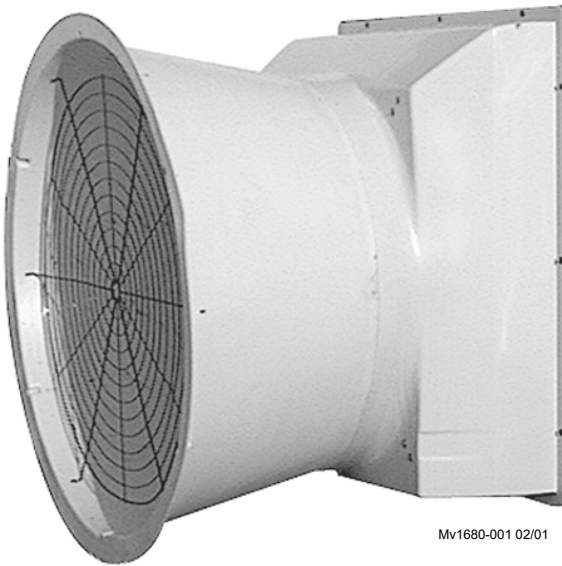


# **TURBO<sup>®</sup> Fiberglass Cone and Grill Fans 36" Belt Drive**

## **Installation & Operator's Instruction Manual**



Operating static pressure should be less than 0.15 inches water column [37 Pa].

The Fan Inlet and exhaust must be kept clear of obstructions. Failure to keep the Fan airflow path clear of obstructions could cause loss of Fan performance and Fan damage.

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## Chore-Time Extended Warranty

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

Component Part	Extended Warranty Period
RXL Fan (except motors and bearings)	Three (3) Years
TURBO® Fan (except motors and bearings)	Three (3) Years
TURBO® Fan fiberglass housing, polyethylene cone, and cast aluminum blade.	Lifetime of Product
TURBO® fan motor and bearings.	Two (2) Years
Chore-Time® Poultry Feeder Pan	Three (3) Years
Chore-Time® Rotating Centerless Augers (except where used in applications involving high moisture feed stuffs exceeding 17%)	Ten (10) Years
Chore-Time Steel Auger Tubes	Ten (10) Years
ULTRAFLO® Breeder Feeding System auger and feed trough.	Five (5) Years
ULTRAPAN® Feeding System augers .	Five (5) Years

### CONDITIONS AND LIMITATIONS

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

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

The following circumstances shall render this Warranty void:

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

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

Effective: April, 2014

# General

## Support Information

The Chore-Time TURBO<sup>®</sup> Cone & Grill Fans are designed to be used as exhaust fans in corrosive environments. The primary components are made from plastic or stainless steel materials. 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, safety, 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!

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.

## 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 decals immediately.

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.

## 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: Electrical Hazard**

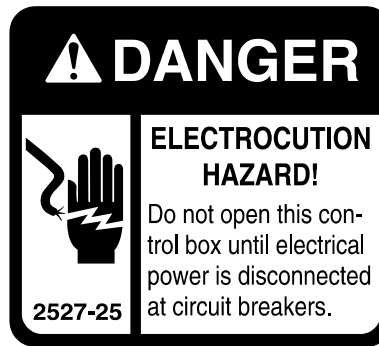
Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

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.

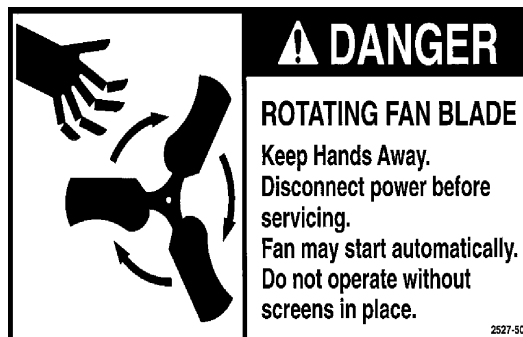
With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.



### **DANGER: Rotating Fan Blade (Part Number 2527-50)**

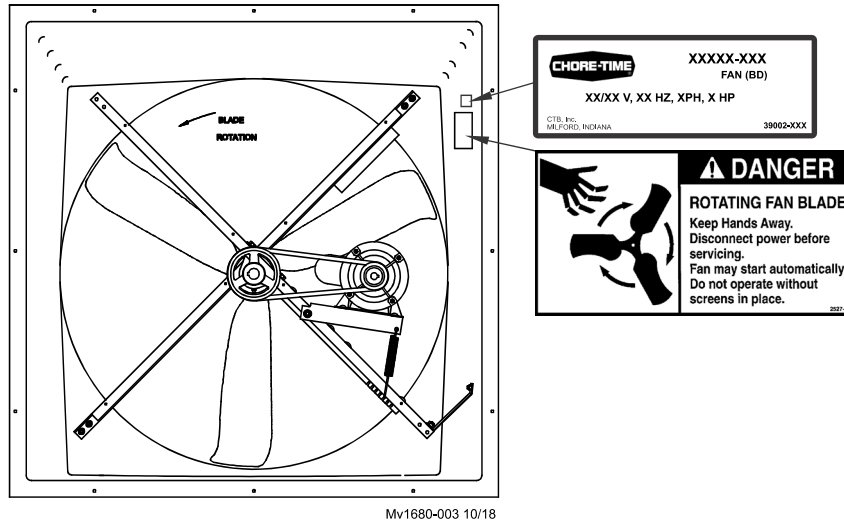
- This Decal is placed on both sides of the shroud.
- Keep hands away.
- Disconnect power before servicing.
- The Fan may start automatically.
- Do not operate the Fan without the screens in place.

