

# ***42 Draft Designs***

## **Mk3 VR6 PCV Fix – Installation Guidelines & FAQ**

**Tools Recommended:** needle nose pliers, small flat head screwdriver, 1/4” nut driver, sharp knife or scissors

**Warning!** Hot metal burns! Always work on a cool motor.

### **Contents:**

- (1) PCV tube
- (1) PCV coupler 1.5” long
- (1) PCV coupler 2.0” long
- (1) replacement vacuum line 12.0” long
- (4) #12 hose clamps
- (2) #4 hose clamps

### **Installation Guidelines**

Installation is simply remove & replace. Instead of a step-by-step instruction manual we've chosen to highlight some important notes:

- When removing the factory PCV baffle & tube don't try to remove the inline heater from the intake boot. Forceful removal will break the intake boot!
- Use needle nose pliers to destroy the factory hose clamps on the PCV tube & the vacuum line. Twist the head of the clamp to loosen the grip.
- Install the replacement vacuum line before installing the new PCV tube. Route the vacuum line between the head and the lift bracket on the engine. Trim to length and be sure to keep the vacuum line off the exhaust manifold heat shield.
- The 2.0” long coupler goes on the valve cover. The 1.5” long coupler goes on the inline heater. Excessive clamp force is not necessary. Tighten clamps until they are snug and don't deform the couplers.

### **Frequently Asked Questions**

#### **Q: What is the purpose of the factory PCV baffle?**

**A:** The purpose of the factory baffle is to slow down the flow of PCV gases from the valve cover into the air intake. The design of the baffle somewhat limits a surge of PCV pressure from blowing liquid oil into the air intake.

#### **Q: What does the vacuum port on the baffle do?**

**A:** Nothing. The baffle is not vacuum operated. Read below for more information on this vacuum line.

#### **Q: Why would I want to remove a factory installed PCV baffle?**

**A:** Because it doesn't work. The VR6 valve cover has a sophisticated baffle built-in to prevent excess PCV oil and gunk from entering the intake boot. The factory baffle is nothing more than a rubber flap. It does collect excess gunk that slips past the valve cover baffle, but it doesn't allow anywhere for this gunk to go. Gravity pulls it down and pressure blows it past the rubber flap. We chose to remove it for two reasons – it breaks and it's not needed. Theoretically, a final baffle could be designed to jam in-between the valve cover and the intake boot. A well designed oil catch can would perform even better and likely cost less.

**Q: What does the vacuum line connect to?**

**A:** The vacuum line connects the throttle body to the emissions purge valve. The purge valve is an electronically operated valve which opens to allow vacuum from the intake manifold to remove excess vapors from the top of the gas tank. This vacuum line used to connect to the PCV tube. When operated, suction from both sides of the throttle body was used to remove vapors. By eliminating the PCV tube connection we've eliminated a constant vacuum leak and improved the function of the purge system.

**Q: What is the tube with the electrical connector for?**

**A:** The tube which connects directly to your intake boot is a PCV heater. This heater is operated by 12 volts and is always on. It is not monitored by the ECU or any temperature controller. It has a significant purpose, so don't rush to eliminate it. Heating the PCV gases helps to prevent condensation. It keeps water and oil vapors in a gaseous state where they can mix easily with the intake air-fuel mixture. Warm weather cars have a plastic dummy in place of this heater.

**Q: Will I get a CEL?**

**A:** No. This PCV fix will not cause a CEL. Other broken PCV components can and will – like the various valves, solenoids, and rotten vacuum lines. Removing the PCV baffle will not cause a CEL. Removing the PCV heater, though not recommended will also not cause a CEL.

**Q: Why is the PCV Fix tube smaller than the factory tube?**

**A:** It's really not. The internal size of the tube is what's important. We've matched our tube to the ID of the valve cover outlet. The factory tube was larger to accommodate restriction caused by the baffle. It was also designed to fit over the various fittings in the system. Our tube may appear smaller, but it's identical to the limits of the stock system and dramatically improves PCV flow.

**Q: How long will this fix last?**

**A:** Forever. The tube is made from 304 stainless steel and powdercoated for additional protection. It will not rust or corrode. All clamps provided are 100% stainless steel of various grades. The couplers are made from a synthetic rubber designed specifically for gravity transport of fuel and oil. It will last longer than any coupler possibly could. The replacement vacuum line is the toughest we could source. It's designed for fuel and has a thick sidewall and reinforcing braid.

**Q: I want to run an oil catch can – can I still use this fix?**

**A:** No. It won't physically fit. Oil catch cans require a total re-route of the PCV system. This tube won't fit and isn't necessary. Be on the lookout for catch can specific plumbing from 42 in 2010.