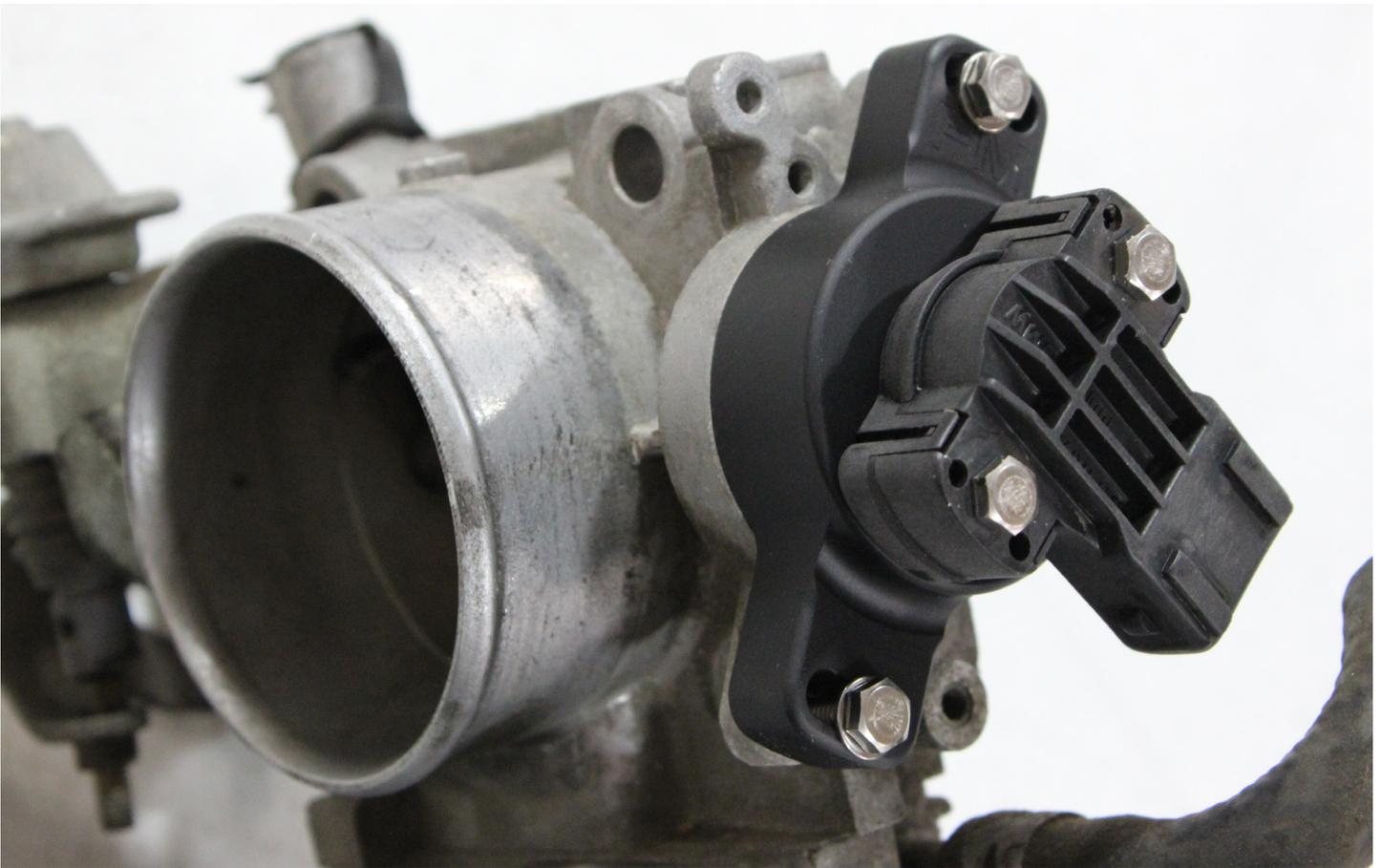


Flyin' Miata

**TPS Upgrade kit for NA6
07-36019**



Thanks for purchasing our TPS upgrade kit! This will give 90-93 manual transmission Miatas with a standalone ECU a true TPS. This kit will NOT work if your car is a 90-93 auto, a 94+, or if it still has a stock ECU. If you have any questions during installation or suggestions for improvement - to the product or the instructions - please don't hesitate to email or call.

WARNING: Not everyone can perform every installation. It is critical that you be honest with yourself in regards to your ability. We're more than happy to help, but there are only so many things we can do from the other end of a phone / computer. If in doubt, discuss the install with us before you dive in. Improper installation could cause injury and / or death!

Required tools

- Socket set
- Wrenches

Torque specs

- **All included bolts: 14-21 lb-in**

1. This installation should be pretty straightforward. First, remove the stock throttle body. Be careful with the stock gasket, as you'll want to reuse it. Once the bolts holding the stock TPS are accessible, remove them and the stock TPS.
2. Bolt the adapter into place using the shorter 16mm long M4 bolts (36-10416) with washers. Torque these bolts to 14-21 lb-*in*. Do NOT torque them to lb-*ft*. The adapter is symmetrical, so it can be installed with the logo at the top or bottom. If you can adjust the TPS in your ECU (most common), tighten the adapter down in the center of its adjustment. If you need to adjust the TPS itself, just snug the bolts for now.
3. Carefully press the BMW TPS into place, in the orientation shown on the first page. Unlike the adapter, it's not symmetrical, so it must be installed as shown. The TPS can be damaged if you force it - so don't. It will need some force to fully seat the throttle shaft, but be certain that it's lined up properly first. There's a flat on the shaft and a corresponding flat in the TPS that need to be oriented to each other. **Be careful not to rotate it in the wrong direction, as that is easy and will destroy the TPS.** Gentle rotation with a finger is best. Bolt the BMW TPS into place using the longer 22mm long M4 bolts (36-10422). Torque these bolts to 14-21 lb-*in* as well.
4. Route the original wiring to the new TPS location (pointing down/rearward), being sure to not put any strain on the wiring. Plug the TPS in (it needs to be done before bolting the throttle body into place), then reinstall the throttle body, torquing the nuts bolts to 14-19 lb-*ft*. If the gasket was damaged, replace it - a vacuum leak here is not acceptable, but likely if the gasket was damaged.
5. The setup and calibration of the TPS will vary by ECU, so refer to your ECU's instructions for how to adjust your mapping. Wiring will vary by ECU as well. Refer to the table below to help determine what wiring changes are necessary for your setup.

Acronyms

- **TPS: Throttle Position Sensor**
- **ECU: Electronic Control Unit**

- **Throttle body nuts & bolts: 14-19 lb-ft**

Wire color	Position (see pic)	Function	Stock ECU position
red	A	Signal output	1N
black/lt green stripe	B	Ground	2C, ground
lt green/ white stripe	C	5V input	2L

