

55" LIGHT TRAP COMBINATION SYSTEM

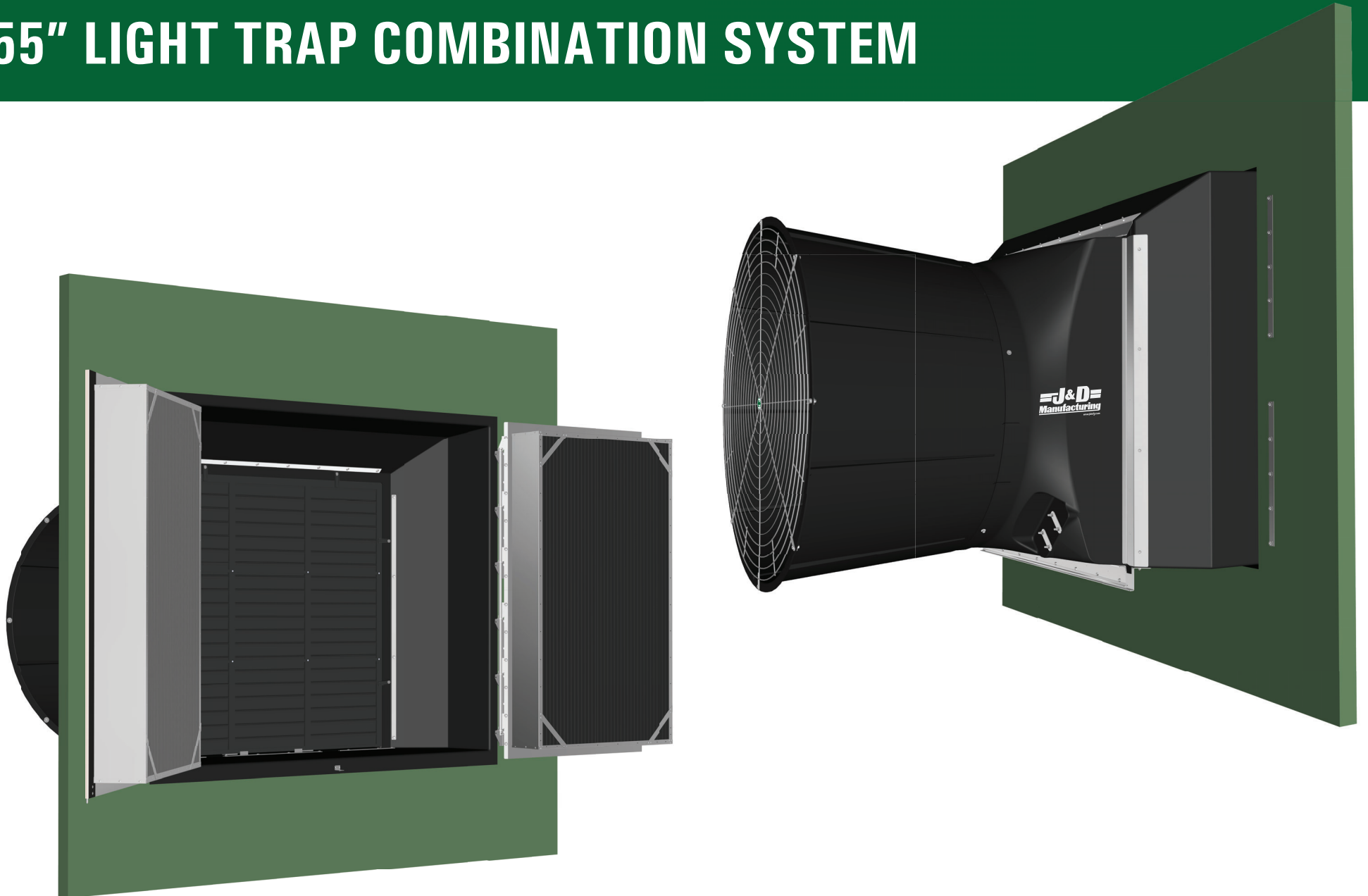


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WARRANTY

J&D Mfg. warrants this product is free from defects in materials and workmanship under normal use for the period of one year from date of purchase. Our warranty does not cover ordinary wear and tear. J&D Mfg can repair or replace at our option, any product or part of the product that is found to be defective. Our warranty applies to materials only and does not include return freight, delivery, loss or damage to personal property, cost of removal or installation, any incidental or consequential damages or labor. This warranty does not apply to products which are misused, abused, altered, improperly installed or subject to negligence. All warranties must be approved through our warranty department. The original purchaser must present a copy of the invoice for the defective product.

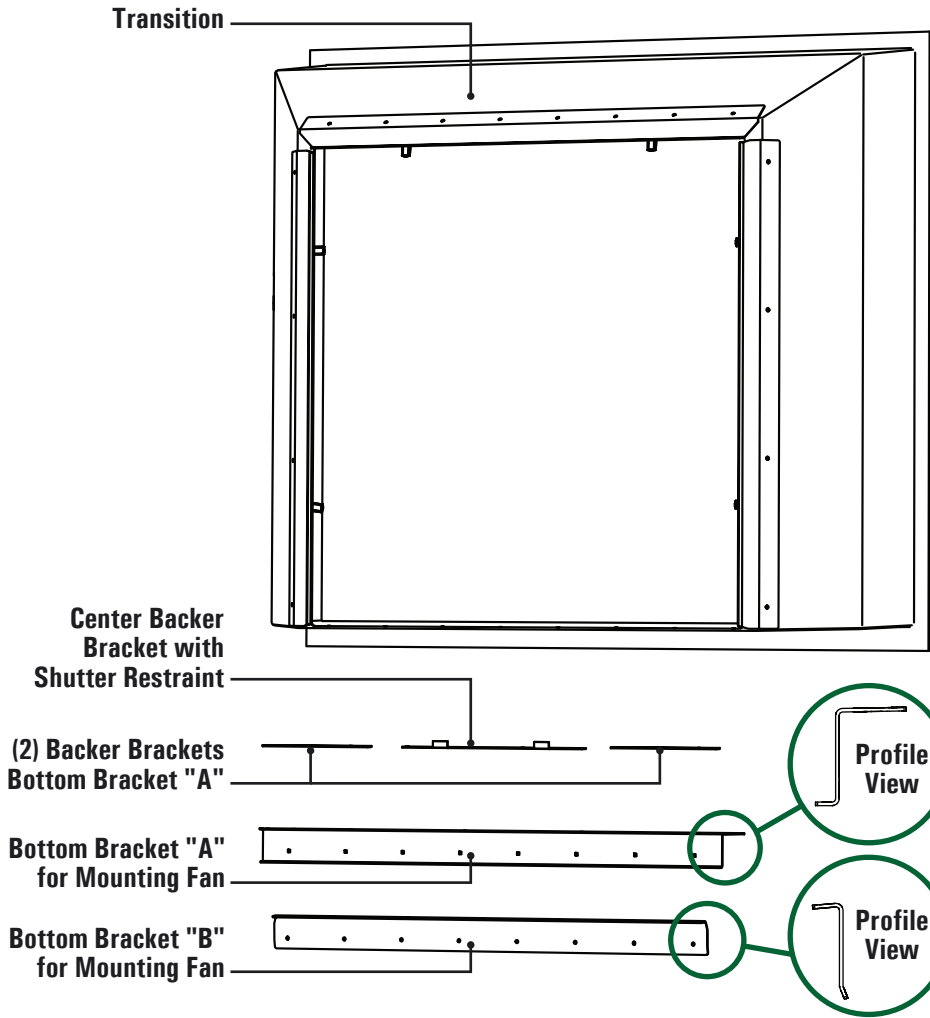
INSTALLATION

Please read over ALL instructions carefully before you begin.
If you have any questions please call your local J&D reseller,
or contact J&D Manufacturing at 1-800-998-2398.

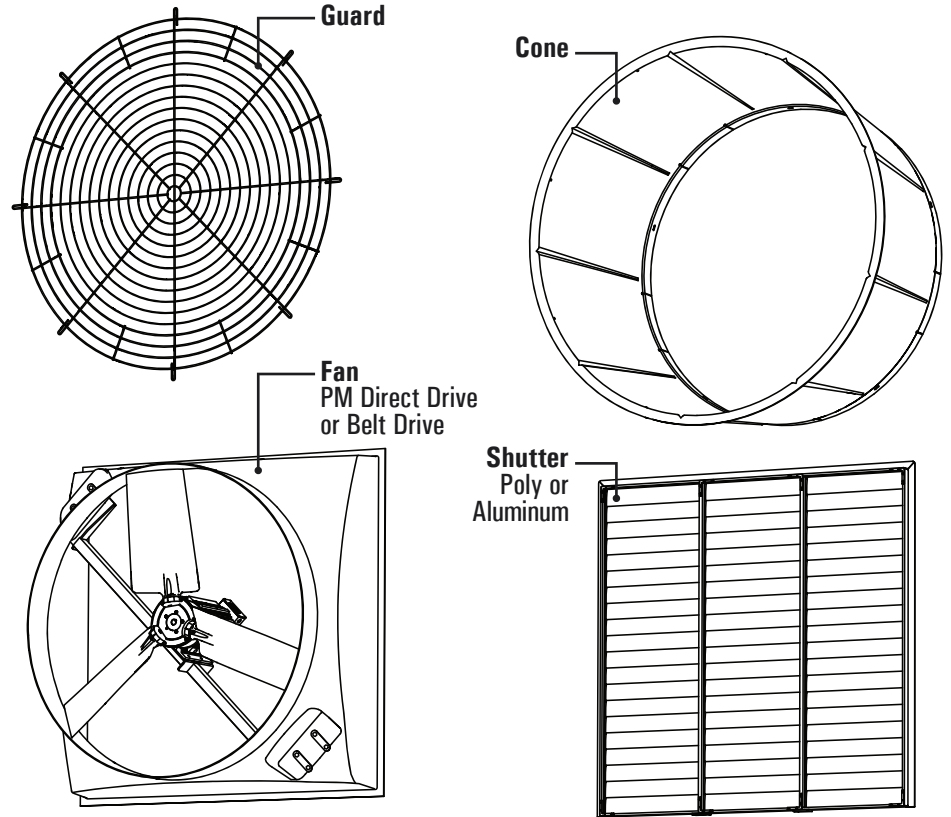
Maintenance Instructions:

- Disconnect power before cleaning or maintaining your fan in order to prevent serious injury or death
- Service and repair of fan should only be completed by a qualified technician
- Motor is sealed and does not require additional oil
- Cleaning
 - For maximum efficiency and fan life, keep the following free from dirt and dust:
 - Fan Blades
 - Guard
 - Shutter Louvers
 - Motor
 - Light Trap Fins
 - DO NOT pressure wash any of the components as it can cause damage that is not covered by warranty
 - Using either water from hose at 120-150 psi max pressure and/or high volume, high pressure air

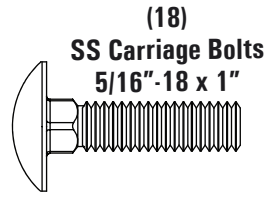
55" TRANSITION - PARTS LEGEND



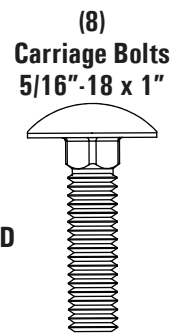
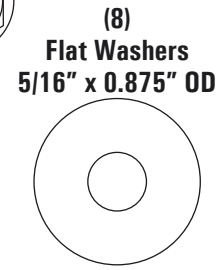
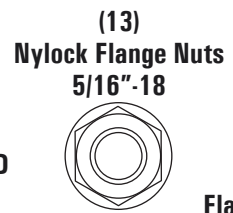
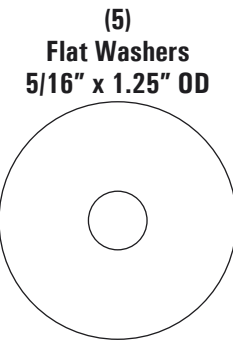
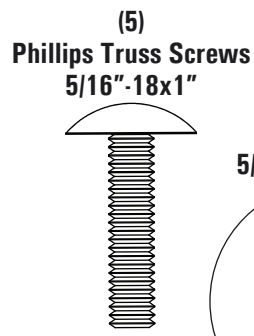
55" FAN - PARTS LEGEND



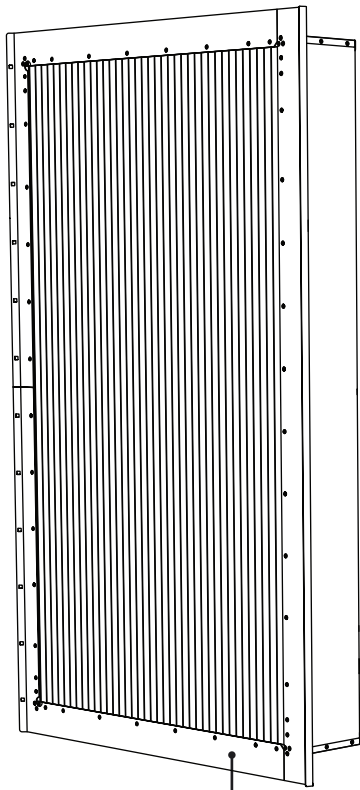
55" TRANSITION - INCLUDED ASSEMBLY HARDWARE



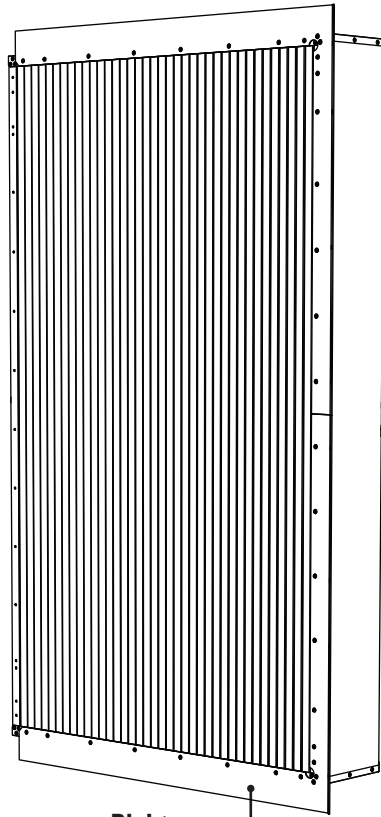
55" FAN - INCLUDED ASSEMBLY HARDWARE



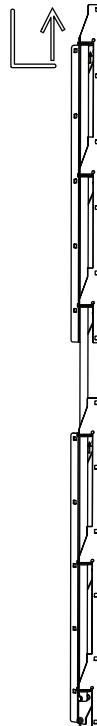
LIGHT TRAP - PARTS LEGEND



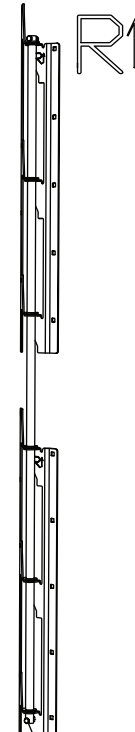
**Left
Light Trap Door
with Lip**



**Right
Light Trap Door**



**Left
Door
Hinge**



**Right
Door
Hinge**



**(4) Hinge
Backer
Plates**

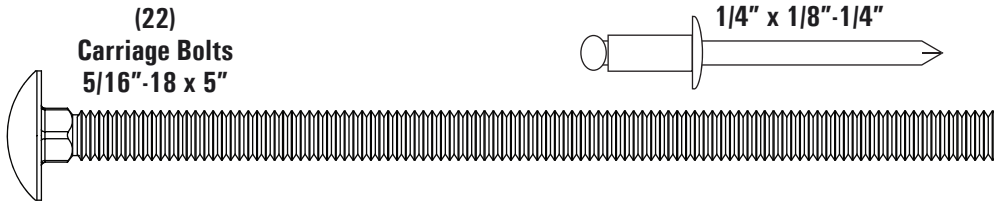


**(1) Spring Loaded
Bolt Latch**

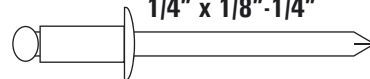


**(1) Latch
Locking Plate**

LIGHT TRAP - INCLUDED ASSEMBLY HARDWARE



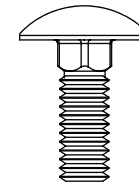
**(22)
Carriage Bolts
5/16"-18 x 5"**



**(2)
Aluminum Rivet
1/4" x 1/8"-1/4"**



**(24)
SS Nylock Nuts
5/16"-18**



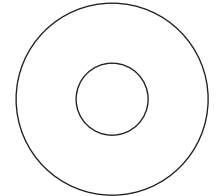
**(24)
SS Carriage Bolts
5/16"-18 x 3/4"**



