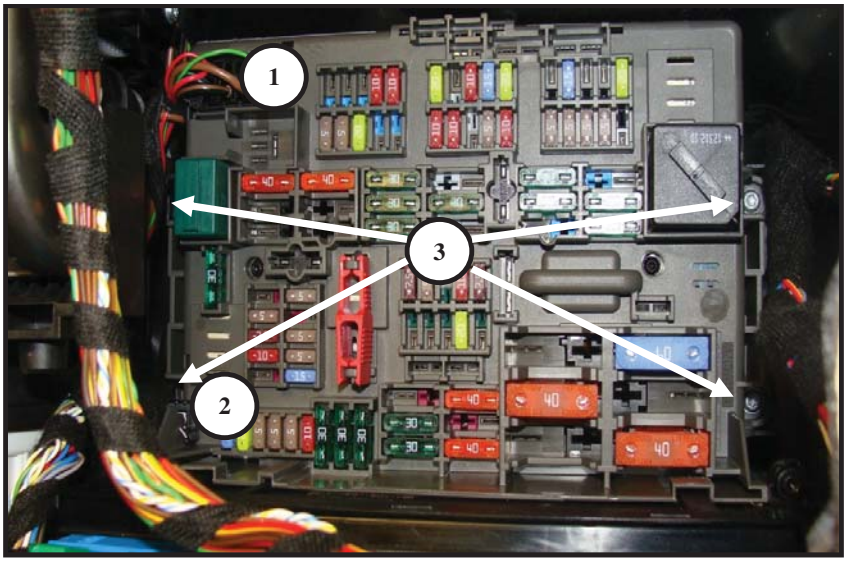
PROCEDURE

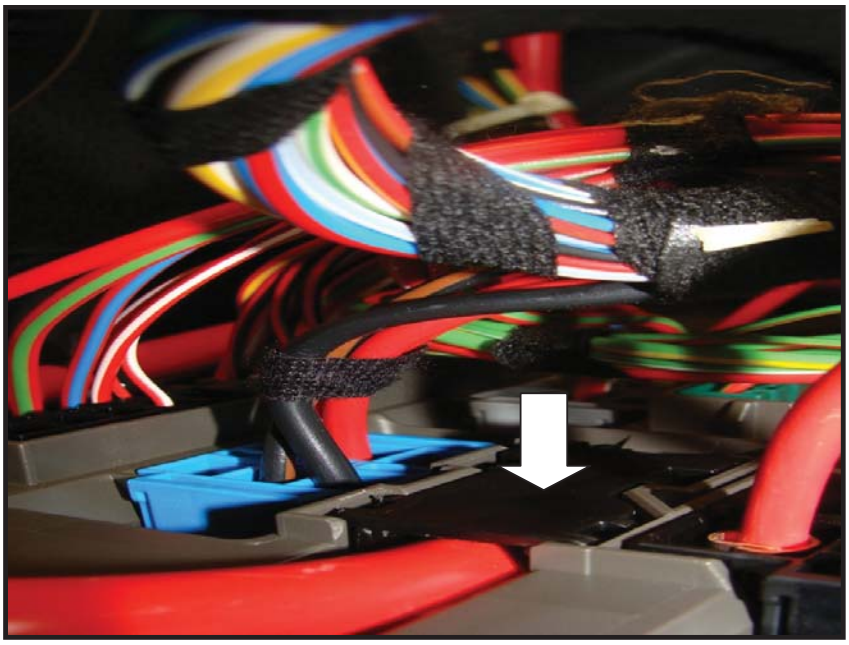
Note: The following work was performed on an E90. Other models may vary slightly.

1. Move the passenger seat all the way back to ensure ample room for working in the passenger footwell area.
2. Remove the glove box. Refer to ISTA Repair Instructions, “51 16 366 Removing and installing right glove box with housing.”

