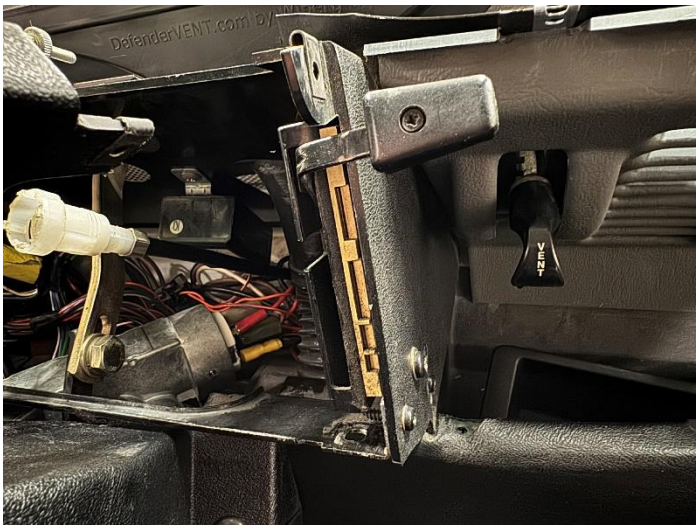
Dismantling the old heater speed controller:

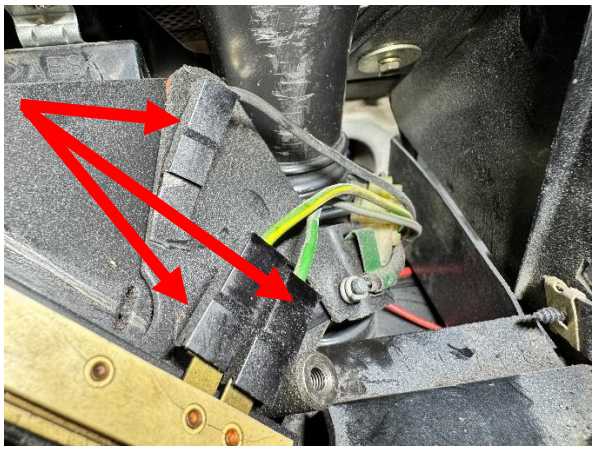
Remove the 4 screws that secure the instrument binnacle to the dashboard.

After removal, the heater speed control mechanism mounted on the side of the dashboard binnacle becomes visible. Removing the two screws that go through the side of the binnacle will release the heater control from the binnacle.

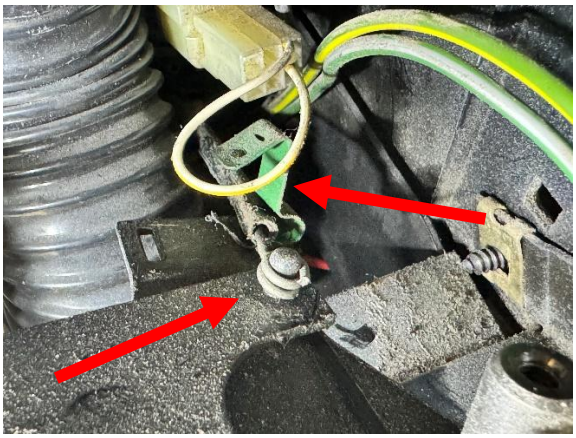


The uppermost inner screw is located directly behind a part of the dashboard so either the dashboard has to be partially dismantled to remove this screw, or you can simply leave this screw trapped in its hole after unscrewing it and secure it with a nut.

Remove the three spade connectors from the heater control. These connections are now redundant.

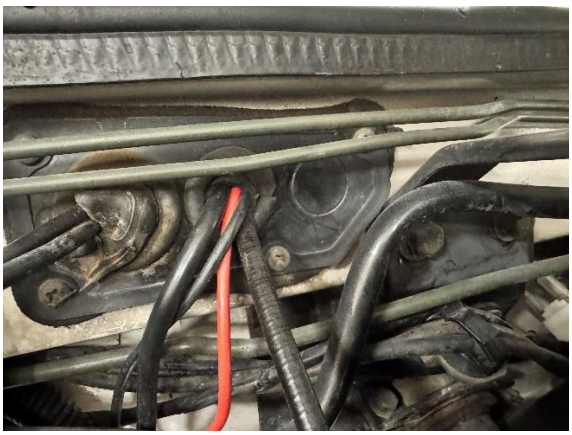


Release the retaining clip for the Bowden cable and prise the end of the cable (small wire coil) from the stud it sits on. The heater control assembly is no longer required and can be set aside.