**(22)
Hex Nuts
5/16"-18**



**(22)
Split Lock
Washers
5/16"**



**(22)
Flat Washers
3/8" x 1"**

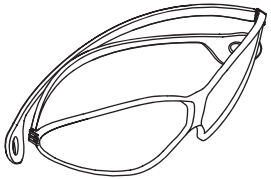
ADDITIONAL ITEM NEEDED - (NOT PROVIDED)

1/2" X ~6" x ~4'
Spacer Board

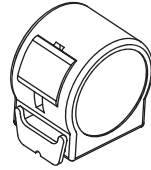


RECOMMENDED TOOLS FOR INSTALLATION AND ASSEMBLY (NOT PROVIDED)

Safety Glasses



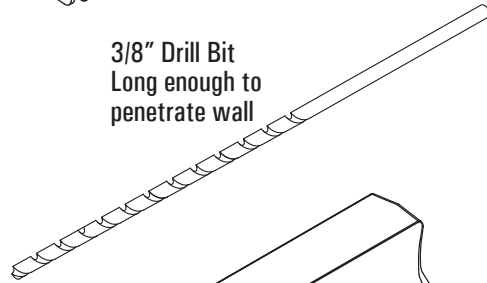
Measuring Tape



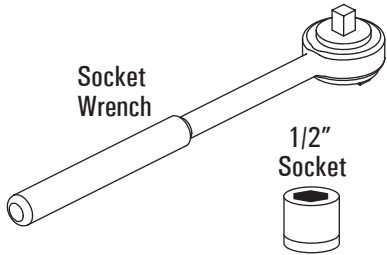
5/16" Drill Bit



3/8" Drill Bit
Long enough to
penetrate wall



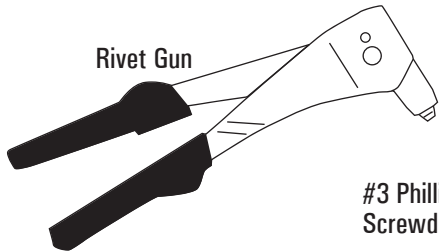
Socket
Wrench



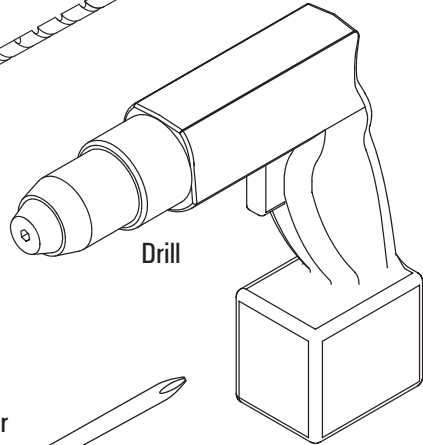
1/2" Socket



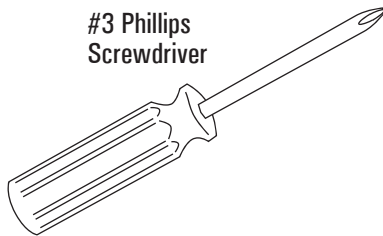
Rivet Gun



Drill



#3 Phillips
Screwdriver



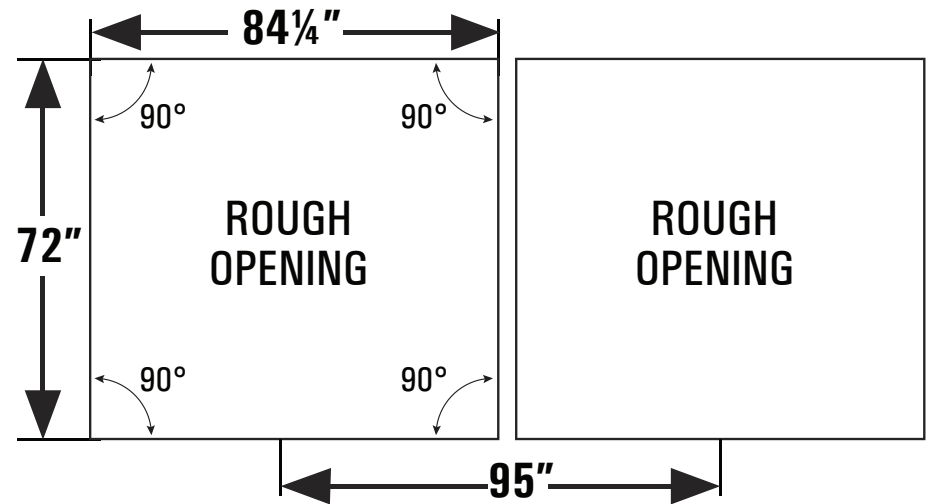
Site Requirements:

- Rough Opening - 84¼" W x 72" H
- Side-By-Side Recommended OC Dimension - Minimum 95"
- Precautions should be taken in locations that receive winter precipitation accumulation to prevent damage to fans from roof avalanches.
Damage to fans from ice, snow, or any other falling debris is not covered by warranty.

Common industry standard solutions are

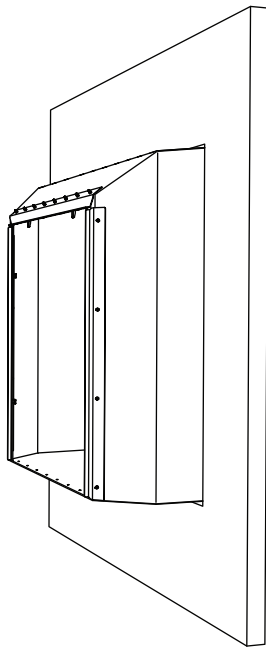
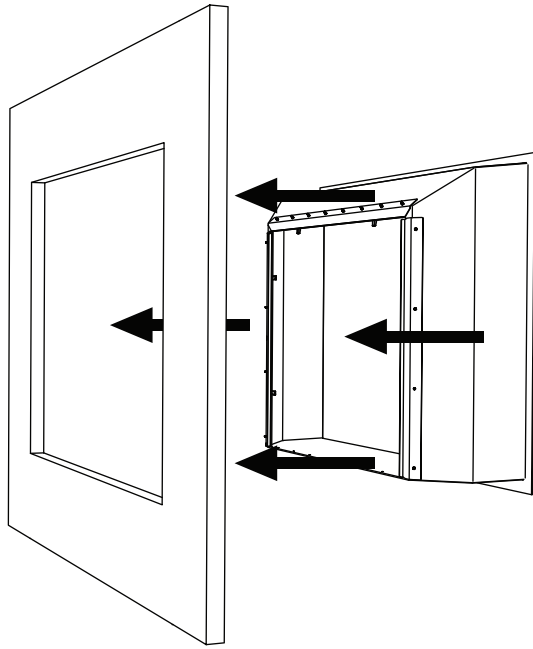
- > Extending roof eave beyond fan cone*
- > Create a shelter a minimum of 6" above cone that extends beyond the fan cone*
- > Install snow guards according to manufacturers recommendations

* The depth of J&D's 55" Light Trap Combination System is 86"



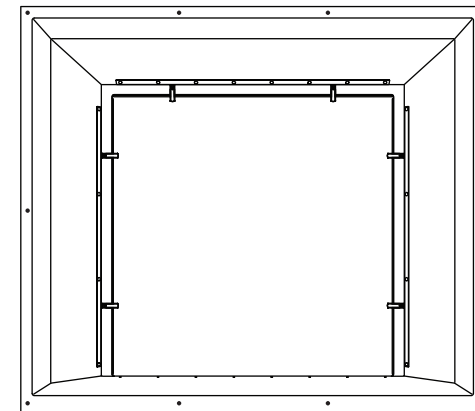
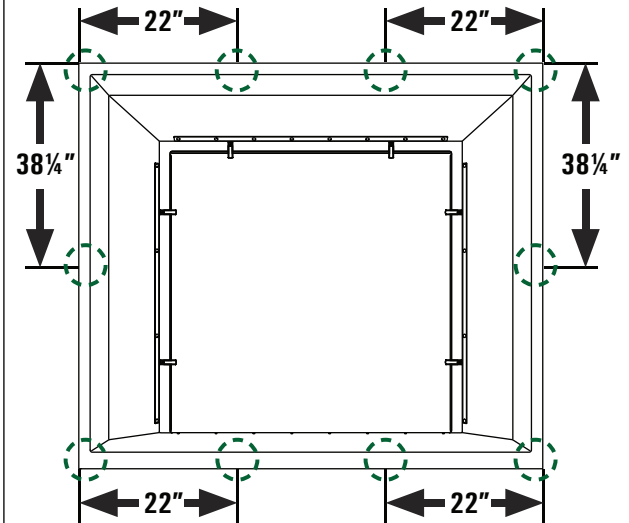
Installing and Securing Transition in Opening:

- Insert transition into rough opening as shown below



1

- Following the measurements and locations, mark the locations, as illustrated below
- Secure transition to structure using the appropriate hardware for your building material at the (10) marked locations (securing hardware is not provided)

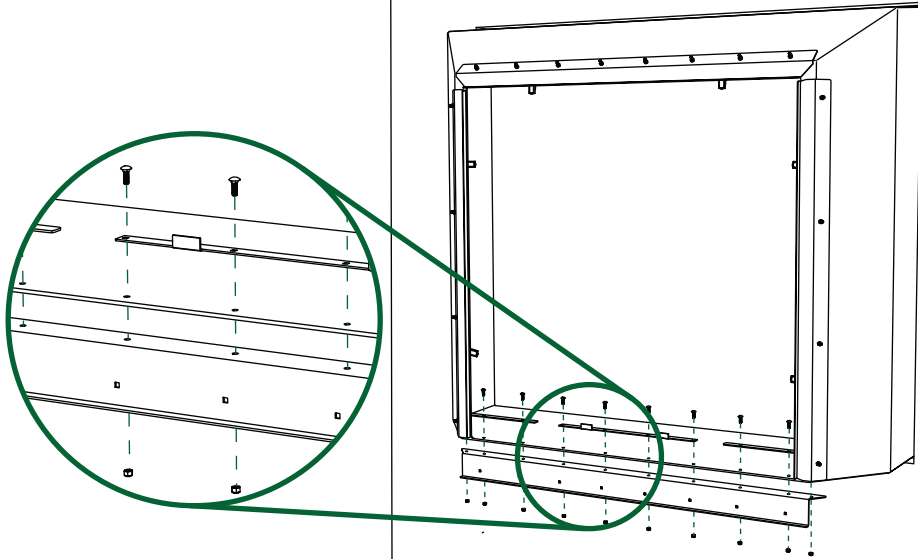


2

Attaching Bottom Brackets to Transition:

- Using (10) 5/16"-18 x 1" SS Carriage Bolts, (10) 5/16"-18 SS Nylock Nuts, (2) Backer Brackets and Center Backer Bracket with Shutter Restraint*, secure the Bottom Bracket "A" to bottom of the transition, as shown below.

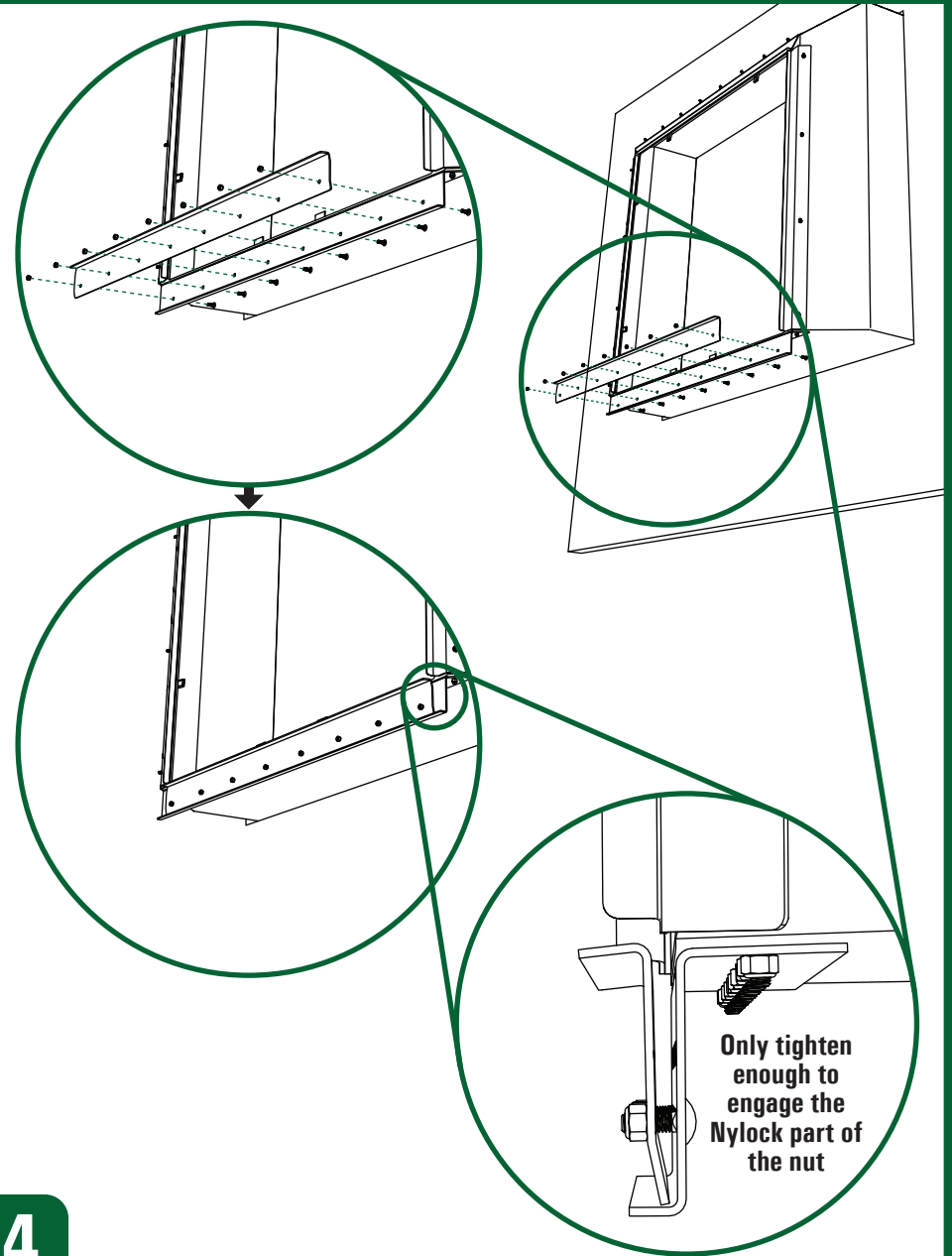
*NOTE: Tabs of Center Backer Bracket with Shutter Restraint should face the towards the outside of the transition as shown in the close up below.



