

APPLICATION

Q539 Subbases provide cooling anticipators, and mounting for T87F Thermostats.

Q539A models provide COOL-OFF-HEAT system switching and AUTO-ON fan switching for heating-cooling or cooling-only applications.

Q539C models provide COOL-OFF system switching and AUTO-ON fan switching for cooling-only applications.

Q539J models provide COOL-OFF-HEAT system switching and AUTO-ON fan switching for heating-cooling, heating-only, cooling-only, heat pump, and electric heat applications.

Q539P models provide wiring terminals for heating-only applications and includes an indicator LED.

INSTALLATION

WHEN INSTALLING THIS PRODUCT...

1. Read these instructions carefully. Failure to follow instructions can damage product or cause a hazardous condition.
2. Check ratings given in instructions and on product to make sure product is suitable for your application.
3. Make sure installer is a trained, experienced service technician.
4. After completing installation, use these instructions to check out product operation.

CAUTION

1. Disconnect power supply before beginning installation to prevent electrical shock or equipment damage.
2. On systems using a low voltage gas control, never apply a jumper across the control coil terminals. This may burn out the thermostat heat anticipator.

LOCATION

Locate the subbase about 5 ft [1.5 m] above the floor in an area with good air circulation at average temperature.

Do not mount the subbase where it may be affected by—

- drafts or dead spots behind doors or in corners.
- hot or cold air from ducts.
- radiant heat from the sun, fireplaces, or appliances
- concealed pipes and chimneys.
- unheated (uncooled) areas behind the subbase, such as an outside wall.

MOUNTING AND WIRING

Disconnect power supply before beginning installation to prevent electrical shock or equipment damage.

All wiring must comply with local codes and ordinances.

1. In replacement applications, check the existing subbase wires for cracked or frayed insulation. Replace any

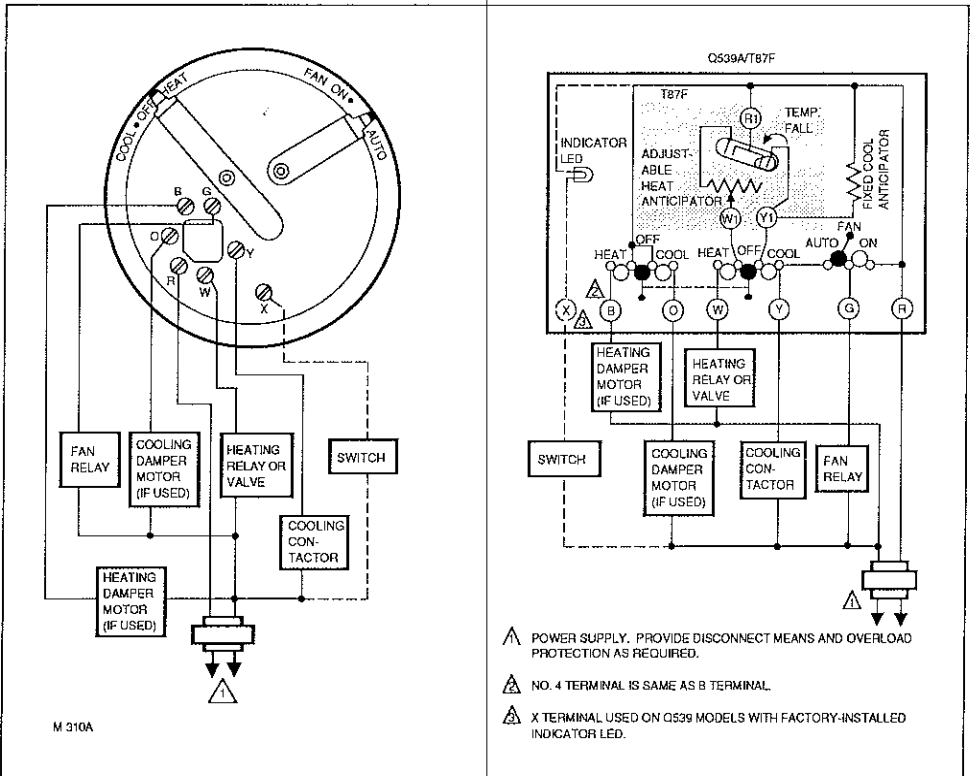


Fig. 1—Q539A,C in heating-cooling application using common power supply.

wires in poor condition. If the wire is plastered into the wall, make a hole next to the wires and loosen the wires so that they can be pushed back into the wall later.

