

# Area 451 Parts cruise control Installation Instructions

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It is always a good idea to disconnect your battery when installing any electronic part in your car. Electrical damage is not covered by the warranty, so please disconnect your battery before installing, adjusting or disconnecting your cruise control.

The instructions should be in your car's manual, but I'll go ahead and give you a quick run down here.

For those that don't know, your battery is located under the carpet beneath your passenger foot well. The first step is to remove the plastic screw near the top right corner using a regular flat-bladed (aka "slot") screw driver.

Now you can pull the carpet back, revealing the foot rest beneath. At the bottom right corner of this, there is a black plastic nut that you spin off with your finger. Once the plastic nut is removed, the entire foam block can be gently but firmly finessed out of position and removed from the car revealing the battery.

With access to the battery, use a 10mm wrench to loosen the negative battery terminal. Obviously, you must be careful when working around car batteries! Only touch the negative terminal shown in the photo below. The positive terminal is (or should be) protected by a red plastic flap - leave it alone. Take the negative terminal off its post and move it aside where you are certain it won't come into contact with the post while working.



Removing the lower steering wheel cover is fairly straight forward. Take firm hold of the rear corners (those closest to the steering wheel) and pull down until the clips release.



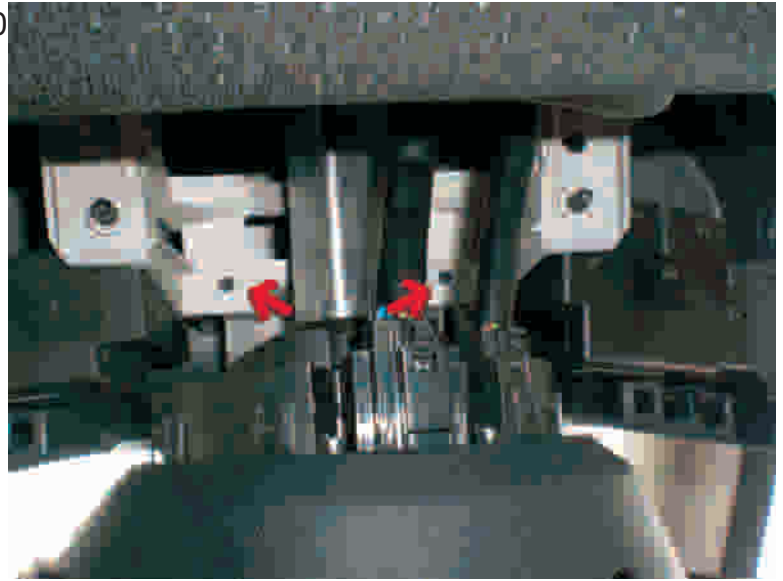
With the rear corners loose, you can work the forward ones free.



Once the four corners are free, you can remove the lower cover and set it aside.



With the lower cover free, you can access the two T10 Torx screws that hold the upper cover in place. Be careful not to lose the screws into the dash cavity! (yes that comes from experience)



With the screws removed, the upper cover is still secured with a clip. It is easily released by lifting the end of the cover closest to the steering wheel as shown.



Now that the covers are off, it is time to remove the wiper control arm. Press the release tab with your index finger and firmly pull the assembly straight up to remove.



Press the release tab on the wiper control arm cable connector and disconnect to completely free the wiper control arm.



With a firm two-handed grip and a straight swift tug, separate the original cylinder from the rest of the wiper control arm.



Finally, using a thin flat bladed tool, gently pry the decorative cap from the original cylinder and set aside.



With the original cylinder removed during the last step, you can see that there is a clear path through the shaft of the wiper control arm.



Drill a 5/16" hole in the plastic wiper control arm shroud so that it approximately lines up with the path through the shaft.



Feed the tiny white connector attached to the long black switch cable through the wiper control arm shaft and through the hole you drilled in the previous step.



