

TAC-110-1 SERIES "D" AIR CONDITIONER
INSTALLATION INSTRUCTIONS

D O ' S & D O N ' T S

1. Do - Read the instructions before starting installation.
 2. Do - Use cardboard template correctly to insure proper location of holes.
 3. Do - Plan location of drain fitting so drain tube will not interfere with closet or cabinet doors.
 4. Do - Use proper size wrenches when coupling refrigerant lines - one for back-up and one to turn slip nut.
 5. Do - Check for refrigerant leaks after installation.
 6. Do - Check for proper operation after installation.
 7. Do - Use good grade water sealant where specified.
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1. Don't - Bend, twist or pull refrigerant tubing more than necessary to make connections.
 2. Don't - Locate thermostat in a position where conditioned air will circulate directly on it.

INSTALLATION INSTRUCTIONS

TAC-110-1 SERIES "D" AIR CONDITIONER

Determine location of air conditioner, keeping the following points in mind. The unit should be located in a position so the hitch weight is not greatly affected.

Note - On 1969 Models unit location is pre-established by the removable Multi-Dome section above wheel area and is secured by attaching to extruded aluminum support members.

The unit should be located so as the living and sleeping areas will both receive conditioned air. The selected location should not interfere with roof ventilators. The condensate drain location should also be considered at this time. See Step #16.

Note that there are only two possible drain positions, one on either side.

The air conditioner mounts on the longitudinal center-line of the trailer. Use the cardboard template provided for determining the unit location and hole locations. Note that the template is stencilled on both sides; "for use inside trailer" and "for use on roof". The template is the same size as the inside evaporator section less mounting flanges. Place the template on ceiling center-line with stencilled side "for use inside trailer" down, so it can be read while in use.

Locate the evaporator with respect to bulkhead or folding door track so that the filter can be removed and the drain lines conveniently routed. In cases where a solid header is encountered, a rectangular opening may be cut in the header above the door to correspond to the evaporator. On others it may be necessary to remove or lower the header above the door.

Make sure a transverse row of rivets (side to side) does not fall in the area where holes are indicated in template. This would indicate a rib and the template should be shifted fore or aft to clear. Longitudinal row of rivets (front to rear) indicating a stringer does not matter, for it may be cut.

So that the plastic shroud which covers the outside unit will not interfere with the roof ventilators, a minimum of 17-1/2" clearance is needed from the center of the 1" dia. hole forward to the edge of a ventilator opening. A minimum of 28" is needed aft.

Tape template to ceiling in selected position and begin with instructions. All steps are co-ordinated with numbers indicated in the exploded illustration.

Step #1. Drill or cut all holes indicated by template (Caution Use care so as not to damage existing coach wiring) 2-1/2" dia. hole in ceiling and roof skin (IMPORTANT - 2-1/2" dia. holes and 1" dia. holes in ceiling and roof must be cut in vertical alignment).

On 1969 Airstream coaches with removable Multi-Dome, it will not be necessary to cut any holes through ceiling skin. However, since the evaporator is prelocated the holes in the roof skin must line-up with the holes on evaporator top cover plate.

On earlier Airstream models (with ceiling skin), remove evaporator top panel by drilling out necessary pop rivets being careful not to damage refrigerant tubing. Pop rivet coil seal back in place. The top panel must be in place on Multi-Dome models. Using template on roof, cut openings for wiring.

Step #2. Pull power and thermostat leads through ceiling area and extend up through holes in roof skin. Plan thermostat location on closet wall or bulkhead where it will not receive direct circulation of conditioned air. Locate approximately 4-1/2' above floor. Allow approximately 7" to extend through roof. Power leads should be at least 14 AWG wire, thermostat leads should be 4 conductor 18 AWG. All applicable codes and standards in wiring should be observed. Power circuit should be separate and protected by a 15 Amp. time delay fuse. Since late 1963 all Airstreams are wired for air conditioning - exact location of wires can be obtained from the Airstream Factory. On units manufactured before 1969 it will be necessary to rerun thermostat wire using 4 conductor 18 AWG.

