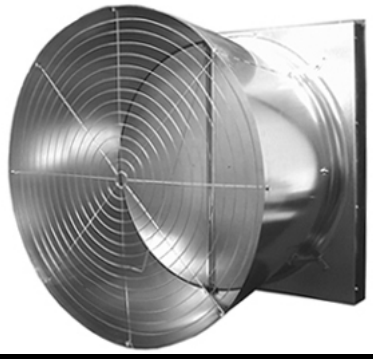
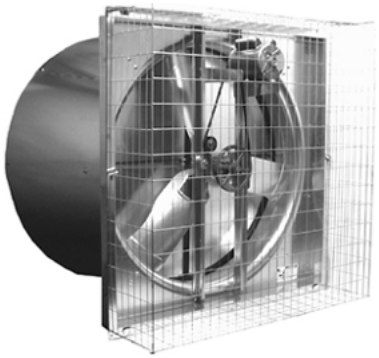
48" and 52" Hyflo® Fans
Installation and Operators Instruction Manual

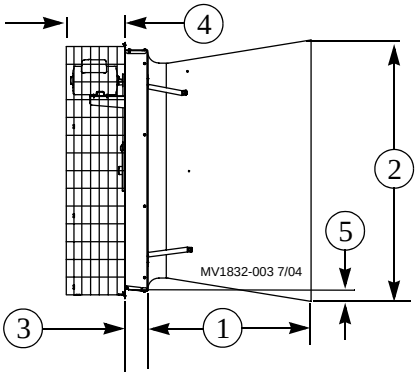
Thank You

The employees of Chore-Time Equipment would like to thank your for your recent Chore-Time purchase. If a problem should arise, your Chore-Time distributor can supply the necessary information to help you.



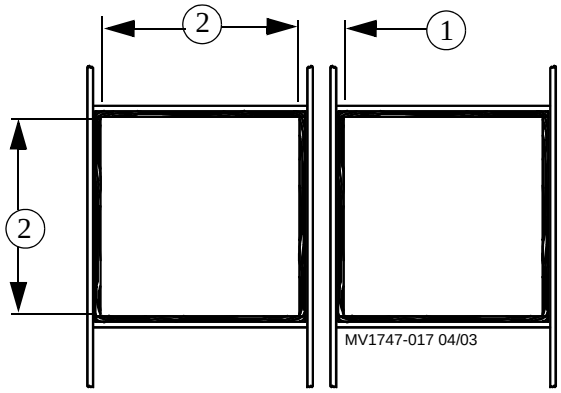


Fan and Fan Framing Dimensions



Item	48" Hyflo® 49451-XX	48" Hyflo® (9 Inch Panels) 49515-XX	52" Hyflo® 49511-XX	52" Hyflo® (9 Inch Panels) 49519-XX
1	41-7/8" [106.36 cm]	41-7/8" [106.36 cm]	44" [111.76 cm]	44" [111.76 cm]
2	59" [149.9 cm]	59" [149.9 cm]	64" [162.56 cm]	64" [162.56 cm]
3	5-1/8" [13.02 cm]	9-1/8" [23.18 cm]	5-1/8" [13.02 cm]	9-1/8" [23.18 cm]
4	12.35" [31.37 cm]	12.35" [31.37 cm]	12.35" [31.37 cm]	12.35" [31.37 cm]
5	2-5/16" [5.87 cm]	2-5/16" [5.87 cm]	4-1/8" [10.48 cm]	4-1/8" [10.48 cm]

Figure 1. Fan Dimensions



Planning the layout of the spacing between Fans is very important. Spacing too close together will cause interference between the discharge Cones. **The Rough Opening dimensions for Fans are shown above**.

Item	48" Hyflo®	52" Hyflo®
1	4" [10.16 cm] Minimum	8" [20.32 cm] Minimum*
2	55" [139.7 cm]	56-1/2" [143.51 cm]
*52" models can be mounted 3.5" apart if Cone Clips are used. **See Figures 32 and 33**.		

Figure 2. Fan Spacing

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 perfomance and Fan damage.

Do Not operate these Fans with a variable speed control device. Operating static pressure should be less than 0.15 inches water column.

Fan Assembly/Installation

Assembly for 9" Panel Models (models 49515-XX and 49519-XX)

Hyflo® Fans with 9" panels need to be repositioned from their shipping position before they can be installed. Remove the Fan from the Crate, and with the Blade down, rest the Fan Shroud orifice on sawhorses. **Do Not rest the Fan on the blade. (See Figure 3 below)**

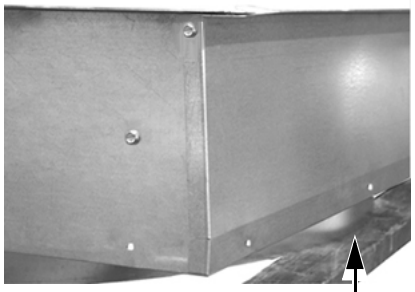
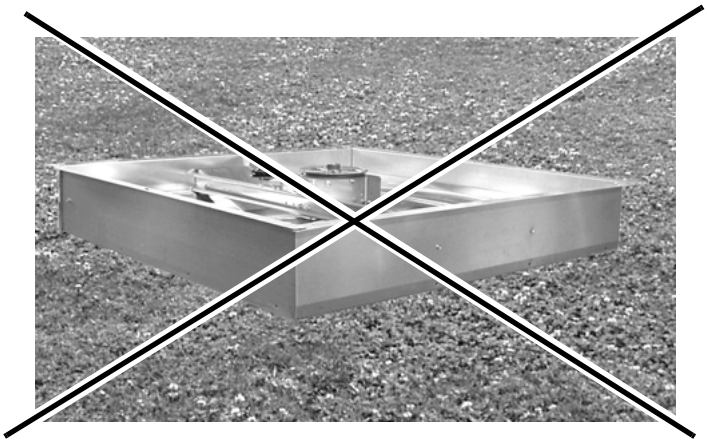


Figure 3. Orifice resting on Sawhorse



Do Not lay Fan on the ground with the weight of the Fan on the Fan Blade.

Remove the 1/4 x 1/2" Screws from the Side Panels **(Figure 4)**. Shift the Panels up until the second set of holes in the Panels line up with the holes in the Shroud **(Figure 5)**. Re-attach the Panels with the 1/4 x 1/2" Screws as shown. Repeat the same procedure for the Top and Bottom Panels. The additional 1/4 x 1/2" Screws that are required are included in the Parts Package. Once all of the Panels have been shifted attach the Panels at the corners with 1/4 x 1/2" Screws.