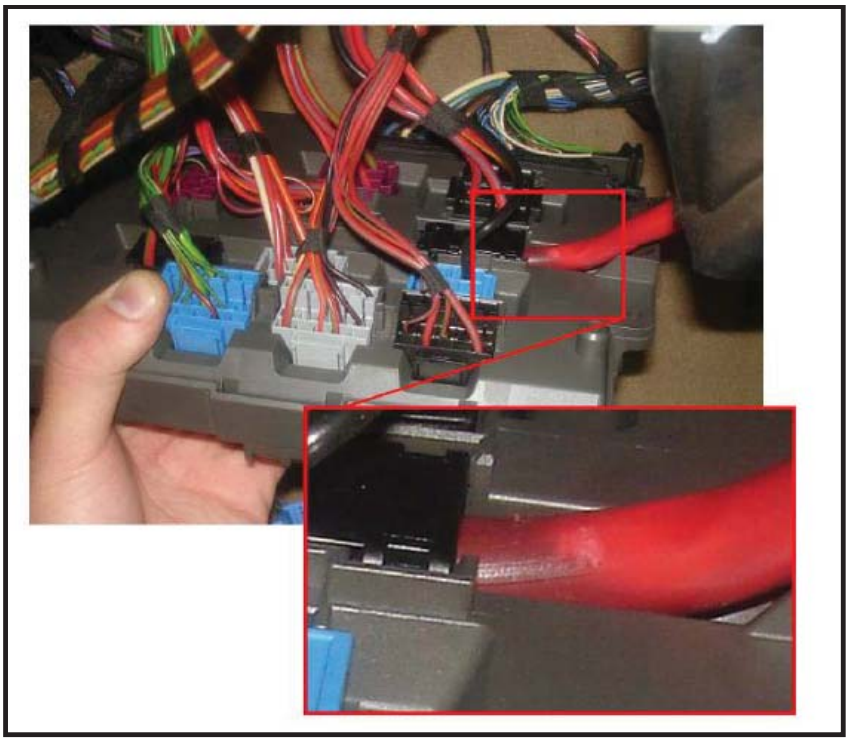
   For E89, steps 3-7 are not necessary.
3. Remove the Junction Box Electronics. Refer to ISTA Repair Instructions, “61 35 107 Removing and installing or replacing Junction Box Electronics.”
4. **Before proceeding to the next step, ensure that the battery is disconnected.**



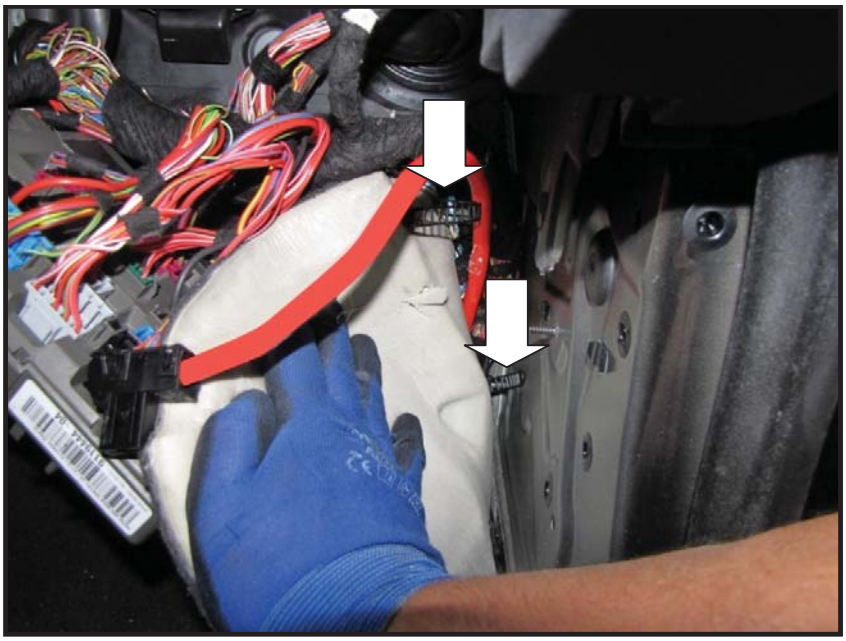
5. Disconnect the plug connection (1). Release the wiring harness mounting from the power distribution box (2).
6. Release the 4 mounting screws (3).
7. Fold the power distribution box forward in order to gain access to the back. Feed the positive battery cable out of the holder.



8. Disconnect the positive battery cable.
9. Do not disconnect the other plug connections at the back of the power distribution box.

