

## B. Refrigerant Hose Installation

1. Install "O" Rings and connect hoses to fittings on unit.
2. Route hoses over the top of the cab and down the back wall to the compressor. On tilt cab vehicles, route hose to the cab pivot point and then to compressor.
3. Use clamps provided to secure hoses and prevent hose movement. Hoses must not come in contact with hot vehicle components and they should not be subjected to mechanical abrasions.

## C. Drain Hose Installation

1. Locate 2 long drain hoses and install on rear facing drain tubes. Make sure drain tubes are routed with a vertical run in them. Secure drain tubes with tie wraps. Do **not** overtighten tie wraps as this could cause inadequate drainage.
2. Locate 2 short drain hoses and install on forward facing drain tubes.
3. Inspect to be sure that drain hoses are not kinked or squished, especially at the back of the cab.

## D. Wiring

**Note: Unit is wired for a negative ground.**

1. Disconnect battery.
2. **Orange and Black wires (condenser fan circuit):** Connect the Orange wire to the ignition switch supplied power through a 30 amp circuit breaker (15 amp/24V) and the black wire to ground.
3. **Red and Black wires (motor blower circuit):** Connect the red wire to ignition switch supplied power through 30 amp circuit breaker (15 amp/24V) and the black wire to ground.
4. **Green wire (compressor clutch circuit):** Connect the compressor clutch. Route the wire around the hinge point before connecting to compressor clutch on tilt-cab installations.
5. See Wiring Schematic (RD-3-19406) provided in installation kit.

## E. Air Diffuser Plenum

1. Install headliner (if it was removed). Make sure that wire loom exits plenum and is not pinched.
2. Install four M5 x 0.8 x 75 in the plenum assembly and secure with provided retainers. If you have a thin roof and thin or no headliner you may want to use the four M5 x 0.8 x 50
3. Place one gasket in plastic plenum assembly. Two foam gaskets may be required if the headliner is over 1" thick. If a second gasket is required you can order it (RD-2-1297-0). The two gaskets can be glued together for ease of installation.
4. Place plenum in place and start one M5 screw.
5. Attach the switch and thermostat to the plenum with three 7/16-28 nuts (two with the switch and one with the thermostat).
6. Start the remaining screws and tighten plenum screws evenly until the plenum fits snugly against the headliner. **NOTE:** Do not use an impact wrench to tighten these bolts. Do not exceed 30 in-lb (3.4 Nm) torque for plenum bolts.
7. Align D-flats on the knobs and push them on.

## F. Refrigerant Charge Guide

Hose Length in Feet	R-134a in oz.	Hose Length in Feet	R-134a in oz.
10	26.0	15	26.5
20	27.0	25	27.4
30	27.9	35	28.4



# R-6101 Rooftop Air Conditioner

## INSTALLATION INSTRUCTIONS

### MODEL R-6101 ROOFTOP AIR CONDITIONER INSTALLATION INSTRUCTIONS

#### NOTE:

1. Please read instructions completely before beginning work.
2. Check that all items listed on the RD-2-7314-0 installation kit have been included.
3. A compressor, compressor bracket(s), belts and refrigerant are required to complete the installation. These items are available from your RED DOT Distributor.
4. The compressor must have sufficient capacity to allow the unit to deliver the rated BTU output. A compressor displacing 9 cubic inches per revolution (Sanden SD7H15 or equiv.).

#### A. Mounting the unit on the cab roof

1. Remove the headliner or loosen enough to drop the center portion (Disregard if no headliner).
2. Determine the most suitable location for mounting the air conditioning unit.
  - a. Mark the front-to-rear centerline of the cab on the outside of the cab roof.
  - b. Place the mounting template on the roof using the centerline as a guide.
  - c. Consider the position of the horn(s) and marker lights.
  - d. Ensure that air flow to the unit is not obstructed.
  - e. Do not mount the unit with the front lower than the rear, as this will prohibit water drainage.
  - f. Avoid cutting roof stiffeners if possible. If stiffeners are cut or roof is weakened due to the cut-out, reinforcement may be required.
3. Tape the template to the roof at the desired location. Mark the mounting hole location and the roof cut-out area (punch or scribe the roof).
4. Cut the roof where marked and drill the 1/2" mounting holes. Remove burrs and sharp edges.
5. Temporarily install the headliner and trace the cut-out onto it from the cab roof. Remove the headliner and cut out the area marked. Use caution and do not cut the headliner opening larger than the roof opening (check against template if in doubt).
6. Should roof reinforcement be required, fabricate and install at this time.
7. Clean the outside roof area around the cut-out and mounting holes using a mild solvent.
8. Apply a thin film of adhesive 1" wide around upper surface of roof cut-out and mounting holes. Apply sealer to the face of the sealing ring on the unit. See Figure 1.
9. Set unit on cab. Make sure that drain tube is not pinched and roof brace is installed, if required.
10. Select spacers as required to level and support unit. See Figure 2.
11. Apply adhesive to the faces of all spacers and locate over mounting holes.
12. Tighten the four cap screws provided evenly until the spacers take the load and just begin to "bulge" slightly. Do not overtighten. Bottom of unit and roof may distort and cause water leakage.