside of the adjustment bolt head. Using the cable type bracket set up in a TTVA equipped unit without changing the setting on the adjustment bolt can set the same codes.

Transmission Throttle Valve Actuator Code List:

- **P1749** – Transmission Throttle Valve Position Sensor Circuit Low
- **P1750** – Transmission Throttle Valve Position Sensor Circuit High
- **P1751** – Transmission Throttle Valve Position Minimum Range Performance
- **P1752** – Transmission Throttle Valve Span Performance
- **P1753** – Transmission Throttle Valve Mechanical Performance
- **P1754** – Transmission Throttle Valve Actuator Stuck
- **P1755** – Transmission Throttle Valve Control Circuit

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Jeff Parlee is Director of Product Support at Valve Body Xpress and a member of the Sonnax TASC Force (Technical Automotive Specialties Committee), a group of recognized industry technical specialists, transmission rebuilders and Sonnax Industries Inc. technicians.

sonnax®

Automatic Drive P.O. Box 440
Bellows Falls, VT 05101-0440 USA
800-843-2600 • fax: 802-463-4059
email: info@sonnax.com • www.sonnax.com