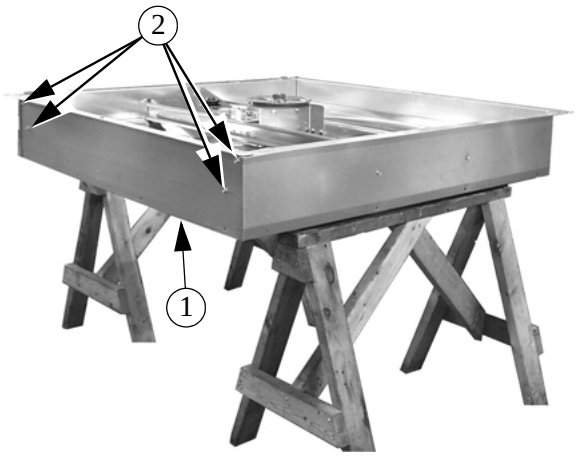


Figure 4. 9" Remove Screws

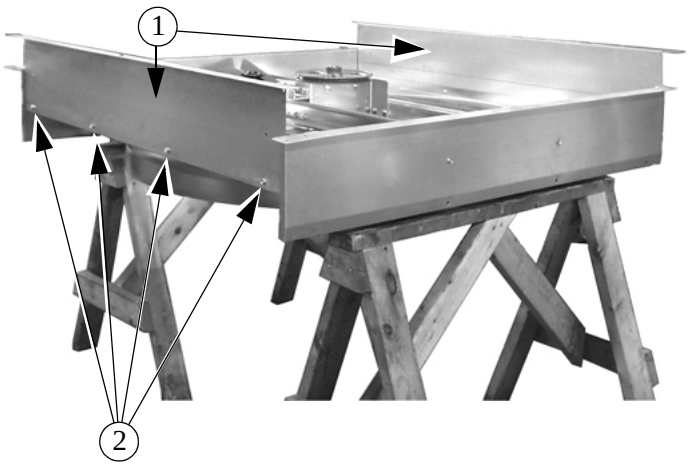


Figure 5. Shift Side Panels and re-attach

Item	Description
1	Side Panel
2	1/4 x 1/2" Screw

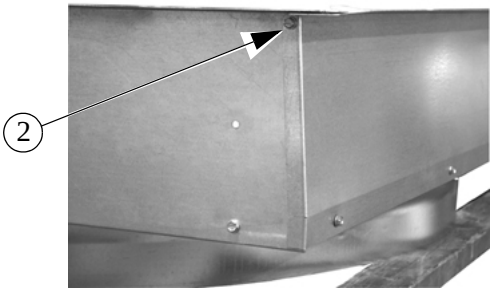
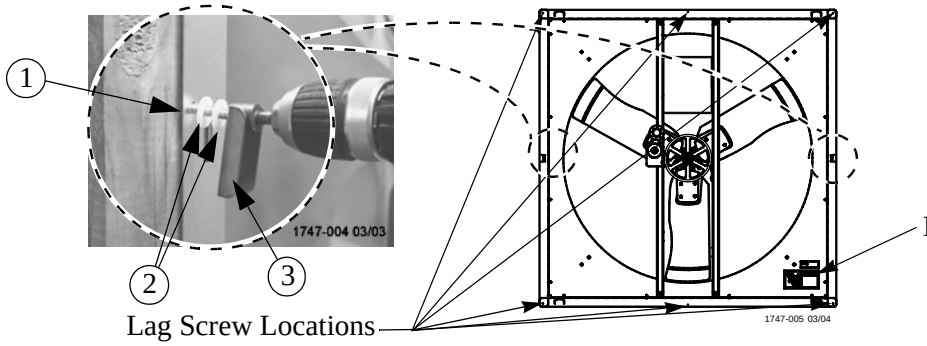


Figure 6. Attach Panels at Corners

Lift the Fan into Wall opening. The Fan should be oriented in the opening as **shown below**. In the center of the side panel mounting flange, use 1 Lag Screw, 2 Nylon Washers, and 1 Screen Clip to attach the Fan to the wall **(See Figure 7)**. These Screen Clips will later be used to hold the Screen on. Install Lag Screws in the remaining 6 locations as shown in **Figure 7**.

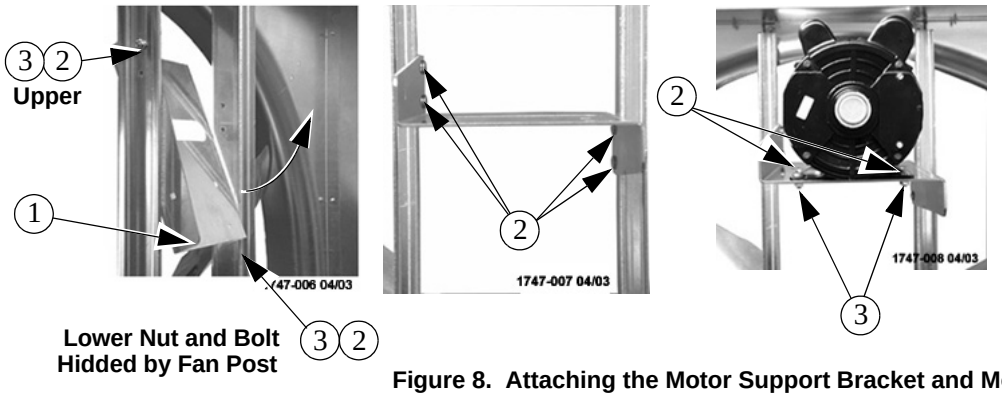


Item	Description
1	1/4 x 1-1/2" Lag Screw
2	Nylon Washer
3	Screen Clip

Figure 7. Installing Fan in Wall Opening

Motor Installation

Rotate the Motor Support Bracket into the upright position by removing the **Upper** Carriage Bolt and Nut and loosening the **Lower** Bolt and Nut **(See Figure 8)**. Rotate the Motor Support Bracket until it is perpendicular to the Fan Posts and fasten with (4) 5/16 Carriage Bolts and (4) 5/16 Flange Nuts. *Note that the Nuts go outside the Posts*. Remove the Motor from the Crate and attach it to the Motor Support Bracket with (4) 5/16 Carriage Bolts and (4) 5/16 Flange Nuts **as shown**.

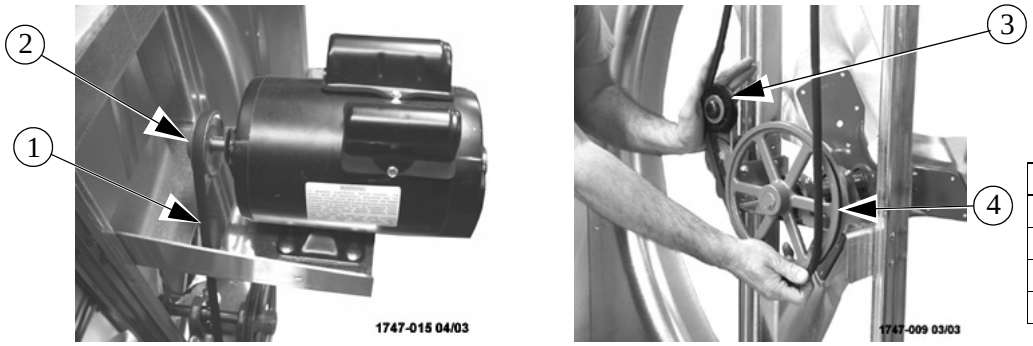


Item	Description
1	Motor Support Bracket
2	5/16 Carriage Bolt
3	5/16 Flange Nut

Figure 8. Attaching the Motor Support Bracket and Motor

Belt Installation

Guide the Belt through the Opening in the Motor Support Bracket and loop it over the Motor Sheave. Guide the Belt around the Tensioner Sheave and push on it to get enough slack to put the Belt on the Driven Sheave **as shown in Figure 9**. Make sure the Belt does not rub against the Motor Support Bracket.

