

P2701: TRANSMISSION FRICTION ELEMENT B APPLY TIME RANGE/PERFORMANCE

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Intermediate
Repair Cost	:	\$100-\$1646
Can I Still Drive?	:	Yes

What Does The P2701 Code Mean?

Transmission friction element. Pretty vague description given the fact that there are numerous friction elements involved when you consider the mechanical operation of an automatic transmission (A/T). Not to mention manual transmissions also use similar friction materials (i.e. clutch).

In this case, I suspect we are referring to an A/T. The symptoms and causes vary significantly depending on many things but it is important to note, the first thing to consider is the overall health of the automatic transmission and especially your ATF (Automatic Transmission Fluid).

Problems with internal friction materials in the A/T most likely will cause erratic driving conditions as far as shift timing, torque output, among countless other consequences to this fault are concerned.

Abnormally paired tires, inadequately inflated tires, things of this nature tend to cause internal slippage given it's unsymmetrical circumstances. That being said, keep this in mind when considering the drivetrain's functionality and troubleshooting any faults. Install a used tire lately? Same size? Check the tire's sidewall to verify this. Sometimes, minor differences can cause indirect issues such as this.

Typically, when the ECM (Engine Control Module) activates this P2701 code and related ones, it has

proactively been monitoring and adjusting other sensors and systems in order to ensure proper self-diagnosis.

So, rest assured, you need to address this before your daily driving needs consequently cause further potential issues. This may be a simple fix, definitely possible. That said, it may also be a complex internal electrical malfunction (i.e. short, open, water intrusion). Make sure to acquire help accordingly here, even pros make easily overlooked mistakes that costs thousands, speaking from experience here.

The letter in this case, "B", may refer to a few different possible distinction. You may be dealing with a specific circuit/wire or you may be dealing with a specific friction element within the transmission. Having said all that, always refer to your service manual for specific locations, distinctions, and other such specifications.

Code P2701 is logged by the ECM when it detects that the internal "B" friction element inside the transmission is experiencing a general problem with it's performance.

What Are The Symptoms Of The P2701 Code?

Symptoms of a P2701 trouble code may include:

- Uneven handling
- Transmission slipping
- Erratic shifting
- Abnormal shift patterns
- Harsh shift selection
- ATF (Automatic Transmission Fluid) leak
- Low torque
- Abnormal power output

What Are The Potential Causes Of The P2701 Code?

Causes for this P2701 friction element slip code may include:

- Low ATF
- Worn friction element (internal)
- Dirty ATF Causes
- Wiring issue (e.g. open, short, chafe, heat damage)
- Uneven tire sizes
- Issue causing uneven rotational speed/circumference (e.g. low tire pressures, brake stuck on, etc.)
- TCM (Transmission Control Module) issue
- ECM (Engine Controls Module) issue

- Water damage to module and/or harness

How Can You Fix The P2701 Code?

The first step in the troubleshooting process for any malfunction is to research the Technical Service Bulletins for known issues with the specific vehicle.

Advanced diagnostic steps become very vehicle specific and may require the appropriate advanced equipment and knowledge to perform accurately. We include basic steps below but refer to a vehicle year/make/model/powertrain specific repair guide for specific steps for your vehicle.

Basic Step #1

It is imperative that you follow basic maintenance procedures accordingly at this point, as far as the transmission's health goes, start at the fluid.

Your ATF (Automatic Transmission fluid) needs to be clean, free of debris and also, proper maintenance schedules have to be followed to avoid more faults like this in the future. If you don't remember the last transmission has been serviced (i.e. filter+fluid+gasket), it's a good idea to perform this before continuing. Who knows there may be a bit of debris in your oil that is trapped internally. It may only take a simple service, so make sure you are aware of the last A/T service you have done.

NOTE: Ensure you are using the correct ATF for your specific make and model.

Basic Step #2

Most likely, when trying to find the connector/harness for this system, you will have to find a junction connector. There may be one "master" connector so make sure you are working with the correct one by referring to your manual. Make sure the connector itself is seated properly to ensure a good electrical connection. Where the connector is located on the A/T, it may be subject to vibrations that could cause connections to come loose or physically damage them. Not to mention, the possibility of ATF to saturate connectors and wires causing future or present issues.

Basic Step #3

It is always wise to be aware of the overall condition of your vehicle. Given the fact that, like in this case, other systems can directly affect other systems. Uneven tires, worn out suspension parts, incorrect wheels, all of these can and will cause issues in this system and possibly others as well, so even things out, and you may rid of this code.

This article is strictly for information purposes only and the technical data and service bulletins for your specific vehicle should always take precedence.

Severity Description

As explained earlier, this isn't something that I would leave unattended, especially if you are actively using the vehicle with said fault(s) present. You should definitely prioritize this. Well, if driving your vehicle is a necessity, daily.

Photo and cutaway of an automatic transmission:

Reference Sources

[P2701 Transmission Friction Element B Apply Time Range/Performance](#), OBD-Codes.