# THM 4T80-E

## TURBINE SHAFT SPEED SENSOR
## TROUBLE CODE "P056"

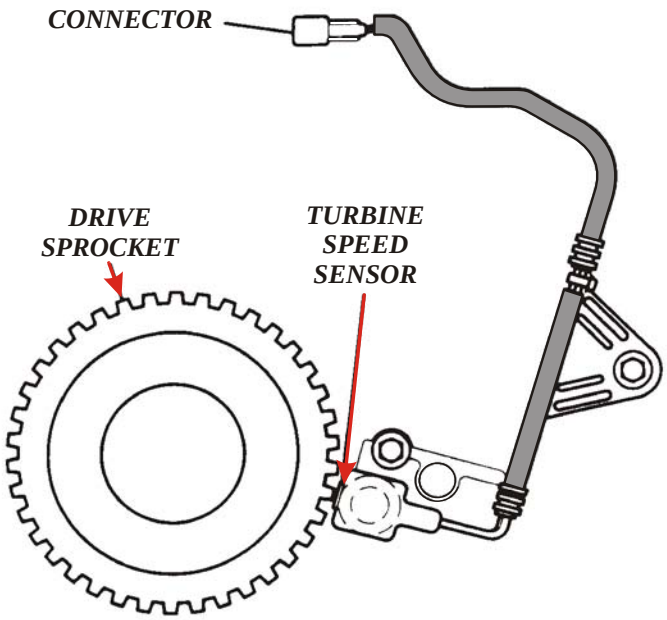
**COMPLAINT:** Some 1993-1996 model Cadillac vehicles equipped with the THM 4T80-E transaxle, may exhibit a second gear start condition, and have trouble code "P056" stored in the PCM. Trouble codes ***should*** be accessed through the on-board diagnostic system and will be displayed on the Climate Control Center. We have seen scanners give us incorrect information on these models.

**CAUSE:** The cause may be, a defective Turbine Shaft Speed Sensor, that is located under the channel plate and triggered by the drive sprocket, as shown in Figure 1.

**CORRECTION:** Replace the the Turbine Shaft Speed Sensor with a new OEM part, available under OEM Part Number 8685532. We have also provided you with wire connector pin identification for both case connector configurations so that you can check the resistance values on the TSS and Shift Solenoids. Refer to Figure 2 for the 1993 case connector and Figure 3 for the 1994 and later case connector.
***Special Note:*** Since this has been the ***number two problem*** that we have been faced with on the telephone, we would highly recommend replacing the TSS as a mandatory replacement part on every rebuild, because of its location.

