

48" Vanguard Belt Drive Fans Installation and Operators Instruction Manual

Thank You

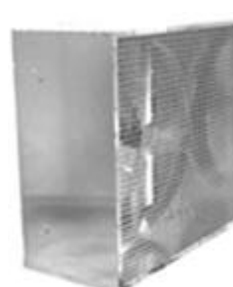
The employees of Chore-Time Equipment would like to thank you for your recent Chore-Time purchase. If a problem should arise, your Chore-Time distributor can supply the necessary information to help you.



Slant Wall Fan



Cone Fan



Box Fan



Panel Fan

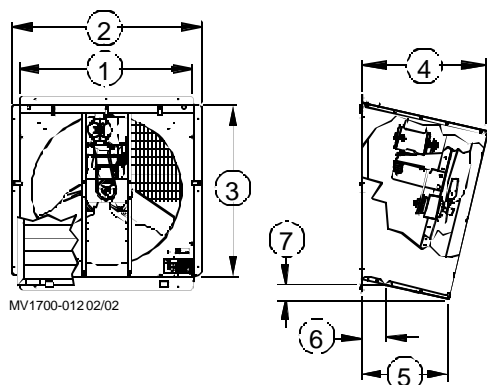
Specifications and Part Numbers

Fan Part Numbers		Motor Specifications and Part Numbers						
Description	*Assembled Part No.	Voltage	HZ	Phase	HP	Motor Part No.	Motor Sheave Part No.	Fan Sheave Part No.
48" Standard Slant Wall Fan	46991-482X	230	60	1	1	37729	8773 (AK30)	40274 (AK94)
	46991-484X	208-230/460	60	3	1	40157	8773 (AK30)	40274 (AK94)
48" Hi-Cap Slant Wall Fan	47659-482X	115/230	60	1	1.5	47691	35333 (AK28)	28143 (AK84)
48" Vanguard Standard Cone Fan	46868-482X	230	60	1	1	37729	8773 (AK30)	40274 (AK94)
	46868-484X	208-230/460	60	3	1	40157	8773 (AK30)	40274 (AK94)
48" Vanguard High Efficiency Cone Fan	46992-482X	230	60	1	1	37729	1381 (AK27)	28143 (AK84)
	46992-484X	208-230/460	60	3	1	40157	1381 (AK27)	28143 (AK84)
	46992-488X	200/208	60	3	1	47680	1381 (AK27)	28143 (AK84)
48" Vanguard Hi-Cap. Cone Fan	46997-482X	115/230	60	1	1.5	47691	8773 (AK30)	40274 (AK94)
	46997-484X	208-230/460	60	3	1.5	47693	8773 (AK30)	40274 (AK94)
48" Box Fan	38434-4820	230	60	1	1	37729	35333 (AK28)	42072
	38434-4830	230	50	1	1	37729	8773 (AK30)	42072
	38434-4840	208-230/460	60	3	1	40157	35333 (AK28)	42072
	38434-4850	220-240/380-415	50	3	1	36142	24697 (MA33)	42072
	38434-4860	230/380-415	60	3	1	36142	35333 (AK28)	42072
48" Panel Fan	40407-4820	230	60	1	1	37729	35333 (AK28)	42072
	40407-4830	230	50	1	1	37729	8773 (AK30)	42072
	40407-4840	208-230/460	60	3	1	40157	35333 (AK28)	42072
	40407-4850	220-240/380-415	50	3	1	36142	24697 (MA33)	42072
	40407-4860	230/380-415	60	3	1	36142	35333 (AK28)	42072

* Replace the "X" in Fan P/N with "1" for an Aluminum Shutter, "2" for a White Plastic Shutter, and "4" for Gray Plastic Shutter