Disregard to the above mentioned **DANGER** will cause serious injury including death.



## Decal Location

This diagram shows the proper location of the **Safety Decal** and a **Identification Decal** (the identification decal will be different depending on the type of fan purchased) as shipped from the factory. Replace damaged or missing decals. Make sure the decals can be easily seen at all times.



MV1680-003 10/18

## Fan Installation

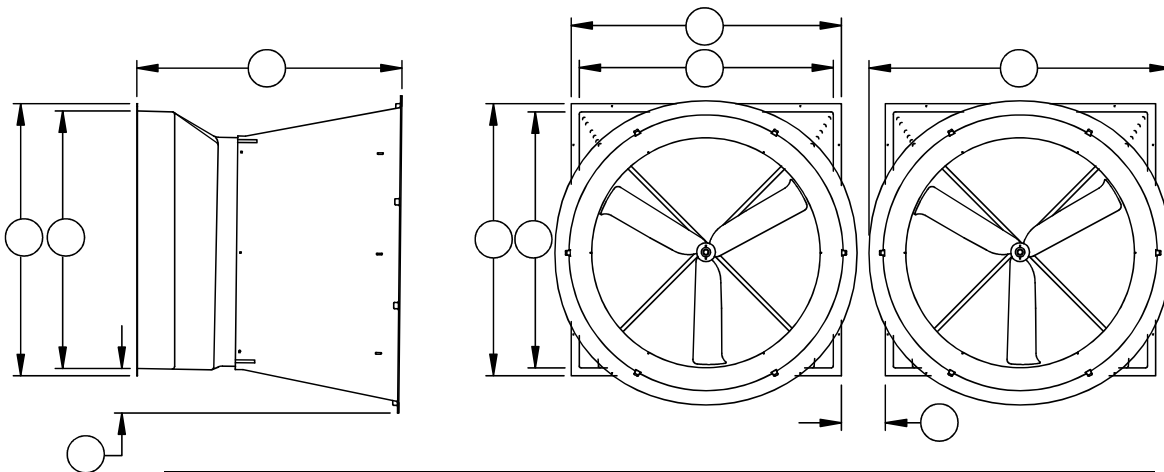
### Planning the Installation

Carefully plan the installation.

Dimensions are provided for the 36" TURBO<sup>®</sup> Fans with Cones (See Figure 1.) and without Cones (See Figure 2.) Be sure to allow enough space to install fans without interfering with other fans or equipment that may be installed at a later date.

**Note:** See Figure 3 (on page 8) for framed opening size.

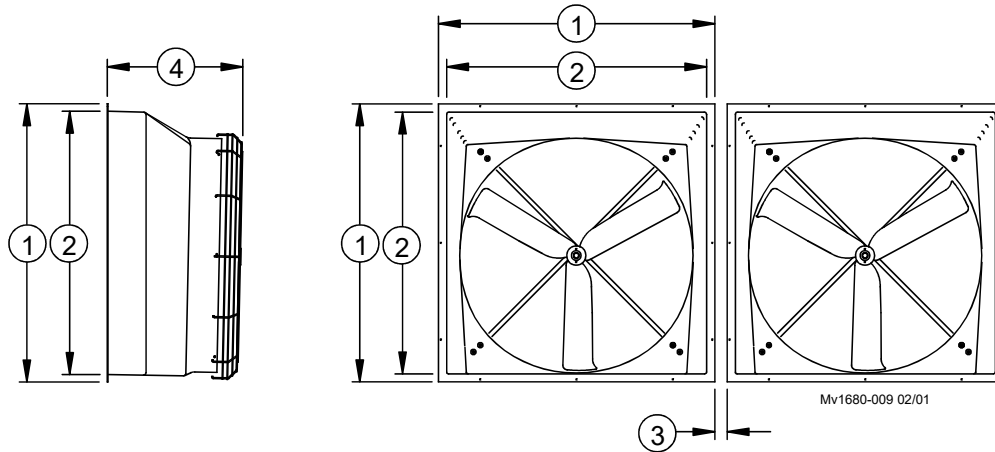
**Important:** Cones are wider than the actual opening cut into wall. Thus, dimension "3" must be no less than that listed in chart below.



