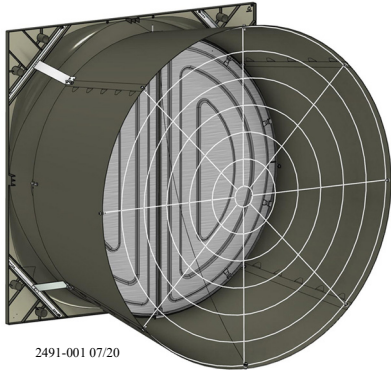
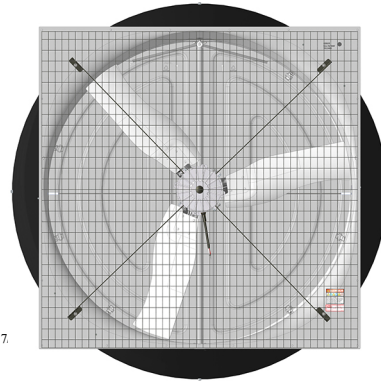




57" Assembled & Unassembled Direct Drive EnduraMax™ Fan



2491-001 07/20



2491-002 07.

Fan Part No. 57611-11

Fan	Bess Lab Test*	Phase	Voltage	Hz	Full Speed RPM
57611-11	24694	1	220-240	60	630

*Bess Lab test data available at <http://bess.illinois.edu/type.asp>



Operating static pressure should be less than 0.25 inches water column [62 Pa].
The Fan Inlet and exhaust must be kept clear of obstructions. Failure to keep the Fan airflow path clear of obstructions could cause loss of Fan performance and Fan damage.

Installation and Operators Manual

Installation and Operators Manual

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Safety

Warning



This product has inherent dangers, which can cause damage or loss to persons or equipment if the warnings in this manual are not adhered to. Please read and follow all instructions.

Personnel Requirements



This product must only be used by persons adequately trained in the hazards, dangers, and risks of the equipment.

All users of this product must be trained in the following areas:

- Health and safety hazards relating to use of this machine throughout its entire life cycle
- Devices provided for safety of the operator
- Instructions for safe shutdown in case of emergency

The employer must assume the following responsibilities:

- To provide necessary personal protective equipment required
- To ensure normal maintenance operations are carried out
- To provide necessary repair parts in a timely manner

General Requirements



Safety devices must remain in good working condition and may not be bypassed or rendered ineffective. The fan must not be operated with guards removed. All maintenance work must be done with electrical power isolated from the machine via proper device in accordance with local and national laws. The user must ensure that the environmental and electrical supply conditions in which the fan operates are within the limits specified in this manual or on product labels. Modification to this machine in any way are prohibited unless given written consent by CTB, Inc. Unauthorized modifications will render the warranty void and can lead to hazardous situations.

Safety Devices



This machine has been designed to operate with fixed guards in order to protect users from physical hazards on both inlet and outlet sides of this fan. They were designed in accordance with national standards. They must not be altered. They must remain in their fixings at all times of operation. If damage or destruction should occur, exact replacements should be fitted immediately. **Reference the technical documentation section at the back of this manual** for more information.

At the time of installation, a proper device should be fitted in the direct vicinity of the fan to act as an emergency stop device. This device must be supplied by the installer. The device must be of a type to satisfy the emergency stop device requirements below.

EN-IEC 60204-1 Section 10.7.2:

- a push-button operated switch with a palm or mushroom head type

Section 10.7.3:

- actuators of emergency stop devices shall be colored RED.

Residual Risks

Despite the level of caution taken and the incorporation of safeguards, some risks will remain. This product has the following hazards:

Hazard	Safeguard	Operator Requirement
Cutting or trapping Ejection of parts	Fixed guards	Maintain all fixed guards in proper location and good condition
Stability	Design Installation Instructions	Maintain product in good operating condition according to manual
Electrical shock	Warning Labels Installation Instructions	Maintain hazard decals in good readable condition Install and operate in accordance with instruction in manual
Noise	Design	Wear hearing protection if in vicinity of product for extended time periods
Transport and Handling	Instructions	Reference manual for precautions to take during transport or handling of this product

Follow Safety Instructions

Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.



Limited Warranty

Chore-Time Group, a division of CTB, Inc. ("Chore-Time") warrants new CHORE-TIME EnduraMax™ Fans manufactured by Chore-Time to be free from defects in material or workmanship under normal usage and conditions, for One (1) year from the date of installation by the original purchaser ("Warranty"). Chore-Time provides for an extension of the aforementioned Warranty period ("Extended Warranty Period") with respect to certain Product parts ("Component Part") as set forth in the table below. If such a defect is determined by Chore-Time to exist within the applicable period, Chore-Time will, at its option, (a) repair the Product or Component Part free of charge, F.O.B. the factory of manufacture or (b) replace the Product or Component Part free of charge, F.O.B. the factory of manufacture. This Warranty is not transferable, and applies only to the original purchaser of the Product.

Component Part	Extended Warranty Period
EnduraMax™ Fan Housing and Cones (Including Composite Shrouds, Composite Doors and HDPE Cone Panels)	Five (5) Years

CONDITIONS AND LIMITATIONS

THIS WARRANTY CONSTITUTES CHORE-TIME'S ENTIRE AND SOLE WARRANTY AND CHORE-TIME EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES. CHORE-TIME shall not be liable for any direct, indirect, incidental, consequential or special damages which any purchaser may suffer or claim to suffer as a result of any defect in the Product. Consequential or Special Damages as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs, and operational inefficiencies. *Some jurisdictions prohibit limitations on implied warranties and/or the exclusion or limitation of such damages, so these limitations and exclusions may not apply to you. This warranty gives the original purchaser specific legal rights. You may also have other rights based upon your specific jurisdiction.*

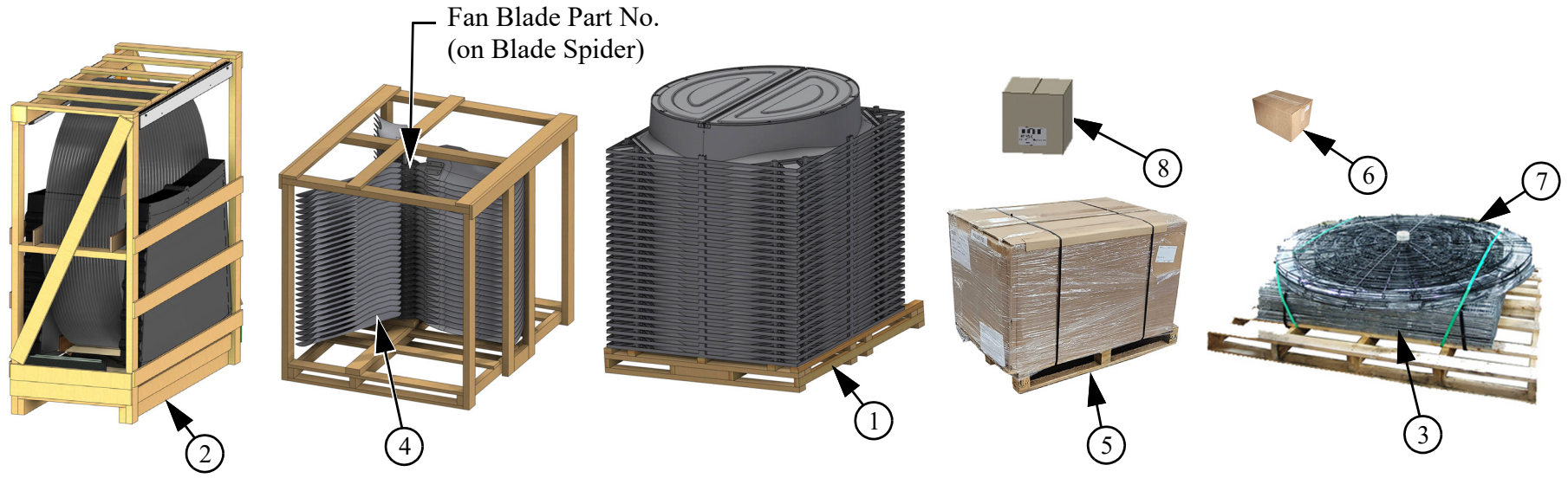
Compliance with federal, state and local rules which apply to the location, installation and use of the Product are the responsibility of the original purchaser, and CHORE-TIME shall not be liable for any damages which may result from non-compliance with such rules.

The following circumstances shall render this Warranty void:

- Modifications made to the Product not specifically delineated in the Product manual.
- Product not installed and/or operated in accordance with the instructions published by the CHORE-TIME.
- All components of the Product are not original equipment supplied by CHORE-TIME.
- Product was not purchased from and/or installed by a CHORE-TIME authorized distributor or certified representative.
- Product experienced malfunction or failure resulting from misuse, abuse, mismanagement, negligence, alteration, accident, or lack of proper maintenance, or from lightning strikes, electrical power surges or interruption of electricity.
- Product experienced corrosion, material deterioration and/or equipment malfunction caused by or consistent with the application of chemicals, minerals, sediments or other foreign elements.
- Product was used for any purpose other than for the care of poultry and livestock.

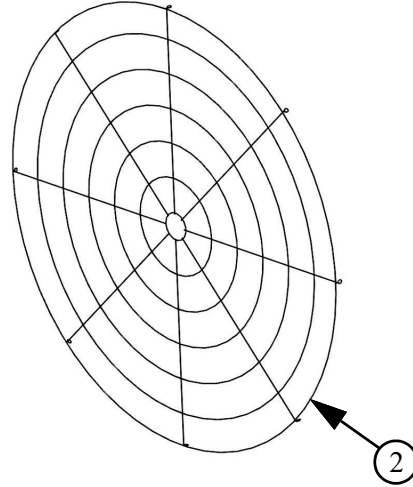
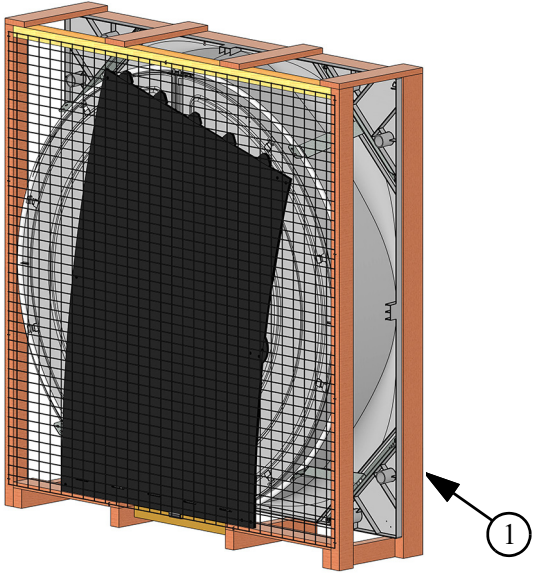
The Warranty and Extended Warranty may only be modified in writing by an officer of CHORE-TIME. CHORE-TIME shall have no obligation or responsibility for any representations or warranties made by or on behalf of any distributor, dealer, agent or certified representative.

Unassembled Fan Component Part Numbers



Unassembled 57" DD Fan Kit Part Numbers		
Fan Kit Part Number	57611-11U	
Phase	1	
Voltage	220-240	
Cone Grill Spacing	6" [152mm]	
Fan Blade Material	Galv.	
Item	Description	Component Part No.
1	57" Fan Shroud and Door Package	53850-XX
2	57" DD Fan Component Pack	57617-XX
3	59 Square 1.25x2 Wire Screen	56540
4	57" Fan Blade	53219-XX
5	Motor	57401
6	Programmed VFD	58142-1
7	57" Fan Cone Grill	53129
8	57" DD Fan Hardware Package	57616-1XX
XX=part packaged quantity		

Assembled Fan Component Part Numbers



Assembled 57" DD Fan Kit Part Numbers		
Fan Kit Part Number	57611-11	
Phase	1	
Voltage	220-240	
Cone Grill Ring Spacing	6" [152mm]	
Fan Blade Material	Galv.	
Item	Description	Component Part No.
1	57" DD Fan Sub-Assembly	57611-11P
2	57" Fan Cone Grill	53129
3	Programmed VFD	58142-1

Tools Needed and Supplies

- Ratchet or Impact Wrench
- Phillips Screwdriver
- Drill
- 3/16" Drill Bit
- Expansion Clamp (See “Keeping Fan Shroud edges straight” on page 15)
- 3/8" Socket
- 1/2" Socket or Wrench
- Side Cutters
- Caulking