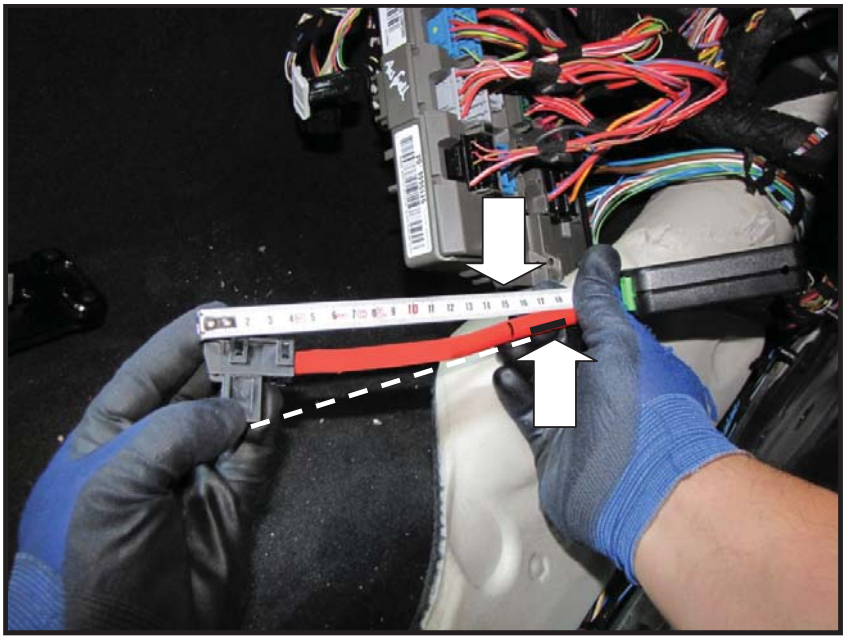


10. Remove the positive battery cable and inspect the connection point for any overheating. Replace the power distribution box if overheating is found on the cable or the connector. If the box is OK, proceed to the next step.



11. Open the retaining straps and pull the positive battery cable out as far as possible.

12. Pre-drill both bridges of the power distribution box at the area (as shown) with a 2mm drill and then with a 5 mm drill. **This step may not be necessary for E89.**

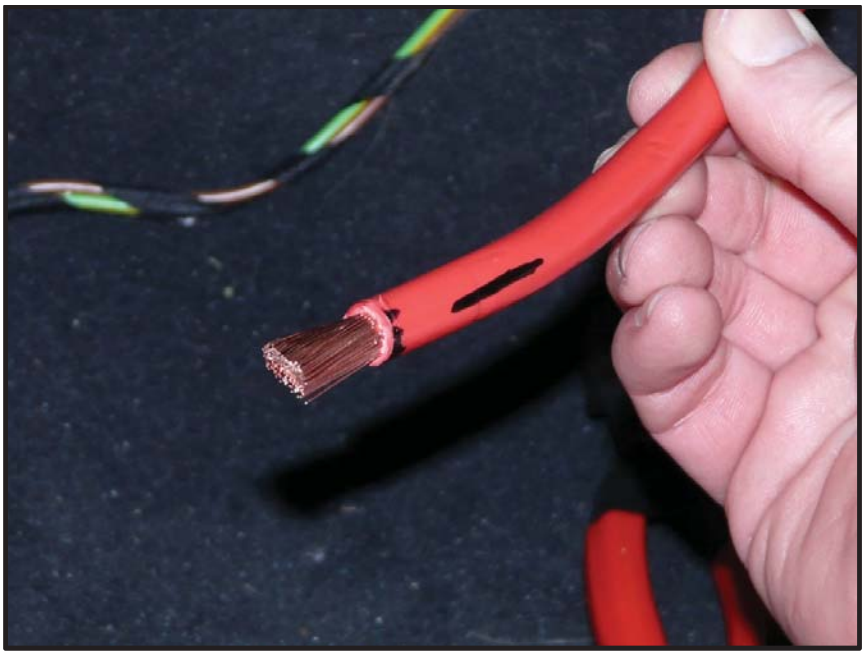


13. Measure a 15 cm length (as shown) and mark the positive battery cable. Mark the location in which the old connector faces (direction).

14. Cut the positive cable at the mark using special tool 2 337 974.

15. At the cut-off end of the positive cable, measure and mark 2 cm from the end of the cable.

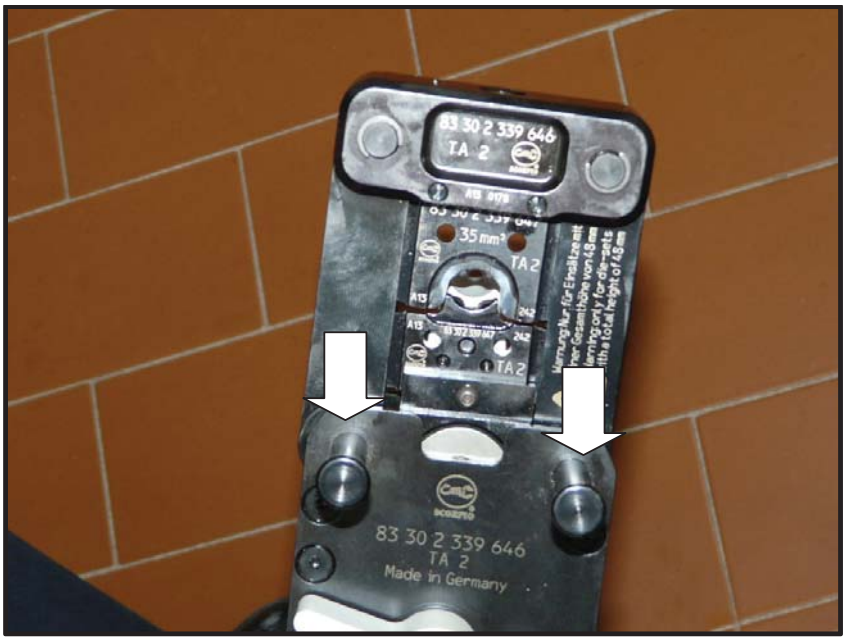
16. Strip off the insulation using the outer cutting jaws of the special tool. Be careful that you do not cut any of the cable strands while penetrating the insulation sheath.



