

Fusebox Installation

by Bill Morgan and Julie Muckleroy

Fuse box replacement becomes necessary when the fuse receptacles have melted. For years, the solution had been to splice an inline fuse holder in place of the melted receptacle. DeLorean fuse boxes have been unavailable for many years as an item separate from a main harness. DeLorean Motor Company has recently "stripped" the fuse boxes from a quantity of these harnesses in order to fill the demand for this part. But first, what causes the fuses and fuse receptacles to melt? Most commonly, owners neglect to maintain the fuse box, allowing corrosion to build on the fuses and terminals, causing overheating and melting. In some cases, long term storage with the battery left in the car and connected can lead to this problem, as well. The battery's close proximity to the fuses and relay compartment creates a magnetic field which over time causes electrolysis and eventually corrosion.



Before beginning fuse box replacement it is imperative that you assess your skill level and confidence replacing this part after thoroughly reading through this article. Fuse box replacement requires a great deal of patience and time. You should also be very familiar with 12 volt auto electric systems and have have experience and confidence working with small wires and small terminals that are used in the fuse box.

Preparation:

1. This project is made quite a bit easier with the removal of the passenger seat. This will allow you more space to work as you replace the fuse box. There are four bolts on the bottom of the seats, and the nuts holding the seat place are accessed from underneath the vehicle. Slide the seat as far forward as possible to ensure that it will clear the seat belt receptacle on the center console.
2. Before beginning the procedure you will need to assess and diagnose your electrical system. Use the data sheet provided along with your kit, or access the data sheet online at www.deloreans.com in the web exclusive area. The first step of diagnosis is determining which fuses work and which do not. Check each fuse with a 12 volt test light or a voltmeter. If you find that a fuse is good and working properly but the component it controls is still not operating there may be other electrical problems to contend with that will not necessarily be repaired by this replacement. If you find that fuses are working properly and the component it controls also works properly than they should still work upon completion of the replacement. If, after completing the replacement, a component no longer works that was operating properly before then this will indicate an incorrect installation.
3. After testing each fuse to determine the electrical system's condition remove each fuse and discard them. New fuses are included with your kit.
4. Check out all of the pieces included in the Fusebox Assembly Kit, see *Figure A* to compare. You should have everything you need including 40 terminal replacements. There are actually only 36 terminals and, most likely, not all will need to be replaced. Save the extra terminals for later use should any damage occur or replacement of a terminal become necessary. *(Continued on next page)*

You will need:

Parts & Hardware:

106912 Fusebox Assembly

- 40 Terminal Replacements - Part No. 106101
- Fusebox - Not Sold Separately
- Fusebox Cover - Part No. 110520
- (11) 30 Amp Fuses (Red) - Part No. 106100
- (6) 20 Amp Fuses (Yellow) - Part No. 106102
- (1) 30 Amp Fuse (Green) - Part No. 106104

106913 Fusebox Assembly w/o Cover

Tools & Equipment:

Electrical System Data Sheets

- *(provided with kit)*
- 12 Volt Test Light or Voltmeter
- Small Eyeglass Repair Screwdriver (Slotted)
- Wire crimping tool



Figure A - Fusebox Assembly kit showing all included pieces. Compare pieces before beginning your project.

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Procedure:

1. Disconnect the battery negative terminal making certain the cable will not touch the battery post. Failure to disconnect the battery could result in short circuits and other electrical malfunctions.

2. Compare the existing fuse box to the new fuse box. This will help you get an idea of how the fuse box mounts and will be useful in the correct placement and mounting at the end of the installation.

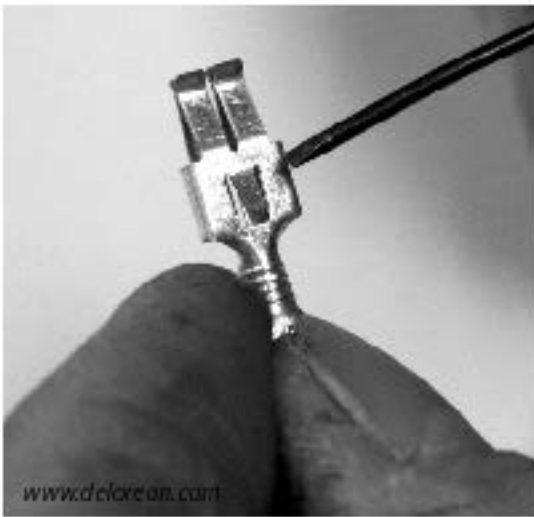
3. First, remove all fuses from the box. The fuse box is held in place by four mounting pegs which create a friction fit. In order to detach the fusebox gently pull upward. Release the circuit breakers from their holder by pulling them out of their spring clips. The circuit breakers are held in place similarly to the fusebox, the tension is held by the spring clips so all you will need to do is gently pull. Releasing the circuit breakers will give you more range of motion thus making the installation easier.

