



## DODGE TRUCKS

### UNINTENDED “OUT OF PARK” ALARM INITIATION

**INTRODUCTION:** In March of 2006 Dodge issued safety recall E17 for 2003 to 2005 Dodge Ram pickup trucks equipped with the 5.9 Liter Diesel engine and 48RE transmission. The recall provides a re-flash which installs into the PCM a program that sounds the horn, flashes the headlamps as well as the PRNDL indicator lamps, if the selector lever is not placed in the Park position with the engine running and the door is opened.

**NOTE:** *When a Dodge vehicle is brought to the dealer for any type of service and falls under this recall will automatically receive this reflash possibly without the owners knowledge.*

**COMPLAINT:** A Dodge truck equipped with the “Out of Park” alarm system has a complaint of the alarm going off anytime the engine is running and the door is opened with the selector lever in Park.

In addition, when the door was closed and the selector lever was placed in the Drive position, the PRNDL indicator did not illuminate the “D” lamp and when the truck was driven, the alarm would intermittently initiate itself at speeds of 35 to 45 mph. No codes were found in the PCM or ECM.

**CAUSE:** The Transmission Range Sensor five volt supply circuit was found to have battery voltage on it which would indicate that the five volt wire was shorted to power somewhere between the range sensor and the instrument cluster.

When the system is working correctly, with the TRS connector unplugged, terminal 1 and 6 should have ignition voltage on them while terminal 2 should have 5 volts (See Figure 1). When the TRS connector is plugged in, step down voltage should be seen as shown in Figure 2. The voltage in Park will be slightly below the 5 volt supply and then drop as the shift lever is moved towards manual low. But with this circuit being shorted to power, the system operated incorrectly.

By tracing the wires from the TRS to the instrument cluster, a connector located under the dash left of the brake pedal known as the C219 connector is found. This 5 volt wire for the TRS is a Yellow/Tan wire which is circuit number T917 and passes through this connector on terminal 47 (Refer to Figure 3). The cavities surrounding terminal 47 are terminals 48, 51 and 52. However, terminals 51 and 52 are empty leaving only terminal 48 which is a Red/Tan wire. Power distribution wiring diagrams revealed that this is the A12 circuit used to supply system voltage to a power outlet (Refer to Figure 4). This circuit that was shorted to the TRS 5 volt supply wire within the C219 connector and therefore causing the above mentioned complaints.

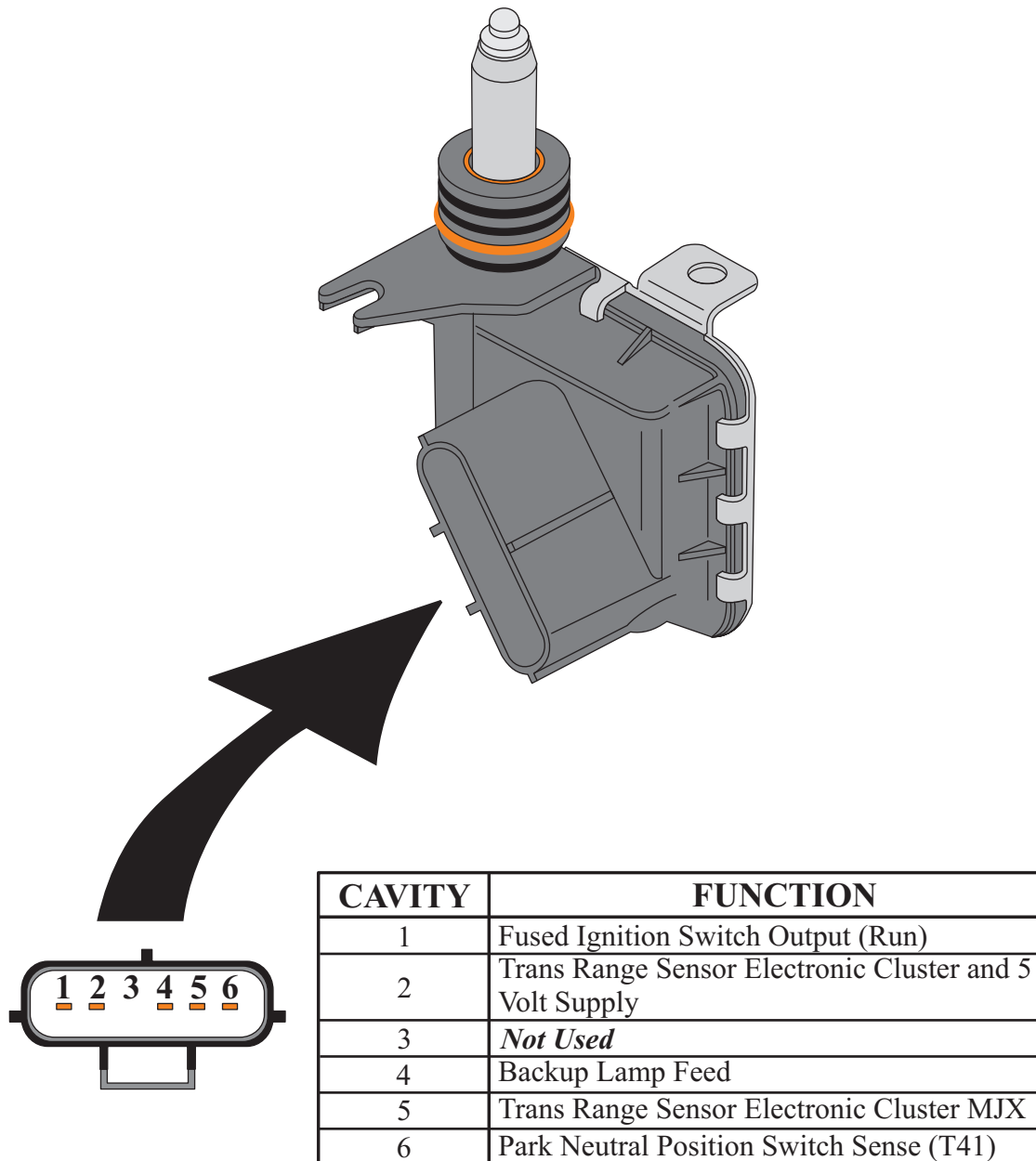
**CORRECTION:** The A12 circuit wire was removed from both sides of connector C219 and reconnected externally which restored circuit integrity to the TRS 5 volt supply circuit. Once this was accomplished, the PRNDL lamps and the “Out of Park” alarm system functioned correctly.

