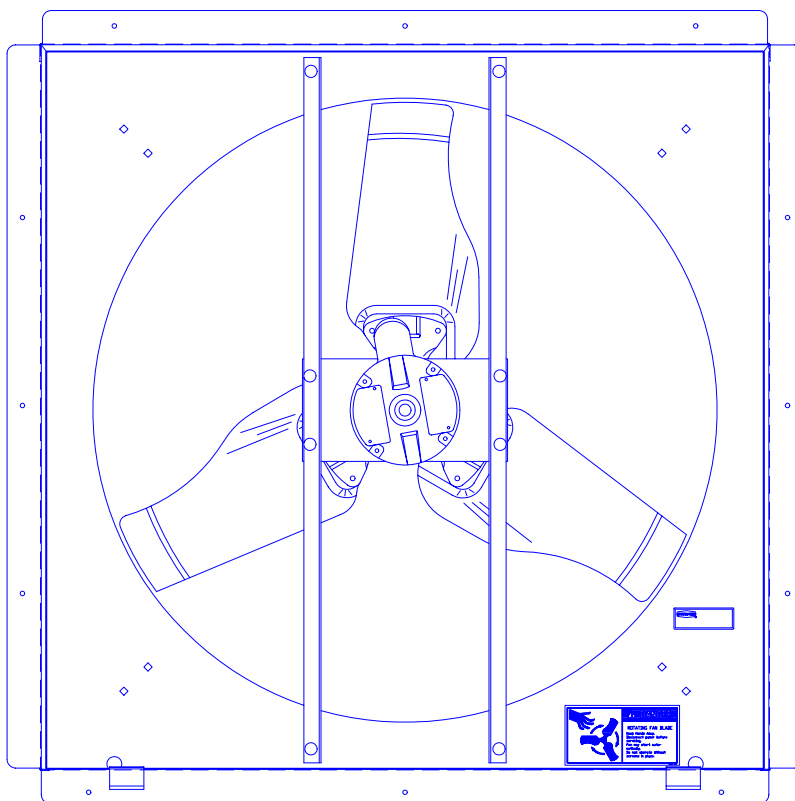


36" E-Z Cone Fan

Installation & Operator's Instruction Manual

(Direct Drive)



MV1433-4 3/97

Chore-Time Warranty

Chore-Time Equipment warrants each new product manufactured by it to be free from defects in material or workmanship for one year from the date of initial installation by the original purchaser. If such a defect is found by Chore-Time to exist within the one year period, Chore-Time 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.

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, mismanagement, negligence, alteration, accident, or lack of proper maintenance, or from lightning strikes, electrical power surges or interruption of electricity shall not be considered defects under the Warranty. Corrosion, material deterioration and/or equipment malfunction caused by or consistent with excessive additions or application of chemicals, minerals, sediments or other foreign elements with the product 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.

Chore-Time shall not be liable for any **Consequential or Special Damage** which any purchaser may suffer or claim to have suffered 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 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 AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Any exceptions to this warranty must be authorized in writing by an officer of the company. Chore-Time reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

**CHORE-TIME EQUIPMENT, A Division of CTB, Inc.
P.O. Box 2000
Milford, Indiana 46542-2000 U.S.A.**

Table of Contents

Topic	Page	User*
Chore-Time Warranty	2	C,D
Support Information	4	C,D
Distributor and Installer Information	4	C,D,I
Safety Information	5	C,I
Safety–Alert Symbol.	5	C,I
Signal Words.	5	C,I
DANGER: Electrical Hazard.	5	C,I
Technical Information	6	C,I
Tools Required	6	C,I
Fan Dimensions.	7	C,I
Fan Assembly Procedure	7	I
Fan Installation.	12	I
Cone Assembly and Installation	14	I
Wiring:	16	I
Shutter Installation.	17	I
MAINTENANCE:	18	C
Direct Drive E-Z Cone Fan Part Numbers and Motor Specifications.	18	C,I
Direct Drive E-Z Cone Fan Parts List	19	C,I

***Legend: C = Customer (end user), D = Distributor (sales), I - Installer of equipment**

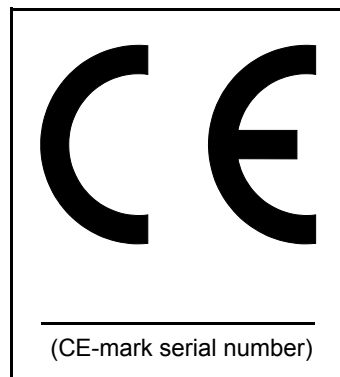
Support Information

The Chore-Time E-Z Cone Fans are designed to be used as circulating or exhaust fans. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury.

This manual is designed to provide comprehensive planning, installation, operation, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual. The Table of Contents also specifies which pages contain information for the sales personnel, installer, and consumer (end user).

IMPORTANT: CE stands for certified Europe. It is a standard which equipment must meet or exceed in order to be sold in Europe. CE provides a benchmark for safety and manufacturing issues. **CE is required only on equipment sold in Europe.**

Chore-Time Equipment recognizes CE Mark and pursues compliance in all applicable products. *Fill in the CE-Mark serial number in the blank space provided for future reference.*



Distributor and Installer Information

Please fill in the following information about your Product.
Keep this manual in a clean, dry place for future reference.

