Flyin' Miata INSTALLATION INSTRUCTIONS

WIRING KIT FOR SPAL FANS
09-561 40

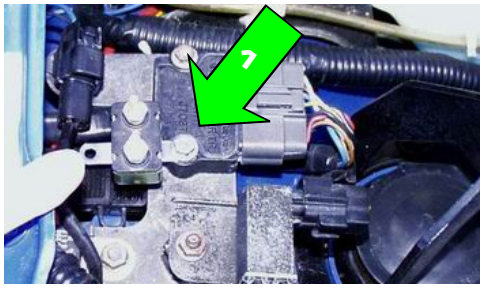
The Flyin' Miata fan shroud replaces both of the fans with more powerful ones. While the wiring for the primary (driver's side) fan is sufficient on all years, the wiring for the secondary / AC fan on the '90 – '93 cars is not, and the secondary / AC wiring on cars with only one stock fan is not fully present. While you can source the missing factory AC relay & AC relay harness for 94-97s in place of this kit for single fan cars, those parts are no longer available from Mazda and not always easy to find. This kit allows you to wire in the secondary without the need to source those parts.If you have any questions during installation or suggestions for improvement to the product or the instructions - please don't hesitate to call or email.

WARNING: Not everyone can perform every installation. It is critical that you be honest with yourself in regards to your ability. We're more than happy to help, but there are only so many things we can do from the other end of a phone / computer. If in doubt, discuss the install with us before you dive in. Improper installation could cause injury and / or death!

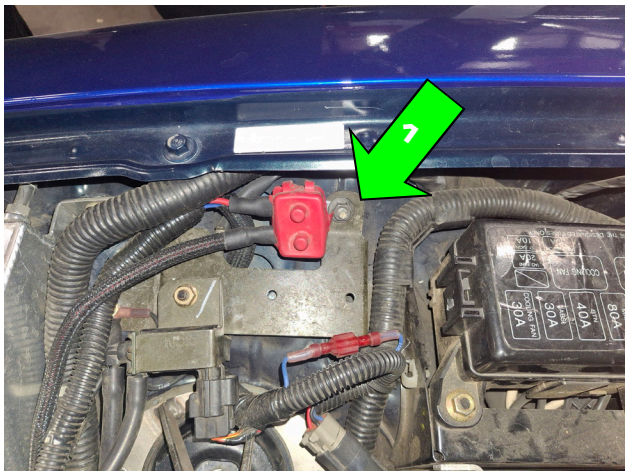
Required tools:

- **Metric socket /wrench set**
- **Wire stripping tool**
- **Wire crimping tool**
- **Heat gun**

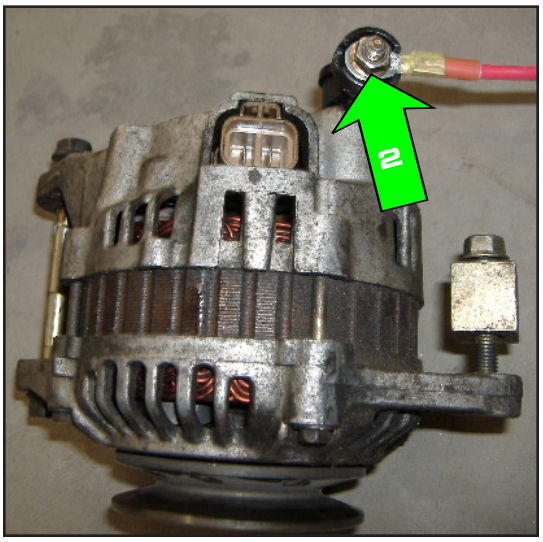
1. Disconnect the negative terminal on the battery. If you skip this step, you will immediately regret it when you grab the wire on the alternator.



