Fitting a Scottoiler to a 2002 Model BMW F650 GS

The following instructions detail how to fit a Scottoiler HCR kit to a 2002 model BMW F650GS. It is a little fiddly to do (but not beyond the means of a reasonably competent & intelligent person) and the advantages of the constant lubrication on the chain life make it well worth the effort.

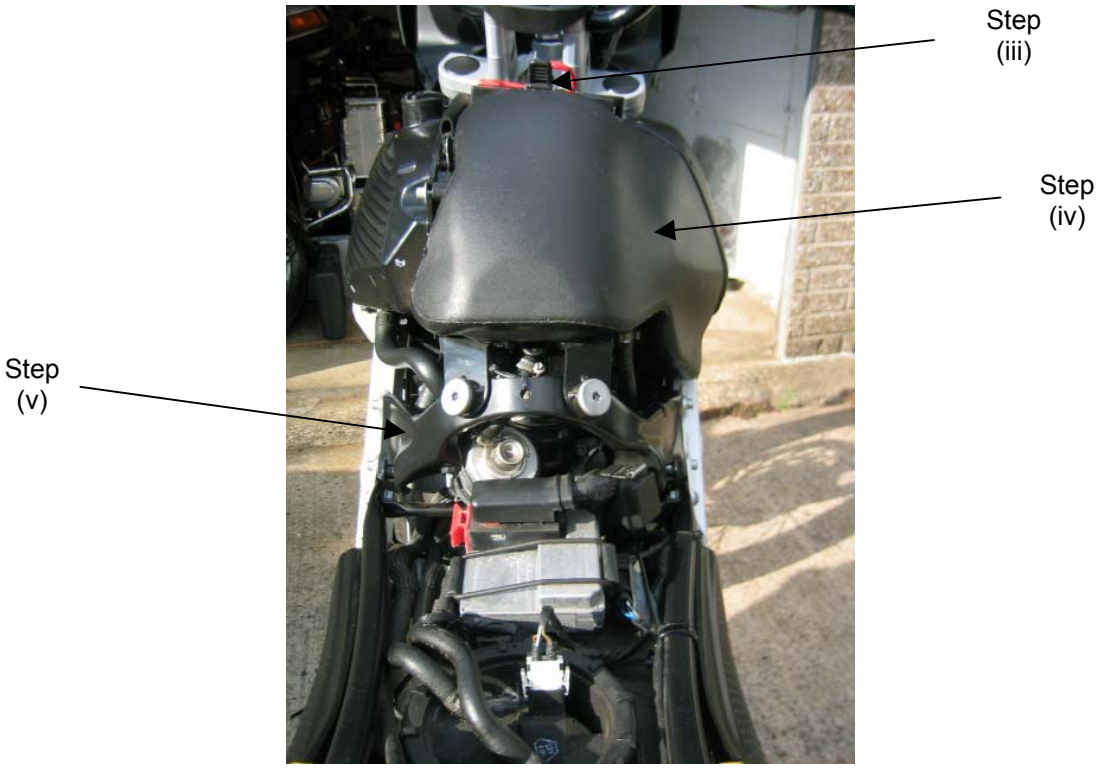
First of all open the packaging and carefully read all of the instructions & literature with the kit. It's worth taking a little time to familiarise yourself with all of the parts. Fitting the Scottoiler can be broken down into 3 major areas as follows:

1) Fitting the vacuum line.
2) Fitting the HCR & RMV.
3) Fitting the delivery system that takes the oil to the chain.

1. Fitting the Vacuum Line

The BM is fuel injected and this means no easy carburettor vacuum point to take a feed off for the Scottoiler. The supplied brass vacuum spigot (item #8) must therefore be fitted to the rubber inlet manifold.

(i) Remove the Tail Piece cover & Seat.
(ii) Remove the front indicators & the 3-piece dummy tank panelling (the owners manual shows you how to do this).



(iii) Remove the battery.