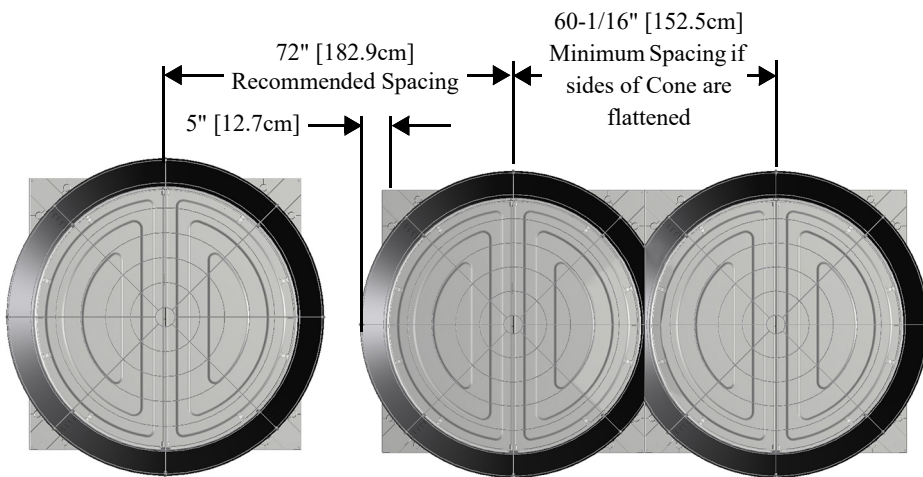
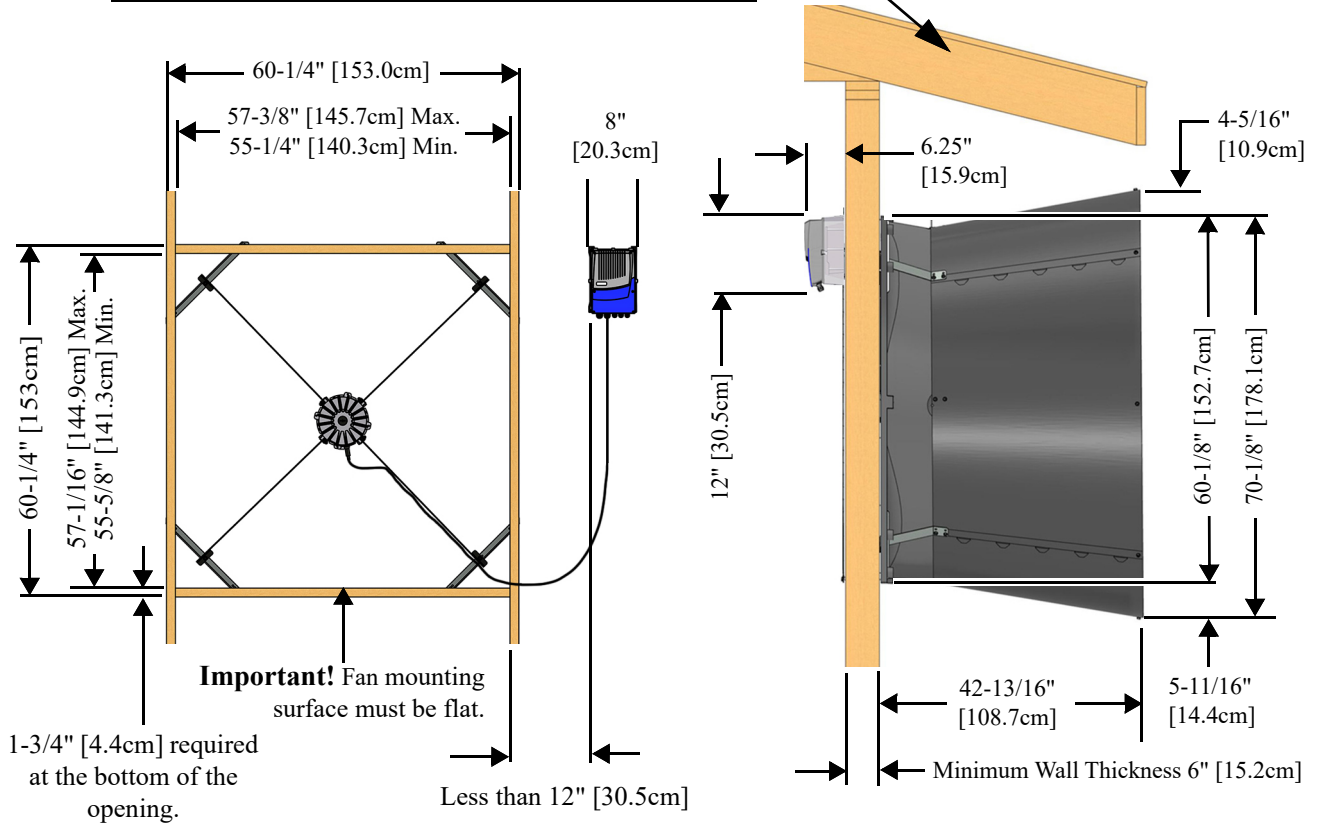
VFD Cross Reference Part Numbers

Chore-Time Part Number	Keld Model Number
58142-1	KMD2-0C00GAG

EnduraMax™ DD Fan New Installation Planning

Planning the layout of the spacing between Fans is very important. Spacing too close together will cause interference between the discharge Cones. See “Fan Drive (VFD) Mounting” on page 22.

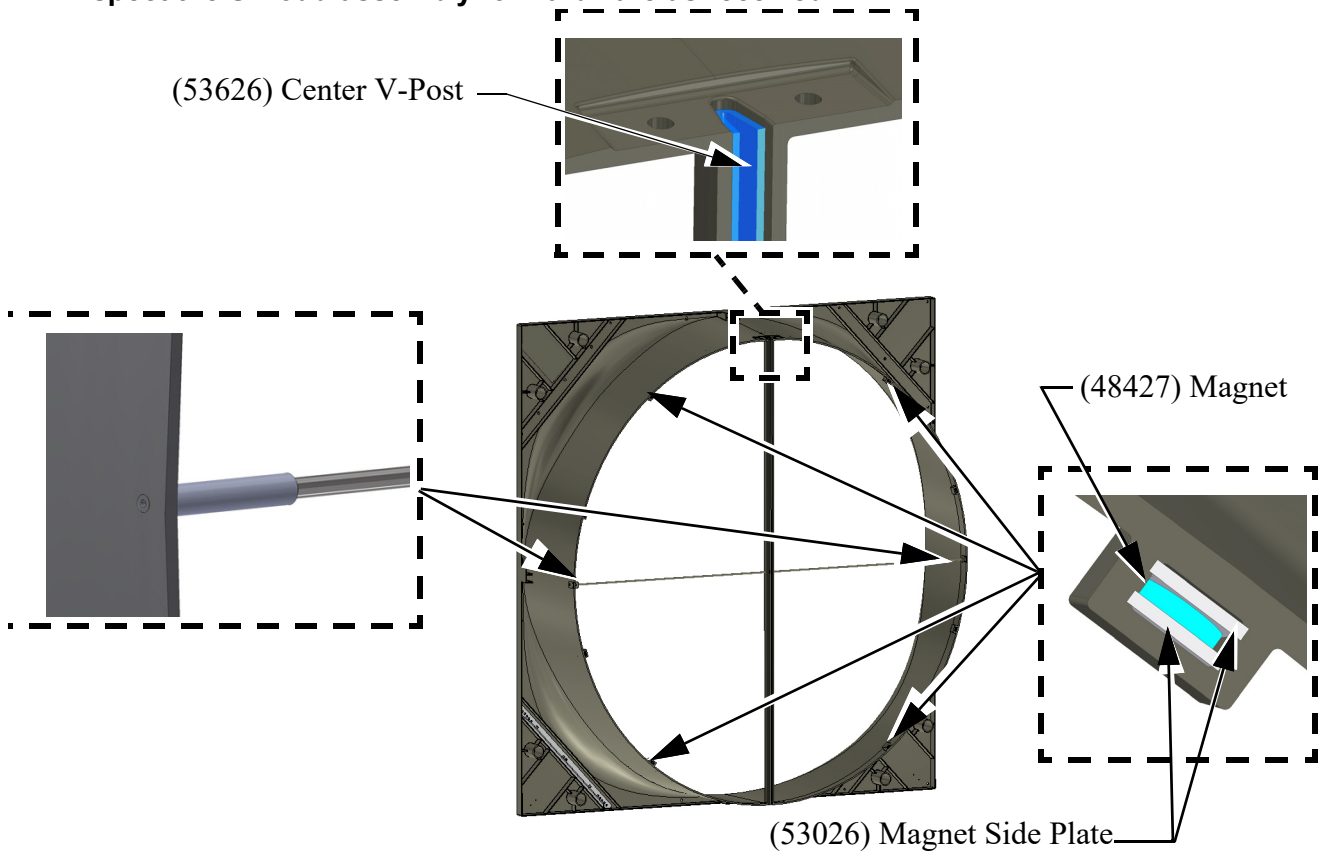
Important: Provide Shelter over Cones in areas where snow or ice could cause damage. CTB Inc. Warranty **Does Not** cover damage from external sources.



Installation

Inspecting the Shroud

Inspect the Shroud assembly for hardware as received.



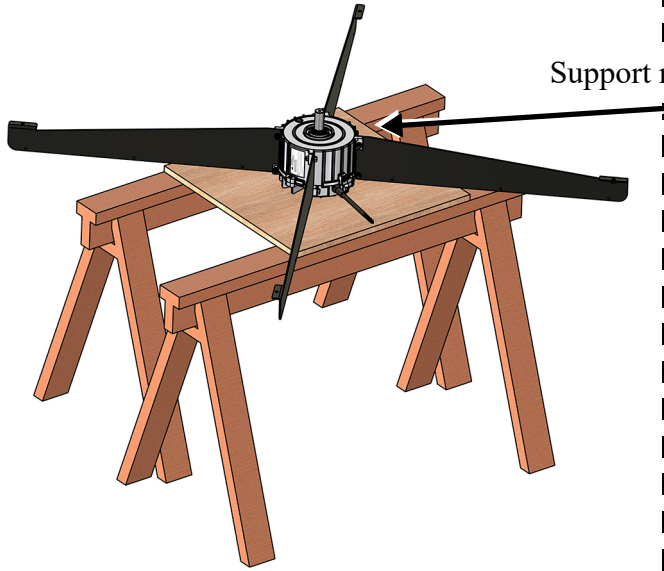
Assembly Jig for Unassembled Fans

(For assembled versions skip to page 12)

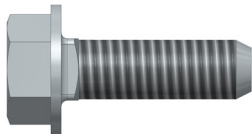
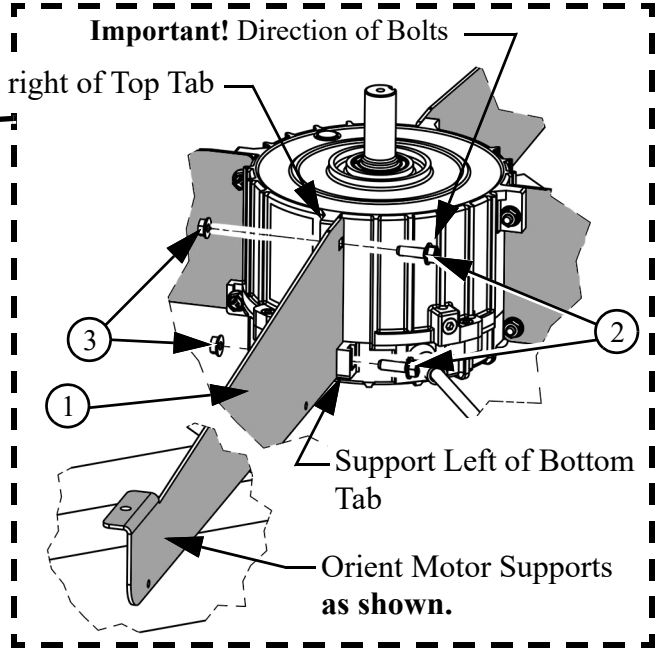
For ease of Fan assembly it is helpful to create an elevated flat surface as shown.



Install Motor Supports



Support right of Top Tab



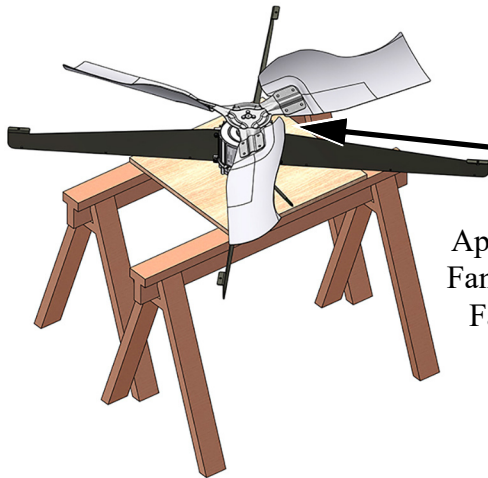
(54287) 5/16-18 x 1 Bolt



(46764) 5/16 Flg. Nut

Item	Description	Part No.
1	57" DD Fan Motor Support	57592
2	5/16-18 x 1 Bolt	54287
3	5/16 Flg. Nut	46764

Blade Installation

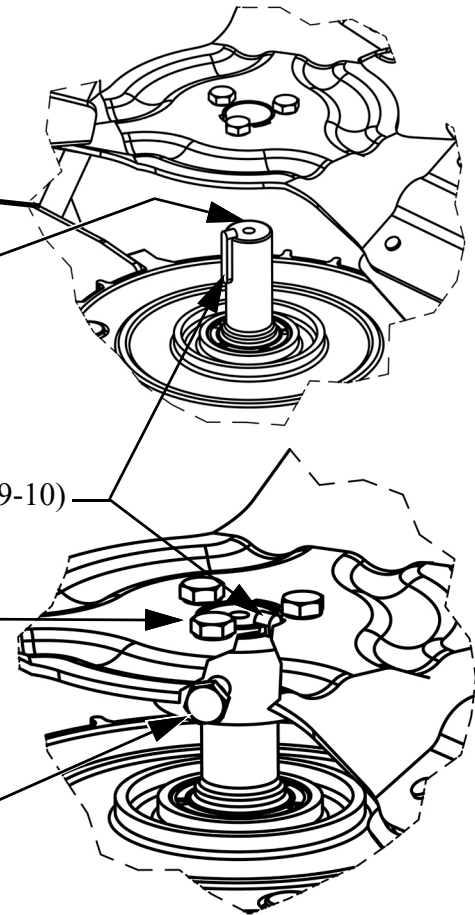


Apply Anti-Seize to the Fan Blade Shaft and the Fan Blade bore before installing Blade.

