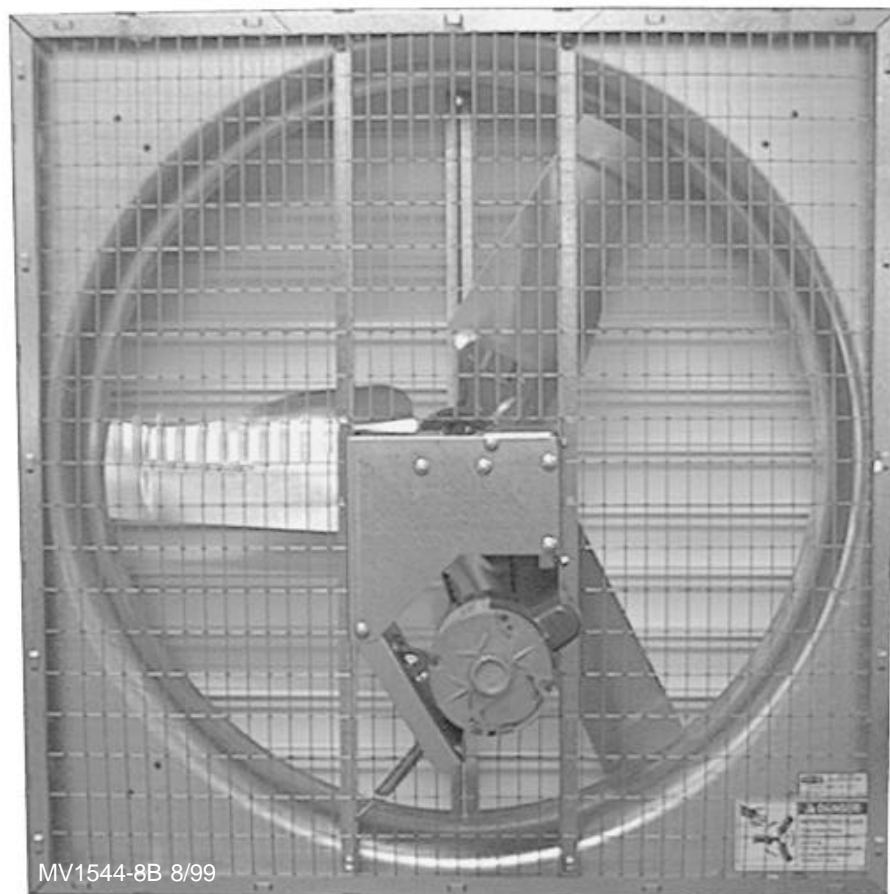


36" & 48" E-Z Shutter Fan Installation & Operator's Instruction Manual



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 and operated in accordance with instructions published by **Chore-Time or warranty will be void.**
2. Warranty is void if **all components** of a system are not supplied by **Chore-Time.**
3. This product must be purchased from and installed by an authorized Chore-Time dealer 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 this 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.

CTB Inc.
P.O. Box 2000 • Milford, Indiana 46542-2000 • U.S.A.
Phone (219) 658-4101 • Fax (800) 333-4191
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General

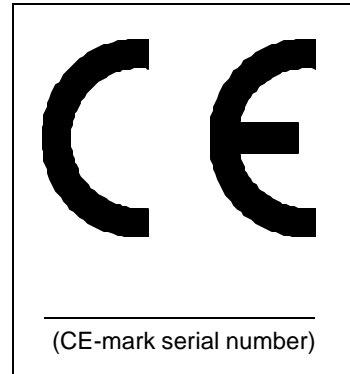
Support Information

The Chore-Time Shutter Fans are designed to be used as exhaust fans. The Shutter Fans are shipped unassembled to save on shipping charges. 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 _____

About This Manual

The intent of this manual is to help you in two ways. One is to follow step-by-step in the order of assembly of your product. The other way is for easy reference if you have questions in a particular area.

Important ! Read ALL instructions carefully before starting construction.

Important ! Pay particular attention to all SAFETY information.

- *Metric measurements are shown in millimeters and in brackets, unless otherwise specified. “ ” equals inches and “ ’ ” equals feet in English measurements.*

Examples:

1" [25.4]

4' [1 219]

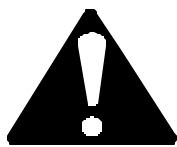
- Optional equipment contains necessary instructions for assembly or operation.
- Major changes from the last printing will be listed on the back cover.
- This Planning Symbol is used in areas where planning needs to take place before construction continues.
- Very small numbers near an illustration (*i.e.*, 1257-48) are identification of the graphic, not a part number.



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.

Understanding 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.



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



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

Safety Information

Follow Safety Instructions

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

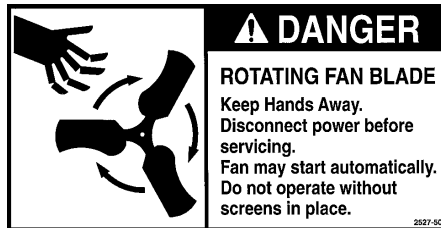
Keep safety signs in good condition. Replace missing or damaged safety signs.

Decal Descriptions

DANGER: Rotating Fan Blade

This decal is placed on the Panel Weldment.

Severe personal injury will result, if the electrical power is not disconnected, prior to servicing 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.