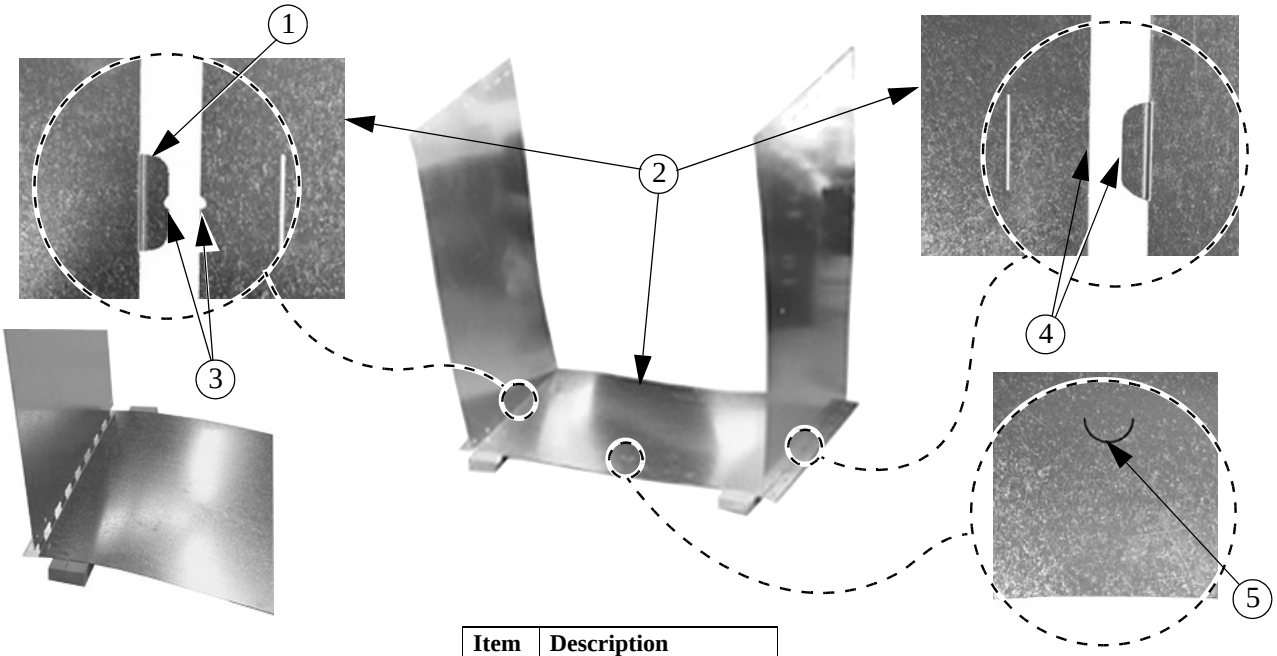


Item	Description
1	Belt
2	Motor Sheave
3	Tensioner Sheave
4	Driven Sheave

Figure 9. Installing the Belt

Cone Assembly

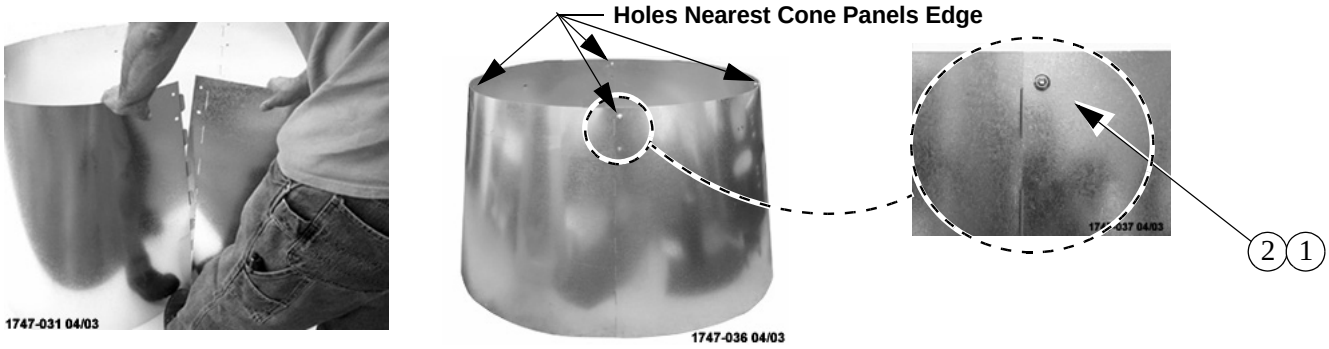
The Cone Panels can be identified by the number of notches at the edge of each Panel. Begin the Cone assembly by laying the Panel with **no tabs** on a couple of boards with the one notch end to the left and with the **Knock-out** at the Bottom **as shown in Figure 10**. Insert the tabs into the slots on the edge with the same number of notches.



Item	Description
1	Tab
2	Panel with No Tabs
3	1 Notch Panels
4	No Notch Panels
5	Knock-out

Figure 10. Assembling Cone Panels

When all four Cone Panels are connected stand the panels up on edge and curl the Cone around with the smaller diameter of the Cone up as **shown below**. Assemble the final Panels together and allow the Cone to take its shape. If the Cone is assembled correctly the Tabs should all be on the Inside of the finished Cone. Fasten the Cone Panels together with (4) 5/16 x 1/2" Hex Bolts Threaded in from the inside of the finished Cone **as shown in Figure 11**. *Do not tighten down the Nuts at this time.* Leave the Nuts loose until the Cone is attached to the Fan.



Item	Description
1	5/16 x 1/2" Bolt
2	5/16 Flange Nut

Figure 11. Bolting Cone Panels

Door Assembly/Installation

To install the Door in the Cone you must first identify the bottom of the Cone and the Door Assembly. The bottom of the Cone has a C-shaped Drain Tab in it. **(See Figure 30)**. The bottom of the Door Assembly can be identified by a drain hole in the Ring **(See Figure 12)**. Line up the Four Holes in the Door Ring with the holes in the Cone and thread (4) 5/16 x 1.25" Bolts in until they are tight. Do not install Nuts at this time. These Bolts will be used later to attach the Cone Brackets to the Cone Assembly.

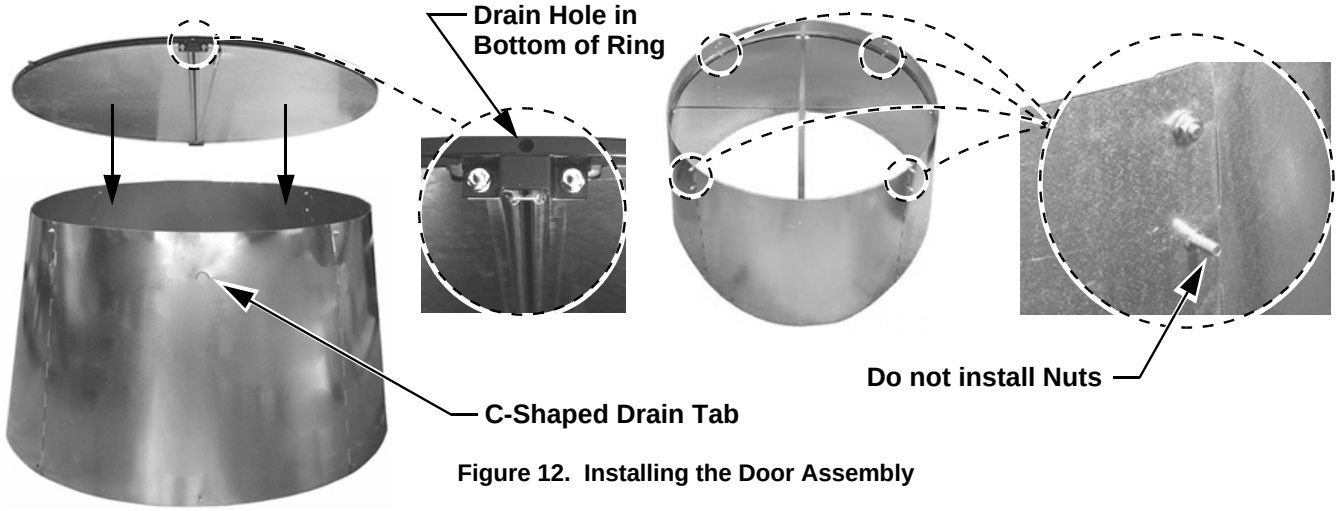
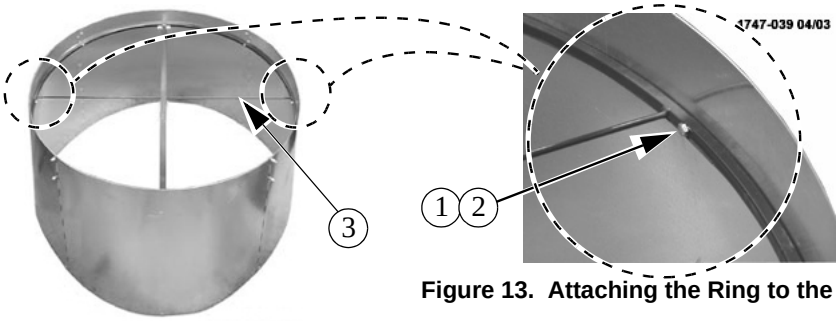


Figure 12. Installing the Door Assembly

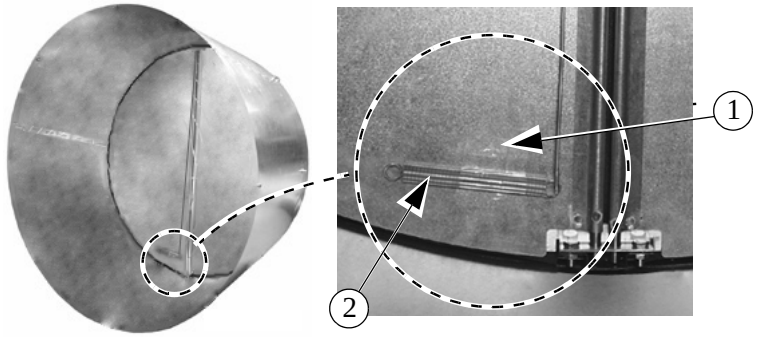
Use (2) 5/16 x 1.25" Bolts and 5/16 Flange Nuts to attach the Ring to the Cone using the Holes located on both sides near the Door Center Brace as **shown below**. *Note that the Nuts go on the outside of the Cone.*



Item	Description
1	5/16 x 1-1/4 x 1/2"
2	5/16 Flange Nut
3	Door Center Brace

Figure 13. Attaching the Ring to the Cone

Turn the Cone over and remove the tape **(Item 1, Figure 14)** from the Spring **(Item 2)**.



