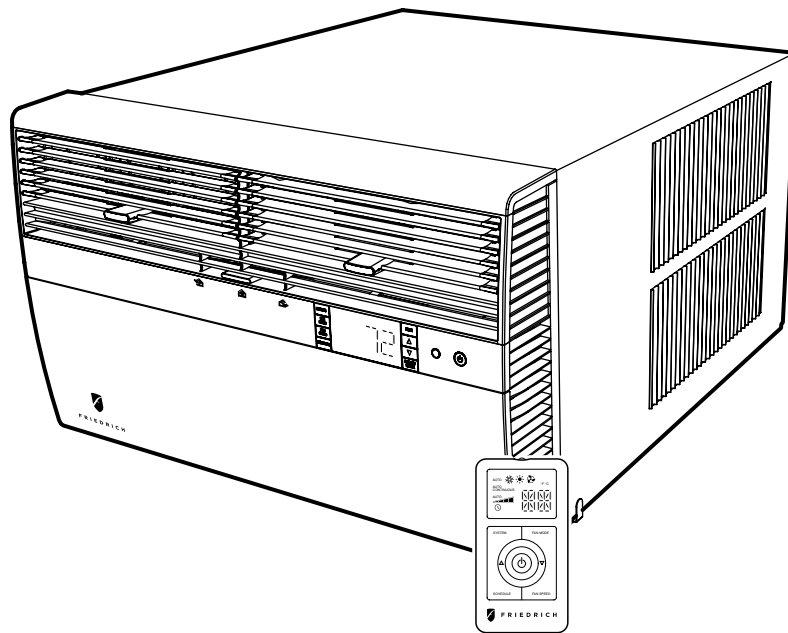




FRIEDRICH

Room Air Conditioners



Standard Chassis Models

Kühl

115-Volt: SS08, SS10, SS12, SS14, SM15,
208-230-Volt: SS12, SM18, SM21, SL24, SL28, SL36

Kühl+

Electric Heat

115-Volt: EQ08, YS10
208-230-Volt: ES12, ES16, YS12, EM18,
YM18, EM24, EL24, EL36, YL24

Kühl+

Heat Pump

Airflow Selection and Adjustment


Air flow direction adjustment


The airflow path may be adjusted to distribute air independently from the left or right side of the discharge opening. Each of the banks of louvers can be directed left, right, up or down in order to achieve the most optimum airflow positioning.

To adjust airflow direction grab the lever in the center of the louver bank and move it in the direction that you would like the air to be directed. Please note that it is normal that airflow may be stronger out of one side of the louvers than the other.

Fresh air and exhaust control

Your air conditioner has the ability to bring fresh air into the room or exhaust stale air out of the room. The control slide is found on the upper part of the unit (See Figure 13).

TO BRING IN FRESH AIR – Move the lever to the **Fresh Air**  position which allows outside air to enter the room. This is useful in fall and spring as a means of bringing in fresh outside air when using FAN ONLY. It can also be used in the summer with the compressor in the Cooling Mode if you wish.

TO EXHAUST INDOOR AIR – Move the lever to the **Exhaust**  position. This will allow stale air to be expelled to the outside of the dwelling. This is especially handy in the spring or fall when indoor air tends to get stale, or after a social gathering involving smokers, or to remove cooking odors.


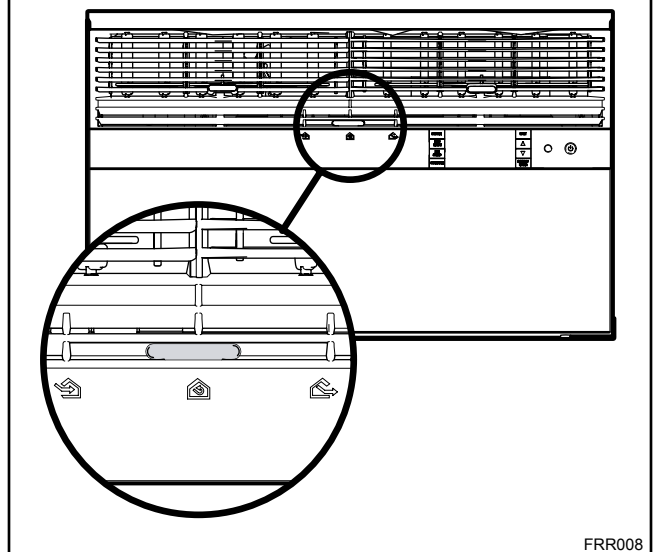
BEST PERFORMANCE – Move the lever to the **Re-Circulate Position** . This is the most efficient mode for cooling and heating.


Figure 13



Installation Instructions

READ THIS FIRST! Electrical Requirements

⚠ WARNING



Electrical Shock Hazard

Make sure your electrical receptacle has the same configuration as your air conditioner's plug. If different, consult a Licensed Electrician.

Do not use plug adapters.
Do not use an extension cord.
Do not remove ground prong.

Always plug into a grounded 3 prong outlet. Failure to follow these instructions can result in death, fire, or electrical shock.

IMPORTANT: Before you begin the actual installation of your air conditioner, check local electrical codes and the information below. Your air conditioner must be connected to a power source with the same alternating current (A.C.) voltage and amperage as marked on the name plate located on the chassis. Only A.C. can be used. Direct Current (D.C.) cannot be used.

CIRCUIT PROTECTION – Use on single outlet circuit only. An overloaded circuit will invariably cause malfunction or failure of an air conditioner, therefore, it is necessary that the electrical protection is adequate. Due to momentary high current demand when the air conditioner starts, use a "TIME DELAY" fuse or a HACR type circuit breaker. Consult your dealer or power company if in doubt.

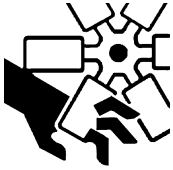
Refer to the electrical name plate located on the air conditioner chassis (See page 2) to determine the correct fuse or circuit breaker amperage for your model (See Table 1 on Page 6 for electrical receptacle types).

The power cord has a plug with a grounding prong and a matching receptacle is required.

The following instructions are for standard chassis model groups distinguished by the first two letters of the model designations and cabinet sizes listed in Table 3.

MODEL DESIGNATION	CABINET SIZE (H x W x D)
SMALL CHASSIS - SS, ES, YS	15 15/16" x 25 15/16" x 29" (405 mm x 660 mm x 737 mm)
MEDIUM CHASSIS - SM, EM, YM	17 15/16" x 25 15/16" x 29" (455 mm x 660 mm x 737 mm)
LARGE CHASSIS - SL, EL, YL	20 3/16" x 28" x 35 1/2" (513 mm x 711 mm x 851 mm)

⚠ WARNING



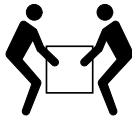
MOVING PARTS HAZARDS

* Do not operate unit out of sleeve or with front grille removed.

* Do not place hands in blower or fan blade areas.

Failure to do so can result in serious injury.

⚠ CAUTION



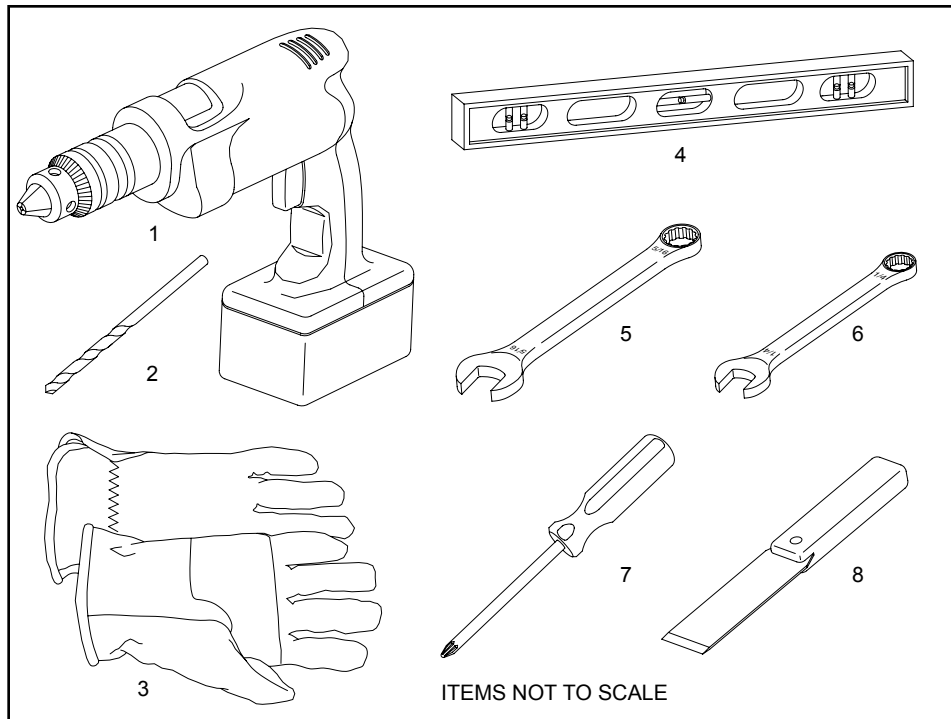
Excessive Weight Hazard

Use two or more people when installing your air conditioner.

