

## FIELD CUT OPENINGS FOR DUCTS, DAMPERS AND SPECIAL ACCESS FOR TITUS REVOLUTION DOUBLE WALL 2" PANELS



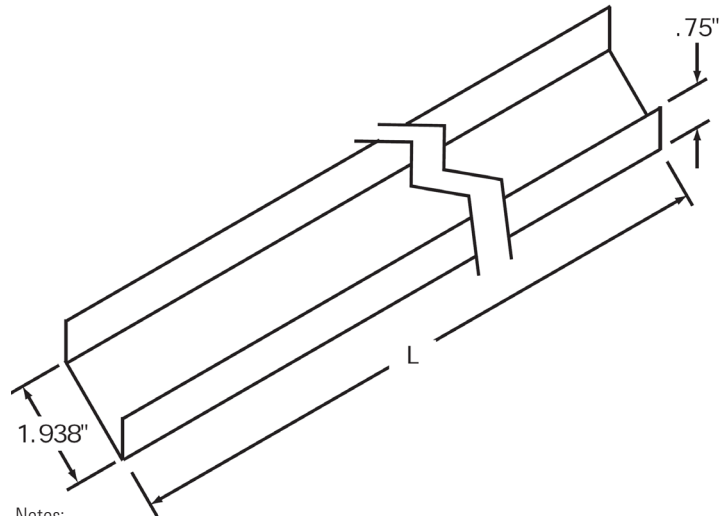
*A premanufactured replacement panel with your specified opening size and location can be purchased through Titus.*

### TOOLS REQUIRED

- Screw gun with #3 Phillips bit
- Gasket scraper
- Broad, thin pry bar
- Drill motor
- One-eighth in drills
- Pop rivet gun
- Hole saw-approximately 1-1/2" diameter for starter holes
- Power saw or power shear for metal cutting
- Power cords as required
- Awl

### MATERIAL REQUIRED

- Two prefabricated pieces of "C" channel used for stiffeners and insulation covers equal to the height of the new opening. If this were a side panel, this would be "vertical". This channel is 20 gauge galvanized sheet metal, 1.938" wide with .750" legs (see Fig. 1).
- Two prefabricated pieces of "C" channel used for stiffeners and insulations covers equal to the width of the new opening. If this were as side panel, this would be "horizontal". This channel is 20 gauge galvanized sheet metal, 1.938" wide with .750" legs (see Fig. 1).



#### Notes:

1. Select the C-Channel that is nearest to the size of your opening and cut to fit
2. Available lengths (L) for stiffeners

PART NUMBER	LENGTH (L)
087-40048-050	47.938"
087-40072-050	71.938"
087-40127-050	126.938"

FIG. 1. — C-CHANNEL

- 1/8" steel pop rivets for 1/4" working thickness
- Paint, cold galvanized
- Paint, touchup spray, champagne, P/N 013-03322-000 (for outdoor unit exterior only)
- Caulk, P/N 013-02966-011 gray for indoor units or 013-03317-040 for outdoor units with champagne paint
- For door and panel flanges, use gasket, neoprene .75"w x .25" thk, P/N 021-17722-000
- Clean up supplies

### PROCEDURE

1. Cut the "C" Channel stiffeners to fit opening. Use for stiffening the cut panel and for sealing of insulation and probable air leakage areas.
2. Make sure any components; bulkheads or other obstructions are disconnected from panel inside and out



*Panels can often be cut in place without removing from the air handling unit*

3. When removing panel, to prevent damage of unit remove panel slowly allowing butyl tape to release
4. Layout location and dimensions of opening to be cut. Do this on both sides of double wall panels.
5. Cut desired opening in panel insuring cuts on both sides line up
6. Insert stiffeners, legs first, by tapping into panel until flush with new panel opening. This simultaneously forces the legs of "C" channels between the foam insulation and the liner and between the foam insulation and the outer sheet metal without damage to the insulation. Be sure the broad sides of the "C" channels line up to form the desired opening dimensions. This should be flush with the edges of the new opening.
7. Secure "C" channels with pop rivets at 3" intervals on a line 1/4" from the new opening edges. When fastening with pop rivets avoid buckling or bulging of sheet metal by applying rivets simultaneously on each side of the opening, working from center to corners.
8. Apply gray sealant to corner seams and all seams inside the new opening
9. Paint rivets and raw edges of sheet metal with cold galvanized paint
10. If the panel was removed, clean away damaged or residual gasket or sealing compound and replace with appropriate material (see material list above)
11. Install panel on air handling unit carefully using panel screws (see material list above)
12. All reinstalled panels and alterations of panels must provide integrity equal to original equipment specifications
13. Reconnect any components, bulkheads or other fixtures that were disconnected from panel in step #2
14. Thoroughly clean up inside and outside air unit

#### TOOLS REQUIRED

- Screw gun with #3 Phillips bit
- Gasket scraper
- Broad, thin pry bar
- Awl

#### MATERIAL REQUIRED

- Replacement panel available through Titus. Please confirm order # when requesting.
- Caulk, P/N 013-02966-011 gray for indoor units
- For door and panel flanges, use gasket, neoprene .75" w x .25" thk, P/N 028-11873-010
- Panel screws 1/4" x 3/4" pan head thread forming sheet metal screw, P/N 021-17722-000
- Clean up supplies