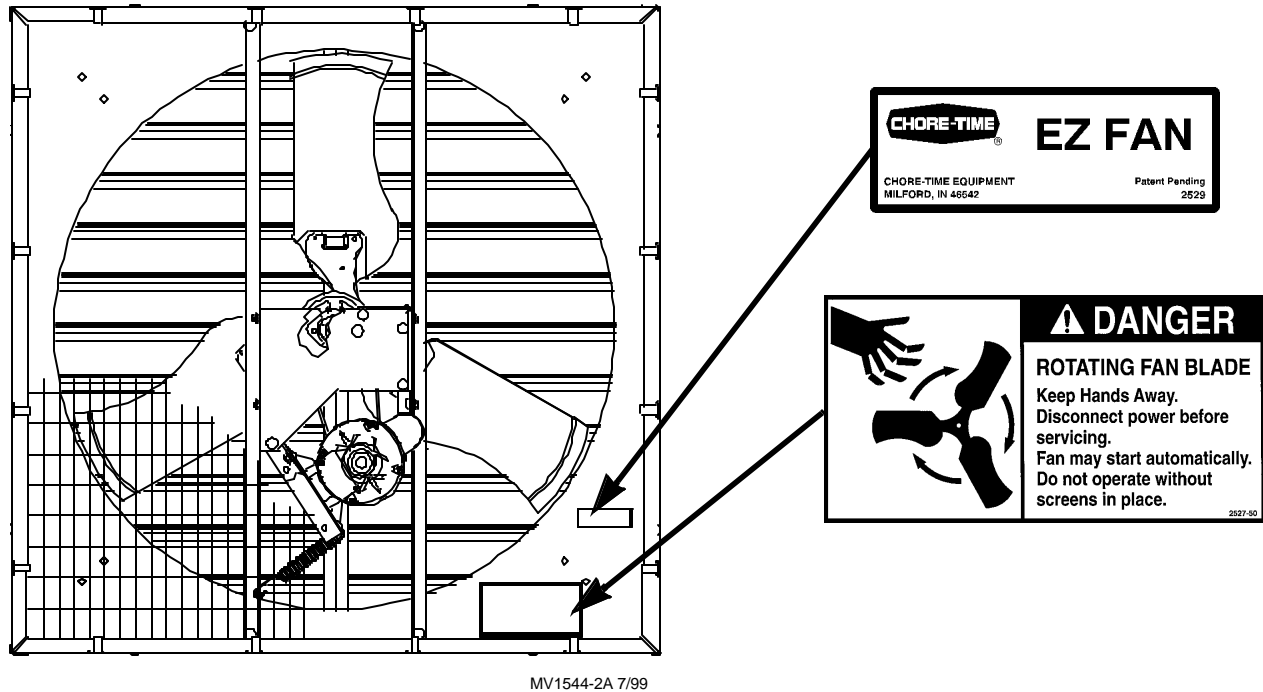


Figure 1. Decal Placement

Technical Information

Motor choices and specifications are provided in the Parts List section of this manual. See page 17 for 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

- 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 Assembly Procedure

For Factory Assembled Fans see Steps 3 through 6.

Step 1 - Mount Motor Mount Post to Fan Shroud

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

The Motor Mount Post must be installed as shown in **Figure 1**.

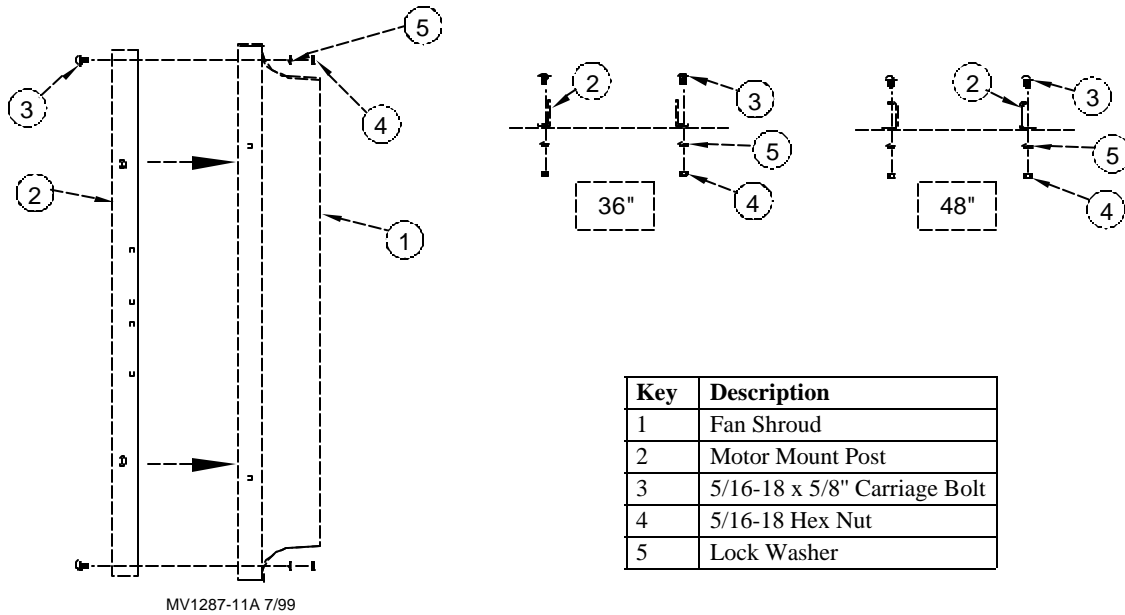


Figure 2. Motor Mount Installation

Step 2 - Mount Side Panels to Fan Shroud

The Side Panels for the Box Fans are identical. The Panels lock together by inserting the tabs of one Panel into the slot in the end of another Panel. See the detail in **Figure 3**.

Orienting the Side Panels as shown in **Figure 3**, assemble the Side Panels together around the Shroud using the 5/16-18 hardware provided.

36" Fans use (2) bolts, washers, and nuts per side. 48" Fans use (3) bolts, washers, and nuts per side to attach shroud.

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

Note: Orient the Shroud with the Shroud Drain Holes at the bottom of the Fan. Remove the (2) knockouts from the bottom Side Panel for water drainage.