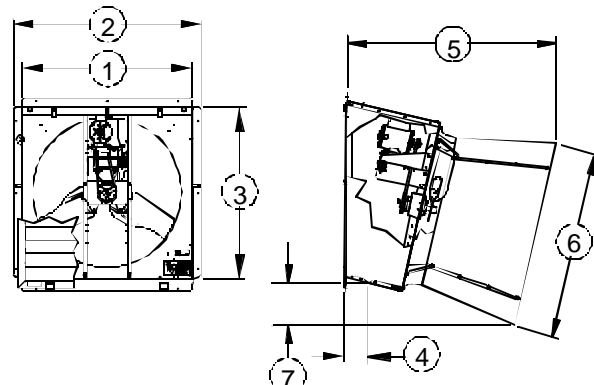
Do Not operate these Fans with a variable speed control device. Operating static pressure should be less than 0.15 inches water column.

Fan and Fan Framing Dimensions



MV1700-012 02/02

Slant Wall Fan	
Item	Description
1	54.5" [138.4 cm]
2	58-1/4" [148 cm]
3	57" [144.8 cm]
4	33-3/8" [84.8 cm]
5	21" [53.3 cm]
6	5-3/4" [14.6 cm]
7	3-9/32" [8.3 cm]



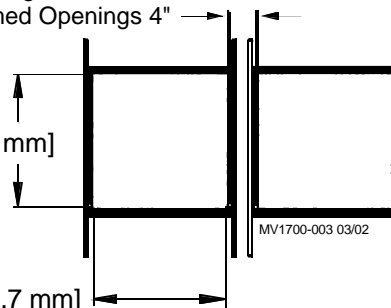
Cone Fan	
Item	Description
1	54.5" [138.4 cm]
2	58-1/4" [148 cm]
3	57" [144.8 cm]
4	5-3/4" [14.6]
5	52-3/4" [134 cm]
6	Ø57" [Ø144.8 cm]
7	9-1/2" [24.13 cm]

Planning the layout of the spacing between fans is very important. Spacing too close together will cause interference with the flanges. Allow a minimum of 4" between framed openings of adjacent fans. **The Rough Opening dimensions for Slant Wall and Cone Fans are shown at the right.**

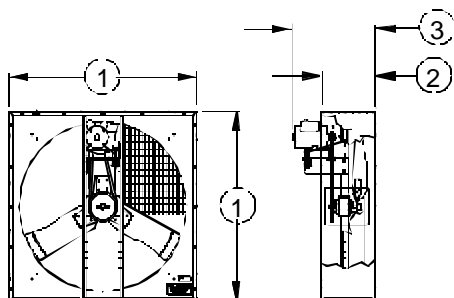
Spacing Between
Framed Openings 4"

57.5" [146.1 mm]

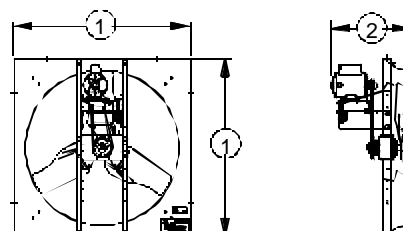
55" [139.7 mm]



MV1700-003 03/02



Box Fan	
Item	Description
1	54.5" [138.4 cm]
2	15.75" [40 cm]
3	24" [70 cm]