3

- Using (8) 5/16"-18 x 1" SS Carriage Bolts and (8) 5/16"-18 SS Nylock Nuts attach the Bottom Bracket "B" to Bottom Bracket "A"

NOTE: DO NOT tighten these nuts at this time only thread onto bolts until the Nylock is engaged



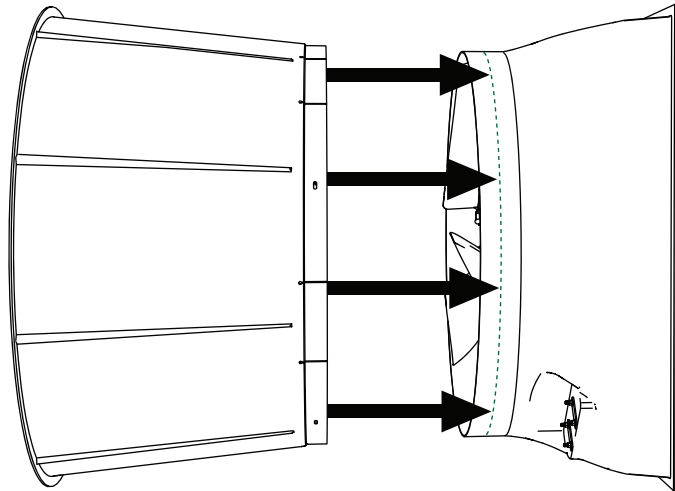
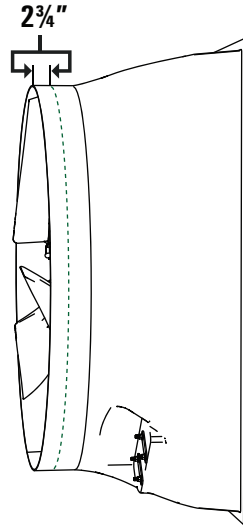
4

NOTE: Fan assembly can be completed either before installation into the transition or after housing is mounted in the transition. Site accessibility, available machinery, and manpower should be your deciding factor.

Attaching Cone to Fan:

- Measure and mark $2\frac{3}{4}$ " from the edge of the venturi, as shown below
- Slide cone onto venturi to the $2\frac{3}{4}$ " mark just made

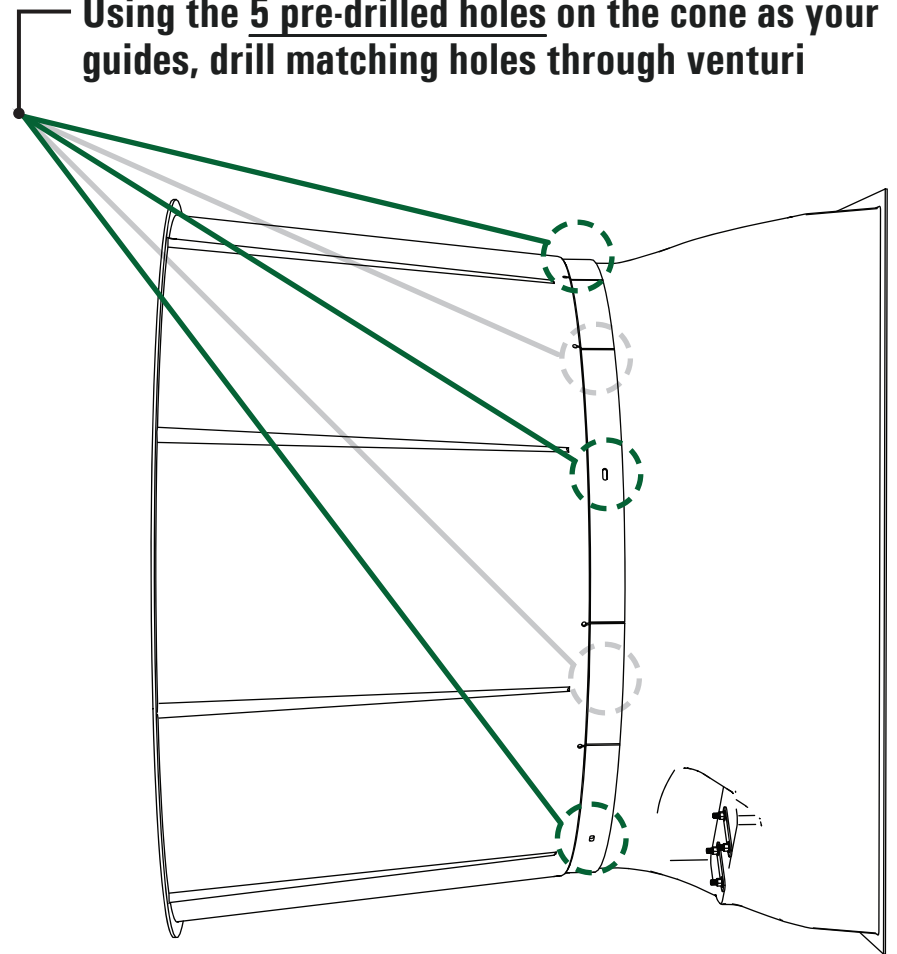
Measure and mark $2\frac{3}{4}$ "
from edge of venturi



5

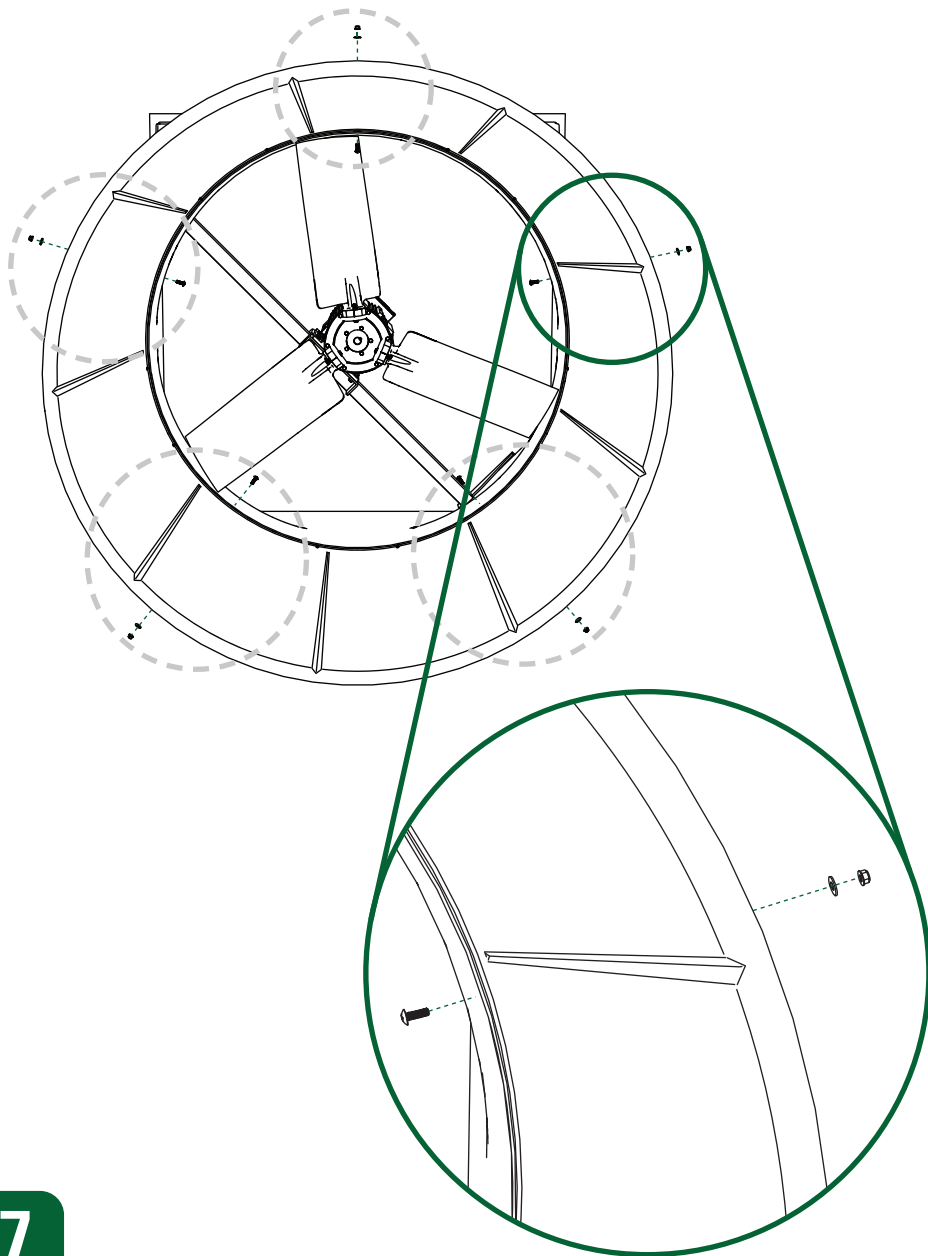
- With a $5/16$ " drill bit, drill matching holes through the venturi using the 5 pre-drilled holes on the cone as your guides

Using the 5 pre-drilled holes on the cone as your guides, drill matching holes through venturi



6

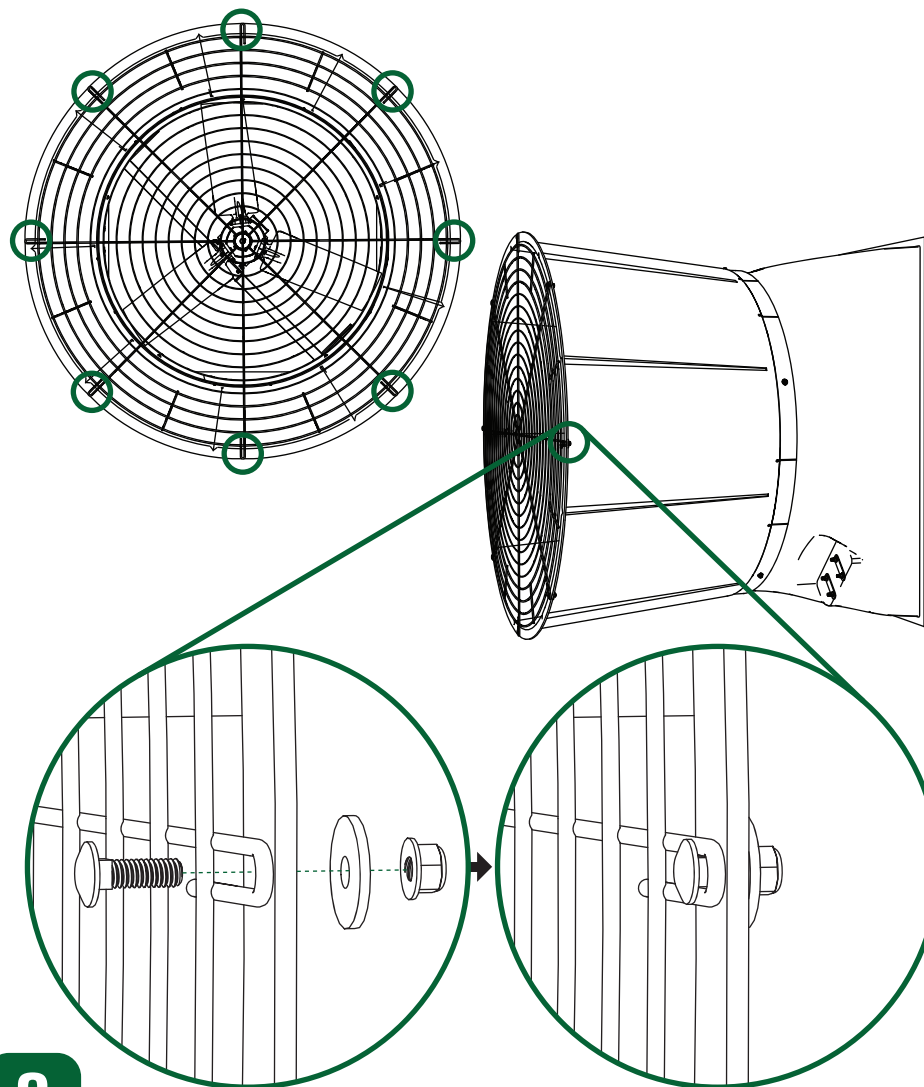
- Secure the cone to the venturi using (5) 5/16"-18x1" **Phillips Truss Screws**, (5) 5/16" x 1.25" OD **Flat Washers**, and (5) 5/16"-18 **Nylock Flange Nuts**.
- Insert bolts from the interior of the cone and secure with washers and nuts on exterior, as shown below.



7

Attaching Guard to Cone:

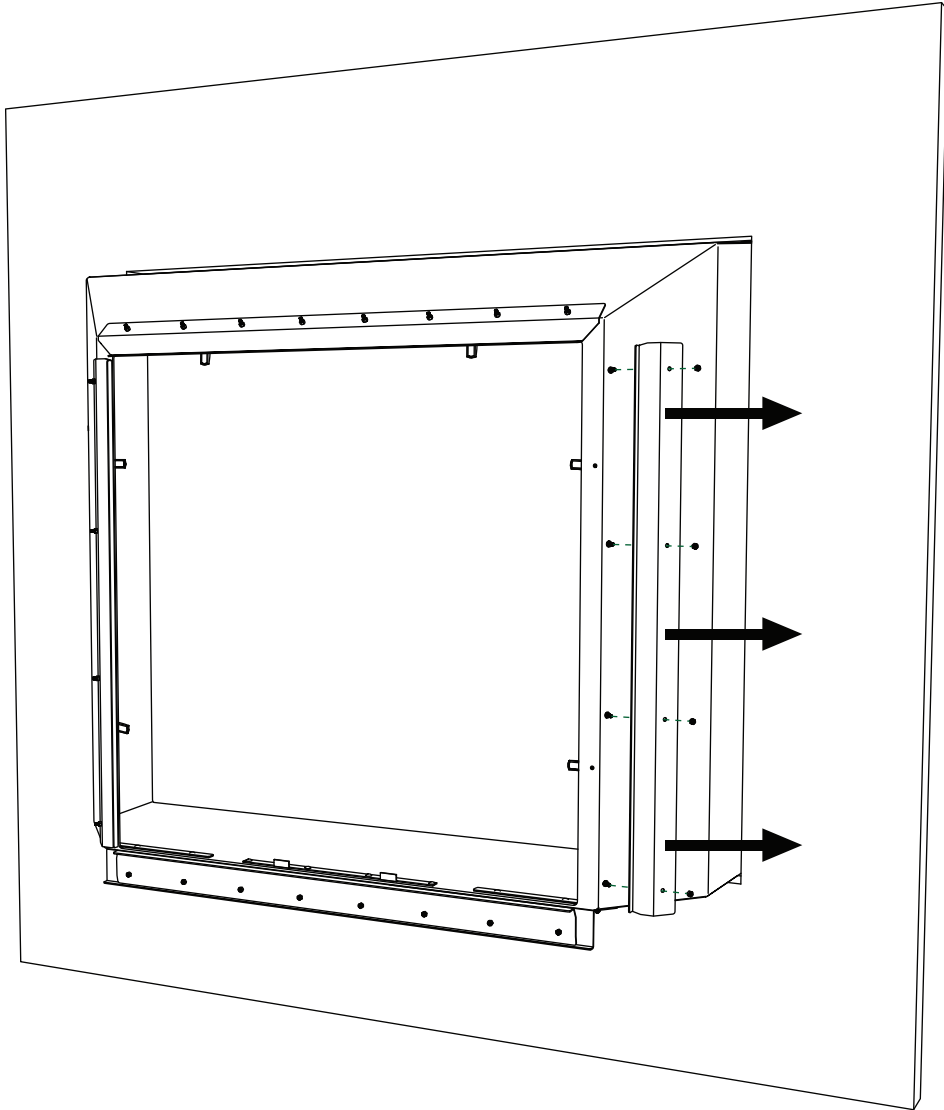
- Place guard against cone flange.
- Using 5/16" drill bit and the guard mounting feet as guides, drill holes through the cone flange.
- Secure the guard to the cone using (8) 5/16" **Carriage Bolts**, (8) 5/16" **Flat Washers**, and (8) 5/16" **Nylock Flange Nuts**.
- Do not tighten hardware until all have been assembled.