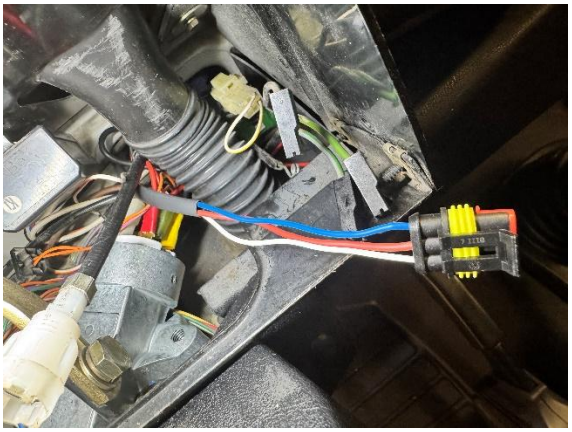


Installation of the new slider control unit and wiring harness:

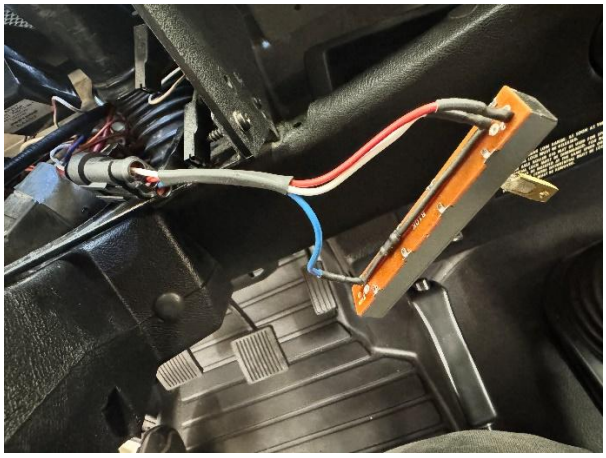
In the engine compartment, locate one of the spare grommets in the bulkhead.



Route the end of the supplied wiring harness with the Superseal multiplug connector on it from the engine bay, through the grommet and into the area behind the binnacle.



Connect the Superseal multiplug connector of the wiring harness with the corresponding connector on the slide controller.



Remove the handle from the old heater control lever and place it on the potentiometer. You may have to remove some of the excess epoxy adhesive on the potentiometer with a sharp blade in order to get the fixing hole in the handle to slide far enough onto the potentiometer to align with the threaded fixing hole on the slide controller.

Be very careful not to overtighten this fixing screw.

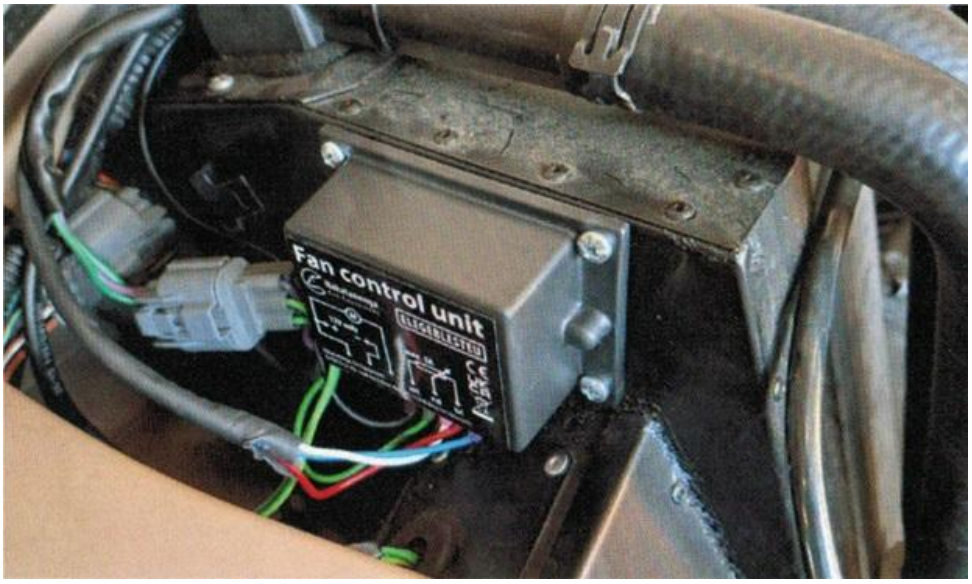
Reassemble the binnacle with the slide controller placed loosely into the slot on the end of the binnacle. The Red and White cables on the slide controller should be uppermost when installed in the binnacle. The black plastic bezel goes on the outside of the binnacle. The two countersunk M3 screws go through the bezel and into the slide controller.

