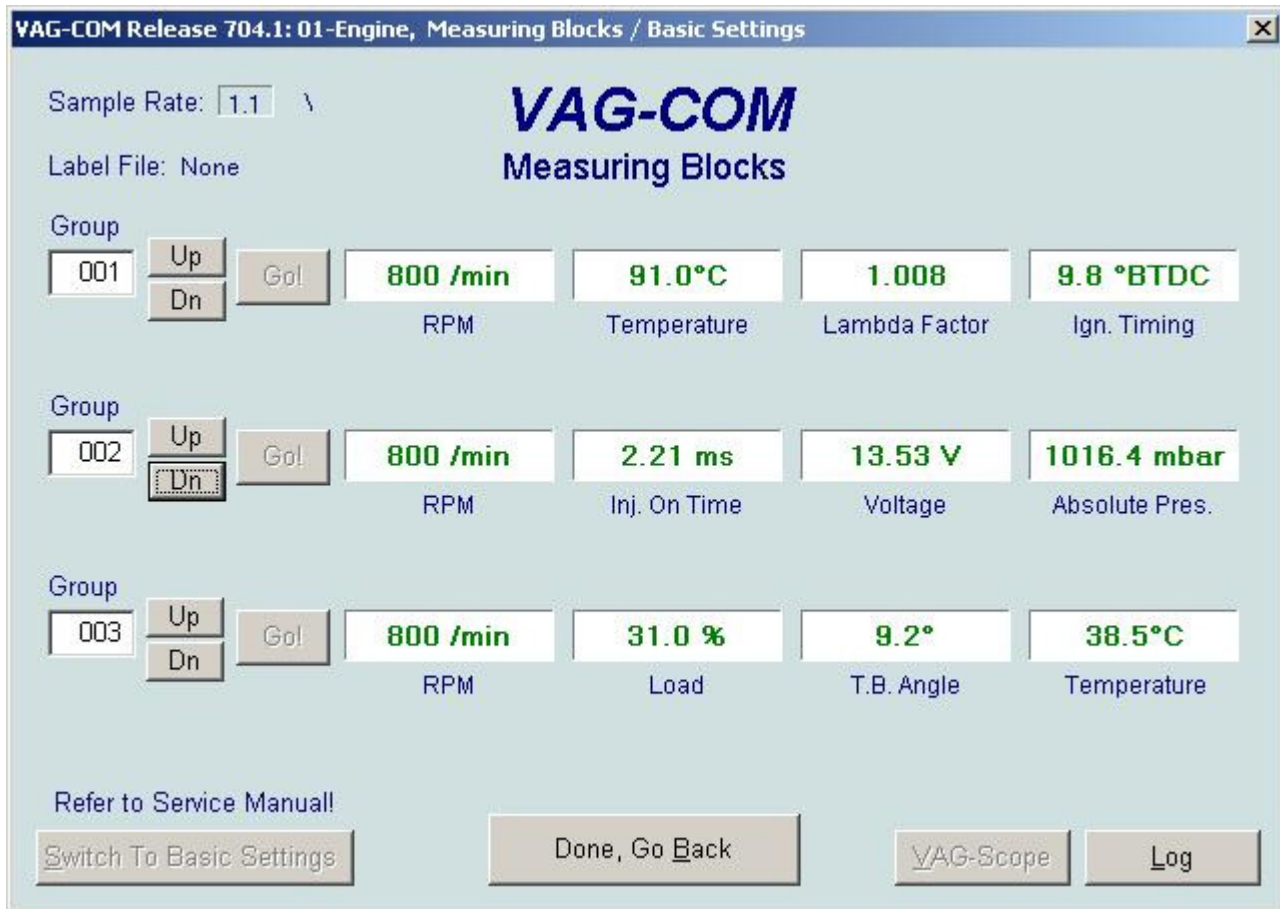


UrS // Throttle Body Service / install / adjustment

by [Deephouse](#) » Sat Jan 12, 2008 12:27 pm

This is a general writeup on R&R your throttle body. Though I cannot say i'm an expert at throttle adjustment, I can give you some pointers on what to expect when you tackle this project.