1	2	3	4	5	6
	<b>Rough Frame Opening</b>	<b>Minimum</b>			
45.38" (115.27 cm)	43.00" (109.22 cm)	8.00" (20.32cm)	47.00" (119.38 cm)	6.85" (17.40 cm)	52.38" (133.05 cm)

Figure 1. Planning and Layout Diagram for Cone Fans

## Planning the Installation Continued....

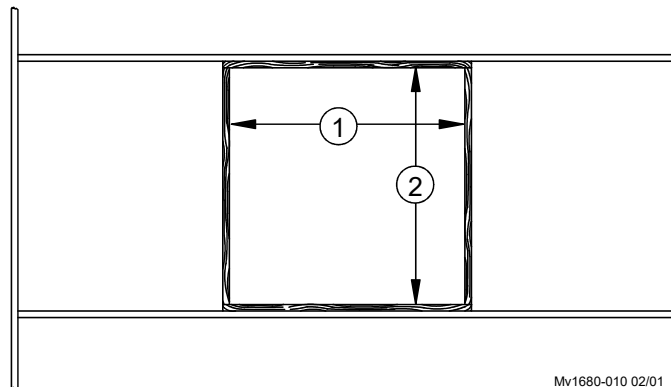


1	2	3	4
	<b>Rough Frame Opening</b>	<b>Minimum</b>	
45.38" (115.27 cm)	43.00" (109.22 cm)	0" (0.00 cm)	27" (68.58 cm)

Figure 2. Planning and Layout Diagram for Grill Fans

## Installing the Fan to the Framed Opening

1. Cut an opening in the wall to house the fan—the required wall opening is provided in the chart below (See Figure 3.).
2. Construct a frame in the opening of the wall for the fan using 2" x 6" (50 x 152 mm) lumber—not supplied.

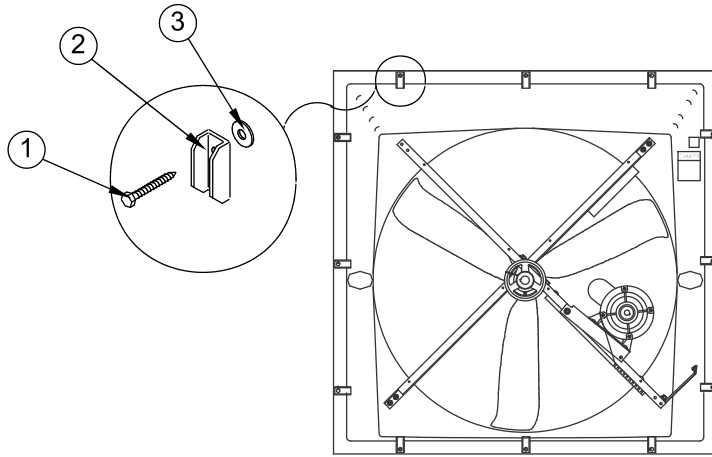


Minimum Dimension	
1	2
43.00" (109.22 cm)	43.00" (109.22 cm)

Figure 3. Framing Diagram



3. Insert the Fan Assembly in the wall opening and secure using the (12) 1/4 x 1-3/4 Lag Screws, Shutter Clips, and Nylon Washers provided. The Shroud is pre-drilled (3 holes per side). The hardware must be installed as shown in **Figure 4** below. This allows for rotation of the Shutter Clips when installing the Shutter.



Key	Description	Part No.
1	1/4 x 1-3/4 SS Lag Screw	40938
2	Shutter Clip	36729
3	Nylon Washer	4856

**Figure 4. Fan Assembly**

## Installing the Cone or Grill to the Fiberglass Fan

### Fiberglass Cone Fan:

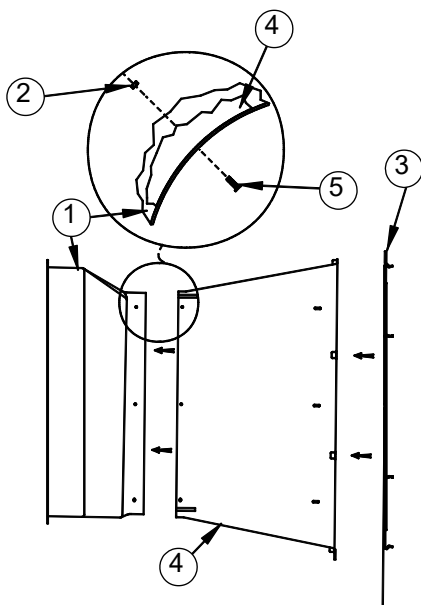
1. Slide the Cone onto the Shroud—the Shroud fits inside the Cone (See **Figure 5**).

10" slots are cut into the edge of the cone to allow expansion as the cone is slide onto the shroud.

Align the holes in the Cone with the slots in the Shroud.

Insert the (6) Wafer Head Bolts from inside the Shroud through the Cone and thread the Flange Nuts onto ends of the Wafer Head Bolts.