8

Prepare Transition for Mounting Fan:

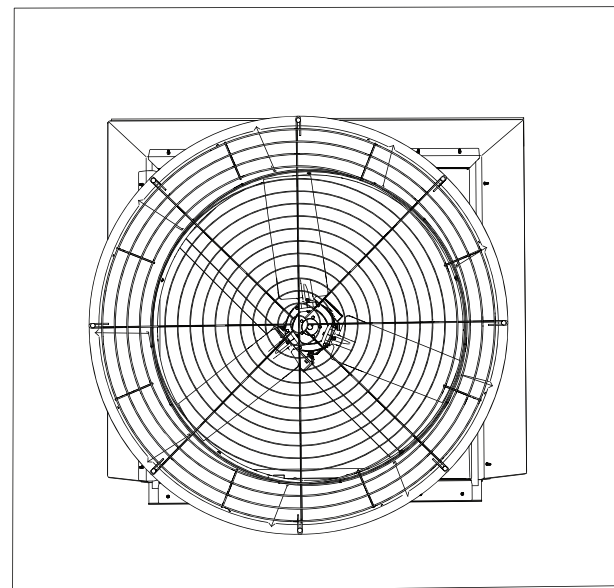
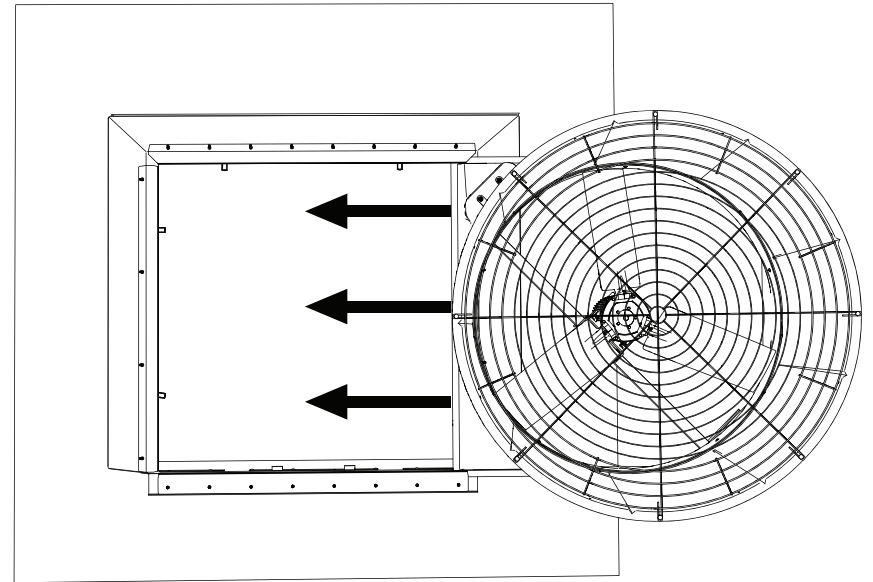
- Choose a side that you intend to mount the fan from and remove the side bracket, as shown below



9

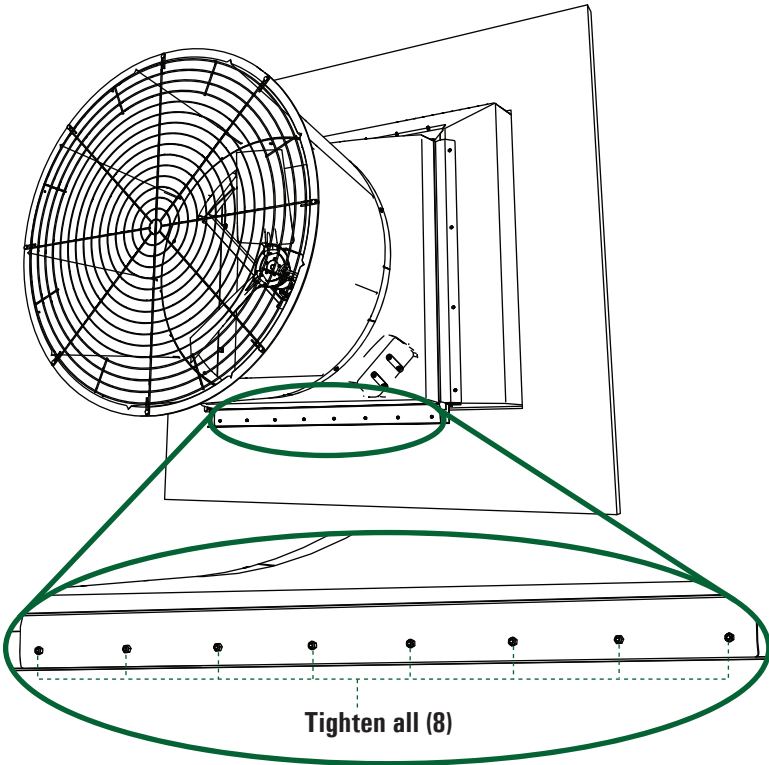
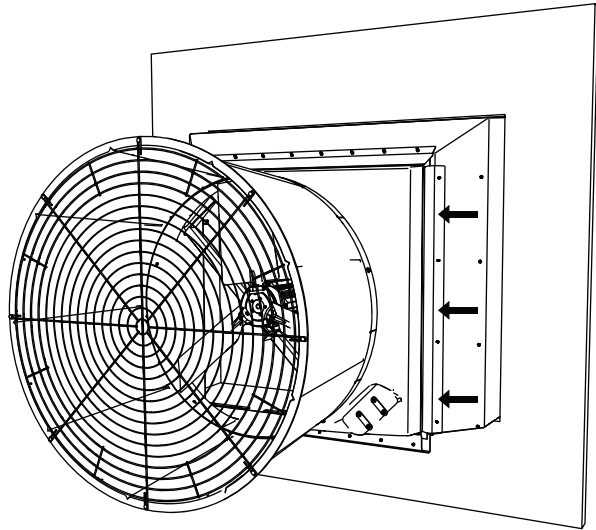
Install Fan:

- Align flange of fan so that the bottom flange rests between Bottom Bracket "A" and Bottom Bracket "B" previously installed in **Steps 3 & 4** and the top flange under the top bracket
- Once aligned, slide fan all the way over making sure that the fans side flange is under the side bracket, as shown below



10

- Secure fan by reinstalling the side bracket removed in **Step 9**
- Tighten the (8) nuts securing Bottom Bracket "B" to Bottom Bracket "A" from **Step 4**

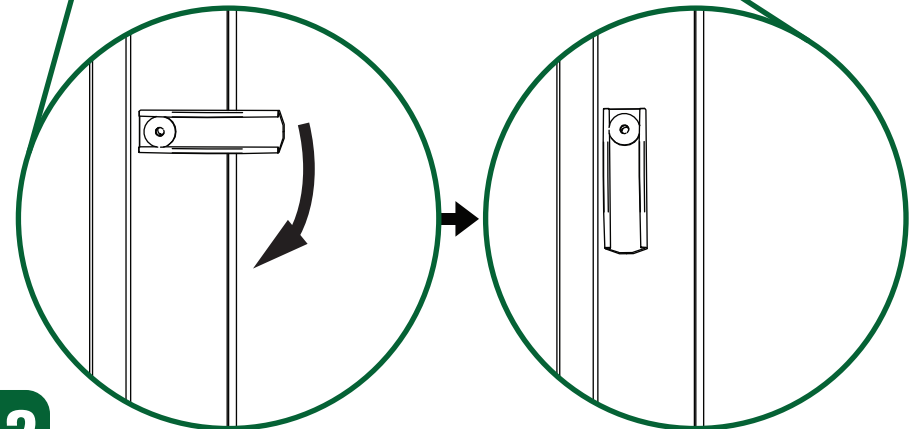
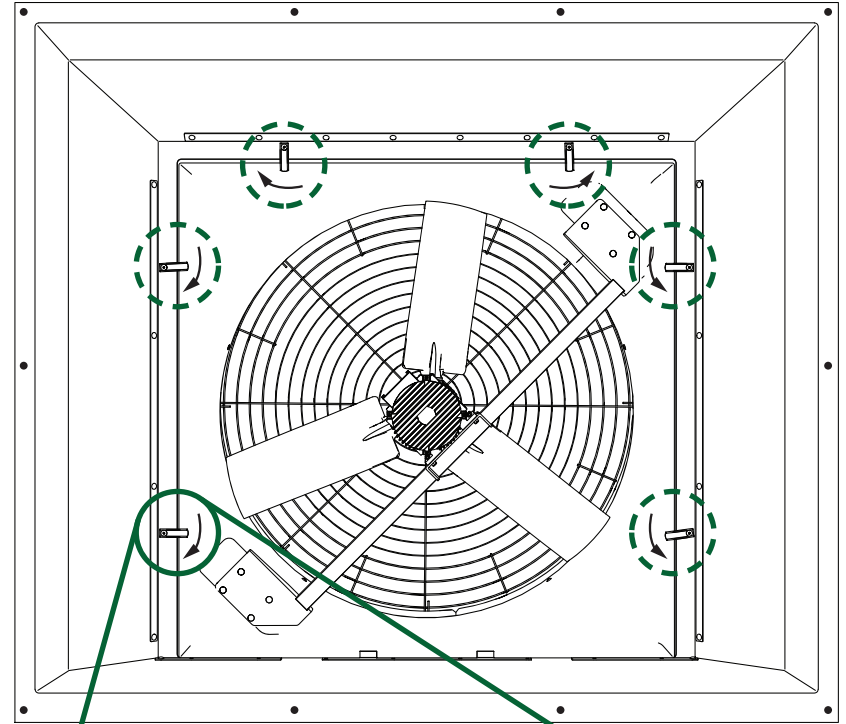


Tighten all (8)

11

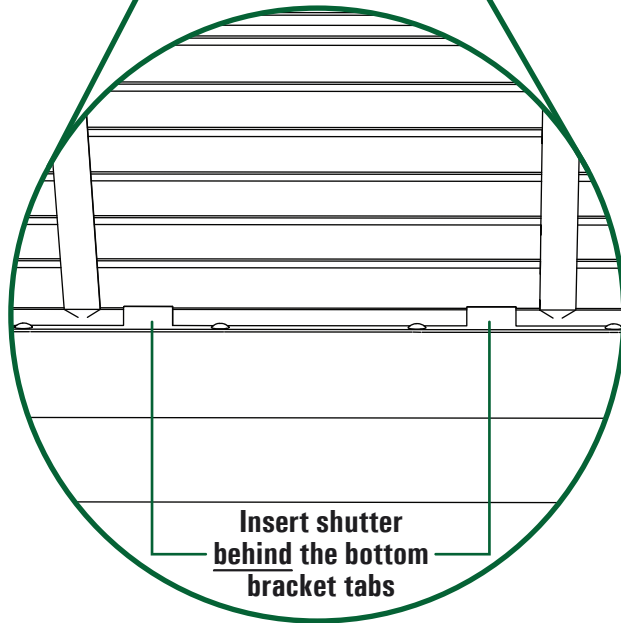
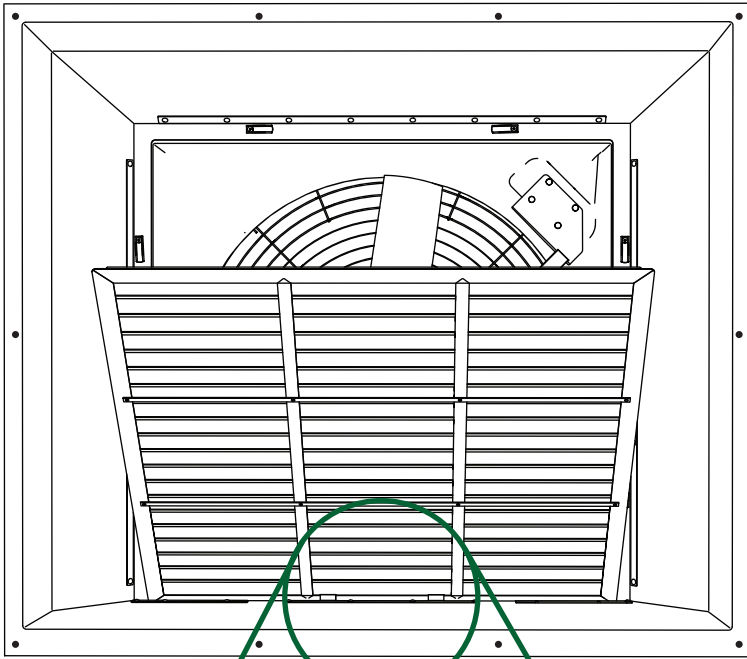
Installing the Poly or Aluminum Shutter:

- Rotate the shutter clips, as shown below



12

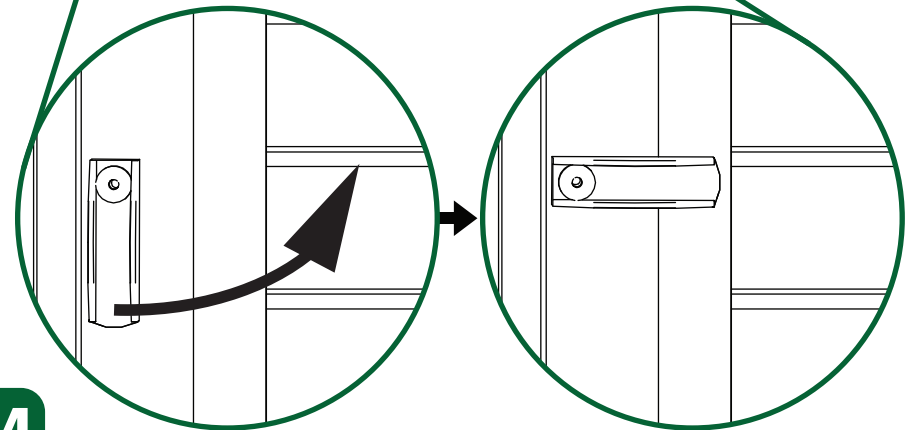
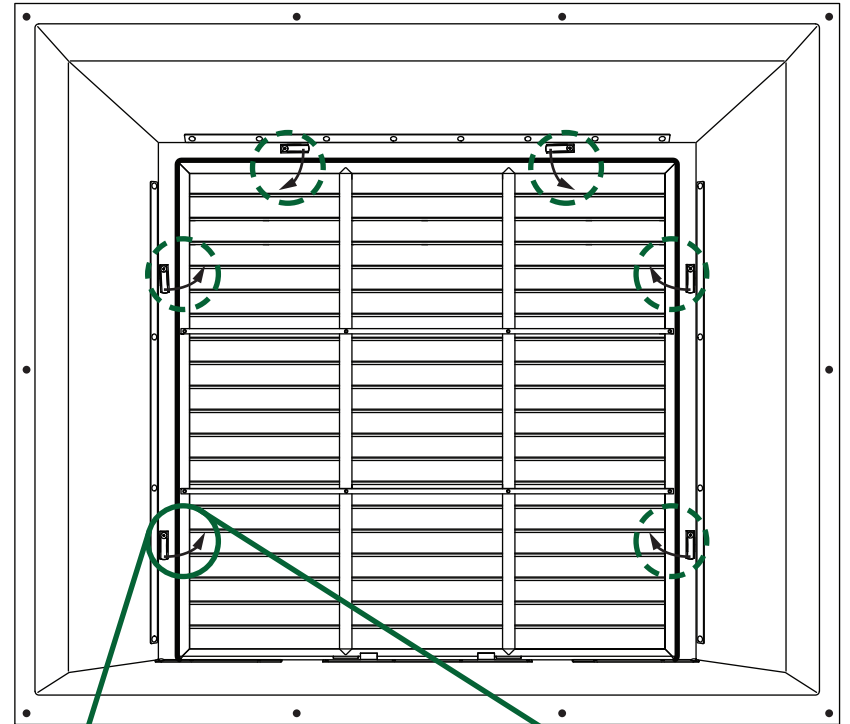
- Insert the bottom of the shutter behind the bottom bracket tabs, as shown below