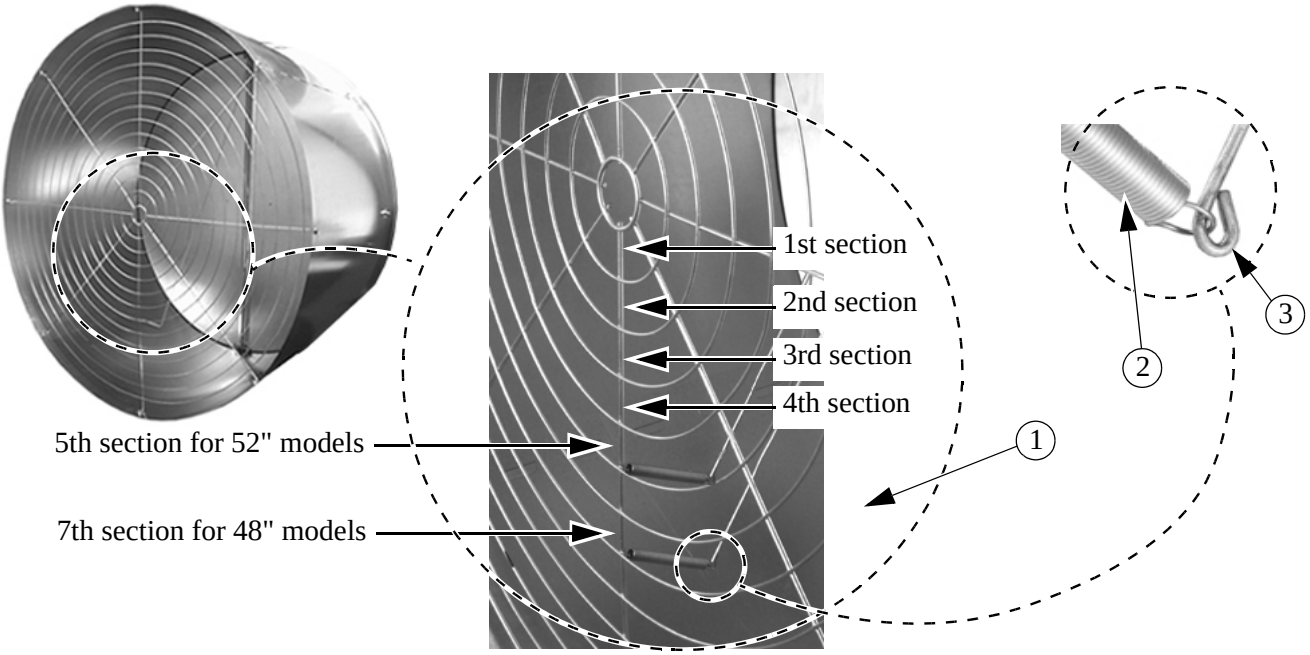
Item	Description
1	Tape
2	Spring

Figure 14. Remove tape from Spring

Before attaching the Grill you need to attach the Door Stop Spring to the Grill.

For *48" Fan models* hold the Grill and hook the Door Stop Spring on the *7th section* from the center of the Grill **(See Figure 15).** Be sure that the spring is not twisted. **Figure 15** shows the Spring and Wire in the correct position.

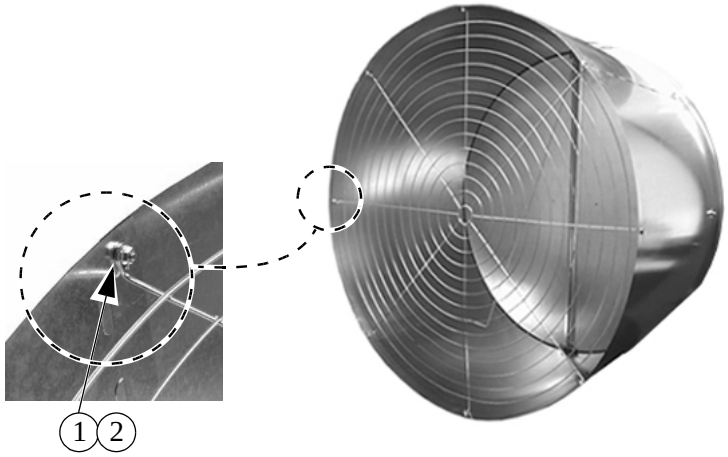
For *52" Fan models* hook the Spring on the *5th section* from the center of the Grill.



Item	Description
1	Grill
2	Door Stop Spring
3	Wire

Figure 15. Attaching Door Stop Spring

Fasten the Grill on with (8) 5/16 x 1/2" Carriage Bolts and Flange Nuts **as shown below**. *Note that the Nuts are to the Inside of the Cone.*

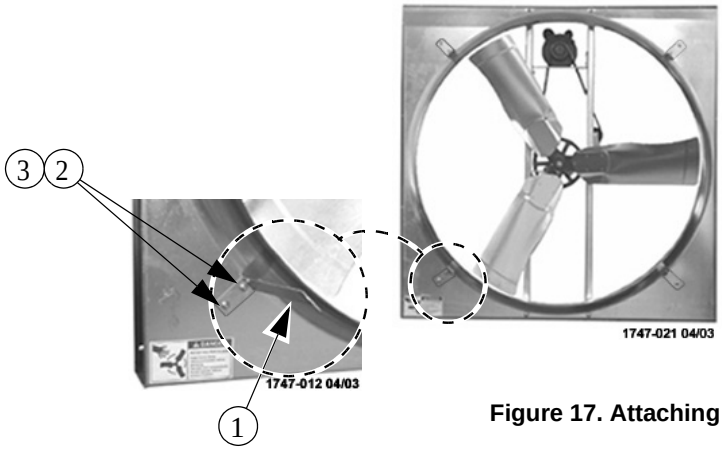


Item	Description
1	5/16 x 1/2" Carriage Bolt
2	5/16 Flange Nut

Figure 16. Attaching the Grill

Assembling the Cone to the Fan

Use 5/16 x 1/2" Carriage Bolts and 5/16 Flange Nuts to attach the Cone Brackets to the Fan Shroud **as shown in Figure 17**.



Item	Description
1	Cone Bracket
2	5/16 x 1/2" Carriage Bolt
3	5/16 Flange Nut

Figure 17. Attaching the Cone Brackets

Mounting the Cone and Door Assembly on the Fan requires at least two people. Pick up and orient the Cone with the C-shaped Drain Tab (**shown in Figure 12)** to the bottom of the Cone. Rest the Cone on top of the Fan Orifice **as shown in Figure 18**. Attach the top of the Cone to the Cone Brackets with the Bolts that were previously threaded through the Ring and Cone and secure with 5/16 Flange Nuts **(Figure 18)**. Only hand tighten the Nuts at this time. Working around the Fan Orifice from inside the fan, in a circular motion Slide the Cone over the Fan Orifice. The Cone will Fit snug. Use the Bolts previously threaded through the Ring and Cone and the 5/16 Flange Nuts to secure the bottom of the Cone to the Fan **(Figure 19)**. Use a Level and rotate the Cone until the Door center rail is Vertical **(Figure 20)**. Now tighten all Hardware.