Distributor's Name _____

Distributor's Address _____

Distributor's Phone _____ **Date of Purchase** _____

Installer's Name _____

Installer's Address _____

Installer's Phone _____ **Date of Installation** _____

System Specifications _____

Safety Information

Caution, Warning and Danger Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety signs.

Using the equipment for purposes other than specified in this manual may cause personal injury and or damage to the equipment.

Safety–Alert Symbol

This is a safety–alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury. This equipment is designed to be installed and operated as safely as possible...however, hazards do exist.



Signal Words

Signal words are used in conjunction with the safety–alert symbol to identify the severity of the warning.

DANGER..... indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



DANGER

WARNING..... indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



WARNING

CAUTION..... indicates a hazardous situation which, if not avoided, **MAY** result in minor or moderate injury.



CAUTION

DANGER: Electrical Hazard

Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

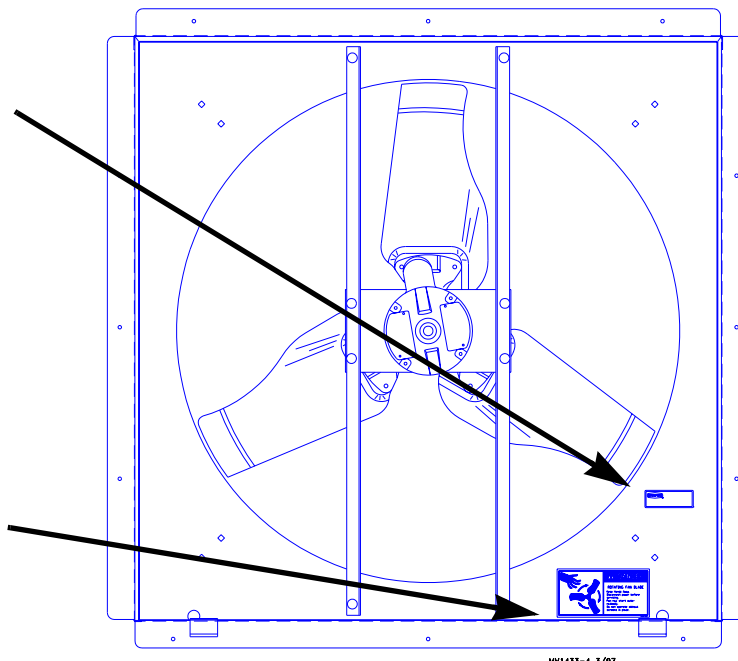
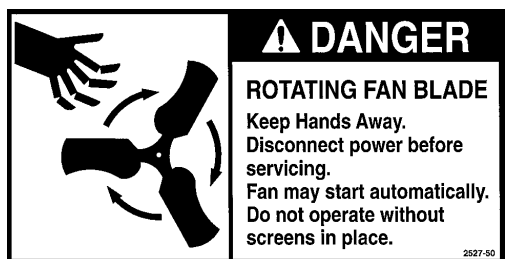
Ground all non-current carrying metal parts to guard against electrical shock.

With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.



This diagram shows the proper location of the safety decal (DANGER--ROTATING FAN BLADE) as shipped from the factory. Replace damaged or missing decals. Make sure the decals may be easily seen at all times.

If the fan is purchased unassembled, the Chore-Time Fan Assembly Part Number Decal will be packed with this instruction manual. Make sure the decal location shown below is clean and dry. Remove the backing of the decal and affix it to the Fan Shroud.



WV1433-4 5/97

Technical Information

Motor choices and specifications are provided in the Parts List section of this manual. See page 14 Fan Motor specifications.

Important

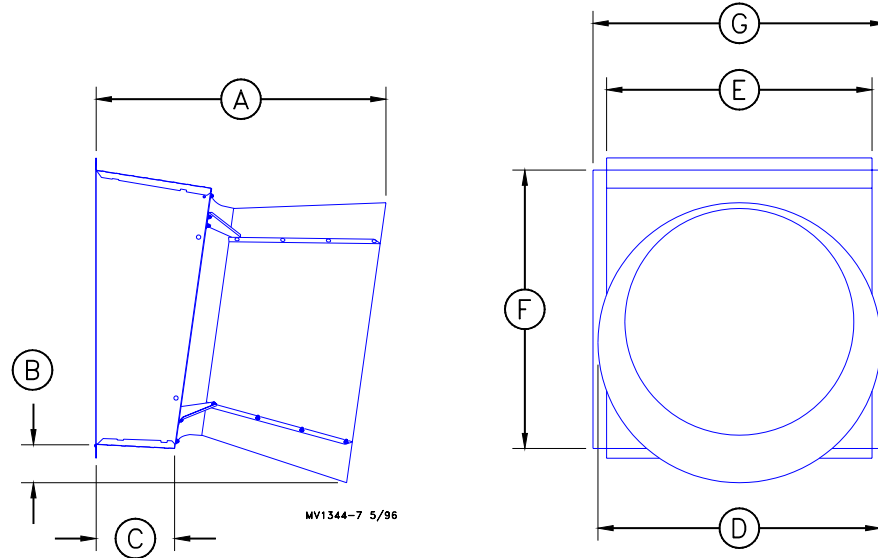
Chore-Time Equipment strongly recommends that a good alarm system should be installed in confinement buildings to warn of power failure and high temperature.

