

## Fitting Seat Heaters into your Fiat Bravo

This guide shows you how to fit the 'Waeco Magic Comfort MSH50' seat heaters into your Fiat Bravo whether your car comes equipped with them as standard (HLX/HGT) or not (S, SX). Please read this guide over once before installation.

**Do not attempt this guide if you have side airbags and/or passenger front airbag.**

Your first step is to purchase the Waeco MSH50 seat heaters which can be found at [www.waeco.co.uk](http://www.waeco.co.uk) for £39.94.



### Step1. How to Remove the Seat from the Car

Tilt and Slide the seat all the way forward to gain access to the screws at the rear of the seat. Unscrew the two mounting bolts as shown. (Alan Key Fitment)



Now put the seat back into its normal position and slide the seat all the way back. Unscrew the two forward mounting bolts as shown. (Alan Key Fitment)



**Note: On models fitted with Heated Seats you will need to disconnect the wiring from under the seat before it can be removed.**

## **Step2. How to Remove the Plastic Trim from around the Seat**

Remove the plastic cap from the seat adjuster handle by carefully prising it out with a small screw driver. Then extract the handle from the seat.



Next unscrew the two remaining self-tapers from the plastic trim. If you have heated seats then disconnect the LED plug under the seat. Now carefully remove the plastic trim. The height adjustment handle does not require removing.

To remove the trim on the opposite side of the seat requires you to remove the plastic cap by prising it out with a small screw driver. Then unscrew the self-taper from the plastic trim.



Before the plastic trim can be removed totally you need to carefully place a large flat headed screw driver behind the plastic trim to help push out the metal retaining washer by pushing the trim away from the seat.



### **Step3. How to Remove the Seat Lever**

Prise the flap out of the lever using a small screw driver as shown.



Pull the flap back from the lever to gain access to a hidden screw. Unscrew the screw as shown and withdraw the lever.



To remove the lever, pull the lever sideways. It will then slide off the metal arm.



Two further hidden screws will now be revealed, use a screw driver to remove them and then carefully remove the handle surround away from the seat.



#### Step4. How to Remove the Upper Seat Cover

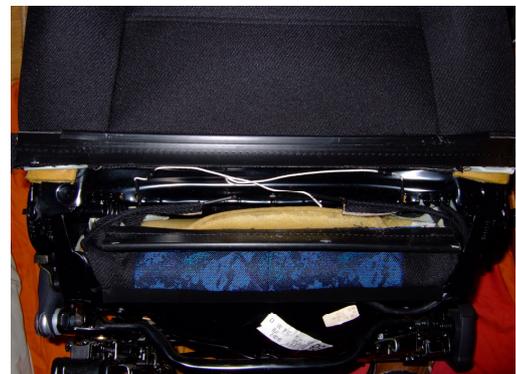
At the rear of the seat at the base you will notice a flap of material.



Lift the flap up to reveal a plastic clip. This clip hooks onto another clip. This is where the back facing of the cover meets the front facing cover and is held in place.



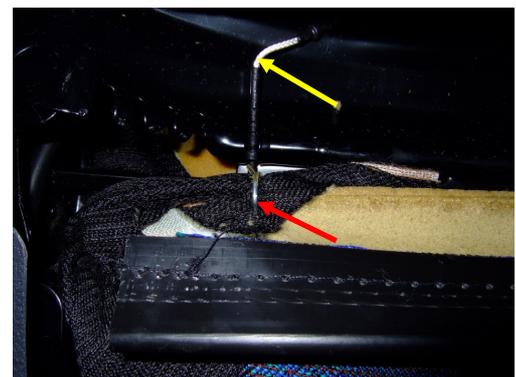
Use a screw driver to prise apart the two plastic clips. Once unclipped it will reveal the following. You will notice two strings in either corner.



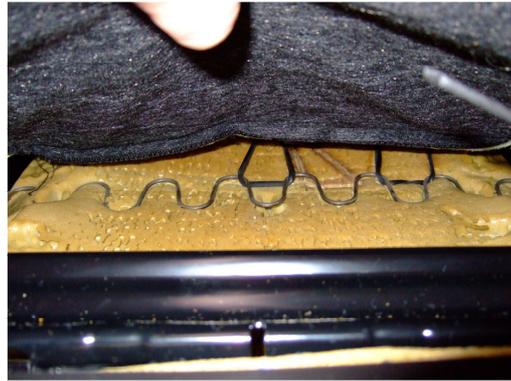
You need to detach the string shown by the yellow arrow by pulling it out of its current holding position.