17. **Note: Do not damage the copper strands during wire stripping.**

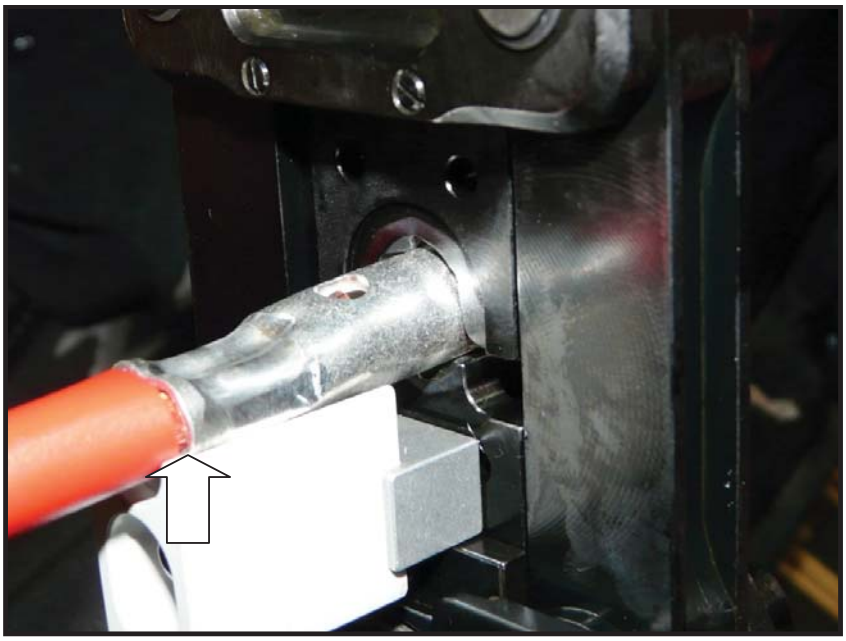
18. Refer to the instruction manual that came with the tool prior to performing any crimping.
19. Insert the lower die set until it is locked into the tool.