Continue feeding all ten feet of the cable, then line the new switch cylinder up appropriately and press it onto the wiper control arm assembly. The cylinder only goes on one way so you don't have to force it too much but it does take a good press to get it on. Examining the internal features of the cylinder may help you determine how to rotate it so that it will go on properly. Caution: do not press on the button itself or you may damage it.



Finally, gently press your original decorative cap onto the button.



Connect the wiper control arm cable back to the wiper control arm and put the wiper control arm back in its original place. Use a flashlight or other portable light source in the driver side foot well to discover the best path from the steering column down to the foot well area and feed the switch cable down through. A stiff wire may assist in fishing the cable through.



Feed the switch cable from the driver side over to the passenger side foot well. The flashlight and stiff wire may come in useful again here.



We recommend running the switch cable behind the pillar support screw and under the carpet as shown below (highlighted with a red line) to best keep it hidden and out of the way of the battery compartment.



From there, continue running the wire under the carpet and to the right side of the passenger seat until you reach the rear storage area. Without removing the passenger seat you may not be able to completely hide the cable from view, but it should be adequate for most people (perfectionists can temporarily remove the passenger seat for better access).



The rear passenger panel is secured with one bolt and five clips. First access the bolt by gently prying the bolt cover off with a flat bladed tool then remove the bolt with a T25 Torx driver.



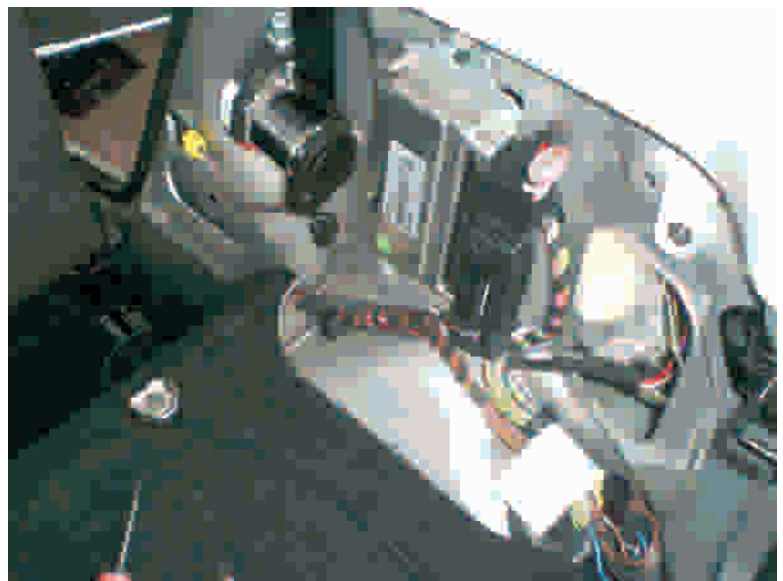
The five clip locations are shown approximately where marked with the red dots below.



Releasing the 5 clips takes firm straight tugs near their positions. A good place to start is the rear-most clips. You can get a good grip by removing the access door like so.



Follow that up with the forward top and bottom clips and then finally the middle top clip until the entire piece is free revealing the car's engine control unit (ECU).



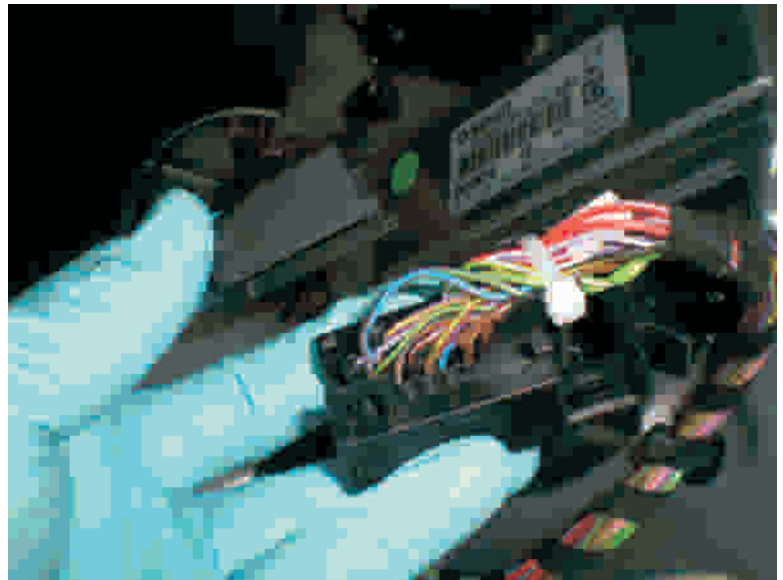
The ECU has two connector blocks - a larger lower one and a smaller upper one. We are concerned only with the smaller upper connector block.



