How to Repair a Frayed Apple AC Adpater Wire

This guide will show you to prolong the use of your Apple AC Power Adapter.

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INTRODUCTION

Over time, the wire coating of an Apple MagSafe Power Adaptor may deteriorate leaving the wires exposed and possibly subject to electrical shorts. By covering the exposed wires with heat shrink you can protect the power adapter and yourself while continuing to charge your computer.

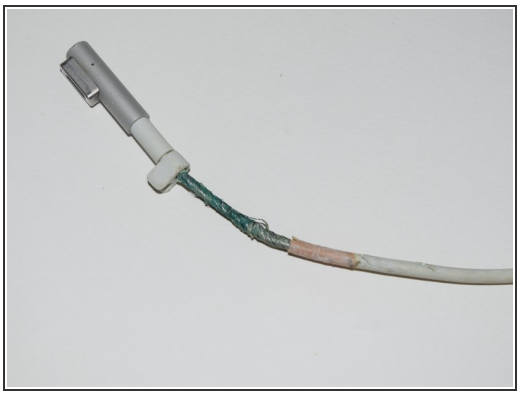
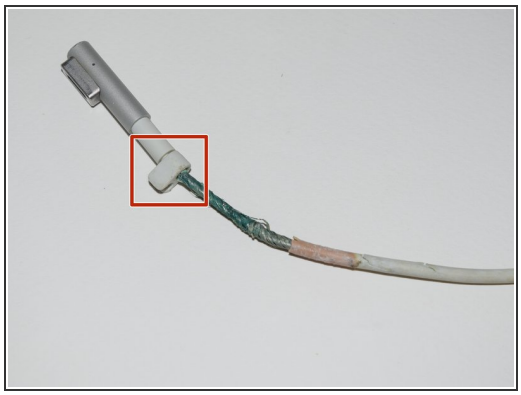
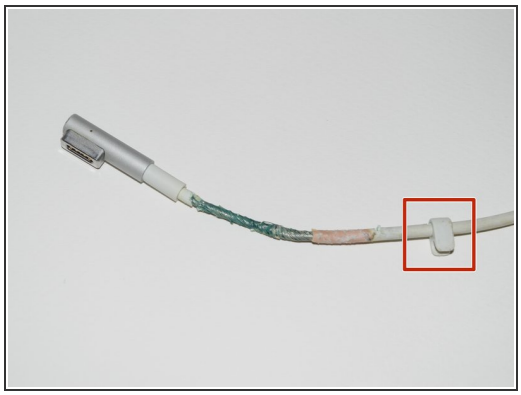
TOOLS:

- Heat Gun (1)
- Utility Scissors (1)
- Black Electrical Tape (1)

PARTS:

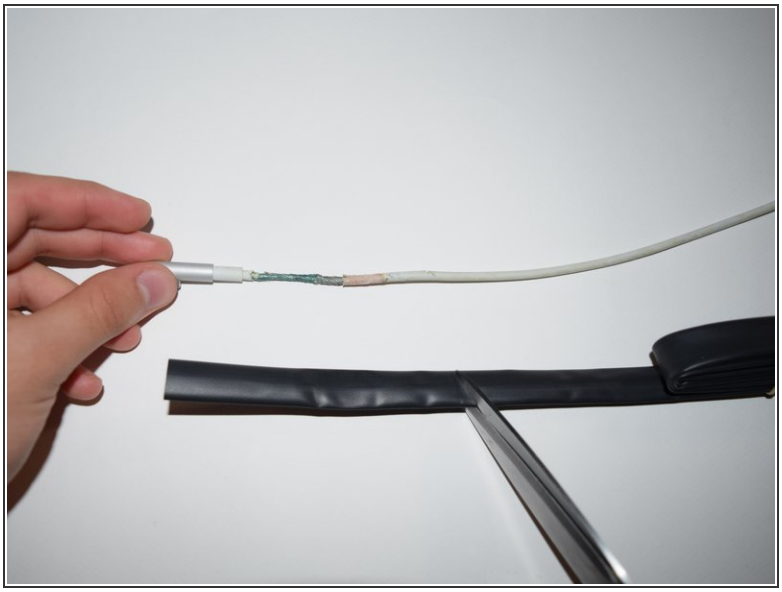
- 3/8" Heat Shrink (1)