20. Insert the upper die into the tool (as shown) until it locks in place.

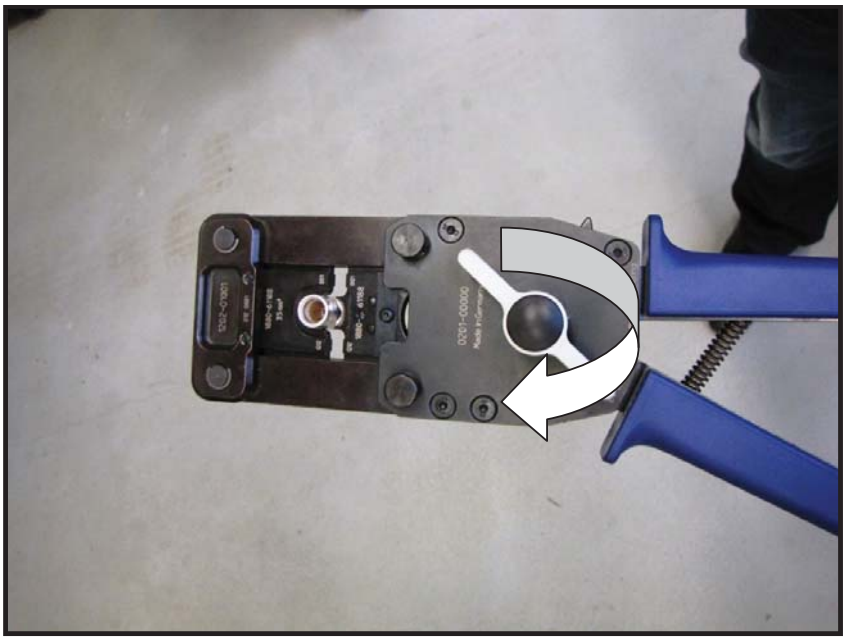


21. Assemble the tool (as shown) and push both pins in all the way.

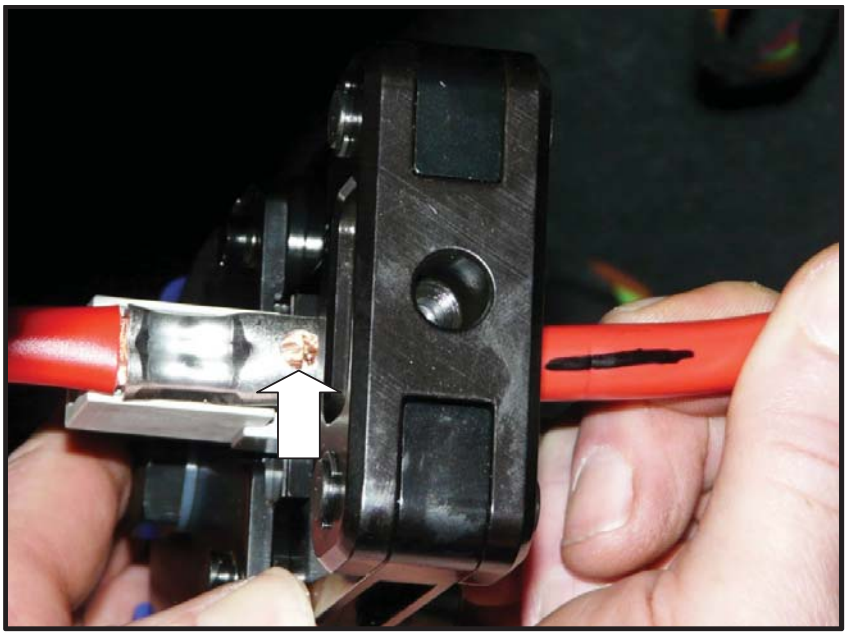
22. Using the wrench supplied with the tool, open the tool by holding the release lever and turning the nut counterclockwise.



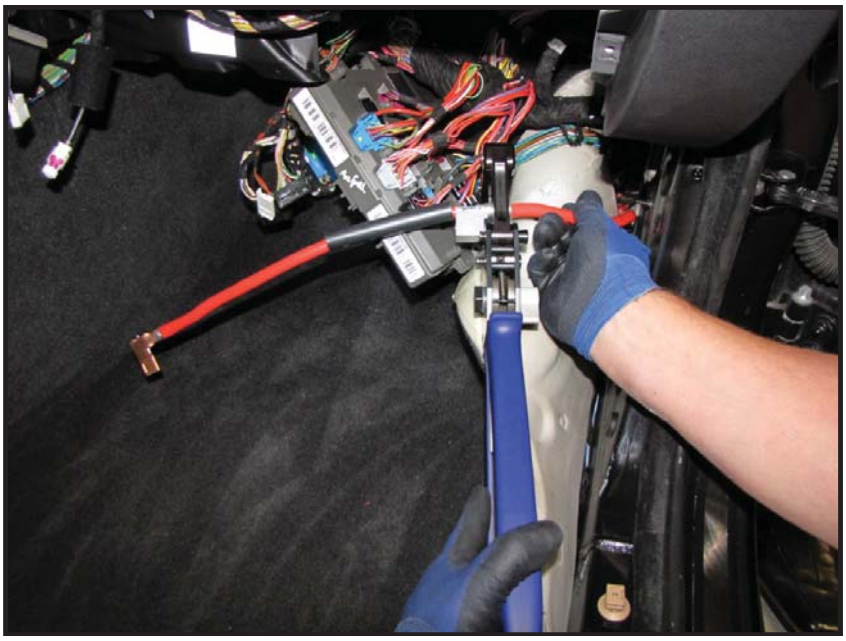
23. Slide the shrink tube over the repair cable prior to proceeding to the next step.
24. Insert the repair cable into the tool, as shown. The edge of the butt connector rests against the lip of the holding tool, as shown.



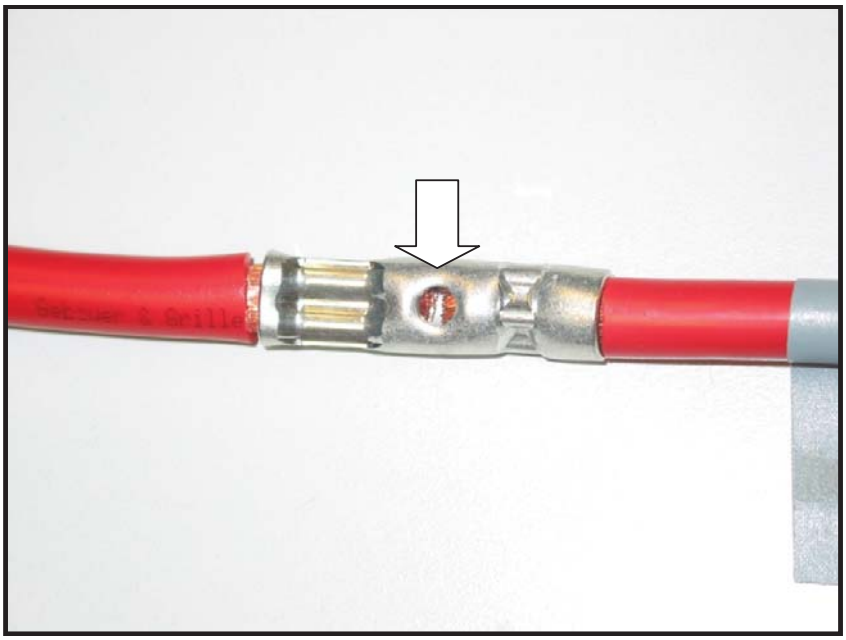
25. Close the tool by turning the fast-feed lever clockwise.