First, it helps to have a VAG-COM and laptop. With these tools you can actually monitor (LIVE) your RPM Idle speed, your TB Angle, and your Ign Timing all on the same screen. You can also log and graph your readings. Helps a TON when troubleshooting. I cannot vouch for any eBay VAG cable products so I'd say spend the extra money at Ross-Tech.com and get the support, updates, and craftsmanship you can expect from a quality diagnostic tool.



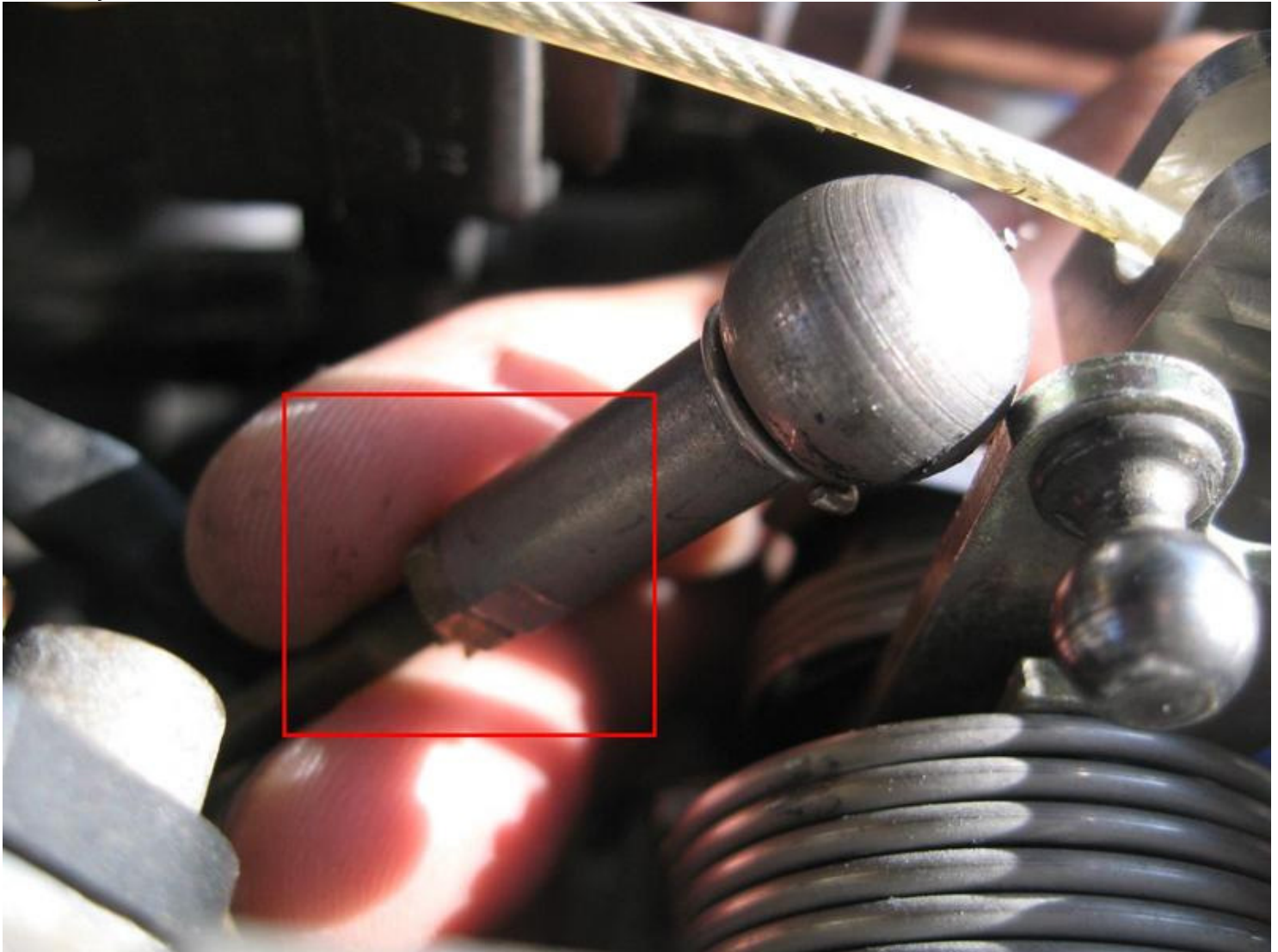
You will at some point have to interact with any or all of the following components on your throttle: Throttle cable/linkage, throttle cam sprocket, cruise control rod, throttle position sensor (TPS or Potentiometer), throttle stop screw, and the dashpot.

