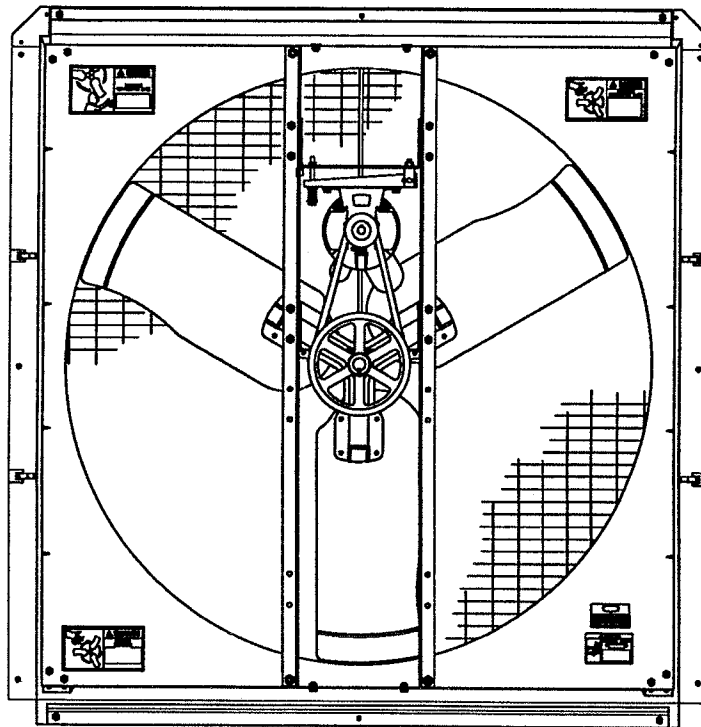


# **48" Belt Drive Fan and Slant Wall Housing**

## *Installation Manual*

*Maintenance, Fan Performance Information,  
Parts List & Warranty Information*



MV886.19 4/91

## WARRANTY INFORMATION

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.

Additional extended warranties are herewith provided to the original purchaser as follows:

1. RLX Fans, less motors, for three years from date of installation.
2. Poultry feeder pans that become unusable within five years from date of installation. Warranty prorated after three years usage.
- \*3. Rotating centerless augers, excluding applications involving High Moisture Corn (exceeding 18%), for ten years from date of installation. Applications involving High Moisture Corn are subject to a one year warranty.
4. Chore-Time manufactured roll-formed steel auger tubes for ten years from date of installation.
5. Laying cages that become unusable within ten years. Warranty prorated after three years usage.
- \*6. ULTRAFLO® Auger and ULTRAFLO® Feed Trough (except ULTRAFLO® Trough Liners) are warranted for a period of five (5) years from date of original purchase against repeated breakage of the auger or wear-through of the feed trough.

### 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.

\*See separate "WARRANTY ADDITION" as to these products.

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

## SAFETY INFORMATION

*CHORE-TIME is concerned about the safety of its customers. 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 decals.*

### 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.*



### Signal Words

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

*DANGER .....identifies immediate hazards which WILL result in severe personal injury or death.*

*WARNING .....identifies hazards or unsafe practices which COULD result in severe personal injury or death.*

*CAUTION .....identifies hazards or unsafe practices which COULD result in minor personal injury or product or property damage.*



**DANGER**



**WARNING**



**CAUTION**

### IMPORTANT

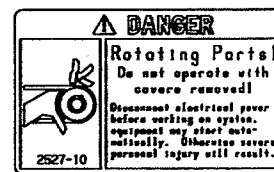
*Chore-Time Equipment, Inc. strongly recommends that a good alarm system should be installed in confinement buildings to warn of power failure and high temperature.*

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

## THESE DECALS ARE PLACED ON THE SHROUD OF THE 48" FAN

### DANGER--ROTATING PARTS

*Severe personal injury will result, if the equipment is operated without covers properly installed, and if equipment starts automatically while in contact with rotating parts.*



### DANGER--ELECTRICAL HAZARD

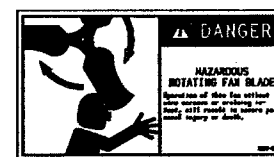
*Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.*

*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.*

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





**CHECK SHIPMENT FOR DAMAGES  
AND SHORTAGES.  
ALL CLAIMS FOR DAMAGES OR  
SHORTAGES RESULTING FROM  
SHIPMENT MUST BE FILED WITH THE  
CARRIER.**

## Installation

Installation instructions for P/N 28480 and 28480LM assembled version of the 48" Slant Wall fan.

**NOTE:** All steps for the installation of the assembled version are marked with a star ( ☆ ).

- For wall frame construction and Slant Wall installation refer to steps 1, 2, 7, and 8.
- For assembly of parts supplied refer to steps 13, 19 through 27, 29, and 31.
- For routing of motor cord and installation of shutter refer to steps 32 through 34.

