

Cleaning a Halltech Stinger Warhead air filter by Dave68

Background: After 2 and a half years and approximately 12,000 miles, I was curious to see:

- a) if the filter needed cleaning and
- b) if it was doing a good job of keeping my engine clean

As some of you know, I have previously fabricated a CAI (Cold Air Intake) modification that allows outside air to be directed through a 316 stainless steel screen (via a polycarbonate scoop) and into the intake system as it passes through the Halltech Warhead filter. Knowing that the underside of the filter stood to receive the most contaminants, I ran my fingers along some of the filter pleats. What I saw reminded me of the black powder that accumulates on the inside of a chimney – lots of black soot!

Soooo, I figured it was time to do a thorough cleaning and effectivity investigation:

0.0 Loosen the clamps that held the smooth TB coupler to the throttlebody. See figure 1.



Figure 1: TB coupler clamps

- 1.0 Remove the MAF connector clip by pulling out the gray clip, squeezing the connector tabs and pulling the two connectors apart (as per my Halltech Stinger installation instructions).
- 2.0 Now loosen the MAF clamps. You should be able to remove the MAF from the air bridge and the airbridge from the throttlebody. See figures 2 and 3.

Cleaning and oiling a Halltech Warhead filter

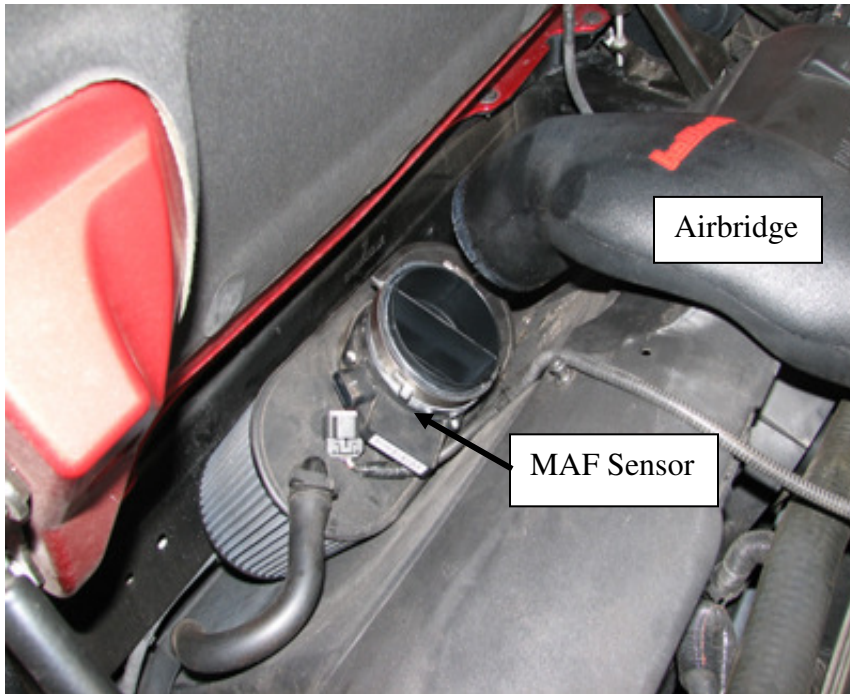


Figure 2: Airbridge to MAF coupling disassembly



Figure 3: Throttlebody

- 3.0 Set the MAF sensor and airbridge aside and remove the Warhead filter from the engine bay.
- 4.0 Tap the filter several times to dislodge any large, accumulated debris from its pleats. Obtain a small brush and remove as much of the embedded black “soot” from the pleats. If you have the CAI mod in place, you will notice that the area of the filter that resides over the lower radiator cover cutout, will have much more black soot than anywhere else on the filter. Spend extra time brushing this area. See figures 4 and 5.

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Figure 4: CAI inlet side of filter



Figure 5: Brushing soot from filter

- 5.0 Tap and brush the filter until the majority of the soot is removed.
- 6.0 Spray Simple Green liberally on the entire exterior surface of the filter. I used a similar cleaner and achieved good results as well.
- 7.0 If you have the CAI mod, you will need to both spray cleaner and brush the dirtiest parts of the filter. Brush and spray for at least a few minutes. See figure 6.

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Figure 6: Applying cleaner

8.0 Once the filter is thoroughly saturated with cleaner, allow 10 minutes before continuing on to the next step.

9.0 Direct low-pressure water at the **INSIDE** of the filter, through the large opening. Thoroughly rinse out the entire amount of cleaner in this manner. See figure 7.