Once tightened down, the plastic bezel and slide controller are effectively clamped in place either side of the binnacle plastic. Check that the slide controller can be moved easily.

Installation of the motor controller:

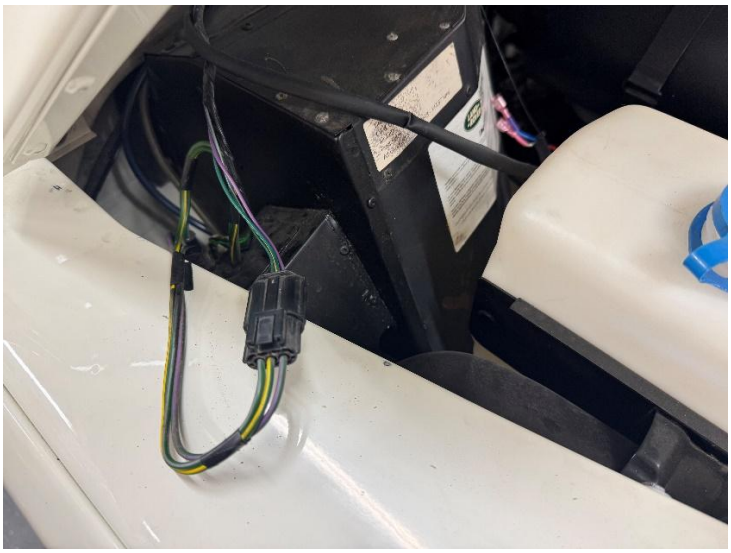
Mark the positions of the mounting holes on the side wall or the front panel of the heater box housing. This is the best place to install the engine control unit, as the electronics in the control unit need to be cooled and the air always flows past the marked spot when the fan is running, ensuring the necessary heat dissipation. Installation anywhere where there's a chance of excessive heat build-up will damage the electronic controller. Remember to take the curvature of the bonnet/hood into account so make sure that the engine controller is not installed too high on the heater box where it may hit the underside of the bonnet/hood.

After marking the fixing holes, the holes can be drilled with a 2.5 mm drill. Apply the thermal paste to the back of the control unit and screw it in place with the M3 screws provided. NOTE: It isn't possible to drill the lower fixings without removal of the wing or the heater motor! Use just the accessible top pair of fixings instead.

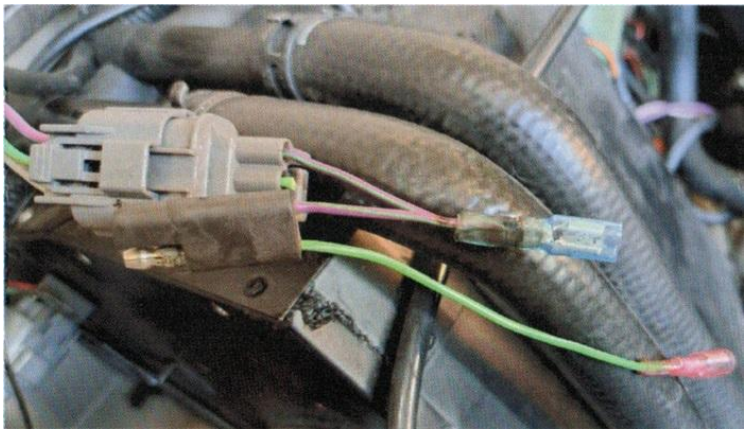


Wiring the motor controller

Locate the wiring connectors at the heater box. You will find a large 3-pin multiplug (style of connector may vary dependent on age of the Defender) and a 2-pin bullet connector. These connectors can be tricky to access dependent on the age of the car.