Insert shutter
behind the bottom
bracket tabs

13

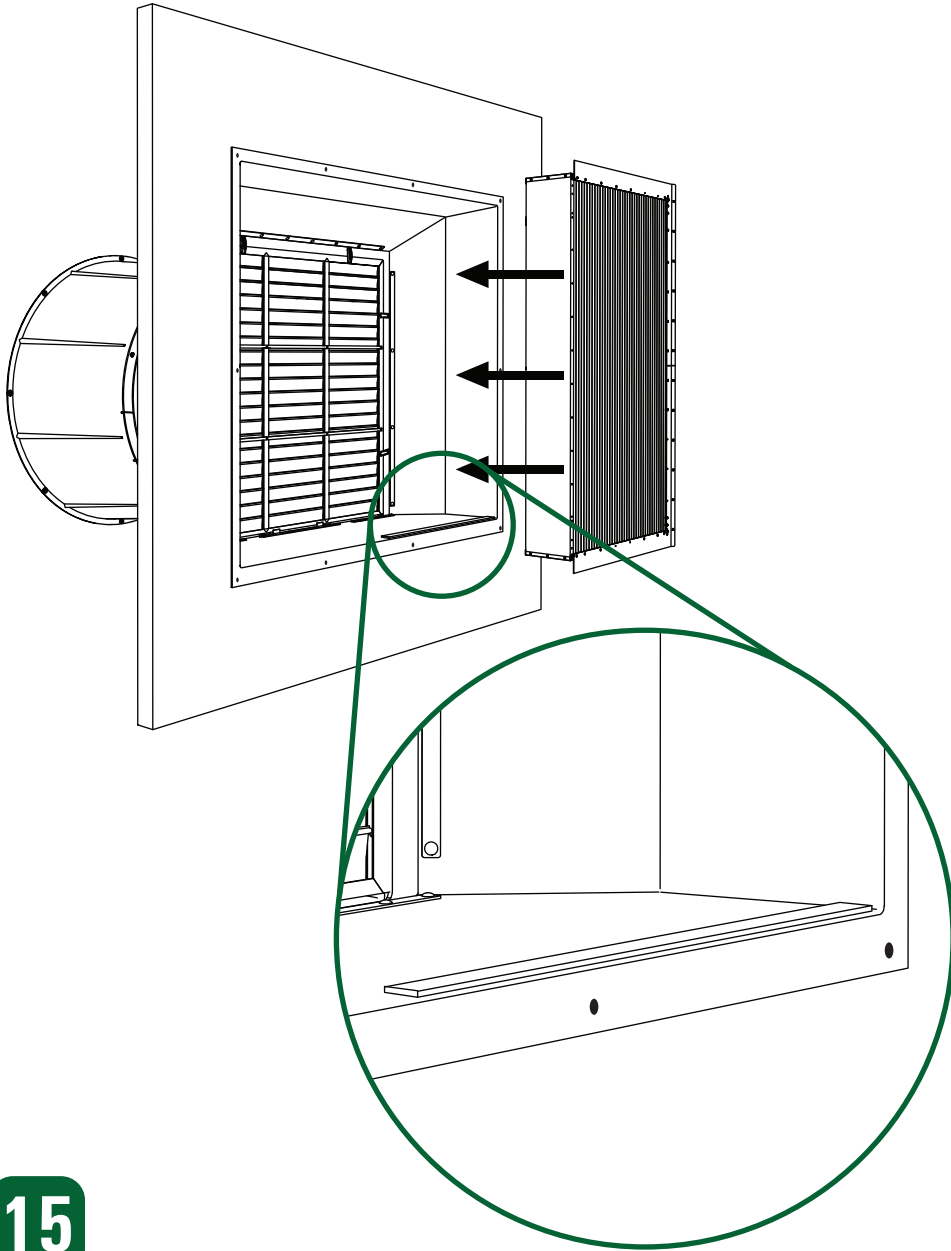
- Tilt the top of the shutter into the opening
- Rotate the shutter clips to secure shutter into opening, as shown below



14

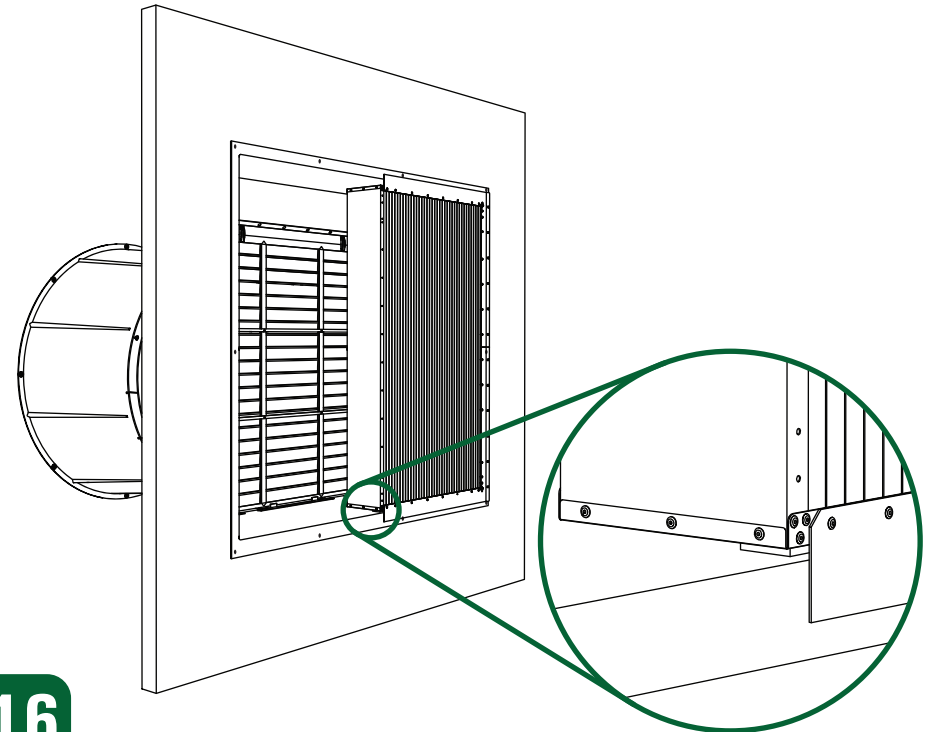
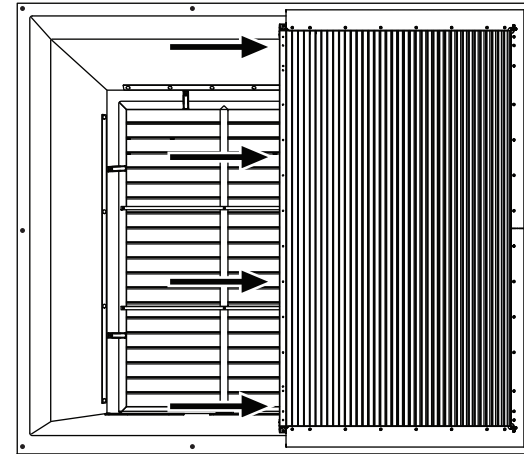
Placement of Right Light Trap Door:

- Place 1/2" thick spacer board (not provided) on the bottom right side of the transition, as shown below
- Insert right light trap door into transition



15

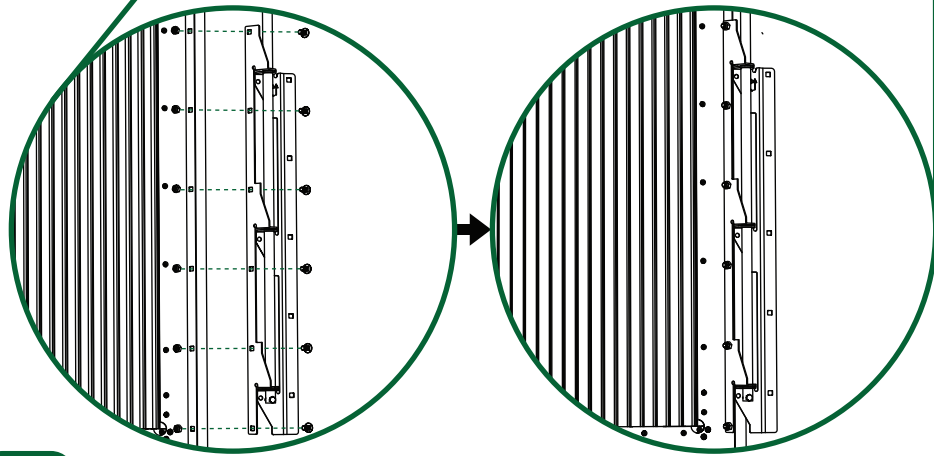
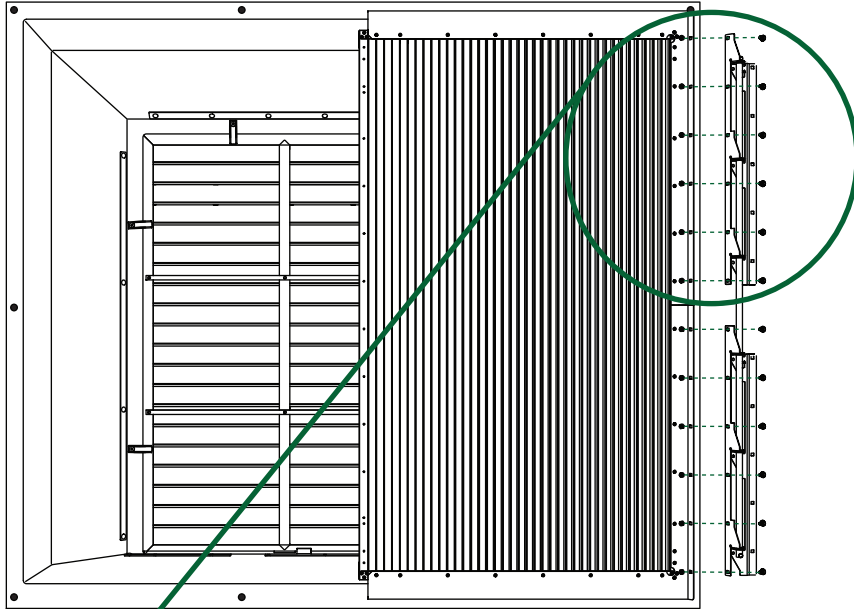
- Push right light trap door to the right so that it is tight against the transition, as shown below
- Check placement of the 1/2" thick spacer board confirming that it is under the door



16

Attaching Right Hinge to Right Light Trap Door:

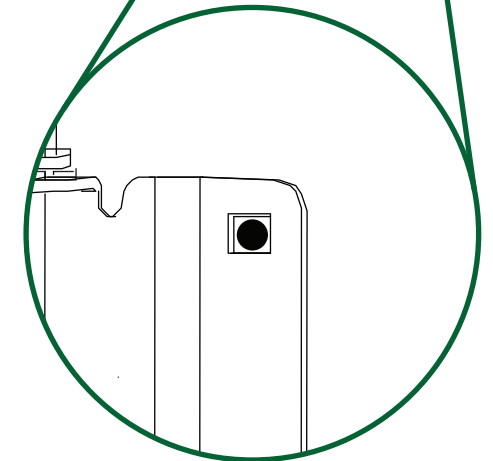
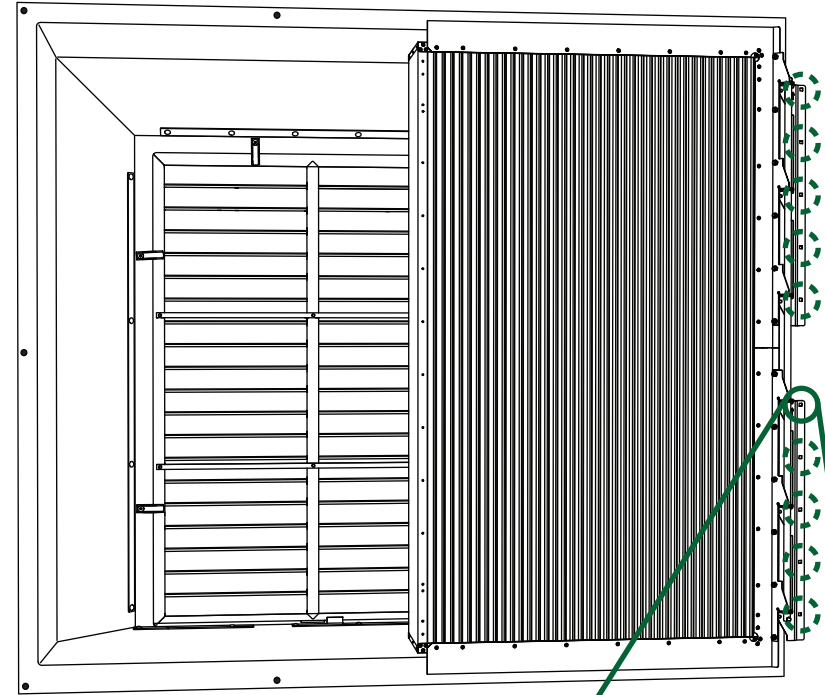
- Using (12) 5/16"-18 x 3/4" **SS Carriage Bolts** and (12) 5/16"-18 **SS Nylock Nuts** secure the right hinge to the right light trap door, as shown below