**SERVICE INFORMATION:**

Turbin Shaft Speed Sensor (All) ..... 8685532



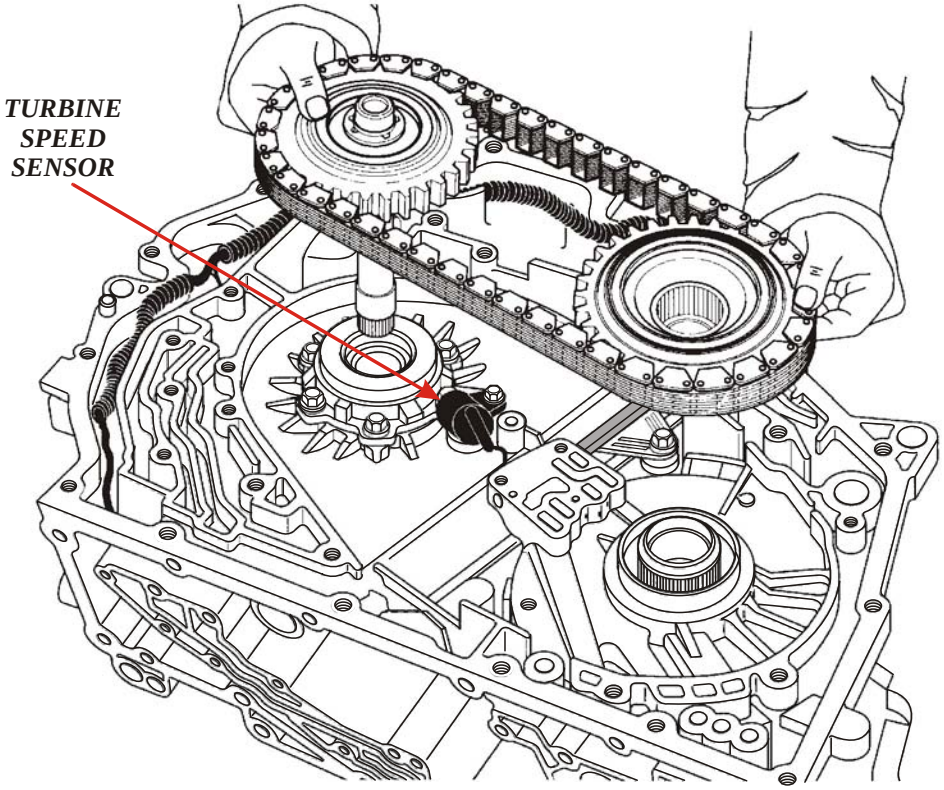
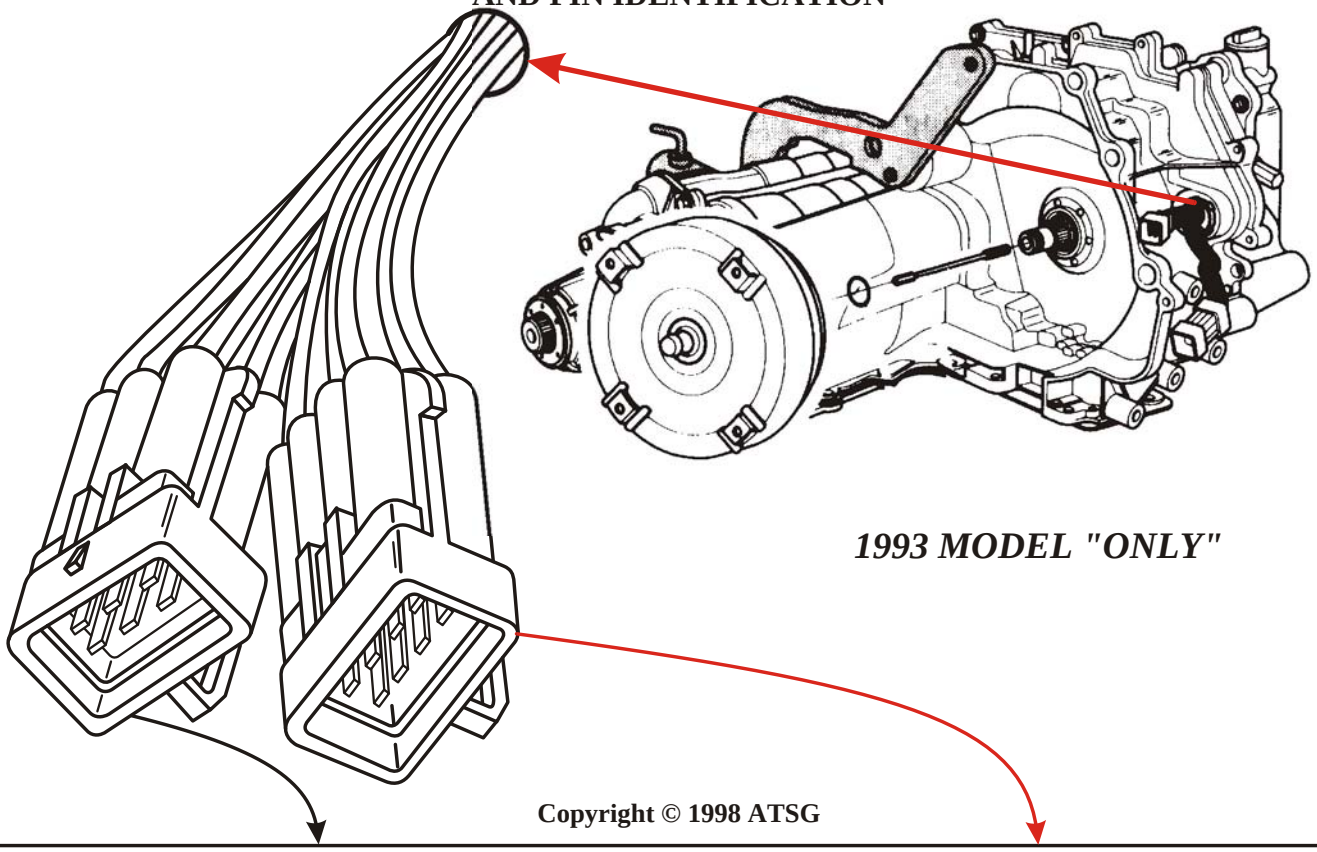






Figure 1

## THM 4T80-E CASE CONNECTOR LOCATION AND PIN IDENTIFICATION

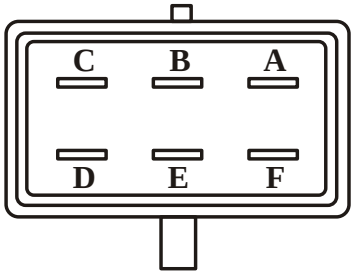


*1993 MODEL "ONLY"*



### CONNECTOR NUMBER 130
### 6 PIN CONNECTOR

*View Looking Into Case Connector*



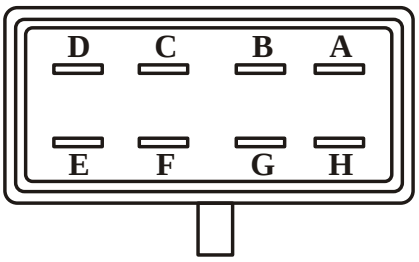

A = TRANSAXLE INPUT SPEED SENSOR (HI)
B = TRANSAXLE INPUT SPEED SENSOR (LO)
C = EPC SOLENOID (HI)
D = EPC SOLENOID (LO)
E = TCC SOLENOID - 12V POWER IN
F = TCC SOLENOID - GROUND SIGNAL