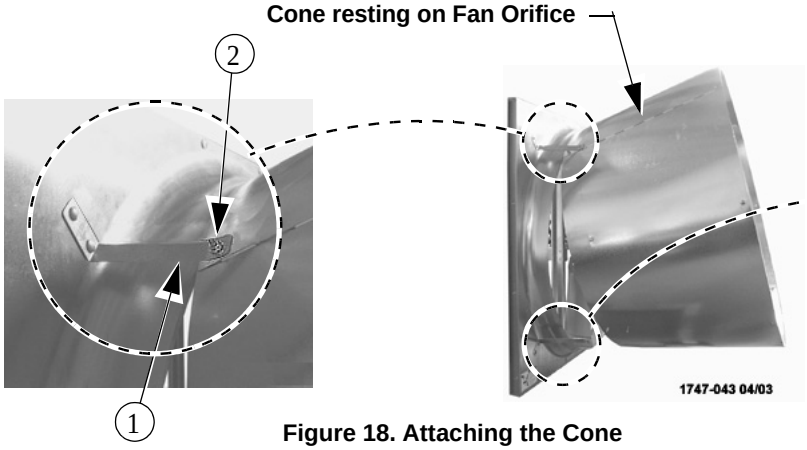


Figure 18. Attaching the Cone

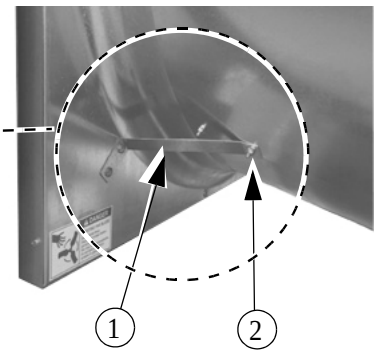
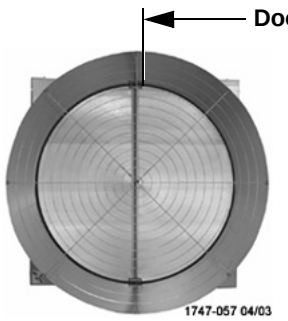


Figure 19. Attaching the Cone



Item	Description
1	Cone Bracket
2	5/16 Flange Nut

Figure 20. Attaching the Cone

Door Spring Assembly

On the Cone side of the Door, at the middle of the Door Center Brace, attach the Spring Mounting Bracket **(Included in the Parts Package)** as shown in **Figure 21 to the right**.

Item	Description
1	Door Center Brace
2	Spring Mounting Bracket

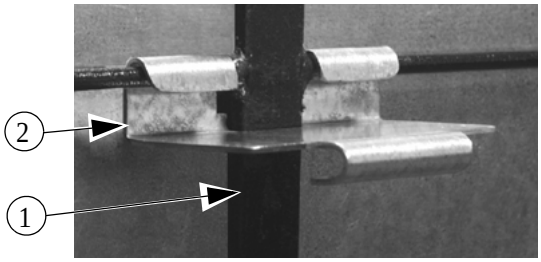
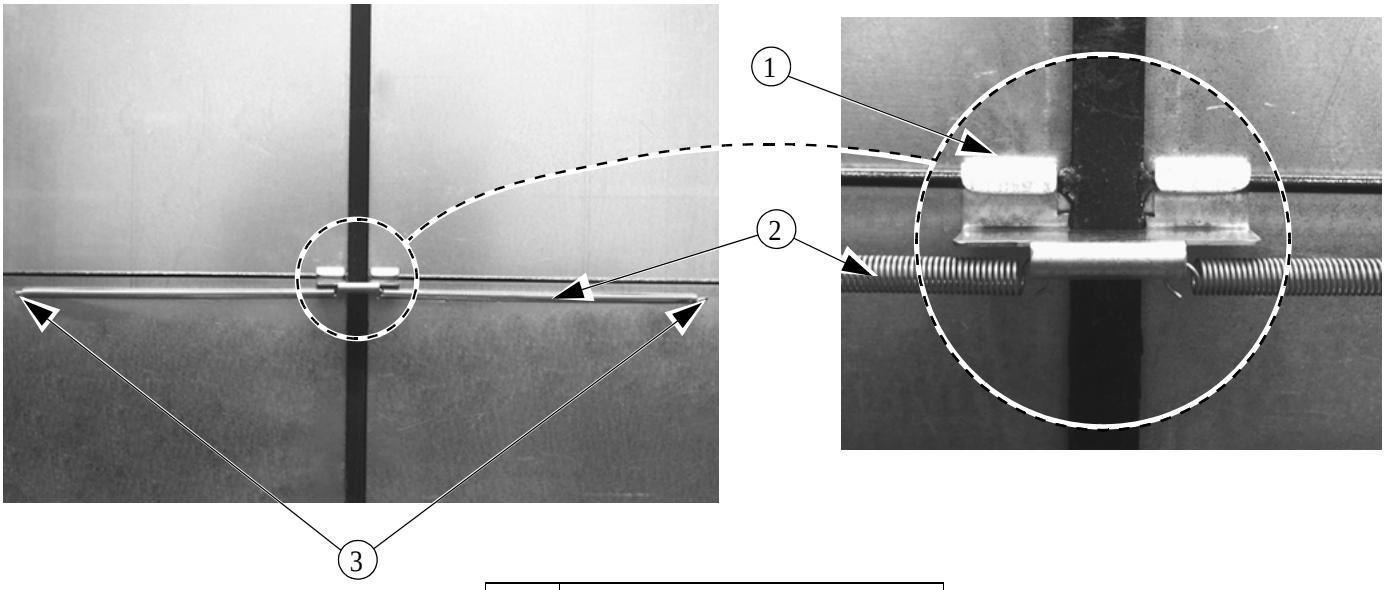


Figure 21. Attaching the Spring Mounting Bracket

Hook the rounded ends of the Door Springs onto the Spring Mounting Bracket. Stretch the Door Springs out and hook them on the 3/32" holes in the Doors (**See Figure 22)**.

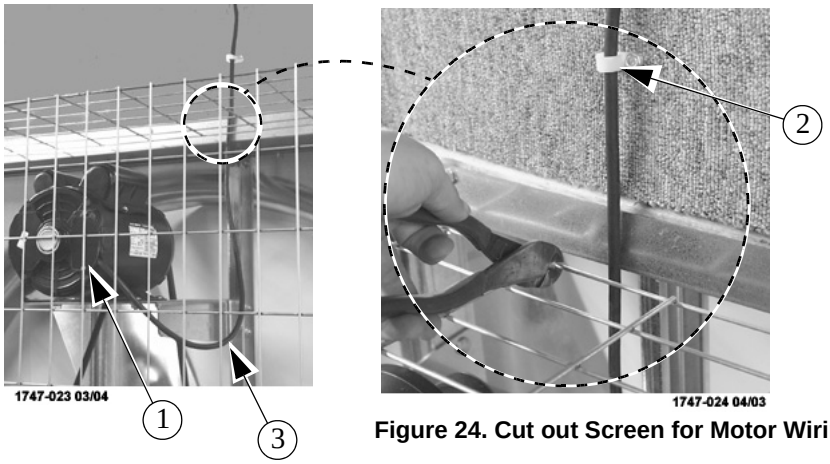


Item	Description
1	Spring Mounting Bracket
2	Door Spring
3	3/32" Hole in Door

Figure 22. Attaching the Door Springs

Wiring

1. Check that the electrical power being supplied to the Fan matches the electrical Specifications on the Fan and Motor Decals.
2. Remove the Motor Access Cover.
3. Install an electrical disconnect within reach of each Fan installed.
4. Connect the cord to the motor according to the wiring diagram on the motor. Verify that the motor is connected for counter clockwise rotation (viewing the back of the motor, opposite the shaft end.)
5. Follow local, state, and national electrical codes for wiring.Cut out one section of the Screen to route the cord out of the Fan: This will allow for the Screen to be removed without interfering with the Cord.**(See Figure 24)**. Attach the cord to the Wall using a Lag Screw and Cord Clip. Allow enough slack in the cord to form a "drip loop" for moisture to fall away from the cord and not into the motor.