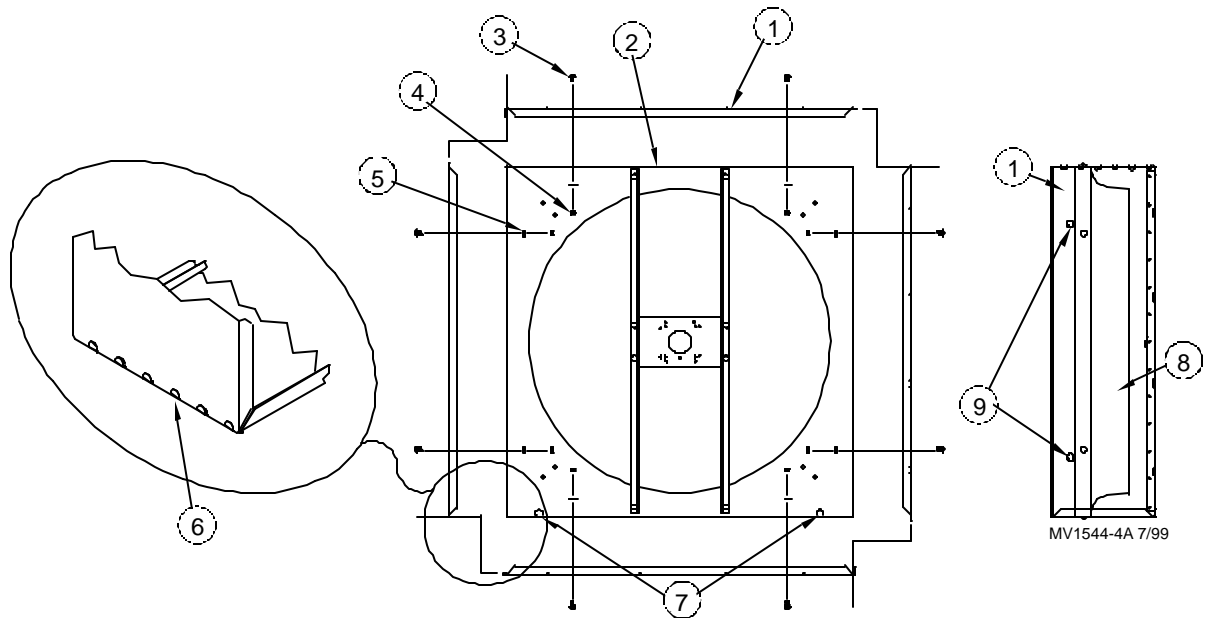


Figure 3. Side Panel Assembly

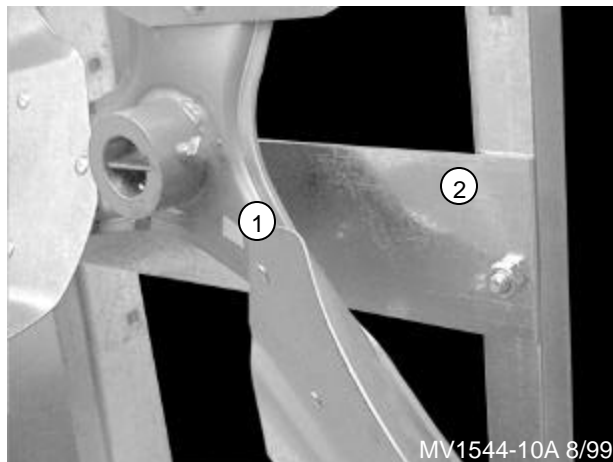
Item	Description
1	Side Panel
2	Fan Shroud
3	5/16-18 x 5/8" Carriage Bolt
4	5/16-18 Hex Nut
5	Lock Washer

Item	Description
6	Lock Side Panels together by bending tabs over.
7	Shroud Drain Holes
8	Shroud Orifice
9	Shroud Knockouts

Step 3B - Mount Module Assembly to Motor Mount Posts

Note: The Shutter Fans may be ordered with or without the Motor.

If a Factory Assembled Fan was ordered, the Fan Blade was shipped mounted to a Shipping Bracket. The Shipping Bracket must be removed and discarded. See **Figure 6**.



Item	Description
1	Fan Blade
2	Shipping Bracket

Figure 6. Detail of Shipping Bracket on Factory Assembled Fans (For Belt Drive Units Only)

Secure the Module Assembly and Motor between the Motor Support Posts, as shown in **Figure 7**. Hardware is included in the Hardware Package.

If your Fans do not have factory-included motors, set the Motor on the Module Assembly and secure in place with the 5/16-18 x 5/8" carriage bolts, 5/16" lock washers, and 5/16"-18 hex nuts, as shown in **Figure 7**.

The Motor is mounted in the rear set of holes.

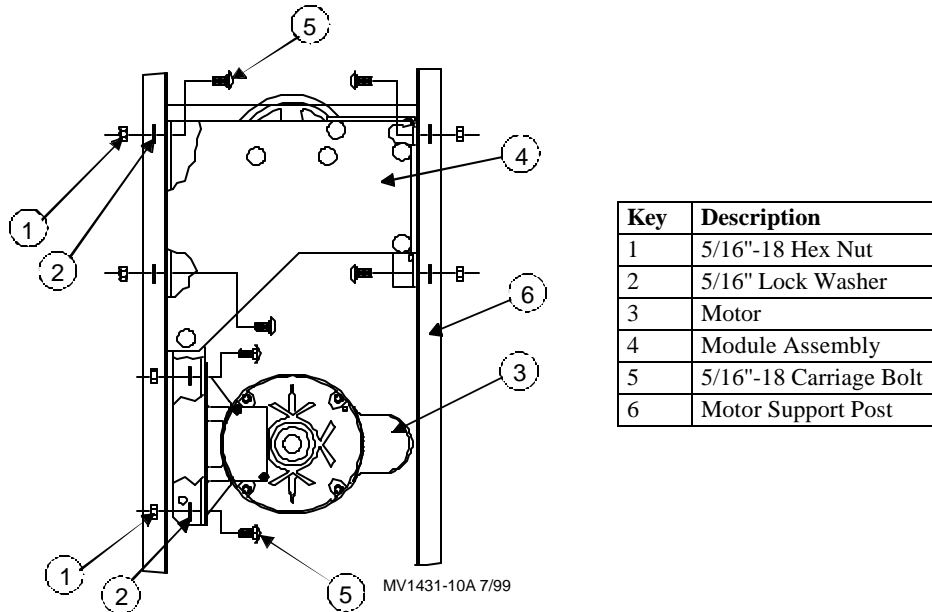


Figure 7. Fan Module and Motor Installation

Step 4 - Motor Sheave and Belt Installation

Install the Motor Sheave on the Motor Shaft. The outside edge of the Motor Sheave should be flush with the end of the Motor Shaft then tighten Allen Screws. See **Figure 8, Item 6**.