4. To avoid confusion and keep things simple, ONLY change one terminal at a time. Each fuse has two terminals, and it is important to change one terminal and then the other. This will avoid crossing wires, creating more electrical problems and perhaps damaging your DeLorean. Starting with #1 fuse use a very small flat blade screwdriver, like might be used to repair glasses, and depress the retaining tab that holds the terminal in place. Depressing or squeezing this tab will allow the terminal to be removed from the fusebox. See *Figure B* for an example of the terminal and retaining tab, also see *Figure C* for an example of the location of the terminal.

5. Gently tug the wire underneath to pull the wire with attached terminal out of the box.

6. Next, evaluate whether the terminal must be replaced or if you will reuse it in the new fuse box. Consider the following items to determine if the terminal should be replaced: Is the wire or terminal burned? Does either the wire or terminal have evidence of corrosion? Are there any deformities of the wire or the terminal that might cause a poor connection? If the answer is "yes" to any of those questions you'll want to replace the terminal. Don't take the chance if you're unsure. It's always better to start with a fresh terminal than leave one that could cause potential harm. If you choose to replace the terminal, see the instructions located in the sidebar (Terminal Replacement) on the next page.

7. If you choose to use the existing terminal, make sure the depression tab is lifted into proper position so that it will lock firmly when inserted into the new box. If the depression tab does NOT lock firmly into place, it is very likely that when the new fuse is inserted in the receptacle, it will 'push' the wire out of the fuse box. This may or may not be immediately obvious, causing difficulty in troubleshooting. Anything less than complete connectivity between the fuse and terminal could result in overheating and melting, perhaps even an electrical fire. See *Figure D* for an example of a terminal with a correctly positioned depression tab.



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Figure B - Fusebox terminal and retaining tab.



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Figure C - Terminal location in fusebox assembly.



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Figure D - Properly positioned depression tab.

NOTE: Steps 6 & 7 must be repeated for each fuse terminal. There are 2 terminals that must be evaluated/changed per fuse.

8. As you remove each wire with connected terminal, and after evaluating each, insert the wire and terminal into the correct slot on the new box. You will find it much easier to do this wire by wire rather than disconnecting all wires at once and then re-connecting. Working with each wire individually will avoid crossing wires that could create further electrical problems. If, however, you choose to remove all wires at one time make sure to have pen and paper handy to record the color of the wire and it's location so that when inserting them into the new box there is no confusion as to what goes where.

9. After inserting the wires until they snap in place, gently tug to make sure it is properly inserted and not loose. Repeat the above procedures for each terminal until all have been changed over to the new box.

10. Connect the battery. Install the new fuses, one at a time, by plugging each fuse into the proper terminal according to the data sheet provided with the kit, or downloaded from the [deloreans.com](http://www.deloreans.com) website. After each fuse has been installed, test each electrical component on the data sheet for proper function. Then proceed with the next fuse.

11. If after checking the electrical components you discover that something is not functioning, you will need to reevaluate the wiring, terminal and fuse for that component. Make sure the fuse is properly installed, the terminal is secure in its placement and the wire is not loose in the terminal. You may also want to check the quality of the terminal if it is one that you carried over from the original and did not replace. It may need to be replaced to work properly.

12. Mount the new fuse box securely in the proper location by gently pressing it down onto the mounting pegs. Take care to avoid crimping or damaging wires as you secure the new box in place.

13. Replace the access cover and the passenger seat (*if removed*).

It's generally recommended that the fuse box cover NOT be installed over the fuse box to reduce the buildup of heat. Put it away someplace safe, where you will remember where you put it! Finally, don't forget to inspect the fuses and fusebox (*see sidebar*) at least once a year to prevent damage to your new fuse box!

Terminal Replacement

Figure A



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Utilizing a pair of wire crimpers strip the plastic insulation back from the wire 3/8 - 1/4". Make sure the end of the wire is a clean cut and twist the wire. Insert the wire in the base of the terminal making sure it runs inside the channel of the 4 tabs, see Figure A above for an illustration. Next bend the top two tabs on the terminal over the wire and crimp to secure as shown in Figure B below.

Figure B



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Now bend the second and lower pair of tabs over the wire and crimp to secure them. Gently tug the base of the wire to ensure a firm hold and continue with the installation. See Figure C below for the final product.

Figure C



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Fusebox Care & Maintenance

Once a year make sure to remove, discard and replace all fuses. Fuses are inexpensive in contrast to the cost of a new fuse box and the labor necessary to replace it. Also clean all terminals with electrical contact cleaner to remove any mild corrosion that might occur. Don't forget to check the fuses in the "fused jumper" that you may have installed in place of the fan fail relay (*see diagram enclosed with kit or on www.deloreans.com web exclusive*). It's also a good idea at this time to check and clean the terminals on the relays, as well as the spade connectors on the relays themselves.



Web Exclusive Content

Log in to www.deloreans.com to view the Electrical Data Sheets required for this installation.