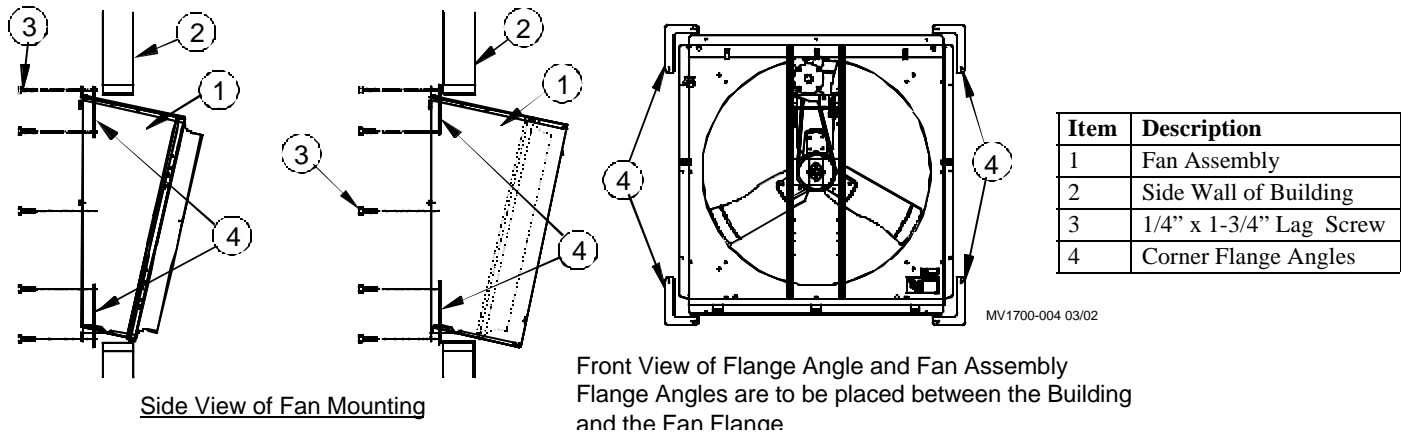
MV1700-013 02/02

Panel Fan	
Item	Description
1	54.25" [137.8 cm]
2	20.75" [52.7 cm]

Rough Openings for Box and Panel Fans: Add 1/2" [12.7 mm] to Width and Height.

Fan Assembly

Assemble the Corner Flange Angles between the Fan Flange and framed opening.

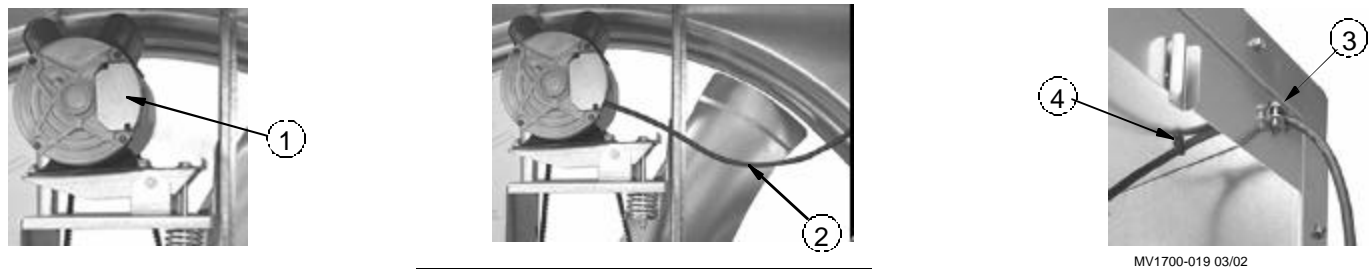


Wiring

- 1. Remove Cover Plate (Item 1, Figure below).
- 2. Install an electrical disconnect within reach of each Fan installed.
- 3. Remove the electrical knock-out nearest the Fan power supply outlet.
- 4. Install the Romex Connector (Item 3, Figure below) and cord through the knock-out selected before wiring the motor. Connect the cord to the motor according to the wiring diagram on the motor. Verify that the motor is connected for counter clockwise rotation (viewing the back of the motor, opposite the shaft end.)

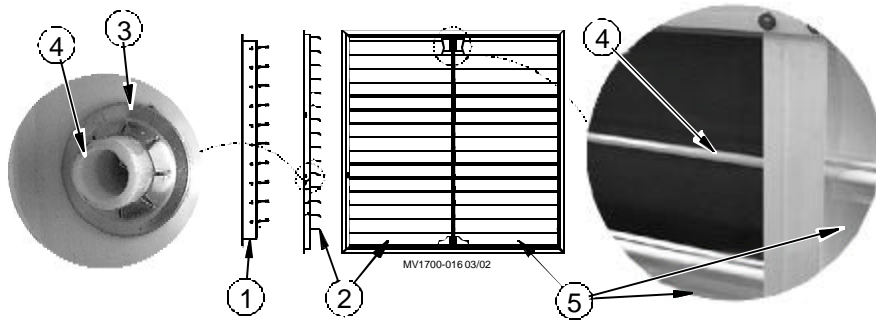
Follow local, state, and national electrical codes for wiring.

