



## Technical Bulletin # TCB5

**Transmission:** 46/47/48RE  
**Subject:** Cycling In & Out of Lockup  
**Application:** All  
**Issue Date:** November, 2010

# TCC Cycling In & Out

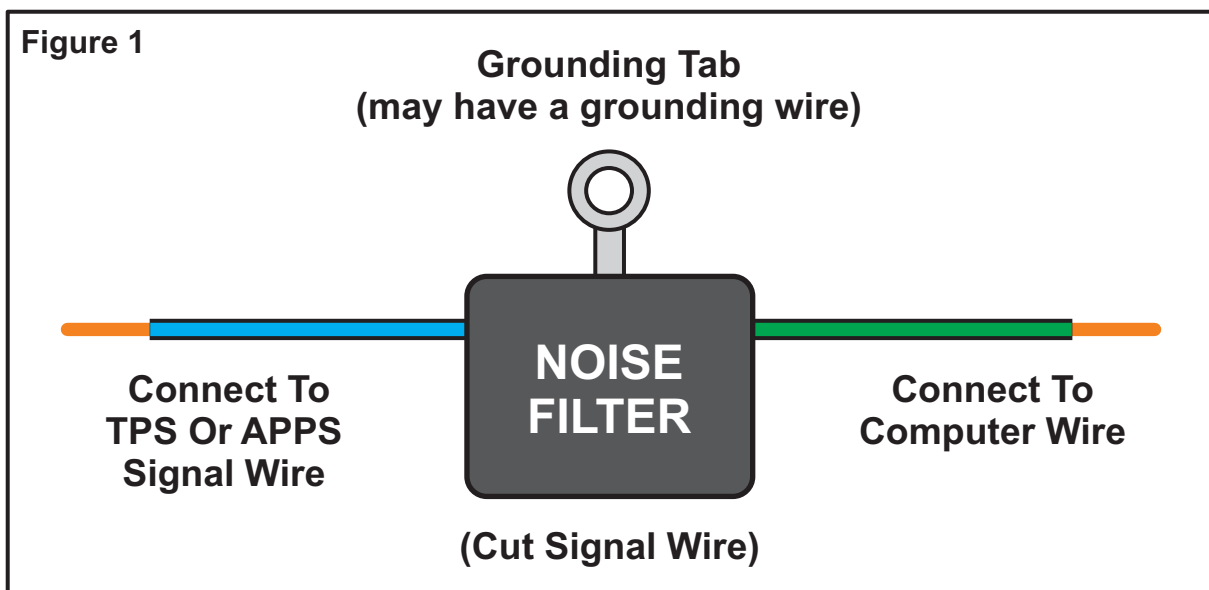
Dodge and Jeep vehicles with an RE type transmission and a complaint of TCC cycling in and out between 40-50 mph may be caused by Electro Magnetic Interference (EMI).

Use your scan tool to verify the command being sent by the PCM. If the PCM is commanding the TCC to cycle the problem may be caused by Electro Magnetic Interference (EMI) from the Alternator. To test this unbolt the wire from the battery positive at the alternator (not necessary to unplug the Field Wire). This test can only be performed for a short time while the problem is present.

The first step would be to clean both Battery Terminal Connections (both Batteries on Diesel vehicles) no matter how clean they may appear (replace Battery Cables if needed). Remove the ground cable connection on the engine block and clean the contact surface area (most common fault). This procedure should be done before replacing the Alternator along with testing for a faulty Diode.