Chore-Time Equipment also recommends that an alternate power source be available for confinement buildings in case of power failure.

Tools Required

- Regular Screwdriver
- Hammer
- 1/2" Open End Wrench or Socket Wrench with 1/2" Socket
- Wire Cutters & Strippers
- Adequate Size & Quantity of Electrical Wire
- 5/16" Hex Key Wrench
- 5/16" Open End Wrench or a 12 Point 3/8" Socket and Ratchet

Fan Dimensions



"A"	"B"	"C"	"D"	"E"	"F"	"G"
46" (116.8 cm)	3" (7.6 cm)	16.25" (41.3 cm)	45" (114.3 cm)	42.75" (108.6 cm)	42.5" (108.0 cm)	46.5" (118.1 cm)

Fan Assembly Procedure

Position the Side Panels around the Fan Shroud, as shown in **Figure 1**. Loosely secure the Side Panels to the Fan Shroud using 5/16-18 hardware.

Important: Notice the orientation of the drain holes in the bottom of the Shroud. The narrow end of the Side Panels must be toward the bottom of the Shroud.

Note: Fans use (2) bolts, washers, and nuts per side.

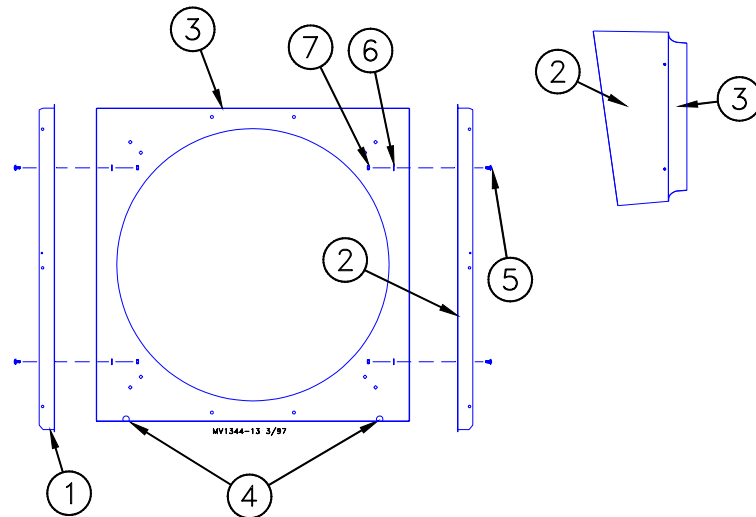


Figure 2. Shroud and Panel Assembly (front view).

Key	Description
1	Side Panel (L.H.)
2	Side Panel (R.H.)

Key	Description
3	Fan Shroud
4	Drain holes in bottom of Shroud
5	5/16-18 x 5/8" Carriage Bolt
6	5/16" Lock Washer
7	5/16-18 Hex Nut

Assemble the Top and Bottom Panels to the Fan Shroud, using the 5/16-18 hardware supplied. See **Figure 2**.

Note: The Bottom Panel is narrow, the Top Panel is wide.

The Side, Top, and Bottom Panels lock together by inserting the tabs of one Panel into the slot in the end of another Panel. See the detail in **Figure 2**.

Use a hammer to carefully bend the corner tabs over to secure the Side Panels together.

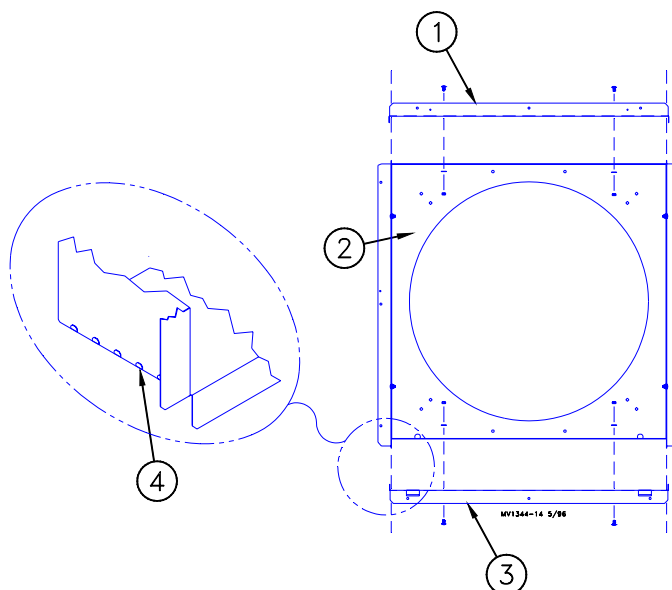


Figure 2. Shroud and Panel Assembly (front view).

Key	Description
1	Top Panel
2	Fan Shroud
3	Bottom Panel
4	Insert tabs into adjoining Panels. Bend tabs to lock Panels together.

Secure the Motor Mount Post to the Fan Shroud using the 5/16-18 x 5/8" carriage bolts and hex nuts provided in the Hardware Package. See **Figure 3**.