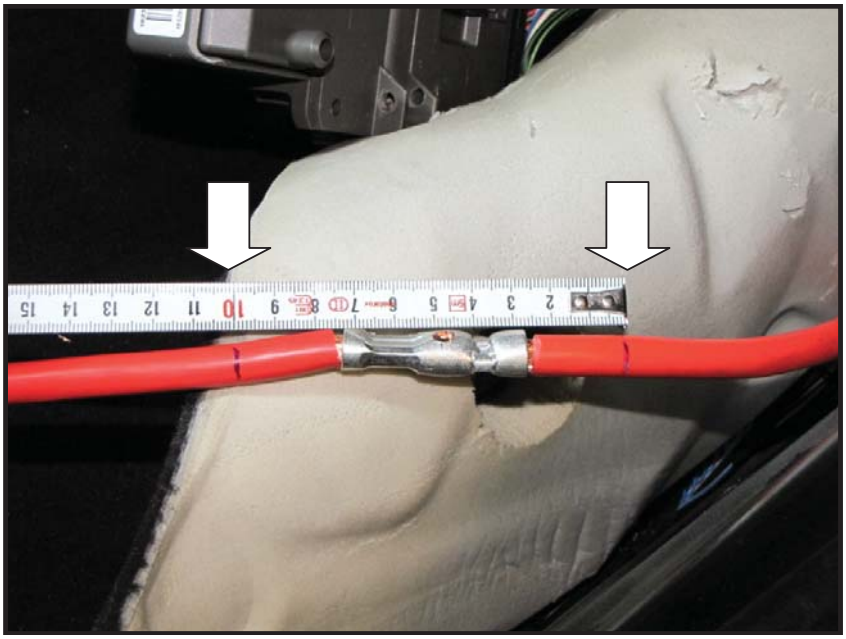
26. Insert the vehicle's positive cable into the open end of the butt connector, as shown. Make sure the copper wires are shown in the hole on top of the butt connector, and the previous mark made on the cable lines up with the connector direction on the repair cable end.



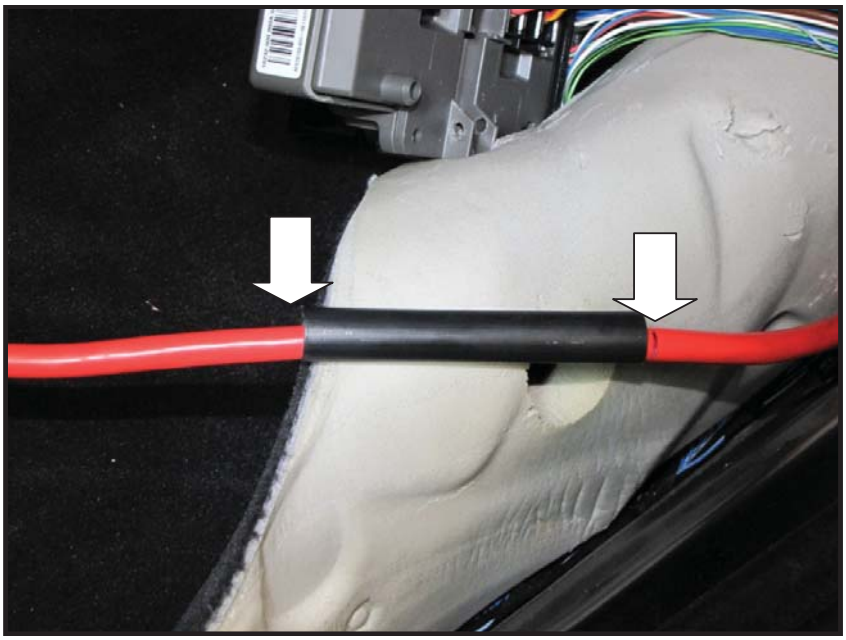
27. Crimp the butt connector using the crimping pliers. **The crimping tool will automatically release when it reaches the final crimping point.**