Note: **Align the Fan Shaft Sheave with the Motor Sheave and tighten the set screws. The Sheaves must be aligned so that the Belt will track straight.**

Install the Belt Tensioning Spring between the Motor Mount Post and the Motor Support Plate. Install Belt Tensioning Spring in the **fifth and sixth hole** from the bottom of the Motor Mount Post. See detail in **Figure 8**.

Install Belt around the sheaves.

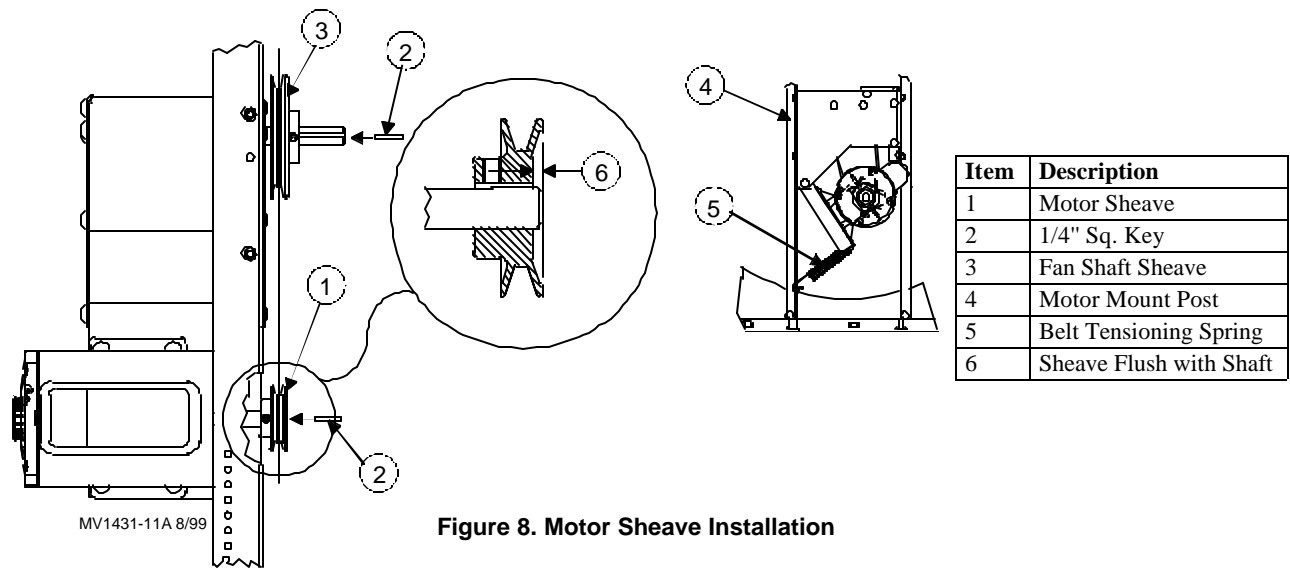


Figure 8. Motor Sheave Installation

Step 5 - Fan Blade Installation

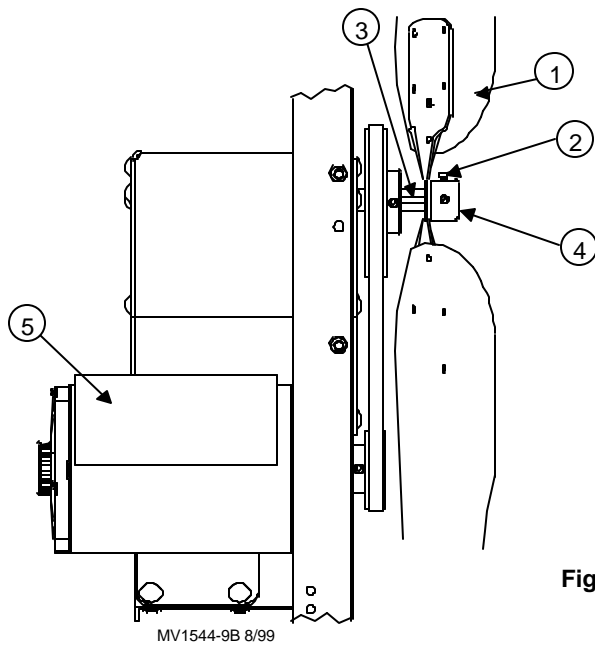
Slide the Fan Blade Assembly onto the shaft. The Hub of the Fan Blade should be flush with the end of the Shaft. **See Figure 8 Item 6.** Apply grease or an anti-seize compound to the Fan Shaft before mounting the Fan Blade.

Insert key into keyway on shaft.

Tighten the set screw(s) using a 5/16" open end wrench or 12 point 3/8" socket and ratchet).

Torque the set screws to approximately 150 in./lbs (12.5 ft/lbs).

IMPORTANT! If Decals are not already installed, see the Decal placement instructions on page 7.



Item	Description
1	Blade Assembly
2	Torque to 150 in/lbs (12.5 ft/lbs)
3	Shaft with Keyway
4	Fan Blade Hub Flush with Shaft
5	Motor

Figure 9. Blade Assembly Installation

Step 6 - Screen Installation



DANGER! The Wire Inlet Screen **MUST** be installed to prevent serious injury or death.