2. In new installations, run wiring (if necessary) to the subbase location.

3. Connect the wires to the terminals inside the subbase. Refer to equipment manufacturer's instructions for Q539 wiring diagrams. If not available, refer to Figs. 1 through 9.

4. Push excess wire back through the hole and plug any opening with insulation to prevent drafts that may affect performance.

5. Loosely fasten the thermostat subbase to the wall with a screw through the left mounting hole. Adjust the subbase so that it is approximately level and start the second screw through the right mounting slot. Do not tighten.

6. Level the thermostat subbase using a plumb line or spirit level as shown in Fig. 10.

7. Tighten mounting screws.

IMPORTANT

This thermostat was calibrated at the factory while mounted at true level. Any inaccuracy in leveling during mounting will cause control point deviation.

8. Mount and wire the thermostat to the thermostat subbase by tightening three captive mounting screws on the thermostat. Tightening the three captive mounting screws completes all electrical connections.

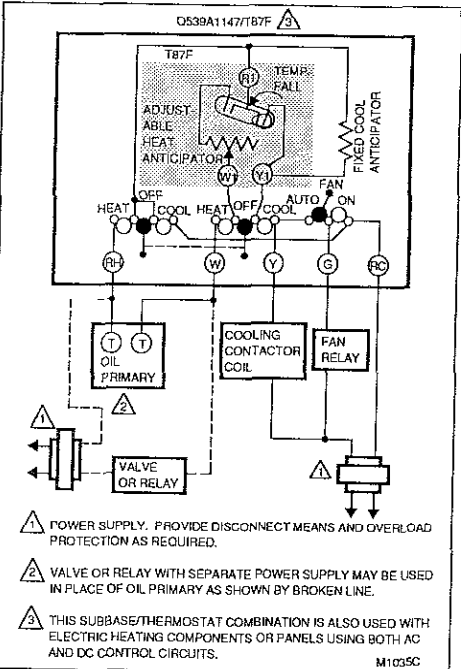


Fig. 2—Q539A1147 in heating-cooling application with isolated circuits.

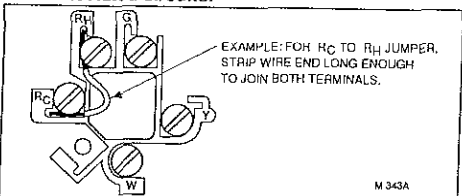


Fig. 3—Jumper "RC" and "RH" terminals for common heating-cooling transformer in Q539A1147.

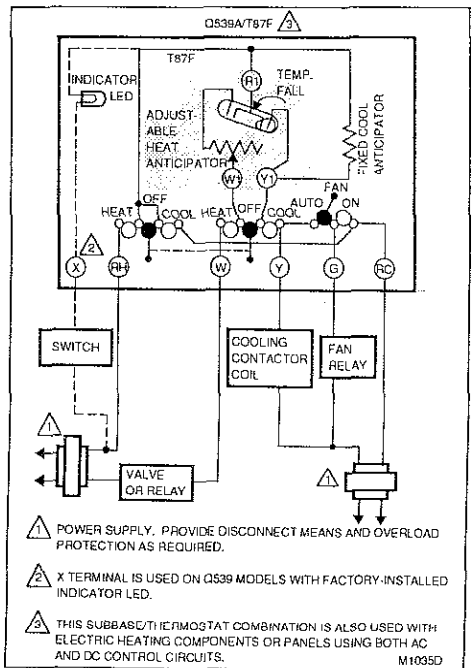


Fig. 4—Q539A in heating-cooling application with isolated circuits.

