



## FORD WINDSTAR

### CODE P0743, TCC SOLENOID ELECTRICAL CIRCUIT FAULT

**COMPLAINT:** A 1998 Ford Windstar comes into the shop with a code P0743 for a “TCC Solenoid Electrical Circuit Fault” stored as a hard code. The unusual part of this problem is that the code is stored as soon as the ignition is turned on.

**CAUSE:** Since all items relating to this type of situation had already been eliminated as the cause of the problem, the technician decided to consult wiring diagrams for this vehicle. Since the factory wiring diagrams were split into two categories, vehicles built before 9/8/97 and vehicles built after 9/8/97, both were compared. The “before 9/8/97” indicated that the TCC ground controlled terminal was at pin 82, (Refer to Figure 1). The “after 9/8/97” diagram indicated this circuit should be at terminal 54, (Refer to Figure 2). The technician decided to check the signal that was being sent on this circuit by the PCM. The Red/Lt Blue wire was located at terminal 82 in the PCM connector. There was battery voltage on the circuit at all times, usually meaning that the PCM did not deliver the ground signal. ***The PCM connector location at pin 54 was molded shut!***

A call to the local Ford dealer parts person revealed a “Special Service Message” that is only available to Ford dealers that states as follows:

“THE TORQUE CONVERTER CLUTCH SOLENOID IN 1998 WINDSTARS BUILT FROM JANUARY 1, 1997 TO SEPTEMBER 8, 1997, WILL HAVE A RESISTANCE OF .98 TO 1.6 OHMS AND THE PCM TERMINAL LOCATION IS PIN 82.

THE TCC SOLENOID IN 1998½ WINDSTARS BUILT FROM SEPTEMBER 9, 1997 TO PRESENT WILL HAVE A RESISTANCE OF 13 TO 24 OHMS AND THE PCM TERMINAL LOCATION IS PIN 54.

1998½ MODEL YEAR DESIGNATION MAY BE IDENTIFIED BY THE LETTER “Z” IN THE 4TH DIGIT OF THE VEHICLE IDENTIFICATION NUMBER (VIN)”.

**CORRECTION:** This vehicle did have a “Z” as the 4th vin digit making it a 1998½ vehicle which means the active TCC solenoid ground circuit should be terminal 54, not 82.

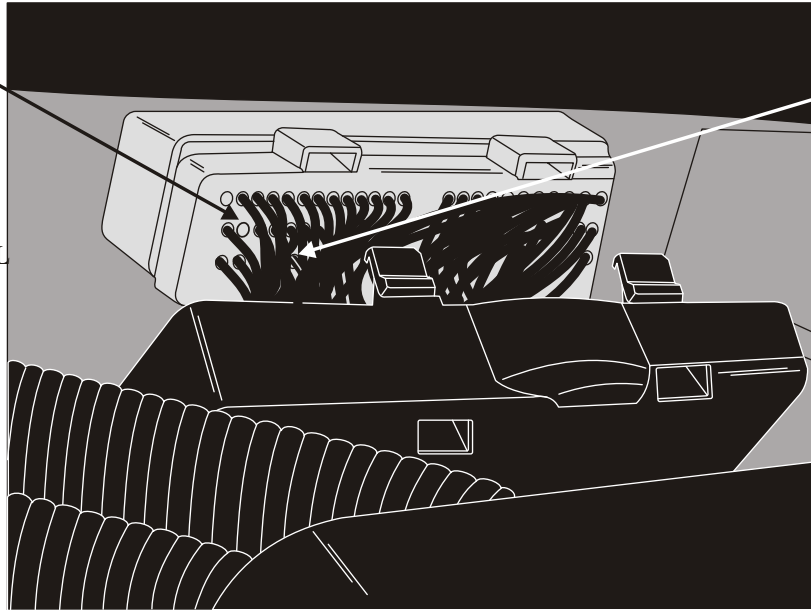
How this came about will remain a mystery. It would seem that someone working on this vehicle in the past went through the trouble of installing a 1998½ PCM with a 1998 wiring harness.

The fix was to drill the terminal 54 location open and move the TCC ground controlled wire from the pin 82 location to terminal 54.

*Many thanks to Jim Brinkman of Brinkman's Transmission in Dayton, Ohio for sharing his experience with us in order to put this material together, and congratulations to Jim and Dan for a tough job well done.*

## *WINDSTARS BUILT BEFORE 9/8/97*

HAS THE WHITE CONNECTOR TCC SOLENOID AND WILL HAVE TERMINAL 54 MOLDED SHUT AND THIS PCM TERMINAL WILL BE NON-FUNCTIONAL

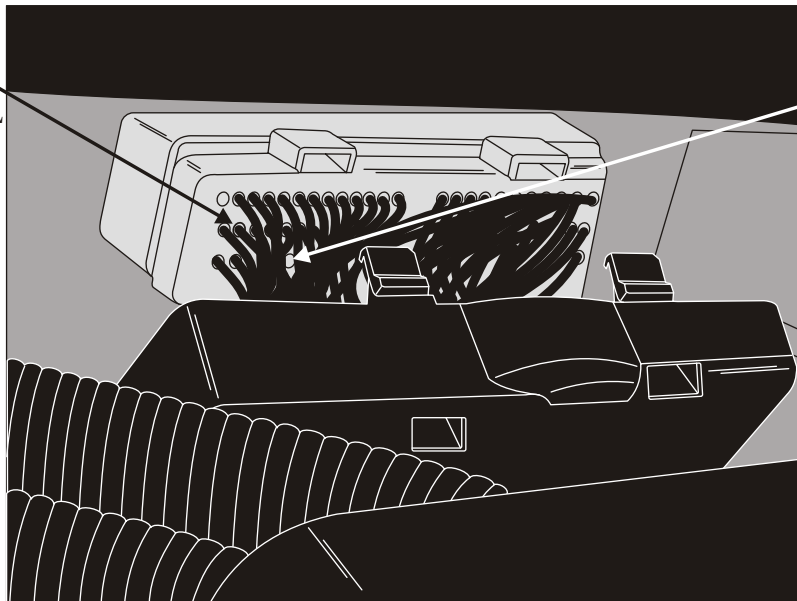


TERMINAL 82 WILL BE THE FUNCTIONAL TERMINAL FOR THE TCC GROUND CONTROLLED CIRCUIT

Figure 1

## *WINDSTARS BUILT AFTER 9/8/97*

TERMINAL 54 WILL BE THE FUNCTIONAL TERMINAL FOR THE TCC GROUND CONTROLLED CIRCUIT



HAS THE BLUE CONNECTOR TCC SOLENOID AND WILL HAVE TERMINAL 82 MOLDED SHUT AND THIS PCM TERMINAL WILL BE NON-FUNCTIONAL

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Figure 2