1/4" Key (2419-10)

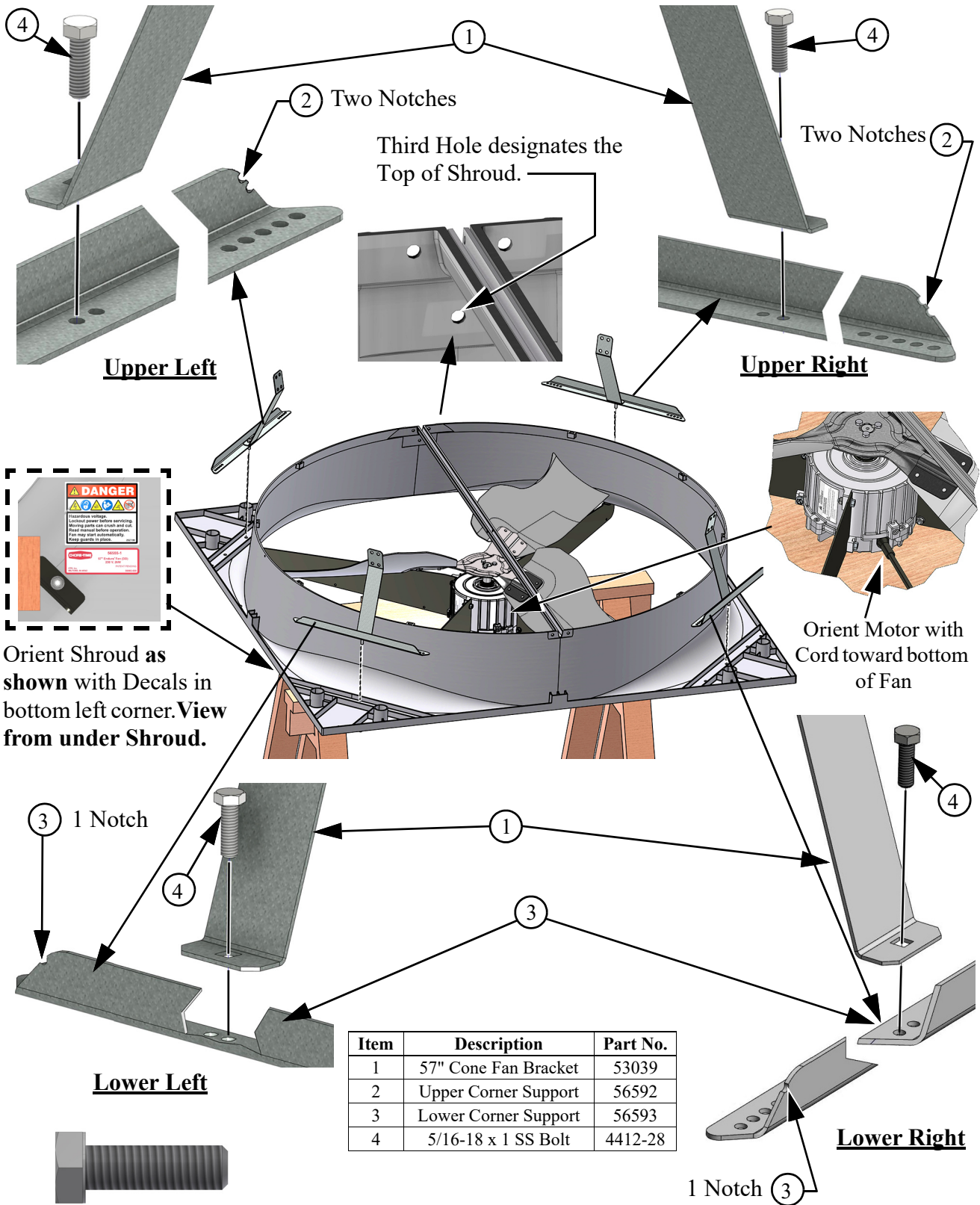
Blade flush with end of Motor Shaft.

Torque Fan Blade Bolt to 252 ± 8 in lbs. [28.47 ± .9 Nm].



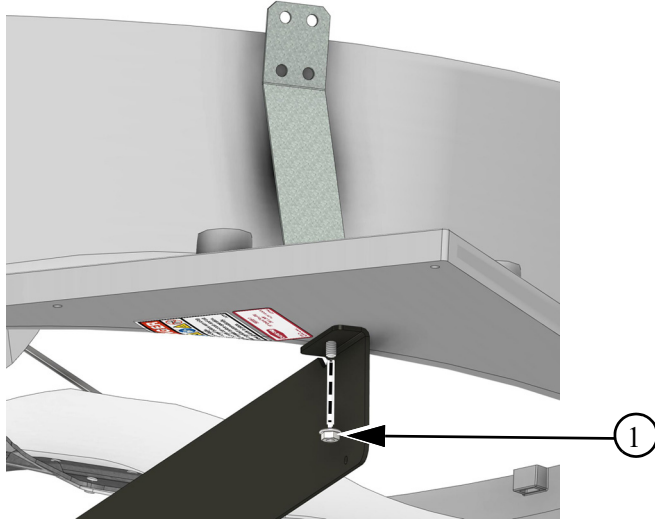
Shroud and Shroud Components Installation

1. Assemble the four corner Bracket assemblies by threading (4412-28) Bolts into the Corner Supports as shown. Each Corner Bracket Assembly is unique. Make sure to use the appropriate Corner Support with the Bolt in the correct hole as shown. Line up the Bolts with the Holes in the shroud and Motor Supports and set in place as shown.



(4412-28) 5/16-18 x 1" Bolt

2. Fasten the Cone Supports and Brackets to the Fan Motor Supports with 4 (46764) Nuts as shown.



Item	Description	Part No.
1	5/16 Flg. Nut	46764



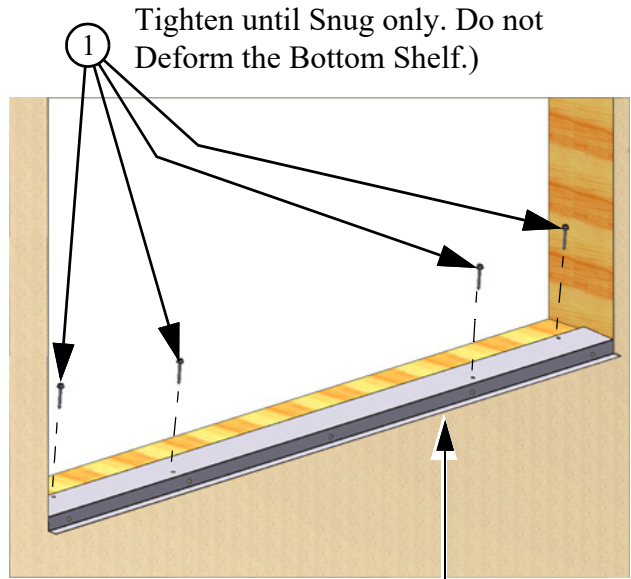
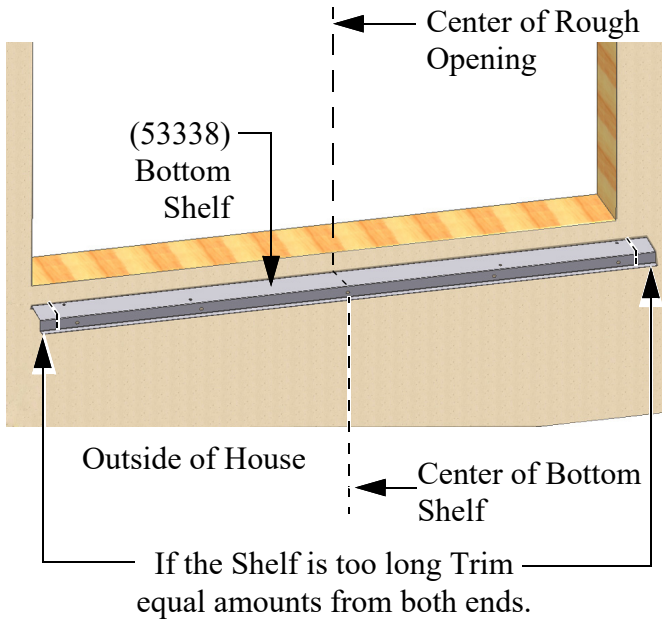
(46764) 5/16 Flg. Nut

3. Install the Top Pivot Plate Bracket (53037), Bottom Pivot Plate Bracket (53036), Fan Cone Cable (50618-5) and Eye-Bolt (30663) as shown.

Item	Description	Part No.
1	57" Fan Top Pivot Plate	53037
2	5/16 Flg. Nut	46764
3	3/32" Fan Cone Cable	50618-5
4	5/16-18 x 2 Eye-Bolt	30663
5	57" Fan Bottom Pivot Plate	53036

(46764) 5/16 Flg. Nut

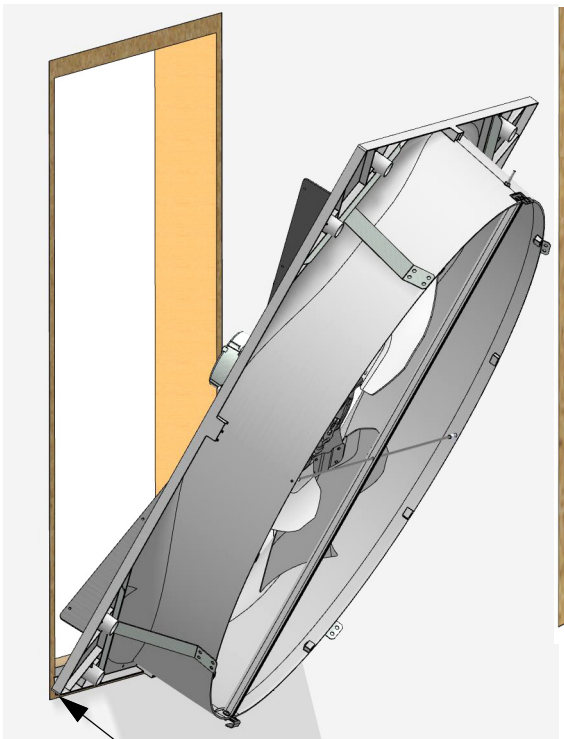
Bottom Shelf Installation



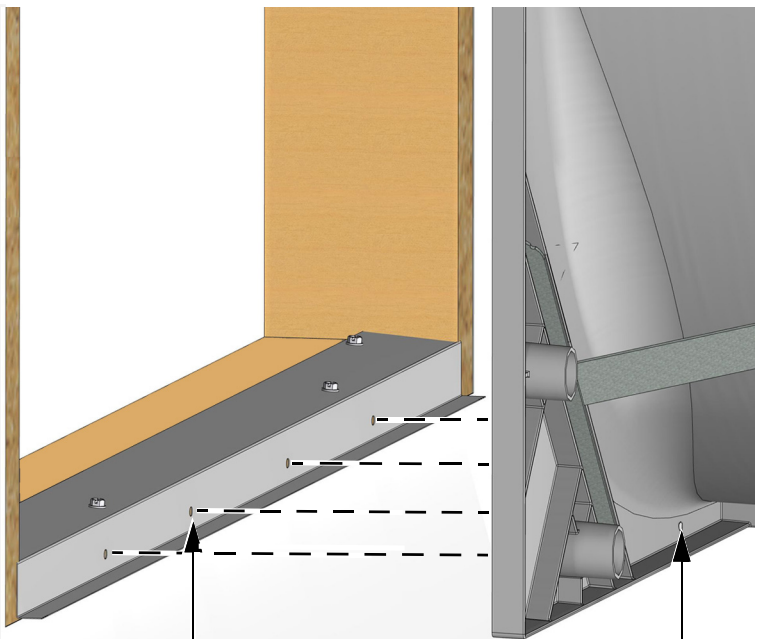
① (41561) 1/4 x 1-1/2 Lag Screw

This Flange must be straight after installation!