**NOTE:** *Dodge wiring diagrams show TRS terminal 2 as being the TRS ground circuit, it is in fact the 5 volt supply circuit.*

*Many thanks to Mister Transmissions in Guelph, Ontario*

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### TRS TERMINAL IDENTIFICATION



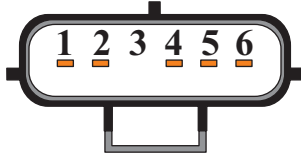
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Figure 1

## DODGE TRUCKS UNINTENDED "OUT OF PARK" ALARM INITIATION

### TRS CIRCUIT VALUES

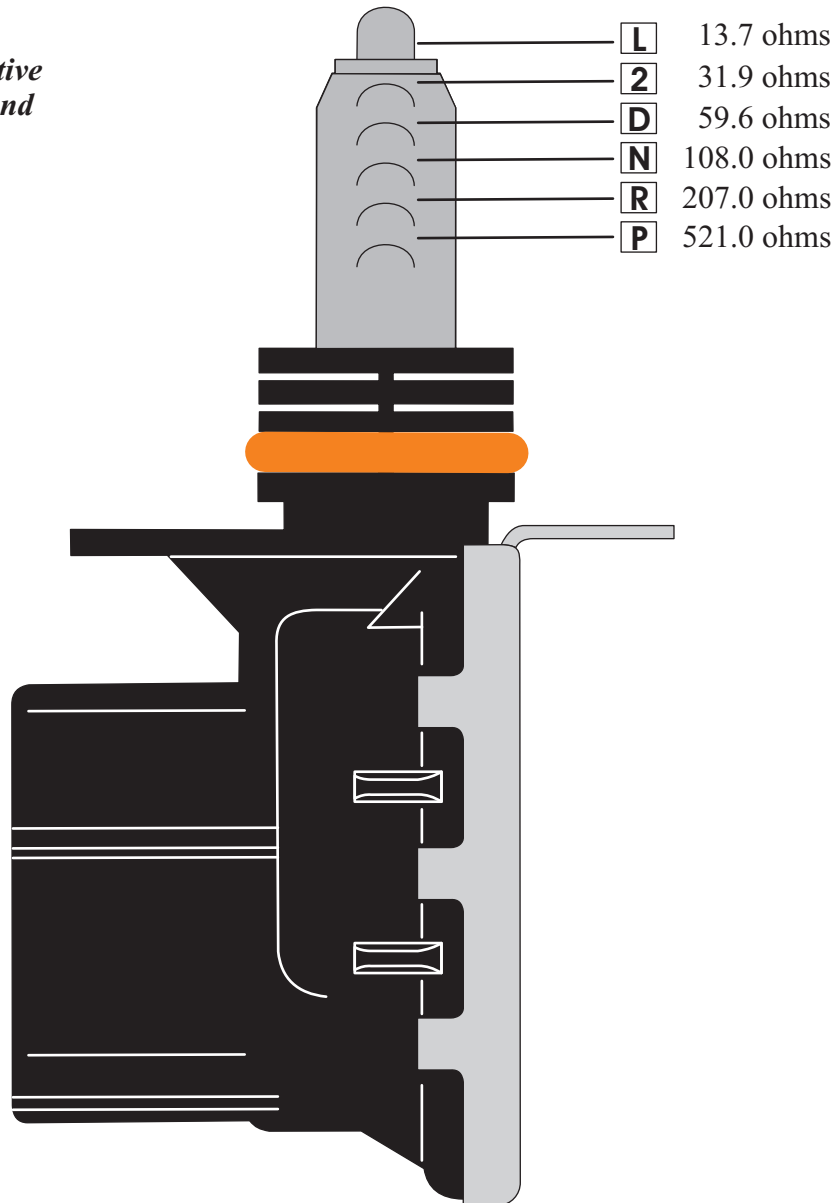
#### Sensor Connector View



*In car voltage test with positive meter lead into terminal 2 and negative lead to ground:*

<b>L</b>	0.647 DCV
<b>2</b>	1.244 DCV
<b>D</b>	1.903 DCV
<b>N</b>	2.629 DCV
<b>R</b>	3.388 DCV
<b>P</b>	4.213 DCV