2. Snap the Cone Grill into the slots on the outlet end of the Cone.

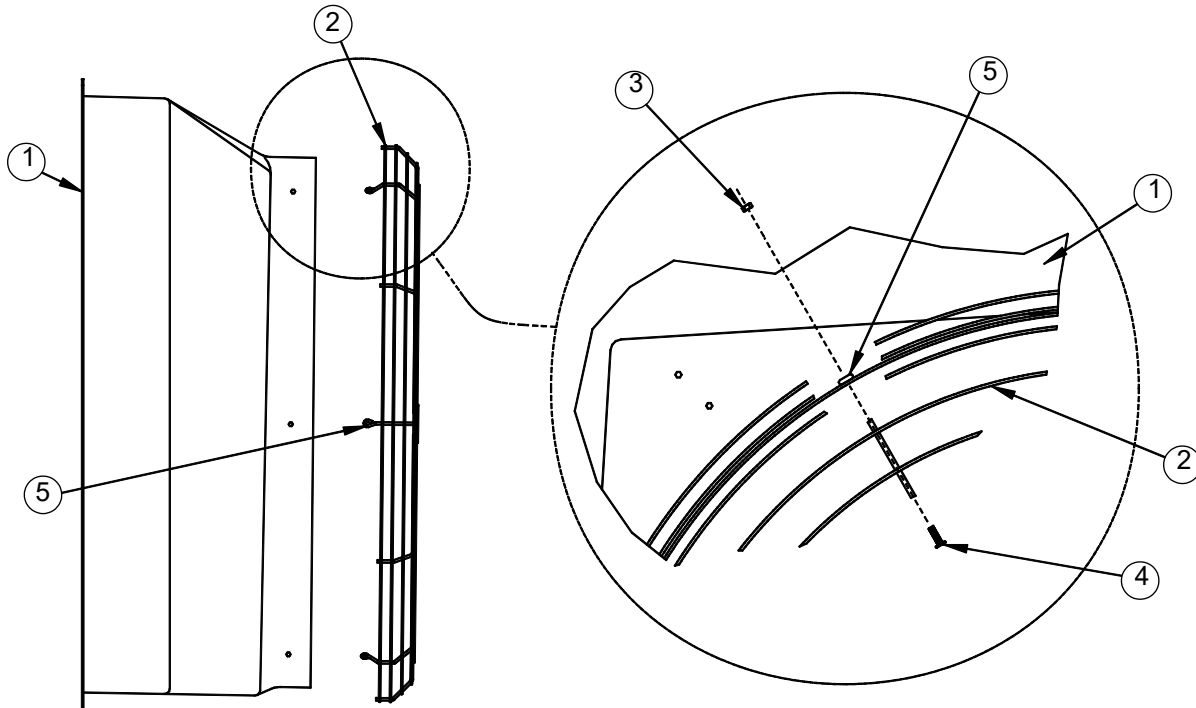


Key	Description	Part No.
1	Shroud (White)	37913
	Shroud (Black)	46970
2	1/4-20 SS Hex Ser. Flange Nut	46298
3	Cone Grill	35228
4	Cone (White)	38267
	Cone (Black)	46971
5	1/4-20 x 7/8 Wafer Head Bolt	40775

**Figure 5. Cone Installation**

**Fiberglass Grill Fan:**

1. Align the holes in the Grill with the slots in the Shroud.
2. Insert the (6) Wafer Head Bolts from inside the Shroud through the Grill and thread the Flange Nuts onto the ends of the Wafer Head Bolts.



Key	Description	Part No.
1	Shroud	37913
2	Shroud Grill	37920
3	1/4-20 x 7/8 Wafer Head Bolt	40775
4	Nylon Washer	4856
5	Shroud Grill Mounting Loop	