The Wire Inlet Screen has an opening to accommodate the Motor and Motor Module. The Wire Inlet Screen must have a section bent out to fit over the Motor Module. Position the Wire Inlet Screen over the back of the fan with the screens natural bow out away from the fan. Grasp the section that is over the Motor Module and pull it out away from the Motor Module, then push the Wire Inlet Screen back to the Motor Mount Posts. See **Figure 10.**

Note: For Direct Drive Fans the Wire Screen does **NOT** have to be formed.

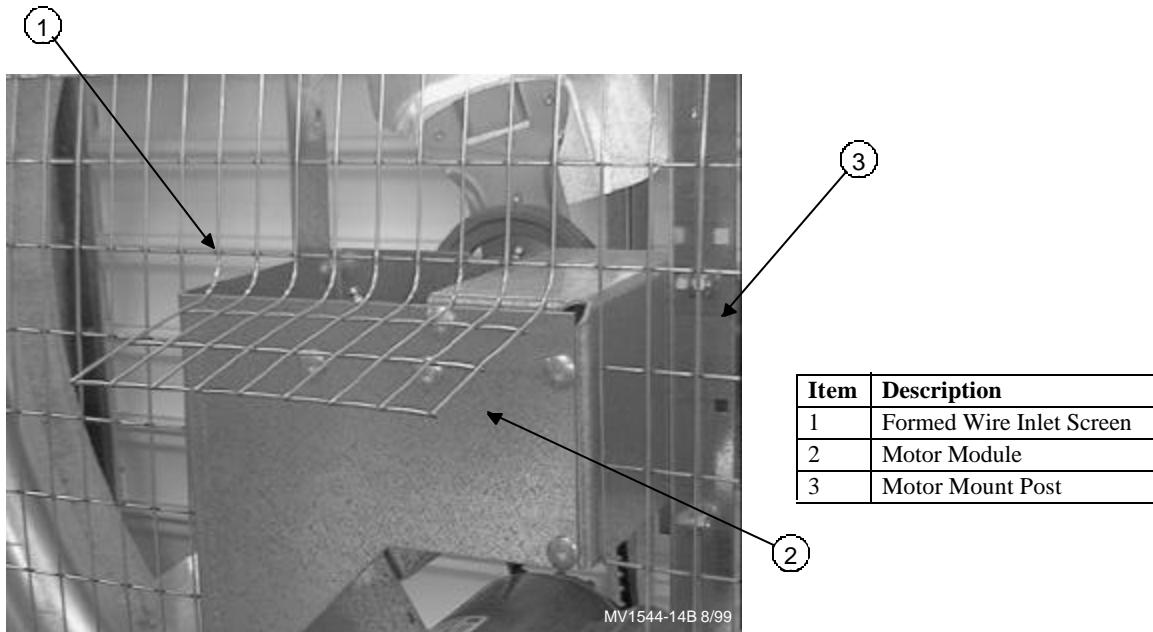
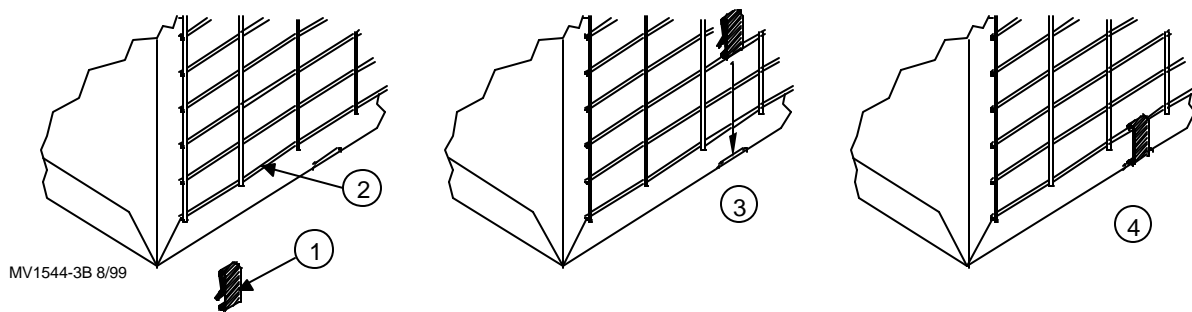


Figure 10. Forming the Wire Inlet Screen to fit the Motor and Motor Module

Install (4) Wire Clips on each side to secure the Wire Inlet Screen to the Side Panels. See **Figure 11**.

The Direct Drive Fans do not need forming and is assembled the same as shown in **Figure 11**.



Item	Description
1	Screen Clip Part Number 38891
2	Wire Screen Part Number 36629
3	Slip Screen Clip over Screen Wire.
4	Snap in slot on Fan Side Panel to secure.

Part Numbers are the same for both Direct and Belt Drive Fans (Item 1 and 2 Figure 11).

Figure 11. Screen Installation

Step 7 - Shutter Louver Installation

Orient the Shutter Fan Assembly so that the drain holes are on the bottom. Insert the tab on the end of one of the Center Rails into the slot on the Bottom Side Panel. Slide the top of the Center Rail until it snaps into the corresponding slot in the Top Side Panel. Repeat for the other Center Rail. See **Figure 12**.