Tools:

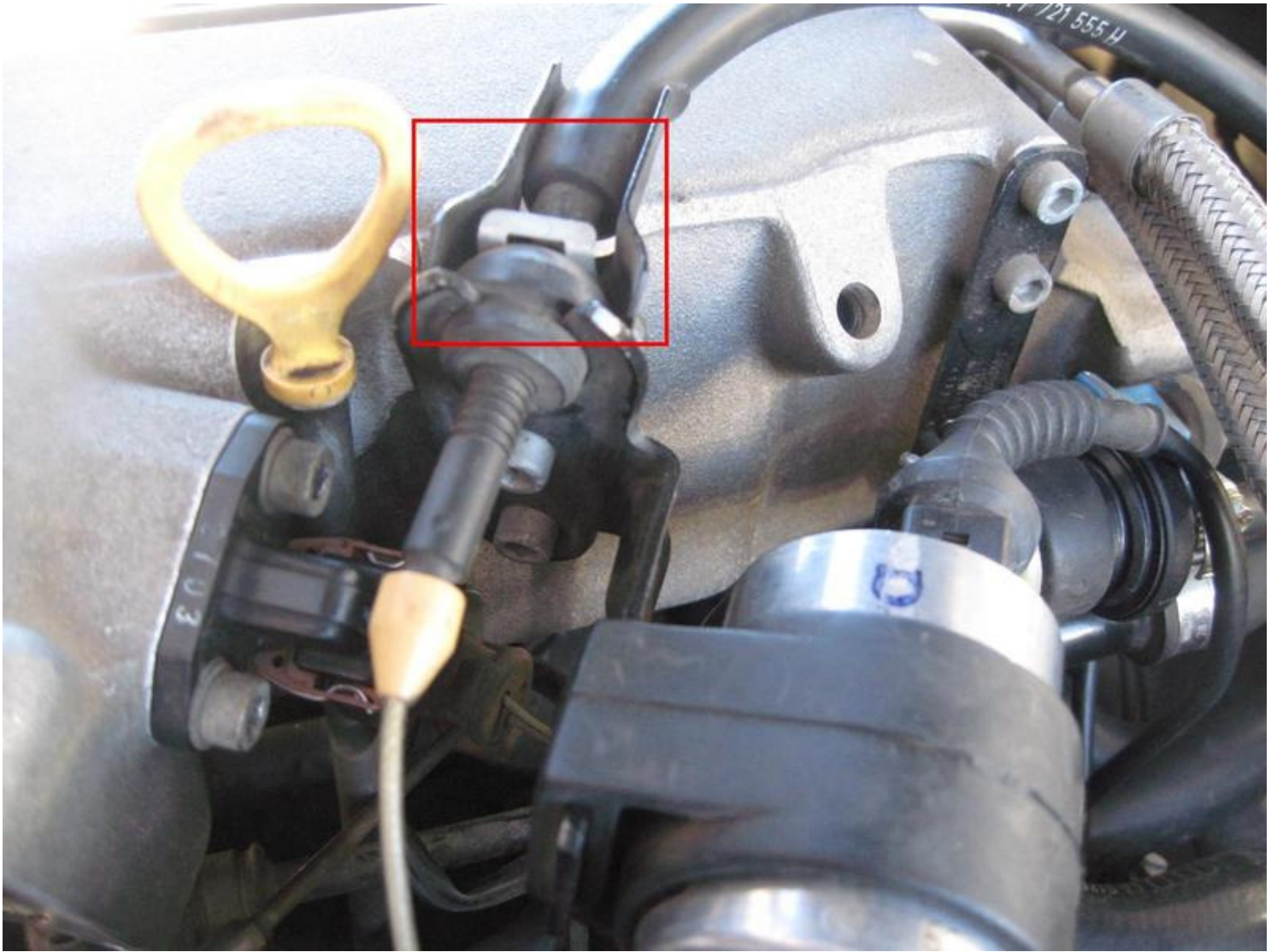
- 6mm Metric Hex key set, to remove actual throttle body from IM
- 7mm open end wrench to adjust the Cruise control rod bolt.
- 8mm open end wrench to adjust the throttle stop bolt
- 13mm open end for the dashpot nut
- 14mm open end for the throttle cam nut
- Phillips screwdriver.
- Long nose vise grip pliers, they will come in handy at some point.