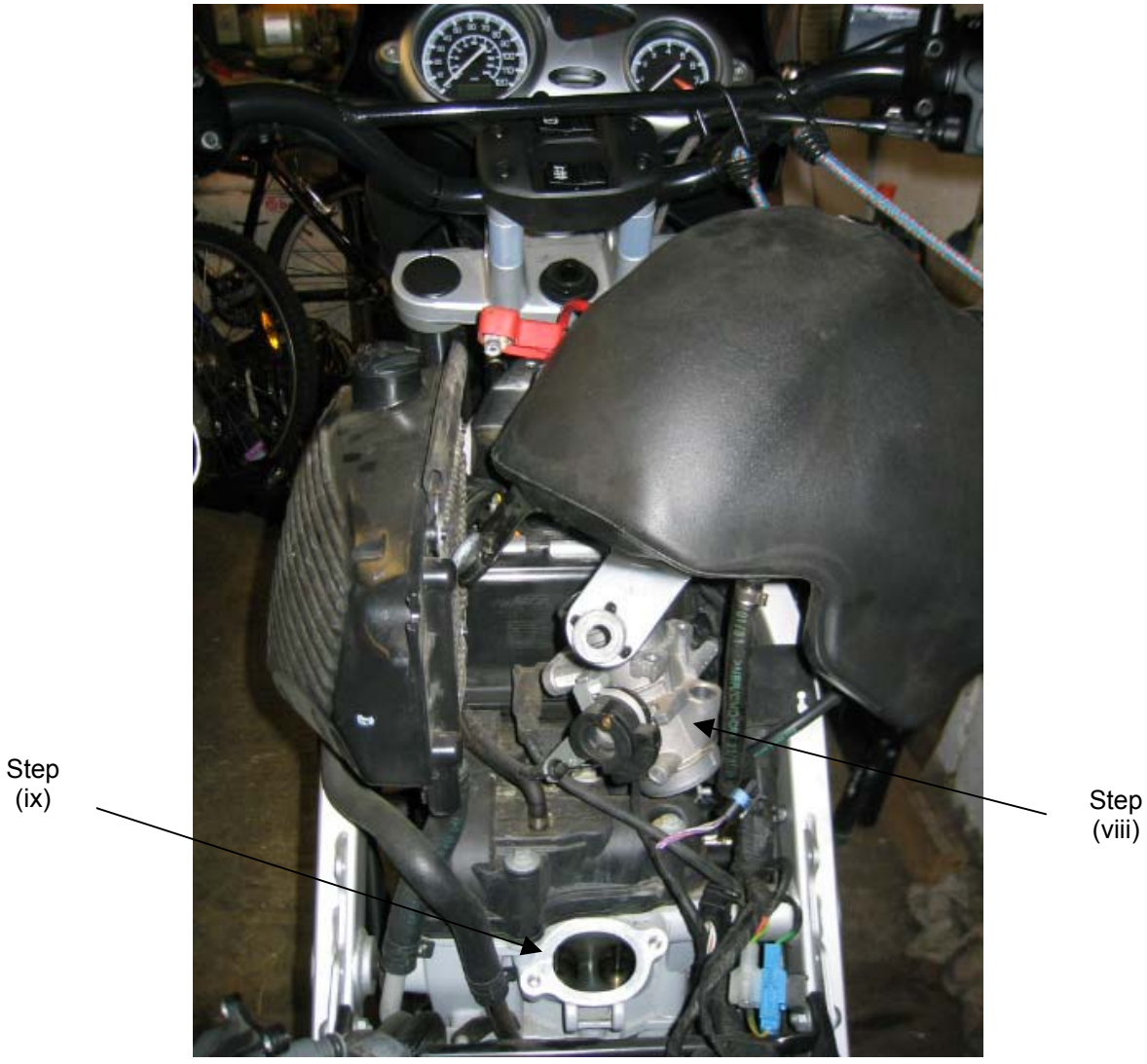
(iv) Remove the airbox and hang it to one side (it has fuel lines going through it so it is not easily detachable)

(v) Remove the rear dummy tank frame (4 bolts – 2 to each side). You will have to unscrew / unclip all of the electrical bits fastened to this and cut the cable ties on the harness, but it is worthwhile as it gives improved access to the manifold.

(vi) Remove the fuel injector nozzle from the carburettor body by undoing the 2 screws facing back at you. Pull this out of the way.

(vii) Undo any electrical connectors in the way.

(viii) Loosen the jubilee clip holding the carburettor onto the inlet manifold. The carburettor can now be eased out & set to one side. I didn't have to remove throttle cables etc



(ix) You are now at the rubber inlet manifold which can now be un-bolted and removed. **Take care to clean the area around the manifold before removing it and make sure you do not drop any small objects down into the manifold as they will go straight into the engine and untold hours of fun may ensue fishing them out!**

(x) Drill a 4.5mm hole in the side of the manifold. Make sure it is clean & free from debris.

(xi) Fit the brass spigot (part #8) with some silicone engine sealant (I used Hylomar - an instant gasket type material) on each side. Ensure the spigot is fixed with a brass washer on each side & then tighten up the nut. Clean off any excess sealant paying particular attention to the inside of the manifold.

(xii) I found it easier to also fit the Vacuum Damper Assembly & vacuum line at this stage, as it is easier to push home the fitting with the manifold off the bike.

(xiii) Reassemble all of the items in reverse order but leave the dummy tank panels, seat & tailpiece off.