The first step here is to remove the connector block. To do so, lift the sliding lock mechanism straight up. When fully up, the connector block should be completely loose.



Next, remove the plastic cover/back from the connector block to access the individual wires. This is more difficult than it sounds because the clips are very tight and there are two of them, one on each side. Using a flat bladed tool, gently pry them slightly so the cover can be removed. Pry them too far, and the clips will break. It will actually secure quite well with only one clip in tact (yes, this is from experience) but do your best.



You may find the following steps easier if you cut off the nylon strap securing the wires. In the photo below it is white but yours will probably be black. If you do cut this, be careful not to nick any of the wires and also have another suitable nylon strap handy to replace it when you're done.



The next step is to use your flat bladed tool to shift both of the white pin locks down as shown below. These locks sometimes have a tendency to shift back on their own slightly, so if you ever have problems removing the pins in the next steps, check back to make sure the locks are both down as far as they'll go.



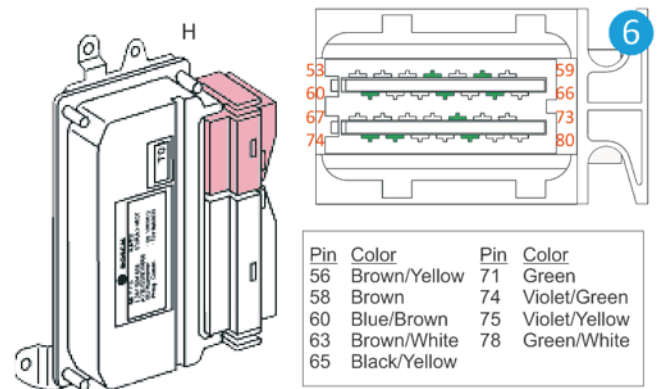
Now for the most important part of the installation - removing the pins. We're going to demonstrate using heavy duty staples rather than the Mini-ISO removal tool since the proper tool is expensive, hard to find, and you'll need a different one to reverse the install while a couple of staples will do the job just fine. Because the tools are so rare yet simple, even many professionals use improvised versions. These are the staples we're using:



Any brand will do, but they should be heavy-duty staples. Not regular paper staples, and not construction staples. You likely won't have these in your house but they are readily available at any office supply store.