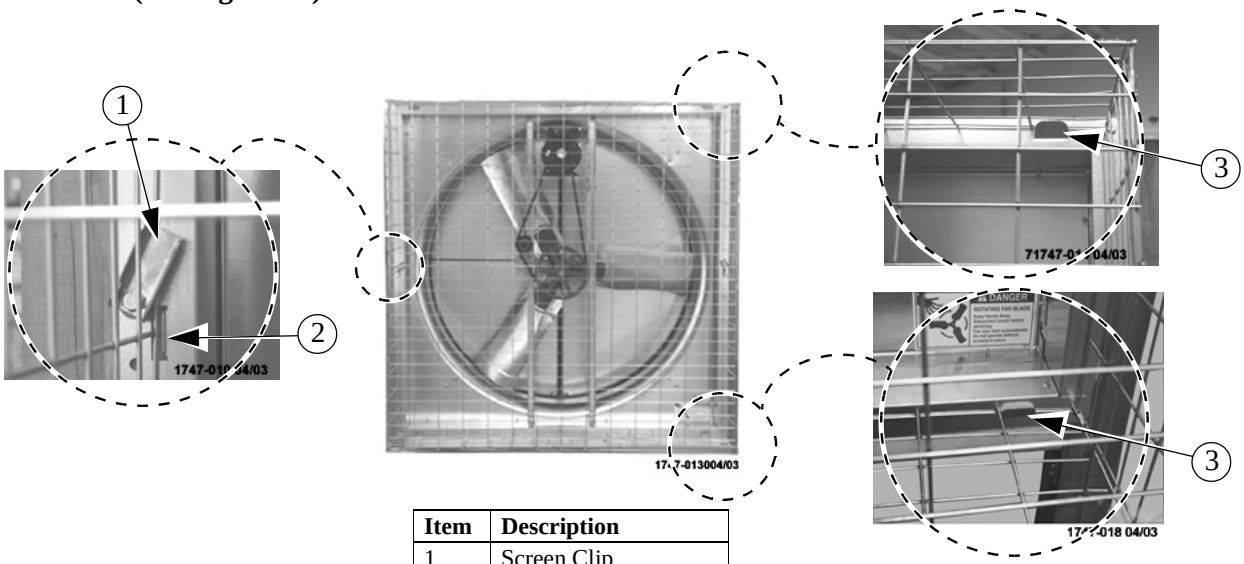


Item	Description
1	Motor Access Cover
2	Cord Clip
3	Drip Loop

Figure 24. Cut out Screen for Motor Wiring

Installing the Screen

Hang the Rear Screen on the four tabs located in the corners of the Fan Mounting Flange. Position the Screen so that the Screen wire is captured between the 1/8" tall tabs and the Screen Clips. Rotate the two Screen Clips to capture the Screen **(See Figure 25)**.



Item	Description
1	Screen Clip
2	1/8" tall Tab
3	Screen Mounting Tabs

Figure 25. Installing the Screen

Drain Tabs

The Fan is designed with Drain Tabs located in the bottom corners of the Shroud **(Item 1, Figure 26)**. From the inside of the Fan, using a screw driver, Push the drain tabs out. From the outside of the Fan, use pliers to bend the Drain Tabdown to create a place for water to drain out and away from the building **(See Figure 27)**. The Drain Tab should look like it does in **Figure 28** for proper drainage.

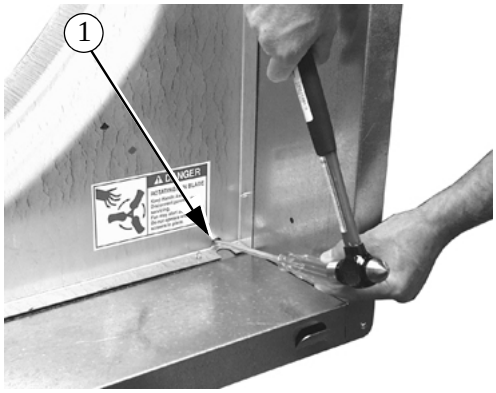


Figure 26. Use a screwdriver to push Drain Tab out

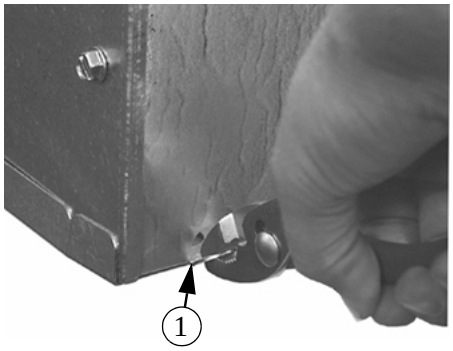


Figure 27. Use Pliers to bend Drain Tab down

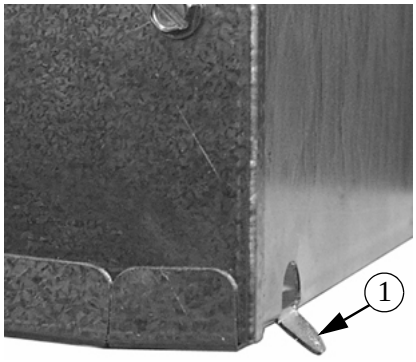


Figure 28. Drain Tab Bent down so water drains out of the Fan and away from building

Item	Description
1	Drain Tab

The Fan Cone is designed with a C-Shaped Drain Tab located at the back of the Bottom Cone Panel. Use a screw driver to push the Drain Tab out as shown in **Figure 29 below**.

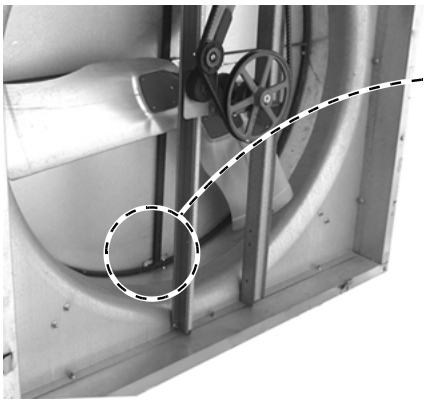


Figure 29. Drain Tab at back of Bottom Panel

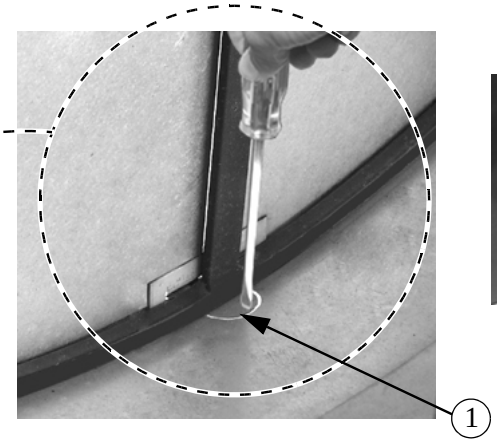


Figure 30. Use screw driver to push Drain Tab out

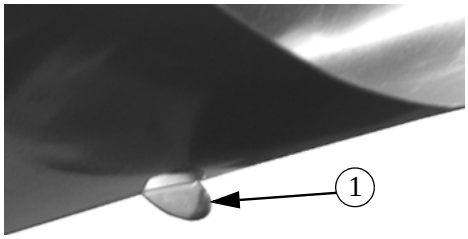


Figure 31. Drain Tab Pushed out (Shown from under Cone)

Item	Description
1	Drain Tab

Installing Fans 60"-64-1/2" on Center

If 52" Fans need to be installed 60"-64-1/2" on center, Cone Clips can be used to keep Cones from interfering with one another. First, cut the two legs from the horizontal Screen wire as shown in F**igure 32 below**.