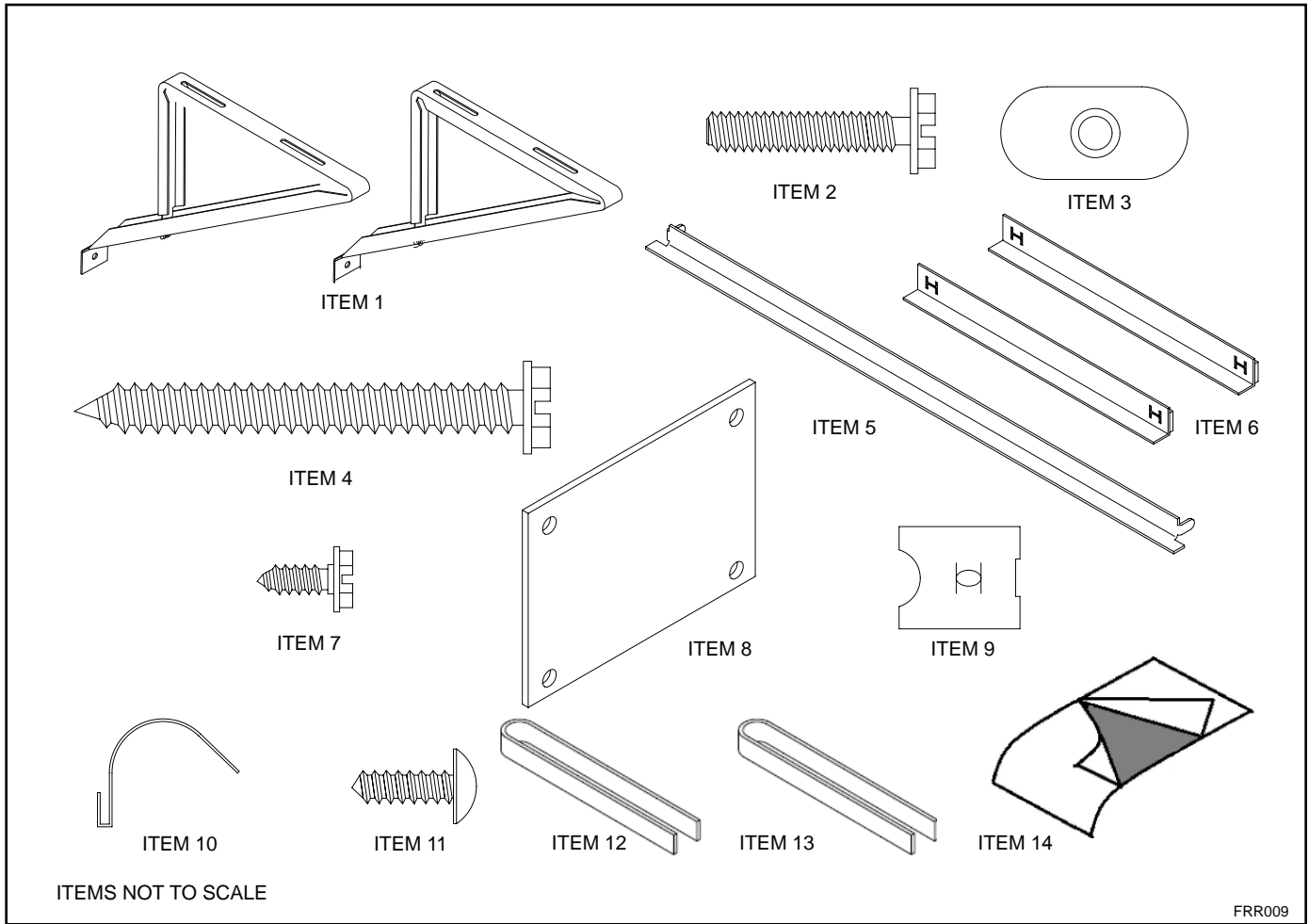
Failure to do so can result in back or other injury.

- ### Recommended Tools

 1. Power Drill
 2. 5/32" Drill Bit
 3. Gloves
 4. Carpenters Level
 5. 5/16" Wrench
 6. 1/4" Wrench
 7. #2 Phillips Screw Driver
 8. Putty Knife or (wood stir stick)



INSTALLATION HARDWARE AND ACCESSORY DETAIL



Window Mount Installation Hardware

ITEM NO	DESCRIPTION	QTY.
SHELL MOUNTING PARTS		
1	SUPPORT BRACKET	2
2	SCREW, 10-24 x 1" HEX HEAD	4
3	10-24 FLAT WELD NUT	4
4	SCREW, SHEET METAL #12 x 2"	7
WINGBOARD ANGLE MOUNTING		
5	WINGBOARD ANGLE, TOP	1
6	WINGBOARD ANGLE, SIDE	2
7	SCREW, SHEET METAL #8 x 3/8"	2
WINGBOARD MOUNTING PARTS		
8	WINGBOARD (MASONITE)	1
9	"J" TYPE SPEED NUT	4
10	WINGBOARD CLIP (SPRING STEEL)	4
11	SCREW, #8 x 1/2" PHILLIPS TRUSS HD.	4
WINDOW SEALING		
12	WINDOW SEAL GASKET (DARK FOAM)	1
13	CHASSIS SEAL GASKET (LIGHT FOAM)	1
14	R1 INSULATION PANEL (GREY FOAM)	1

Thru-the-wall Installation Hardware

ITEM NO	DESCRIPTION	QTY.
MOUNTING PARTS		
4	SCREW, SHEET METAL #12A x 2"	7
13	CHASSIS SEAL GASKET (LIGHT FOAM)	1

NOTE: Kühl + models do not come with window mounting components. When mounting a cooling and heating model a window installation kit must be purchased separately.

KWIKS – For all ES and YS models.

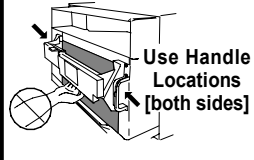
KWIKM – For all EM and YM models.

KWIKL – For all EL and YL models.

Standard Window Installation

NOTE: Hardware and accessories used during installation are shown on page 18. Each part will be referred as Item No.

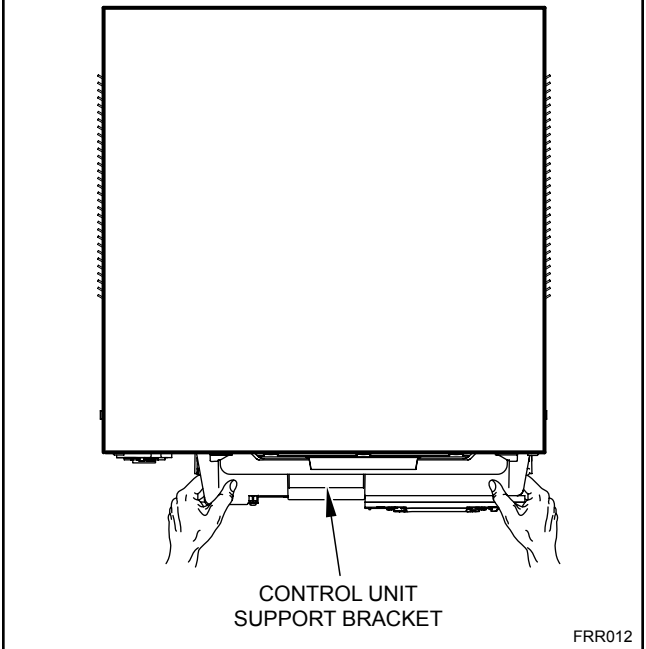
STEP 1. Remove the chassis Entrygard retainer by removing the far right screw (See Figure 14), save this screw to reattach the chassis retainer after installation (Step 12). Also, remove and discard the two retainer screws and washers located at the rear of the unit (See Figure 14).

CAUTION	
 <p>Use Handle Locations [both sides]</p>	<p>Handle Use</p> <p>Use handle on both sides to pull unit from sleeve.</p> <p>Do not push, pull or lift from center of support.</p>

STEP 2. Hold the cabinet stationary, then use the hand grips on both ends of the control unit support bracket to pull the chassis out of the cabinet (See Figure 15).

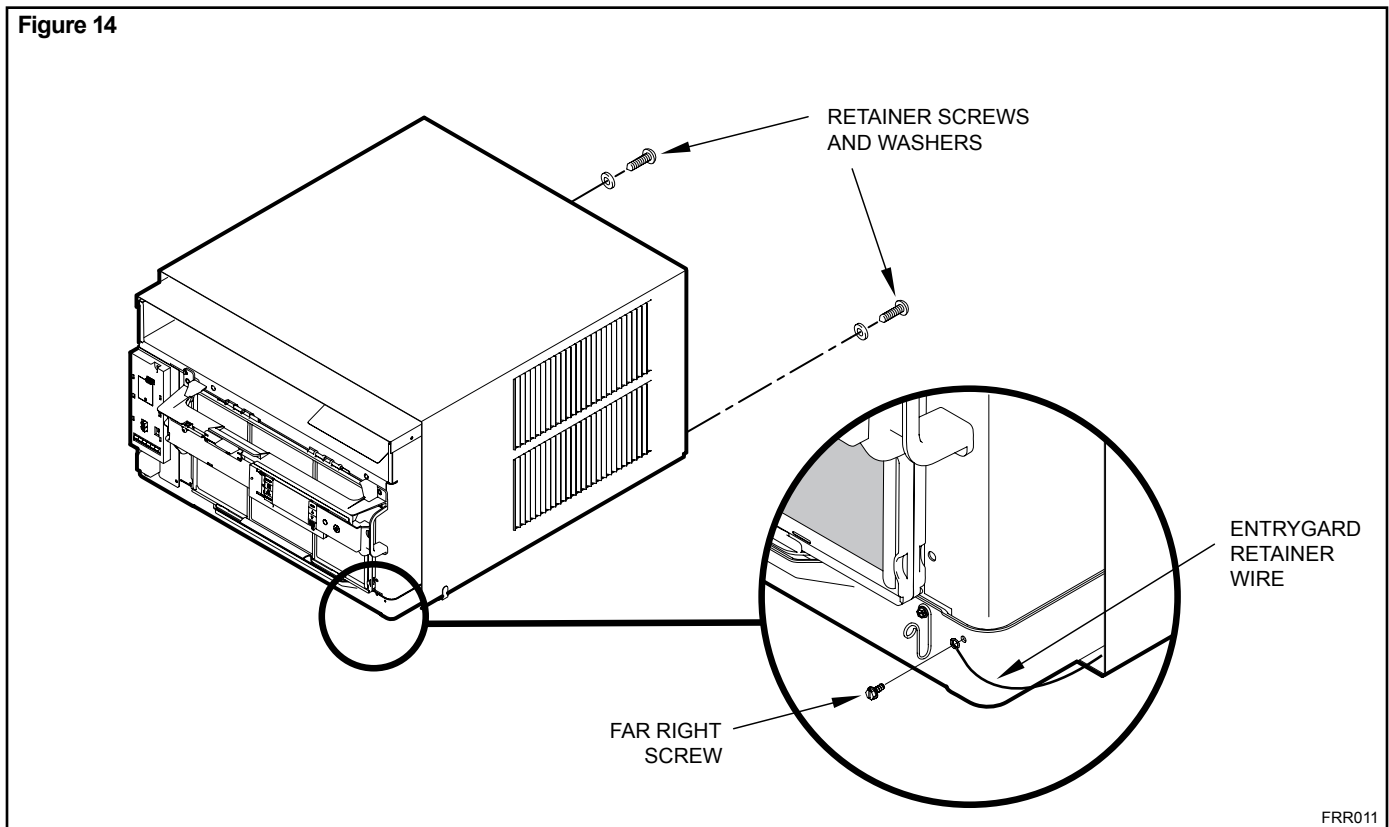
STEP 3. Remove the large white foam blocks used to restrain the compressor during shipment (See Figure 16). Inspect base pan for dislodged white foam blocks and remove. Do not remove any other foam parts.