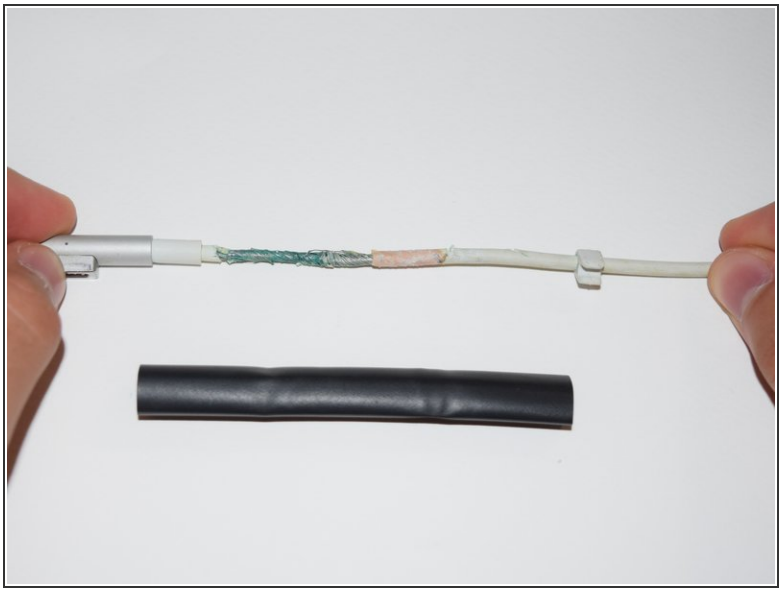
Step 1 — How to Repair a Frayed Apple AC Adpater Wire

- Locate the damaged or exposed area on the adaptor wire.
  - Move the wire connector away from the damaged or exposed area.

Step 2





- Measure the approximate length of heat shrink to throughly cover all nearby damage with a single piece of heat shrink.

  The length of the heat shrink should be longer than the actual length of the damaged or exposed wire.

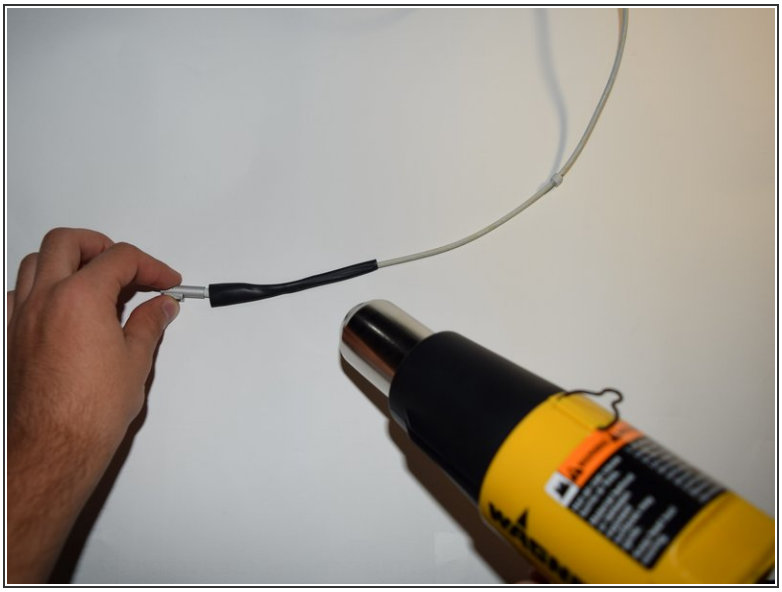
  Use 3/8" diameter heat shrink. This size diameter is large enough to slide over the charging interface and small enough to secure itself on the wire when heated.