**Figure 6. Shroud Grill Installation**

## Remove Nylon Ties

1. Cut and Remove Nylon Ties from the Driven Sheave and the Motor (See Figure 7.)

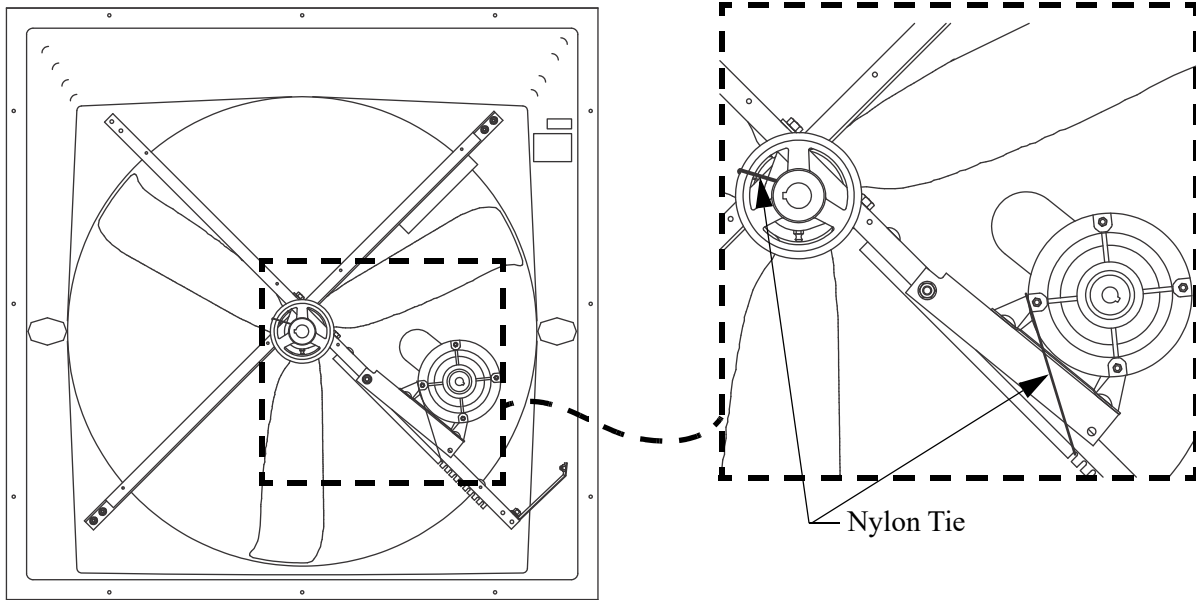


Figure 7.Removing Nylon Tie's

## Installing the Belt and Tension Spring

1. Install the Belt as shown.
2. Install the Tension Spring in the 5th notch from the top (See Figure 8.)

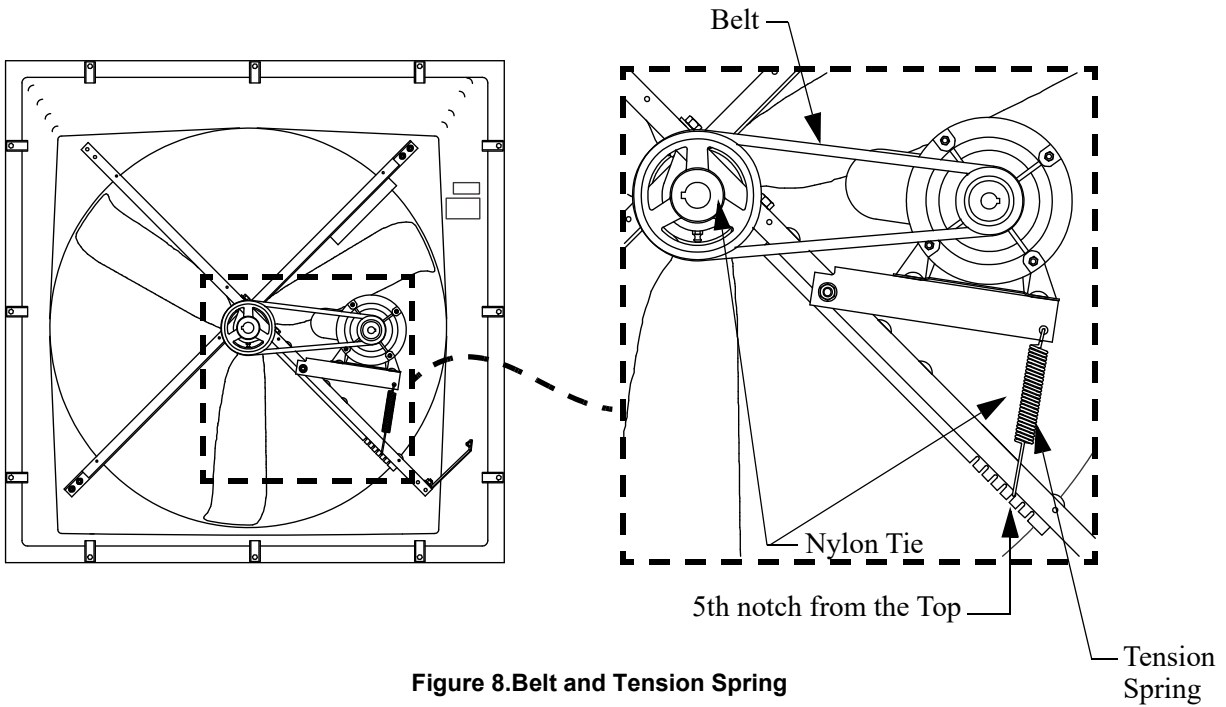


Figure 8.Belt and Tension Spring

## Shutter Installation/Cord Routing and Wiring

1. See Wiring diagram on Motor for Motor electrical connections. Follow local, state, and national electrical codes for wiring.
2. Install an electrical disconnect within reach of each Fan.
3. Route the motor cord (not supplied) toward the upper left corner of the Fan and attach the cord to the Motor Mount using the three Cable Ties—included in the hardware package.
4. Cut a 3/8" [9.53 mm] slot in the upper left flange of the Shutter frame in order to route the electrical cord out the back.
5. Position the Shutter, centered in the Fan Shroud, and rotate the Shutter Clips to lock the Shutter into place. Check the Shutter for proper operation. The Shutter must be able to open and close freely without obstructions.
6. Some installations may require an exit hole for the motor cord to be drilled in the side of the Shroud. These installations must have electrical wires routed through conduit.