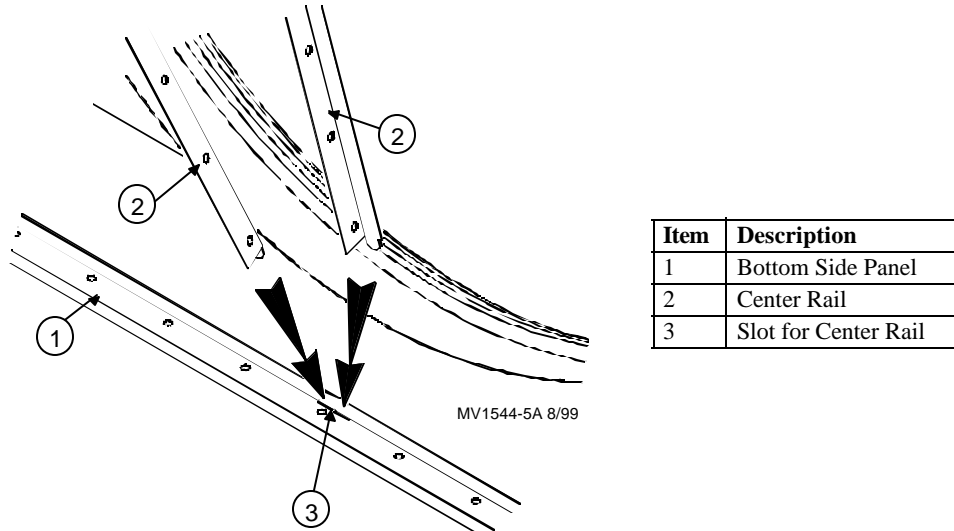


Figure 12. Installing Center Rails

Insert a Shutter Pivot Rod in the second hole up from the bottom of the Center Rails, through a Shutter Louver, and into the second hole up from the bottom on the Side Panel. See **Figure 13**.

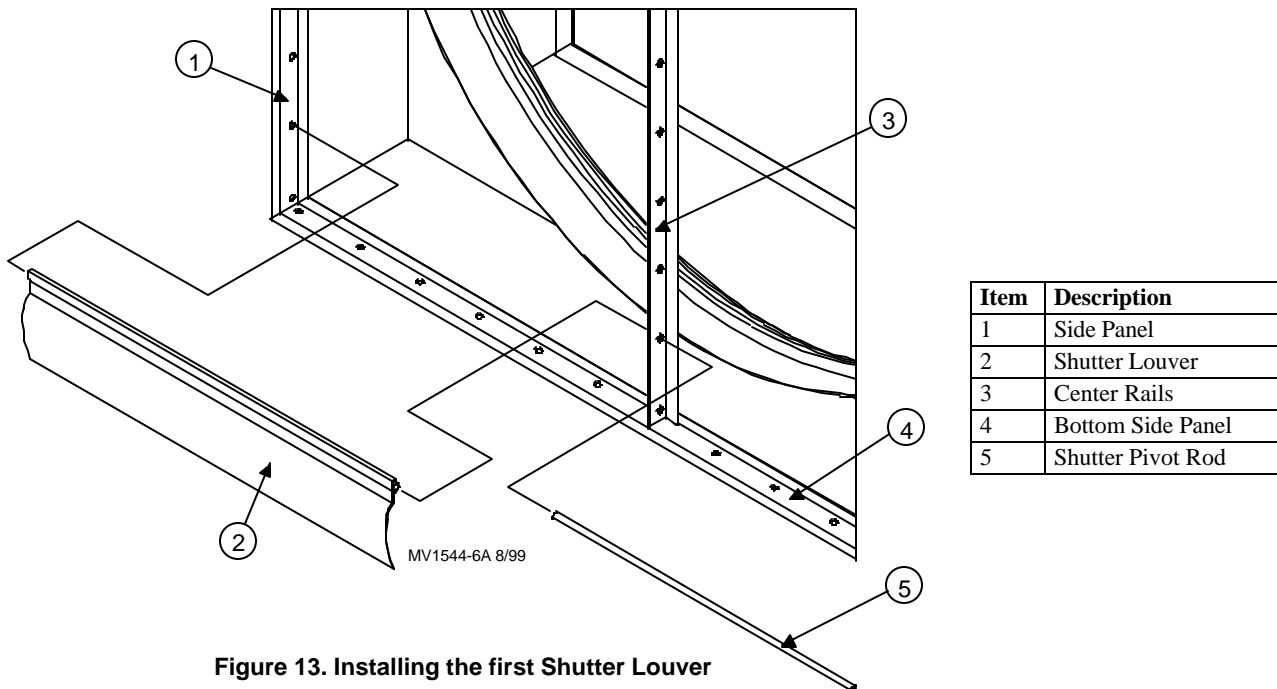
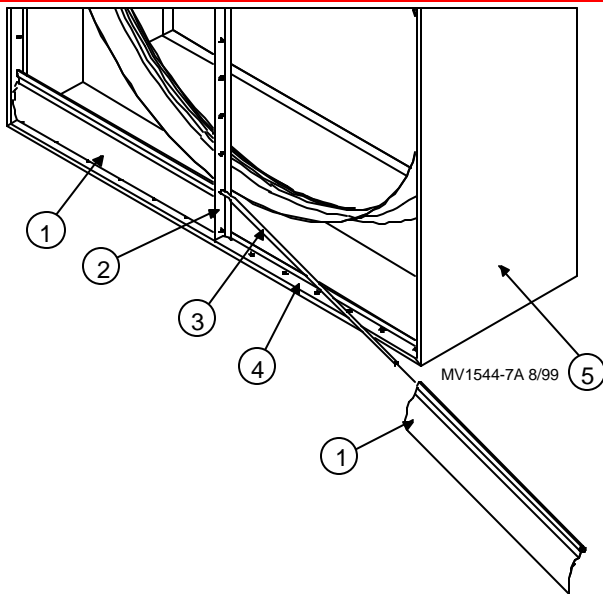


Figure 13. Installing the first Shutter Louver

Slide the next Shutter Louver on the opposite end of the Shutter Pivot Rod, Bend the Shutter Pivot Rod - Shutter Louver combination and insert the free end of the Shutter Pivot Rod into the second hole up from the bottom of the other Side Panel. See **Figure 14**.