Next you can see a metal ring shown by the red arrow. Use wire cutters to cut the ring off and remove.

Repeat this operation for the other side of the seat.



Carefully lift up the cover on the back of the seat to reveal the backrest springs. If you look up you will notice one or two elastic bands. Carefully detach the elastic bands, DO NOT cut them off. Let them spring back up the seat.



Now push the cover and clip between the upper and lower cushions. Until it is fully seen on the front side of the seat.



Start by lifting one corner up a little at a time while constantly swapping sides so it evenly starts to rise up the seat. Compress the bolsters to help lift up the cover. The cover will only go approx 2/3 of the way up until the internal seat hooks prevent it from going any further. That is okay, we do not need to go any further.

The white part on my seat is the old heating elements. S and SX owners won't have this.



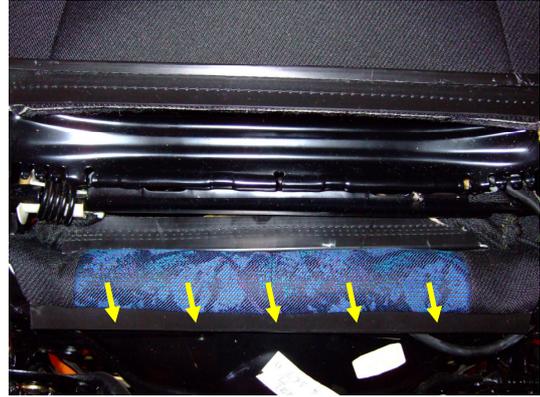
For those with the heated seats you may want to remove this. Whilst I was removing mine, it was lifting off a small layer of the cushion as well, so make sure this is kept to a minimum. Take your time and be patient. Use a hair dryer to soften the glue and/or use a sharp knife.

Disconnect the backrest heating element from the lower heating element to aid removal.



## Step5. How to Remove the Lower Seat Cover

The lower cushion cover is clipped onto a metal ridge at the rear of seat similar to the upper cushion, but this time to the seats frame. Gently use a screw driver to prise it off the frame.



Push the cover from the rear of the seat through the gap between the upper and lower cushions.



Starting at one corner, as shown by the yellow arrow in the previous photograph; lift this corner up to find a hidden metal ring clip. Be very careful, that you only cut off the metal ring clip and not the metal rod and remove it. Repeat for the other corner.



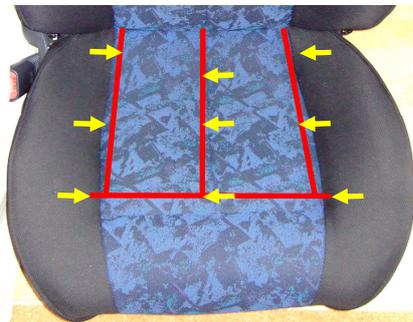
Now the hard part before you can begin to start removing the cushion cover you need to unhook the cover from the sides of the seats. This can be tricky, so again be patient and don't butcher anything. Use a screw driver to unhook the plastic edging on the cover from the frame. Work from the back to the front along the side. Do not carry on unclipping the front, it is not required. Repeat for the other side.



The following will look something like this.



You may now have noticed that there are three metal rods running the whole length of the lower cushion and a strut rod near the front of the cushion (Shown as red lines). The yellow arrows point to metal ring clips that need to be removed. These ring clips hold the rods within the cover to a metal rod within the foam cushion. Whatever you do, do not cut the metal rods. Only the metal ring clips. Work your way left to right in a row removing the clips, try not to bend the metal rods in the cover.



Once you've cut away 'ALL' the metal ring clips and removed them you can then fold over the cover. Those with heated seats, I have removed the heating elements and removed all the old wiring and connectors as shown.



## **Step6. How to Fit the New Seat Heater to the Lower Cushion**

The design of all heating elements are to have all the wires leading to the rear of the seat as most cars are designed with the strut rod near the rear of the cushion. Due to the Bravo seats design this cannot work as the elements will get broken the other way round as the strut rod will crush the elements. Unfortunately the wiring for the lower cushion must go to the front. This is no problem and cannot be noticed once fitted.

Remove the film at the back of the pads and stick it down as shown. Make sure the crevice for the strut rod can be seen through the gap in the elements indicated by the yellow arrow.