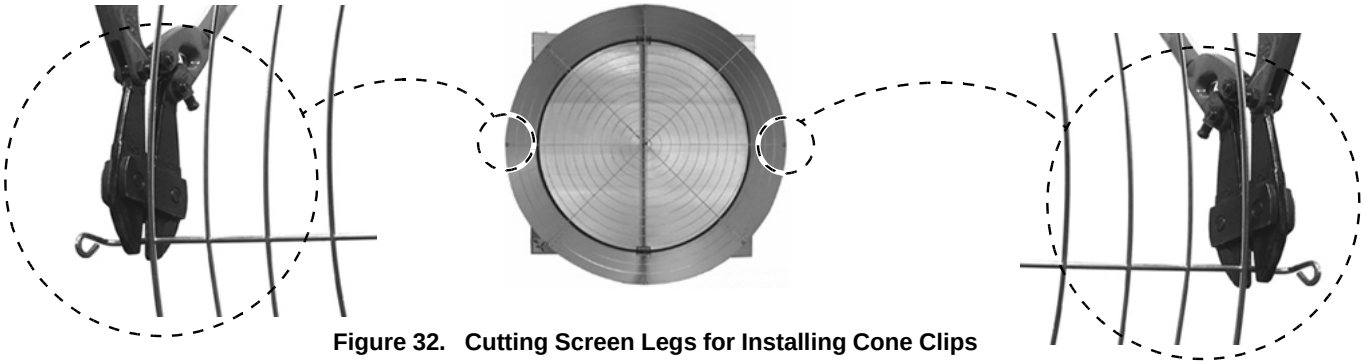
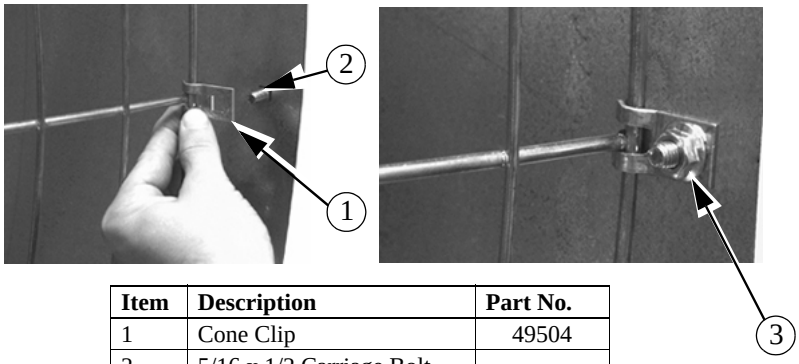
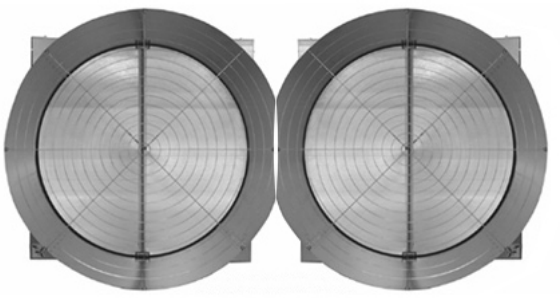


Figure 32. Cutting Screen Legs for Installing Cone Clips

Holding a Cone Clip in place, Push in the side of the Cone and fasten with 5/16 x 1/2" Carriage Bolts and Flange Nuts as shown in **Figure 33 below**.



Item	Description	Part No.
1	Cone Clip	49504
2	5/16 x 1/2 Carriage Bolt	-
3	5/16 Flange Nut	-



52" Cone Fans with Cone Clips

Figure 33. Attaching Cone Clips

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.
- Keep the fan clean for maximum life and best performance. **Do Not spray water on the Fan Shaft Bearings, the Belt Tensioner, or the Motor.**
- Periodically check the V-Belt and replace if necessary. A worn Belt will cause a substantial drop in Fan performance or it can break and cause Fan failure. If a Belt rides below the Sheave edge, replace the belt. **(See Figure 34 below)**

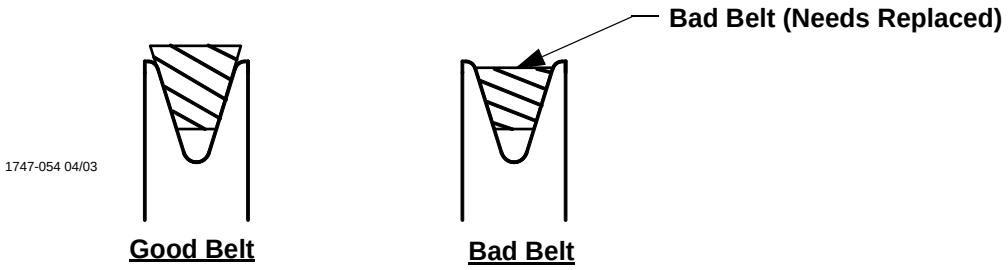


Figure 34. Belt Condition

- Check Belt Tension. The Belt should be tensioned just tight enough to minimize Belt slippage. Over tensioning the belt will cause premature Belt and Bearing wear. With a new Belt the Idler Sheave indicator mark should line up with the third notch in the Tensioner Housing **(See Figure 35)**.

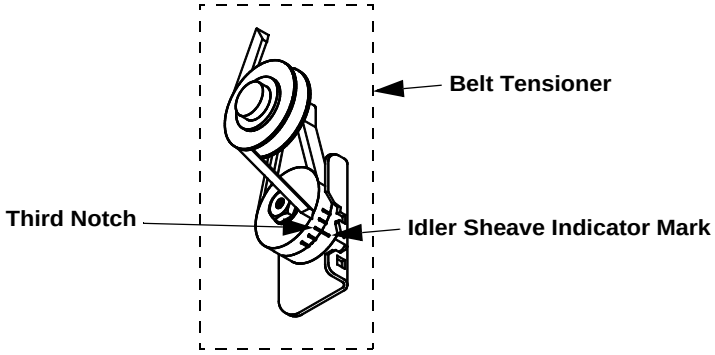


Figure 35. Idler Sheave Indicator Mark

- Keep Shutters, Blades, and Housing clear of obstacles for best air performance.
- The motor and Fan Shaft Bearings are pre-lubricated. Grease zerks are provided on the fan shaft bearings for installations where re-lubrication is needed. Add only a small amount of grease to purge impurities out of the bearing seals. Use only high quality lithium soap base grease and clean all dirt from zerk before applying grease. Chore-Time recommends using Shell Alvania # 2 in the fan shaft bearings.