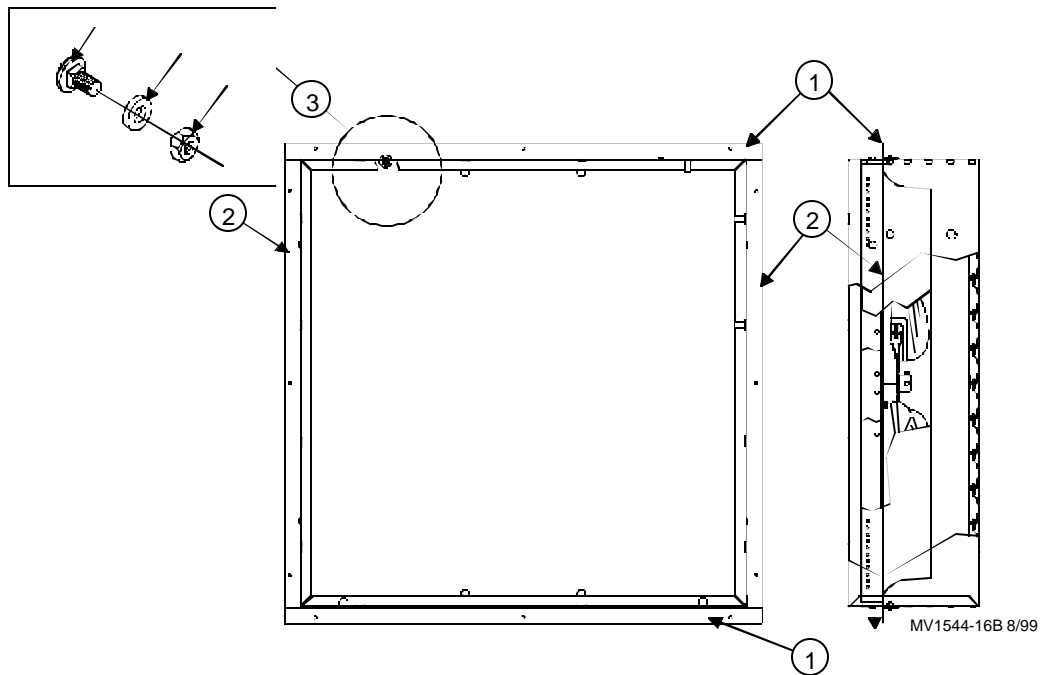
Item	Description
1	Shutter Louver
2	Center Rails
3	Shutter Pivot Rod
4	Bottom Side Panel
5	Side Panel

Figure 14. Installing the second Shutter Louver

Repeat these steps for the remaining Shutter Pivot Rods and Shutter Louvers.

(Optional) Mounting Kit

Figure 15. shows the optional Mounting Kit available through your local dealer.



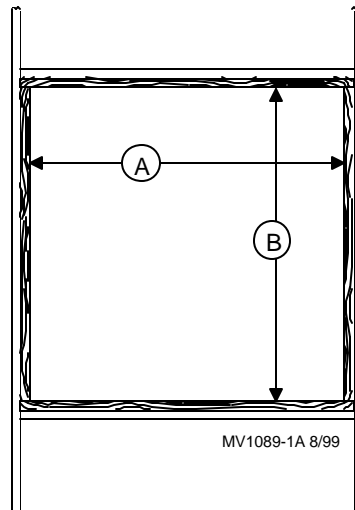
36" Shutter Fan Mounting Kit Part Number 44456		
1	Top 36" Shutter Fan Mount	44402
2	Side 36" Shutter Fan Mount	44403
3	Mounting Kit Package Hardware	44506

48" Shutter Fan Mounting Kit Part Number 44455		
1	Top 36" Shutter Fan Mount	44400
2	Side 36" Shutter Fan Mount	44401
3	Mounting Kit Package Hardware	44507

Figure 15. Optional Mounting Kit

Fan Installation

Build fan framing out of 2" (50 mm) lumber (not supplied). The required wall opening is provided in the chart below. See **Figure 16**.



Dimension (minimum)	A	B
36" Fan	42-1/4" [107.3 cm]	42-1/4" [107.3 cm]
48" Fan	54-5/8" [138.7 cm]	54-5/8" [138.7 cm]

Figure 16. Framing Diagram (front view)

Insert and secure the Fan Assembly in the framed opening in the side wall (hardware not supplied).

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.

Maintenance:



DANGER!

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. Do not spray water on Fan Shaft Bearings.

Periodically check the V-Belt. If necessary, adjust the spring tension to prevent the belt from slipping. The spring should be stretched to an overall length of 6" to 7" for proper belt tension.

Two options are available for V-Belt replacement. The first option is to use Red Link V-Belt (see parts list), which does not require disassembly of the fan. The second option is to use a black V-Belt (see parts list), which requires removal of the Fan Blade or Fan Shaft.

The Motor and Fan Shaft Bearings are permanently lubricated. Grease Zerks are provided on the Fan Shaft Bearings when relubrication is needed. Relubrication is required whenever water comes in contact with the Fan Shaft Bearings. Slowly rotate the Fan Shaft as bearing is filled with Grease. Use only high quality lithium soap base grease and clean all dirt from Zerk before applying grease.