The Motor Mount Post must be installed as shown in **Figure 3**.

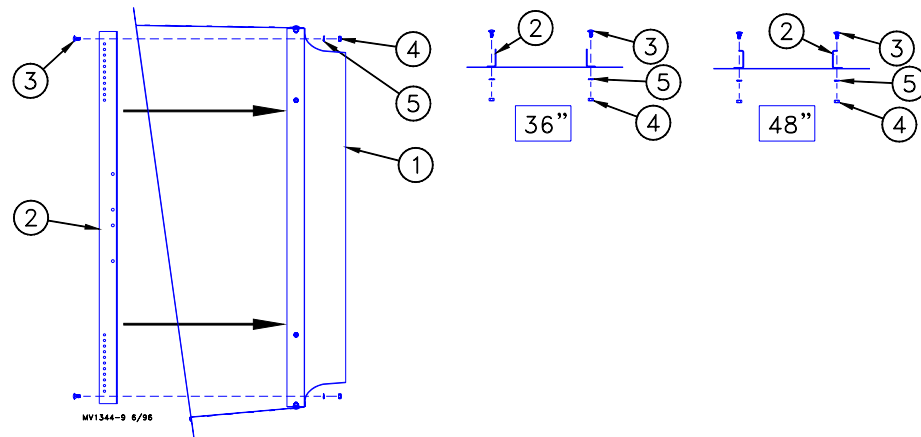


Figure 3. Motor Mount Post Installation (side view).

Key	Description
1	Fan Shroud
2	Motor Mount Post
3	5/16-18 x 5/8" Carriage Bolt
4	5/16-18 Hex Nut
5	5/16" Lock Washer

Install the Motor Support to the Motor Mount Post, as shown in **Figure 4**.

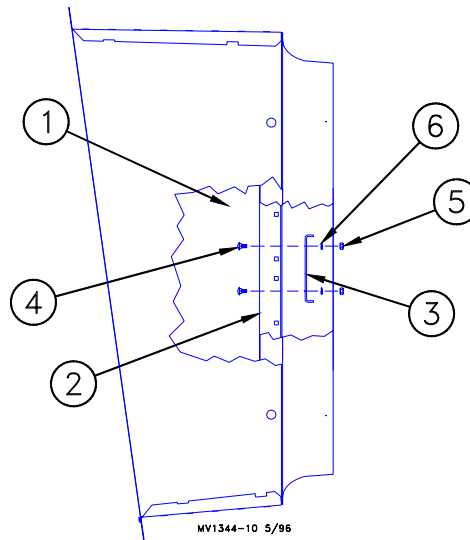


Figure 4. Motor Support Installation (side view).

Key	Description
1	Panel
2	Motor Mount Post
3	Motor Support
4	5/16-18 x 5/8" Carriage Bolt
5	5/16-18 Hex Nut
6	5/16" Lock Washer

Secure the Motor to the Motor Support. Fan Motors with Capacitors, orient as shown in **Figure 5** and **Figure 6**.

The Motor is attached using 10-32 Serrated Flange Nuts provided in the Hardware Package (See **Figure 5**).

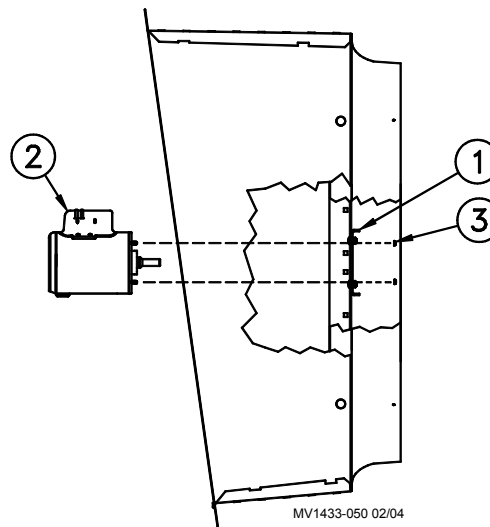


Figure 5. Motor Installation (side view).

Key	Description
1	Motor Support
2	Motor
3	10-32 Serrated Flange Nut

Slide the Blade Assembly onto the motor shaft. The Fan Blade Hub should be flush to the end of the motor shaft. See **Figure 7**.

Insert key into keyway on motor shaft.

Tighten the set screws using a 5/16" open end wrench.

Torque the set screw(s) to approximately 130 in./lbs.

See the decal placement instructions on page 6.

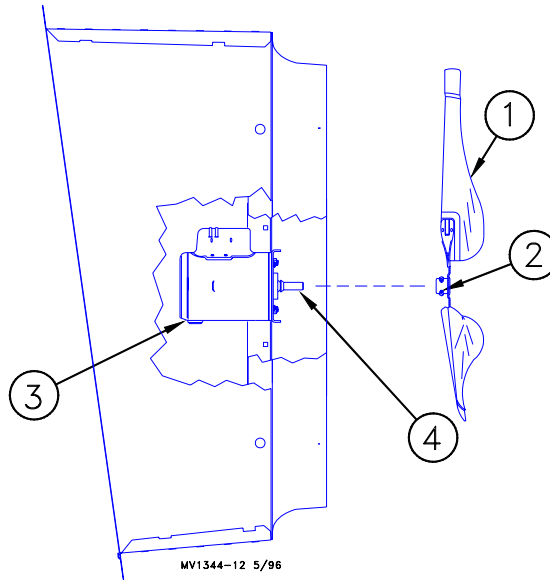


Figure 7. Blade Assembly Installation (side view).