*These are average voltage readings taken from a working vehicle.*



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Figure 2

## DODGE TRUCKS UNINTENDED "OUT OF PARK" ALARM INITIATION

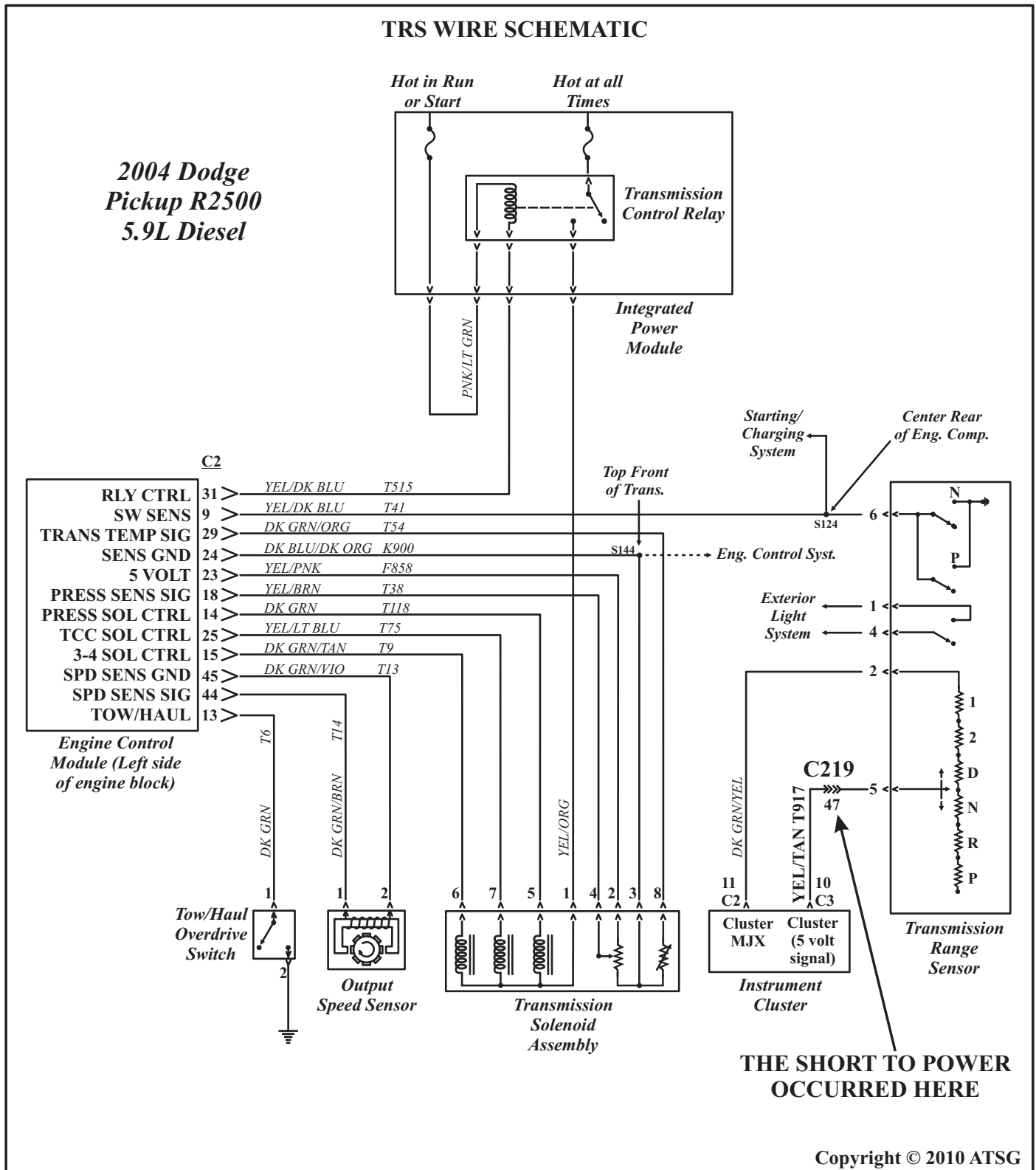


Figure 3

## DODGE TRUCKS UNINTENDED “OUT OF PARK” ALARM INITIATION

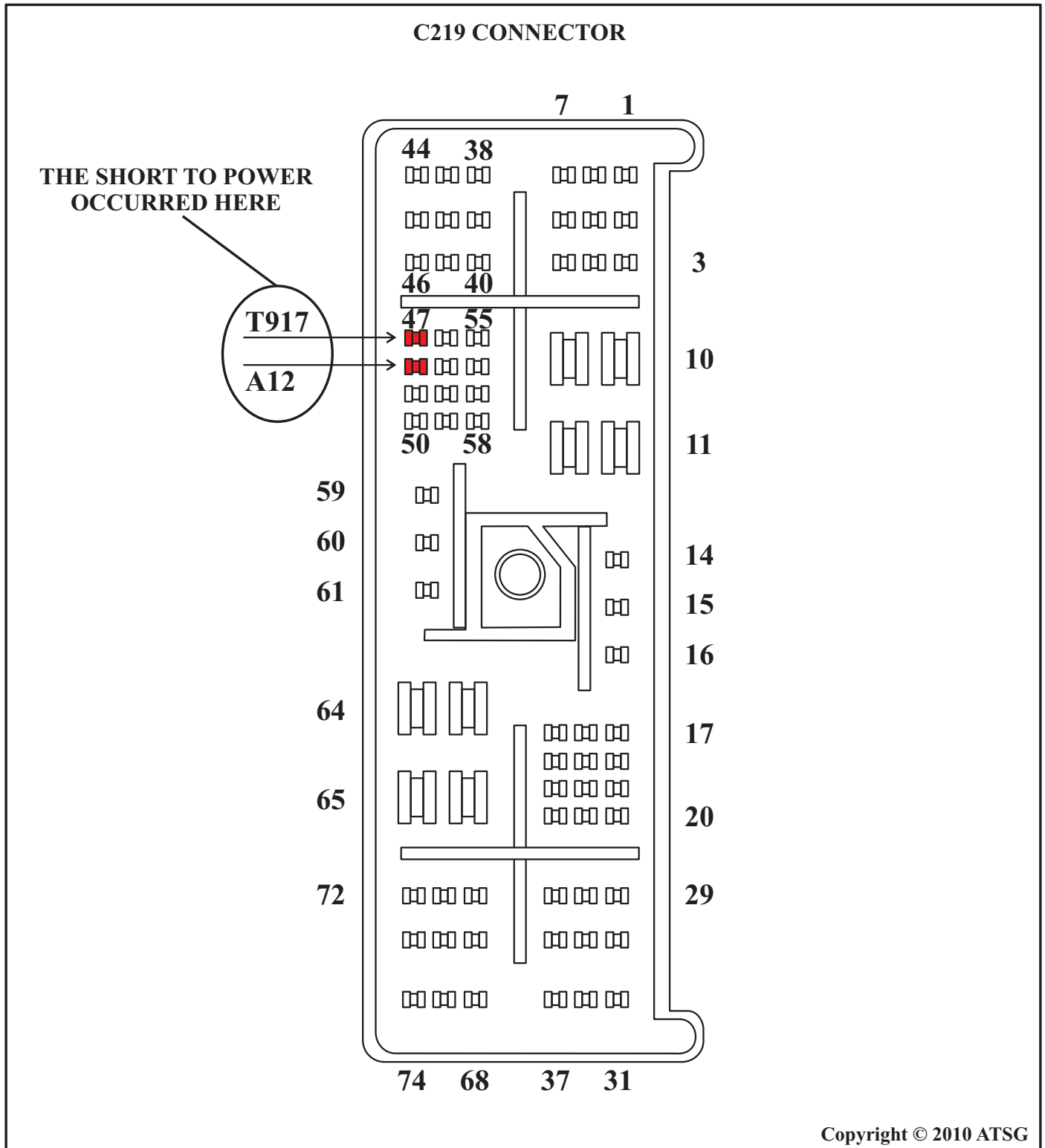


Figure 4