



## FORD TRUCKS

### BRAKE SWITCH CORRELATION ERROR

**COMPLAINT:** A 2011 Ford F450 with the 6.7L Turbo Diesel engine and 6R140W transmission has a complaint of the first shift sequence is fine but every shift sequence after that is late (almost to red line). Only one code was found and that was in the PCM, P0504 for Brake Switch A/B Correlation. There was no complaint of stop lights not working and there was no problem getting the shift lever out of park. When viewing the transmission data parameters on the scan tool, nothing was found to be out of order however, the TCM was commanding the late shift condition.

**CAUSE:** The Brake Pedal Position Switch G300 ground wire was broken, refer to figure 1.

**CORRECTION:** Repair the Brake Pedal Position Switch ground wire.

#### SERVICE INFORMATION:

P0505 sets when the PCM does not sense the correct sequence of the brake pedal input signal from both the cruise control deactivator and stop lamp switches when the brake pedal is pressed and released.

If the BOO1 and BOO2 parameters are viewed on the scan tool in the PCM data list, the chart in figure 2 indicates a good working switch.

The Brake Pedal Position Switch is a two stage switch with two inputs to the PCM. When the brake pedal is applied, the first stage which is a normally open stop lamp switch, also sends a voltage signal to the PCM which if engaged, deactivates cruise control

The second stage is a normally closed switch. When it opens, it removes the ground signal to the PCM which deactivates cruise control which is a redundant signal, this has nothing to do with the stop lights. The requires firm brake pedal application, refer to figure 3.

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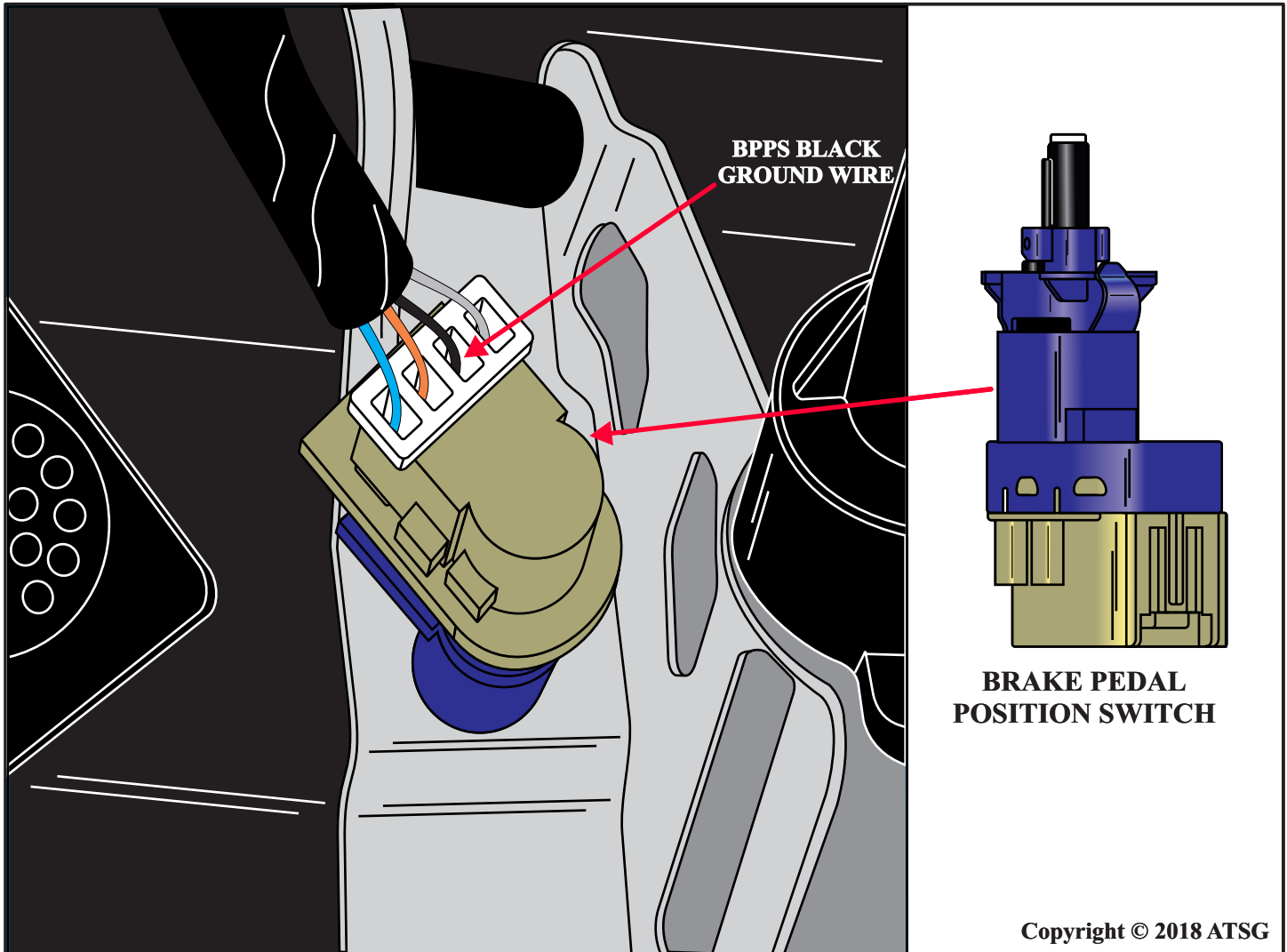