Key	Description
1	Blade Assembly
2	Fan Blade Hub
3	Motor
4	Motor Shaft with key/keyway

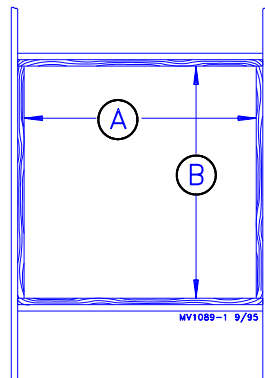
Fan Installation

E-Z Direct Drive Cone Fans must be installed in a side wall.

Build fan framing out of 2" (50 mm) lumber (not supplied).

The required wall opening is provided in the chart below. See **Figure 8**.

Additionally, the chart on page 7 provides fan dimensions that may be required for installation.



Dimension (minimum)	A	B
36" E-Z Cone Fan	43" (109.2 cm)	43" (109.2 cm)

Figure 9. Cone Assembly (side view).

Insert the Fan Assembly in the framed opening in the side wall.

Center the Fan Assembly in the framed opening, left to right. Allow the Fan Housing to set on the bottom of the framed opening.

Secure the Fan Assembly to the framed opening, using (1) 1/4" x 1-3/4" Lag Screw through the middle hole on each side and (3) 1/4" x 1-3/4" Lag Screws across the bottom panel. See **Figure 9**. Lag Screws are supplied in the Hardware Package.

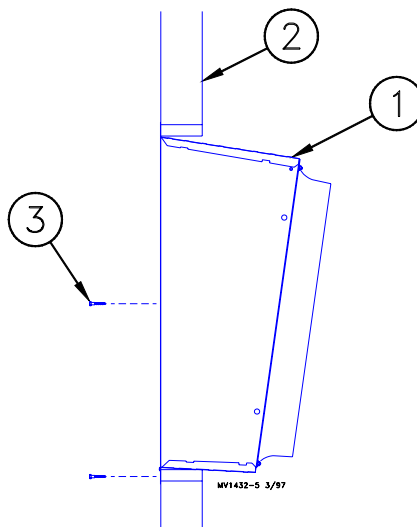


Figure 9. Cone Assembly (side view).

Key	Description
1	Cone Fan Assembly
2	Side Wall of Building
3	1/4" x 1-3/4" Lag Screws (5 used)

Install the Shutter Clips, as shown in **Figure 10**, in the remaining holes on the sides and top of the Slant Wall Kit. The Shutter Clips need to be tight, but loose enough to be turned.

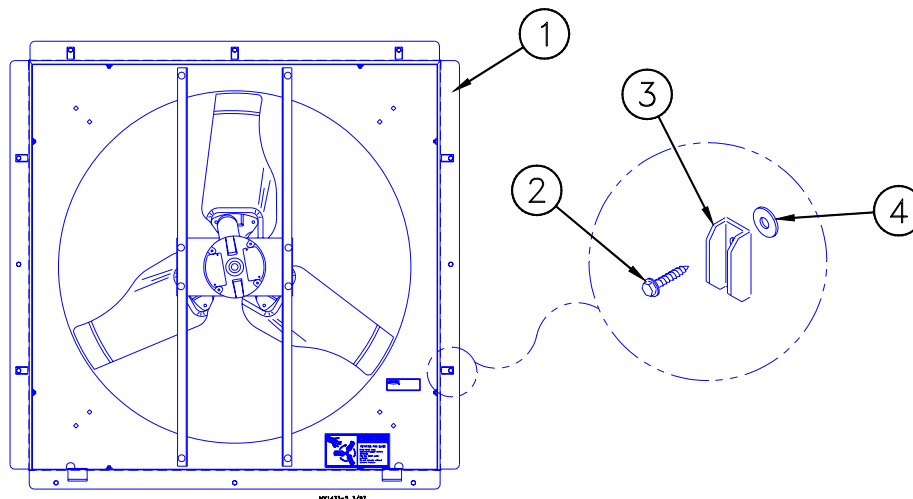


Figure 10. Shutter Clip installation (front view).

Key	Description
1	Cone Fan Assembly
2	1/4 x 1-3/4" Lag Screw
3	Shutter Clip
4	Nylon Flat Washer

Cone Assembly and Installation

The Cone must be assembled and installed in the field.

Important: The Fan must be installed in the wall before installing the Cone to the Fan.

Lay the Cone Panels, with the flanges up, on a flat surface, as shown in **Figure 11**.

Loosely, fasten the Side Panels together with (3) 5/16-18 x 5/8" carriage bolts, (3) 3/8" lock washers, and (3) 5/16-18 hex nuts per joint. Only install hardware at the locations shown in **Figure 11**.

Do not tighten the hardware.

