

**FD: Brake Lamp Switch**[← FD: Introduction](#)**FD1 DIAGNOSTIC TROUBLE CODE (DTC) P0703**

**Note:** When performing KOER switch test, wait five seconds after pressing the trigger to start the test before running through the driver operated controls. The test may also take up to five minutes to complete.

**Note:** No PID transition indicates a BPP circuit failure.

- Key on, engine off.
- Firmly cycle brake pedal.
- Access BPP PID.

**Does PID read ON only?**

Yes	No
GO to <a href="#">FD2</a> .	GO to <a href="#">FD4</a> .

**FD2 CHECK FOR BPP SWITCH FAILED CLOSED**

- Disconnect brake lamp switch.
- Key off.

**Did PID go to OFF?**

Yes	No
REPLACE brake lamp switch.	GO to <a href="#">FD3</a> .

**FD3 CHECK FOR SHORT TO B+ IN SWITCH OUTPUT CIRCUIT**

- Disconnect PCM.
- Key on, engine off.
- Check voltage between Circuit 511 (LG) for Econoline or 810 (R/LG) for F-Series brake lamp switch harness connector and chassis ground.
- Key off.

**Was B+ present?**

Yes	No
REPAIR short to B+ in Circuits 511 (LG) or 810 (R/LG).	Short to B+ is at Pin 92 in PCM. SERVICE as necessary. GO to <a href="#">FD11</a> .

**FD4 CHECK PID BPP**

**Does PID read OFF only?**

Yes	No
F-Series, GO to <a href="#">FD5</a> . Econoline, GO to <a href="#">FD6</a> .	Fault may be intermittent. GO to <a href="#">FD13</a> .

**FD5 CHECK FUSE 15 (15 AMP)**

- Check Fuse 15 (15 amp) in IP fuse panel.

**Is Fuse 15 OK?**

Yes	No
LOOK for open circuit. GO to <a href="#">FD9</a> .	THROW away fuse. TEST for short to ground. GO to <a href="#">FD7</a> .

**FD6 CHECK FUSE 11 (15 AMP)**

- Check Fuse 11 (15 amp) in IP fuse panel.

**Is Fuse 1 OK?**

Yes	No
GO to <a href="#">FD9</a> .	THROW away fuse. TEST for possible short to ground. GO to <a href="#">FD7</a> .

**FD7 CHECK BATTERY INPUT CIRCUIT TO BPP SWITCH**

- Key off.
- Disconnect wiring at BPP brake lamp switch.
- Check resistance between Circuit 10 (LG/R) for Econoline or 22 (LB/BK) for F-Series, and chassis ground.

**Is resistance less than 10,000 ohms?**

Yes	No
REPAIR short to ground in Circuits 22 (LB/BK) or 10 (LG/R). REPLACE Fuse 15 (15A). RESTORE system. CLEAR DTCs and RETEST.	GO to <a href="#">FD8</a> .

**FD8 CHECK FOR SHORT TO GROUND IN BPP SWITCH OUTPUT CIRCUIT**

- Disconnect PCM.
- Key on, engine off.
- Check resistance between Circuit 511 (LG) for Econoline or 810 (R/LG) for F-Series at brake lamp switch harness connector, and chassis ground.

**Is resistance less than 10,000 ohms?**

Yes	No

REPAIR short to ground in Circuits 511 (LG) or 810 (R/LG). RESTORE system. CLEAR DTCs and RETEST.

Short to ground is at PCM Pin 92. SERVICE as necessary. GO to [FD12](#) .

## FD9 CHECK BATTERY INPUT CIRCUIT TO BPP SWITCH FOR OPEN

- Key off.
- Disconnect brake lamp switch.
- Check resistance between Circuit 10 (LG/R) for Econoline or 22 (LB/BK) for F-Series, and fuse contact.

Is resistance less than 5 ohms?

Yes	No
Circuit 10 (LG/R) is OK. GO to <a href="#">FD10</a> .	REPAIR open in Circuits 22 (LB/BK) or 10 (LG/R). RESTORE system. CLEAR DTCs and RETEST.

## FD10 CHECK BPP SWITCH FOR OPEN

- Key on, engine off.
- Install jumper between brake lamp switch Circuits 511 (LG) and 10 (LG/R) for Econoline, or 810 (R/LG) and 22 (LB/BK) for F-Series.
- Key off.

Did PID read ON?

Yes	No
REPLACE brake lamp switch. RESTORE system. CLEAR DTCs and RETEST.	GO to <a href="#">FD11</a> .

## FD11 CHECK SWITCH OUTPUT CIRCUIT FOR OPEN

- Remove jumper.
- Disconnect PCM.
- Install breakout box; leave PCM disconnected.
- Key on, engine off.
- Check resistance between PCM Test Pin 92 and BPP switch Circuit 511 (LG) for Econoline, or 810 (R/LG) for F-Series.

Is resistance less than 5 ohms?

Yes	No
Circuits 511 (LG) for Econoline or 810 (R/LG) for F-Series are OK. Open is at PCM Pin 92. REPAIR as required. GO to <a href="#">FD12</a> .	REPAIR open in Circuits 511 (LG) for Econoline or 810 (R/LG) for F-Series. RESTORE system. CLEAR DTCs and RETEST.

## FD12 CONFIRM PCM FAULT

Does PID switch between ON and OFF?

Yes	No
System is OK. RESTORE system. CLEAR DTCs and RETEST.	REPLACE PCM. RESTORE system. CLEAR DTCs and RETEST.

### FD13 CHECKS FOR INTERMITTENT OPEN OR SHORT

- Key off.
- Disconnect wiring at BPP.
- Key on, engine off.
- Install jumper between switch connector Circuits 511 (LG) and 10 (LG/R) for Econoline, or 22 (LB/BK) and 810 (R/LG) for F-Series.
- Confirm BPP PID reads ON and that stoplamps are on.
- Wiggle connectors and wires while observing BPP PID and stoplamps.

#### Does PID switch between ON and OFF?

Yes	No
REPAIR circuitry at point of intermittent. RESTORE system. CLEAR DTCs and RETEST.	GO to <a href="#">FD14</a> .

### FD14 CHECK FOR INTERMITTENT SHORT TO B+

- Remove fuse.
- Confirm BPP PID reads OFF and that stoplamps are off.
- Wiggle connector and wires while watching BPP PID and stoplamps.

#### Does PID switch between OFF and ON?

Yes	No
REPAIR circuitry at point of intermittent contact with B+ source. INSTALL fuse. RESTORE system. CLEAR DTCs and RETEST.	Intermittent not detected. RESTORE system. CLEAR DTCs and RETEST.

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