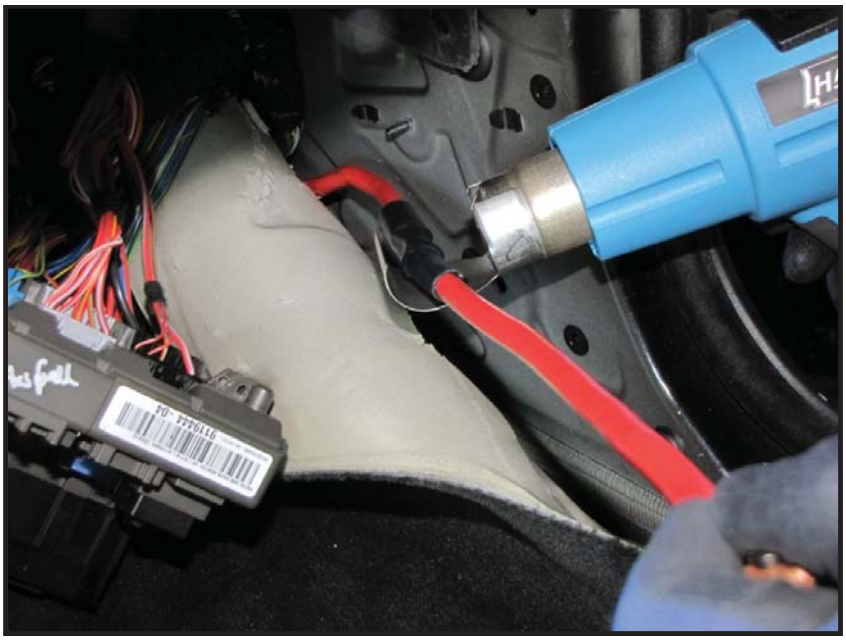
28. After crimping, the copper wires of the vehicle's side battery cable must be visible inside the opening.



29. Centrally measure and mark a distance of 10 cm, as shown.

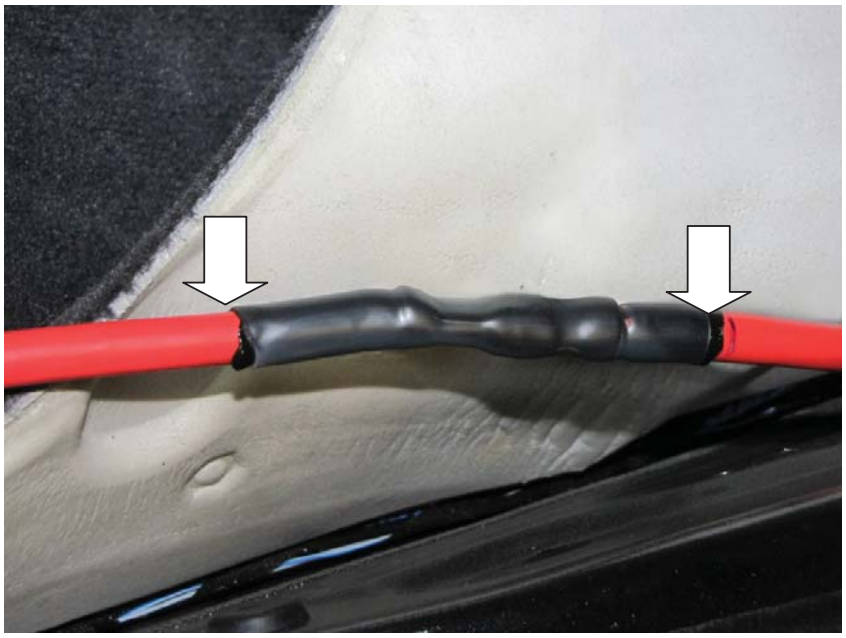


30. Position the shrink tube over the connection, so that the marks made in the previous step are visible, one on each side.