Step #3. Spread a liberal amount of water sealant around all openings on roof.

Step #4. Insert 2-1/2" dia. sleeve through opening and press against sealant. Drill holes with #30 drill and pop rivet in place. Build up a ring of caulking around opening approximately 1/2" high. Make sure leaks cannot occur between sleeve and roof skin. Slit sleeve in 1/2" segments and peen over whenever possible. See Fig. 3.

Step #5. Insert wires through conduit stubs and press doubler plate against sealant. Pop rivet in place. Seal heads of pop rivets.

Step #6. Remove top cover. Set condenser over conduit stubs of doubler plate so that wires protrude into junction box. Note - The access opening in rear of control box can be removed for ease in inserting wires through control box. Align 1" hole in base pan with 1" hole in roof skin. Sealant should be between base and roof skin. Insert 1" dia. sleeve down through base pan, roof and ceiling. Square-up condenser on trailer. The 2-1/2" dia. hole should also line up. Drill #30 dia. holes down through roof skin using pilot holes around 1" dia. hole in condenser pan. Pop rivet in place securing roof skin and base tightly together. Seal pop rivet heads. Secure 1" dia. sleeve by installing large speed nut provided by holding down on sleeve and pushing speed nut against ceiling or roof skin.

Step #7. Secure unit with side and end flanges. Use caulking under each flange and secure with pop rivets or sheet metal screws. If pop rivets are used seal top of each rivet.

Step #8. Connect wires according to wiring diagram. The access opening in back of control box can be removed for ease in routing wires.

Step #9. Install fan motor - place bushings and washer from parts package over studs - spin on nuts till motor is held down snugly.

Step #10. Install evaporator fan blade (inside coach). Install evaporator up against ceiling by guiding refrigerant lines up through 2-1/2" hole and sleeves through evaporator top panel. Center filter opening about fan blade - square up evaporator and secure to ceiling with pop-rivets or screws. Install filter.

Step #11. Connect refrigerant lines. Do not use force on evaporator lines. Any misalignment of tubing can be corrected by gently forming tubing in condensing section. Cover coil next to fittings with hand towel or cardboard to protect hands. Remove aluminum shipping closures from quick connect fittings. Apply one or two drops of refrigerant grade oil on threads and center portion of male fittings.

CAUTION Connect lines of same diameter together. Start coupling halves together by

hand to insure proper mating of threads. With proper wrench sizes (13/16 and 3/4) tighten until coupling bodies bottom or a definite resistance is felt. Then tighten an additional 1/6 to 1/4 turn. Check for refrigerant leaks at couplings and any soldered joints where tubing has been pulled or twisted during installation. Use a Halide torch or electronic detector. Seal the hole completely around the refrigerant lines using caulking compound; press firmly around lines and against condenser pan.

Step #12. Install condenser fan (4 blades) - hub should be positioned flush with end of motor shaft.

Step #13. Install top cover - make sure front and rear panels on unit are engaged by slip joints in top cover.

Step #14. To install plastic cover shroud, pop-rivet the long "Z" bar sections to condenser pan section just under the condenser coils on each side. Be sure that in drilling for the "Z" bar sections, the coils are not damaged or punctured. Place the shroud over the top of the unit so the cut-out portion will fit the configuration of the top of the unit. Use eight to twelve sheet metal screws to secure plastic shroud to top of the condensing unit.