Figure 15



STEP 4. Anchor the side angles (Item 6) by engaging the tabs of the lower sill plate (See Figure 17, Detail B-2) with the loops of the side angle. Engage the tabs of the top angle (Item 5) with the top loops of the side angle (See Figure 17, Detail B-1). Install two (2) screws (Item 7) to secure the top angle tabs and the side angle to the cabinet (See Figure 17, Detail B-1).

Figure 14



⚠ CAUTION



Remove Shipping Blocks

Prior to operating the unit remove the foam shipping blocks.

Failure to do so may result in damage to the unit which is not covered by the manufacturer's warranty!

- STEP 5.** Check the window sill and frame to be sure they are in good condition and firmly anchored to the wall. Repair if necessary.
- STEP 6. CABINET MOUNTING** – Raise the lower window 1/4" more than the height of the cabinet. Carefully slide the cabinet through the opening until the lower sill plate channel rests behind the window sill and the top angle rests against the window (See Figure 18). Center the cabinet within the opening. Drill three (3) 5/32" diameter pilot holes into window sill using the holes in the cabinet sill plate as a guide. Install three (3) #12 x 2" long screws (Item 4) (See Figure 18).
- STEP 7. OUTSIDE SUPPORT MOUNTING** – Refer to Figures 19 and 20. Assemble the support brackets (Item 1) to the bottom of the cabinet with four (4) 10-24 1" long screws (Item 2) and four 10-24 flat nuts (Item 3). Adjust the support brackets, using a combination of the elongated holes of the bracket and different hole locations in the cabinet, to bring the bottom support bracket pads in contact with the wall. A 1" x 4" or 2" x 4" SPACER SHOULD BE USED BETWEEN THE WALL AND SUPPORT THE BRACKETS WHEN INSTALLED ON ALUMINUM OR VINYL SIDING. Drill 5/32" diameter pilot holes and secure the brackets to the wall with two (2) 12A x 2" long screws (Item 4).

NOTE: DO NOT LEVEL the cabinet from front to back. Make sure there is approximately 3/8" to 1/2" slope (1/8 to 1/4 bubble on level) toward the outside of the house.

Adjust the support brackets to provide an inside-to-outside slope for excess condensation drainage (Refer to Standard Window Installation, Figures 19 through 23). Tighten all screws.

Alternate support method A: If you have a wide window sill which prevents you from mounting the brackets as shown in Figure 22, try the following: Using the elongated holes and different hole locations in the cabinet, set the placement of the bracket to support the unit's weight (Figure 22). Tighten all screws.

Alternate support method B: If the window ledge gap is narrow, try the following. Bend the bracket end tab flat. Cut the bracket in two (2) places as shown in Figure 23. Bend the short piece so it will be vertical when installed. Adjust the placement as required. Tighten all screws.

- STEP 8.** Measure and cut the wingboard panels (fit with about 1/8" clearance) from the supplied Masonite (Item 8) to fit the space between the window side channels and cabinet. (Figure 24). Make sure you include the depth of the window channel.

NOTICE



For YOUR security and safety, YOU must provide a means of preventing the upper part of the window from opening.

- STEP 9.** To assemble the wingboard panels, push on the "J" type speed nuts (Item 9) and spring steel clips (Item 10) (See Figures 25) on page 26. Secure each panel with two (2) screws (Item 11).

Figure 16

TOP VIEW OF UNIT

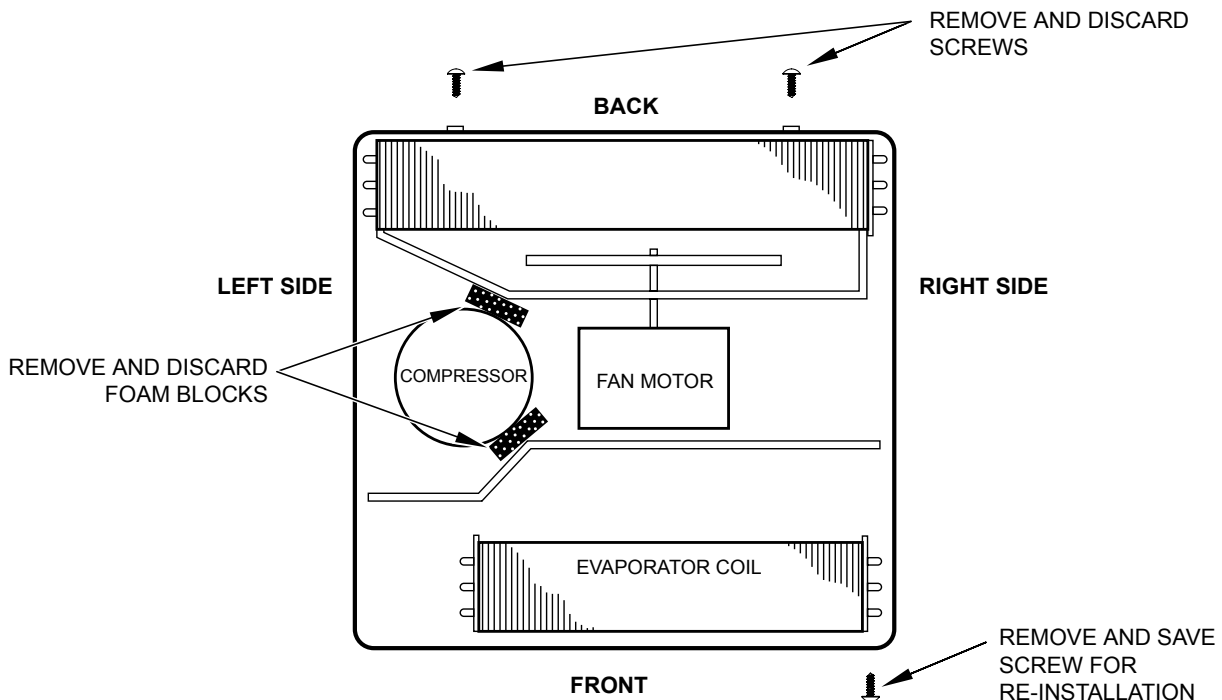
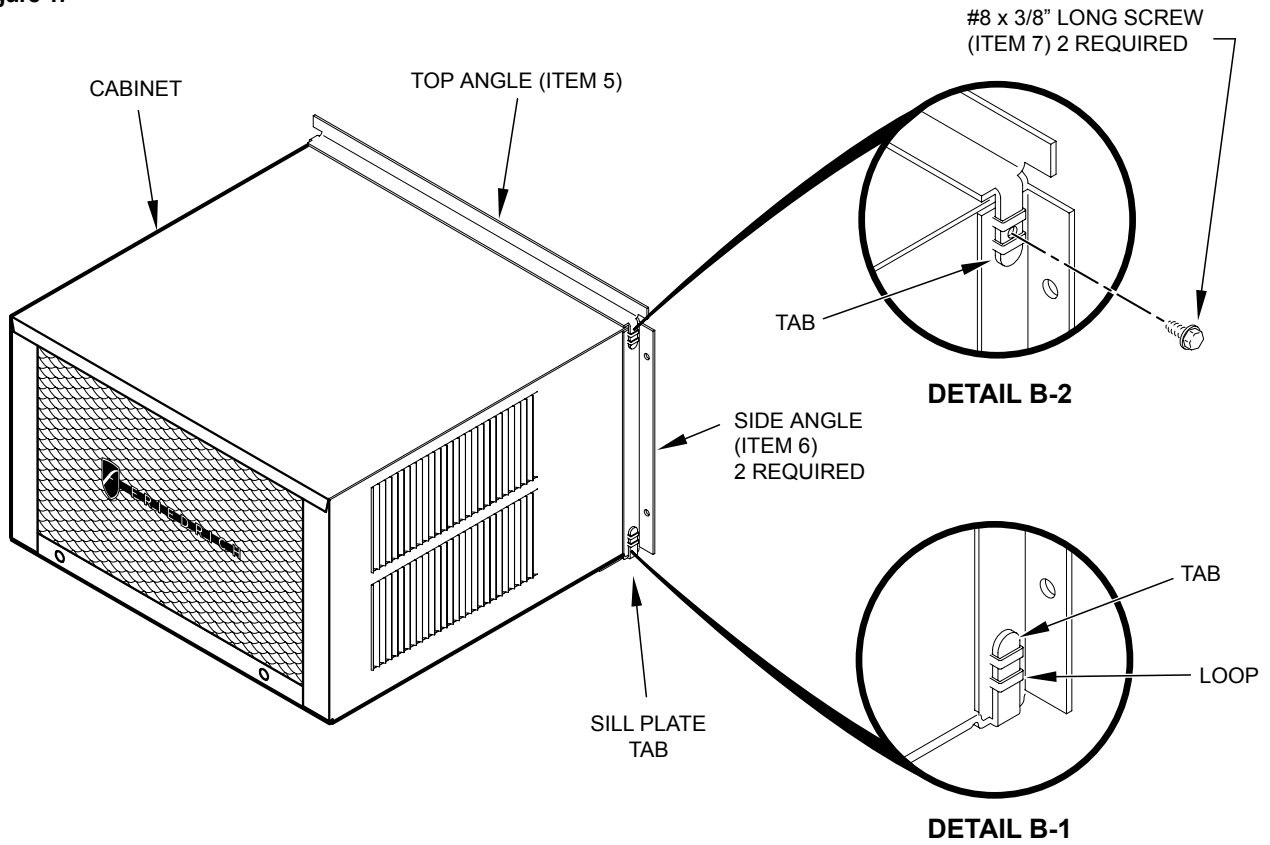
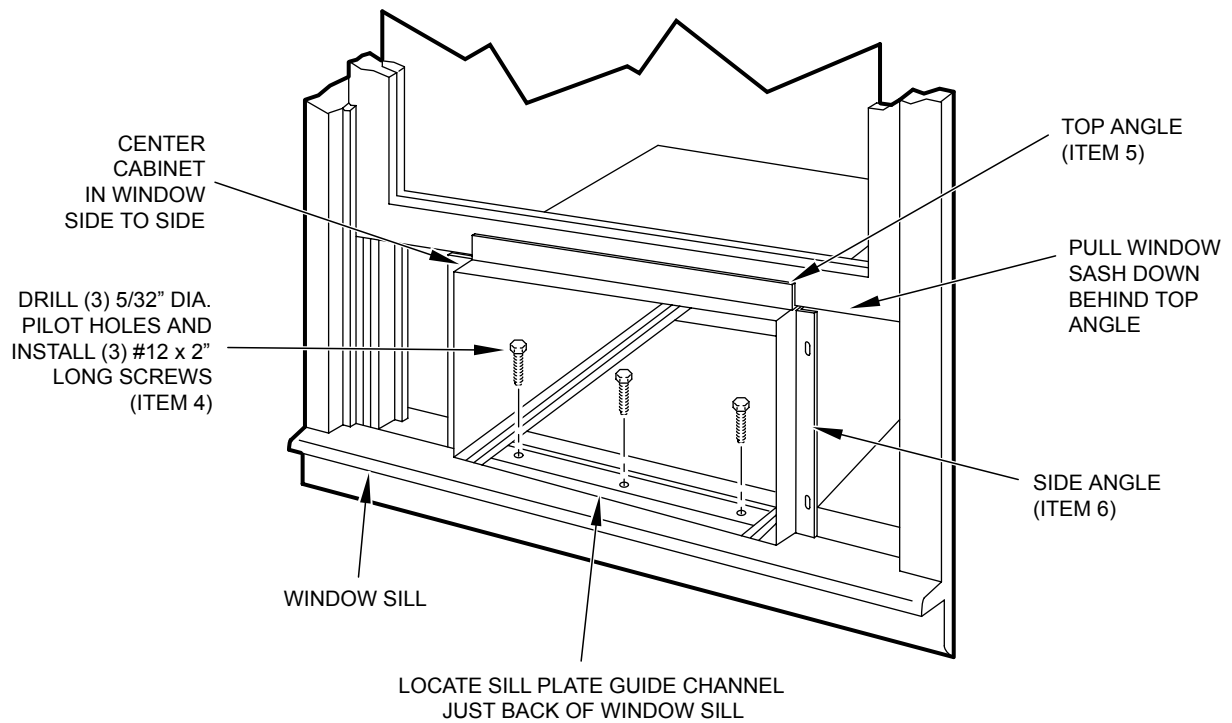


