

Transmission Control Unit Calibration

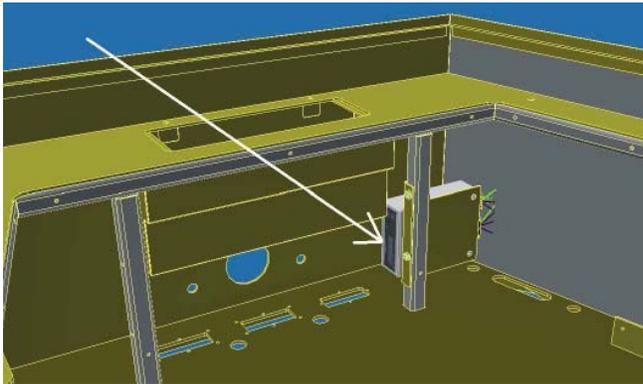
Introduction

Dana TE32 transmissions are controlled by a transmission control unit (TCU) that uses pressure and speed sensors to ensure safe operation of the transmission. The TCU has a self-calibration procedure that must be initialized at the factory and every 2000 traveling hours thereafter. This document explains how to initialize the calibration mode from the TCU interface.

- The calibration procedure is automatic and takes 10 to 15 minutes.
- The transmission temperature needs to be above 140° F (60° C)

TCU Interface Calibration

The TCU is located on the driver's side in the bulkhead at the rear of the cab. There are two buttons on the TCU display M and S. The M button is towards the front of the cab and the S is towards the rear.



Procedure

1. Press and hold the “M” button for 15 seconds, and turn the ignition switch to Run, but do not start.
 - The screen will display:

2. Start the machine, turning the ignition switch to Run.
3. Press the “S” button to start the calibration mode.

4. Stall the transmission until the sump is at the correct operating temperature of 60° C.
 - The display will show the sump temperature.
 - A. Keep the service brake applied.
 - B. Turn the declutch switch off.
 - C. Take the parking brake off.
 - D. Place the transmission in forward 4th gear.
 - E. Stall the transmission until the transmission is at operating temperature.
 - F. The TCU will take control of the transmission when the operating temperature is reached.
5. Keep the service brake applied for the rest of the calibration.
6. The calibration mode will start automatically when:
 - A. The parking brake is applied.
 - B. The transmission is in neutral.
7. The calibration procedure will now go through the range and direction clutches.
 - A slight delay might be noticed before activity is noticed.
8. The display will show the clutch that is being calibrated:



- Where c1 stand for clutch 1, and n1 stands for mode 1.
9. When all the clutches have been calibrated, the display will show:

 10. Turn off the ignition to exit out of the calibration mode and save the results.

Notes

1. The transmission will display an error if the machine moves during calibration.

A digital display showing the word "STOP" in a large, bold, black font. The letters are slightly shadowed, giving a 3D effect.

2. Selecting reverse will restart the calibration.
3. The display will indicate if you need to shift to neutral.

A digital display showing the letter "N" in a large, bold, black font. The letter is slightly shadowed, giving a 3D effect.

4. The display will indicate if you need to apply the parking brake.

A digital display showing the letter "P" in a large, bold, black font. The letter is slightly shadowed, giving a 3D effect.

5. Error messages have the form E1.XX, E2.XX, etc. If any error codes show on the display, write down the error code and contact engineering.