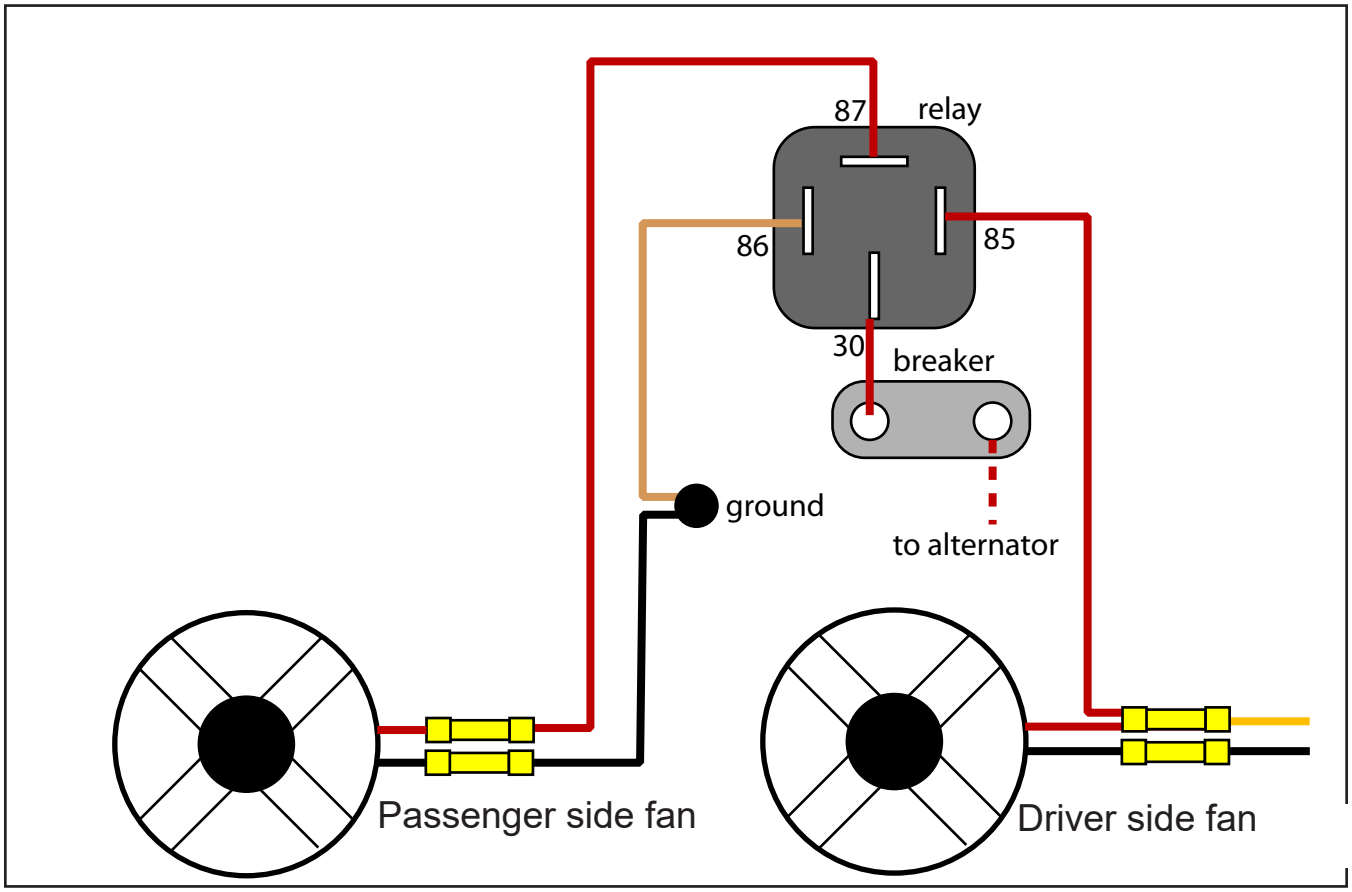
2. Mount the circuit breaker to the bracket on the right (passenger) side fender (1). On 1.6 cars, the igniter and solenoid for the charcoal canister are located here. Mount the breaker under one of the nuts for the igniter. On 94-97 cars, use the supplied M5 hardware to secure the circuit breaker to the solenoid bracket (1).



3. Crimp a yellow eyelet onto the red wire and use a heat gun to shrink the heat sleeve. Then attach this to the stud on the alternator that already has a wire attached to it (2). Tighten the nut back down.
4. Using another yellow eyelet, connect the other end of the red wire from the alternator to the copper stud on the circuit breaker. Use a third yellow eyelet and connect the second red wire to the other terminal on the circuit breaker.

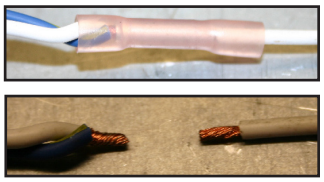


5. Run the second red wire from the circuit breaker (from step 4) to terminal #30 on the relay. Use one of the yellow female spades to make the connection. Connect the remaining length of red wire to terminal #87 on the relay using a yellow female spade connector. Let this hang loose for now. It will be connected to the red wire on the fan in a few steps.
6. Connect one end of the dual lead wire to the relay using two of the red female spade connectors (one on each leg). Connect one lead to terminal #85 and the other lead to terminal #86. It doesn't matter which wire goes where. Terminal 87a will not be used.



7. On 1.6 cars with AC, mount the relay bracket to the bolt that holds the AC relay to the body (3). Mount the relay to the relay bracket using a 6mm x 10mm bolt, nut and washer. On single fan cars, mount the relay directly to the same chassis mounting point.

8. Run one side of the dual lead wire to an easily accessible nut/bolt. Be sure that it's connected to substantial metal - the bracket in step five isn't sufficient. Cut the one side to length, crimp on the red eyelet, but don't tighten it down. The same location will be used for another ground in step 12.



9. Run the other side of the dual lead wire over to the yellow wire going into the primary fan. Use the blue butt connector to tap the new wire into the yellow factory wire on the plug. You'll need to cut the original wire, twist the new wire around one of the cut and stripped ends, crimp it into the butt connector, then crimp the other end into the butt connector. If the fit isn't snug enough (pre-crimping), strip more and double the wire over. Once connected, give a slight tug to ensure that the wires are firmly held in the butt connector. CONFIRM YOUR CONNECTIONS WITH A MULTIMETER! No connection needs to be made with the other factory fan wire. Zip tie the wire to the upper fan mounts for a neat appearance.
10. If you're using our fan kit, you'll have a connector for the secondary fan. If you're not, you'll need to somehow connect the wires in the next step.
11. Connect the red wire from the secondary fan plug to the red wire hanging from terminal #87 on the relay using the yellow butt connector. Connect the black wire from the secondary fan plug to the black 10 gauge wire using a yellow butt connector.
12. Run the black 10 gauge wire from the fan over to the ground used in step 8. Melt on a yellow eyelet and secure this wire.
13. Double check all of the electrical connections and reconnect the battery.
14. To test the fans turn the car on but do not start it. Remove the wire from the temperature switch on the top of the thermostat housing and ground the wire to the engine. Both fans should energize, blowing air toward the engine. Be absolutely certain that the air is blowing towards the engine, not towards the radiator. If it's blowing in the wrong direction, you need to swap the wires at the fan itself.