## Maintenance

Keep the fan clean for maximum life and best performance. Do not spray with water or cleaning fluids. Remove dirt by dry brushing.

All fan motors have permanently lubricated bearings which do not require oiling.

## TOOLS NEEDED FOR INSTALLATION

- ☐ Circular Saw
- ☐ Saws All
- ☐ Side Cutters
- ☐ Hammer
- ☐ Tape Measure
- ☐ Carpenters Square
- ☐ Level
- ☐ Locking Pliers
- ☐ Pliers
- ☐ Socket Wrench Set
- ☐ Miscellaneous Open End Wrenches
- ☐ Nut Drivers
- ☐ Wire Strippers
- ☐ Wire Cutters
- ☐ Electric Drill
- ☐ Regular Screwdriver
- ☐ Allen Wrenches
- ☐ Torque Wrench



## CAUTION

***Disconnect power before servicing.  
Fans may start automatically causing  
serious injury or death.***

## FAN PERFORMANCE

Fan Model	Size	RPM	H.P.	Volts	Amps	Performance CFM(2)			Max. BHP
						.0" SP	.05" SP	.125" SP	
48 B/SW	48"	556	1.0	230	5.4	19,100	18,100	16,700	1.20

- (1) Typical RPM observed under normal operation condition.
- (2) Air deliveries are for unit with all fixtures (grills, hoods, shutters, etc.) in place.
- (3) Max BHP is highest BHP observed in the range of performance cited and does not include belt drive loss. Actual operating BHP will usually be slightly less than maximum under normal operating conditions of .05" SP.

## Introduction

Thank-you for purchasing a CHORE-TIME 48" Slant Wall fan. Please read the installation instructions in this manual prior to beginning the installation. This manual is designed to give necessary information on the Installation, operation, and maintenance of the 48" fan.

The primary usage of the 48" Slant Wall fan is for exhaust application. It may also be used for a variety of applications requiring large volumes of air to be moved. Refer to the Fan Performance Chart, page 4.

## Installation

Installation instructions for P/N 28481 and 28481LM **unassembled** version of the 48" Slant Wall fan.

**NOTE:** All reference to direction of fan is with your body facing the direction of fan air flow.

- ☆ 1. Cut an opening in wall to house fan. Inside dimensions of the framing are to be 56" (1.42m) tall by 54 3/4" (1.39m) wide, as shown in Figure 1.
- ☆ 2. Construct frame for fan using 2" x 6" (50 x 152 mm) lumber (not supplied). Frame should be securely fastened together in opening.

**NOTE:** Framing should not recess more than 19" (483 mm) maximum into the wall opening from the outside wall. See Figure 2.

3. Align holes of top panel to holes in side panel, with mounting flanges of both panels flush and outward. Clamp together with locking pliers. Attach panels at holes with six (6) #10 x 1/2 self drilling screws. See Figure 3.

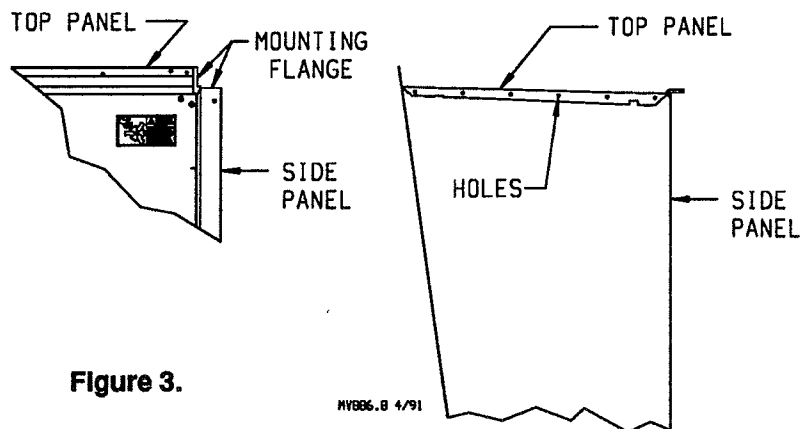


Figure 3.

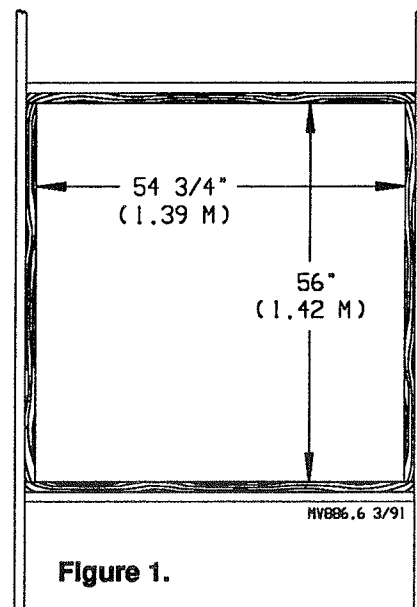


Figure 1.

Figure 2.

