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Synopsis

The new TT39 kit consists of two 11L side tanks which add 22L capacity to the F650GS. These side tanks drain by gravity into the main underseat tank. The German F650 has a 17L tank ($17+22=39L=10.3$ gallons), but the USA model has a charcoal cannister in the tank which reduces capacity to 15.5L ($15.5+22=37.5L=9.7$ gallons). Slightly used [17L tanks](#) are available from Touratech.

This is an addendum to the [complete TT39 installation instructions](#):

Option: Drilling the STOCK tank without removing the tank.

Please see the [complete TT39 installation instructions](#).

The side tanks are easily removed by one bolt ([OD couplings](#) included) which makes it easy to



TOURATECH **TT39 Tank kit on** **F650GS series** **BMW.**

part# 100-1100

Use these suggestions at your own risk.

- These instructions are new and have not been tested by independent installers.
- The instructions are not complete.
- Touratech and Touratech-USA assume no responsibility for errors using these suggestions.

If you have any doubts about your ability to install the tank kit, please contact a professional installer.

We highly advise that you test fit or pre-inspect everything prior to sending the parts out to paint. TOURATECH will replace any parts found defective, but the painting is 100% customer responsibility.

(Print this for your painter).

Prepping and painting of the side tanks (polyamide)

1. Plastic adhesion promoter PPG product # DPX 801
2. DP sealer various #'s 90,40,48
3. Wetsand to smooth imperfections
4. DP sealer second coat
5. Base coat/ Clear coat system or single depending on color and application.

The three fairing parts are fibreglas.

which makes it easy to transfer gas to your distance-challenged riding partners. Since the tanks are separate, an option is to use one tank for drinking water (but not after you've used it for Petrol).

This installation will take some time. You have to drill 3 holes in your BMW fuel tank (\$205 to replace, so be careful). Assembly of the other components and the surface preparation then painting may require more than a few evenings. See a photo of the [entire kit](#) here.

On our first installation we were able to install the fuel tap in a USA model BMW without removing the main tank from the motorcycle.

These tanks are top-quality, made by Elkamet, the same company that makes your stock BMW underseat tank. See the differences between the USA tank and the German tank here ([top](#) and [bottom](#)).

- 1) Empty** the fuel tank by riding, or other means.
- 2) Remove** the seat.
- 3) Disconnect** the fuel pump electrical connector.
- 4) Unscrew** the fuel pump retainer ring and remove the fuel pump

assembly.

5) Remove the remaining gasoline from the tank.

6) Drill holes to attach the fuel tap.

7) Re-install the fuel pump.

8) Install the side tanks, connect the hoses.

9) Inspect your connections for leaks. Inspect again after a few days' time.



Choose left side or right side:

The tank fitting is shown assembled. It's sitting on the frame for illustrative purposes. Behind the fitting you can see the charcoal cannister. This is the LEFT side of the US model GS.

The blue outline shows that there is no space for the fitting (left side, USA model F650GS). On the USA model the fuel tap is placed on the right side due to the charcoal cannister on the left side.

On German F650 (with [17L](#) tank) the fuel tap is fitted on the left side of the bike.



Marking the location:

For USA GS we are installing the fuel tap on the right side (chain side).

Place one part of the fuel tap fitting on the tank bottom and mark the location of the center hole. The other half to the tank fitting goes inside the tank, and on the inside, there is less space between the rounded edges of the tank. Choose a location farthest away from the rounded edges of the tank, and as central as possible. Trace around the fitting and inspect that the sealing surface will be flat and smooth.

You may have to use a sharp knife or sharp file to remove some external flashing from the plastic molding process. Or remove the tank and smooth the surface with sandpaper.

On this F650, we achieved a perfect seal without any smoothing of the surface.



Drill the first hole:

Drill the first small pilot hole for the center fuel hole. Take a look inside the tank from the top. Place the inner fitting part inside the tank, centered on the hole to verify that you have chosen a proper, centralized location. Since your pilot hole is so small, it is still possible to shift the location of the hole before you enlarge it to 3/8".