Check Sheaves for wear. Replace if a Sheave groove is worn. **(See Figure 36)**

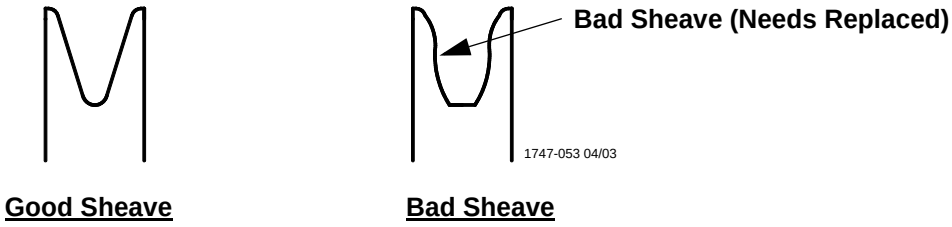


Figure 36. Sheave Condition

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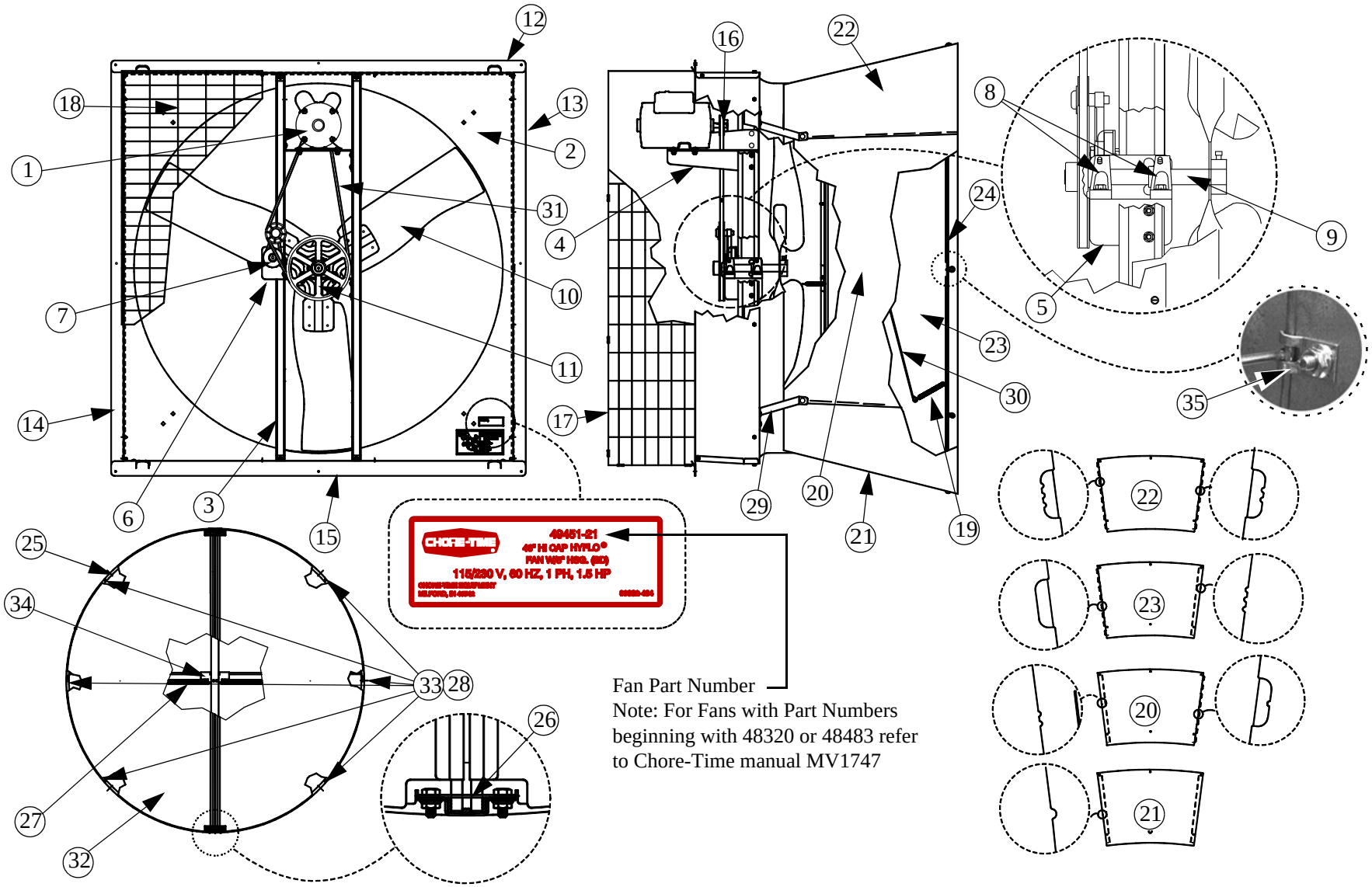
Hyflo® Fan Parts



Fan Part Number

Note: For Fans with Part Numbers beginning with 48320 or 48483 refer to Chore-Time manual MV1747

		48" Fan Part Numbers		52" Fan Part Numbers	
		5" Deep Housing 49451-XX 9" Deep Housing 49515-XX		5" Deep Housing 49511-XX 9" Deep Housing 49519-XX	
Item	Part Description	Part No.	Models-XX	Part No.	Models-XX
1	Motor, 1ph, 1.5hp, 1725 rpm	49903	-21	49903	-22
	Motor, 1ph, 1hp, 1725 rpm	37729	-22, -23	--	--
	Motor, 3ph, 1.5hp, 1725 rpm	47693	-52	--	--
	Motor, 3ph, 1hp, 1725 rpm	40157	-42	--	--
	Motor, 1ph, 1.5hp	--	--	48580	-21
	Motor, 3ph, 1.5hp	48608	-41,-51	48608	-41,-51,-42,-52
2	Shroud, Fan	48362	All	47710	All
3	Post, Fan	48393	All	48072	All
4	Motor Support, Idler Drive	48396	All	48396	All
5	Bearing Support, Idler Drive	48395	All	48395	All
6	Tensioner Support	48394	All	48394	All
7	Tensioner, Assy	48429	All	48429	All
8	Bearing, 1" Pillow Block	48428	All	48428	All
9	Fan Shaft	48397	All	48397	All
10	Fan Blade, High Efficiency	45932	-23	--	--
	Fan Blade, Standard	28140	-22, -42, -52	48507	-22, -42, -52
	Fan Blade, High Capacity	46748	-21, -41, -51	48125	-21, -41, -51
11	Sheave, Driven AK84	28143	-51, -52, -23	28143	-51, -52
	Sheave, Driven AK94	40274	-21, -22, -41, -42	40274	-21, -22, -41, -42,
12	5" Hyflo® Top Panel	48671	All	48685	All
	9" Hyflo® Top Panel	49207	All	49459	All
13	5" Hyflo® R.H. Side Panel	49474-2	All	49510-2	All
	9" Hyflo® R.H. Side Panel	49514-2	All	49518-2	All
14	5" Hyflo® L.H. Side Panel	49474-1	All	49510-1	All
	9" Hyflo® L.H. Side Panel	49514-1	All	49518-1	All
15	5" Hyflo® Bottom Panel	49473	All	49509	All
	9" Hyflo® Bottom Panel	49513	All	49517	All
16	Sheave, Driver AK27	1381	-23	--	--
	Sheave, Driver AK30	8773	-21, -22, -41, 42	8773	-21, -22, -41, -42
	Sheave, Driver AK32	48504	-51, -52	48504	-51, -52
17	Screen, 12" x 56" Mesh	48340	All	48340	All
18	Screen, 56 x 56, 2 x 4 Wire	48228	All	48228	All
19	Spring, Door Stop	49596	All	49596	All
20	Cone Panel, RH Hyflo®	49444	All	49508	All
21	Cone Panel, Bottom Hyflo®	49442	All	49506	All
22	Cone Panel, Top Hyflo®	49441	All	49505	All
23	Cone Panel, LH Hyflo®	49443	All	49507	All
24	Grill, Galv. Cone	49447	All	49501	All
25	Frame, Hyflo® Door	49439	All	49499	All
26	Plate, SS Fan Door Pivot Bottom	49598	All	49598	All
27	Spring, Door Closing	49629	All	49629	All
28	Magnet, .125 Thk. x .50 Dia.	48427	All	48427	All
29	Bracket, Cone Support	49445	All	49445	All
30	Wire, Hyflo® Door Stop	49597	All	49597	All
31	V-Belt A59	48505	-23,-51,-52	48505	-23,-52
	V-Belt A60	48430	-21,-22,-41,-42	48430	-22, 42
	V-Belt AX59	--	--	48615	-51
	V-Belt AX60	--	--	48541	-21,-41
32	Door, Hyflo® Shutter	49446	All	49500	All
33	Pop Rivet, SS 1/8 x .40	48936	All	48936	All
34	Support, Hyflo® Door Spring	49450	All	49450	All
35	Cone Clip (Optional)	--	--	49504	All

Safety Information

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.

DANGER: Electrical Hazard

Disconnect electrical power before inspecting or servicing equipment Ground all electrical equipment for safety. All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes. Ground all non-current carrying metal parts to guard against electrical shock. With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.

DANGER: Rotating Fan Blade

Keep Hands away. Disconnect power before servicing. Fan may start automatically. Do not operate the Fan without the screens in place. Disregard to these things will cause serious injury including death.

Warranty

Chore-Time Equipment ("Chore-Time") warrants each new Chore-Time product manufactured by it to be free from defects in material or workmanship for one year from and after the date of initial installation by or for the original purchaser. If such a defect is found by the Manufacturer to exist within the one-year period, the Manufacturer will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement. Labor costs associated with the replacement or repair of the product are not covered by the Manufacturer.

Conditions and Limitations

1. The product must be installed by and operated in accordance with the instructions published by the **Manufacturer or Warranty will be void**.
2. Warranty is void if **all components** of the system are not original equipment supplied by the **Manufacturer**.
3. This product must be purchased from and installed by an authorized distributor or certified representative thereof or the Warranty will be void.
4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under the Warranty.
5. This Warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this Warranty.

The **Manufacturer** shall not be liable for any **Consequential or Special Damage** 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.*

THIS WARRANTY CONSTITUTES THE MANUFACTURER'S ENTIRE AND SOLE WARRANTY AND THIS MANUFACTURER EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

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