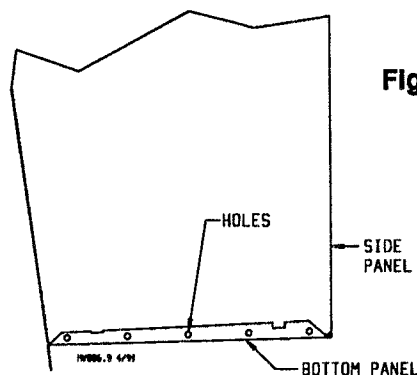
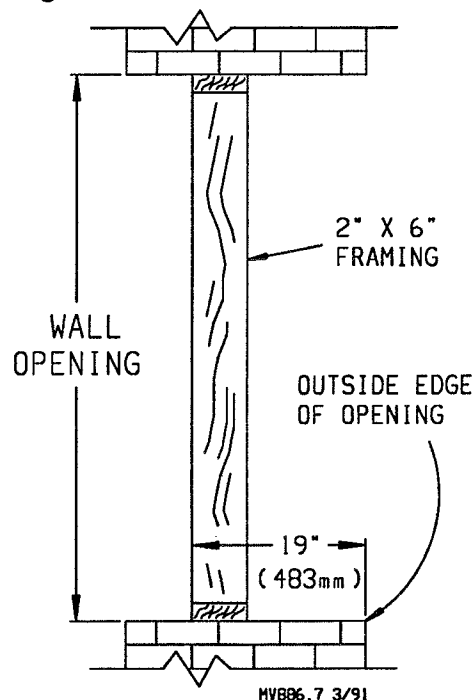


Figure 4.

4. Align second side panel holes to top panel holes with mounting flanges of both panels pointing outwards and flush. Clamp both panels together and secure with six (6) #10 x 1/2 self drilling screws in the holes similar to the ones shown in Figure 3.
5. Align holes in bottom panel to holes in both side panels as shown in Figure 4. With all mounting flanges pointing outward, clamp each side panel to bottom panel and secure each with five (5) #10 x 1/2 self drilling screws through the indicated holes in Figure 4.

6. Install the four (4) shroud mounting brackets to the top and bottom panels of the slant housing as indicated in Figure 5. Use the eight (8) 5/16-18 x 5/8 bolts, flat washers, and nuts provided. Do not fasten securely.
- ☆ 7. Position partial Slant Wall housing into wall frame construction from inside of house. Slope of the top and bottom panels should be downward.
- ☆ 8. Secure side panel flanges to 2" x 6" wood framing with six (6) 5/16 x 2 lag screws provided. See Figure 5.

**NOTE:** Do not install lag screws into top and bottom Slant Wall panels until step # 24.

9. Place fan shroud with throat down over a firm level surface. Install Air Systems Decal (P/N 2529-323) in bottom right hand corner.

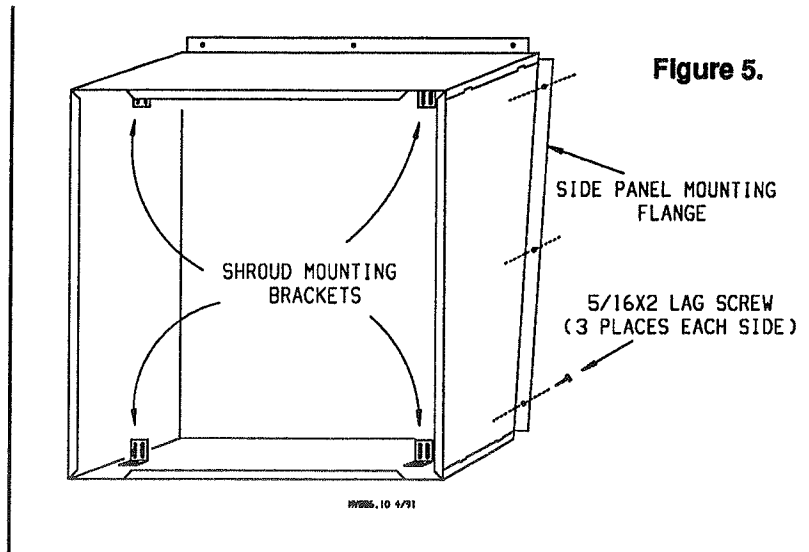


Figure 5.

10. As shown in Figure 6, fasten each post to the shroud using two (2) 7/16-14 x 1 1/4 bolt, flat washer, 7/16-14 non-locking nut, and a 7/16-14 locknut. The 7/16 flat washer and non-locking nut must be installed as shown.
11. Align bearing mount post assembly to set of holes marked "B" and fasten with four (4) 3/8-16 x 3/4 bolts, and locknuts. See Figure 7.
12. Align motor mount post assembly to set of holes marked "A" and fasten with four (4) 3/8-16 x 3/4 bolts, and locknuts. See Figure 7.
- ☆ 13. Remove pivot plate from motor mount post assembly by pulling hairpin and removing shaft. See Figure 7.

