ADJUSTABLE FAN CONTROLLER INSTALLATION PROCEDURE

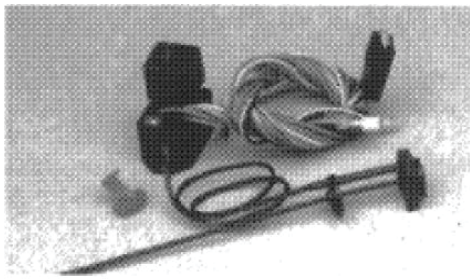


Image of Adjustable Fan Controller.

CONTROL BOX MOUNTING:

Note: The control box must be mounted to allow access to the temperature adjusting screw and keep control away from high heat sources, such as exhaust manifolds or pipes.

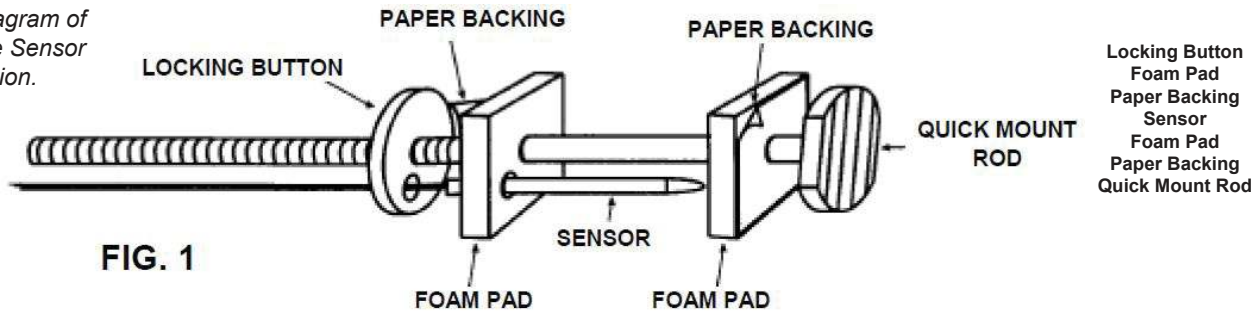
1. Control Box to Fan Bracket Mounting (Does not apply to Thin Line Models):
    a. Insert white plastic rivets through the holes in the control box tabs.
    b. Place control box in fan bracket.
    c. Align rivets with holes in bracket. Press into holes.
    d. Use punch and light hammer to tap rivet center flush with rivet.
2. Other Mounting Locations:
    a. Drill two 3/16 inch holes 2 to 1/8 inch apart through mounting surface.
    b. Use plastic rivets or sheet metal screws to attach control to the mounting location.

TEMPERATURE SENSOR INSTALLATION: (FIGURE 1)

Note: Select sensor mounting location before installing the fan. Sensor installation requires access to both sides of the radiator. Remove radiator and/or air conditioner condenser, if necessary, to allow access to both sides.

1. Remove Quick Mount rod, button and two small foam pads from parts bag.
2. Remove paper backing from foam pads. Place one foam pad on the flat side of button, aligning center hole in button with the hole in the foam pad. Slide the other foam onto the Quick Mount rod, adhesive side first.
3. Pierce foam pad on button at offset hole, and insert sensor through it.

Figure 1: Diagram of Temperature Sensor Installation.



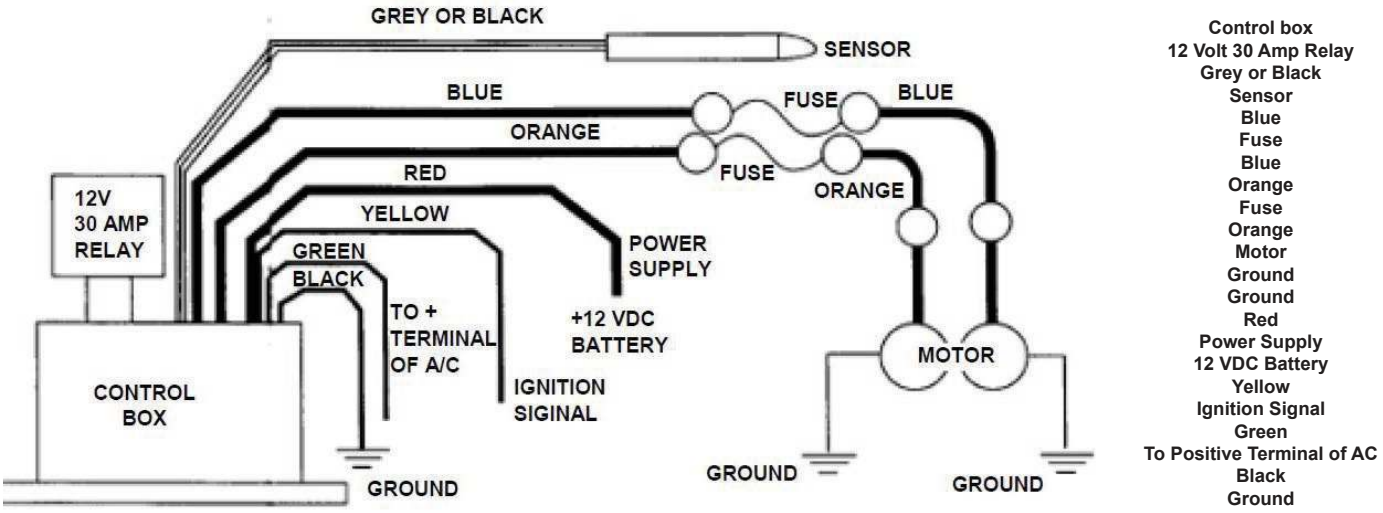
Note: For the best temperature sensing, install the sensor near the cooler inlet in the finned section in the top of the radiator. Select a location that will not interfere with the fan. The sensor may not extend completely through the radiator core section. This will not affect operation. DO NOT INSTALL THE SENSOR IN THE RADIATOR HOSE. SERIOUS DAMAGE WILL RESULT.