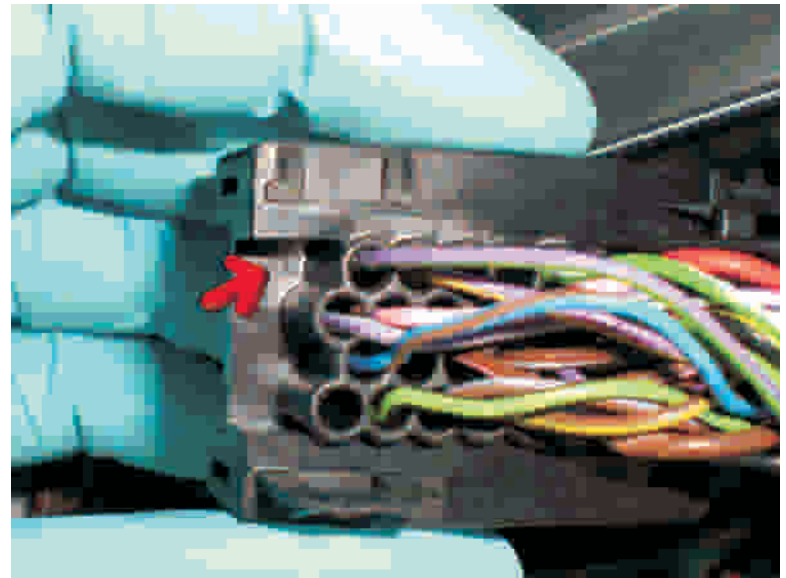


To identify which pins to remove, reference the chart below and also look carefully at the connector block and you'll see the numbers identifying the first pin of each row (53, 60, 67, and 74).

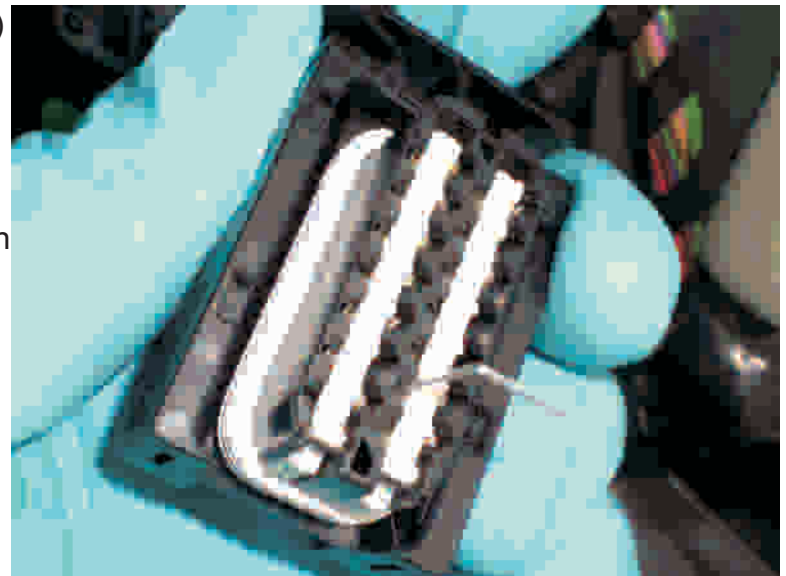


Remove the indicated pins from the highlighted connector block of the ECU (H). Replace each one with the corresponding colored wire from the supplied harness.

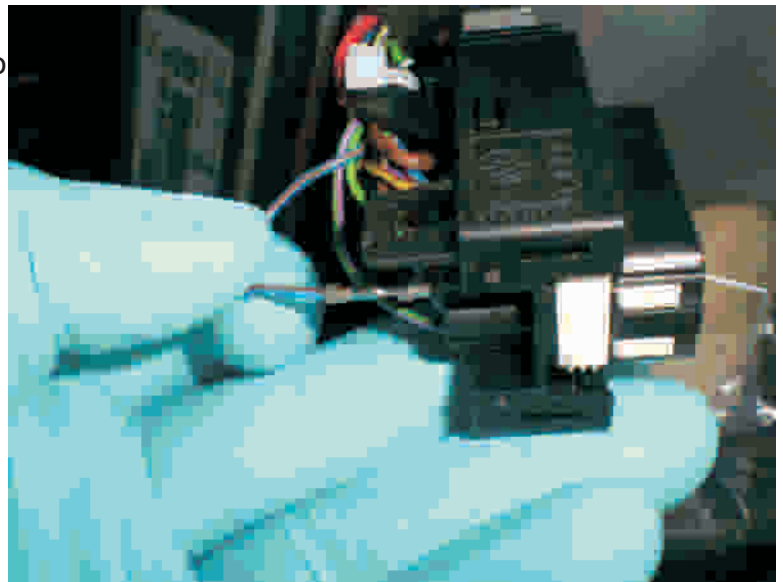
Use these identifiers and count up the rows to be certain you are removing the correct pin, while cross referencing that with the chart to be certain you are removing the correct color wire. It is important that you only remove the pins referenced in the chart and to not get any of the pins mixed up and put in the wrong spots.