**NOTE:** For factory assembled Slant Wall housing a shipping bolt securing the plate must be removed.

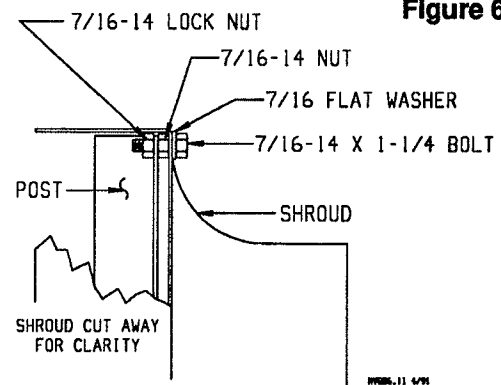


Figure 6.

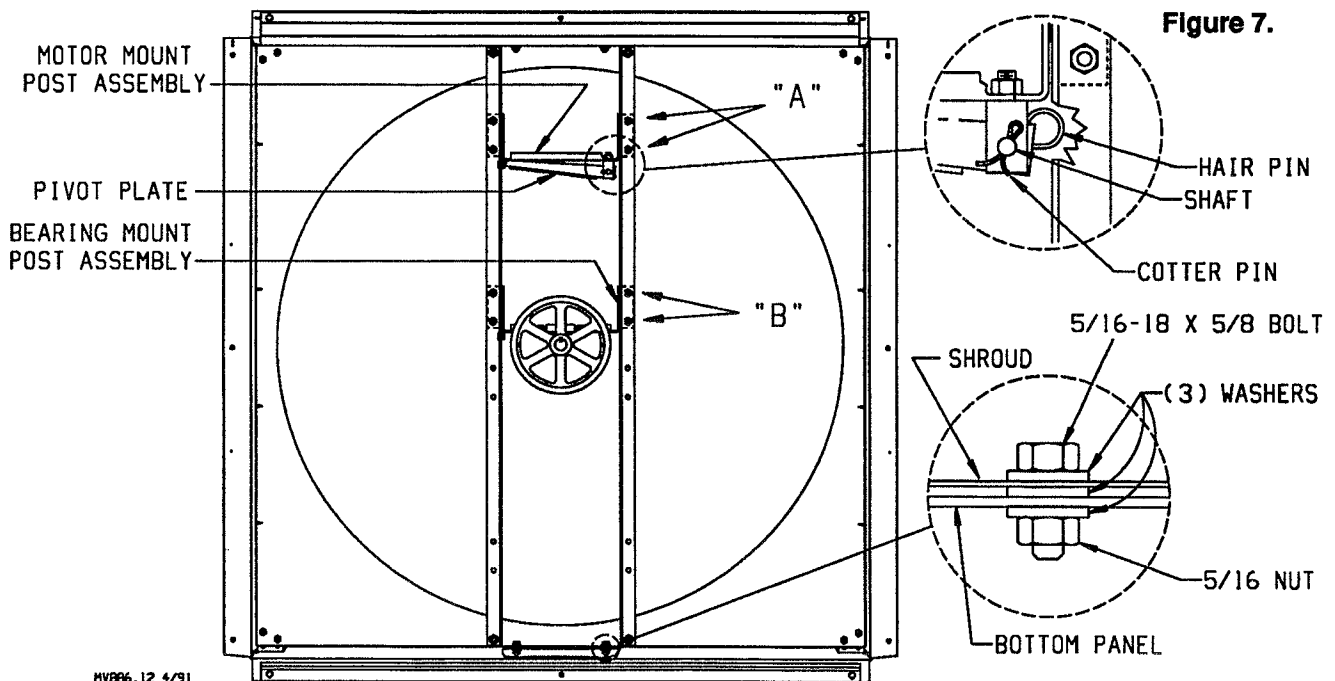


Figure 7.

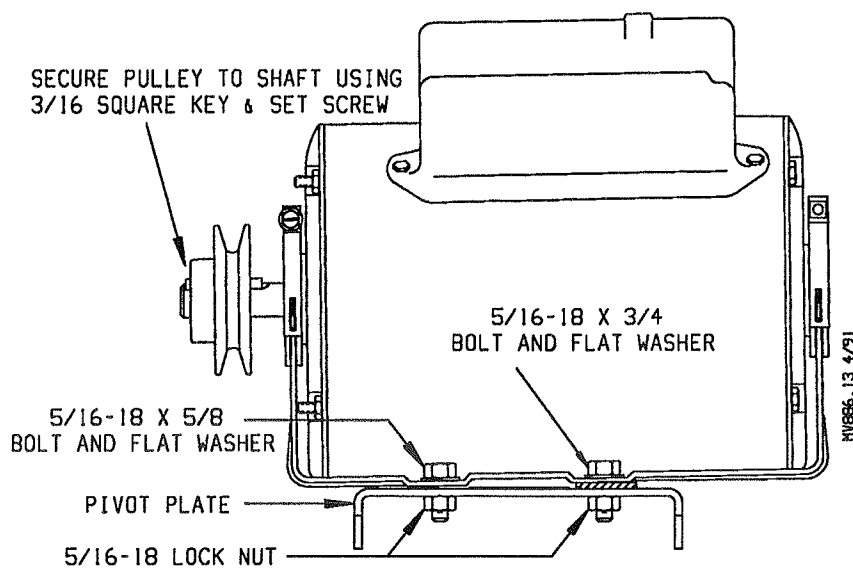


Figure 8.