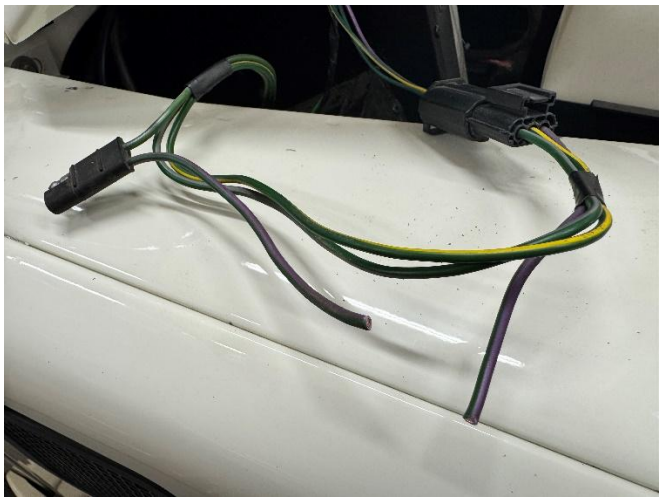
Tdi Connector



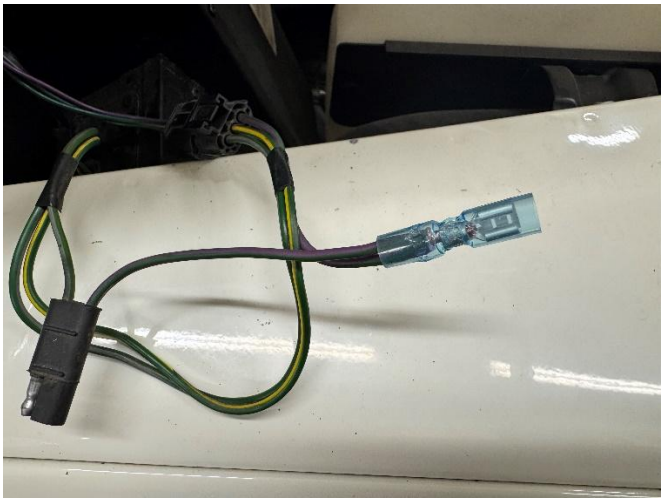
Td5 Connector

Removing the insulation tape that joins the wires together will provide more length on the wires in order for the individual wires to reach the controller location.

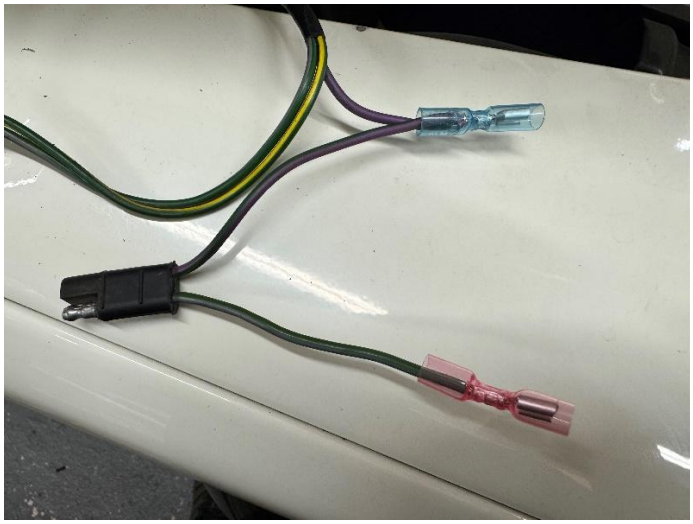
Identify the Purple/Green cable that runs between the Bullet connector and the Econoseal connector. Cut this wire in the middle and strip the ends of the two loose wires. Check that you have sufficient wire length to reach the controller. Extend wire length if necessary.



Attach both of the stripped ends into the Blue spade connector.



