

Intake Pressure Tester for 2.7T Engine

Variations in boost production, air/fuel mixture, and drivability can often be traced to leaks in the intake system of the 2.7T engine, especially when equipped with larger fuel injectors. Finding and eliminating leaks makes your 2.7T ownership and any long distance trouble shooting with your tuner a much better experience.

We came up with an inexpensive method that works like a charm to pressurize the pre-throttle body side of the intake system of the 2.7T. Feel free to source the parts on your own or you can purchase the entire kit from us for a nominal price. If you want to make your own, we suggest using www.mcmaster.com as a source for the parts. We have included the part numbers below.

A regulated compressed air source is required to operate this tester. As with all compressed air applications, take care during operation as the system will be under pressure.

Parts list:

- 1 3" rubber straight joining clamp
McMaster # 4511K78
- 1 3" PVC cap
McMaster # 9102K223
- 1 7/8" vinyl cap
McMaster # 9753K86
- 1 1/4" air coupler, industrial shape
McMaster # 6534K46
- 1 Hose clamp
McMaster # 5388K18

Tool list:

- 9/16" box end wrench
- 31/64" drill bit
- Drill
- Flat head screwdriver
- Regulated compressor air source
- Pliers

Using the 31/64" drill bit, drill a hole in the center of the PVC cap.

Thread the air coupler fitting into the cap using the 9/16" box end wrench. The threads on the fitting will cut into the cap and make an air tight seal. Thread the fitting down until flush with the cap, as in Figure 1.

Install the PVC cap into the rubber joining clamp and tighten down the large hose clamp fully.



Figure 1: Fitting installed in PVC cap

Installation of the tester requires removal of the intake hose running between the MAF and Y-pipe (at point A in Figure 2. AWE RSK04 components shown in Figure 2, but OEM look similar). Use pliers to unload the springs clamps at each end of the hose (flathead screwdriver with AWE RSK04 hose).

Remove the side engine covers (removed in Figure 2).

Unclip the PCV damper from Y-pipe (at point B in Figure 2) by squeezing the clip. Figure 2 shows a 2000 and early 2001 configuration, late 2001 and 2002 will appear similar.

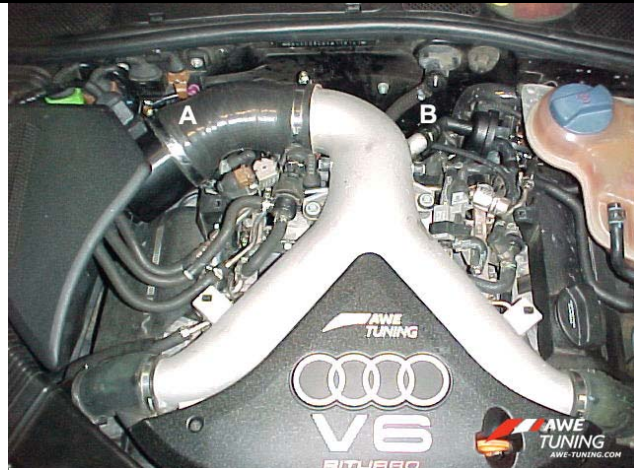


Figure 2: Engine bay

Close the PCV (Positive Crankcase Ventilation) branch off the Y-pipe with the vinyl cap and hose clamp. Slip the hose clamp over the cap and tighten fully.

Figure 3 shows 2000 and early 2001 configuration. Late 2001 and 2002 will appear slightly different.

Remove the oil filler cap, as this will eliminate a hiss noise as air pressurizes the crankcase during testing.

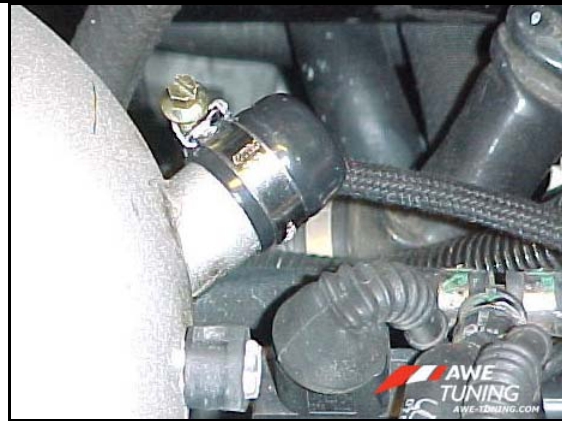


Figure 3: Capping off PCV branch

Slide the rubber clamp assembly over the inlet of the Y-pipe and tighten down the second large hose clamp fully.

With air pressure turned off, attach the end of an air hose to the air fitting on the PVC cap as in Figure 4.

SLOWLY increase the air pressure to the system via a regulator. No more than 15 psi is needed to expose any leaks in the system. Be sure to stand clear in case the tester pops off.

With pressure in the system, listen for any leaks coming from the intake and fix as needed. Common leaks are at hose junctions and intercooler end caps.



Figure 4: Tester installed

While this tester pressurizes only the portion of the intake before the throttle body, that is usually enough to expose any of the common intake leaks that occur on the 2.7T engine.