- Cut the heat shrink to appropriate length using scissors.

Step 3

- Slide the heat shrink over the the wire until it is over the damaged or exposed area.

Step 4

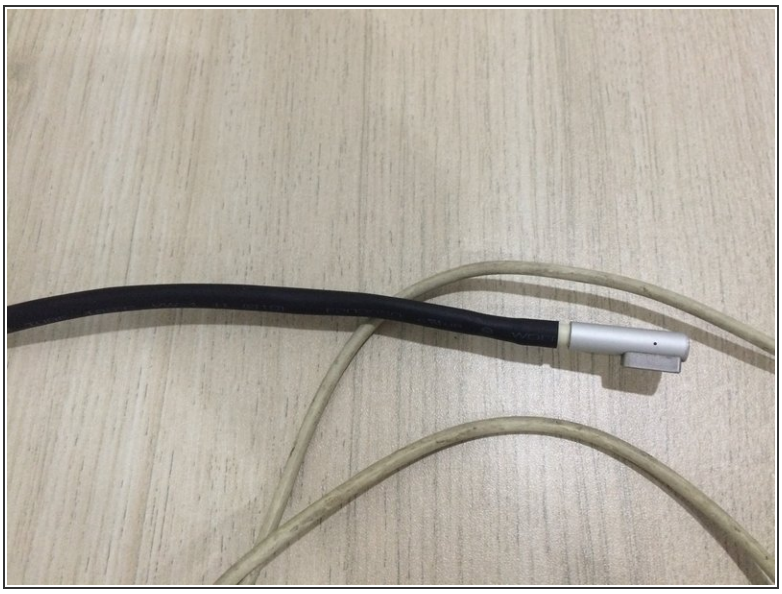


- Use a heat gun to apply heat to the heat shrink.
- Continue until the heat shrink has shrunk and is tightly attached to the wire.

When heating, always keep the heat gun moving around the heat shrink. Do not apply heat to one location for too long. Overheating the heat shrink may cause further damage to the wire or wire coating underneath, and may melt the heat shrink itself.

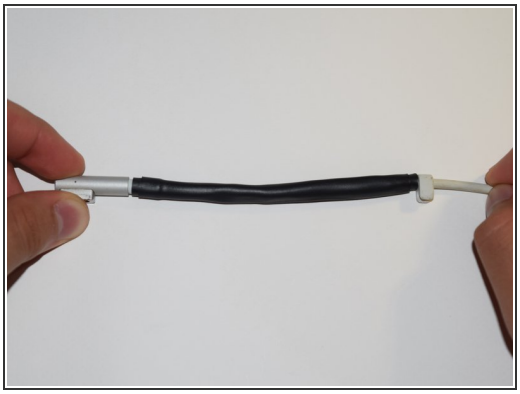
Optional: Apply multiple layers of heat shrink if you think the wire will be used in more strenuous situations and want to ensure its protection and durablity.

Step 5 — Add an additional layer on the ends of the Mac Charger Wire's Diameter



- The 3/8" in Heat Shrink Tube has a *maximum shrinking capacity that is larger than the Mac Charger Wire's Diameter*. So to create a proper hold, we need to increase it's diameter in some way. Wrap around it with an electric tape or this sample red wire covering in the picture, to increase it's diameter before shrinking it all the way into place.
- Since the end of the charger has a bigger diameter than the wire, it seems to have a nice snug fit. If you feel it is necessary to add more body in the diameter of that part then just cover it with electric tape, etc, before shrinking the heat shrink tube in that area.

Step 6



- Once the heat shrink has shrunk, flex the wire in different directions to ensure the heat shrink is properly attached and secured to the wire.

Apple MagSafe Power Adapters typically range from $70-$80. By following this simple repair you can save money and continue using your power adaptor. People with similar wire coating issues and different power adaptors can hopefully find this repair guide helpful since the repair process is nearly identical.