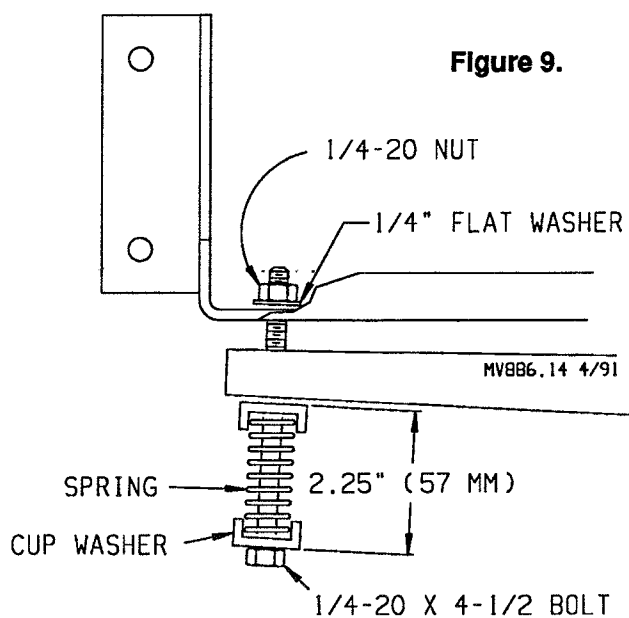


Figure 9.

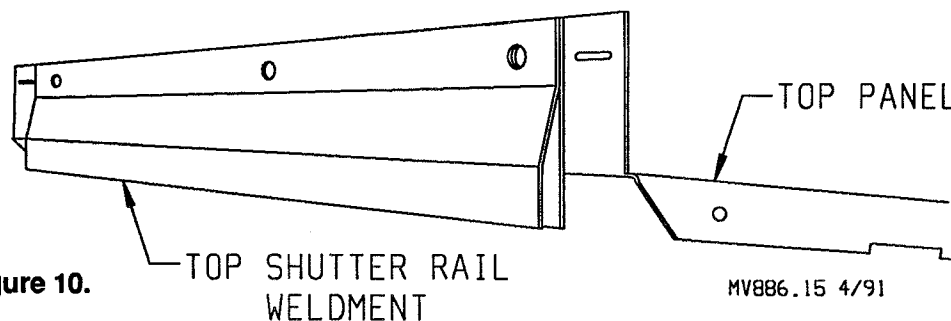


Figure 10.

14. With adequate assistance, lift the shroud assembly and maneuver inside the Slant Wall housing. Once positioned inside, rest the shroud assembly against the four corner brackets of the shroud.

15. To secure the top of the shroud install two (2) 5/16-18 x 5/8 bolts through the slots in the shroud and the top panel, and secure bolts with two (2) 5/16-18 locknuts, and four (4) flat washers.

16. For securing the bottom panel install two (2) 5/16-18 x 5/8 bolts, six (6) 5/16 flat washers, and two (2) nuts as shown in Figure 7.

**NOTE:** Small gap between shroud & bottom panel is for water & debris removal.

17. Adjust the shroud to Slant Wall housing gap evenly from left to right. Next, tighten only the corner bracket's bottom and top panel hardware. Afterwards, tighten all remaining shroud corner bracket hardware including the four (4) 5/16 bolts installed in steps 15 and 16.

18. To reduce gap and to straighten sides of Slant Wall housing, self drill twelve (12) #10 x 1/2 screws through the pre-drilled holes in the top and side panels. Screws should penetrate both Slant Wall panel and shroud flange.

☆ 19. Remove the motor from its box. Locate the 3/16 square key taped to the motor housing. Position key and small diameter pulley on the shaft of the motor.

☆ 20. Set the motor onto the pivot plate removed in step 13. Position the motor over the mounting holes located in the pivot plate as far from the pivot hole as possible. Secure motor with two (2) 5/16-18 x 5/8 bolts, (2) 5/16-18 x 3/4 bolts, flat washers, and locknuts. See Figure 8.

☆ 21. Reinstall motor assembly in step 20 to motor post mount as described in step 13.

☆ 23. Slip V-belt first over small diameter pulley then rotate V-belt over flange of large diameter pulley until seated properly in pulley groove. Align small pulley to larger pulley with a carpenter's square or straight edge. Torque sets screws to 85 lb.-in. (9.6 Nm) on small diameter pulley. See Figure 8.

