How to solder a severed ECU return to battery terminal cable

How to repair your 1984-1989 Toyota 4Runner / Truck's ECU's return to battery cable.

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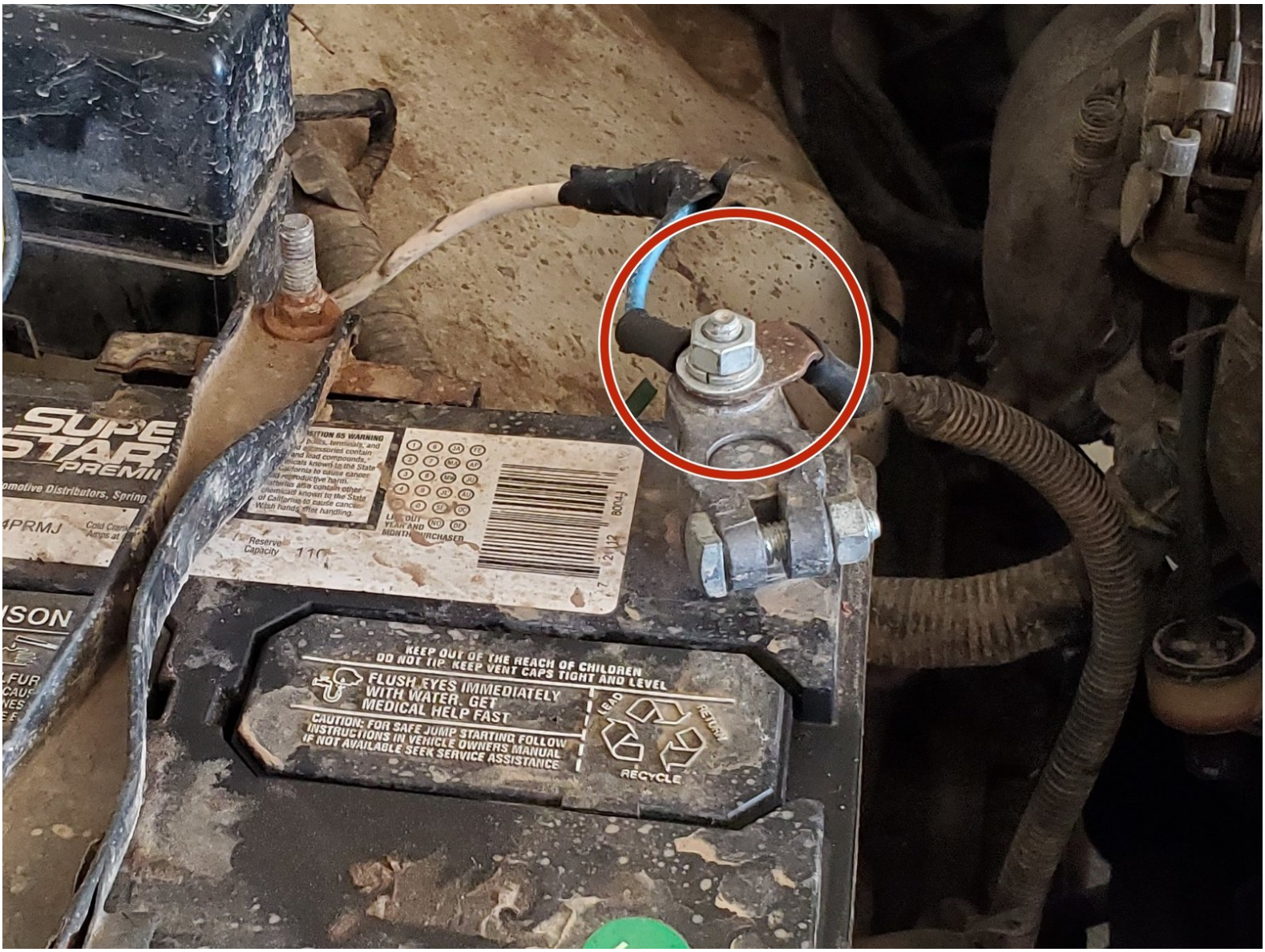

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INTRODUCTION

This guide will show you how to repair your 1984-1989 Toyota 4Runner / Truck's ECU's return to battery cable. Sometimes while off-roading the battery can come loose, which can then tug on the ECU's return to battery cable. If this cable is severed, the truck will not run.

View this How To Guide on soldering if you need any more tips for this part of the guide.