Attaching the Fan to the Wall



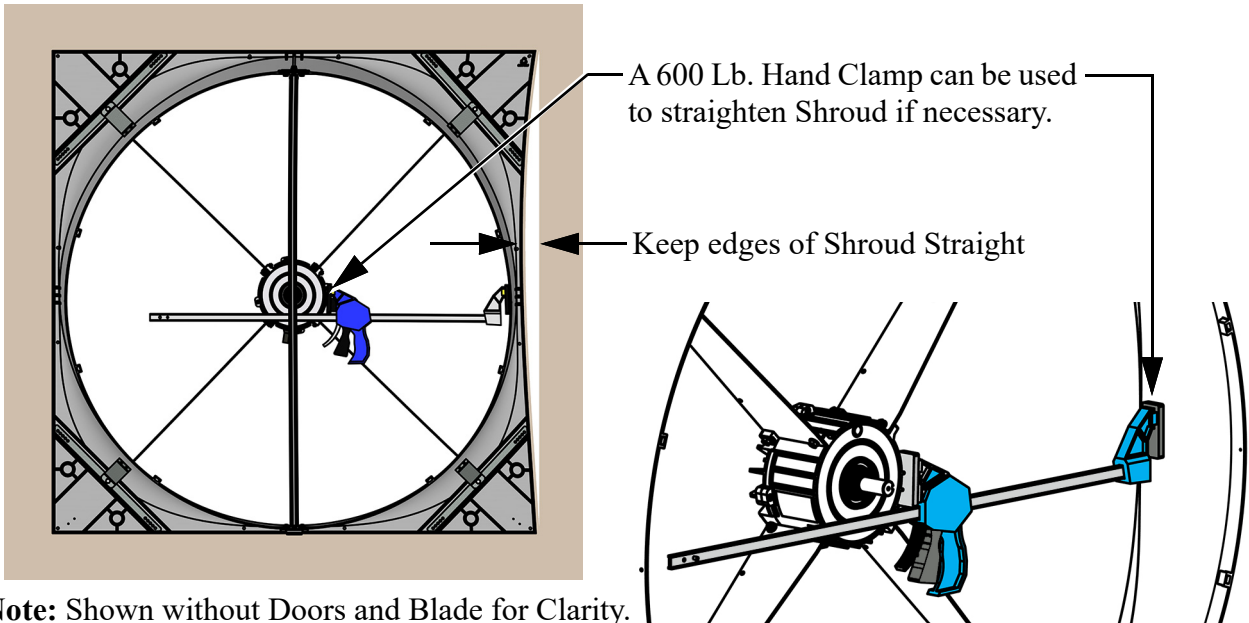
Set Fan Shroud on the Bottom Shelf.



Line up the four Holes in the Shroud with the Holes in the Bottom Shelf.

Keeping Fan Shroud edges straight

It is important when attaching the Fan to the Wall to keep edges of Shroud straight.

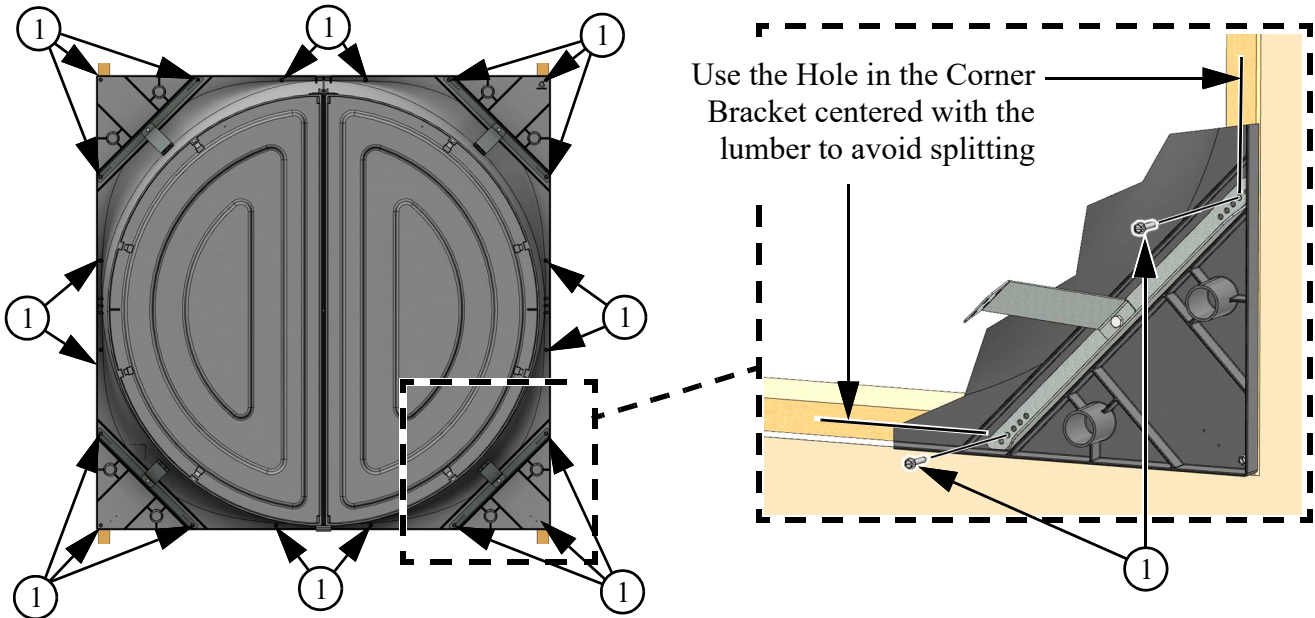


Note: Shown without Doors and Blade for Clarity.

Attaching the Fan Shroud to the Wall

1. Pre-drill holes to 3/16" [4.8 mm] to avoid splitting lumber. If holes do not line up with the lumber it may be necessary to put Screws through Shroud.
2. **Attach the Fan to the Wall with 1/4 x 1-1/2" Lag Screws (41561) as shown. Attach with a total of 20 Lag Screws.**

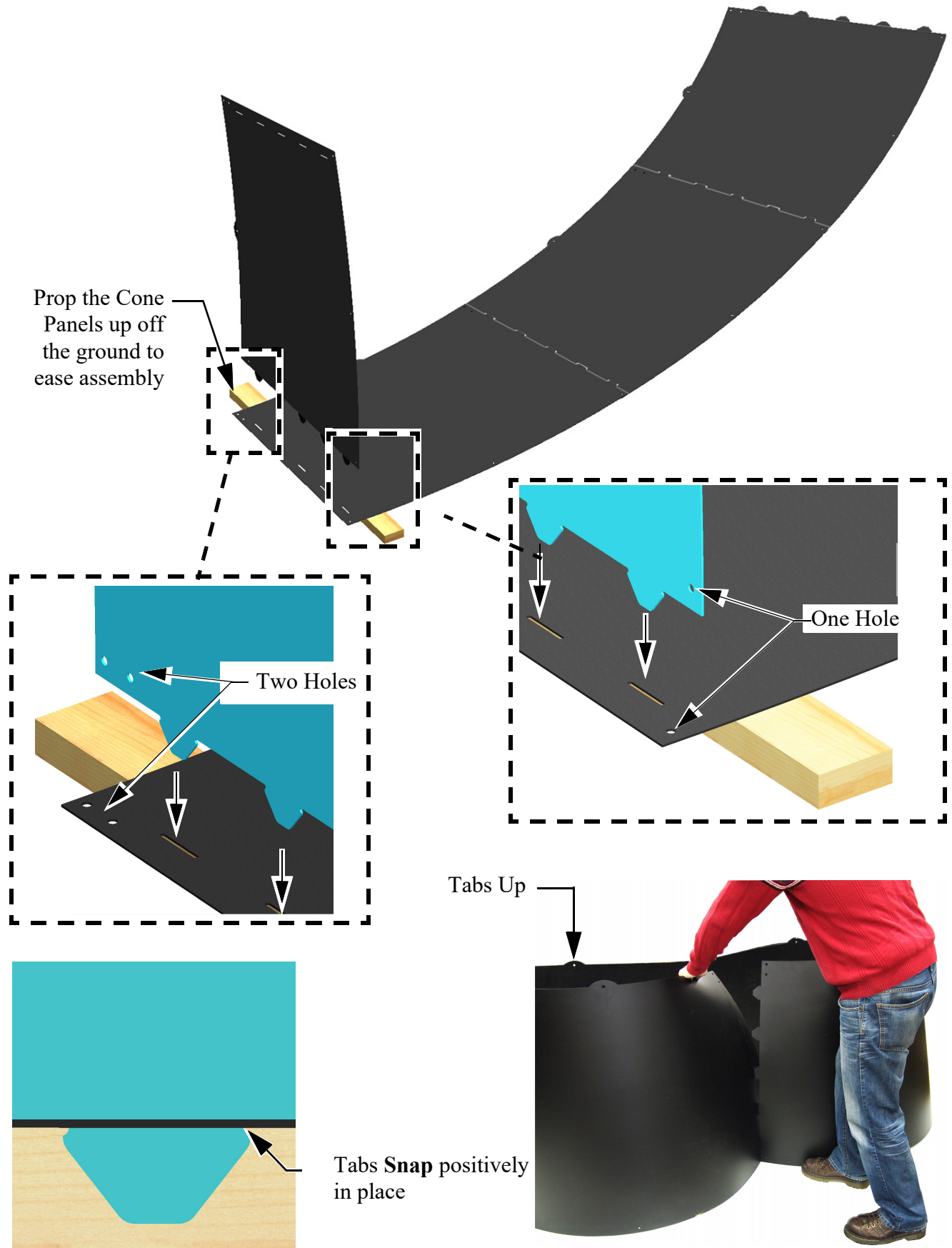
Be sure sides of Shroud are straight, and the wall mounting surface is flat. Bowed sides or an uneven mounting surface can cause the fan blade to hit the orifice, or excessive gaps between the Hyflo® doors and the shroud.



① (41561) 1/4 x 1-1/2 Lag Screw

Cone Assembly

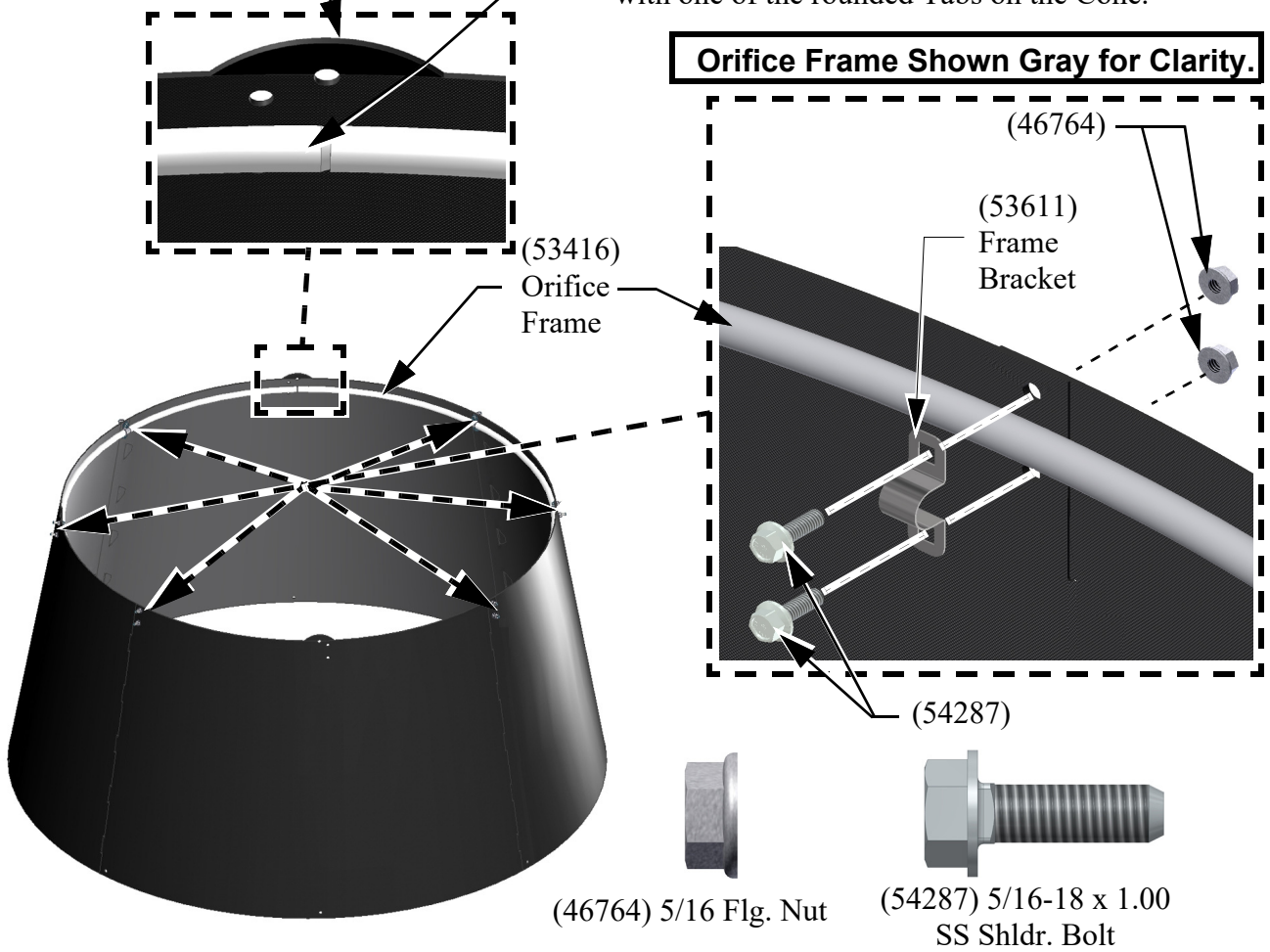
Assemble Cone Panels as shown below.