17

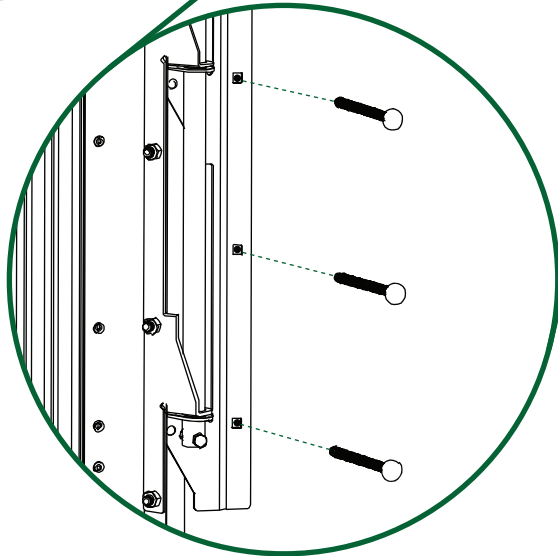
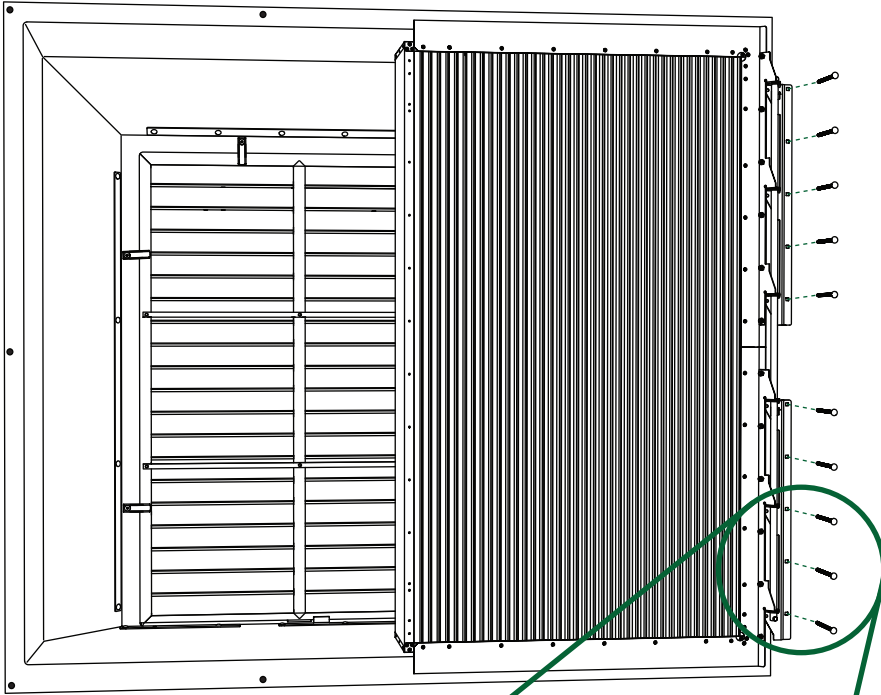
Securing Right Light Trap Door to Structure:

- Lay the other half of the hinge so that it lies flat against the structure
- Using the holes in the hinge plate as your guide and a 3/8" drill bit long enough to penetrate through the structure wall, drill 10 holes (take care to not angle the holes)



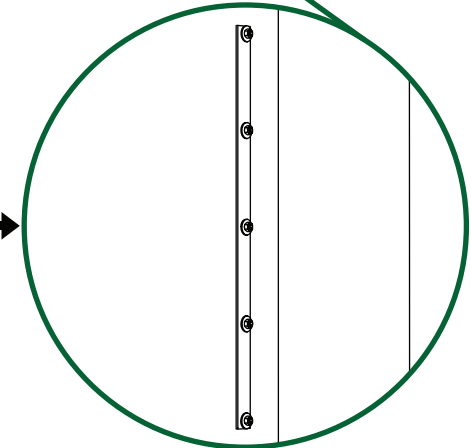
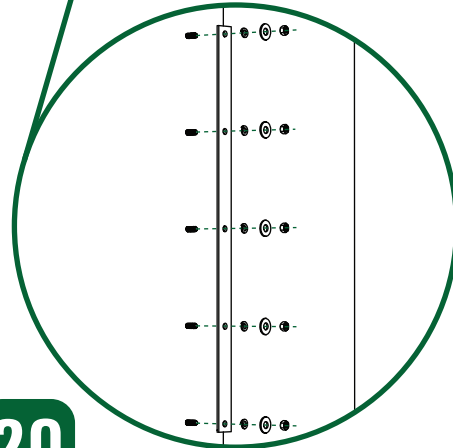
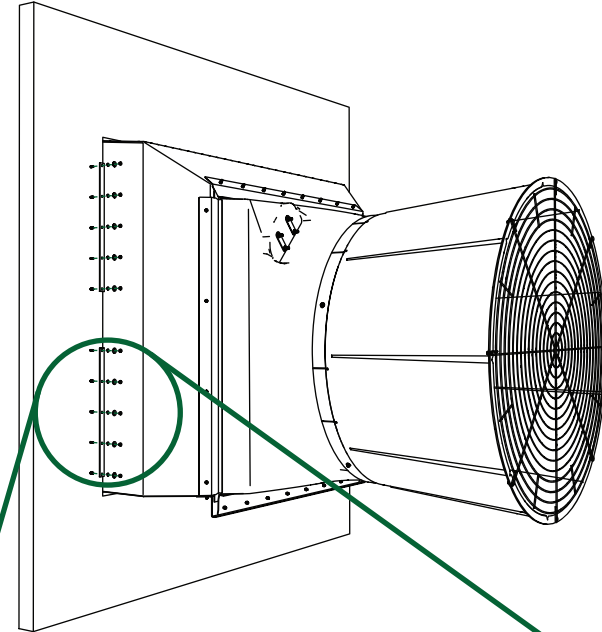
18

- Insert a 5/16"-18 x 5" **Carriage Bolt** into each hole drilled in **Step 18**, as shown below



19

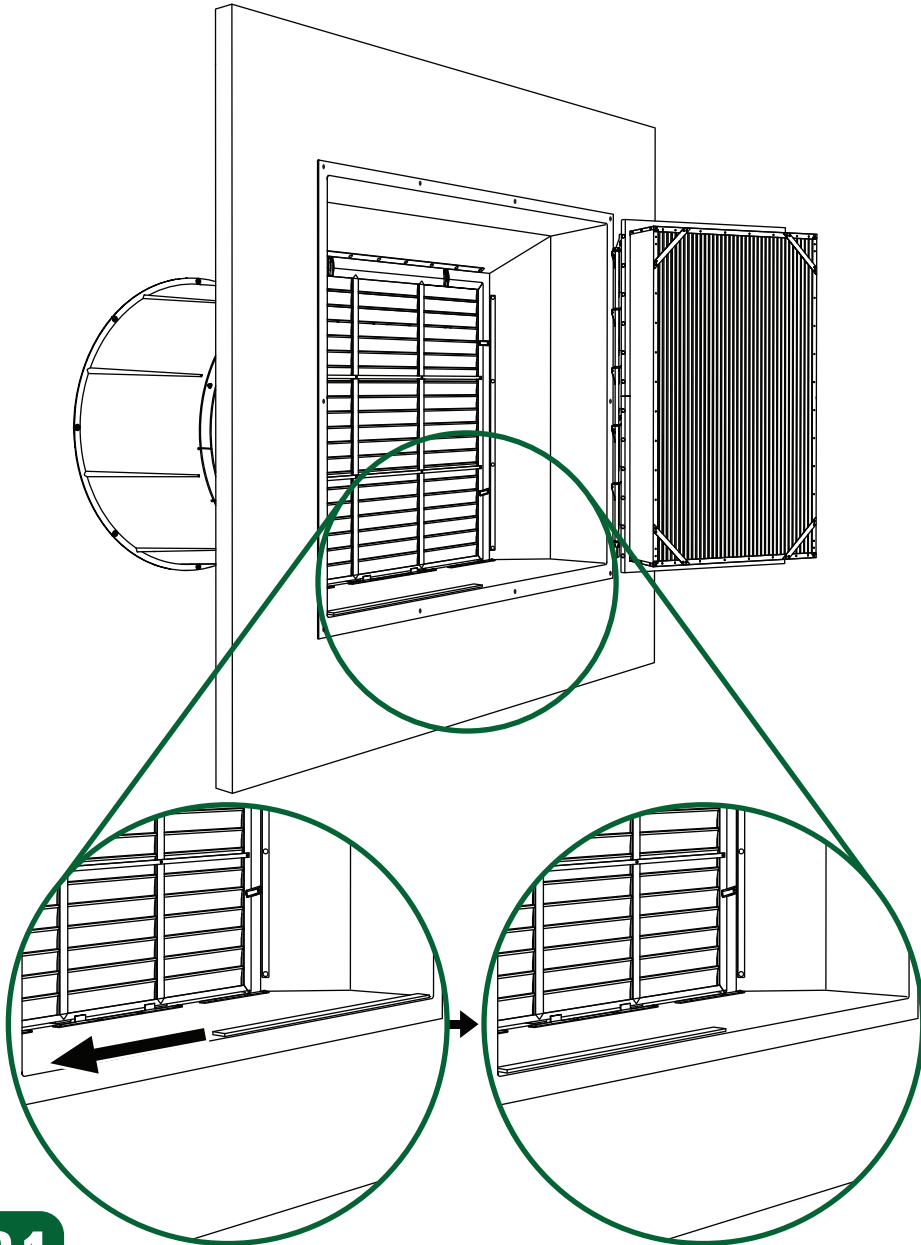
- Locate the (10) 5/16"-18 x 5" **Carriage Bolts** on the exterior of the structure that were inserted in **Step 19**
- Place (1) **Hinge Backer Plate** on the top 5 protruding bolts and (1) **Hinge Backer Plate** on the bottom 5 protruding bolts
- Secure both Hinge Backer Plates to 10 protruding bolts with (10) 5/16" **Split Lock Washers**, (10) 3/8" x 1" **Flat Washers**, and (10) 5/16"-18 **Hex Nuts**, as shown below



20

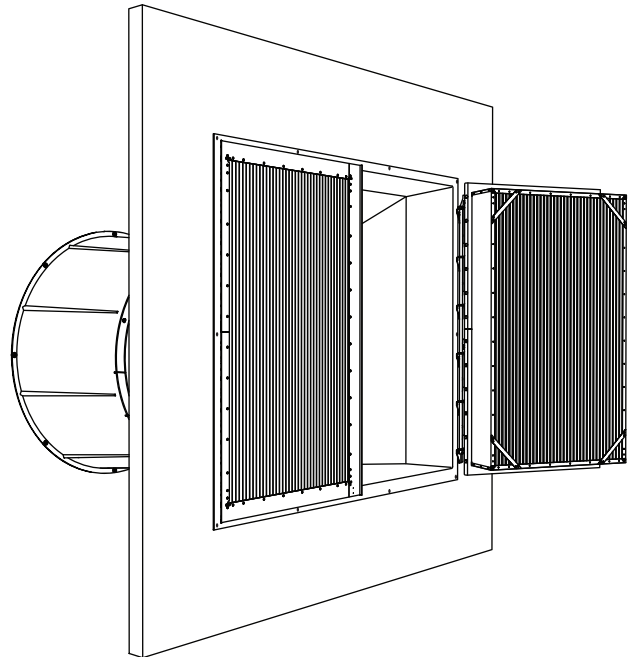
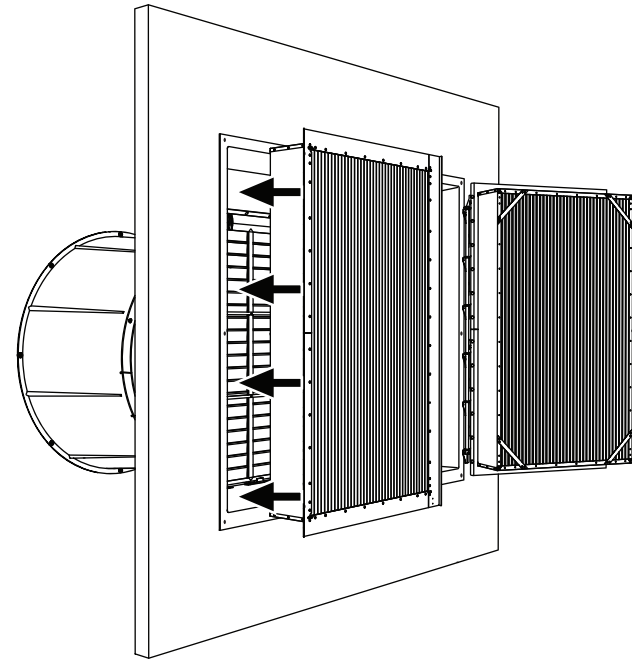
Placement of Left Light Trap Door:

- Move the 1/2" thick spacer board (not provided) that was used for placement of the right door over to left side of the transition, as shown below



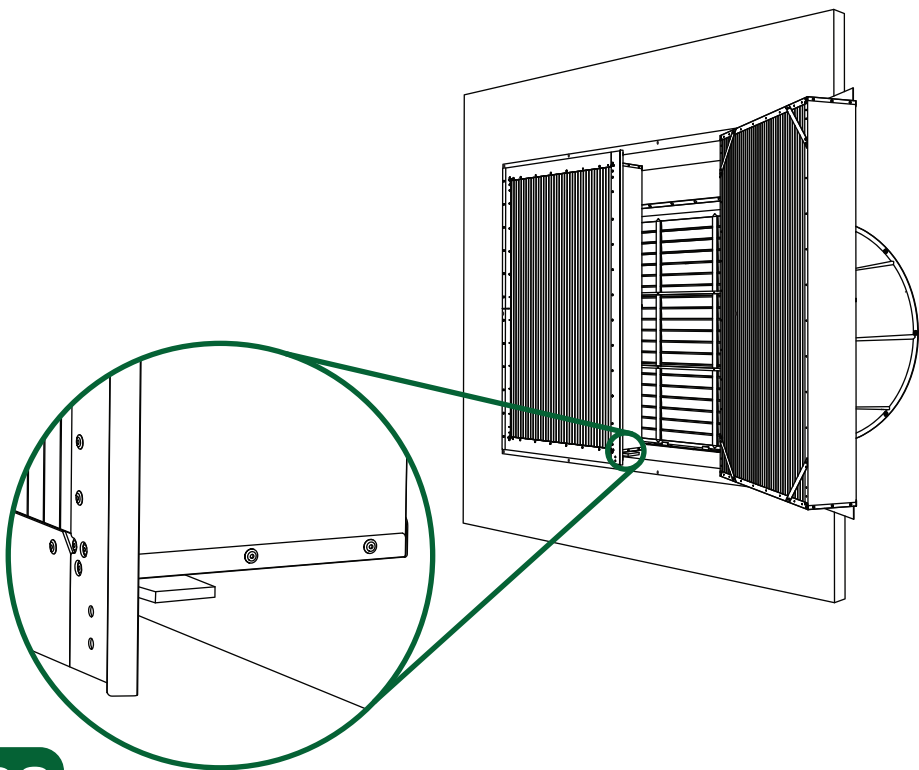
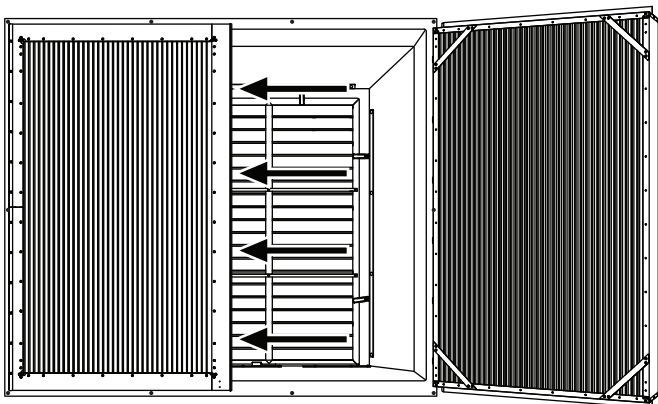
21

- Insert left light trap door into transition



22

- Push left light trap door to the left so that it is tight against the transition, as shown below
- Check placement of the 1/2" thick spacer board confirming that it is under the door



23

Attaching Left Hinge to Left Light Trap Door & Securing Left Light Trap Door to Structure:

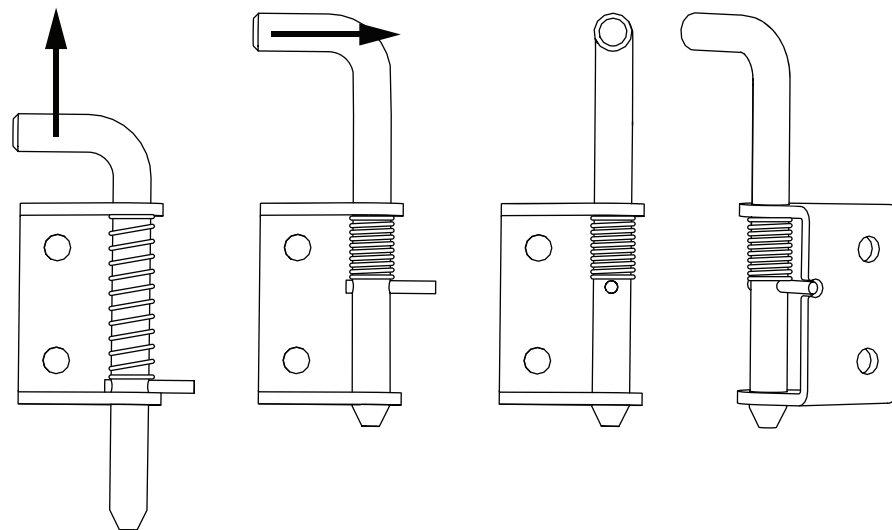
24

- Repeat **Steps 17 to 20** for attaching left hinge to left light trap door and securing hinge to building

Spring Latch Installation:

- Prepare spring latch for installation
- Pull up latch handle
- Rotate latch handle until pin rests in notch as shown below.