Figure 1

BRAKE PEDAL POSITION SWITCH PARAMETERS		
BRAKE PEDAL POSITION	BOO1 PID	BOO2 PID
RELEASED	OFF	OFF
APPLIED LIGHTLY	ON	OFF
APPLIED FIRMLY	ON	ON

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Figure 2

## FORD TRUCKS BRAKE SWITCH CORRELATION ERROR

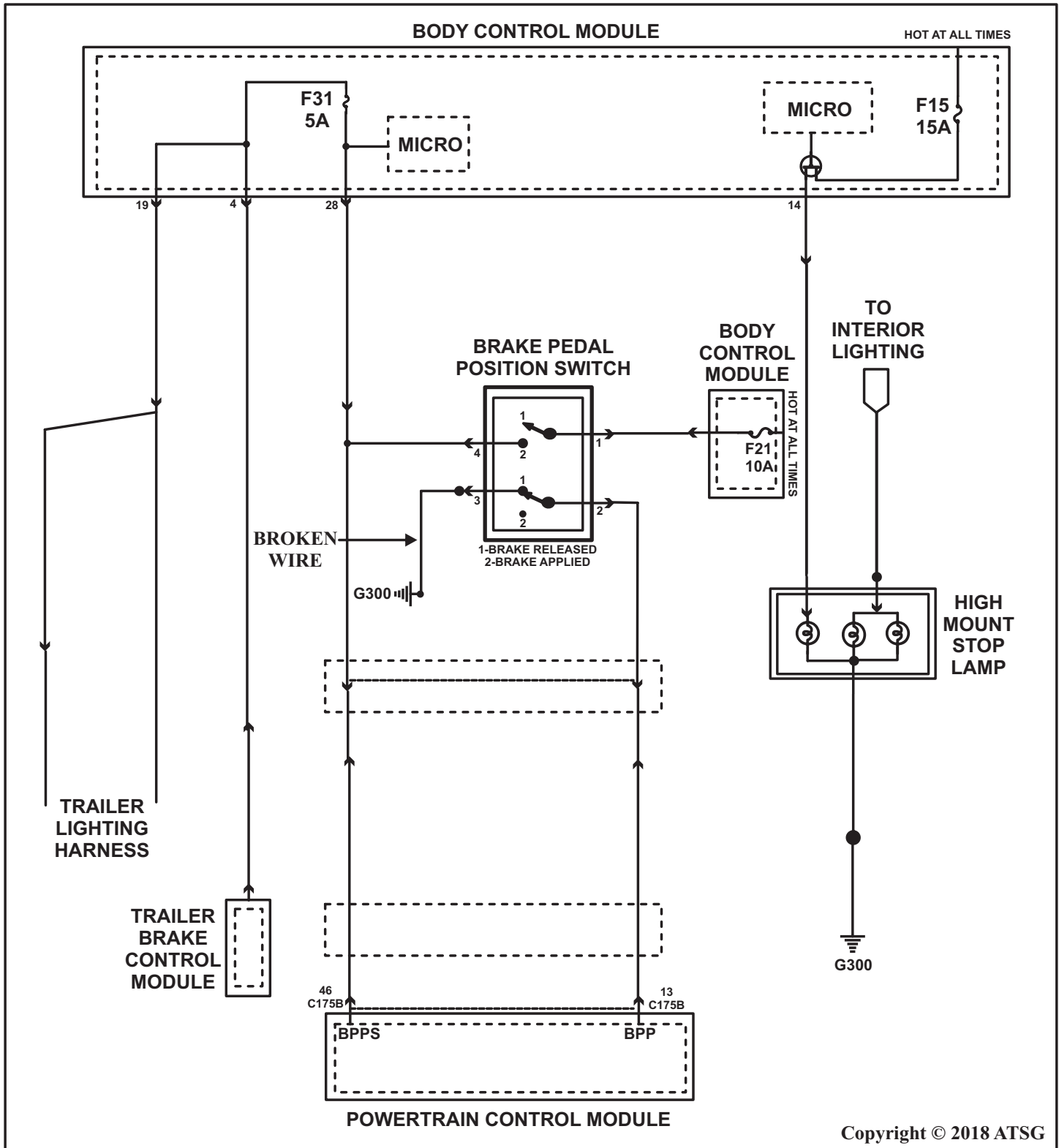


Figure 3