Figure 17



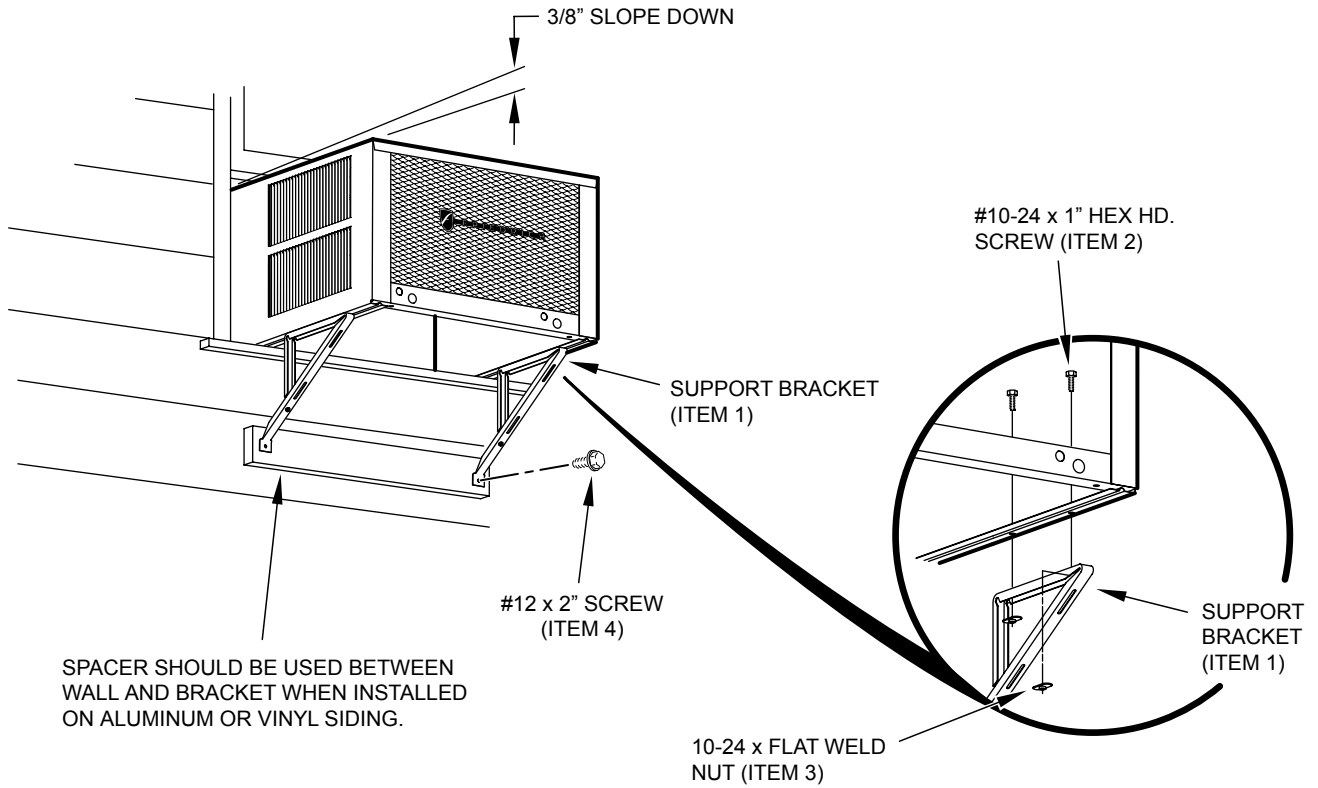
FRR013

Figure 18



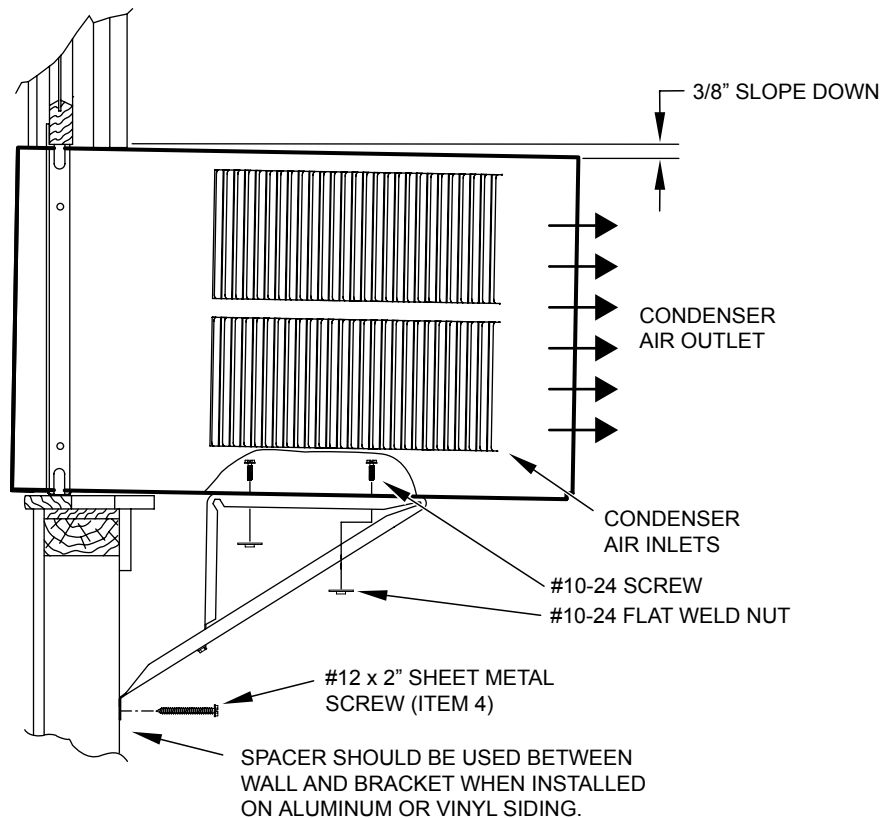
FRR014

Figure 19



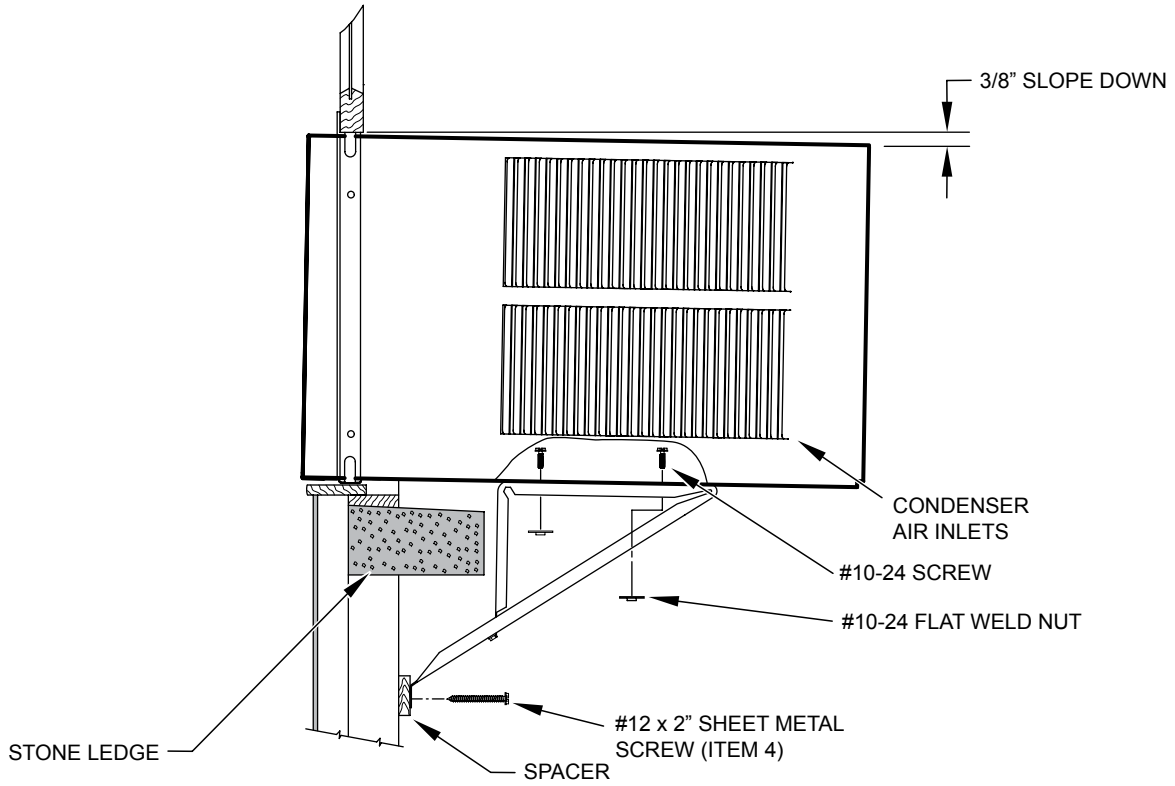
FRR015

Figure 20



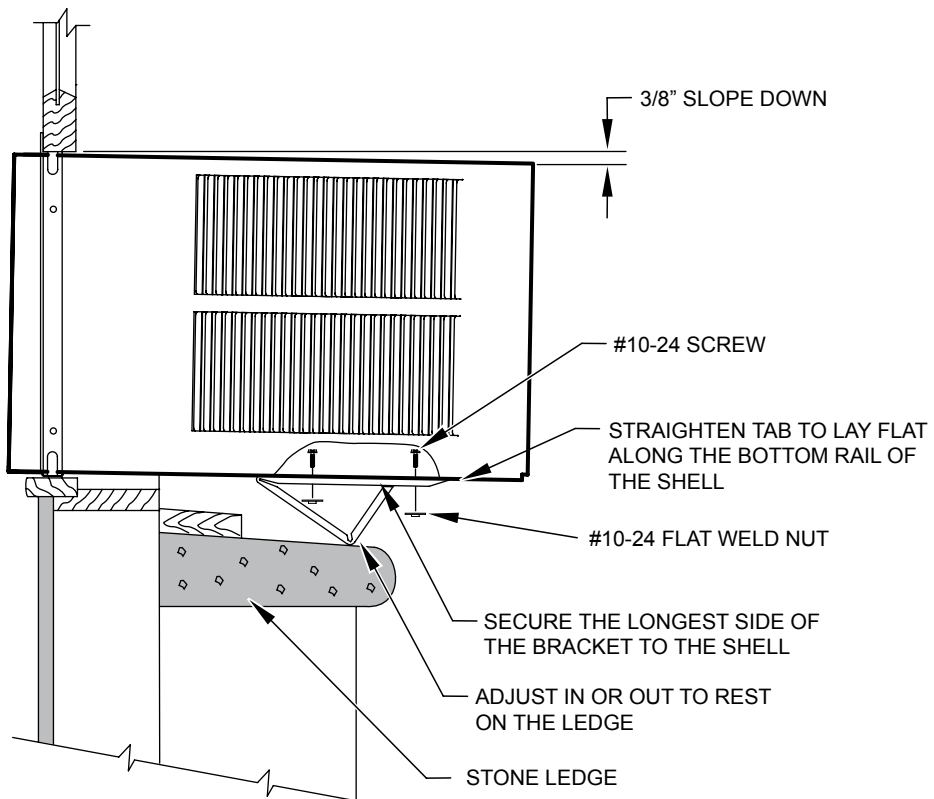
FRR016

Figure 21



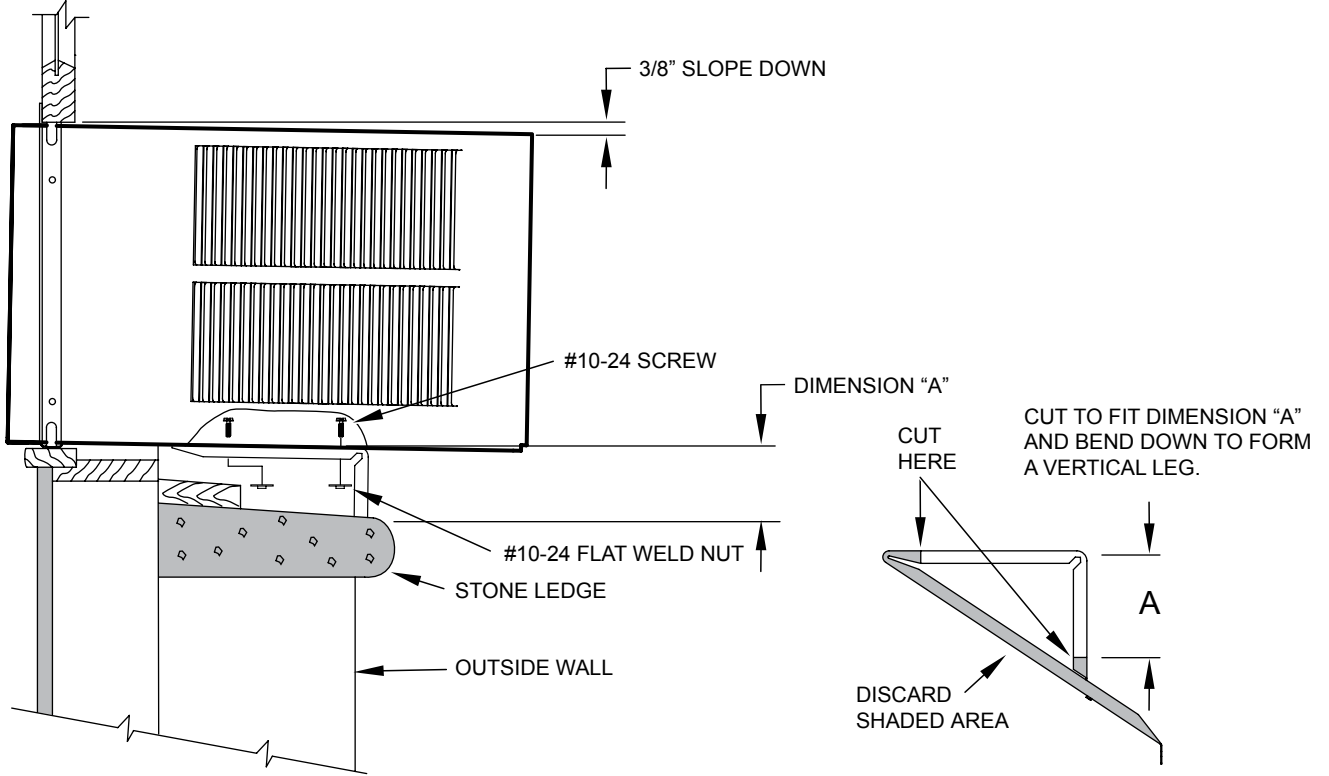
FRR017

Figure 22



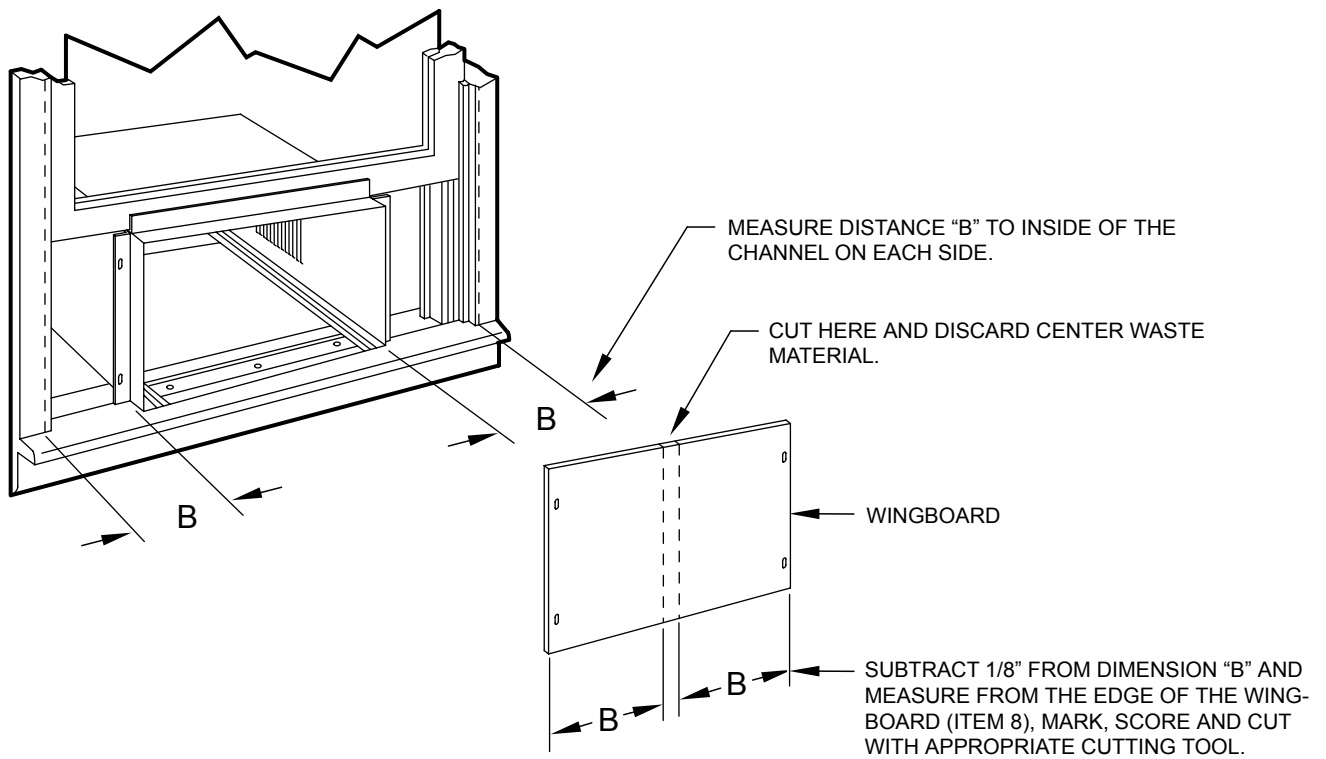
FRR018

Figure 23



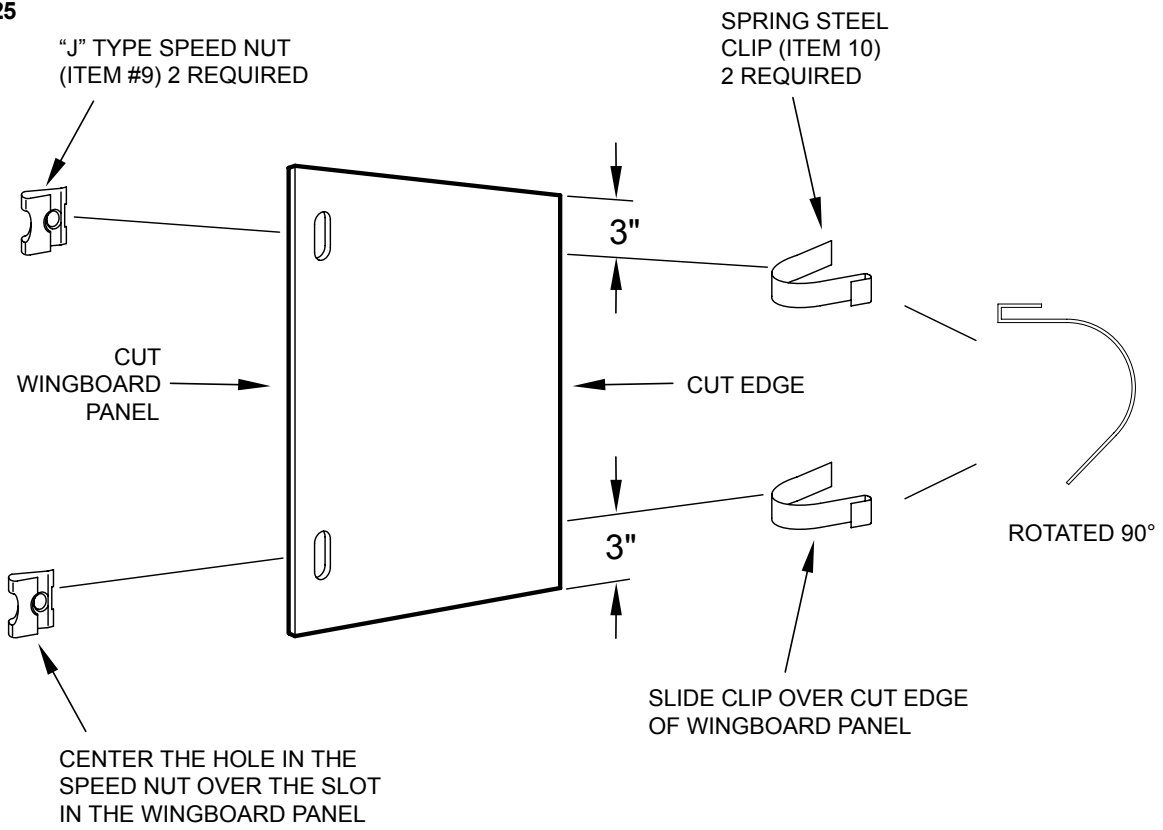
FRR019

Figure 24



FRR020

Figure 25



FRR021

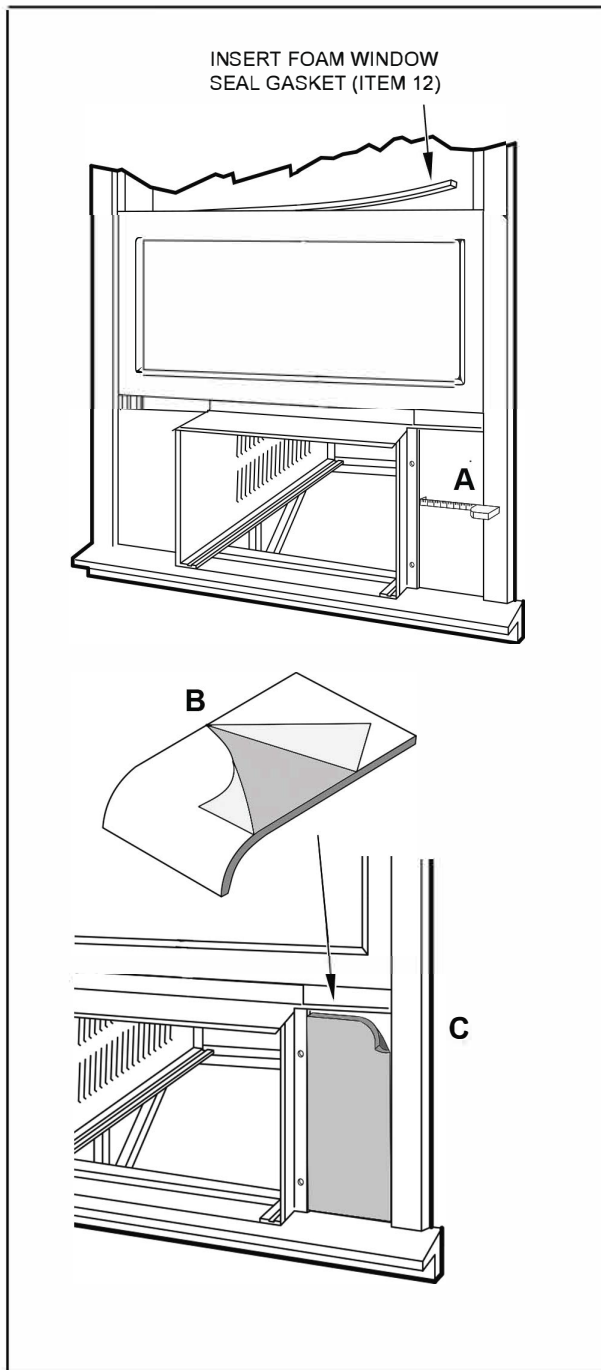
STEP 10. INSTALL THE R1 INSULATION PANEL – To minimize air leaks and ensure optimal insulation, install the included R1 insulation panel. (14 in parts list) (See Figure below A-C).

First, measure the width from one side of the cabinet/sleeve (covering the side angles where the wingboard was just secured) to the end of the wingboard. (See Figure A)

Next cut the R1 insulation panel to the measured width and remove protective cover, exposing adhesive on back panel (See Figure B)

Last, evenly apply the adhesive side of the panel across the entire height and width from side angle to wingboard panel. (See Figure C)

Repeat the steps above for the other wingboard panel.



STEP 11. INSTALL THE WINDOW SEALING GASKETS – Measure and cut the vinyl window seal gasket (grey color, Item 12) to fit the width of the window, and install as shown in Figure 29. Pull the window sash down behind the gasket. Measure and cut the dark foam window seal gasket (Item 13) and install it between the upper glass panel and the top part of the lower window sash (Figure 29).