**Note: Make sure the electrical conduit and wire does not interfere with the Fan Blades or Shutter operation.**

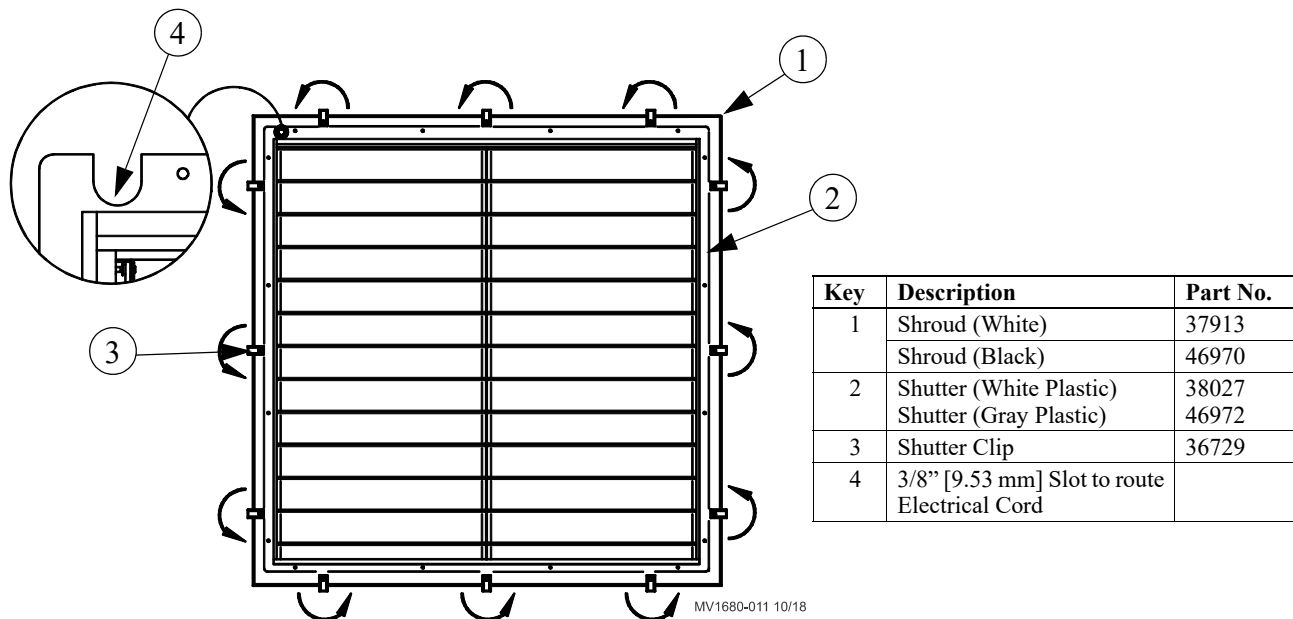


Figure 9. Shutter Installation

## 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 injury or death.**

1. Keep the fan clean for maximum life and performance.
2. Clean Shutter, Cone and Shroud for maximum life and performance.
3. The Fiberglass Fans are shipped with the Danger Decal fastened to the Fan Shroud. Always keep the Decal clean and readable.  
If the Decals becomes damaged or unreadable, order replacement Decals immediately.

Clean the Shroud at the approximate location where the Decal will be placed.

Peel the backing off the Decal and affix it to the Shroud.

4. Periodically check the V-Belt. If necessary, adjust the spring tension to prevent belt from slipping.

### Fan Bearing Lubrication

- Grease zerks are provided for lubrication on the fan shaft bearings.
- Lubricate the fan every 2-6 months or whenever these components get wet.
- Disconnect power to the fan before lubricating.
- Clean the zerk before lubricating to prevent contamination from entering the bearing.
- Use a high quality lithium based, NLGI #2, grease such as Shell Gadus S2 V100 2. Do not use incompatible greases containing aluminum, barium, calcium, bentonite clay or polyurea thickeners.
- Slowly rotate the fan shaft by hand while slowly applying the grease. Rapidly applying grease to a stationary bearing can damage the bearing seals.
- Apply about .10 oz (2.8 g, 3.1 cc) of grease at a time or until a slight amount of grease can be seen purging from the seal.