How To Solder and Desolder Connections

TOOLS:

- Soldering Iron (1)
- 12mm Socket or Wrench (1)
- Wire Brush (1)

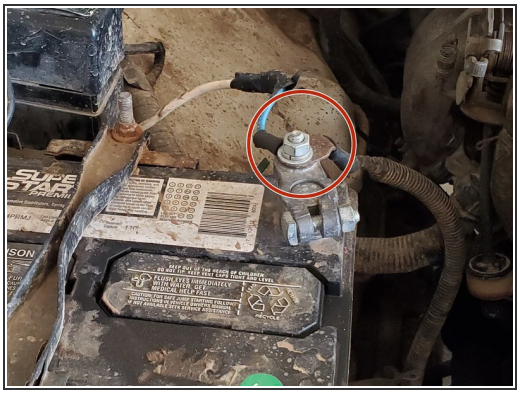
only if wires are dirty

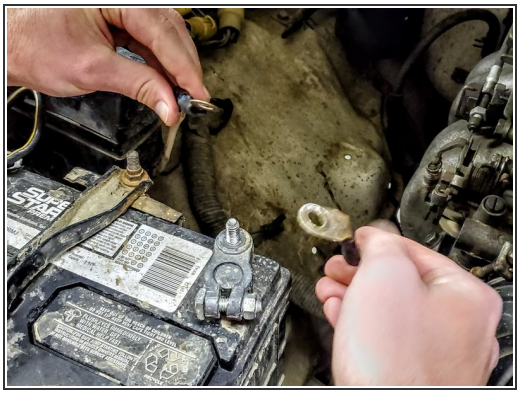
- Hair Dryer (1)

PARTS:

- Solder (1)
- heatshrink tubing (1)
- Black Electrical Tape (1)

Step 1 — How to solder a severed ECU return to battery terminal cable

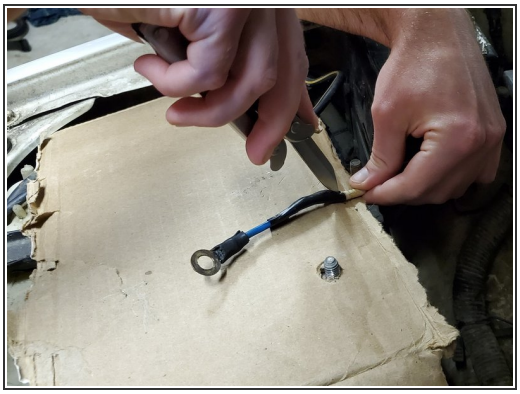




⚠ Be sure to turn your car completely off before touching any component of the battery.

- Disconnect the ECU and positive cable by using your 12mm wrench to loosen the bolt on the battery's positive terminal.
- Once the cables are disconnected, place the positive cable out of the way.

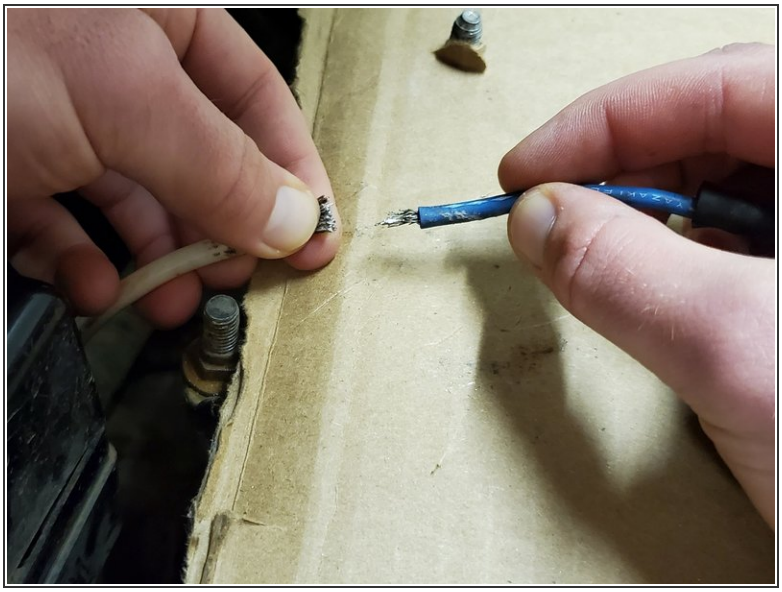
Step 2


- Place a piece of cardboard on top of the battery to work on.
- Peel the black electrical tape off of the ECU wire.