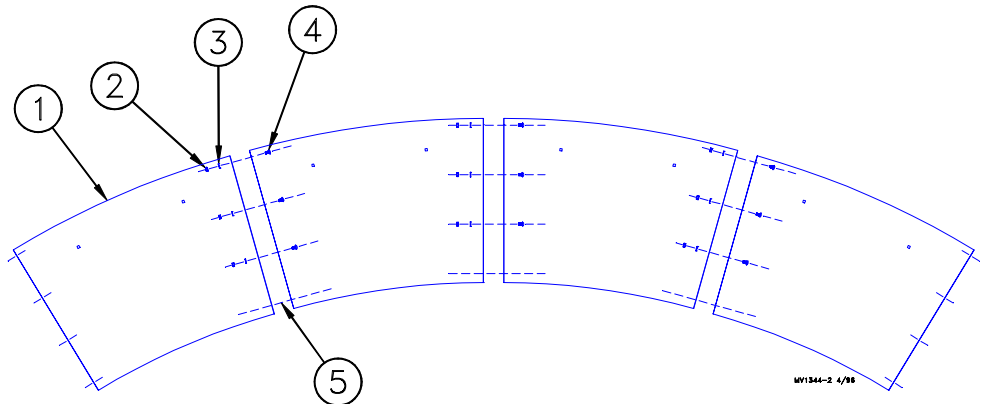


Figure 11. Cone Assembly (top view).

Key	Description
1	Cone Panel
2	5/16-18 Hex Nut
3	3/8" Lock Washer
4	5/16-18 x 5/8" Carriage Bolts
5	<i>Do not install hardware here.</i>

Set the Cone Side Panels up and align the ends to create the cone shaped housing. **Loosely**, secure the ends similar to the other joints.

Note: The flanges should be on the outside of the Cone.

Position the Grill in the larger end of the Cone Assembly. Secure the Grill in place using the 5/16-18 carriage bolts, 3/8" lock washers, and 5/16-18 hex nuts. See **Figure 12**. This will help maintain the shape of the Cone Assembly while it is being secured to the Fan

Shroud.

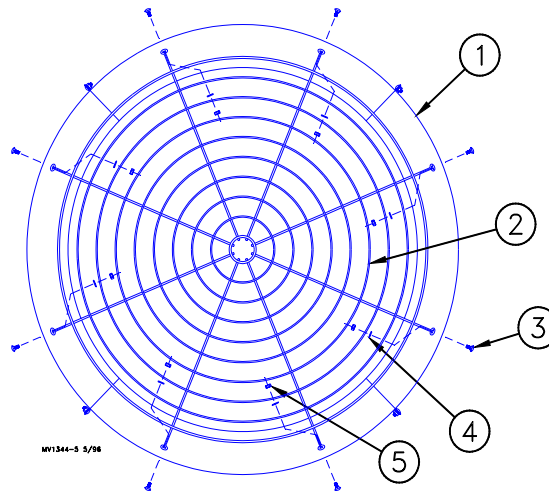


Figure 12. Grill Installation (front view).

Key	Description
1	Cone Assembly
2	Grill
3	5/16-18 Carriage Bolt
4	3/8" Lock Washer
5	5/16-18 Hex Nut

Secure each Cone Hanger Bracket to the Fan Shroud, using 5/16-18 carriage bolts, 3/8" lock washers, and 5/16-18 hex nuts. See **Figure 13**.

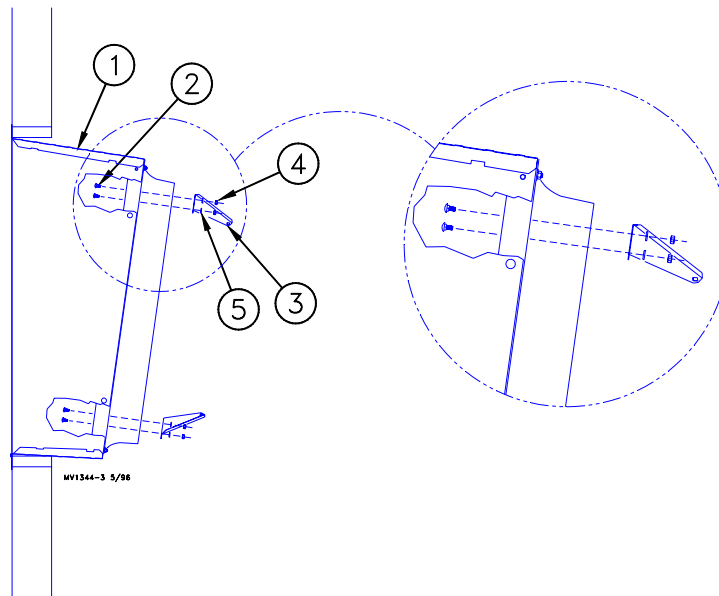


Figure 13. Hanger Bracket Installation (side view).

Key	Description
1	Fan Assembly
2	5/16-18 x 5/8" Carriage Bolt
3	Cone Hanger Bracket
4	5/16-18 Hex Nut
5	3/8" Lock Washer

With the help of an assistant, lift the Cone Assembly to the Fan Shroud. Slide the smaller end of the Cone Assembly over the Fan Shroud. Rotate the Cone Assembly to align the Panel Joints with the Cone Hanger Brackets.