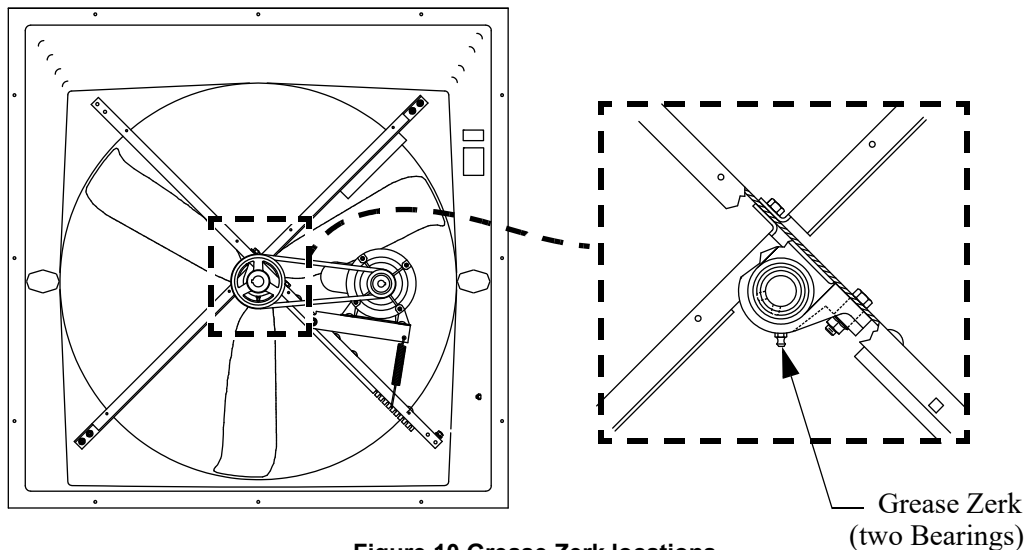


Figure 10. Grease Zerk locations

# Fan Assembly Part Numbers

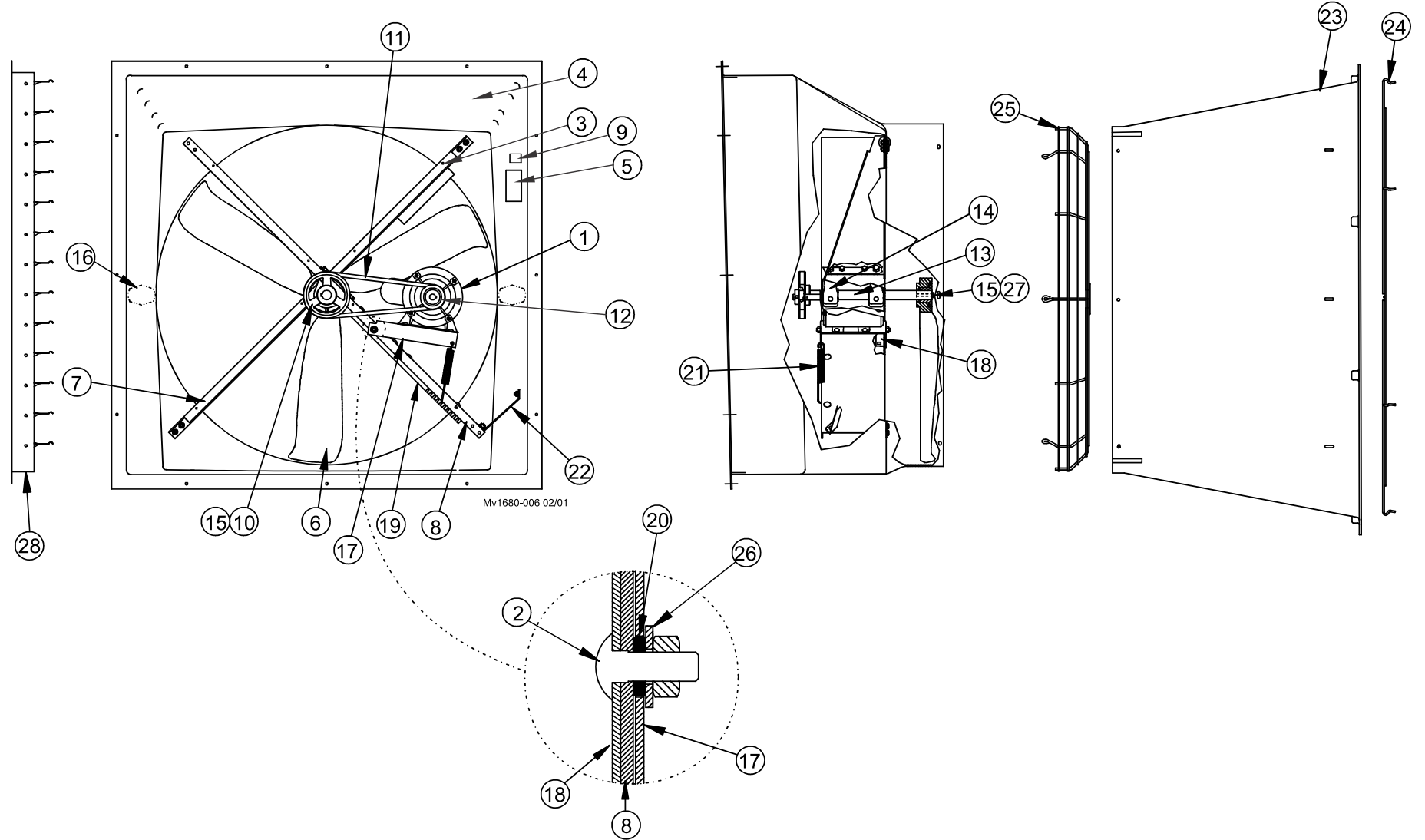
Fan Assembly P/N	Fan Sub-Assembly P/N	Fan Interior Color	Outlet	Voltage	Hz	PH	HP	Motor P/N	Motor Sheave P/N
46777-3604	46974-024	black	Grill	--	--	--	--	--	1381
46777-3624	46974-224	black	Grill	208-230	60	1	0.5	40158	1381
46777-3644	46974-424	black	Grill	208-230/460	60	3	0.5	4714	1381
46777-3654	46974-524	black	Grill	230/380	50	3	0.5	38566	8773
46778-3604	46974-024	black	Cone	--	--	--	--	--	1381
46778-3604W	46974-024	black	Cone	--	--	--	--	--	1381
46778-3624	46974-224	black	Cone	208-230	60	1	0.5	40158	1381
46778-3624W	46974-224	black	Cone	208-230	60	1	0.5	40158	1381
46778-3644	46974-424	black	Cone	208-230/460	60	3	0.5	4714	1381
46778-3644W	46974-424	black	Cone	208-230/460	60	3	0.5	4714	1381
46778-3654	46974-524	black	Cone	230/380	50	3	0.5	38566	8773
46778-3654W	46974-524	black	Cone	230/380	50	3	0.5	38566	8773
38589-3600	38588-020	white	Cone	--	--	--	--	--	1381
38589-3602	38588-022	white	Cone	--	--	--	--	--	1381
38589-3620	38588-220	white	Cone	230	60	1	0.5	40158	1381
38589-3622	38588-222	white	Cone	230	60	1	0.5	40158	1381
38589-3640	38588-420	white	Cone	208-230/460	60	3	0.5	4714	1381
38589-3642	38588-422	white	Cone	208-230/460	60	3	0.5	4714	1381
38589-3650	38588-520	white	Cone	230/380	50	3	0.5	38566	8773
38589-3652	38588-522	white	Cone	230/380	50	3	0.5	38566	8773
38946-3600	38588-020	white	Grill	--	--	--	--	--	1381
38946-3602	38588-022	white	Grill	--	--	--	--	--	1381
38946-3620	38588-220	white	Grill	208/230	60	1	0.5	40158	1381
38946-3622	38588-222	white	Grill	208/230	60	1	0.5	40158	1381
38946-3640	38588-420	white	Grill	208-230/460	60	3	0.5	4714	1381
38946-3642	38588-422	white	Grill	208-230/460	60	3	0.5	4714	1381
38946-3650	38588-520	white	Grill	230/380	50	3	0.5	38566	8773
38946-3652	38588-522	white	Grill	230/380	50	3	0.5	38566	8773