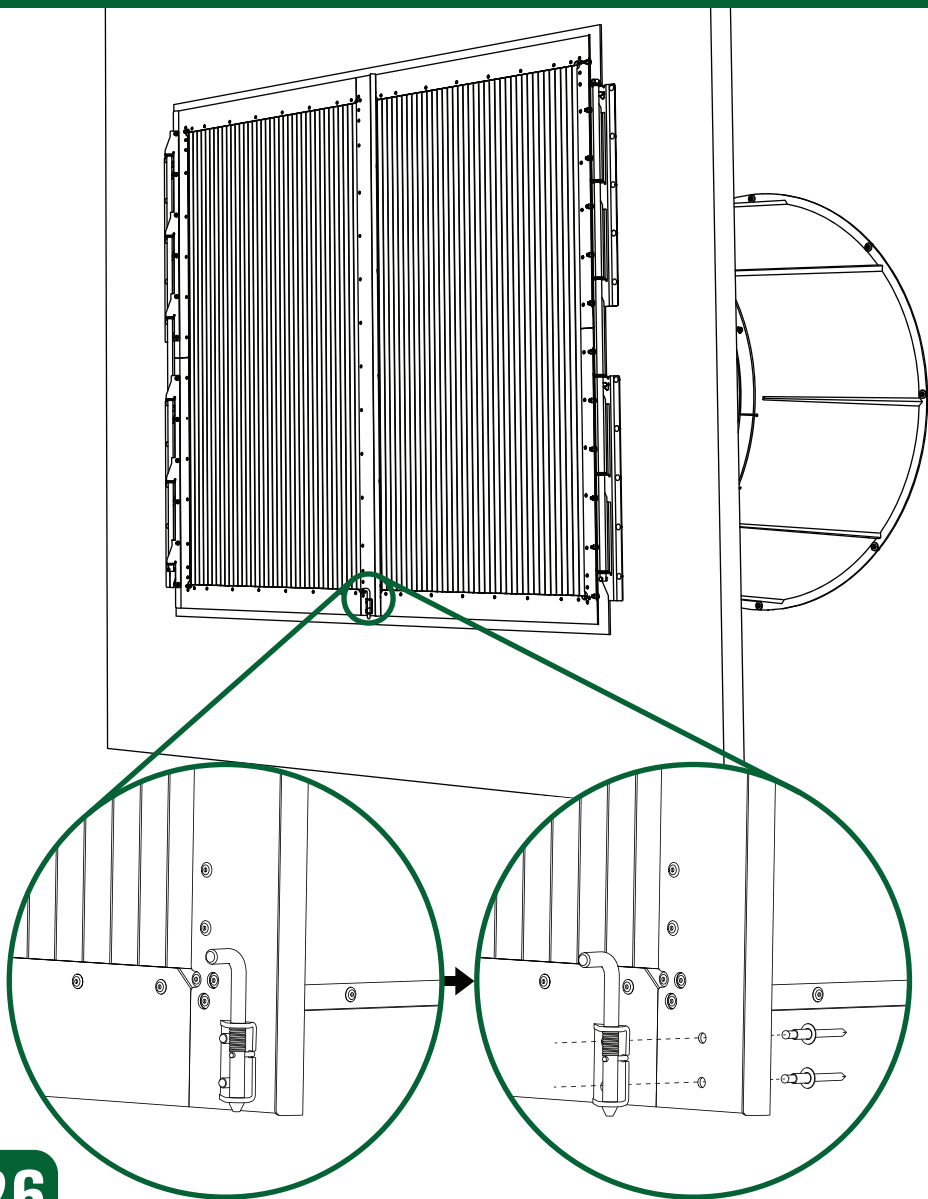
NOTE: If spring latch is not in the locked open position when installing, it may not be able to be locked in the open position once installed due to the restricted movement of the handle.



25

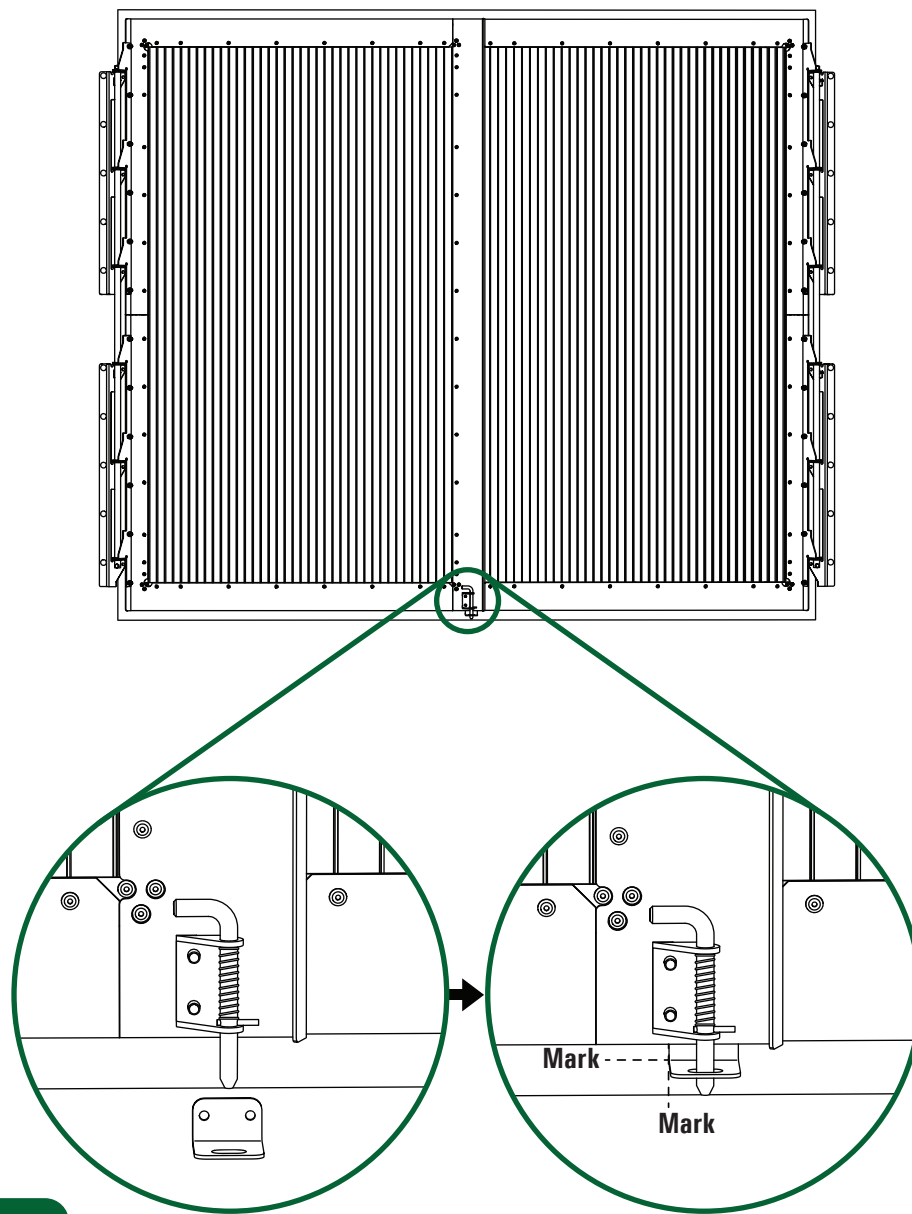
- Open left door, locate lasered holes near bottom edge of door
- Place spring latch on exterior of door and align holes in door with mounting holes on latch
- From interior side of door, secure spring latch to door using (2) 1/4" x 1/8"-1/4" Aluminum Rivets, as shown below

NOTE: Incorrectly installed rivets will prevent door from closing properly.



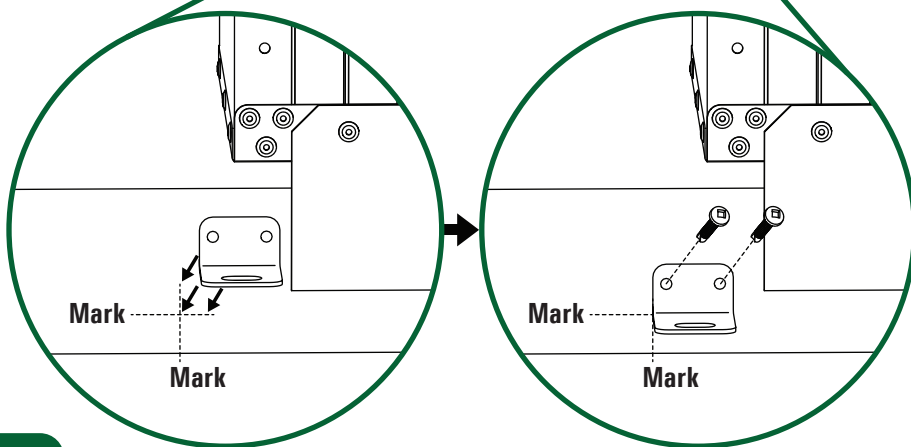
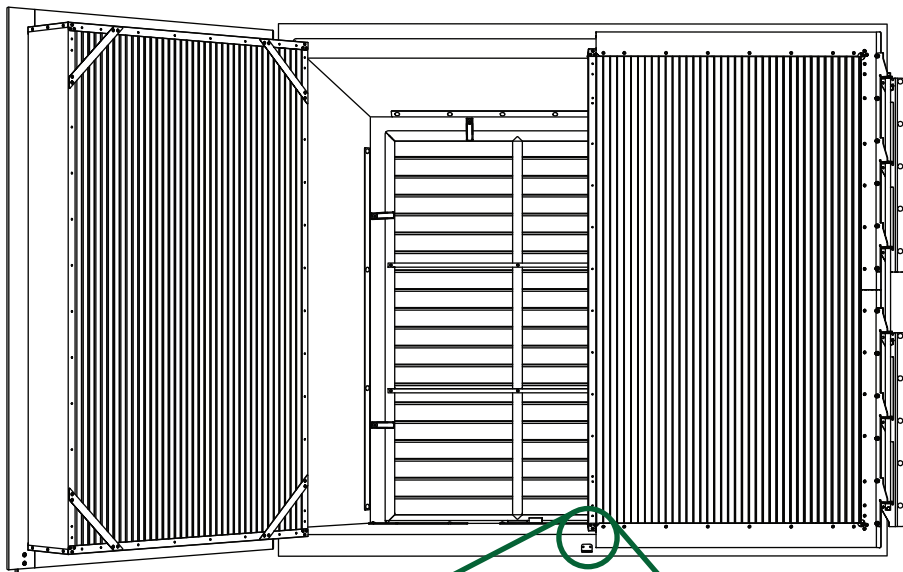
26

- Release the spring latch
- Place latch locking plate where it will fully engage the spring latch bolt
- Mark bottom and side placement of latch locking plate



27

- Open the left door
- Using the marks made in **Step 27** place latch locking plate
- Secure latch locking plate to structure using (2) of the appropriate hardware for your building material (securing hardware is not provided)



28



DISCONNECT POWER BEFORE INSTALLING OR SERVICING.



ALL ELECTRICAL WORK IS TO BE COMPLETED BY A LICENSED AND CERTIFIED ELECTRICIAN AND MEET NATIONAL (NEC), REGIONAL AND LOCAL ELECTRIC CODES.

IT IS THE RESPONSIBILITY OF THE CUSTOMER TO ENSURE THAT INSTALLATIONS MEET THIS AND ANY ADDITIONAL PROVIDED ELECTRICAL REQUIREMENTS.

J&D Manufacturing is not liable for issues arising from non-compliant wiring or installation by unqualified personnel.

General Wiring Instructions:

- Wiring should only be performed by a trained electrician to prevent injury or death.
- Failure to follow the mentioned recommendations can lead to stray voltage and/or increased electrical interference.
- Only permit power to unit when guards are properly installed to prevent injury.
- Refer to motor/VFD specific instructions included with motor/VFD.
- Install manual disconnect switch inside building adjacent to fan.
- Route wire to motor with drip loop and secure. Drip loop will drain accumulated moisture away from the motor.
- Use four conductor 26AWG (or heavier), shielded, dual twisted pair, signal wire with drain wire from J&D control to motor/VFD.

Apply the following as applicable to this unit.