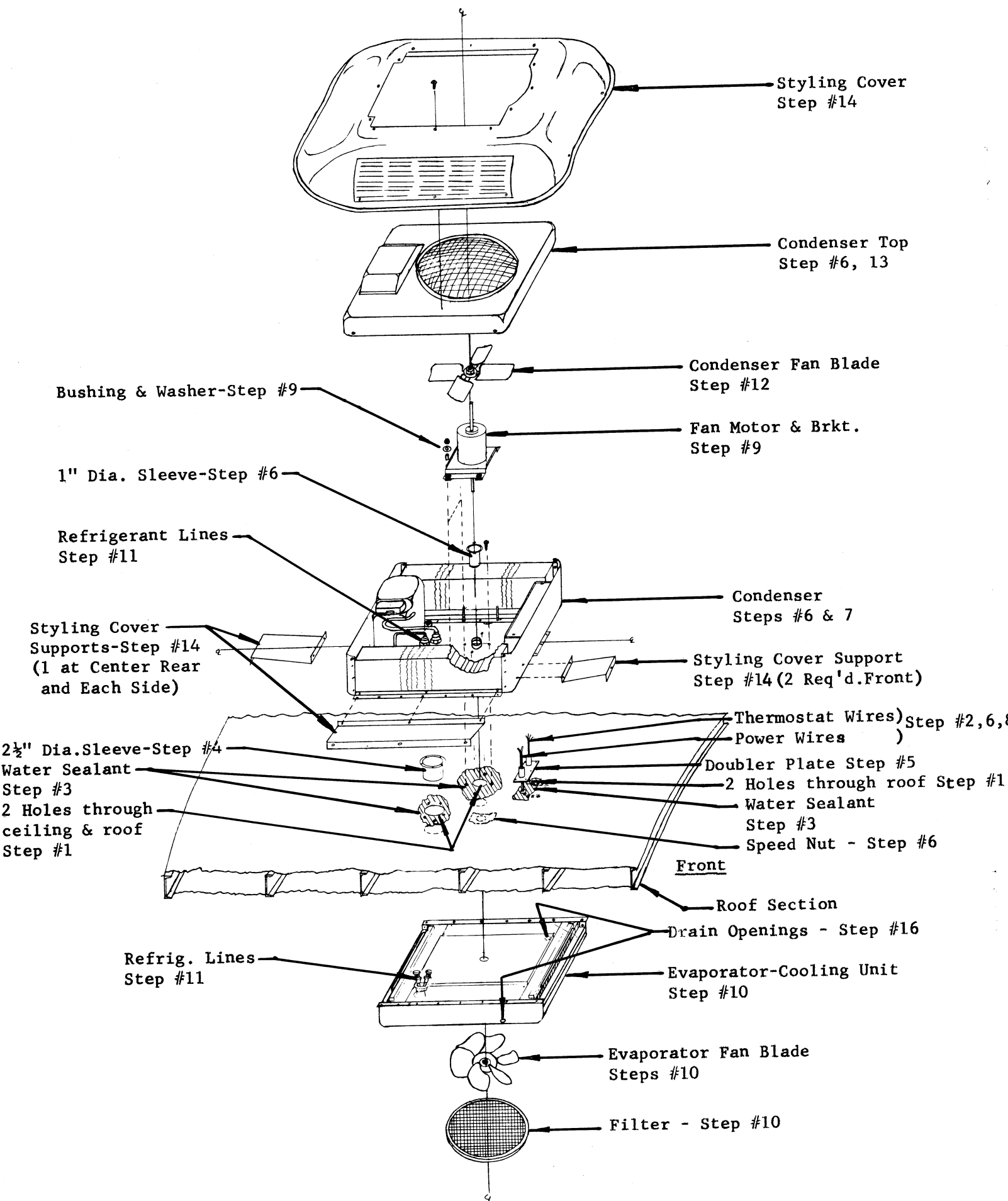
Drill three holes through bottom of louver panel into "Z" bar sections on each side which were secured to sides of condenser under coils. Drill position in this case is horizontal. Do not secure shroud flanges to roof skin.

Step #15. Inside the coach mount and wire thermostat. Mount thermostat sub-base and connect 4 leads being careful to connect wires to terminal letters corresponding with the connections made in the control box.