⚠ CAUTION	
	<p>Excessive Weight Hazard Use two or more people when installing your air conditioner.</p> <p>Failure to do so can result in back or other injury.</p>

⚠ CAUTION	
	<p>Cut/Sever Although great care has been taken to minimize sharp edges in the construction of your unit, use gloves or other hand protection when handling unit</p> <p>Failure to do so can result in minor to moderate personal injury.</p>

STEP 12 Carefully team lift the chassis and set it into the cabinet. Slide the chassis stopping approximately 3" from full insertion. Insert the chassis seal gasket (Item 14) one inch deep between the chassis and the cabinet (See Figure 29) as shown on page 28. A paint stir stick or ruler might be helpful here. Begin inserting the gasket at either bottom corner and go up the side, across the top, and down the opposite side. Then push the chassis all the way into the cabinet.

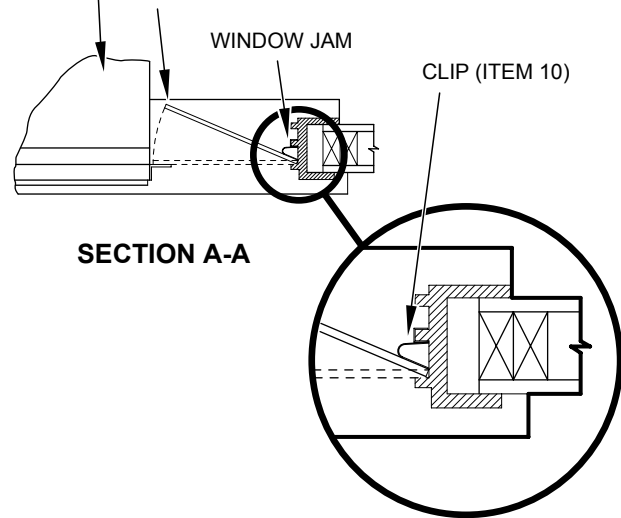
NOTE: If the chassis seal gasket is not installed or installed improperly, the operation of the unit will be negatively affected. Operational noise and outside noise will also be amplified.

STEP 13. Reattach the entry guard chassis entry guard retainer wire with the same screw retained in Step 1 (See Figure 14).

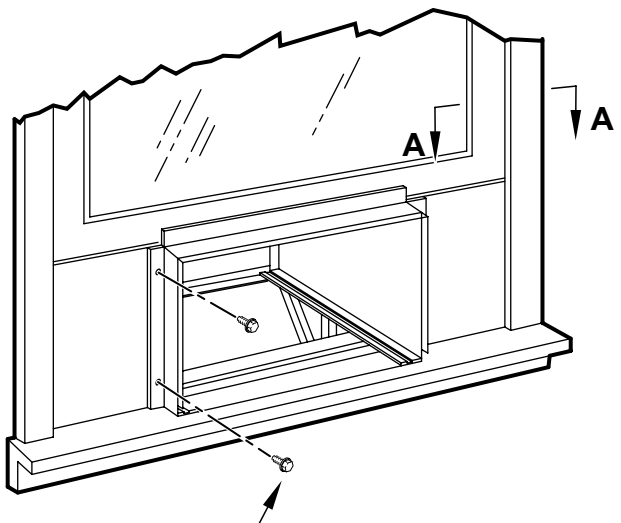
Figure 26

TOP OF CABINET

PLACE WINGBOARD PANEL IN WINDOW JAM TO COMPRESS THE SPRINGS INSIDE THE RUNNERS, AND SWING THE WINGBOARD PANELS INTO PLACE AS INDICATED BY THE DASHED LINES.



SECTION A-A

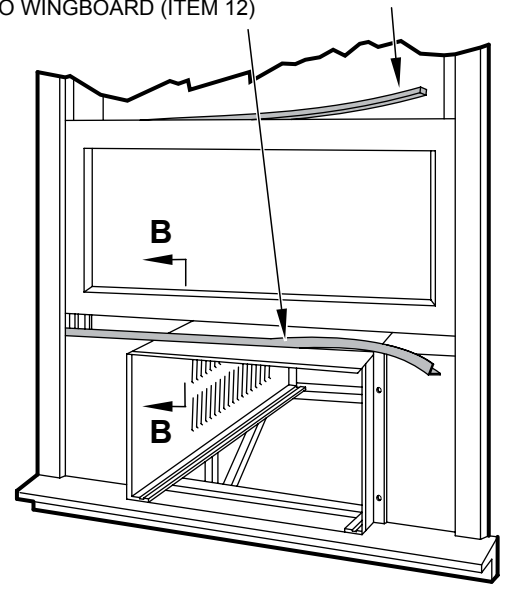


SECURE THE SIDE WINGBOARD PANELS TO THE SIDE ANGLES WITH FOUR (4) #8 x 1/2" LONG SCREWS (ITEM 11), TWO ON EACH SIDE.

FRR022

Figure 27

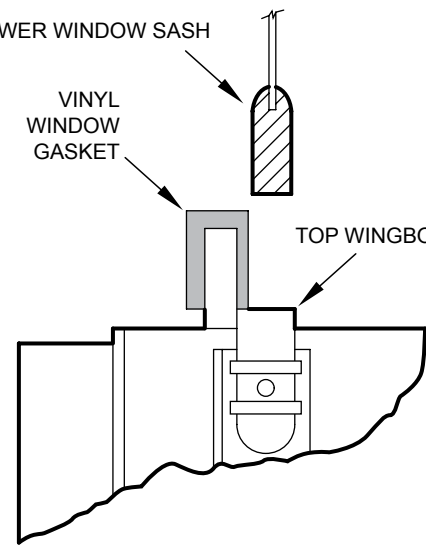
INSERT VINYL WINDOW SEAL GASKET OVER TOP ANGLE
INSERT FOAM WINDOW SEAL GASKET (ITEM 13) TO WINGBOARD (ITEM 12)



LOWER WINDOW SASH

VINYL WINDOW GASKET

TOP WINGBOARD ANGLE



SECTION B-B

FRR023

OPTIONAL: The factory assembles the supply cord so that it exits the left side of the unit at the bottom. At the consumer's discretion, the supply cord can be routed to exit the right side of the unit. To do this, route the supply cord to the right side. Pull the supply cord taut through the loops (Refer to Cord Routing Change, Figure 30) and route the cord down.

STEP 14. To attach and prevent damage to the front grille align the cord notch over the cord and center the fresh air lever, then align and tighten the four (4) captive screws as indicated by the arrows in Figure 28. Before closing the front panel, be sure the filter is in place. Make sure curtains do not block the side air intakes.

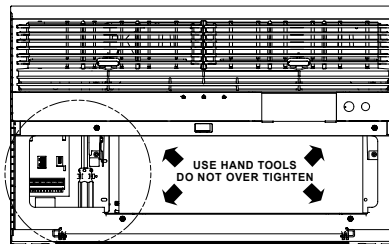
STEP 15. Refer to the Control Panel Operation section for instructions.

STEP 16. You are now ready to control the comfort level of the room.

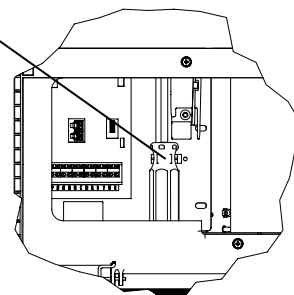
Use Tool Provided

Please use the provided tool to attach the decorative front to the chassis.

Figure 28

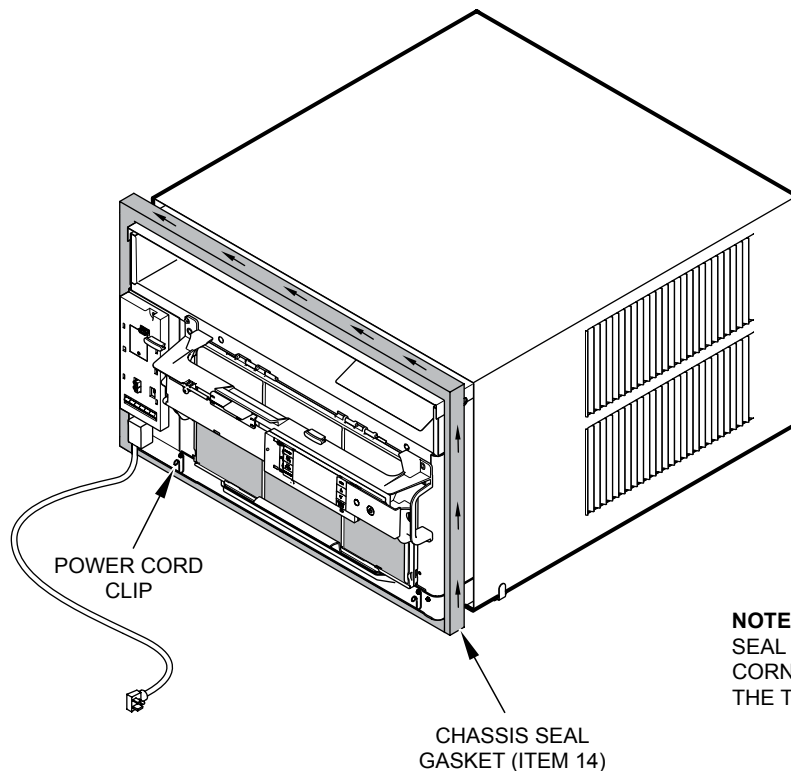


LOCATION OF GRILLE
REMOVAL TOOL



FRR053

Figure 29





NOTE: WHEN INSTALLING THE CHASSIS SEAL GASKET; BEGIN AT EITHER BOTTOM CORNER AND GO UP THE SIDE & ACROSS THE TOP & DOWN THE OPPOSITE SIDE.