Click [here](#) to see the inside tank fitting when completed.



Enlarge to 3/8"

Using the pilot hole as a guide, drill a 3/8" hole (or 9.5mm). Don't allow the drill to walk to the side as the drill wants to bite deeply into the soft plastic. For the more conservative approach, you can step up in increments. We went straight for the full 3/8" and it worked....but....

If you're not confident about this, try drilling some test-holes, and assemble the fitting on a plastic bucket first.



Locate the next two holes:



Here is a method which holds the fitting plate up to the bottom of the tank and allows for perfect centering to drill the other two holes.

First (not shown) the banjo bolt is threaded into the tight hole on the tank, making its own threads in the soft plastic.

Then unscrew the banjo bolt from the tank and assemble the two parts as shown where the banjo bolt is screwed into the fitting plate until just flush with the backside.

Then the two parts are held up to the tank and the banjo bolt is threaded onward into the new plastic threads in the tank. Then spin the fitting plate one-half turn. This slightly strips your 'threads' into the plastic but it holds the plate tightly up against the tank, allowing you to accurately mark the center positions of the other two holes.



Drill the two pilot holes:

Using your careful markings from the previous step, drill two pilot holes.

You can see the 10mm threads in the soft plastic from the previous operation. These threads are temporary, the functional threads are in the metal outer fitting plate.

See [photo#1](#) and [photo#2](#) which include these parts discussed.



Enlarge for 5mm screws:

Then drill to full diameter (7/32") for the two fitting screws.



Assemble fitting parts:

Assemble as shown with a flat VITON rubber seal on each side of the plastic

There is a soft metal crush washer on each side of the banjo.

Note: If you cannot get a torque wrench on the Banjo bolt, you may need to remove the rear subframe bolts (one on each side of the motorcycle) and lift the rear frame a little. Pay attention to the brake master cylinder, you may

have to unbolt it. To re-install use blue loctite and re-torque the frame bolt to 21 Nm (=185 in-lbs).

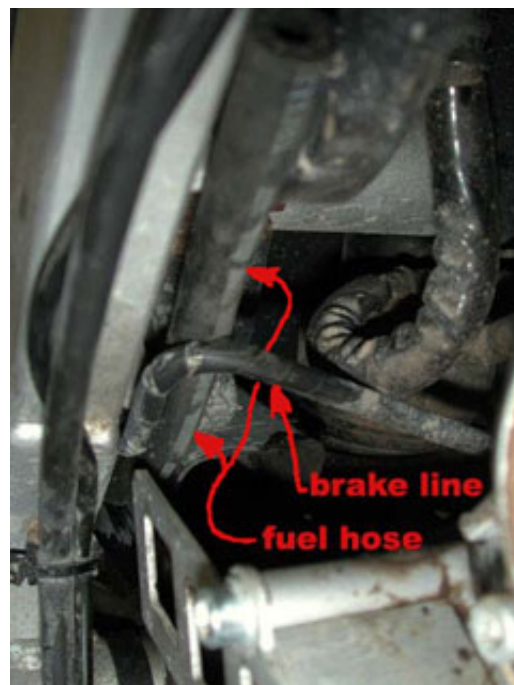


Look inside the tank:

Here's the fitting inside the tank. There are two rubber gaskets, one inside the tank, and one on the outside, with the plastic sandwiched in the center. Put some gasket sealer on the threads before installing the copper sealing washers and acorn cap nuts.

Note that the fitting is fairly close to the inside radius of the tank.

Torque the two countersunk hex screws to 6 Nm (=55 in-lbs). Torque the Banjo bolt to 20 Nm (=180 in-lbs).



Choosing a path for the fuel line:

This view shows the fuel hose from the tank tap routed above the chain, and above the steel brake line. Use cable-ties to support the hose and ensure that the fuel hose remains as far as possible from the chain path. Remember that at full suspension compression, and with a loose chain, there is less clearance than it appears with the wheel off the floor.

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