☆ 22. Assemble the spring tension assembly to the pivot plate and post mount as shown in Figure 9. Adjust height of spring assembly to 2 1/4" (57 mm).

☆ 24. Align holes of top shutter rail weldment over mounting flange holes of top panel (see Figure 10). Secure both top panel and rail weldment to 2" x 6" wood framing with three (3) 5/16 x 2 wood lag screws.

- ☆ 25. Align holes of bottom shutter rail over mounting flange holes of bottom panel. Secure both bottom panel and rail to 2" x 6" wood framing with three (3) 5/16 x 2 wood lag screws.
- ☆ 26. Align each of the two provided corner flanges in the left and right corners of the top panel and side panel mounting flange as shown in Figure 11. Drill two (2) #10 x 1/2 self-drilling screws through the pre-drilled holes in each mounting flange to hold corner piece in place.
- ☆ 27. To install shutter latches, hold each of the four provided spring latches over a pre-drilled pilot hole in the side mounting flanges. Secure each latch with one (1) #10 x 1/2 self drilling screw.

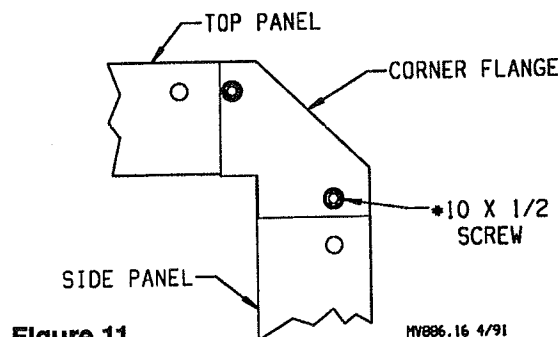


Figure 11

- 28. Remove 48" Fan Blade Assembly from package. With a 1/4" x 1 1/8" sq. key, position the fan blade hub flush with the end of the pre-adjusted shaft length. Setscrews for fan hub should be facing towards the front of the shaft and directly over the 1/4" key. Torque both setscrews to 130 lb.-in. (14.7 Nm).

- ☆ 29. Check clearance gap of fan blade tip from left to right. If necessary readjust at slots in bearing housing to make clearance gap equal.

- 30. Insert the 51" x 52" screen through the front flange slot. With screen positioned to the inside of flanges, secure in place with one cable tie at each of the ten flange hole locations (see Figure 12). Screen should be oriented as shown.

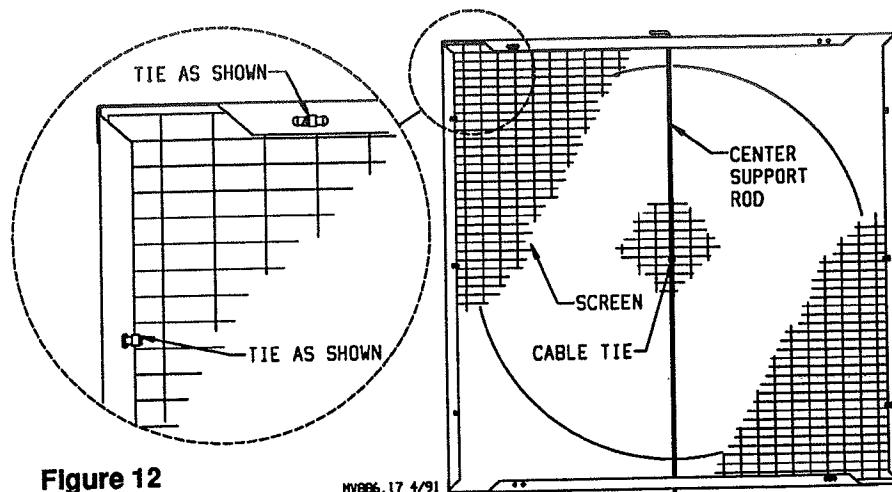


Figure 12

- ☆ 31. Insert the rod center screen support through the 3/8" diameter holes located in the top and bottom Slant Wall panels. Fasten screen to center support rod with one cable tie at the rod's mid-section (see Figure 12). Secure loosely to allow removal of rod.

**NOTE:** For wire installation of motor refer to wiring diagram located on motor housing. See also page 3 for safety information.

