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How to Toyota Camry, 2006 and earlier: How, and why, to clean your engine's throttle body



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All you need to clean inside your throttle body.

Why clean the throttle body on your Toyota? The Toyota 4 cylinder engine is one of the best in the world, but it has one weak spot. The design of the P.C.V. system is such that blow-by gases get into the throttle body and butterfly area. Over time, after 30,000 miles or more, the build-up of crud caused by this can cause your engine to run wrong. Many people wind up taking their car to the shop and spending lots of money to fix a rough-running, hard-starting engine when all they need is some rags, a screwdriver, and \$5 for a can of throttle body cleaner (or a little more for a can of Seafoam) and 20 minutes worth of time to clean inside their throttle body. This article tells you how.

Instructions

Difficulty: Moderately Easy

1. Its not difficult to clean the throttle body, almost anyone can do this. If you can change your own oil you can clean your own throttle body on your own engine. The usual indication you need to clean inside the throttle body assembly is when the engine idles rough or even stalls. The TBI butterfly and I.A.C. (idle air control valve) get dirty after many miles because they are bathed in oil vapor courtesy of the P.C.V. valve, which is routed directly into the plenum, and then migrates onto the TBI and IAC causing dirt to build up on these parts. And this dirt can ultimately affect the butterfly valve (holding it open too far just a tiny bit but enough to affect idle) and the IAC (causing crud build up inside that affects the air/fuel ratio at idle). Fortunately it is quick, easy and cheap to remedy this situation and all you need is a phillips screwdriver, rags, and a can of your throttle body cleaner of choice.

Things You'll Need:

- A can of Seafoam brand cleaner, available at most auto parts stores. Canned throttle body cleaner can also be used.
- Phillips and slotted screwdrivers
- Rags and paper towels

2.  (http://i.ehow.com/images/GlobalPhoto/Articles/5528228/image002_Full.jpg)

Remove the hose clamp securing the large intake hose using a screwdriver.

It is best to do your cleaning on a warm engine. This will help the cleaner burn away when you are finished. An old toothbrush is nice to have but not essential, you can do it with rags or paper towels. The Sea Foam Deep Creep is a good product and said to be safe for the I.A.C.

Seafoam is probably the best product for cleaning inside the throttle body. So use a comparable TBI cleaner or carb cleaner, only if that's all you can get at the moment.

2. Loosen the big hose clamp as shown. (Usually there's no need to remove any of the other hose clamps or hoses in this area, just the big one on the air filter hose, where it mates with the end of the plenum.) Then pull the end of the tubing away from the plenum and push it down slightly so the throttle body and butterfly are exposed.

3.  (http://i.ehow.com/images/GlobalPhoto/Articles/5528228/image003_Full.jpg)

Wedge the throttle

butterfly open by rotating the wheel, and use a screwdriver to hold it open as shown.

Now wedge the throttle open with a big screwdriver or similar object, as shown. (On newer engines the butterfly valve may be designed with no direct mechanical connection to the pedal, a small electrical motor controls throttle opening instead. If so, gently pry open the butterfly valve and open it the minimum to allow you to clean inside.)

4.  (http://i.ehow.com/images/GlobalPhoto/Articles/5528228/image004_Full.jpg)

Clean the area shown, as far back as you can reach, and both sides of the butterfly valve. Hole shown goes to the idle air control valve, so spray inside the hole too.

Clean the throttle body throat and both sides of the butterfly valve with the spray can cleaner, rags and the toothbrush. It's best to spray and wipe the dirt away along with excess cleaner. (Caution, hang on very tightly to the red nozzle on the spray can! If you are not careful the straw can blow out and fly off inside your throttle body where you can't reach it, and this we do not want!)

The hole shown by the arrow, feeds air to the idle air control valve (often referred to simply as the IAC valve). This valve controls the air allowed into the engine at warm-up time when the engine is cold. The IAC valve can cause you a lot of trouble if it is allowed to get too dirty. But there's usually no need to remove the IAC just for cleaning; just soak it but good through the hole. This will dissolve much of the crud that can make it malfunction. Wipe up the excess cleaner as you go - (the object is to clean the dirt, NOT to leave cleaner inside the engine in the hope it may clean as it gets sucked into the combustion chamber - because pooled cleaner will in fact clean very little (without agitation, by you, with rags or toothbrush). Just worry about cleaning the butterfly and throttle body area now and forget the parts you can't reach).

5. When it is clean enough for you, look it all over, and make sure there's no tools left inside the throttle body. Then put everything back together.

The first time you start the engine after doing all this, bear in mind that there are going to be huge clouds of smoke coming out your tail pipe for a couple of minutes. And while it looks a little alarming it won't hurt the car, so don't worry about that. I run the engine at about 2,000 rpm until the smoke starts to subside and i dont try to drive it off! Because i dont want to attract the attention of the police or anything like that. If the area you live is particularly sensitive about smoke coming out of your tailpipe, then maybe i'd wait until late at night to restart the engine when the smoke will not be so obvious.

Tips & Warnings

- Restarting the car may be difficult after cleaning. Try holding the gas pedal at about half throttle while cranking, engage the starter no more than 15 seconds then give it a rest. The engine may stall once or twice but it should eventually start, run rough for 30 seconds or a minute, and put out some big clouds of smoke for several minutes. After that you will probably notice an increase in performance and a smoother idle, depending how dirty your throttle body was. It's a good idea to perform this cleaning every 30,000 miles.

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