FRR024

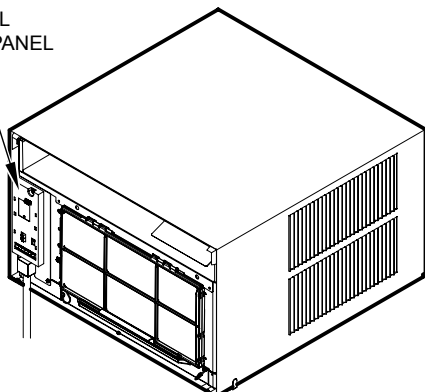
Cord Routing Change

Unplug unit.

 WARNING	
	Electrical Shock Hazard
	Make sure your electrical receptacle has the same configuration as your air conditioner's plug. If different, consult a Licensed Electrician.
	Do not use plug adapters. Do not use an extension cord. Do not remove ground prong.
	Always plug into a grounded 3 prong outlet. Failure to follow these instructions can result in death, fire, or electrical shock.

For convenience and optimum appearance the direction that the power cord exits the unit may be changed from left to right by following the procedure below. Select the exit location on the left or right based on proximity to the power outlet.

Figure 30



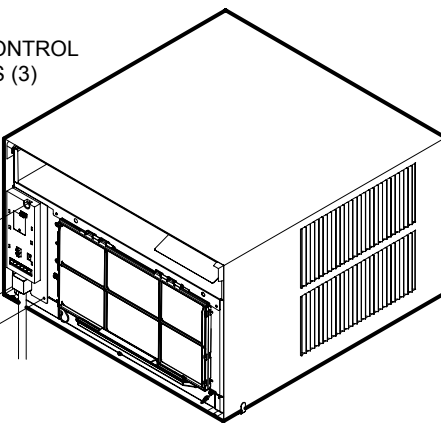
ELECTRICAL CONTROL PANEL

NOTE:
DECORATIVE FRONT REMOVED USE TOOL PROVIDED.
(SEE FIGURE 28 FOR LOCATION OF TOOL).

FRR054

Remove 3 screws as shown from the electrical control panel. Save to reinstall later.

Figure 31

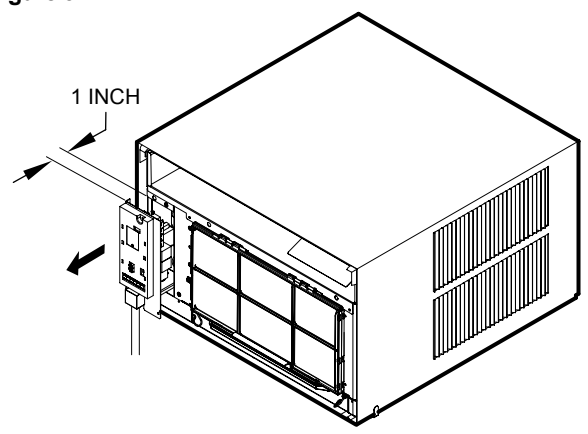


ELECTRICAL CONTROL PANEL SCREWS (3)

FRR055

STEP 17. Carefully pull out electrical control panel 1", but not all the way.

Figure 32

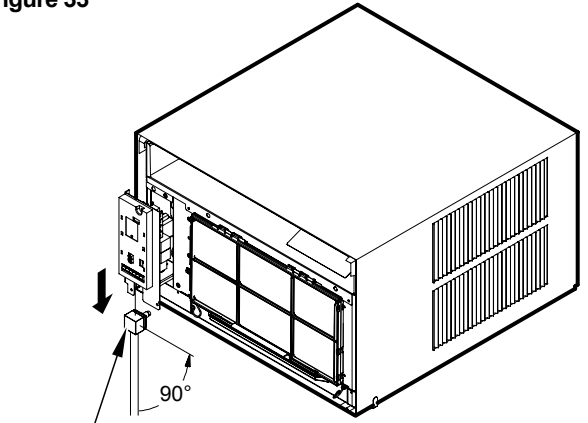


1 INCH

FRR056

STEP 18. Pull electrical cord strain relief downward until free and rotate 90 degrees to the right.

Figure 33



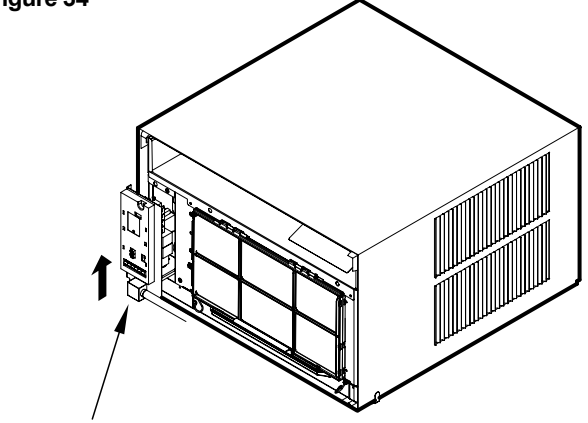
90°

ELECTRICAL CORD STRAIN RELIEF

FRR057

STEP 19. Push electrical cord strain relief back upward into the electrical control panel.

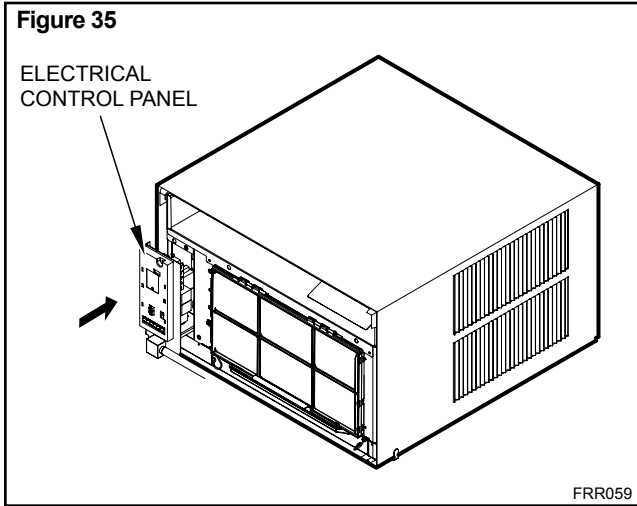
Figure 34



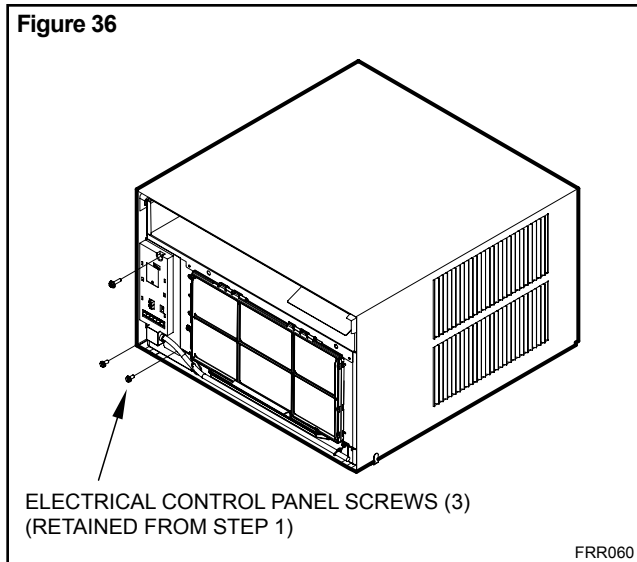
ENSURE THE ELECTRICAL CORD STRAIN RELIEF IS FLUSH WITH THE TOP OF ELECTRICAL CONTROL PANEL

FRR058

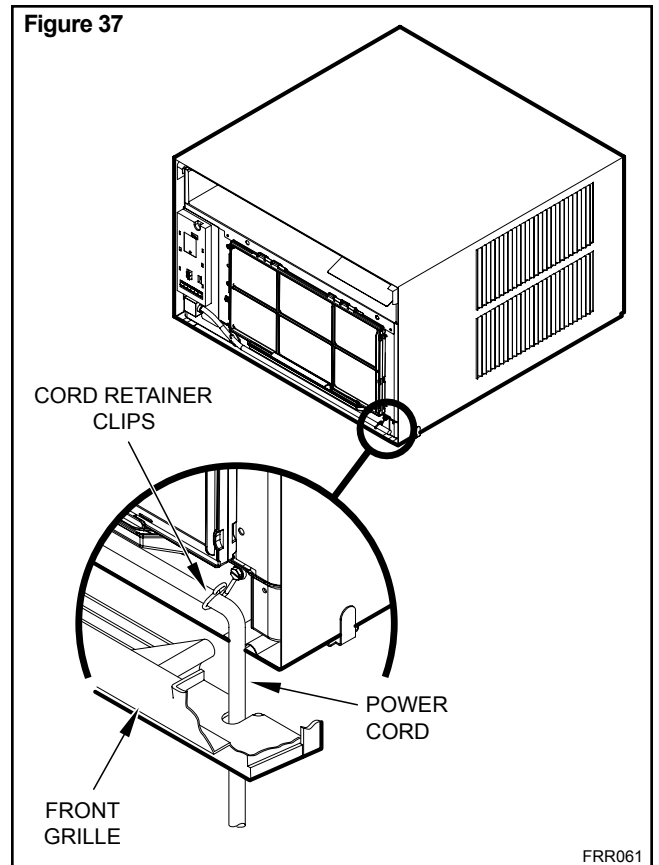
STEP 20. Carefully push electrical control panel back into chassis.



STEP 21. Reinstall the 3 screws removed earlier to secure electrical control panel.



STEP 22. If running power cord to the right of the unit install the cord into the cord retainer clips along the bottom front of the unit.



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F R I E D R I C H

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