- 5. Attach the cord to the Top Panel of the Fan using the Cord Clip (Item 4, Figure below) to keep the cord off the Shutter.
- 6. Allow enough slack in the cord to form a "drip loop", (Item 2, Figure below), for moisture to fall away from the cord and not into the motor.
- 7. Remove the slack in the cord between the Cord Clip and the Romex Connector and then tighten the Romex Connector.



Item	Description	Part No.
1	Cover Plate	
2	"Drip Loop"	
3	Romex Connector	1317
4	Cord Clip	7242

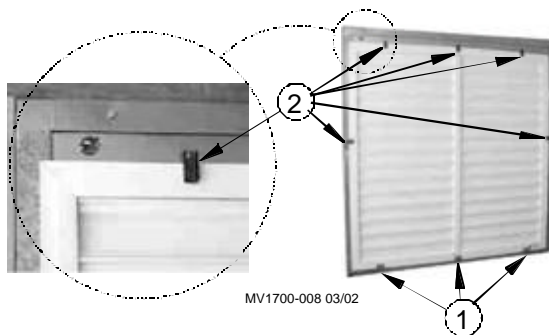
Shutter Part Numbers



Item	Description	Part No.
1	Shutter Aluminum (complete)	38260
2	White Plastic Shutter (complete)	38029
	Gray Plastic Shutter (complete)	46716
3	Push Nut 1/4"	38032
4	Shutter Pivot Rod	38702-4
5	White Shutter Louver	38038-4
	Gray Shutter Louver	46715-4

Shutter Installation

The Bottom Panel is designed with 3 tabs to hold the Shutter. Slide the bottom of the Shutter into position in the Bottom Panel Slots, lean the Shutter back and lock it in place by rotating the Shutter Clips. Check the Shutter for proper operation; The shutter must be able to open and close freely



Item	Description
1	Bottom Panel Slot
2	Shutter Clips

Safety Information

Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions and safe operating practices. Keep safety signs in good condition. Replace missing or damaged safety signs.

DANGER: Electrical Hazard

Disconnect electrical power before inspecting or servicing equipment 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

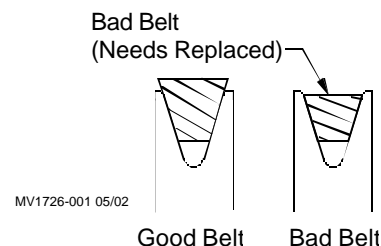
Keep Hands away. Disconnect power before servicing. Fan may start automatically. Do not operate the Fan without the screens in place. Disregard to these things will cause serious injury including death.



Maintenance

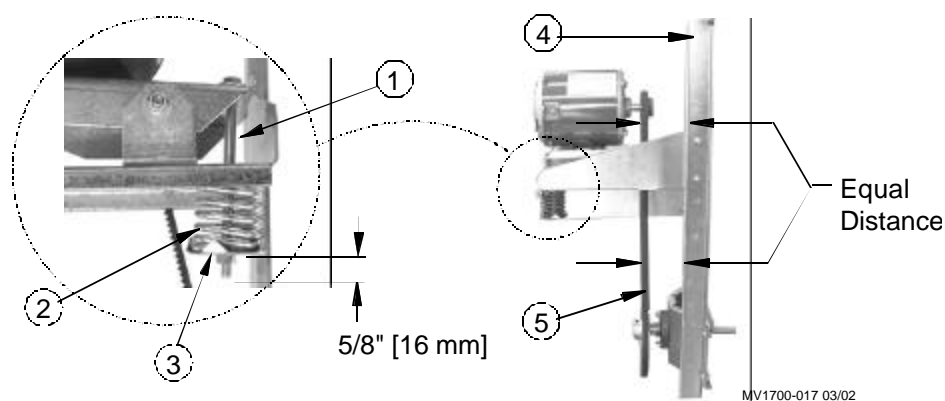
Disconnect Power Prior To Maintaining Or Cleaning The Fan. The fan may start automatically causing serious injury or death.