Installing the Orifice Frame

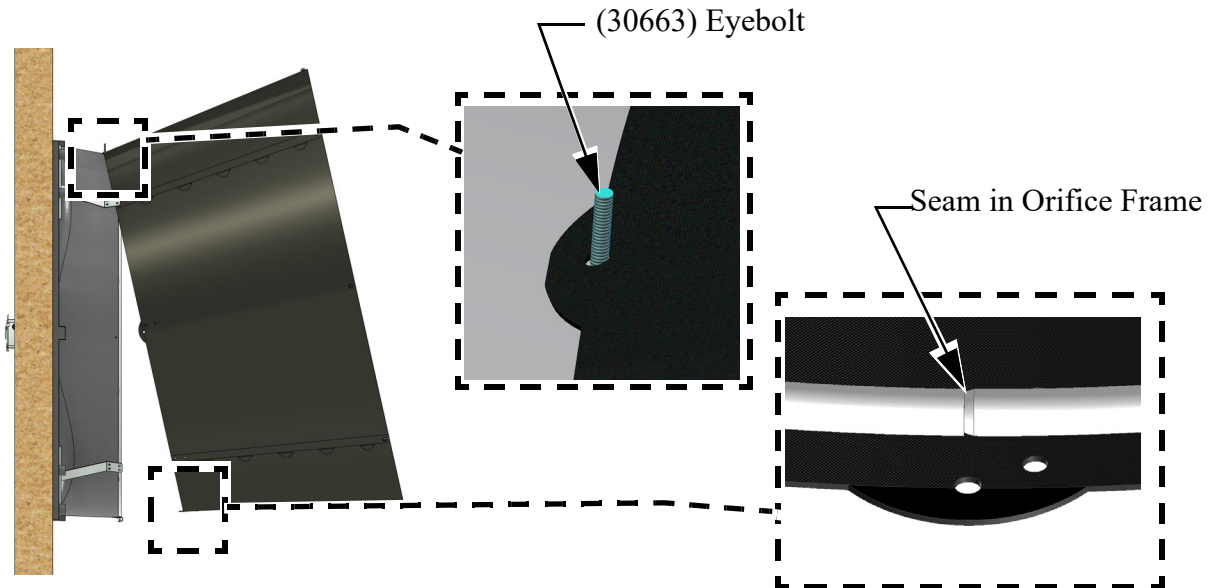
Rounded Tab on the Cone

Important! Line up the Seam in the Orifice Frame with one of the rounded Tabs on the Cone.

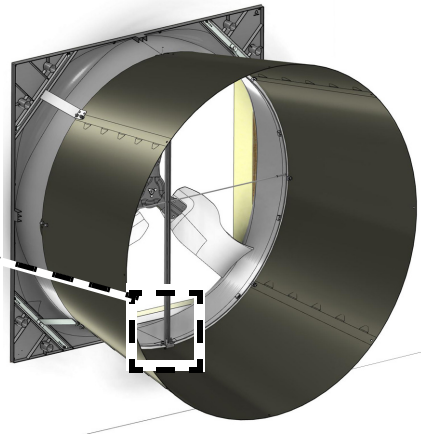
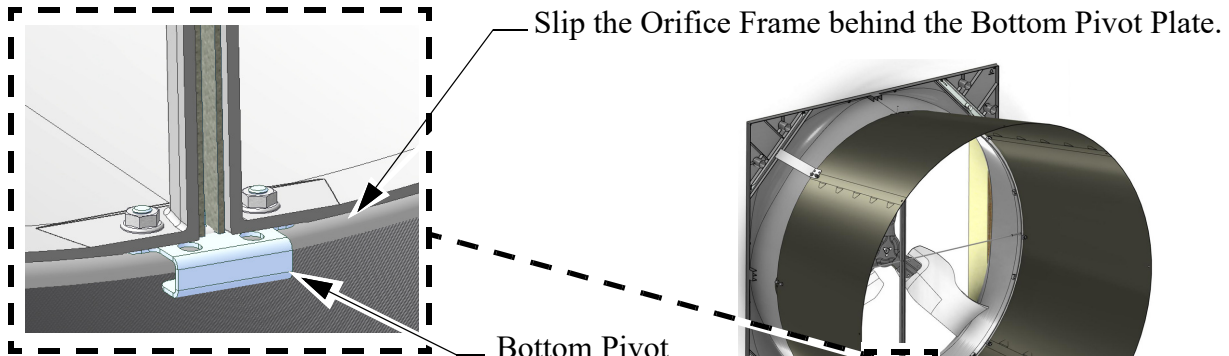


Cone Installation

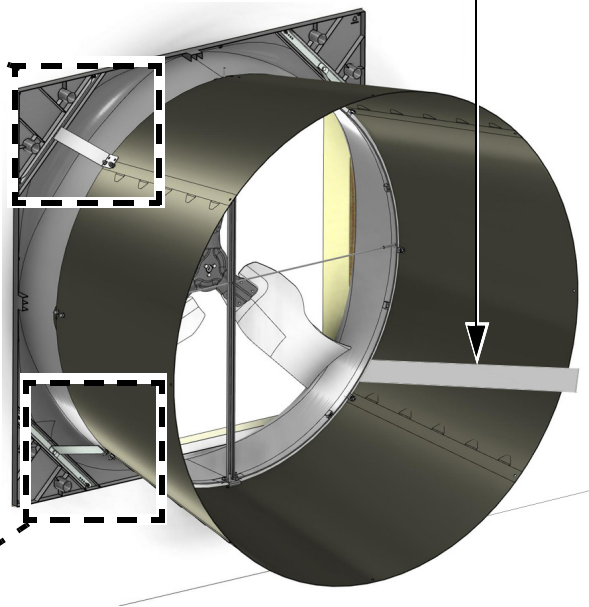
Hang the Cone on the Eye-Bolt extruding from the top of the Shroud using the hole in the Cone as shown.



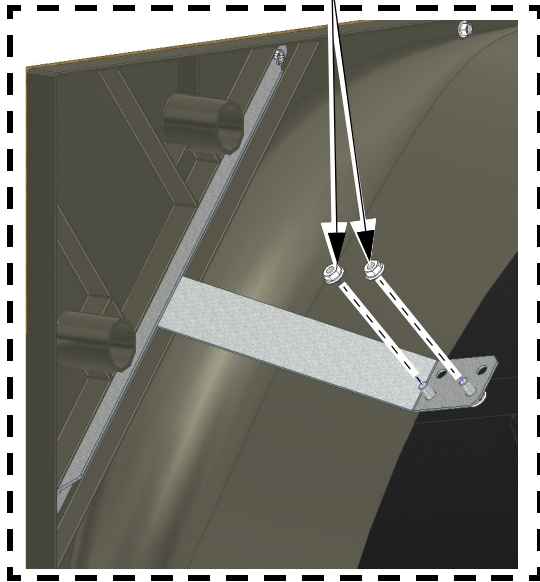
Attach the cone to the Shroud as shown below.



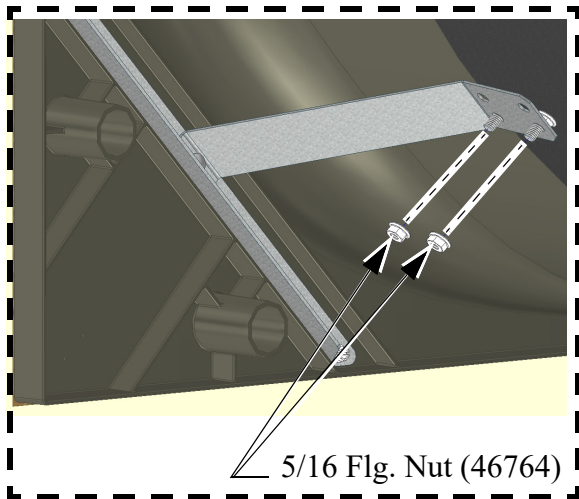
If necessary, slip a thin piece of metal between the Shroud and Cone and work it around the Cone to get it on.



5/16 Flg. Nut (46764)



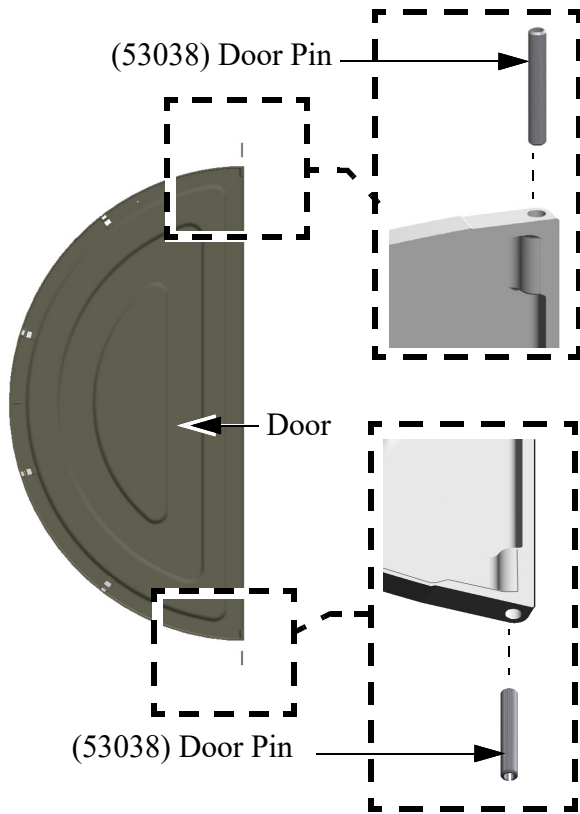
Use the Bolts in the Cone to attach the Cone to the Cone Brackets. Use the Bottom set of holes in the Cone Brackets.



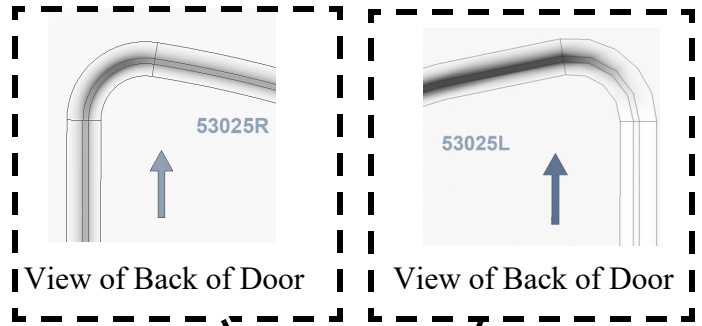
(46764) 5/16 Flg. Nut

Door Assembly and Installation

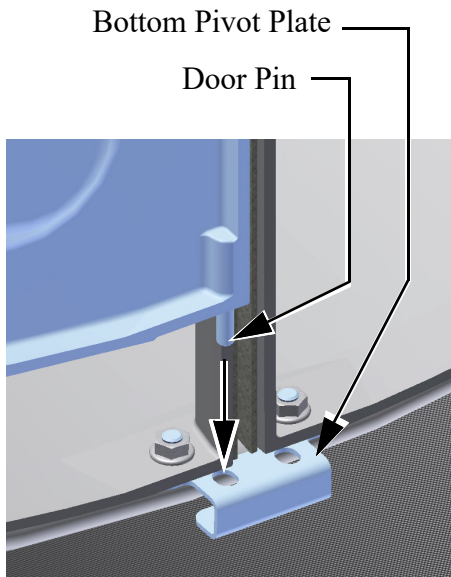
Insert Door Pins in both Doors as shown. Push Pins in until they bottom out.



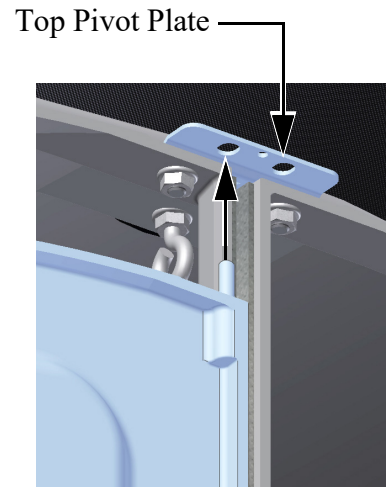
Doors are Left and Right specific.



Insert Door Pins into Bottom Pivot Plate.