Step #16. Run condensate drain line as previously planned. One hole will be open and ready to receive plastic tubing provided. If optional location is used, ~~remove~~ small round cover and plug in drain stub and move to drain opening not being used. Make sure plug is securely pressed into unused stub and cover hole with small round cover. Use plastic tubing provided and connect to copper line (1/2" O.D.) Allow approximately 1" drop from evaporator to point where copper tube connection is made.

Step #17. Install inside fan blade (six blades) and filter. Check for proper operation. The temperature difference between evaporator entering and leaving air should be 15 to 20°F when the outside temperature is 85°F or above. Secure Operating Instruction decal to back of cabinet door near unit for owner's reference.

Present Service and Trouble Shooting Guide and Warranty Card to owner.



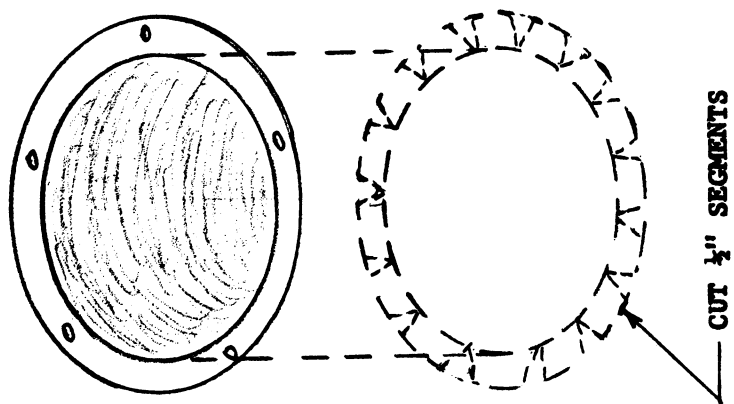
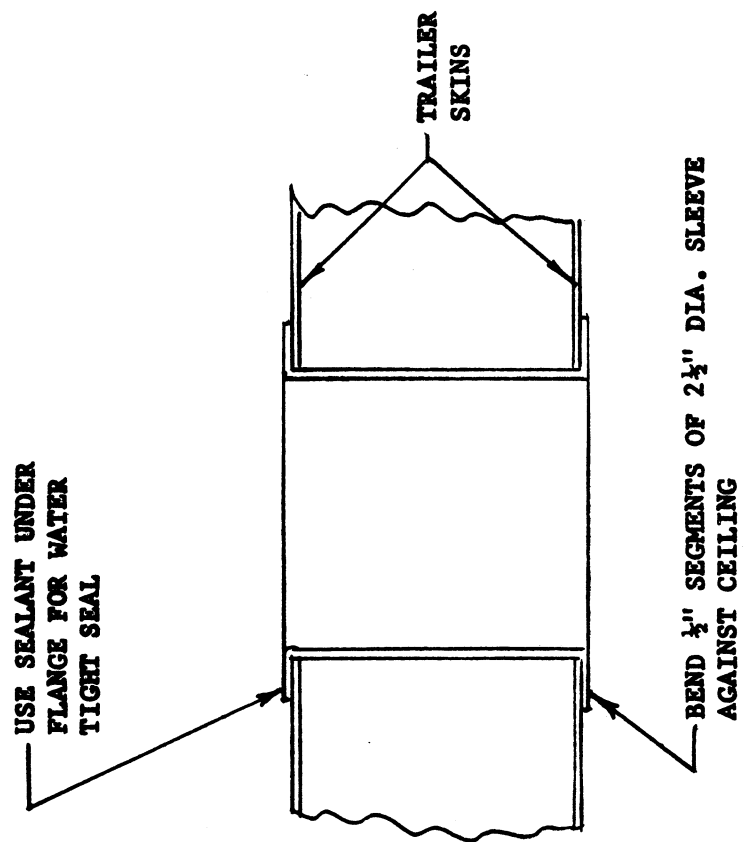


FIGURE 3

