

ELECTRIC RADIATOR COOLING FAN INSTALLATION INSTRUCTIONS

Please take a few minutes to read these instructions carefully, before you begin your installation. There are a few things you will need to locate (depending on your application) in order to successfully complete this project. Included along with this fan assembly is (4) adjustable mounting brackets, a heavy-duty (20-amp) toggle switch, and a 20-amp fuse and holder. You will need a few feet of 14 GA electrical wire, a small assortment of wiring terminals, along with the correct mounting bolts for your application. (Amp draw of the fan motor is just 4-6 amps.)

MOUNTING THE FAN TO THE RADIATOR

- 1) First locate the (4) enclosed mounting brackets that came with your fan.
- 2) Attach the mounting brackets to the fan shroud housing.
- 3) Hold the fan up to the radiator, then locate and mark where the four mounting holes need to be drilled into the radiator support area. Adjust the mounting brackets as necessary to **center the fan in the upper 1/3 of the radiator**.
- 4) Drill and secure the fan to the radiator.
- 5) Install toggle switch under dash at a convenient location.

WIRING THE FAN --

- 1) Connect black wire from the fan wiring harness to ground. Using one of the fan's mounting bolts works well.
- 2) The colored wire is the "hot" or power wire and should be connected through the on / off toggle switch provided. From the switch the power wire needs to be connected to a "switched" power source, one that turns off and on with the ignition key. The "accessory" terminal of the fuse box or ignition switch are two examples.
- 3) You need to install the safety fuse and holder provided at an easy to service location, somewhere along the positive (hot) wire. Installing the fuse and holder is very important. A fuse is designed to protect your fan in case an electrical problem should occur.
- 4) Your fan is now wired so that you can be turned off and on using the toggle switch as needed. The fan will also be turned off with the ignition switch when the car is stopped and will be restarted when the ignition switch is turned on again. This is done for safety so nothing is left running after the ignition is turned off and the car is unattended.

CHECKING YOUR WORK

If you have installed a "**pusher**" type of cooling fan it should be mounted to the front side of the radiator. This style of fan is designed to "push" air through the radiator.

The simple way to check your fan to see if the blades are turning correctly is to carefully hold a shop rag behind the fan while it is running. If your fan is wired correctly, the fan will draw the shop rag **towards** the radiator.

If you have installed a **“puller”** style of cooling fan, it should be mounted on the engine side of the radiator and is designed to “pull” air through the radiator. To check and see if you have wired your puller type of fan correctly hold a shop rag behind the fan while it is running. The fan should blow the shop rag **away** from the radiator.

Not sure, which style of fan you have? Look for the marked fan blade, which will identify the type of fan. Also, look for the arrow showing direction of travel. The rule is...”the curve or pitch of the blades should always face the engine” Pusher fans can be made into puller fans by changing the wires on the motor, and removing hub clip and inverting fan blade assembly. Be sure fan clip is installed correctly into groove.

TROUBLESHOOTING --

If you find that you new cooling fan blows the air the wrong way, the wires on the fan motor are wired backwards. To correct the problem, simply reverse the two wires on the fan motor, which will reverse the direction of the fan.

It is a good idea to check all of your mounting brackets and wiring connections after you have installed everything correctly. Also...be sure your wiring is routed away from any exhaust heat or moving parts.

POSITIVE GROUND --

If your vehicle is positive ground as were most early Fords and Mercury's, the wiring directions for the fan motor itself need to be reversed. In other words, the black wire would be the power (hot) wire, and the colored wire would be the ground wire. This means that the black wire is the one that would go to the switched power source, and the colored wire will be attached to ground.

TECH TIPS...

In the summer months, if you will replace the 50/50 anti-freeze mix with straight DISTILLED water, you will lower the engine block temperature of your car about 20 degrees. Its true, **plain water is the best dispersant of heat there is**. Many vintage cars especially Flathead Fords will run much cooler with straight water in the radiator.

If you decide to run straight water in the radiator, be sure you add a pint of rust inhibitor / water pump lubricant to the water. Also adding a coolant recovery tank and a

(5) pound radiator cap will go a long way towards fixing your cooling problem. Most any cooling system will accept a five-pound pressure cap with no problem.

Remember that electric cooling fans need to be mounted as close to the top of the radiator core as possible because... that is where the warm coolant enters the radiator first.

QUESTIONS...CALL 785-632-3450

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