Figure 7: Removing cleaner with water

10.0 Allow the filter to dry a minimum of 2 hours. I left my filter in the sun and within that amount of time, it was dry.

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11.0 The next step is very critical: **Oiling the filter:**

Note: Applying too much oil may result in a C5 that hesitates, stalls, and just plain doesn't run right. The excess oil may coat the MAF sensor wires, preventing them from functioning properly. How much oil is too much? That is hard to say. A thorough oiling of all filtering surface area will result in some bleeding of the oil. The more oil you apply, the longer you will need to let it bleed.

12.0 That being said, let's go ahead and coat that bad boy! I used K&N oil (red in color); Blackwing users often select Donaldson's own oil. Either way, the synthetic media used to make a Warhead or Blackwing filter is very resistant to many types of oils. See figure 8.



Figure 8: filter oil

13.0 Spray the oil onto the filter by holding the can approximately 3-5 inches away from the filter. See figures 9 and 10.

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Figure 9: Oiled Warhead filter



Figure 10: inside of adequately-oiled filter

- 14.0 The nice thing about the K&N oil is that it is highly visible. A light coating is all you will need, so apply with slightly overlapping, vertical strokes of the can nozzle. Try not to get any oil inside of the filter.
- 15.0 Wipe any oil from the upper and lower caps and then lay the filter on a couple of paper towels. Flip the filter over and change the towels every so often, depending upon how much excess oil is draining out. I leave my oiled filters to drain overnight, just to be sure!

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16.0 In between steps or after oiling your filter, why not clean the lower radiator cover and CAI components, if necessary. Figure 11 shows the stainless steel screen that resides underneath my Warhead filter. I first cleaned it with compressed air before wiping down the CAI scoop and surrounding areas, both above and below the cold air inlet.

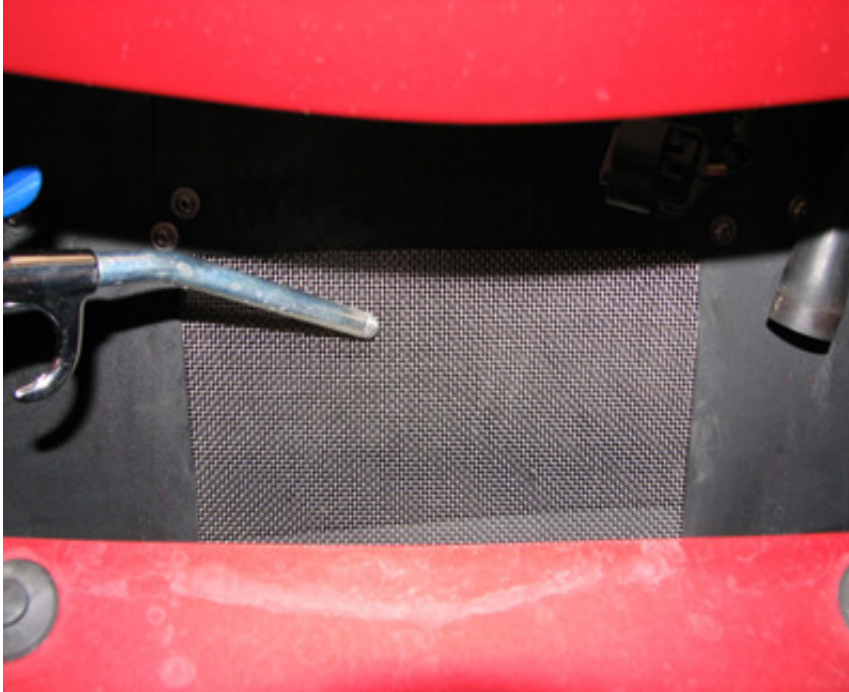


Figure 11: Cleaning the CAI screen

17.0 Well, that wraps up a very vital maintenance procedure for your Halltech Stinger, TRAP, Blackwing, and many other reusable air filters. Simply reinstall and enjoy that freshly-cleaned intake system.

Addendum: I was very pleasantly surprised to find that every surface from the inside of the Warhead filter to the throttle body, including the insides of the MAF sensor housing, airbridge, and smooth TB coupler, were absolutely immaculate – free of any dust, dirt, or other contaminants. This is testimony to the highly effective filtering ability of the Halltech Stinger Warhead filter. Many thanks to Jim Hall for being so selective about the filter media he specified for this intake system.

Dave