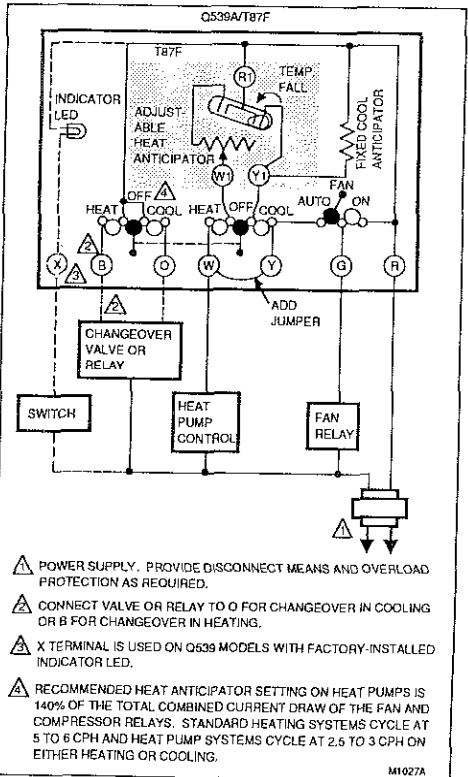


Fig. 5—Q539A in heat pump application.

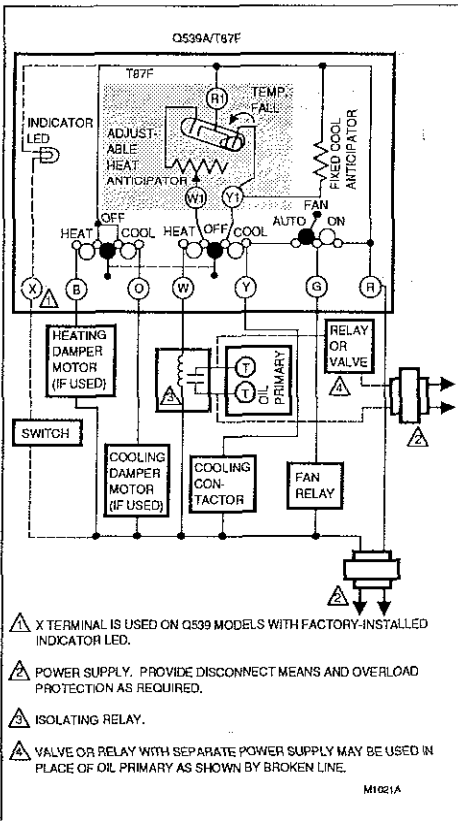


Fig. 6—Q539A in heating-cooling application with damper motors and isolation relay.

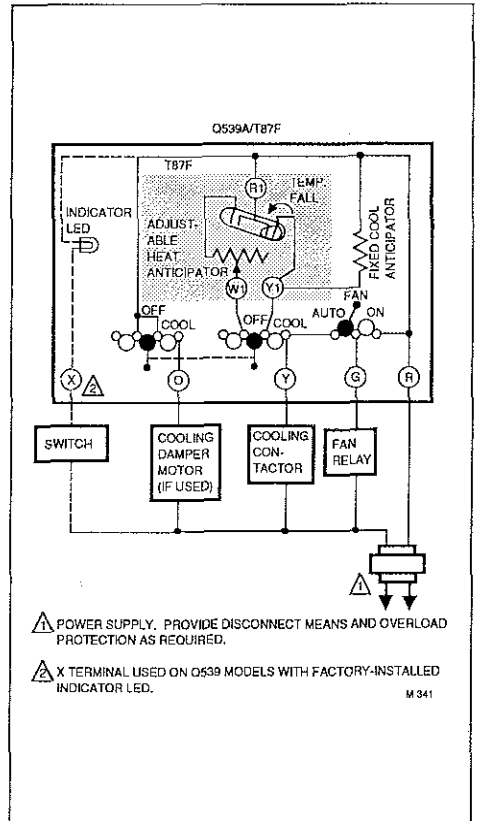


Fig. 7—Q539C in cooling-only application.

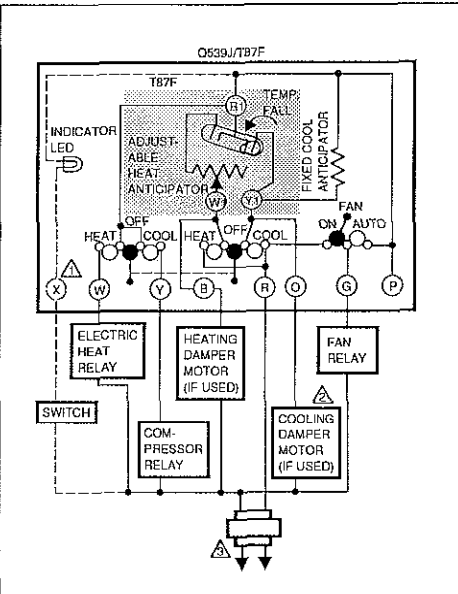


Fig. 8—Q539J in heating-cooling application with AUTO fan operation.