*Internal Wire Harness Colors*

A = Brown
B = Tan
C = Dark Green
D = Light Green
E = Purple
F = Pink

### CONNECTOR NUMBER 129
### 8 PIN CONNECTOR

*View Looking Into Case Connector*



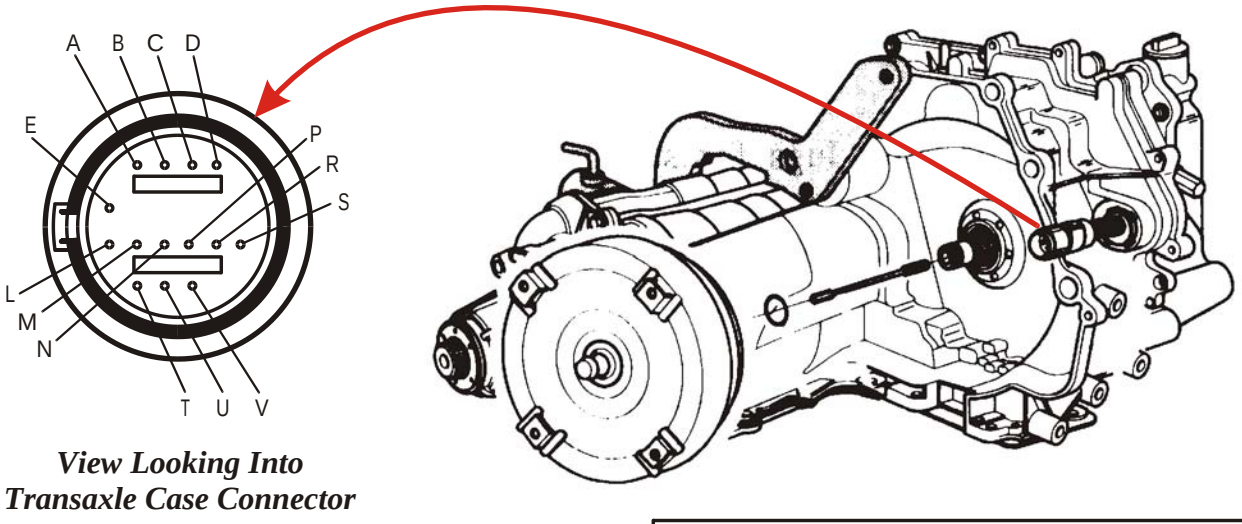

A = PSA SWITCH "X" CIRCUIT INPUT TO PCM
B = PSA SWITCH "Y" CIRCUIT INPUT TO PCM
C = TEMP SENSOR - 5V RETURN
D = TEMP SENSOR - INPUT
E = SHIFT SOLENOID "A" GROUND FROM PCM
F = SHIFT SOLENOIDS - 12V POWER IN
G = SHIFT SOLENOID "B" GROUND FROM PCM
H = PSA SWITCH "Z" CIRCUIT INPUT TO PCM

*Internal Wire Harness Colors*

A = Black
B = White
C = Dark Blue
D = Light Blue
E = Orange
F = Red
G = Yellow
H = Gray

Figure 2

## 1994-UP THM 4T80-E CASE CONNECTOR LOCATION AND PIN IDENTIFICATION




*View Looking Into Transaxle Case Connector*

| *Ohms Resistance Chart* | | | |
|---|---|---|---|
| Cavities | Component | Resistance @ 68°F | Resistance @ 190°F |
| A-E | 1-2 Shift Solenoid | 20-30W | 23-50W |
| B-E | 2-3 Shift Solenoid | 20-30W | 23-50W |
| T-U | TCC/PWM Solenoid | 10-15W | 11-25W |
| C-D | EPC Solenoid | 3-5W | 5-6W |
| S-V | Input Speed Sensor | 1260-1540W | |
| M-L | TFT Sensor | 3164-3867W | 225-285W |
| | Output Speed Sensor | 1260-1540W | |



| CASE CONNECTOR PIN FUNCTION | | |
|---|---|---|
| Pin | Internal Wire Color | Function |
| A | Light Green | Ground signal from PCM for the 1-2 Shift Solenoid (A) |
| B | Yellow/Black | Ground signal from PCM for the 2-3 Shift Solenoid (B) |
| C | Purple | Electronic Pressure Control Solenoid, HIGH Control |
| D | Light Blue | Electronic Pressure Control Solenoid, LOW Control |
| E | Red | Transaxle Solenoid 12V Power In |
| L | Brown | Transaxle Fluid Temperature (TFT) Sensor HIGH |
| M | Gray | Transaxle Fluid Temperature (TFT) Sensor LOW |
| N | Pink | Pressure Switch Assembly, Range Signal "X" |
| P | Orange | Pressure Switch Assembly, Range Signal "Z" |
| R | Dark Blue | Pressure Switch Assembly, Range Signal "Y" |
| S | Light Green | Input Speed Sensor (ISS) signal HIGH |
| T | Tan | Ground signal from PCM for the TCC/PWM Converter Clutch Solenoid |
| U | White | TCC Solenoid Feed |
| V | Purple | Input Speed Sensor (ISS) signal LOW |

Figure 3