- Service and repair of fans should be done only by a qualified technician.
- Keep the fan clean for maximum life and best performance. **Avoid spraying water on fan shaft bearings.**
- Periodically check the V-Belt and replace if necessary. A bad Belt will cause a substantial drop in Fan performance or it can break and cause Fan failure. If a Belt rides below the Sheave edge, replace the belt. (See Figure at the Right)



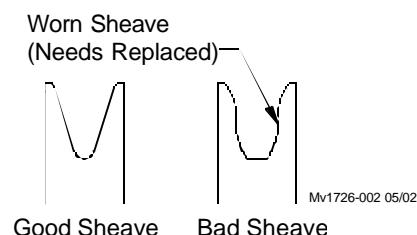
- Keep Shutters, Blades, and Housing clear of obstacles for best air performance.
- The motor and fan shaft bearings are pre-lubricated. Grease zerks are provided on the fan shaft bearings for installations where re-lubrication is needed. Re-lubrication is required once annually or if water contacts the Bearings. Add only a small amount of grease to purge impurities out of the bearing seals.
- Use only high quality lithium soap base grease and clean all dirt from zerk before applying grease. Chore-Time recommends using Shell Alvania # 2 in the fan shaft bearings.
- Check Drive Belt Alignment: The **Figure below** shows how to properly align the belt and adjust the tension to insure the best installation and Fan life.

- Belt must be vertical to obtain maximum belt life.
- Measure from the Post to the belt as shown to make sure that there is equal distance. Lay a straight edge across the posts to get the measurement if necessary. (See Figure below)
- Tighten the 5-16-18 x 5.5" Bolt (**Item 1, Figure below**) until the measurement from the end of the Bolt to the Bottom Spring Cap (**Item 3**) is 5/8" [16 mm] as shown in the **Figure below**.