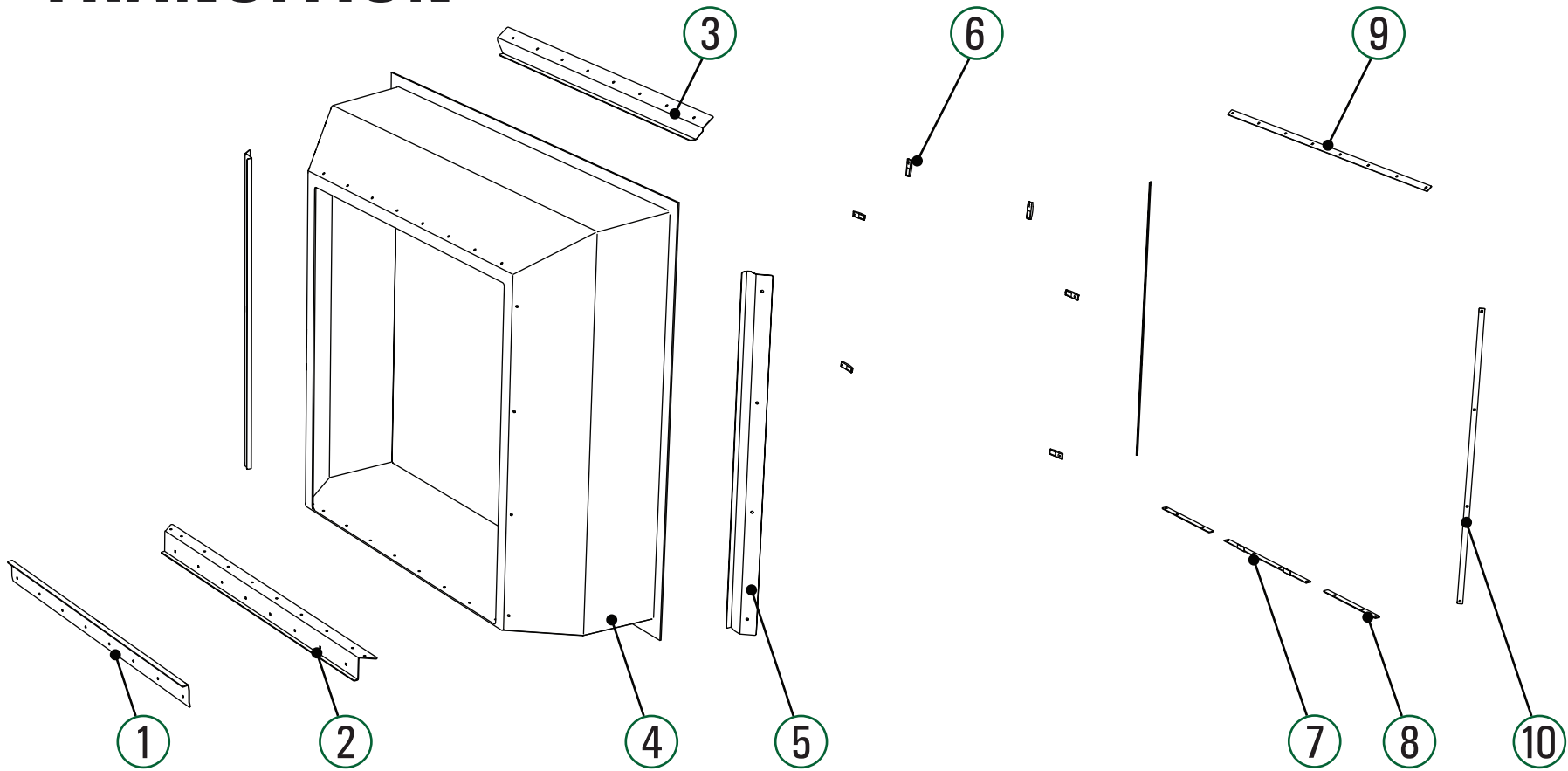
Fans using a VFD:

- Use line reactors to minimize voltage spikes and harmonics.
- Use VFD-rated shielded cable between the drive and motor.
- Ground the shield wire only at the VFD end to avoid ground loops.
- Follow the VFD's wiring instructions and nameplate ratings.
- All equipment must be wired to meet IEEE 519-2022 standard for harmonic distortion.
- Use dedicated overcurrent and overload protection (motor circuit breaker) for each fan.
- Input power must be within +/-5% of nominal voltage.

Single Phase Fans using an Electronic Voltage Control (i.e. TRIAC):

- Do not reduce voltage below 40% of the motor's rated voltage.
- This control method may cause motor humming.
- Fan speed may fluctuate and not remain consistent.

55" TRANSITION

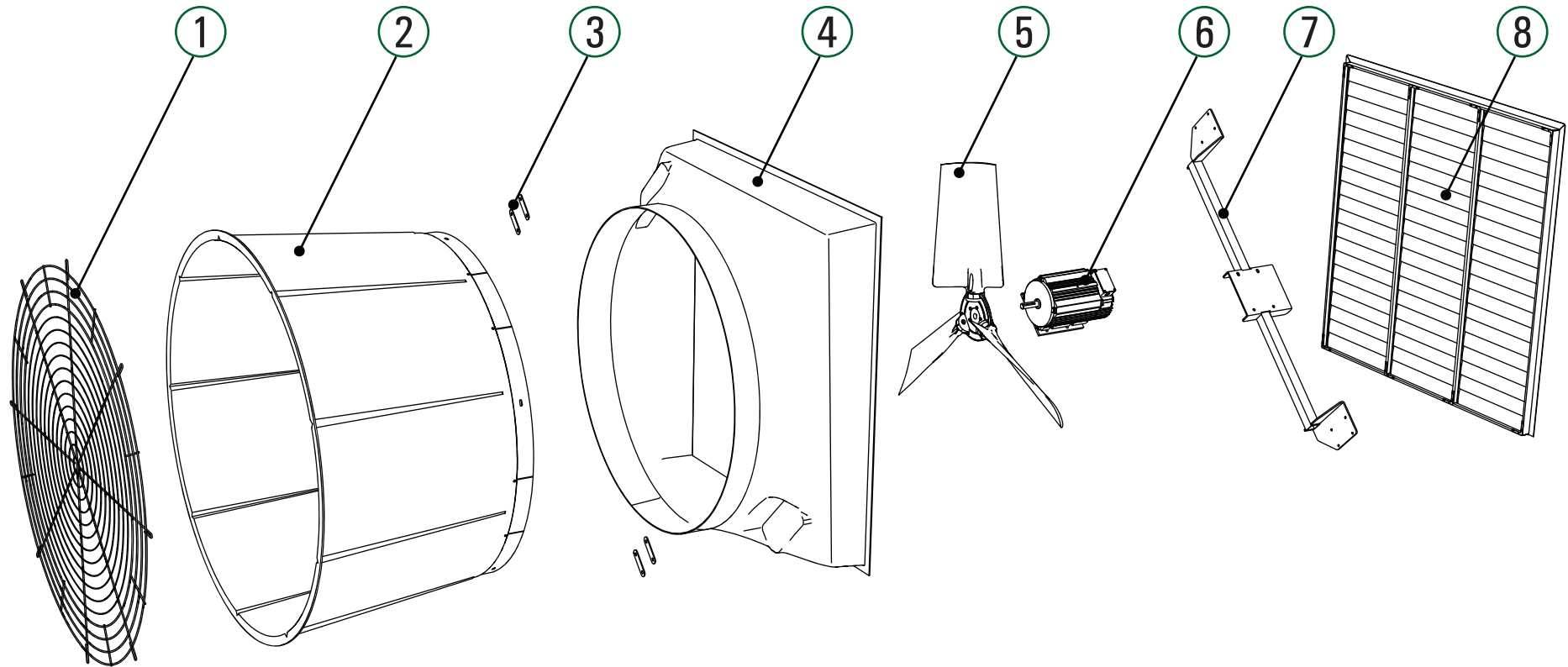


#	(Qty) Description
1	(1) Bottom Bracket "B"
2	(1) Bottom Bracket "A"
3	(1) Top Bracket
4	(1) Transition Housing
5	(2) Side Brackets

#	(Qty) Description
6	(6) Shutter Clips
7	(1) Center Backer Bracket with Shutter Restraints
8	(2) Backer Brackets for Bottom Bracket "A"

#	(Qty) Description
9	(1) Backer Bracket for Top Bracket
10	(2) Backer Brackets for Side Brackets

55" PM DIRECT DRIVE FAN

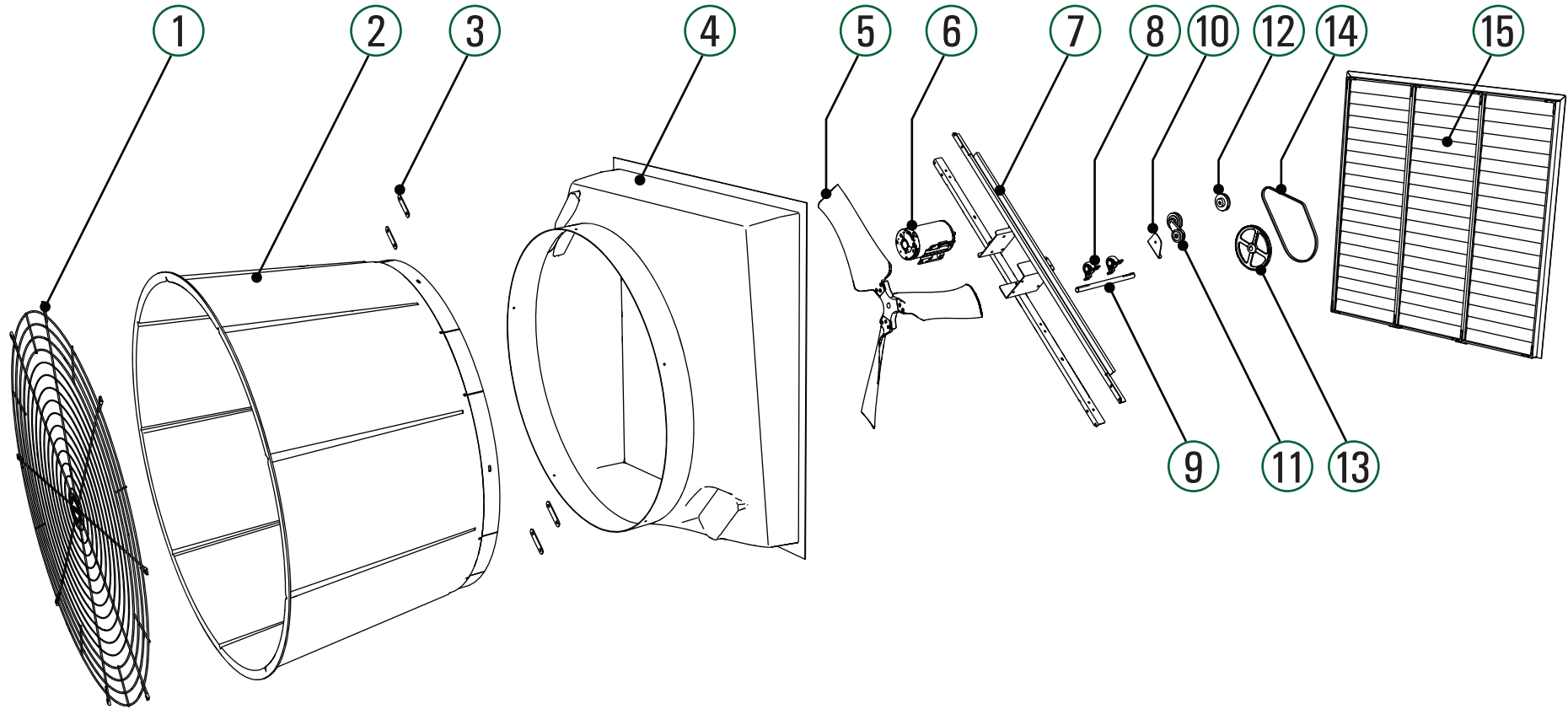


#	(Qty) Description
1	(1) Front Guard
2	(1) Cone
3	(4) Support Plates

#	(Qty) Description
4	(1) Housing
5	(1) Prop
6	(1) Motor

#	(Qty) Description
7	(1) Frame
8	(1) Shutter

55" BELT DRIVE FAN

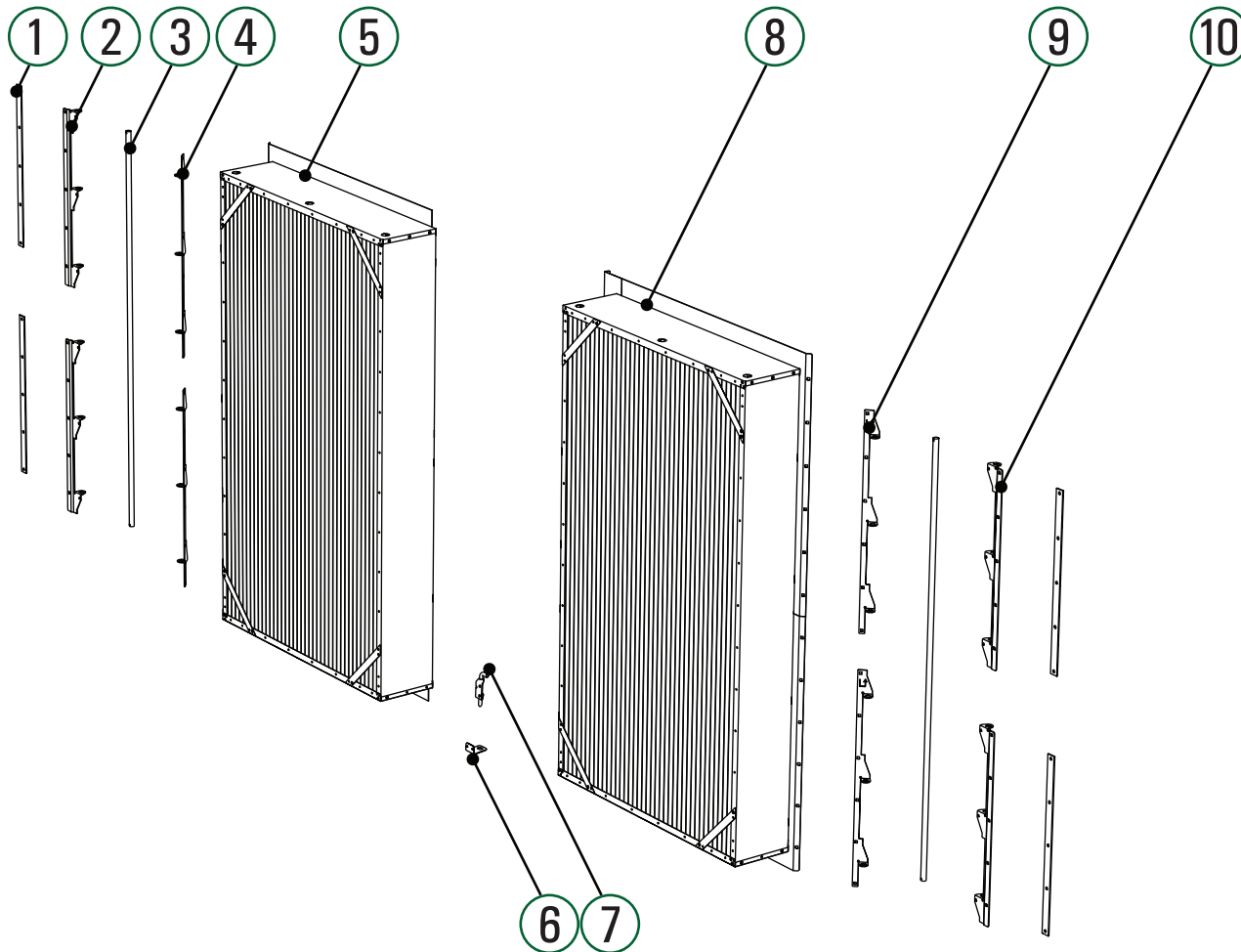


#	(Qty) Description
1	(1) Front Guard
2	(1) Cone
3	(4) Support Plates
4	(1) Housing
5	(1) Prop

#	(Qty) Description
6	(1) Motor
7	(1) Frame
8	(2) Pillowblock Bearings
9	(1) Shaft
10	(1) Tensioner Bracket

#	(Qty) Description
11	(1) Belt Tensioner
12	(1) Motor Pulley
13	(1) Shaft Pulley
14	(1) Belt
15	(1) Shutter

LIGHT TRAP DOORS



#	(Qty) Description
1	(4) Hinge Backer Plates
2	(2) Right Door Hinges - Wall Side
3	(2) Door Hinge Rods
4	(2) Right Door Hinges - Door Side
5	(1) Right Light Trap Door
6	(1) Latch Locking Plate
7	(1) Spring Loaded Bolt Latch
8	(1) Left Light Trap Door with Lip
9	(2) Left Door Hinges - Door Side
10	(2) Left Door Hinges - Wall Side