

Mazda RX-7 Cooling Fan Modification

(For 93+ Model Years)

The following information will guide you through the steps that will allow you to automatically control radiator cooling fan operation (after engine is turned off), which is desirable whenever your car is driven hard (or during particularly hot weather in stop-and-go traffic).

Testing the ECU/Fan circuitry

1. Uncover the ECU which is behind the "kick panel" in the passenger side foot well. You will need to pop off the door sill trim and then pop out all the fasteners holding the kick panel. It is best to go slow with this as the plastic can crack. Once the panel is removed, you can see the ECU mounted to the chassis.
2. Locate the single black wire (with female spade-type connector) coming out of the ECU that is not attached to anything.
3. Attach this wire to ground for two minutes while the car is running.
4. With the wire still grounded, turn the car off and the fans will stay on.
5. After 30 seconds, un-ground the wire and the fans should switch to low speed.
6. The fans stay on for ten minutes.

Performing the "Fan Modification"

1. Disconnect negative battery cable.
2. Remove the scuff plate from the passenger door sill.
3. Remove the kick panel on the passenger side (next to passenger's right foot) to expose ECU.
4. Unbolt the ECU. There are two 10mm hex bolts on the bottom and one on the top right. No need to unplug it.
5. Locate the fan control module mounted behind ECU (small, black plastic box). If this is not present, then the recall was never performed.
6. In the 5-wire harness, follow the black/yellow wire until you reach a dangling female spade connector.
7. Run a wire from this connector to one pole of a switch, and run the other pole to ground. If you mount the switch on the center console, you can use the brass bolts there as ground points.
8. Connect the battery cable and turn on switch. You should hear Relay #3 trigger.

Operation

When you want your fans to come on manually, turn on the switch. In two minutes, your fans will be on medium speed. If the car was hot enough already (more than 221F - fans already at low speed) then your fans will switch to medium speed immediately.

If you want the fans to move up to high speed, turn on your A/C.

Turn on the switch at least two minutes prior to turning off the engine if you want the fans to continue running. The fans will stay on medium speed for 10 minutes. If you turn off the switch within that 10 minutes, the fans will run at low speed for the remainder of the time.

Notes

1. Only use it when it seems appropriate. Constant use may cause premature battery failure.
2. Don't ground the wire all the time (keep switch on) because the fans will stay on all the time. Be sure to allow time for the oil in the turbos to cool down to normal operating temperature. The use of an ignition timer is recommended (sometimes referred to as a "turbo timer").
3. The "cooling fan control module" is the small black plastic box mounted behind the ECU as the result of the cooling system recall.
4. Sometimes the wire is behind the CPU and it is black with a greenish/yellow stripe.
5. Yes, this mod WILL work in conjunction with a Turbo Timer!
6. You don't need to run the engine for the fan modification to work. If the ignition is in the "ON/II" position (warning indicator lights on), the fans will run if the switch is on.
7. There is no harm in leaving the switch activated after the fans shut off. The only power draw is about 1 Watt from the relays. It shouldn't drain the battery unless the car sits for a long time without being started (about a week). Don't forget to turn off the switch BEFORE the next time you start the car or the fans will start running even though the engine is cold.