REMOVAL

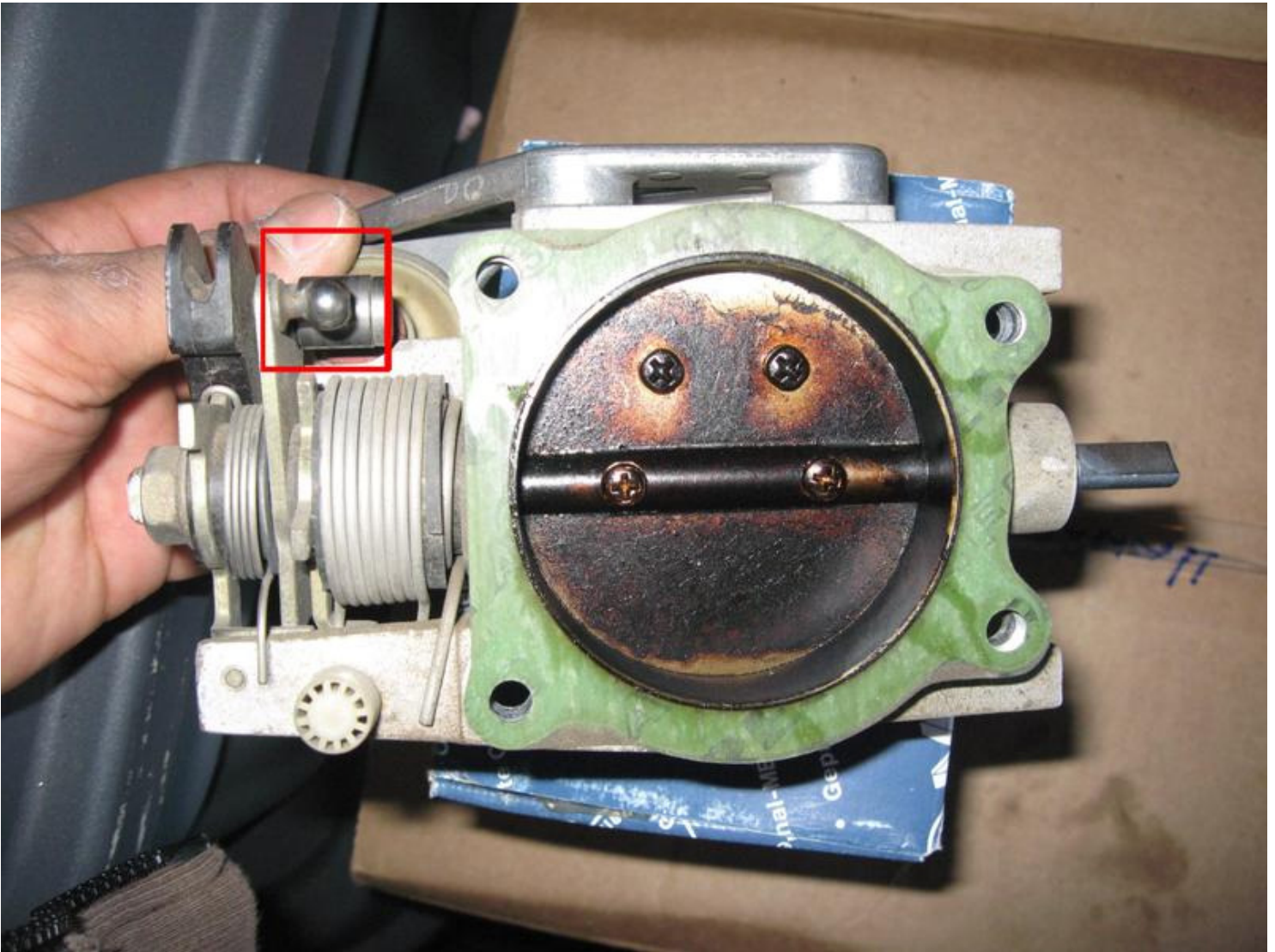
1. Remove the TPS plug.
2. Remove TPS by unscrewing the 2 phillips bolts holding it in. I had to get these replaced because they were OLD and stripped from the few times i tried adjusting the TPS. the PN is N0141233 and the replacement screw has a much bigger bolt head to facilitate adjustment.
3. Remove your TB to Intercooler Piping.
4. Remove the Idle stabilization valve from it's bracket (makes life easier)
5. Remove the Cruise Control Rod using pliers or flathead. The retaining "clip" must be released from the groove (right under the ball) then it can be slid back to allow the joint to pop off. Pictured below is the rod removed, and the clip returned to locked position (so I dont lose it). Highlighted in red is the 7mm adjustment bolt.