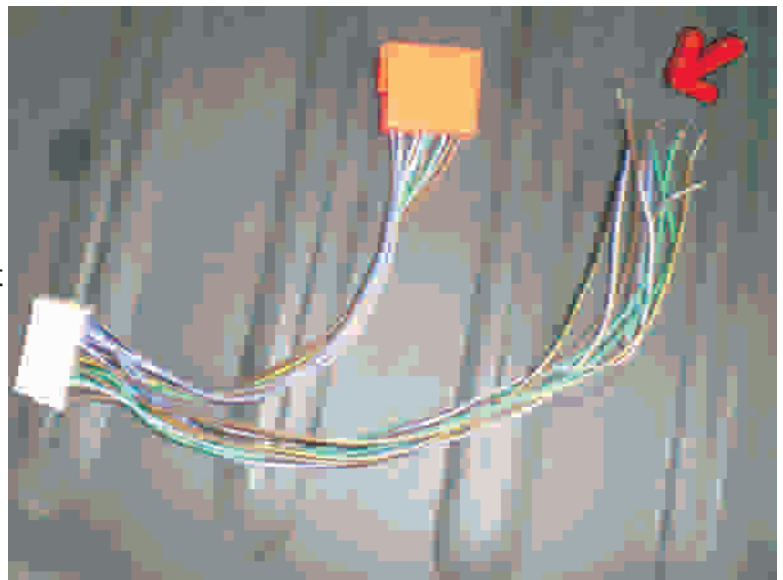
To remove a pin/wire, insert your removal tool (staple) into the space directly beside where you can see the metal pin. The removal tool is engaging a small barb on the pin which, when pressed, allows the pin to easily slide out of its spot. So if the barb is properly engaged, the wire will pull out very easily. Do not pull hard on the wires! If the wire is not coming easily, then pull the removal tool out and try again, slightly adjusting the angle. Keep trying, you'll get it.



You will probably find it easier to remove all of the indicated wires before replacing them, but you may do it one at a time to better ensure you don't mix anything up.



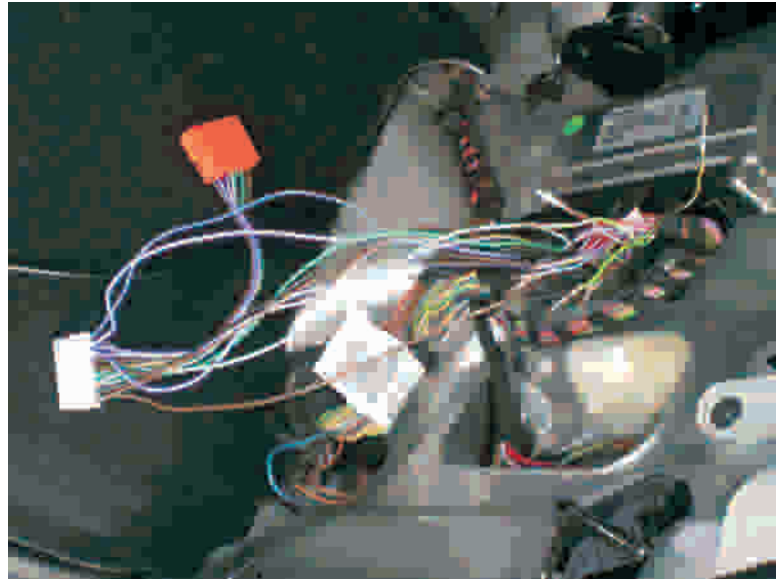
Notice the 9 loose wires from the main wiring harness that came with your kit. These are the 9 wires that are going to replace the 9 you just took out of the connector block. You'll notice the colors aren't exact matches to the original wiring (for example, the green is darker, etc) but in general they correspond with the originals. If you are severely color blind you may wish to seek assistance as it is crucial the colors do not get mixed up.