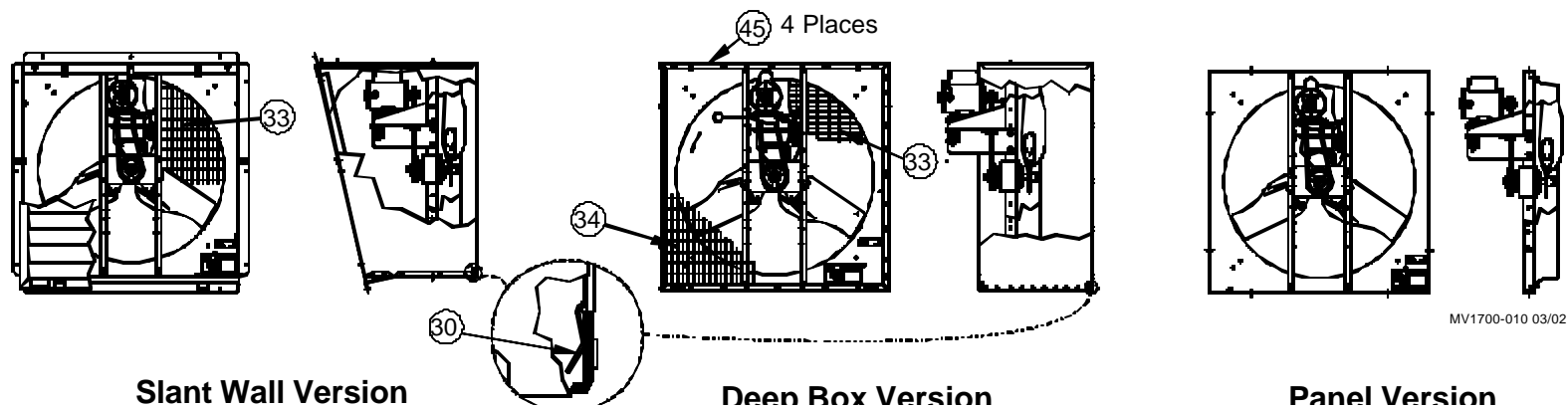
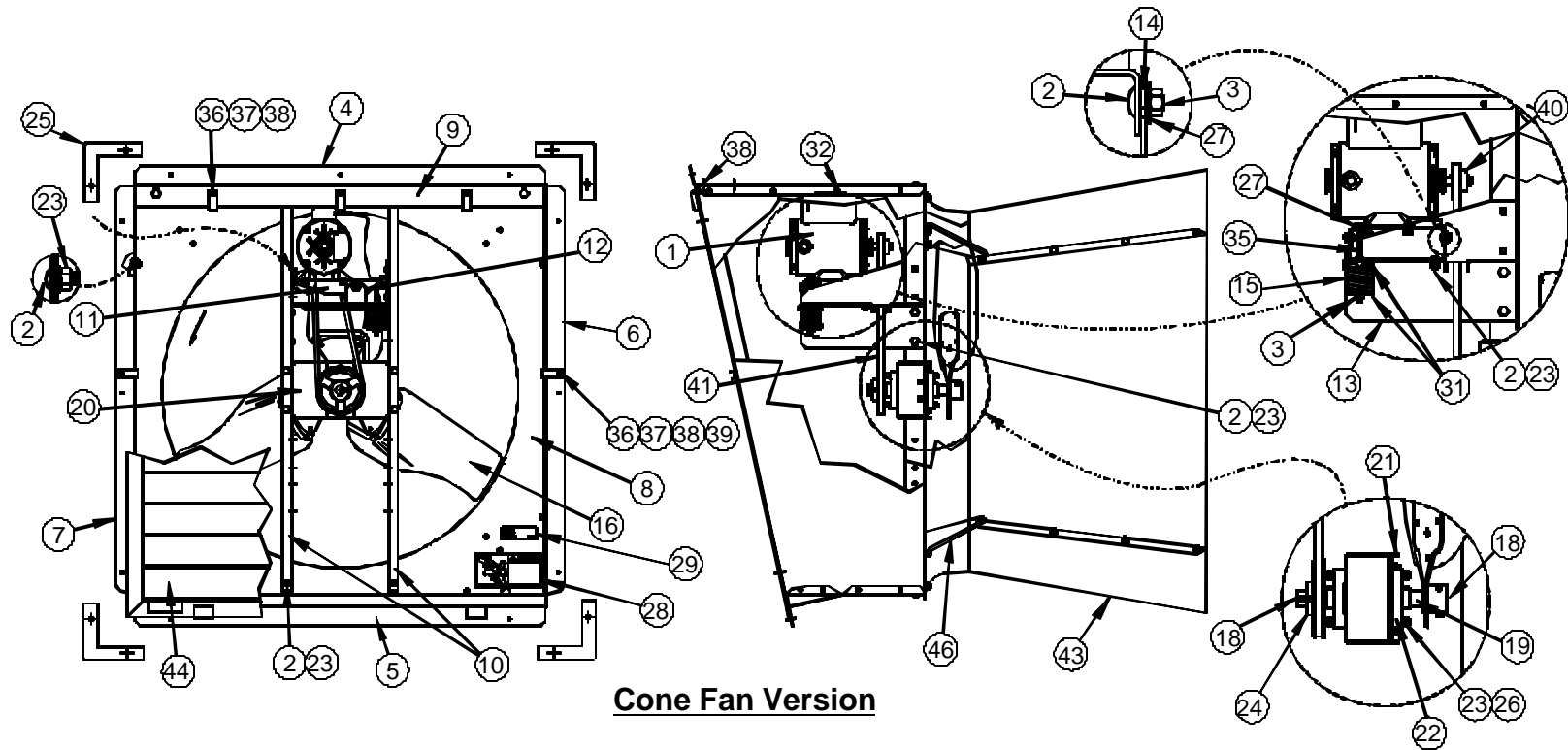