Once you are happy with the way the element is seated, get a screw driver and push a hole through the cushion directly where the wires exit the heating elements at an angle to the thinnest part of the foam cushion. Then use a sharp knife to make a 1.5cm gap then carefully feed the wiring through the hole. As can be seen in the photograph.

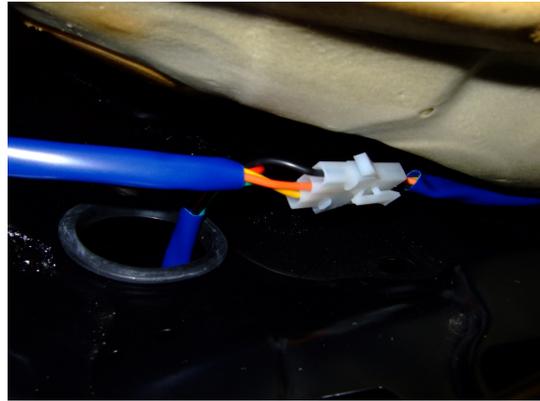


## **Step7. How to Fit the New Seat Heater to the Upper Cushion**

Remove the film from the rear of the seat heating element and carefully position the heater element to the upper cushion. Remember your back doesn't touch the bottom of the seat so it can be positioned 10cm higher from the bottom of the cushion. Carefully tuck the wires under the seat to the right corner leaving some slack.



Make sure the upper heating pad has some slack when it is tucked to the right corner, then pull it gently through under the lower foam cushion and connect it to the lower heating element. Feed the power cables through the hole in the seat. Cars fitted with heated seats will have a rubber ring around the hole; if yours does not, then try using some insulation tape to prevent the cable rubbing the sharp edges.



### **Step8. How to Recover the Upper Seat Cushion**

Carefully ensure that the heater element is firmly stuck to the cushion.

Make sure the elastic bands that you originally detached from the springs in the seat can still be located at the rear under the cover.

Now carefully and slowly, start to pull the cover down over the seat little by little swapping sides. Again compress the bolsters should the cover get tight. Once the cover is all the way down, tuck the cover back under the seat to the rear of the seat through the gap between the upper and lower cushions.

Now carefully pluck at the seat and pull it at the edges and sides so that the seat forms its original shape.

Reattach the elastic bands to the springs at the rear of the seats.

The two strings you originally unhooked will require hooking back; I used a pair of pliers to pull the strings back into their original position.

The excess beading at the edges of the cover that originally had a metal clip will now need securing. Do this using cable ties.



Now clip the two plastic clips from both ends of the cover (front and rear), so that they are perfectly reattached.

## Step9. How to Recover the Lower Seat Cushion

The easiest way to start this is to pre feed cable ties to all the positions where the metal ring clips once where attached, by hooking them under the metal rods in the foam. Except for the two metal ring clips that are now not accessible in the middle of the seat. Seven in total. As shown in the photograph. This will not affect the seat at all.



Carefully tilt the seat covering back over the cushion, pay attention to the front of the cushion so that it doesn't rise or move out of place. Make sure there are no folds or bends in the heater elements then start attaching the cable ties to the metal rods in the cover. Working left to right. Make sure the cover is stretched over properly and the strut rod sits in the crevice. Pull the cable ties tight, then cut off any excess, keep working your way back till all seven are done.



The next stage is to reattach the hidden metal ring clip, in the corners. The excess cover has a small hole in it, so you need to lift the cushion corner carefully, find the metal rod in the foam and partially attach a cable tie, feed the cable tie through the cover then pull it tightly, cutting off any excess. Repeat for the other corner.



Reattach the cover to the sides of the seat, they basically fold over and push back in. You will hear them clip into place. Once complete feed the cover between the lower and upper cushion, make sure you don't trap any of the wiring and then reattach the clip to the bottom of the seats frame.

## **Step10. How to do the Wiring**

This guide will explain how to reconfigure the wiring of the heated seats to work in the S, SX, HLX and HGT models. As with anything electrical disconnect the battery before attempting the wiring.

### **Models fitted without Heated Seats as Standard (S and SX's)**

The wiring is quite explanatory for the base models. I will assume that you will be using the wiring loom supplied with the Waeco heated seats.

Your first step will be to modify the plastic trim to incorporate the switch. I believe it to be easier to have the switch on the side of the seat, but obviously you can fit it anywhere you like, dash, centre console etc. Choice is yours. For convenience sake I will assume the switch will be fitted to the plastic trim on the side of the seat. Use the template provided and cut out a hole in the plastic trim.