Secure the Cone Assembly to the Cone Hanger Brackets using (1) 5/16-18 carriage bolt, 3/8" lock washer, and 5/16-18 hex nut. See **Figure 14**.

Tighten all the hardware.

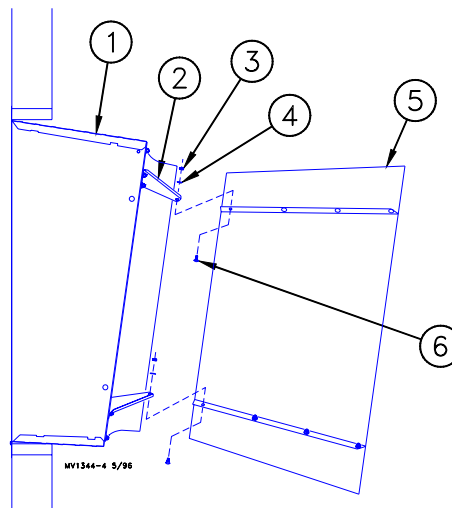


Figure 14. Cone Installation (side view).

Key	Description
1	Fan Assembly
2	Cone Hanger Bracket
3	5/16-18 Hex Nut
4	3/8" Lock Washer
5	Cone Assembly
6	5/16-18 x 5/8" Carriage Bolt

Wiring:

See wiring diagram on Motor for Motor electrical connections. Follow local, state and national electric codes for wiring.

Install an electric disconnect within reach of each Fan.

Route the motor cord (not supplied) toward the upper left corner of fan and attach the cord to the top panel using the 3/8" cord clip mounted in the 1/4" hole in the top panel. See **Figure 15**.

Important: If an Aluminum Shutter will be installed, route the motor cord through the Rubber Grommet.

Some installations may require an exit hole for the motor cord be drilled in the side of the Housing. These installations must have electrical wires routed through conduit to protect them from damage.

Note: Make sure the conduit or wires do not interfere with the Fan Blades or Shutter operation.

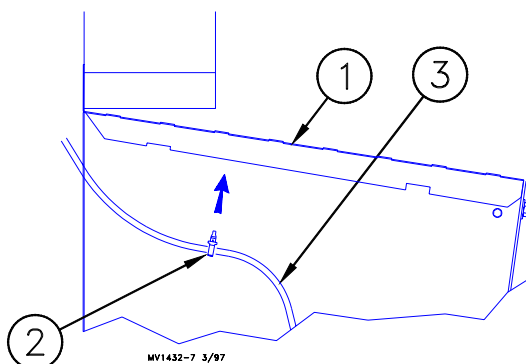


Figure 15. Installing Cord Clip.

Key	Description
1	Slant Wall Top Panel
2	Cord Clip
3	Cord

Shutter Installation

Install the Grommet in the corner of the Aluminum Shutter only. See **Figure 16**.

For fans with plastic shutters, cut a 3/8" slot in the upper left flange of the shutter to route the cord through when the shutter is installed. See detail in **Figure 16**.

The Slant Wall Bottom Panel is designed to hold the Shutter. Slide the bottom of the Shutter into position in the Bottom Panel of the Slant Wall kit, lean the Shutter back and lock it in place by rotating the Shutter Clips. See **Figure 16**.

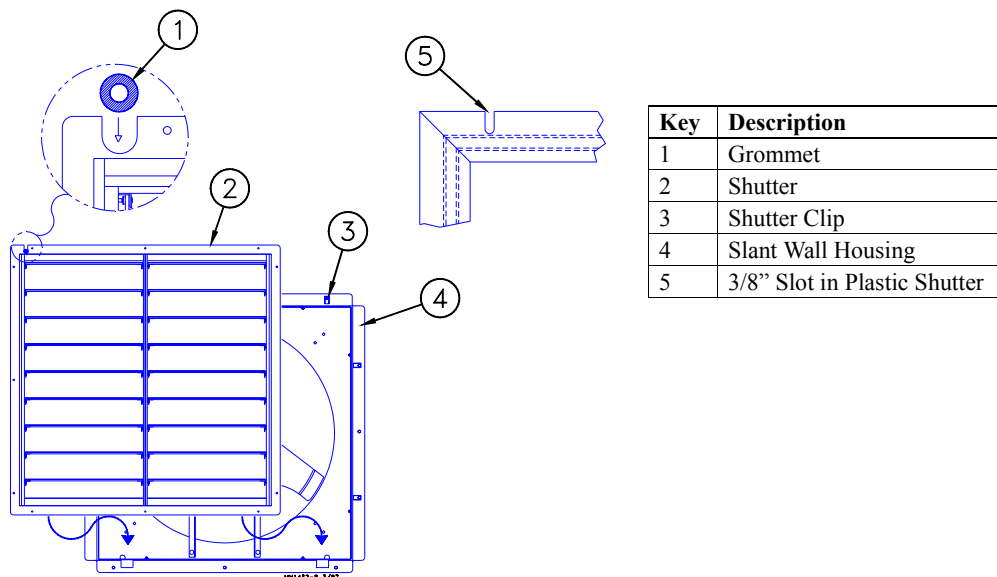


Figure 16. Shutter Installation (front view).