ⓘ If that doesn't work, carefully take a knife and cut the tape off

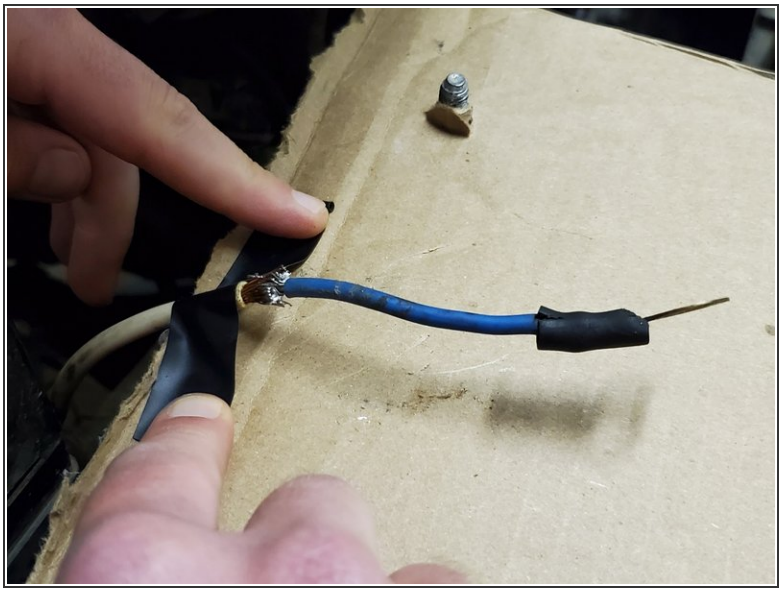
Step 3



- Spread the individual wires apart in each cable.
- Then mesh the ends of the cables together.
- Pinch down on the meshed cable ends.
  - They should hold themselves together.

If the cables are dirty, use the wire brush to clean off any debris.

Step 4

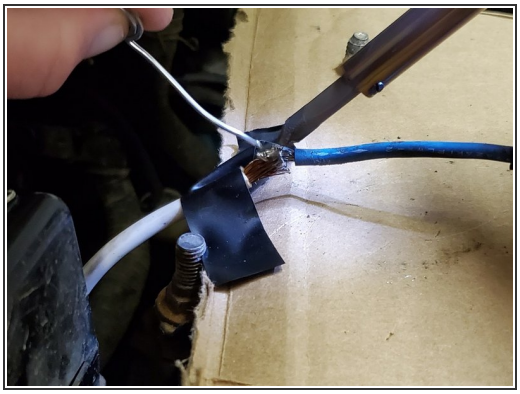
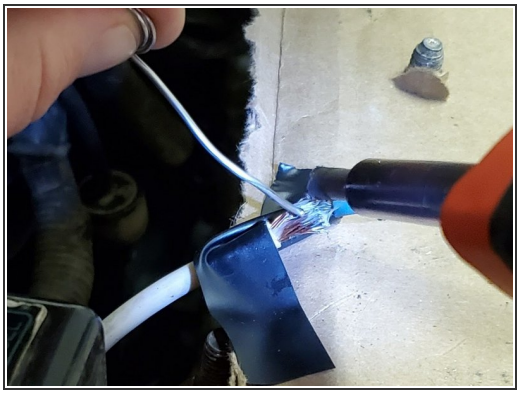


- Plug your soldering iron in to let it warm up.

  The one I am using takes about 15 minutes to warm up.

- Tape the white cable to the cardboard so that the cables don't move around while you're working.

Step 5

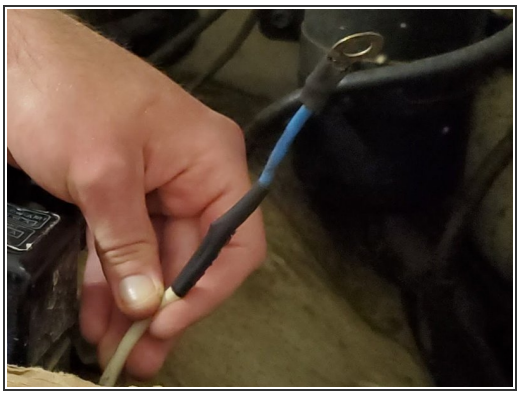

- Gingerly apply solder to the severed cables.
  - For help with soldering best practices, check out our How to Solder and Desolder Connections guide.

- When done the cables should have no issue supporting their own weight, and should be able to withstand a little tug.

- If you see smoke, just back off and slow down.

Step 6





- Take your shrink wrap, and wrap it around the cable.

- Use a hair dryer to blast the shrink wrap with heat. Move the dryer up and down over the wrap.
  - Do this for about a minute or until the wrap has formed around the wire.

Step 7



- Wrap a few layers of electrical tape over the heat shrink tubing.
- Work your way up the cable and cut the tape once you've reached the top.
- Once more tape the cable starting a few inches below the solder and work your way back to the top. Cut the tape again.

Step 8



- Place the positive cable down first.
- Then place a washer between the cables.
- Place the ECU cable, then one final washer, and finally tighten the bolt on top.

Place the positive cable on the battery first. (The one we weren't fixing)

To reassemble your device, besure to place the positive cable down first. Then place a washer between the cables. Place the last washer on top of the ECU cable, then bolt down.