Removal of the centre console maybe required if you don't have the wiring for the heated seats which can be found in a hole in the car under the front seats.

Finding a suitable 12V supply could be tricky; the nearest place would be under the electric mirrors switch panel. If you don't have electric mirrors I think the next logical place would be to pull a 12V supply from the cigarette lighter.

Connect the red and orange wires together and connect them to the 12V supply either from the electric mirrors 12V supply or the cigarette lighter 12V.

Connect the black wire from the wiring loom to a screw connected to the vehicles chassis under the centre console or drill a hole into the cars body below the seat where the ridge is and use a self taper to secure it.

(Please remember I haven't tested this method as my car is equipped with wiring already under the seat, if however your car does have the following two wires under the seats, green/white and black wires, then connect the orange/red to the green/white wires and the black wire off the wiring loom to the black wire or make your own earth).

Try to hide any wiring under the carpets then clip in the switch, plug the wiring loom into the heated seats connector and all should be wired in and fused. Connect the battery, switch the ignition on and test to see if they work. Which they should.

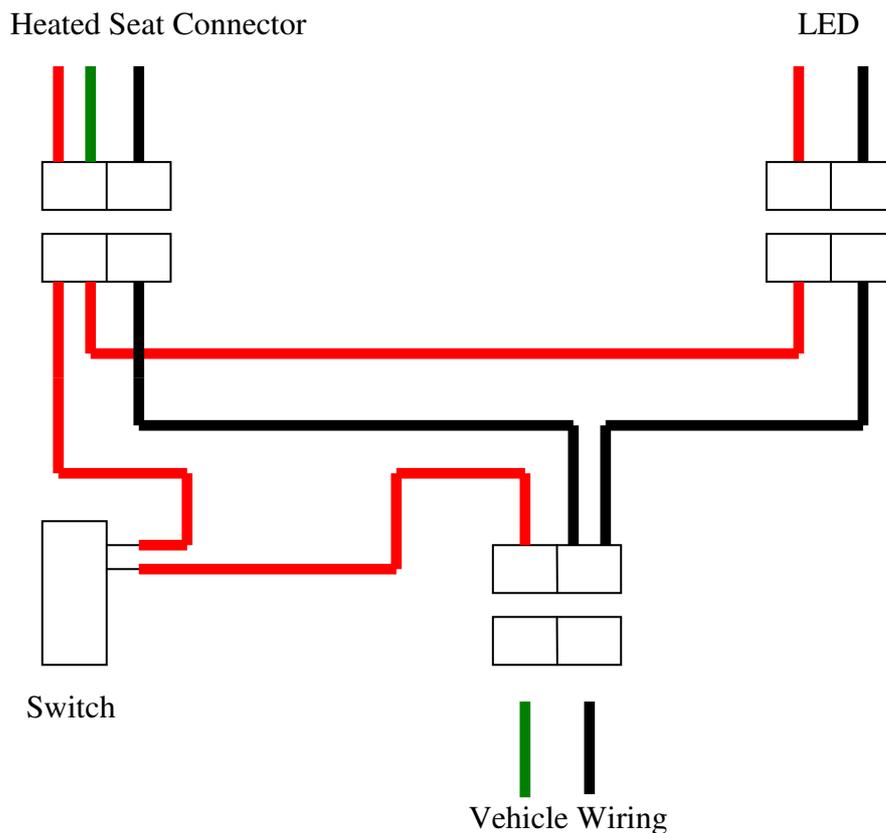
If you have plenty of money you could buy the original bracket and switches fitted to the HLX and HGT, and then use the wiring diagram for the HLX and HGT's. Also don't forget your LED. ☺

Switch - Part No: 124953080

Bracket - Part No: 46992698  
46992700

## Models fitted with Heated Seats as Standard (HLX and HGT)

### Wiring Diagram for Heat Up Only



**If you want to have permanent heat on the heated seats instead, then do not combine the red and the green wires together on the heated seat connector. Connect the red wire only. Tape up and insulate the green wire as it'll not be used.**

*I opted to have the heat up phase rather than the permanent heat as the permanent heat wasn't to my liking. The heat up phase really warms up and the thermostat keeps it from getting too hot temporarily shutting it off when it gets too warm.*

I would suggest buying some of these fabulous connectors. No need for crimping, just strip the wire and screw them in. Also a good advantage is that they pull apart. They can be cut to requirements for the number of wires you need to connect.