MAINTENANCE:

Service and maintenance of fans should be done only by a qualified technician.

DISCONNECT POWER PRIOR TO MAINTAINING OR CLEANING THE FAN! The fan may start automatically causing serious injury or death.



Keep the fan clean for maximum life and best performance.

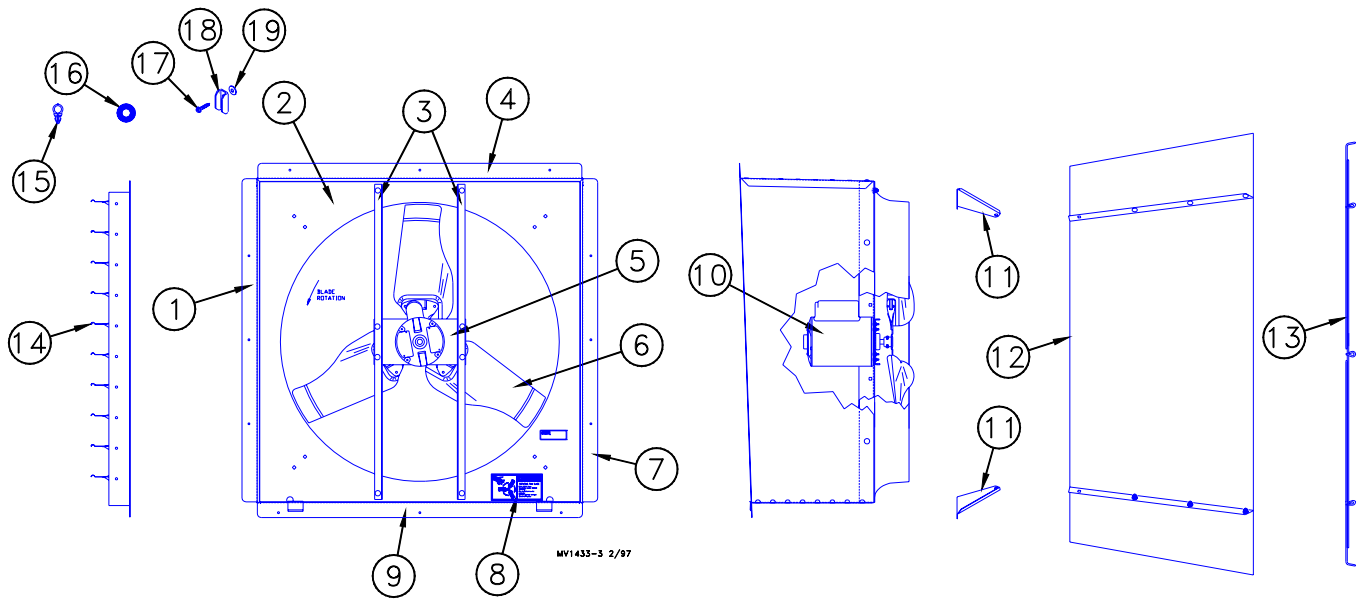
- Service and repair of fans should be done only by a qualified technician.
- Minimize contact of moisture or corrosive chemicals to the surfaces of the fan components to maximize fan life.
- After washing fans, operate fans long enough to remove moisture from all fan surfaces.
- Keep the fan clean for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

Direct Drive E-Z Cone Fan Part Numbers and Motor Specifications

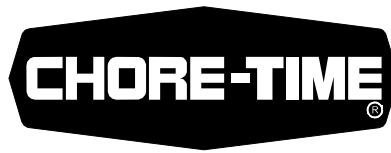
Assembled Fans	Unassembled Fans	Electrical Specs.				
Fan P/N +	Fan P/N +	Voltage	HZ	Phase	HP	Motor P/N
39009-361X	39023-361X	115	60	1	1/2	27536
39009-362X	39023-362X	208-230	60	1	1/2	28936
39009-364X	39023-364X	208-230/460	60	3	1/2	27536-3PH

+ Replace "X" in fan P/N with "1" for an aluminum shutter, or "2" for a plastic shutter

Direct Drive E-Z Cone Fan Parts List



Item	Description	Part No.
1	36" Side Panel (L.H.)	39016-1
2	36" Fan Shroud	5538
3	Motor Mount Post	37209
4	36" Top Panel	39014
5	Motor Support	36564
6	36" 3 Wing Fan Blade	40538
7	36" Side Panel (R.H.)	39016-2
8	Danger Decal	2527-50
9	36" Bottom Panel	39015
10	Motor	See Chart
11*	Cone Bracket	37806
12*	Cone Panel	37804
13	Grill	37629
14	36" Aluminum Shutter 36" Plastic Shutter	38259 38027
15	Cord Clip	7242
16	Grommet	7256
17	1/4 x 1-3/4 Lag Screw	39217
18	Shutter Clip	36729
19	Nylon Washer	4856



**Made to work.
Built to last.**

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Revisions to this Manual

Page No.	Description of Change
Various	Updated Warranty, Maintenance pages, and added Third Party paragraph.

Contact your nearby Chore-Time distributor or representative for additional parts and information.

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