The last digit in the Fan assembly part number = "2" for a White Plastic Shutter, "4" for Gray Plastic Shutter, "0" for No Shutter, and "W" for a White Fan Cone.

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# Part Numbers

## Belt Drive TURBO® Fan Parts



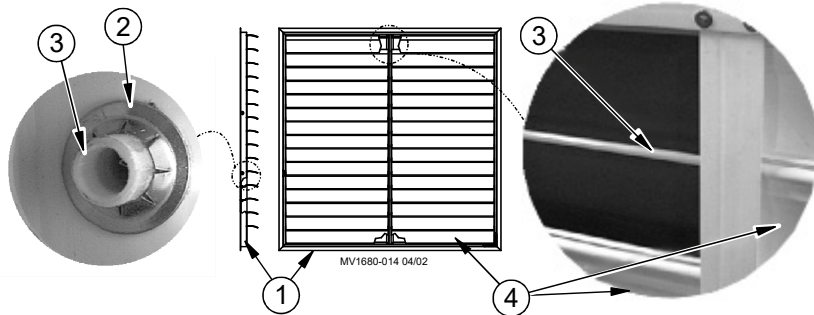


Item	Qty.	Description	Part No.
1*	1	Motor	Varies*
2	2	5/16-18x.75 SS Carr. Bolt	27868-1
3	1	Upper Motor Mount Support	37735
4**	1	36" Fiber Glass Fan Shroud	37913
		36" Fiber Glass Fan Shroud (Black)	46970
5	1	Danger Decal	2527-50
6	1	36" Cast Aluminum Fan Blade	38902-1
7	1	Lower Motor Mount Support	37736
8	1	36" Fan Motor Mount	39785
9	1	Identification Decal	39002-XXX
10	1	AK-51 Sheave	42338
11	1	AX32 Gripnotch V-Belt	39783
12*	1	Sheave	Varies*
13	1	1" Shaft	39688

Item	Qty.	Description	Part No.
14	2	1" Cast Pillow Block Bearing	50553
15	2	1/4 x 1-1/8 Sq. Key	2419-2
16	2	Chore-Time Decal	2525-4
17	1	Self Tension Motor Mount	39677
18	1	Front Motor Mount Reinforcement Angle	39678
19	1	Rear Motor Mount Reinforcement Angle	39679
20	2	SS Self Tension BD Motor Mount Bushing	39681
21	1	SS Self Tension Motor Spring	39684
22	1	TURBO® Fan Motor Mount Brace	39710
23**	1	Outlet Cone (White)	38267
	1	Outlet Cone (Black)	46971
24	1	Outlet Cone Grill	35228
25	1	Shroud Grill	37920
26	2	.375 x .875 x .075 SS Washer	8933
27	1	1/4-20x 7/8 SS Bolt	4404-17
28	1	Shutter Assembly	(See Figure 11.)

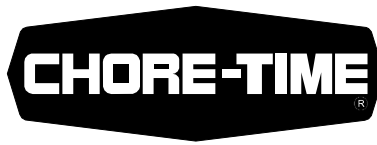
\*See "Fan Assembly Part Numbers" on page 14.  
 \*\*Due to different color availabilities, Item Numbers vary depending on model of Fan.

### Plastic Shutter Part Numbers



Item	Description	Part No.
1	Shutter Assembly (White) Plastic	38027
	Shutter Assembly (Gray) Plastic	46972
2	Push Nut, 1/4"	38032
3	Shutter Rod Pivot	38702-2
4	Shutter Louver (White)	38038-2
	Shutter Louver (Gray)	46715-2

Figure 11. Plastic Shutter Part Numbers



**Made to work.  
Built to last.®**

### **Revisions to this Manual**

<b>Page No.</b>	<b>Description of Change</b>	<b>ECO</b>
16	Removed Balloons 31,32,33	35516
1	Added obstruction and static pressure warning statements	

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

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