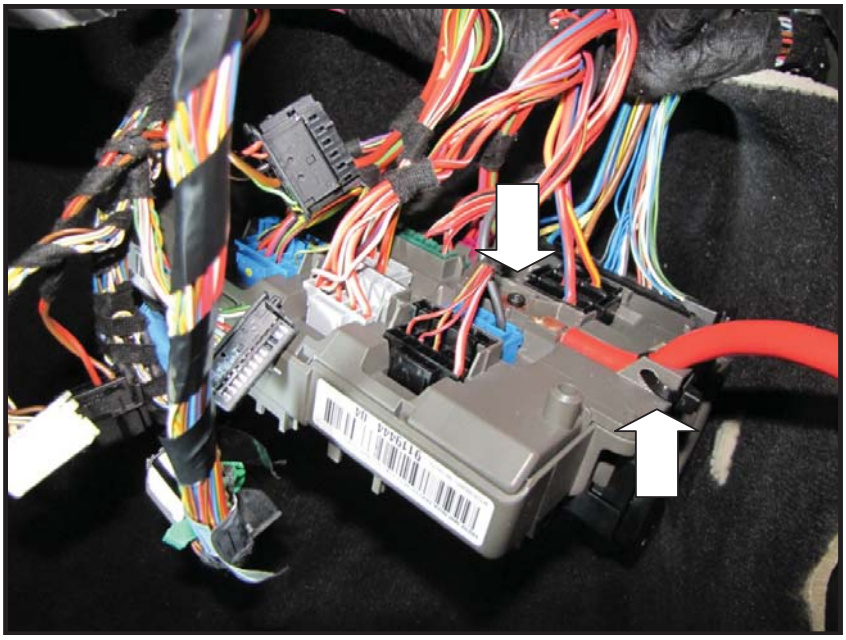


31. Using a suitable hot air blower, heat the shrink tube.

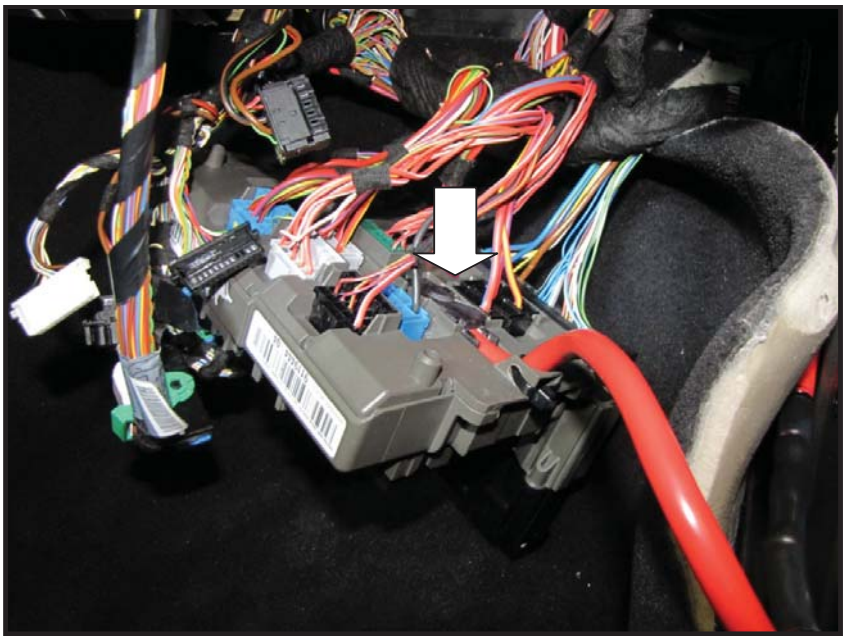
    Note: Be careful to always use a heat deflector in the vehicle, so as not to damage any interior components.



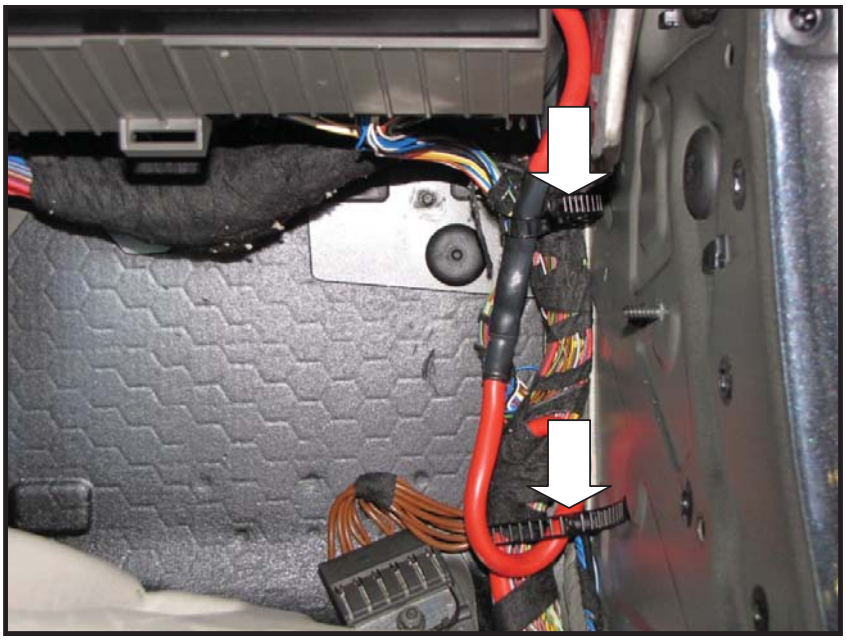
32. After shrinking, adhesive must emerge from both sides of the shrink tube.



33. Connect the repair cable to the power distribution box by pushing down all the way. Tighten the 2.5 mm Allen mounting screw to 1.0 Nm. While tightening the screw, gently push down on the connector.
34. Fasten the repair cable to the box using a cable strap (E89 requires 2 cable ties on the distribution box).



35. Install the protective cap over the mounting screw.
36. Reinstall the Junction Box and Junction Box Electronics if they were previously removed.



37. Fasten the battery cable at the 2 locations.
38. Reinstall the interior trim and glove box that were previously removed.
39. Reconnect the battery.
40. Reset the clock and clear all faults; make sure there are no error messages.