(xiv) It is probably worth starting the engine to verify that you have re-made all the electrical connections & to check that you are drawing a vacuum by putting your thumb over the end of the vacuum line.

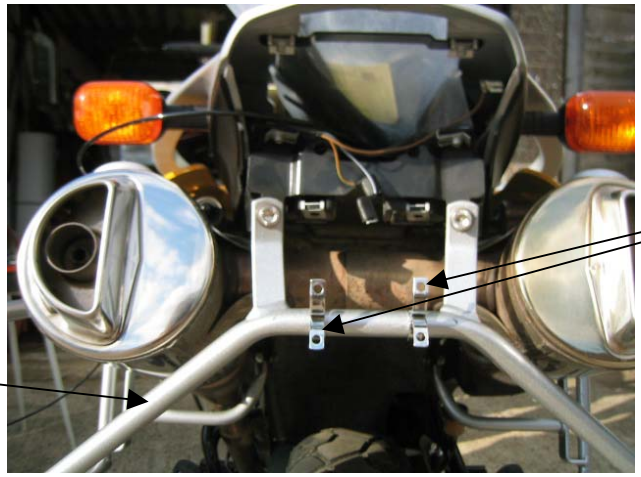
(xv) Route the vacuum line along the main frame and feed it through the square hole in the rubber grommet into the tail compartment. Leave it for trimming later on.

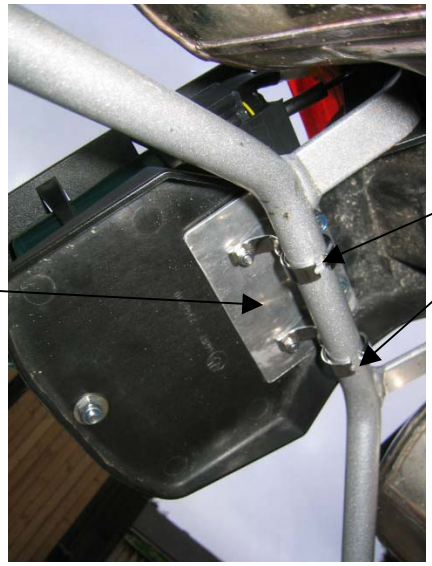
2. Fitting the HCR & RMV.

The HCR & RMV can be easily assembled together in accordance with the instructions provided with the kit. The main problem with fitting the HCR assembly is that it attaches to the plastic number plate holder which is a bit flimsy as it is only held on by 4 bolts to another piece of plastic in the tail compartment of the bike. There are a number of solutions to this.

Touratech do an aluminium number plate reinforcement kit (part no. 051-1202 from www.touratech.com). This can be used to strengthen the holder & then attach the HCR.

For my bike, I had a set of Hepco & Becker 38 litre aluminium panniers fitted. The rack for these hangs off the back of the bike & has a cross piece onto which I was able to fasten a small aluminium support plate with 2 pipe supports from a plumbers yard (see pics).





I also fixed an aluminium backing plate to the HCR itself and the lot was then assembled to the number plate holder to make the good stiff mounting, suffice to support the weight of the filled HCR.

3. Fitting the delivery system that takes the oil to the chain.

The final part is the installation of the delivery tubing & dispenser head. I found that I could not make a suitable support to fit the 650 with the items supplied with the kit. Instead I found some cable supports from an old CX 500 that fitted perfectly to the chain guard attachment point on the lower side of the swing-arm. This retained a degree of flexibility, whilst providing good support.

The dispenser head should be angled such that the slash cut dispenser is away from the sprocket and can drip oil onto the chain. If you turn it around it will pick up dirt off the sprocket & get blocked.

The rest of the oil line was threaded though a PVC support glued onto the swing arm and then threaded up the main frame and along the upper frame rail (I left a little slack along the way for flexibility). I drilled a hole to gain access to the seat compartment and threaded the line through it and on to the HCR.

Connect all the plumbing at the HCR, trimming the vacuum & dispenser lines to suit. These were also cable tied as required along the frame.

Filling the System

This was done in accordance with the Scottoiler instructions, filling the HCR & the RMV with the oil supplied with the kit. Set the RMV to 'prime' & pump the oil through the delivery system until it appears at the dispenser to drip onto the chain. Then set the little dial to the required flow rate – I set it low for hot weather to the 2 – 3 position and have found that this is adequate to keep the chain moistened with oil without any excess flinging off onto the rear wheel.

Finally, once you are satisfied that the oiler is working, drill off the number plate using the template provided & fix the number plate using the 4 little stainless screws provided.

And that's it - One Scottoiler fitted & fully operational!

Norman Magowan
October 2003