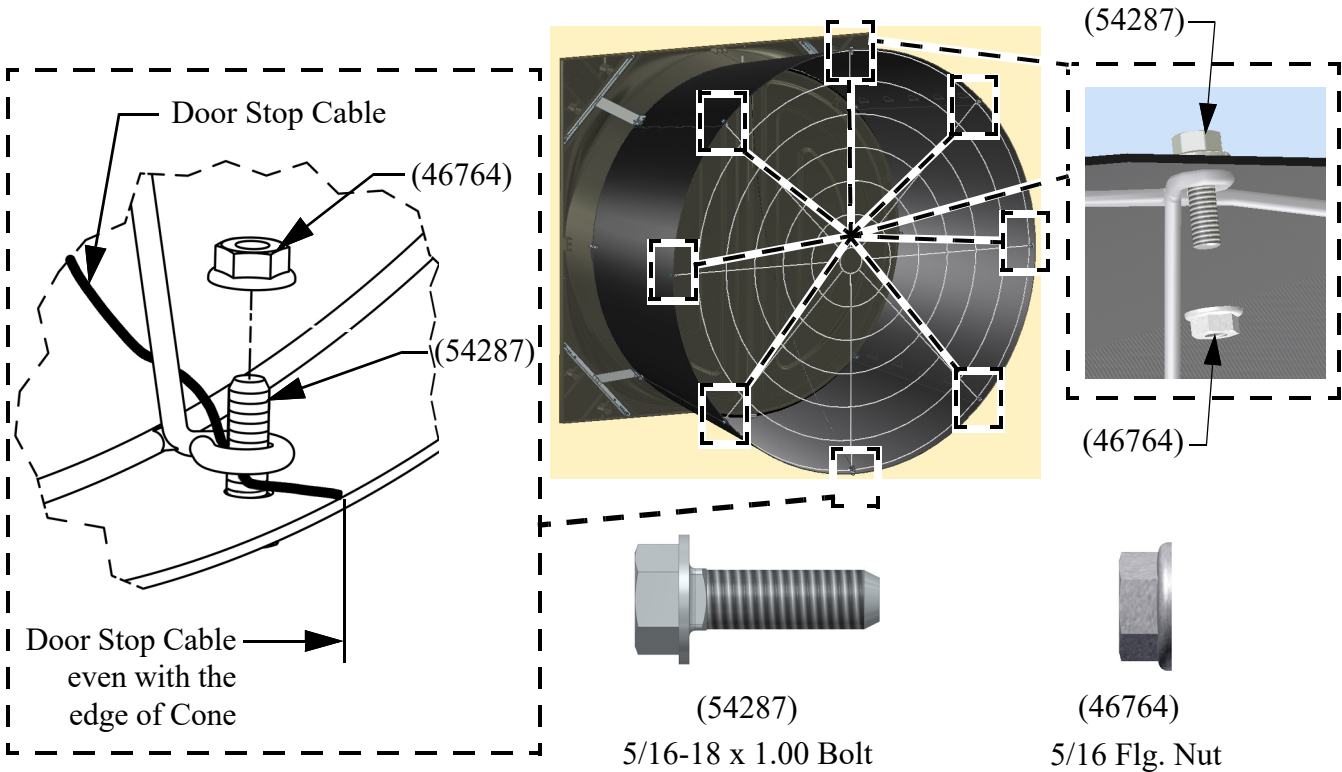


Grab the Door in the Center, Bow the Door outward, and insert the Top Door Pin into the Top Pivot Bracket as shown. **Do not Overbow the Doors!**

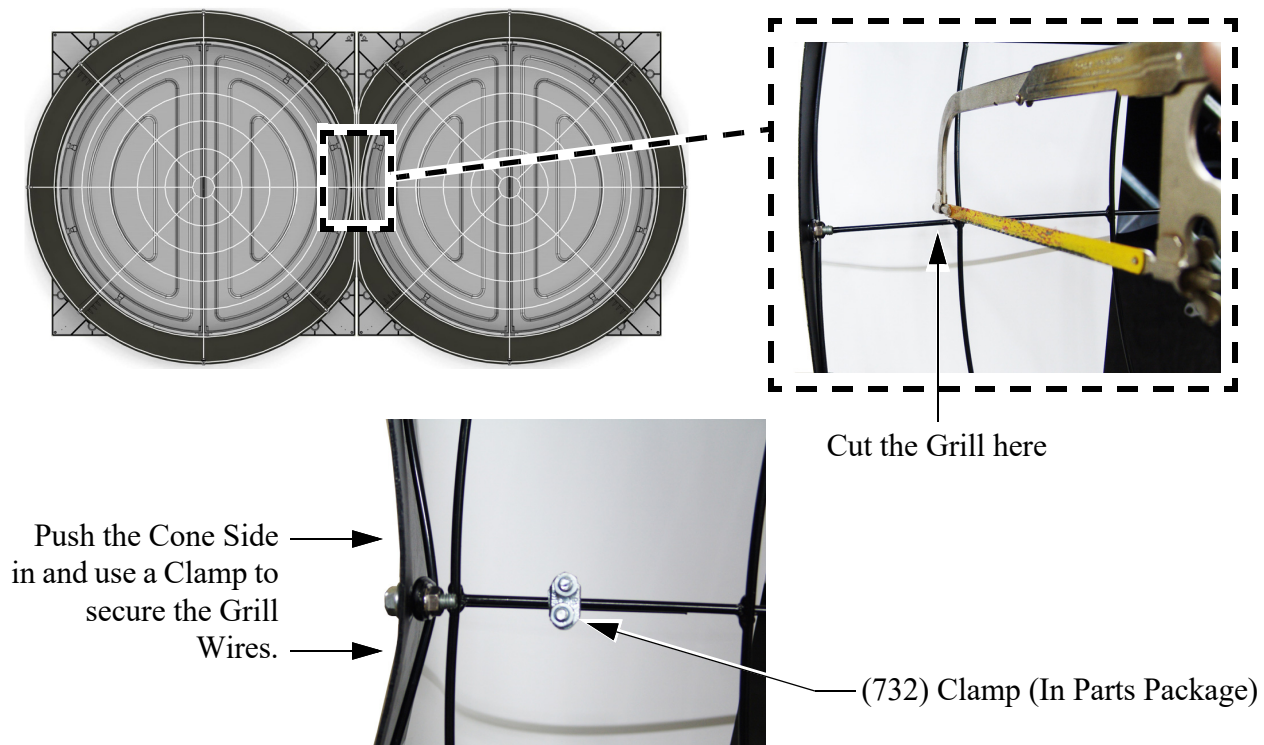


Grill Installation

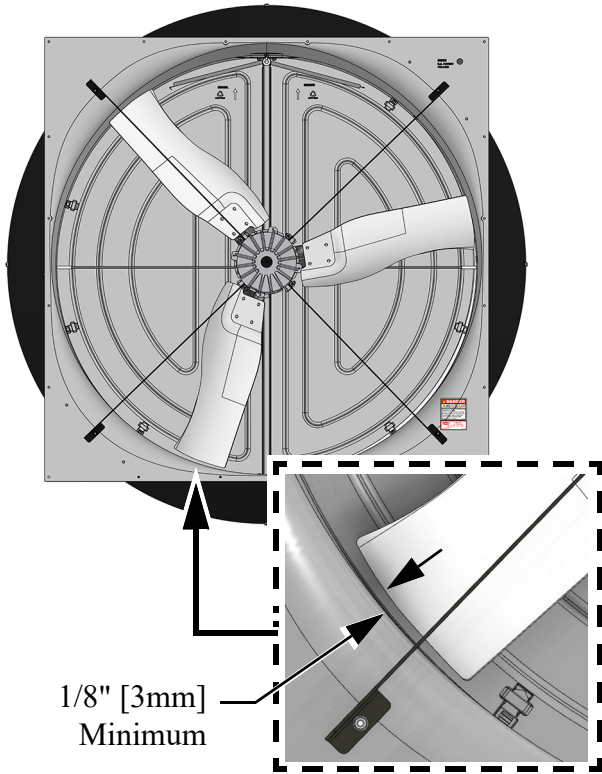
Install the Fan Cone Grill (as shown). Attach the end of the Door Stop Cable to the bottom Grill Leg as shown.



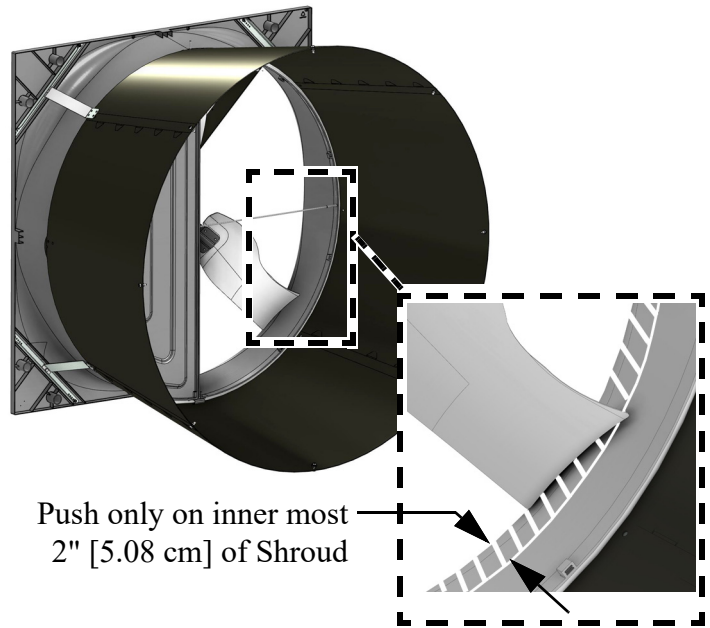
If it is desired to Mount Fans at the minimum spacing cutting the Grills is required as shown.



Check Blade Tip Clearance

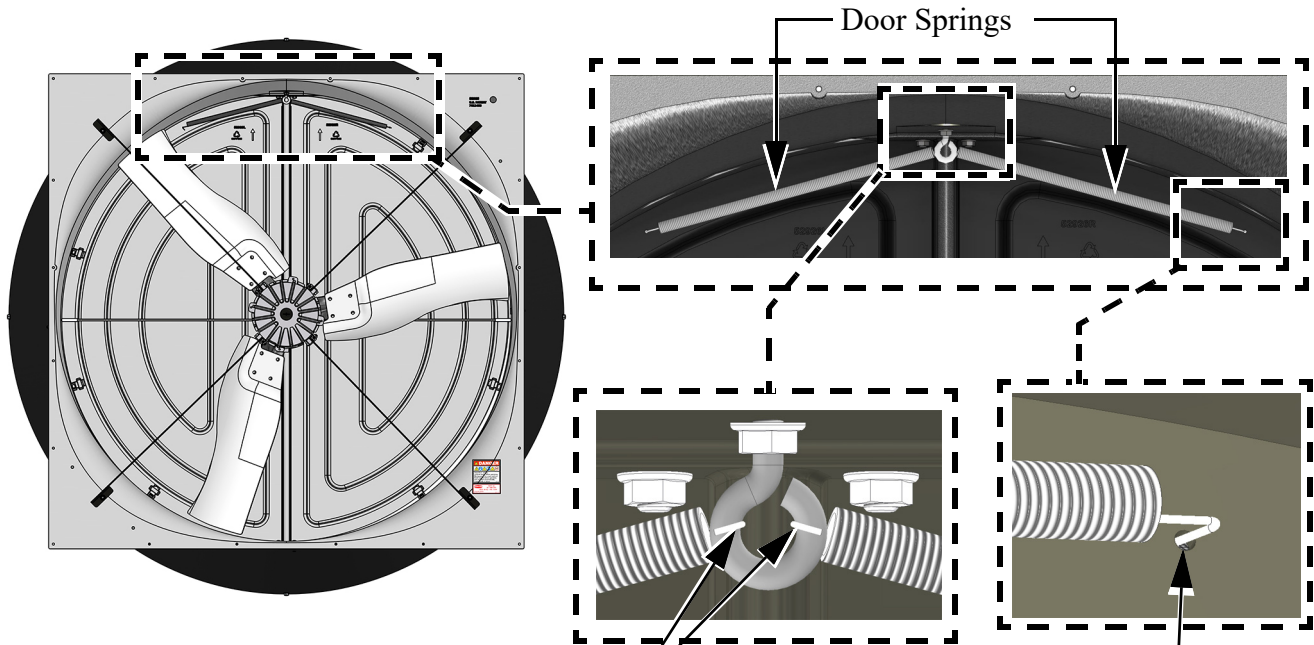


Spin the Blade by hand and check that there is minimum of 1/8" [3 mm] Clearance from the Shroud all the way around orifice.