8. Now remove the throttle cable from the cam. You just gotta work the cable off and will most likely crack brittle cable lining. To make things easier you can remove the throttle cable from the mounting bracket by removing the retaining clip highlighted below. Make note of original position, even though you may end up adjusting it later. Just helps to know where it was to begin with.



9. Use 6mm Hex bolts to remove the throttle body from the Intake Manifold. Pictured below is my stock throttle body, fresh off the IM. Highlighted is the throttle arm.



10. If you feel the need, **Throttle Gasket is PN 034 133 073H**

11. You may or may not have to remove the dashpot. If so, i would leave the dashpot alone, and just remove the 6mm hex bolts at the bracket. Seen below is my cracked dashpot. I was getting my throttle bored/serviced at 034, so I removed this assembly.

Dashpot P/N 034 133 283



At this point, it depends on what you're doing with your throttle, but I would stuff the IM opening with something so nothing happens to get inside your IM without your knowing.

Sent the TB off to 034 and a few days later rec'd a bored 70mm throttle complete with dashpot (saved me \$120) and 034 Stainless Steel throttle cam (bling!)

INSTALLATION and ADJUSTMENT

1. Start by bolting up the four 6mm bolts holding the TB to the IM (dont forget the gasket!). Torque to (someone help me here)

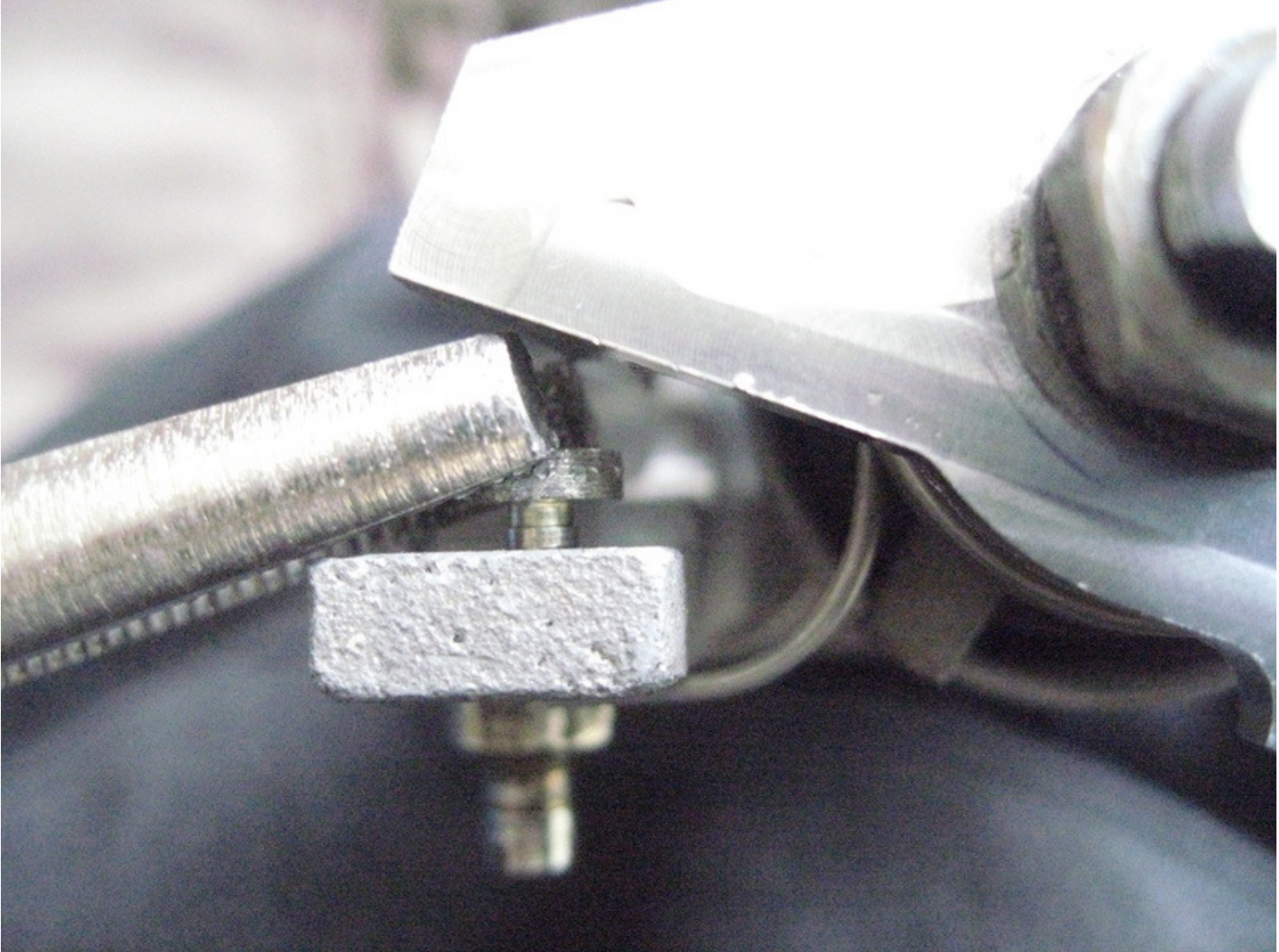
This is where it gets tricky I'd say.