*You will need 3 sets of two connectors. (Same as those shown in the photograph above right), two female spade connectors (to fit switch contact points) and approx 1.5m of red and black wiring. All the above is available at Maplins.*

## Wiring Recap

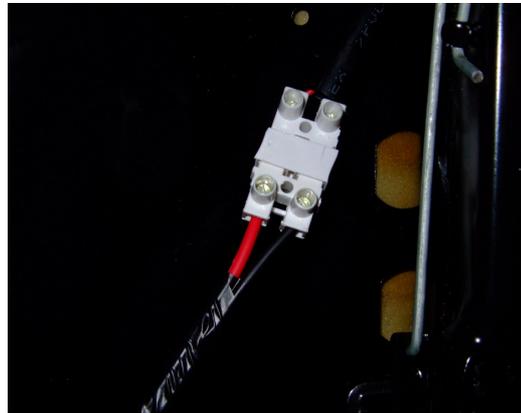
### Heated Seat Connector with new plug

Old plug has been removed and refitted with new one. Red and Green wire is connected to one socket and the black wire to the other as shown.



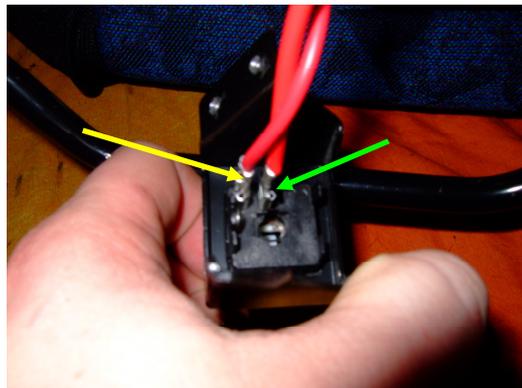
### LED

Old plug removed and refitted with new one. Basically lengthening the wiring. Red goes to the heated seat connector. Black goes to the vehicles original wiring. (Combined with the black wire from the heated seat connector).



### Original Switch

Use spade connectors on the prongs. The upper most prong (Yellow Arrow) goes to the heated seat connector (red/green). The lower prong (Green Arrow) goes to the main vehicles wiring loom.



### Vehicle Wiring

Cut off the original connector and refit a new one. Then connect the other connector with the red wire from the switch and the two black wires, one from the LED and the other from the heated seat connector to this plug.



Carefully insulate the wiring and you should have something similar to this.



This is how I have currently set up my seats; if you prefer to use the wiring loom that came with the heating elements, just connect the orange and red wire to either of the red/green wires from the vehicles own wiring under the seat and the negative wire to either black wire under the seat.

***Do not connect the seats to the car just yet!***

### **Step11. How to Refit the Plastic Trim around the Seat**

Refit the plastic trim (closest side to the centre console), screw the one self taper into the trim. Refit the metal retaining washer over the spindle, then use either a socket or the plastic cap from the seat adjuster as shown in the photograph and push the metal washer down. Remove the cap or socket, and then fit the appropriate plastic cap in place.



Refit the plastic trim for the opposite side, pay attention to the LED wiring or the new switch depending on method taken.  
Refit the two screws.

Reattach the seat adjuster handle and refit the plastic cap to lock it into place.



### **Step12. How to Refit the Seat Lever**

Refit the plastic surround to the seat; make sure the metal arm in the seat doesn't obstruct the surround. Carefully screw the two self tapers back into the surround and then carefully push the seat lever over the metal arm. Finish by refitting the screw into the lever and reconnecting the flap.



### **Step13. Fitting the Seat to the Car**

Those with heated seats as standard, unless you haven't already done so, cut off the plug in the car for the heated seats and replace with the new connector. Double check that the green/white wire connects to the red terminal on the seat when it's fitted and that black goes to black. Base models confirm and check all wiring is connected and is free from being caught by the seat runners.

Refitting the seat into the car can be done by doing the reverse of Step 1. Try to make sure the bolts realign perfectly with the holes in the car otherwise you end up struggling try to get them to screw in. Lift the bar under the seat to release the sub frame runner so that you can adjust it so that it's parallel with the other side before fitting.

Reconnect the wires under the seat to the main vehicle wiring and reconnect the battery.

### **REPEAT ABOVE STEPS FOR THE OTHER SEAT**

You can now relax, sit down on your heated seats and enjoy the warm soothing comfort.

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