



Technical Service Information

FORD FNR5

GEAR RATIO ERROR CODES

COMPLAINT: A Ford Fusion equipped with a 2.3L engine and FNR5 transmission has a complaint of gear ratio error codes P0734 for Gear Ratio Error In Fourth Gear and P0744 for TCC Malfunction Detected. It was also noted that turbine speed was higher than engine speed.

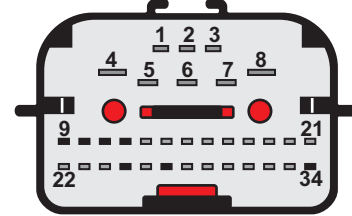
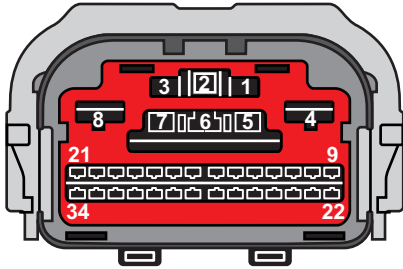
CAUSE: The C134 connector joins the transmission wire harness with the TCM which is located under the instrument panel on the driver's side. The C134 connector travels from the transmission case connector past the under hood fuse box and the battery, it is secured to a frame rail and is subjected to the elements. The C134 connector had water intrusion which should have caused electrical codes to set. This set no electrical codes, instead it set what would be considered mechanically generated codes which can be extremely misleading.

CORRECTION: Clean and dry the C134 connector halves and apply some dielectric grease. Terminal identification and function for the C134 connector can be found in figure 1. Transmission case connector terminal identification as well as function can be found in figure 2 along with solenoid and transmission fluid temperature sensor resistance values.