2. First you have to adjust the throttle arm so that it comes to a stop, a completely closed throttle. Start by slackening up the Cruise Control rod w/ 7mm wrench and vise grip pliers (for the lazy). I found that it's easier to install the knuckle & retaining clip, then just screw the rod OFF. Next, the throttle stop bolt (8mm) must be adjusted to allow the throttle plate to fully close. When installing my 034 throttle, I had to remove the metal cam stop "bumper" to get the throttle where it should be. I will

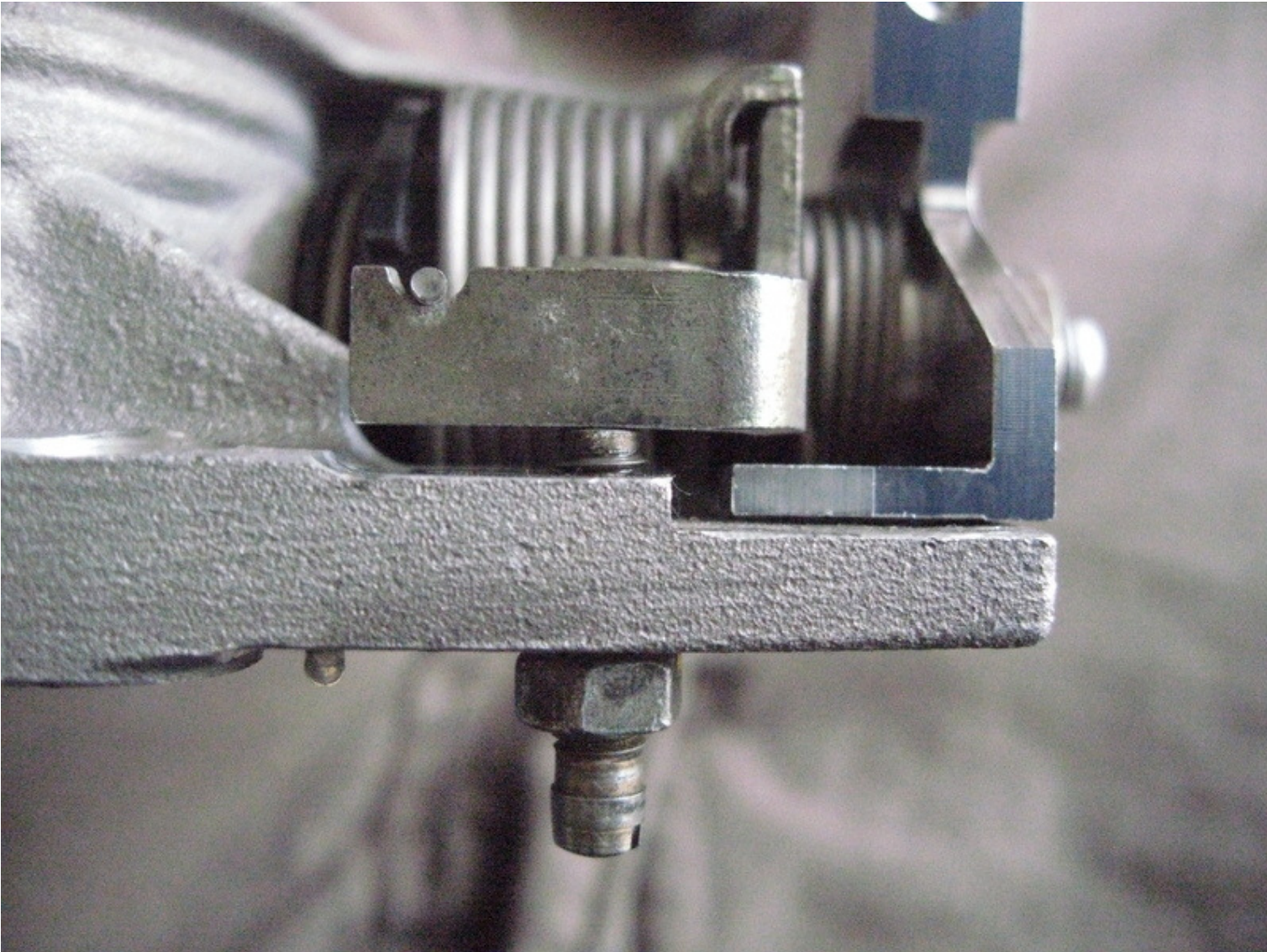
say here, YMMV depending on whether or not your TB is stock or modified.

As you can see here, the metal cam stop is taking precedence over the throttle stop bolt.

It wasn't screwed in, you just have to pull it out. Use vise grip pliers for leverage.



Again, you may or may not have to do this, but to allow for full range of adjustability on the throttle stop bolt, i had to remove this piece. Notice the difference below:



3. Next, reinstall the throttle cable. There may be a little bit of play on the cam throttle, you can adjust that. Use a 6mm open end and 14mm open end to adjust the throttle cam bolt. You want to make sure the throttle remains in closed position (meaning hitting the throttle stop) while you tighten the bolt.



4. Install the TPS. When you install the TPS, note the groove on the inside, it can only be installed one way. Bolt it down using the screws, but you have to twist the TPS Counter-Clockwise till you hear a CLICK. That is the idle position switch engaging. When the throttle rests closed, this idle switch is activated (closed?). If you tighten it before it clicks, or the idle position switch is damaged, you will likely throw this CEL all day long:

00516 - Closed Throttle (Idle) Position Switch (F60)

30-00 - Open or Short to Plus

NOW, you have the throttle closed, the TPS set, and you've taken up any slack in the throttle cable by adjusting the cam and/or reposition it on the throttle cable bracket.