Cut the Green/Grey cable that goes from the bullet connector to the heater box and connect into the Red spade connector.

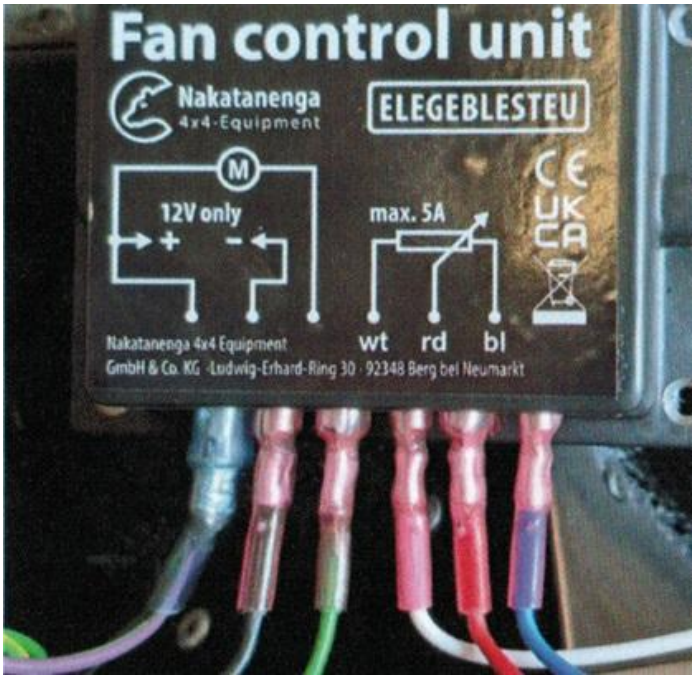


The Red & Blue spade connectors are heat-shrink style connectors. Warming them gently will seal the ends. Slide the Blue connector onto position 1 of the motor controller and the Red connector onto position 3.

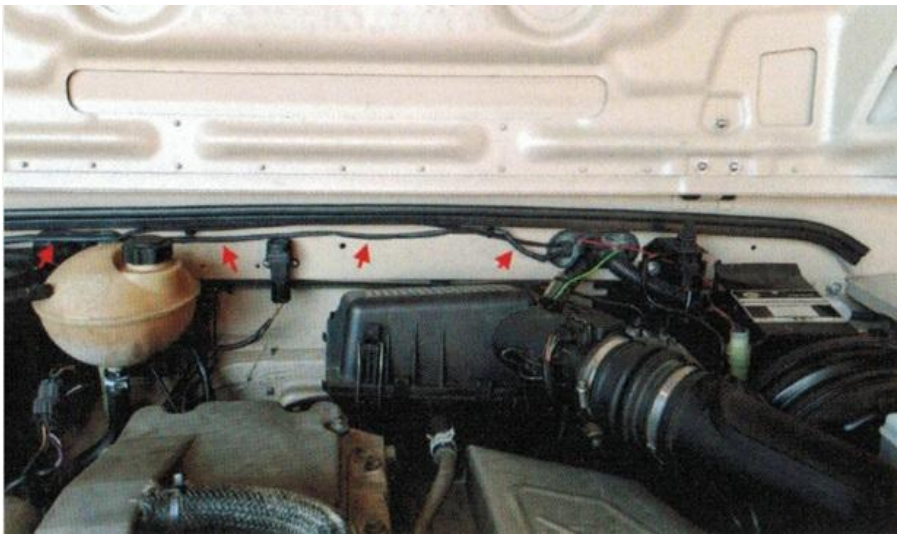
Connect the Black earth/ground cable to position 2. Attach the ring terminal to a convenient earth/ground point. Use either the fixings for the coolant header tank or the washer bottle dependent on model.

Reconnect the two halves of the Bullet connector.

Connect the three wires on the binnacle wiring harness to the last three positions on the controller follow the colour coding indicated on the unit below. The device is now ready to use.



Clip the wiring harness securely to the bulkhead.



IMPORTANT!

Be sure to check that your Defender fan motor runs smoothly and free and that the factory connections are not corroded otherwise this will create unwanted additional electrical resistance that will overheat and destroy the control unit.