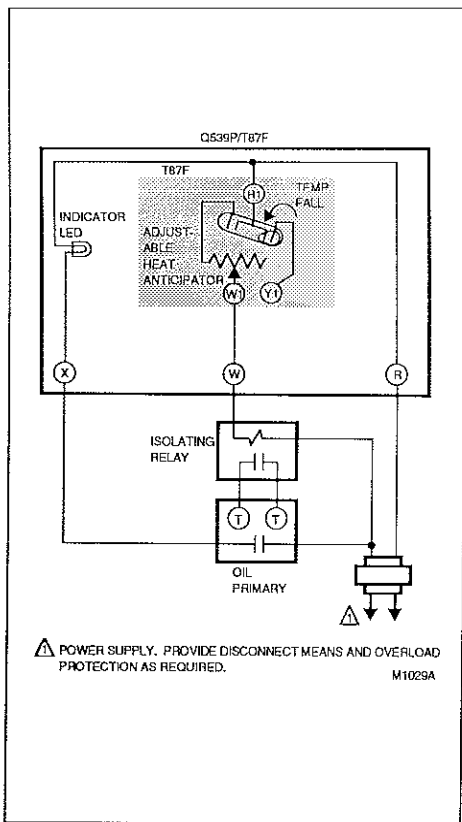


Fig. 9—Q539P in heating-only application.

CHECKOUT

NOTE: When adding a subbase to a thermostat with positive OFF, make certain the positive OFF switch on the thermostat is in the ON position so the system can be manually controlled from the subbase system switch.

When installation is complete, turn on power supply and check system operation as follows:

1. With Q539 system switch (or remote system switch) set at HEAT and fan switch set at AUTO, turn the thermostat dial at least 5° F [3° C] above room temperature. Heating should start immediately; the fan should start after a short delay (immediately with Q539G or Q539J).

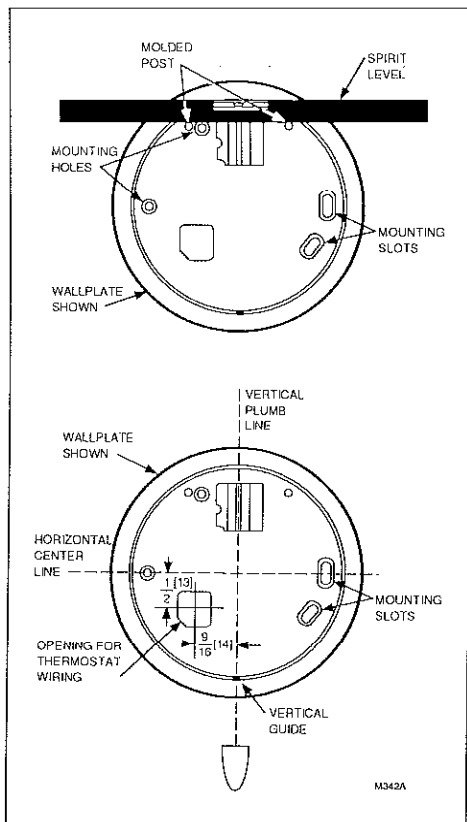


Fig. 10—Level Q539 using a spirit level or plumb line (mm dimensions in brackets).

2. With Q539 system switch (or remote system switch) set at COOL and fan switch set at AUTO, turn the thermostat dial at least 5° F [3° C] below room temperature. Cooling and fan should start. (External switch must be made in Q539H hookup.)

3. Set system switch at OFF and fan switch at FAN ON. Fan should run continuously. Turn thermostat 5° F [3° C] below room temperature. Heating and cooling equipment cannot be actuated by the thermostat (except in system with dpst remote changeover switch).

4. Operate entire system at least one complete cycle with switches in each position before leaving installation. Turn thermostat dial to the desired setting and move the system and fan switches to their proper positions.