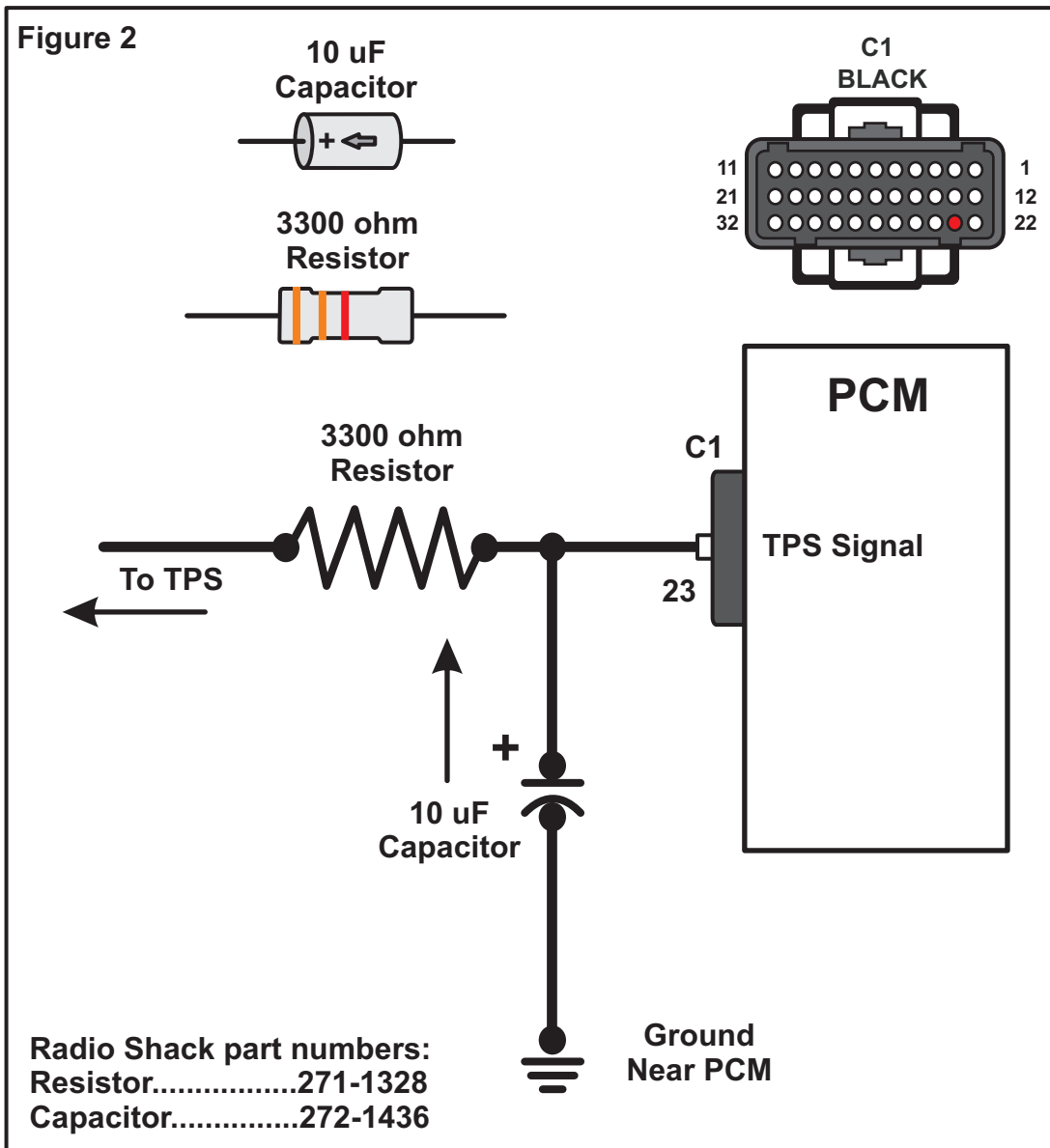
There is a common fix for an EMI problem by installing a Noise Filter on the Throttle Position (TPS) or Accelerator Pedal Position Sensor (APPS) circuit to the Powertrain Control Module (PCM) (figure 1). A noise filter can be purchased through aftermarket suppliers or substituted by making your own filter (figure 2).

On page 3 is a list of several causes for the same complaint. This list is compiled from many years of technical hotline calls on causes and fixes for this complaint which include both gas and diesel engines. Some are specific to gas and/or diesel engines in the order of most common.



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Cut the TPS signal wire near the PCM at the Black C1 Connector Pin 23 and install a 3300 ohm Resistor and 10uF Capacitor (figure 2). Refer to a model specific wire diagram for proper vehicle PCM pin identification. The Capacitor is polarized and the positive terminal mark on the body of the capacitor must be spliced towards the TPS signal wire then grounded near the PCM.





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1. Loose or dirty battery terminal connections or cables, most often cable ground on engine. (Both)  
(clean or repair as needed, check battery condition)
2. Noise (EMI) interference from Alternator to PCM. (Both)  
(install Noise Filter in APPS signal wire or replace Alternator if needed )
3. Noise (EMI) interference from APPS signal to PCM. (24 Valve Diesel Only)  
(PCM reflash Factory Bulletin #18-02-99 some models or install Noise Filter)
4. Faulty TPS or circuit problems. (Both)  
(replace or repair as needed)
5. TPS Cam, Bushings or Plastic Throttle Rod Ball Joints worn. (12 Valve Diesel Only)  
(replace as needed / updated Throttle Rod has Metal Ball Joints p/n 5011959AB)
6. APPS sensor relearn, may have code P1693 Code In Companion Module. (24 Valve Diesel Only)  
(relearn APPS; Key On Engine Off slowly depress accelerator to floor & back then turn key off)
7. Faulty Spark Plugs or Wires, may have misfire codes. (Gas Only)  
(replace as needed)
8. Faulty or loose Brake Switch. (Both)  
(replace or repair as needed)
9. While Generic Scan Tool is in use. (Both)  
(remove scan tool and retest)
10. Erratic or faulty Vehicle Speed Sensor (VSS) signal or circuit. (Both)  
(repair or replace as needed or faulty ABS Module model dependant)
11. Faulty Park/Neutral Switch. (Both)  
(repair or replace as needed / check for broken or damage internal rooster comb)
12. Restricted Fuel or Air Filter. (Both)  
(replace as needed)
13. Faulty Crankshaft Position Sensor or circuit, may not set code. (Gas Only)  
(repair or replace as needed)
14. Engine running cold (Thermostat) or faulty Engine Coolant Temp Sensor (ECT) or circuit. (Both)  
(repair or replace as needed)
15. Faulty Torque Converter Clutch solenoid (TCC) or circuit, may set code P0743. (Both)  
(repair or replace as needed)
16. Faulty Transmission Temp Sensor or circuit. (Both)  
(repair or replace as needed)
17. Faulty ECM, loose or bad connector. (Diesel Only)  
(replace as needed)
18. Faulty or loose Brake Switch or circuit, may not be seen on scan data or movie snap shot. (Both)  
(repair or replace as needed)
19. Low Coolant or Coolant Reservoir level, may not illuminate Low Coolant Lamp if equipped. (Both)  
(repair leaks or repair circuit, replace sensor as needed)
20. Water in Fuel, Warning Lamp should be illuminated. (Diesel Only)  
(replace Fuel Filter)
21. Lift Pump interference. (Diesel Only)  
(There are aftermarket kits to relocate the Lift Pump)
22. Retarded Valve Timing, loose Timing Chain. (Both)  
(replace Timing Chain)