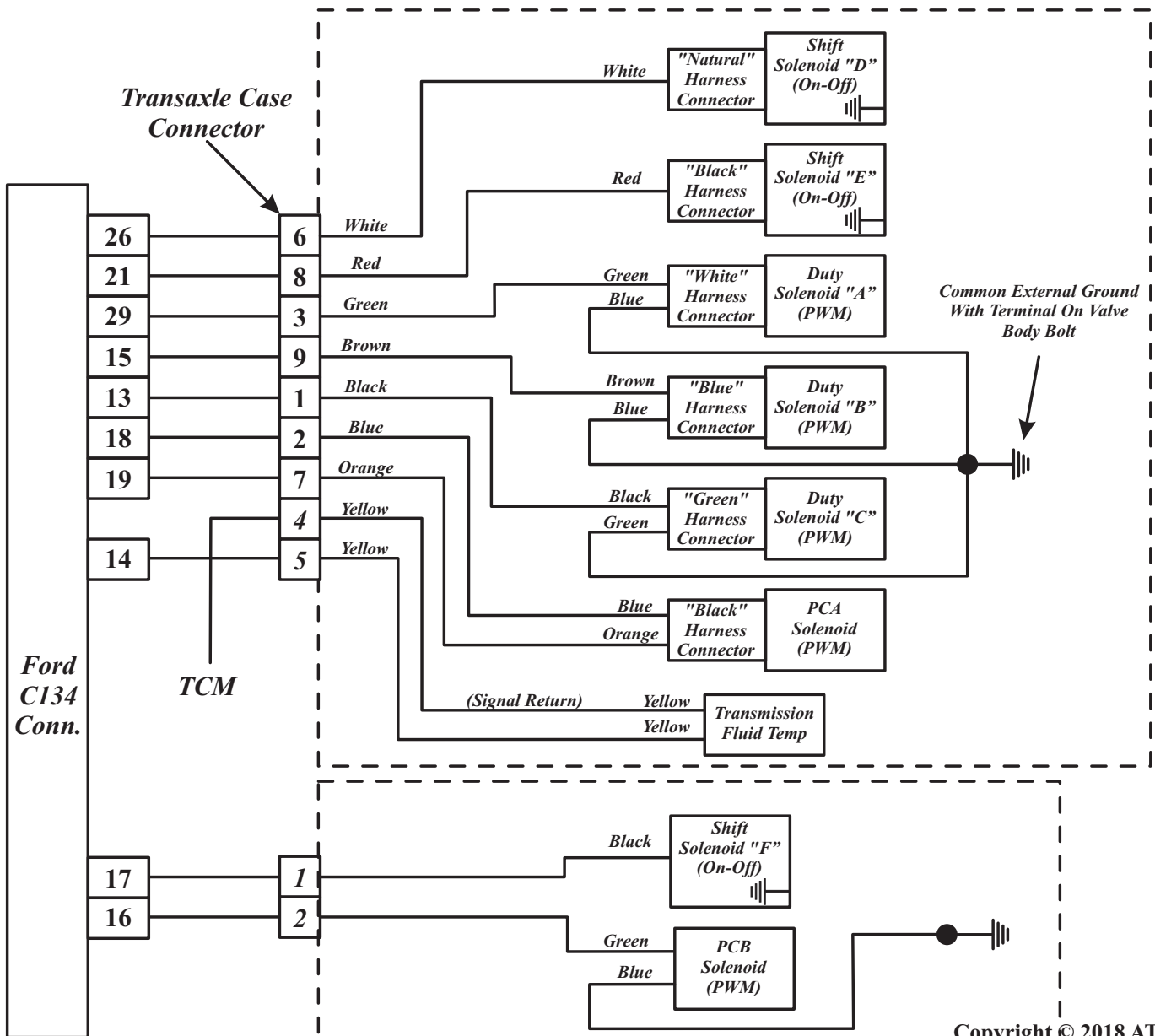
FORD FNR5 GEAR RATIO ERROR CODES

TRANSAXLE ELECTRICAL COMPONENT WIRE SCHEMATIC

C134 Connector



Note: This connector is located in front of the battery tray, and has had a history of water intrusion resulting in gear ratio errors and solenoid circuit faults.

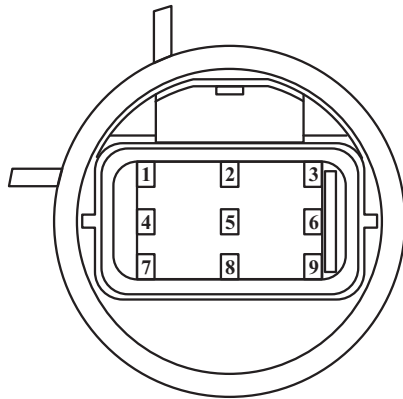


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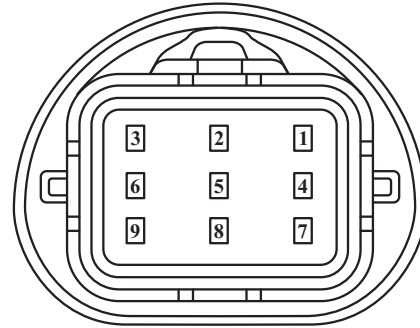
Figure 1

FORD FNR5 GEAR RATIO ERROR CODES

SOLENOID AND TRANSAXLE FLUID TEMP RESISTANCE CHART



*Transaxle Case Connector
(Face View)*



*Vehicle Harness Connector
(Face View)*

INTERNAL TRANSAXLE COMPONENTS RESISTANCE CHART

<i>Terminals</i>	<i>Transaxle Component</i>	<i>Ohms Resistance At 20°C (70°F)</i>
<i>6 and Gnd.</i>	<i>Shift Solenoid "D" (On-Off)</i>	<i>10.9 - 26.2</i>
<i>8 and Gnd.</i>	<i>Shift Solenoid "E" (On-Off)</i>	<i>10.9 - 26.2</i>
<i>3 and Gnd.</i>	<i>Duty Solenoid "A" (PWM)</i>	<i>1.0 - 4.2</i>
<i>9 and Gnd.</i>	<i>Duty Solenoid "B" (PWM)</i>	<i>1.0 - 4.2</i>
<i>1 and Gnd.</i>	<i>Duty Solenoid "C" (PWM)</i>	<i>1.0 - 4.2</i>
<i>2 and 7</i>	<i>Pressure Control Solenoid "A" (PWM)</i>	<i>2.4 - 7.3</i>

NOTE: *Gnd.* = Ground Ohm Meter to the Case

Transaxle Temperature Sensor Resistance Chart Terminals 4 and 5

<i>0°C (32°F) = 83.2k - 107k Ohms</i>
<i>20°C (70°F) = 33.5k - 41.2k Ohms</i>
<i>40°C (104°F) = 14.6k - 17.6k Ohms</i>
<i>60°C (140°F) = 7.08k - 8.01k Ohms</i>
<i>80°C (176°F) = 3.61k - 4.06k Ohms</i>
<i>100°C (212°F) = 1.96k - 2.20k Ohms</i>
<i>120°C (248°F) = 1.13k - 1.25k Ohms</i>
<i>130°C (266°F) = 0.87k - 0.96k Ohms</i>

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Figure 2