Cruise Control: Technical Service Bulletins
Speed Control Diagnostic Tips

Servo Pin-Out Test Tips

NOTE
MEASURING THE RESISTANCE OF A SERVO WILL INDICATE THAT A SERVO IS BAD IF READINGS ARE OUTSIDE THE RANGES SPECIFIED BELOW. HOWEVER, A SERVO CAN HAVE RESISTANCE READINGS WITHIN THE SPECIFIED RANGES AND STILL BE FAULTY.

The following readings are the expected values for a good servo.

Resistance between Pins 6 and 10 should measure less than 5 ohms. This is the ground circuit through the module. Resistance between Pins 7 and 10 will vary with polarity, the type of meter, and source voltage of the meter. Also measurements between Pins 7 and 10 can be any of the following: an open circuit, increasing reading (as a capacitor charging), or changing value (re-apply leads and different value indicated), or a stable reading of 10,000 ohms or greater are all valid results as this is a solid state circuit.

DST Testing Tips (TPS PID)

1. Pinpoint Test: The Speed Control Does Not Disengage When The Brakes Are Applied

With the vehicle speed above 30 MPH (48 Km/h) engage the speed control. Then check to see if the IPS PID returns to base voltage when the brakes are applied. If it does return to base voltage, then the speed control system is working. Need to advise customer that tapping the brakes deactivates speed control and that the brakes must be applied to make the vehicle slow down. On the Escape/Mariner the brake pedal should be depressed at least 13/32" (10 mm) in order to deactivate speed control.

NOTE
CHECK FOR CALIBRATION SERVICE MESSAGES RELATING TO DASHPOT OR IDLE SPEED CONTROL UPDATES.

2. Pinpoint Test: The Speed Control Does Not Disengage When The Clutch Is Applied

Check to see if the TPS PID returns to base voltage when the clutch is pressed. If it does then the speed control system is working. Need to advise customer that pressing clutch deactivates speed control and that the brakes must be applied to make the vehicle slow down.

NOTE
CHECK FOR CALIBRATION SERVICE MESSAGES RELATING TO DASHPOT OR IDLE SPEED CHANGES. ALSO A SLIGHT ENGINE RPM FLARE MAY OCCUR ON SOME VEHICLES WHEN SPEED CONTROL IS DISENGAGED WHICH IS A NORMAL CONDITION.

Speed Signal Testing Tips

NOTE
A FAULTY VEHICLE SPEED SIGNAL TO THE SERVO CAN RESULT IN INTERMITTENT, IRREGULAR OR INOPERATIVE SPEED CONTROL.

NOTE
FOR VEHICLES THAT HAVE OSS OR HALL EFFECT VEHICLE SPEED SIGNALS TO THE SERVO, REFER TO WSM FOR DIAGNOSTICS.

To verify that the speed control signal sent to the servo is valid, the following inspection may be done for ABS and PCM generated speed signals:

1. Disconnect speed control module (C122).

2. Connect DVOM set to Hz to C122 Pin 3 harness side and C122 Pin 10 (ground) harness side.

3. Start the vehicle; place the transmission in DRIVE, test drive vehicle between 25-30 MPH (40-48 Km/h).

4. Measure the frequency between the speed control actuator C122 Pin 3 harness side and C122 Pin 10 (ground) harness side. Divide frequency by 2.2 to give MPH and compare to speedometer reading. Measure AC Volts and record.

5. If the AC Voltage is greater than 4.5V and the frequency reading does match the speedometer reading then the speed signal is valid. If further diagnostics are required see WSM.

Deactivator Switch Inspection Tips

A faulty deactivator switch can result in intermittent or inoperative speed control. There are two types of deactivator switches; a brake line pressure switch which is integrated into the brake master cylinder, and a pedal travel switch, which is connected to the brake pedal arm.

Proper switch function should be confirmed. Inoperative switches of both types should be inspected for connector corrosion or pin push-out. Pedal travel switches should also be inspected for proper mechanical adjustment relative to brake pedal travel.