Each one should go into its spot with a faint but satisfying "click" and a slight tug should confirm it is in correctly. If it is not going in easily, you probably do not have it rotated the correct way. Reference the other pins that are still connected to determine the correct orientation.



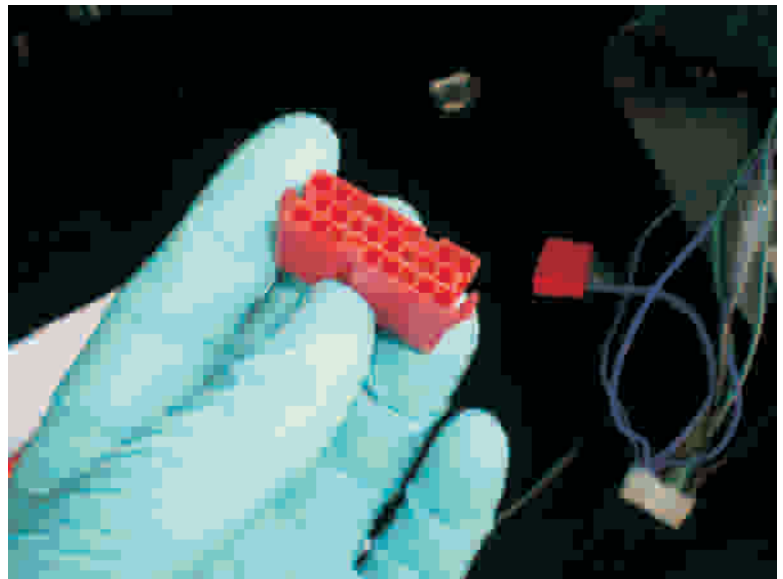
Once you have the 9 wires from the harness plugged into the connector block, it should look something like this.



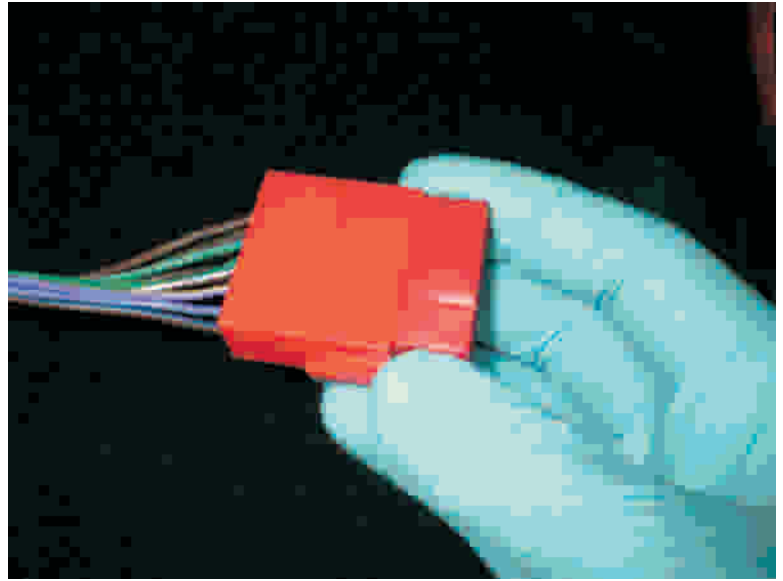
At this point you should use the flat bladed tool again to slide the white pin locks up to their original positions. If either will not go all the way up, it means one or more of the pins is not correctly seated.



