

Aprilia Futura RST1000 Gas Cap Modification

By Bob Thompson

If you are tired of trying to fill the Futura tank through the tiny hole provided, here's a simple modification that will keep the gas splatters down.

Thanks to John Borella of Borella Enterprises for coming up with the original idea, but the directions below are my own description of how I did this modification.

John's full contact information is at the end of this document.

First, the usual disclaimers - This document describes how I modified my bike. Do this modification at your own risk. Modifying the bike may void your warranty.

And be aware that you are going to be working around exposed gas fumes - do it in an area with adequate venting and keep sparks and open flames away from the bike.

Start by removing all six of the Allen screws that hold the gas cap on. Three of these are shorter cosmetic screws, and the other three longer screws attach the assembly to the gas tank. The picture below shows the screws fully loosened (the screws that are elevated are the shorter screws).



Pull the screws and put them in a safe place, where they won't fall into the tank.

Next, open the gas cap. The last retaining screw is the one shown in the following picture with the arrow.



Unless you want to find to try finding a dropped screw at the bottom of the gas tank, temporarily stuff a rag in the gas tank opening. Remove the remaining Allen screw and put it with your other screws.

Lift the gas cap assembly out of the tank. The entire assembly should lift out in one piece as shown in the following picture. If the lower black plastic assembly doesn't come out with the gas cap, just reach in and pull it out. If the rubber gasket shown inside the tank opening comes out with the assembly, reposition as shown in the picture.



At this point, it might be a good idea to temporarily cap the tank. A rag and a tub of waterproof grease worked for me as shown in the following picture.



Remove the black plastic assembly at the base of the gas cap. Be careful to keep the rubber gasket at the base of the metal gas cap in position. Wipe down and dry the plastic assembly with a rag if it has any gas on it.

Then use a Dremel with a thin cutoff wheel to remove the flat molded bottom with the constricted gas opening. Be careful to only remove the base of the assembly. If you cut too high on the plastic tube, you might cut off the locking tab for the gas cap. Also be aware that if you cut too high you will be able to fill the tank to the point where gas might get into your carbon canister and cause venting problems. The idea is to just remove the base of the black plastic.

Use some sandpaper to remove any remaining burrs (I found that plumber's 120 grit sanding cloth works well, but any sandpaper will do). Carefully wipe off any dust and bits of plastic. The plastic assembly with the constricted opening removed is shown in the following picture.



To reassemble, start by reattaching the gas cap to the black plastic assembly with the short screws. If you are at all confused about how the parts line up, just look for the locking tab for the gas cap to provide an alignment key. Be careful to correctly position the rubber gasket between the metal gas cap and the black plastic.

Next, reposition the assembly in the gas tank with the gas cap open. Again temporarily stuff a rag in the opening, and insert the Allen screw that you removed last into the tab at the base of the gas cap.

Loosely tighten the screw (save the last turn for final assembly). Pull the rag out and close the gas cap. Then attach the remaining three long Allen screws.

Tighten these screws fully and recheck that the other three top screws are tight. Open up the gas cap and fully tighten the lower Allen screw. None of these screws need a lot of torque. The specification is for 5 Nm, but that's basically hand-tightened.

The reinstalled assembly is shown in the following picture. The larger opening makes it much easier to see when the fuel level is approaching the top and will save you from a lot of gas splashes.



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