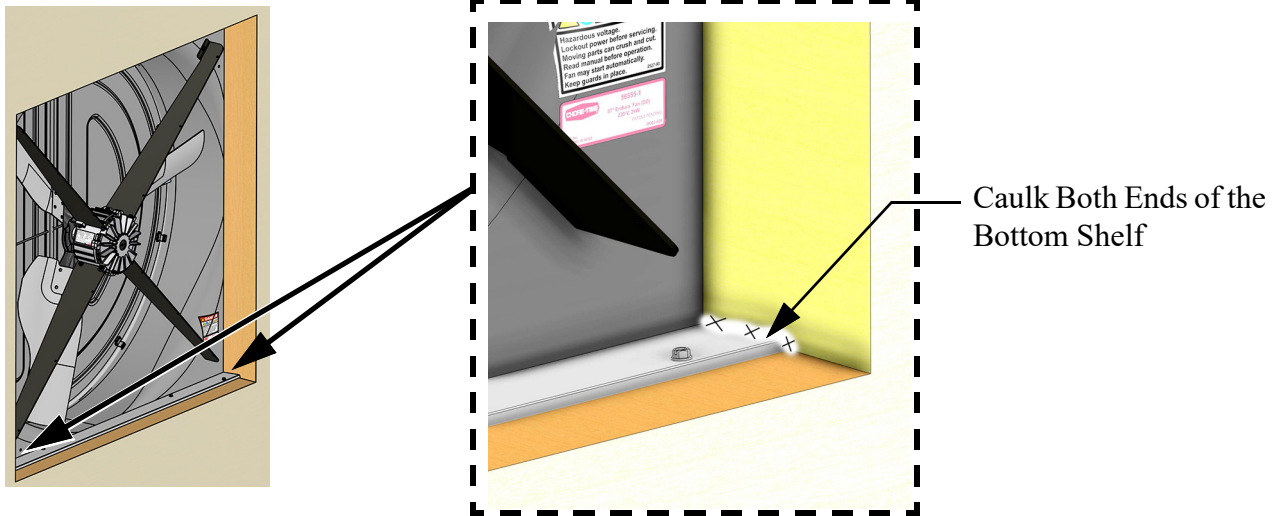
If Clearance is insufficient, check that the mounting surface is flat, and that the sides of the Shroud are straight. To Gain more Tip Clearance, remove the Lag Screws from the side with inadequate clearance, push out on the Shroud orifice. **(Push only on the inner most 2" [5.08 cm] of the Shroud or damage could occur)** Re-install Lag Screws in new holes.

Door Spring Installation



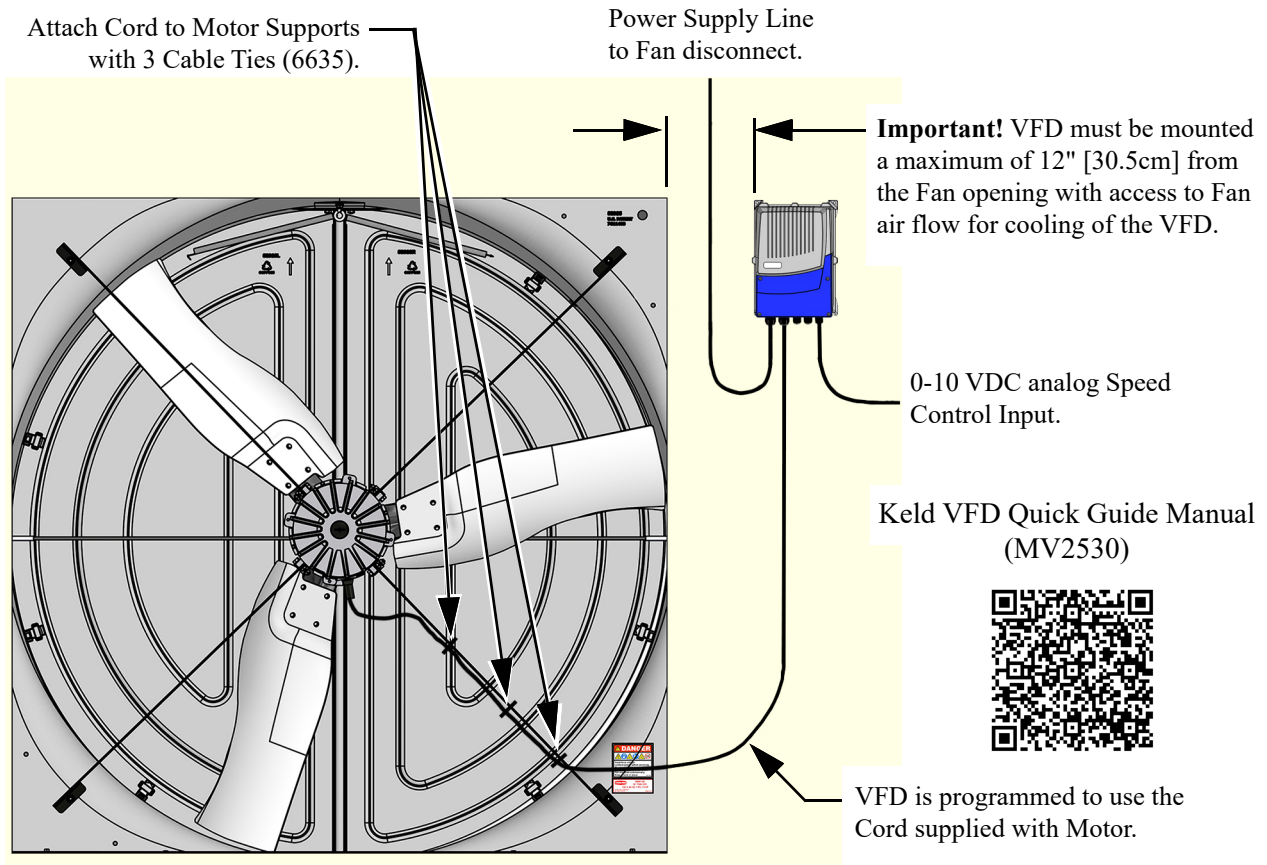
Caulking

Caulk both Ends of the Bottom Shelf to fill any gaps between the Shroud and the Framed opening.



Fan Drive (VFD) Mounting

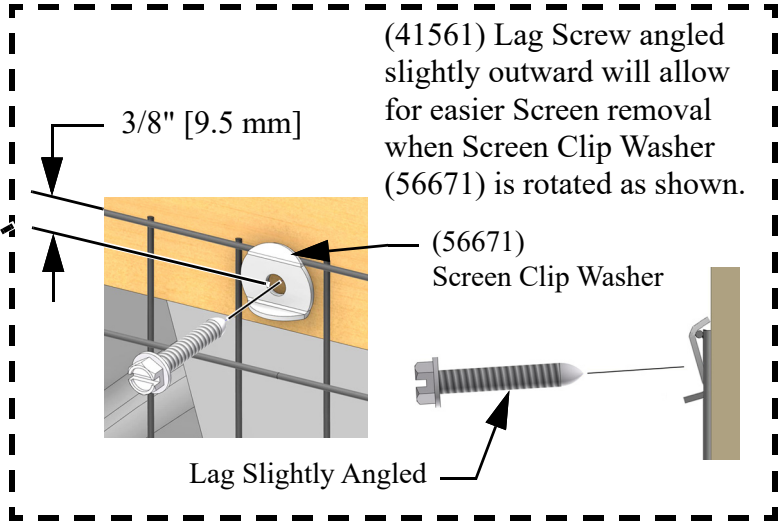
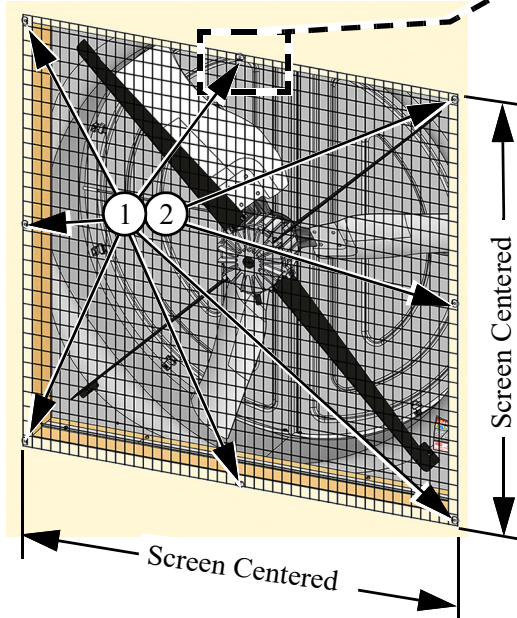
Select a location next to the Fan in the Fan air stream for VFD cooling a maximum of 12" [30.5cm] away from the Fan opening. Access the Keld VFD Quick Guide Manual (MV2530) by using the QR Code bottom right or at <https://www.choretime.com/wp-content/uploads/2025/01/MV2530-Keld-VFD-Quick-Guide-Manual.pdf> for mounting details and general wiring instructions.



Confirm that the Motor is oriented with the Cord coming out of the bottom as shown here.

Screen Installation

Center Screen on the wall opening and fasten with 8 Screen Clip Washers (56671) and (41561) Lag Screws as shown.

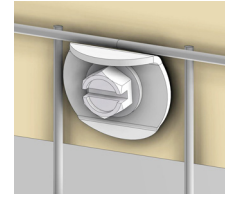
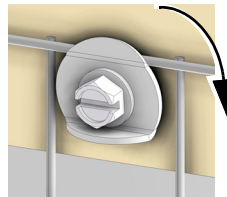


Item	Description	Part No.
1	1/4-10 x1.5 Lag Screw	41561
2	Screen Clip Washer	56671
3	59" Square Screen	56540

Loosen Lag Screw and Rotate Screen Clip Washer for easy Screen removal



(41561) 1/4 x 1-1/2 Lag Screw

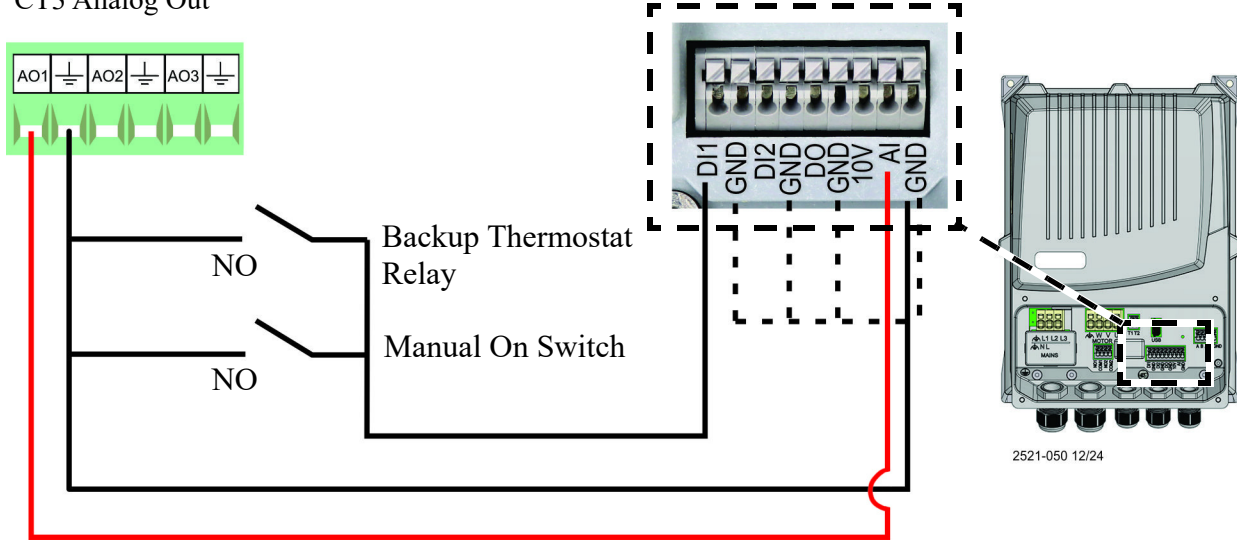


Control Signal Wiring

For variable speed Fan control, connect the 0-10 vdc analog signal from the Main Control to VFD analog input (AI) and ground (GND). The fan will run full speed with an analog signal of 10 vdc and slow down to a minimum speed of 200 rpm at 3.2 volts, stopping at any voltage less than 3.2 V. For optional Fan Backup Control, connect a Backup Relay to Digital Input 1 (DI1) and common (GND). The four GND Connectors are connected and can be used interchangeably. A Switch can be installed in parallel to the Backup Relay to manually start the Fan. Backup speed is controlled by holding register 10 and is set to 630 rpm by default.

For further wiring instructions use the QR Code below or go to <https://www.choretime.com/wp-content/uploads/2025/01/MV2530-Keld-VFD-Quick-Guide-Manual.pdf>.

CT3 Analog Out



Keld VFD Quick Guide Manual
(MV2530)



Drive Parameters

The drives come pre-programmed with parameters that are set as default based on the drive firmware. Parameters can be reset to default by putting "2" into holding register 0. Some of the key parameters are shown below.

No.	Description	57611-11
HR1	Minimum RPM	200
HR2	Maximum RPM	630
HR3	Acceleration RPM/S	200
HR4	Deceleration RPM/S	20
HR10	Fixed Speed Setting RPM	630
HR13	Time full speed at start SEC	8
HR25	Logo Brightness (0-1000)	10

Test Fan for proper operation

Supply power to the VFD and check for proper operation. If the Fan turns in the wrong direction interchange any two wire connections between the drive and the motor to correct the direction of fan blade rotation.