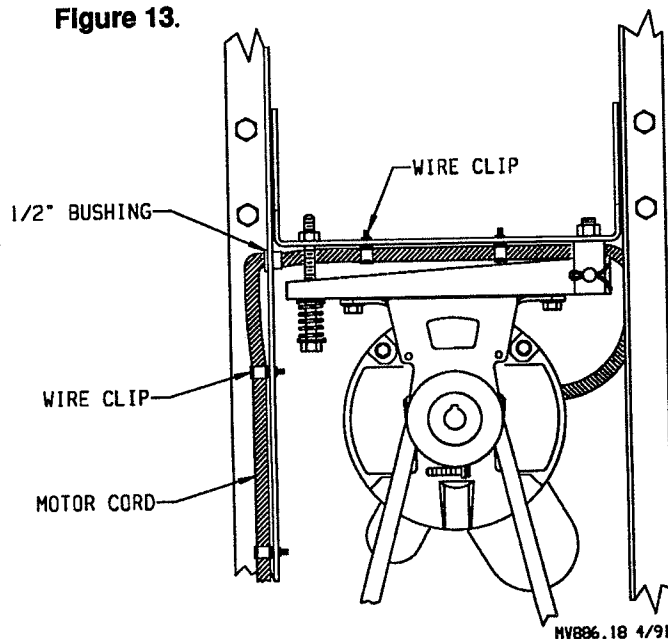
- ☆ 32. To route wire, first install four wire clips with 10-24 x 3/4 screws and kepnuts at the locations shown in Figure 13. Place one (1) bushing through the 5/8" diameter hole in the post as shown. Press bushing into hole until secured onto post. Route wire as shown, then adjust wire loop so it does not catch on any fan assembly components when motor mount is pivoted.

**NOTE:** An exit hole may be drilled for the wiring of the cord. Locate as required. Knockouts are also provided in aluminum shutter to facilitate wire routing.

- ☆ 33. To install shutter, release latches on side panels of Slant Wall to allow for installation of shutter. Next, push top edge of shutter directly into slot of top rail weldment then align bottom edge of shutter with bottom rail slot. After shutter is aligned, drop the shutter directly into lower slot and fasten side latches to secure shutter in place.

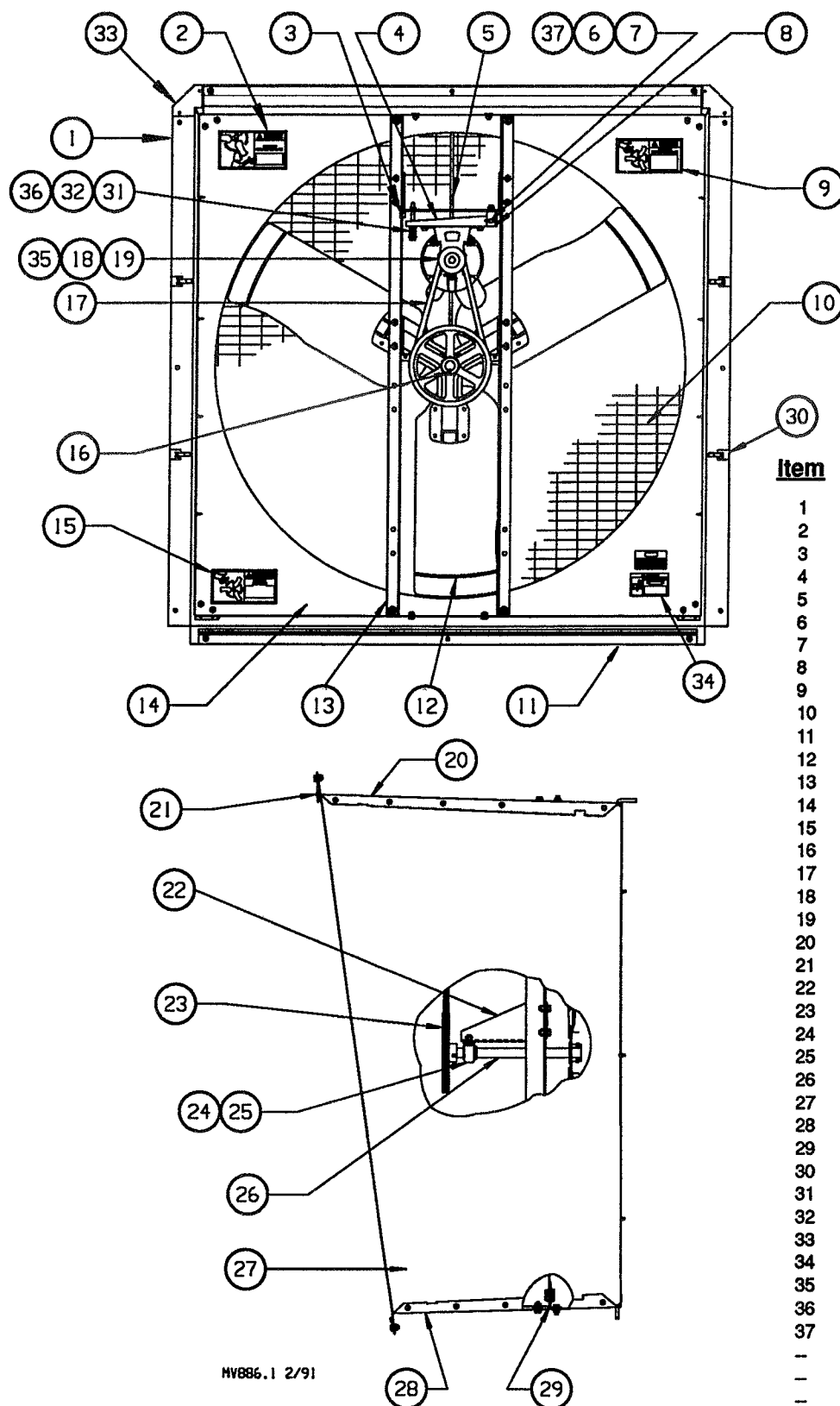
- ☆ 34. Assembly of Slant Wall housing and 48" Belt Drive Fan is now complete. Check for any loose hardware or interferences before providing electricity to fan.