Shutter Fan Specifications

Fan Description	Assembled Fans	Unassembled Fans	Electrical Specs.					
	Fan P/N	Fan P/N	Voltage	HZ	Phase	HP	Motor P/N	Motor Sheave P/N
36" Belt Drive Shutter Fans	41133-3620	40920-3620	115/230	60	1	1/2	39331	4906
	41133-3630	40920-3630	230	50	1	1/2	39332	8773
	41133-3640	40920-3640	208-230/460	60	3	1/2	4714	4906
	41133-3650	40920-3650	220-240/380-415	50	3	1/2	38556	8773
48" Belt Drive Shutter Fans	41134-4820	40921-4820	115/230	60	1	1	39317	35333
	41134-4830	40921-4830	230	50	1	1	39317	8773
	41134-4840	40921-4840	208-230/460	60	3	1	36143	35333
	41134-4850	40921-4850	220-240/380-415	50	3	1	36142	24697
	41134-4860	40921-4860	230/380-415	60	3	1	36142	35333

Parts Listing: Belt Drive E-Z Shutter Fans

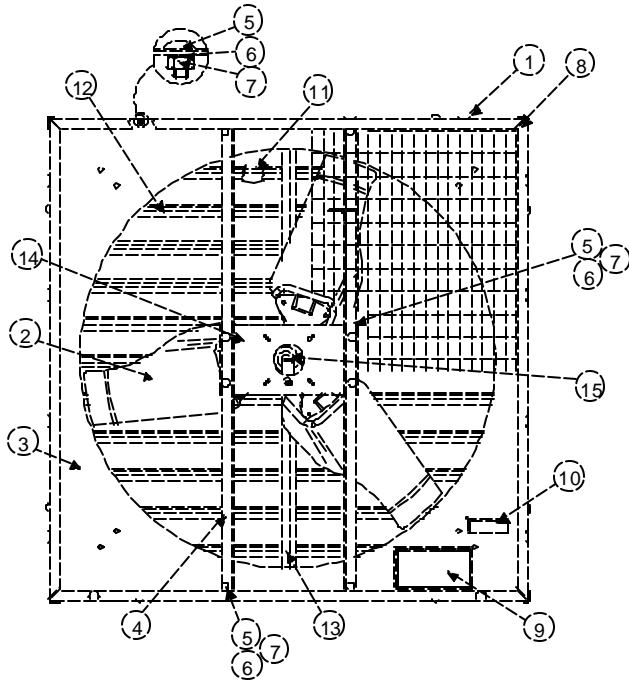
36" Fans

Item	Description	Part No.
1	Motor Mount	38895
2	Module Bushing	38896
3	Module Bracket	38893
4	36" Fan Panel	40705
5	36" Fan Shroud	5538
6	Motor Mount Post	37209
7	Shutter Louver	38038-11
8	36" Fan Blade	29736
9	Danger Decal	2527-50
10	Center Rail	40706
11	Spring	7551
12	Screen Clip	38891
13	Wire Inlet Screen	41278
14	Motor	See Chart
15	Module Bracket Support	38894
16	Fan Shaft	38535
17	3/4" Bore Bearing	38536
18	5" Sheave	27737
19	3/16" Square Key	2112-1
20	Black V-Belt (AX28)	39316
	Red Link V-Belt (2.33' Req'd)	30374
21	Motor Sheave	See Chart
22	Shutter Pivot Rod	38702-10

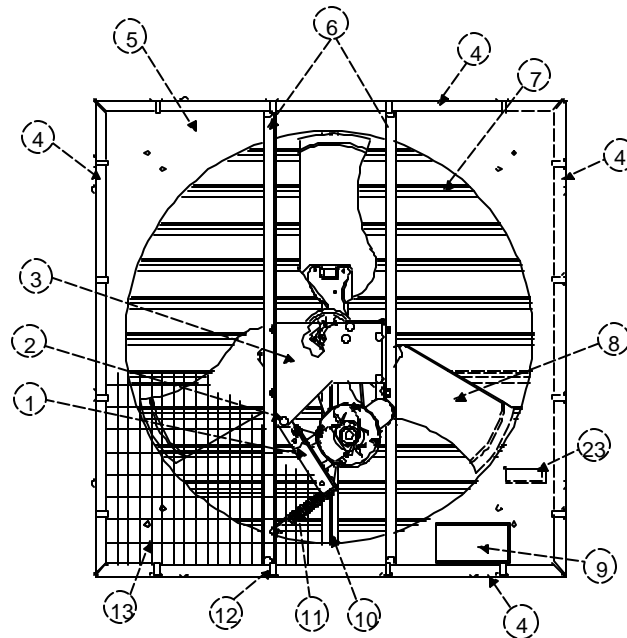
48" Fans

Item	Description	Part No.
1	Motor Mount	38895
2	Module Bushing	38896
3	Module Bracket	38893
4	48" Fan Panel	40509
5	48" Fan Shroud	37583
6	Motor Mount Post	38390
7	Shutter Louver	38038-12
8	48" Fan Blade	28140
9	Danger Decal	2527-50
10	Center Rail	40510
11	Spring	7551
12	Screen Clip	38891
13	Wire Inlet Screen	41045
14	Motor	See Chart
15	Module Bracket Support	38894
16	Fan Shaft	34723
17	1" Bore Bearing	36362
18	8-1/4" Sheave	35009
19	1/4" Square Key	2419-2
20	Black V-Belt (AX35)	4468
	Red Link V-Belt (3' Req'd)	30374
21	Motor Sheave	See Chart
22	Shutter Pivot Rod	38702-11

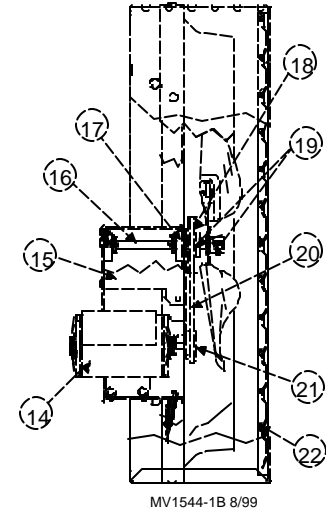
Itemized E-Z Shutter Fans



Direct Drive Version



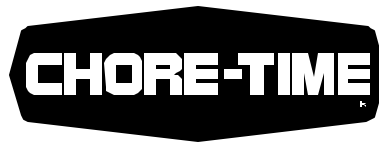
Belt Drive Version



MV1544-1B 8/99

Figure 17. Graphic for Parts Listing

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

Revisions to this Manual

Page No.	Description of Change
9, 15, 19	Addition of the Direct Drive E-Z Shutter Fan option.

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

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Printed in the U.S.A.