Maintenance



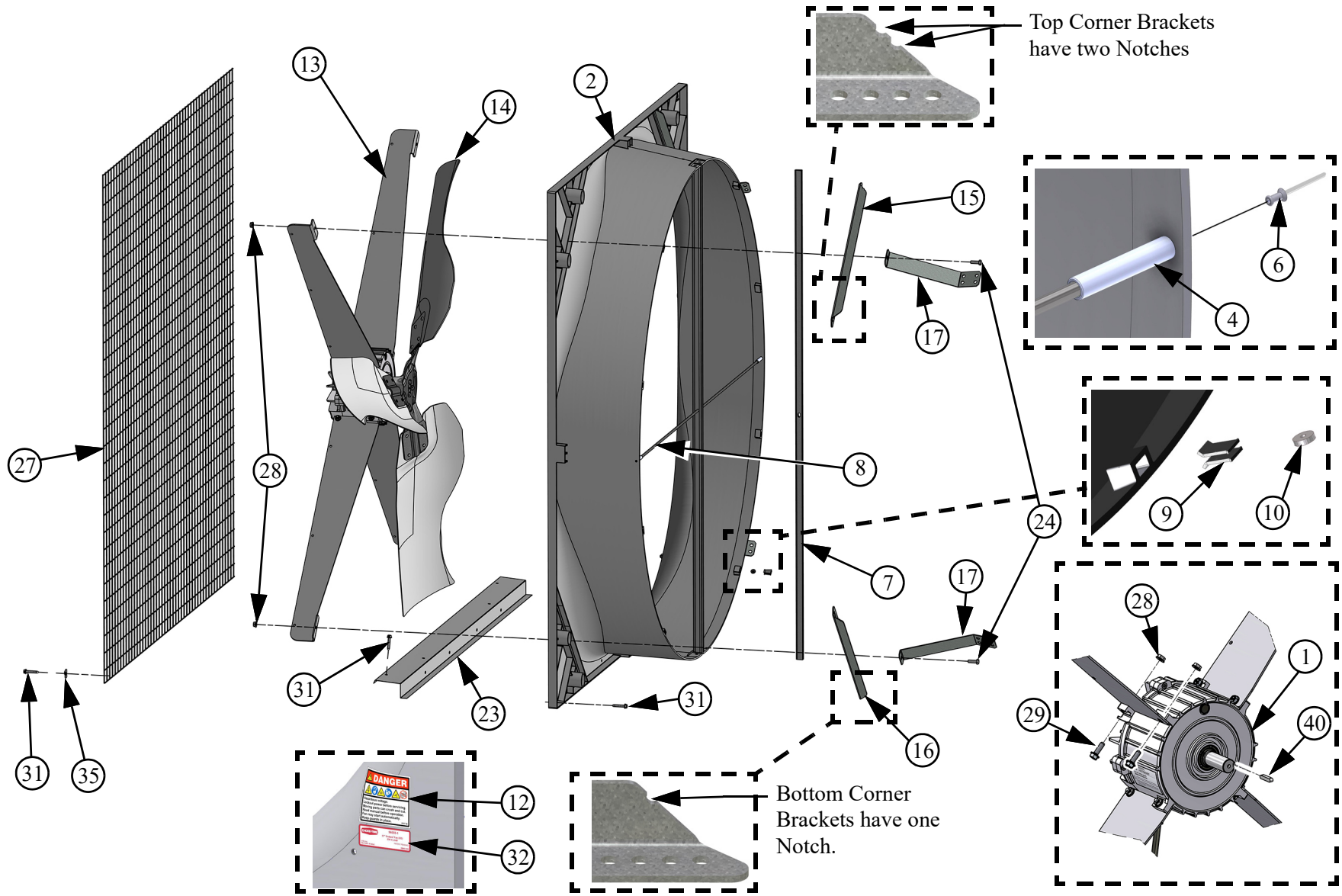
IMPORTANT! Disconnect Power Prior To Maintaining Or Cleaning The Fan. The fan may start automatically causing serious injury or death.

- Service and repair of fans should be done only by a qualified technician.
- Minimize contact of moisture or corrosive chemicals to the surfaces of the fan components to maximize fan life.
- After washing fans, operate fans long enough to remove moisture from all fan surfaces.
- Keep the fan clean for maximum life and best performance.



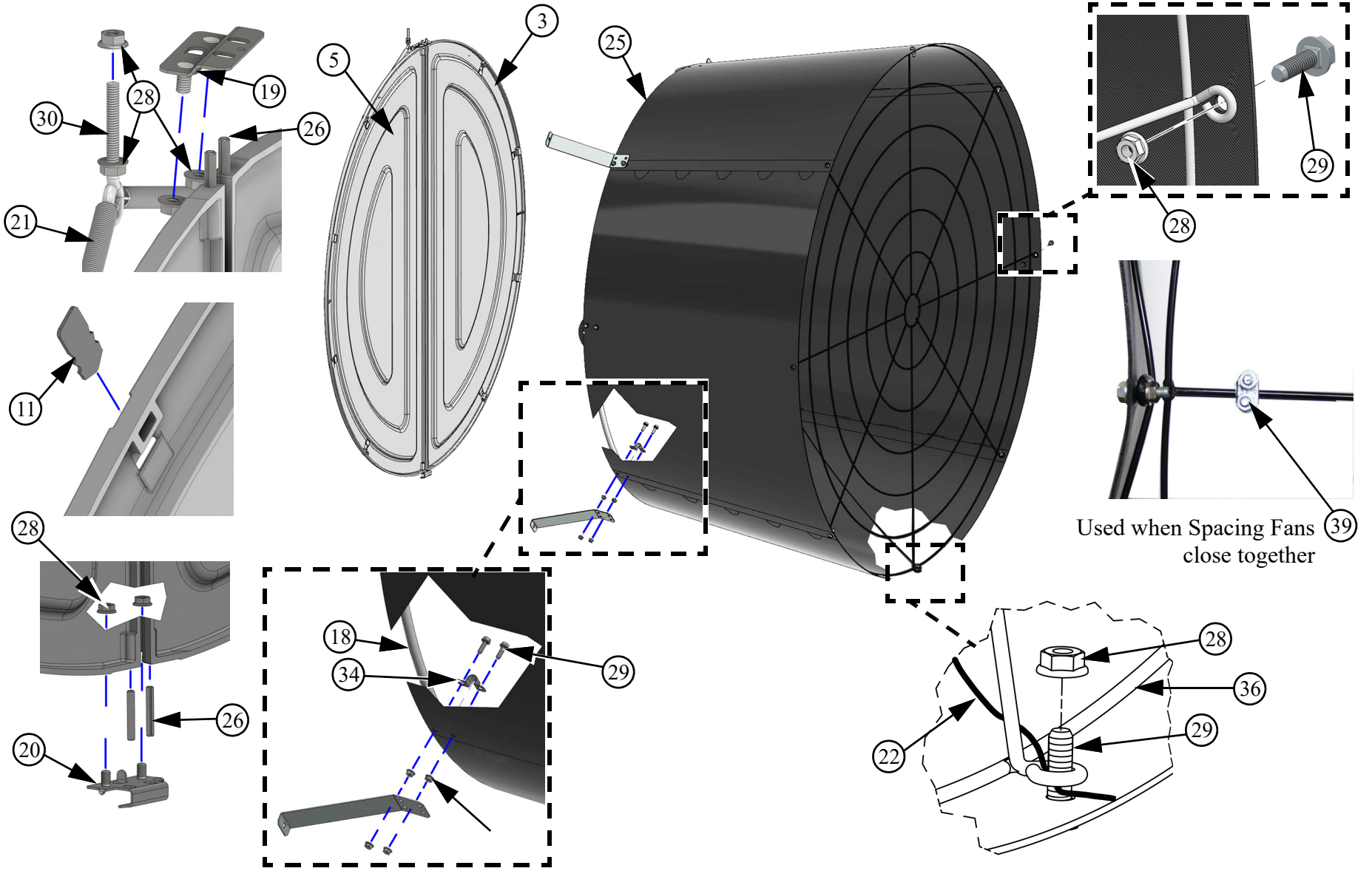
- Wires can cause Shock if motor is turning **even when disconnected from Power!**
- Wait 5 minutes after disconnecting power to the VFD to ensure Capacitors are fully discharged before making contact with the VFD!

Parts Numbers (Itemized)



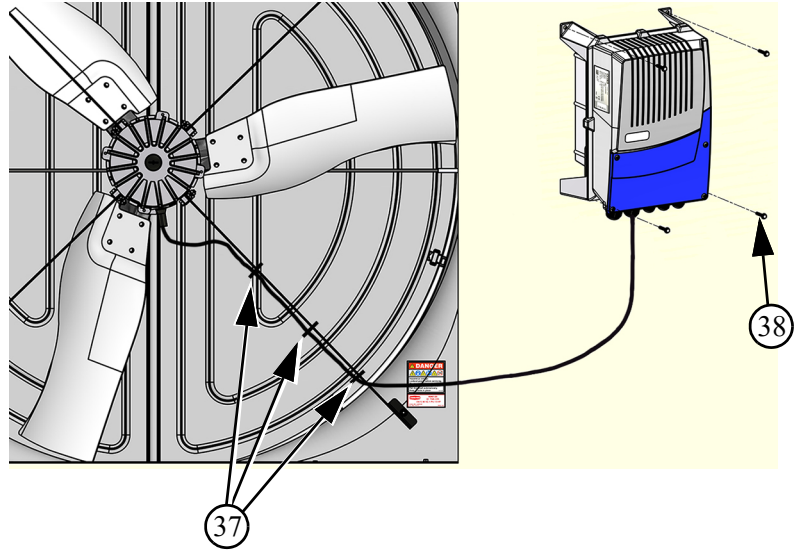
Item	Qty.	Description	Part No.
1	1	Motor, Direct Drive 3 HP, 220-240V, 630 RPM	57401
2*	1	57" Fan Shroud Assembly	52925
4*	2	57" Cross Rod Coupler	56339
6*	2	Rivet	48936
7*	1	57" Fan Center Post Stiffner	53626
8*	1	57" Fan Cross Rod	53398
9*	8	Magnet Side Plate	53026
10*	4	.125 x .50 Magnet	48427
12*	1	Fan Danger Decal	2527-90
13	4	57" DD Fan Motor Support	57592
14	1	57" Galv. Bolted Hub Blade	53219
15	2	Upper Corner 57" DD Fan Support (2 Notches)	56592
16	2	Lower Corner 57" DD Fan Support (1 Notch)	56593
17	4	Cone Bracket	53039
23	1	57" Fan Support Shelf	53338
24	4	5/16-18 x 1.00 HH 316SS Bolt	4412-28
27	1	59" Square 1.25 x 2 Wire Screen	56540
28	46	5/16-18 Hx. Serrated SS Flange Nut	46764
29	28	5/16-18 x 1 HH SS Bolt	54287
31	32	1/4-10 x 1.5 HXWH SS Lag Screw	41561
32	1	57" DD EnduraMax Fan Decal	39002-633
35	8	Screen Clip	56671
40	1	1/4 x 1.25" Square Key w/Round Ends	2419-10
* Fan Shroud Assembly (Item 2) includes items 4,6,7,8,9,10, & 12			
***Unassembled Fans have a "U" at the end of the suffix.			

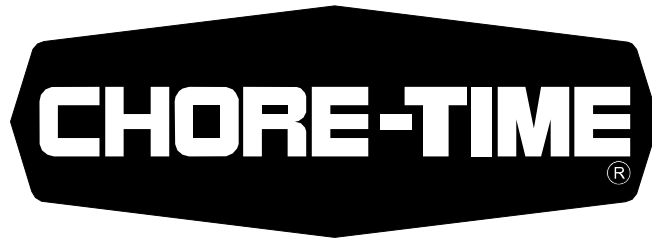
Part Numbers (Itemized) continued



Item	Qty.	Description	Part No.
3**	1	57" Left Hand Fan Door	52926L
5**	1	57" Right Hand Fan Door	52926R
11**	4	Magnet Striker Plate	53027
18	1	57" Fan Orifice Frame	53416
19	1	57" Fan Top Pivot Plate	53037
20	1	57" Bottom Pivot Plate	53036
21	1	.50 OD x 11 x .055 SS Spring	49629
22	1	72" Fan Cone Cable	50618-5
25	4	Cone Panel	53163
26	4	1/4 x 1-3/4 420SS Spring Pin	53038
30	1	5/16-18 x 2 SS Eye Bolt	30663
34	6	57" Fan Orifice Frame Brckt.	53611
36	1	70" Cone Grill with 6" Spacing	53129
37	3	Cable Tie	6635
38	4	#8 x 1 HH Machine Screw	5998
39	2	3/16" Cable Clamp	732

****Door Assemblies include Magnet Striker Plates (Item 11)**
***** Unassembled Fans have a "U" at the end of the suffix.**





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Revisions to this Manual

Page No.	Description of Change	ECO
	New Manual	40493

**For additional parts and information, contact your nearest Chore-Time distributor or representative.
Find your nearest distributor at: www.choretime.com/contacts**

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