Figure 13.





# 48" Slant Housing Parts List



HV886.1 2/91

All parts should be ordered by **PART NUMBER** and **DESCRIPTION** as given in the **PARTS LIST**. Parts are always billed when shipped. If returned parts are defective, and within warranty period, credit will be allowed against billing.

Item	Description	Part No.
1	Side Panel (L.H.)	28478-2
2	Danger Decal	2527-39
3	1/2" Snap Bushing	28479
4	Pivot Plate Weldment	28466
5	Center Support Rod	28171
6	Shaft	28086
7	Cotter Pin	2431
8	Pivot Bracket	28083
9	Danger Decal	2527-13
10	Wire Screen	6023-25
11	Bottom Shutter Rail	28477
12	48" Fan Blade Assembly	28140
13	Post	28137
14	48" Shroud	28145
15	Warning Decal	2527-40
16	1/4 x 1-1/8 in. Sq Key	2419-2
17	V Belt	28142
18	Motor	28236
19	Pulley	28169
20	Top Panel	28438
21	Top Shutter Rail Weldment	28476
22	Post Mount	28138
23	8-1/4" Pulley	28143
24	Bearing Housing	26811
25	Bearing	26864
26	Shaft	28139
27	Side Panel (R.H.)	28478-1
28	Bottom Panel	28439
29	Shroud Mounting Bracket	28474
30	Shutter Latch	3535
31	Cup Washer	14101
32	Spring	28144
33	Corner Flange	28170
34	Danger Decal	2527-10
35	3/16" Sq. Key	2112-1
36	1/4-20x4-1/2 Bolt	4404-2
37	Hairpin	2664
-	Shutter	24803
-	Cable Tie	6635
-	Cord Clip	565B

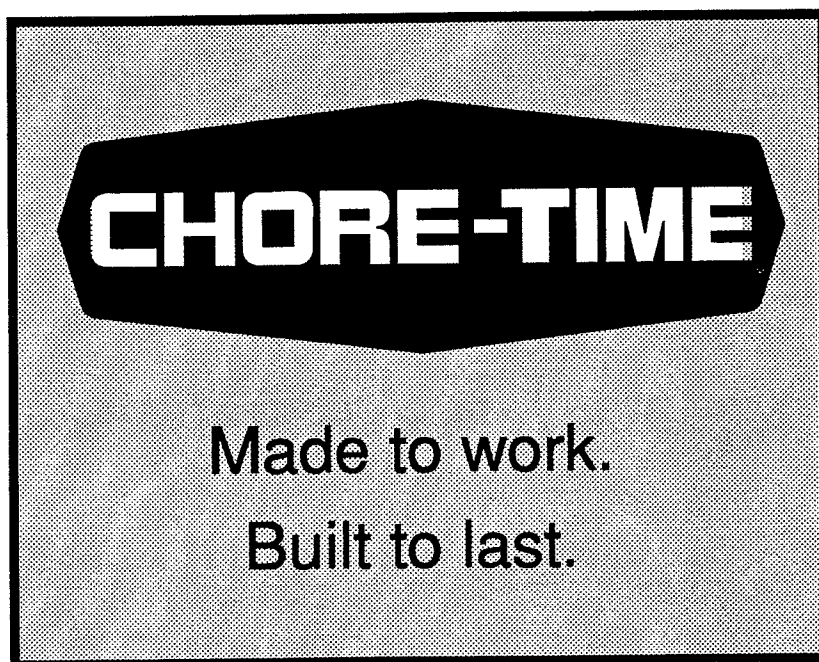
- 28481 48" ASS'Y, SLANT WALL (UNASSEMBLED; INCLUDES SHUTTER AND MOTOR)
- 28481LM 48" ASS'Y, SLANT WALL (UNASSEMBLED; INCLUDES SHUTTER, LESS MOTOR)
- 28480 FAN ASS'Y, 48" SLANT WALL (INCLUDES SHUTTER)
- 28481LM FAN ASS'Y, 48" SLANT WALL (LESS MOTOR, INCLUDES SHUTTER)

Note: Order quantities for 28481 and 28481LM must be 4 minimum.





***THANK-YOU for purchasing  
Chore-Time's  
48" Slant Wall Fan.***



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

Chore-Time Equipment, A Division of CTB, Inc.  
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