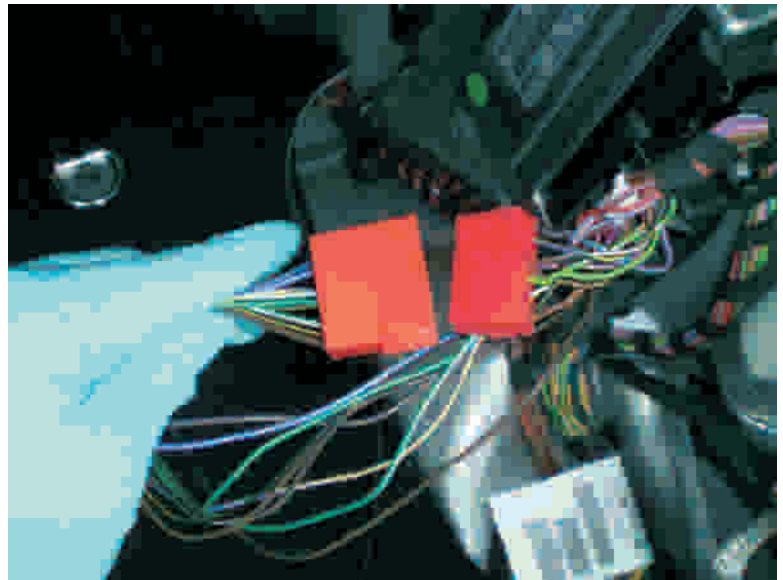
After completing the previous step, you'll notice you still have the 9 original wires loose. That is where the red male connector comes in.



Notice it connects to the red connector found on the wiring harness. It may have arrived package like this.



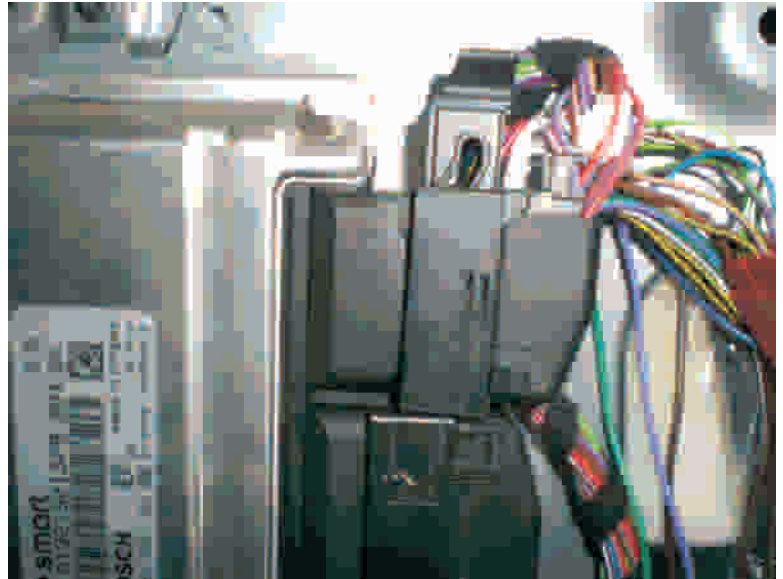
Plug each of the 9 original wires into the red male connector such that when the two red connectors are joined, all of the wire colors correspond.



Use a nylon strap to secure the wires again if you cut the strap previously. Then put the plastic connector block cover/back back into place.



Finally, put the connector block back into position to be returned onto the ECU. If everything is connected properly and the white pin locks are in position, a firm straight push of the connector block onto the ECU will automatically bring down the slide lock nearly into place (you usually have to finish the last tiny bit to click it into place). If it feels like its not going to go on, check your connections and pin locks.