5. If you haven't already done so:

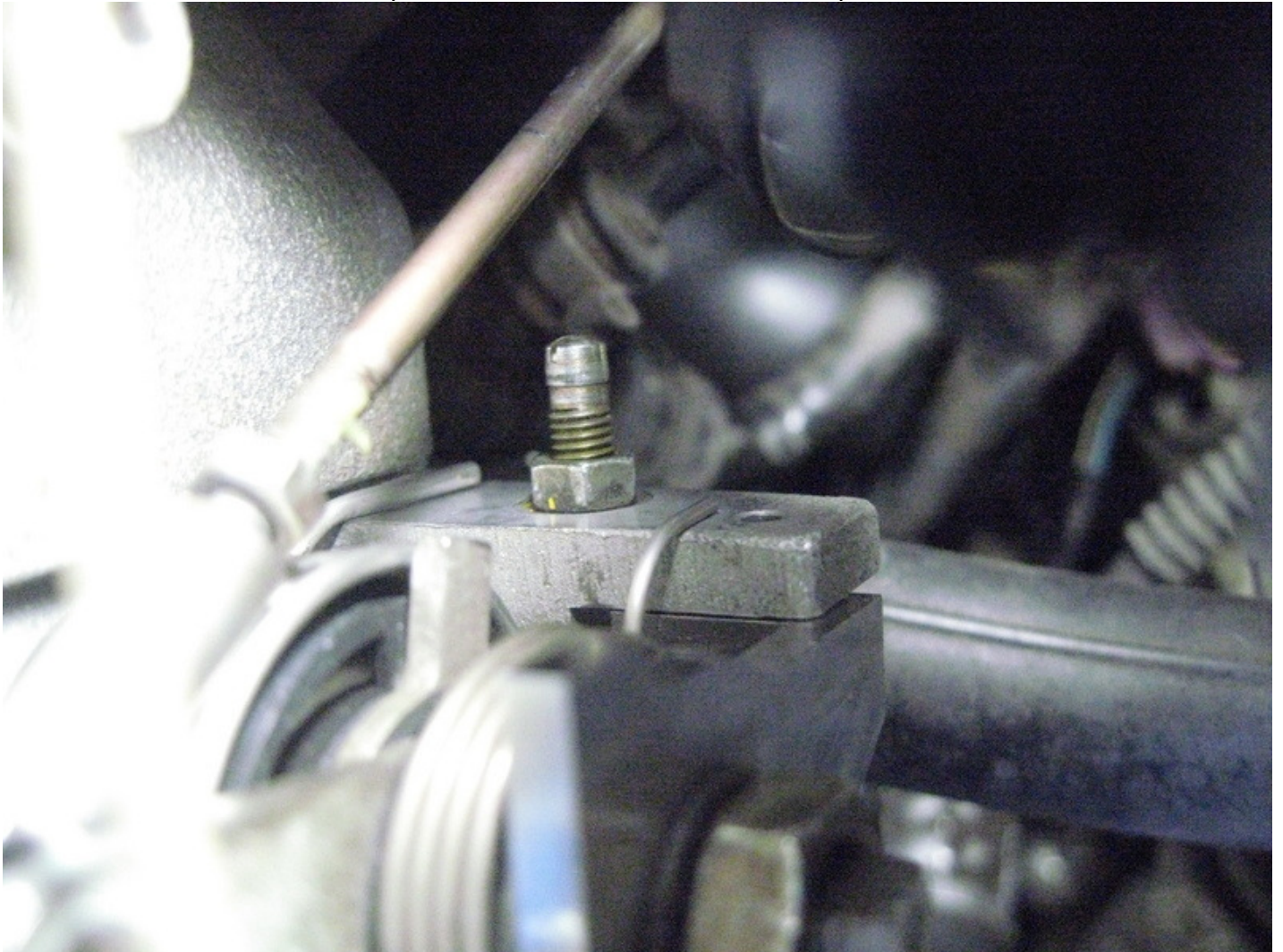
- Adjust the dashpot w/ 13mm open end. The dashpot controls how fast the throttle arm returns to closed position. You may need to just install this and drive the car so you can get a feel for it, and adjust to your liking. Just remember you dont want the dashpot to prevent the throttle arm from

returning to the point at which you already zero'd out in steps 2, 3 and 4.

- Reinstall the cruise control rod by spinning it back on the knuckle, leave a tiny bit of slack, tighten 7mm.
- Plug in the TPS harness.
- Reinstall your IM to TB hose and mount the ISV.

6. Tighten everything down, but bear in mind when you fire up your car you may want to leave room for adjustments. The only thing you need to adjust from this point forward maybe the throttle stop bolt, TPS, and dashpot.

You can access the throttle stop bolt from the underside w/ 8mm open end.



Finished product:



I should note that without removing that metal cam stop, my car was idling at about 920-960rpm and I would throw this code consistently

**00533 - Idle Speed Regulation
10-00 - Adaptation Limit Not Reached**

After making the adjustments exactly as mentioned above my car fired up and idled at 800rpm (similar to the first screen shot of this DIY) and I no longer throw the CEL above.

Best of luck, if you have any questions or suggestions for a more correct DIY just feel free to contribute....

Brian C (deephouse)