4. Using a Quick Mount rod, separate fins from radiator tube below radiator inlet to mount sensor. DO NOT USE ANY SHARP OBJECTS.
5. Insert Quick Mount rod through fin separation.
6. Push button and sensor onto Quick Mount, align and insert into separated fins, pull tight, and cut off excess rod.

FAN WIRING INSTRUCTIONS:

1. Red wire (power supply) – Attach the red wire to the positive terminal of the automobile battery. Use the ring terminal from the parts kit.

Diagram of Fan Wiring.



2. Black wire (ground) - Attach the control box black wire to any good ground. Use the fork terminal from the parts kits.
3. Yellow wire (ignition signal) – Attach the yellow wire to a positive 12 volt connection that is controlled by the ignition. To allow fan/fans to operate with the ignition off, connect the yellow wire to a constantly live (hot) lead.

CAUTION: Relay damage will occur if the yellow wire is connected to a source with low or fluctuating voltage. This will occur on some electronic ignition systems or coils that use a ballast resistor to drop voltage to the coil. This condition will cause the relay to chatter. If this occurs, connect the yellow wire to another lead which is not on the engine ignition circuit.

4. Green wire (Air conditioner override) – Use the blue slicer connector, attach the green wire to the AC Clutch wire. If the automobile does not have air conditioning, tie off or cut short the green wire.
5. Orange fused wire (power output) - Attach the orange fused wire to the fan power wire. Ground the remaining fan motor wire.

Refer to the instructions included with fan to determine the power wire.

6. Blue Wire (power output) - Used for dual fan installation. Attach the blue wire to a fuse holder and then to the second fan power wire. Tie off or cut the wire short for a single fan installation. Ground the remaining fan motor wire.
7. Install fuse/fuses in fuse holder/holders.

CHART 1

PROBLEM	POSSIBLE CAUSES	SOLUTION
Fan does not turn on with AC or thermostatically.	1. No fuse in holder 2. Fan motor/motors not grounded 3. Poor connections 4. Defective control, relay or probe	Add fuse Ground fan motor/motors wire/wires Connect properly See Probe below
Fan operates continuously with the ignition ON or OFF.	1. Relay stuck in closed position	Replace relay and relocate YELLOW wire off engine ignition circuit
Fan operates continuously with the ignition ON.	1. Short in thermal probe 2. Defective control 3. Broken potentiometer (adjusting screw forced past stop)	Cut GREY probe wires- fan will stop if the short is in the probe See CONTROL below Replace control box
Fan speed increases with engine speed.	1. YELLOW wire connected to negative side of coil or electronic ignition	Relocate YELLOW wire to another ignition controlled circuit

INSTALLATION TESTING:

1. If vehicle is equipped with air conditioning, turn ignition key to “ON” position. Do Not start engine. Turn on AC, fan/fans should start operating. Turn Off, and fan/fans should stop operating.
2. Mark position of adjustment pot located on top of the control unit. Control is present at 160 degrees Fahrenheit. Range of adjustment is 90 to 210 degrees Fahrenheit. Turn the adjustment screw clockwise until it stops. DO NOT FORCE IT PAST STOP. 3/4 TURN is the full range of adjustment. Turning Clockwise will raise the temperature, counter clockwise will lower the temperature. Start the engine and allow it to warm-up.
3. Feel inlet side of the radiator. When the thermostat opens and the radiator begins to heat up, turn the adjusting screw counter clockwise until the fan/fans engage. Turn no further. Fan/fans are now properly adjusted. When fan/fans start to run, verify that air flow is from front to rear of radiator. If not, refer to wiring instructions.

ELECTRIC FAN TROUBLESHOOTING: (SEE CHART 1)

Probe, control, relay testing

Probe: Carefully cut through the insulation on the grey wires of the thermal probe. With the ignition on, make contact across the wires. Relay should close and turn on fan/fans. Testing probe: Cut both probe wires and strip back the insulation. Use an ohmmeter to measure resistance across the probe. It should be in the range of 40,000 to 50,000 ohms at 70 to 80 degrees Fahrenheit. Resistance should decrease as temperature increases. Infinite resistance indicates an open circuit. Very low resistance indicates a short.

Control: With the ignition on remove relay. Check for positive 12 volts at terminal 85 on relay socket. If it is not “hot”, check yellow wire for positive 12 volts. If yellow wire is “hot” and terminal 85 is not, then control box is defective.

Relay: Pull the relay partially out of the socket to allow access to relay terminals. With the ignition on, engine NOT running, connect a jumper wire from terminal 86 to ground. The relay should click (close), and the fan/fans should turn on. If fan/fans do not turn on, then the relay may be defective.

Check red power supply wire for positive 12 volts. Check wire connections from relay to fuse holder and fan/fans.