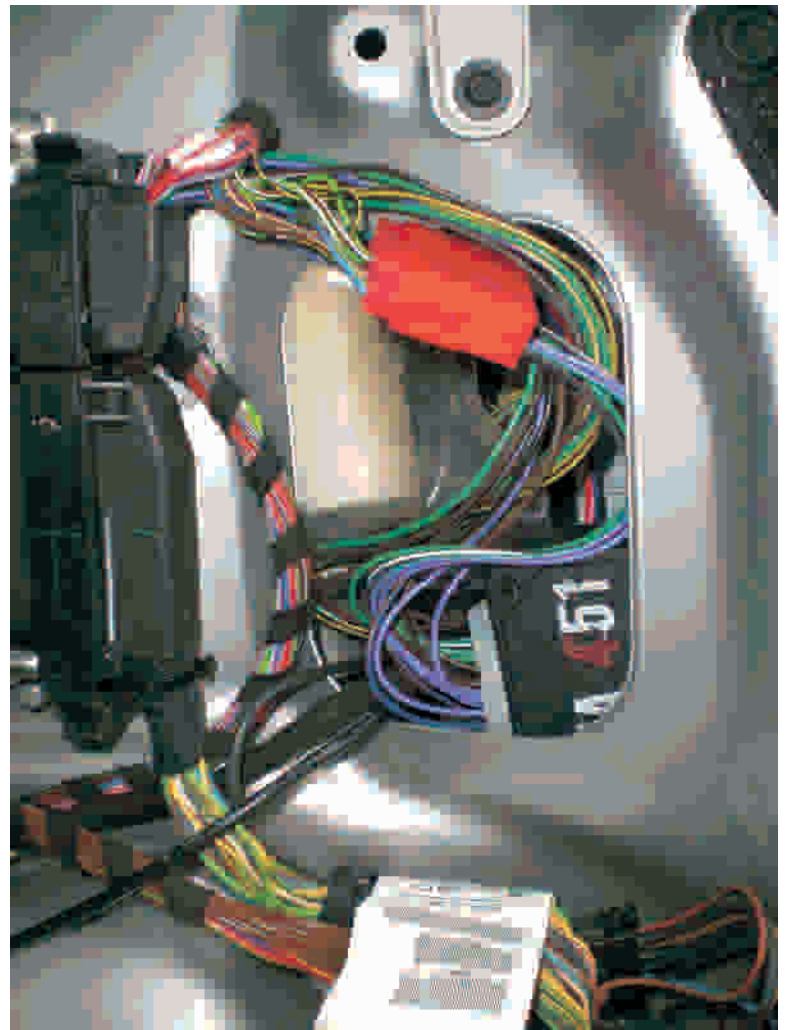


Almost there!

Now you simply plug the white connector from the main harness as well as the tiny white connector from the long switch cable into the cruise control unit.



Tuck the unit and wiring into the available cavity as well as you can.



Using some bubble wrap to cushion the unit will help prevent any knocking you might otherwise hear when you go over bumps.

Now perform many of the previous installation steps in reverse to finish cleaning up:

1. Finish tucking in the switch wire under the carpet.
2. Put the rear passenger panel back on using the 5 clips and T25 Torx bolt (and don't forget the plastic bolt cover).
3. Replace the upper steering column cover using the two screws and then position and snap the lower cover back into place.
4. Reconnect the battery (it is normal to hear clicks and other sounds and your radio may come on), tighten the negative terminal with the 10mm wrench, replace the passenger foam insert (remember the black plastic nut), and put the carpet back and secure it with the plastic screw.

Done! Read the operating manual pages and go for a test drive!

# Operating Manual

**A**

## Operation with Cruise Control **OFF**

- a) Tapping the button will turn the cruise **on** and your speed will immediately be maintained.
- b) Holding the button briefly will turn the cruise **on** and **resume** a previous set speed if there is one.



### Note

- The cruise will not turn on if:
- the speed is < 15 mph (25 kph)
  - the car is in reverse or neutral
  - a door is ajar
  - a brake is engaged

## Operation with Cruise Control **ON**

**B**

- a) Tapping the button will turn the cruise **off**.
- b) Holding the button will **accelerate** the car until you release the button. The cruise will then remain **on** and your new speed will be maintained.

### Note

- The cruise will immediately turn off if:
- the speed falls below 15 mph (25 kph)
  - the car is shifted into reverse or neutral
  - a door opens
  - a brake is engaged
  - the traction control system is activated