Belt Alignment	
Item	Description
1	5/16-18 x 5.5" Bolt
2	Spring
3	Bottom Spring Cap
4	Post
5	Belt

- Check Sheaves for wear. Replace if a Sheave groove is worn. (See Figure to the Right)



Itemized Parts



MV1700-010 03/02

Part Numbers

Item	Description	Slant Wall Fan				Cone Fan						EZ Box Fan		Panel Fan	
		Standard 46991-48XX		Hi-Cap 47659-48XX		Standard 46868-48XX		High Efficiency 46992-48XX		Hi-Cap 46997-48XX		Standard 38434-48X0		Standard 40407-48X0	
		Qty	Part No.	Qty	Part No.	Qty	Part No.	Qty	Part No.	Qty	Part No.	Qty	Part No.	Qty	Part No.
1*	Motor	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies
2	5/16-18 x .625 Car. Bolt	32	8282	32	8282	32	8282	32	8282	32	8282	32	8282	20	8282
3	5/16-18 Hex Lock Nut	3	2148	3	2148	3	2148	3	2148	3	2148	3	2148	3	2148
4	48" Top Panel	1	43667	1	43667	1	43670	1	43670	1	43670				
5	48" Bottom Panel	1	43668	1	43668	1	43671	1	43671	1	43671				
6	48" Side (RH) Panel	1	43669-2	1	43669-2	1	43672-2	1	43672-2	1	43672-2				
7	48" Side (LH) Panel	1	43669-1	1	43669-1	1	43672-1	1	43672-1	1	43672-1				
8	48" Fan Shroud	1	37583	1	37583	1	37583	1	37583	1	37583	1	37583	1	37583
9	48" Fan Shutter Mt. Brace	1	43673	1	43673	1	43673	1	43673	1	43673				
10	48" Fan Post	2	43688	2	43688	2	43688	2	43688	2	43688	2	43688	2	43688
11	Motor Mount Pivot Plate	1	43713	1	43713	1	43713	1	43713	1	43713	1	43713	1	43713
12	Pivot Plate Mntg. Brkt.	1	46444	1	46444	1	46444	1	46444	1	46444	1	46444	1	46444
13	Z-Motor Mounting Brkt.	1	46445	1	46445	1	46445	1	46445	1	46445	1	46445	1	46445
14	ST BD Module Bushing	2	38896	2	38896	2	38896	2	38896	2	38896	2	38896	2	38896
15	Spring	1	43715	1	43715	1	43715	1	43715	1	43715	1	43715	1	43715
16	48" Fan Blade	1	28140	1	46748	1	28140	1	45932	1	46748	1	28140	1	28140
17															
18	1/4 x 1 x 1/8 Square Key	2	2419-2	2	2419-2	2	2419-2	2	2419-2	2	2419-2	2	2419-2	2	2419-2
19	Shaft	1	43691	1	43691	1	43691	1	43691	1	43691	1	43691	1	43691
20	Rear Bearing Mount Plate	1	43690	1	43690	1	43690	1	43690	1	43690	1	43690	1	43690
21	Front Bearing Mnt. Plate	1	43689	1	43689	1	43689	1	43689	1	43689	1	43689	1	43689
22	1" Bore Cast Fl. Bearing	2	43654	2	43654	2	43654	1	43654	1	43654	2	43654	2	43654
23	5/16-18 H. Ser. Flg. Nut	30	8490	34	8490	30	8490	1	8490	1	8490	30	8490	22	8490
24*	Driven Sheave	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies
25	Corner Flange Angle	4	44284	4	44284	4	44284	4	44284	4	44284				
26	5/16-18 x 1.25 Car. Bolt	4	34885-2	4	34885-2	4	34885-2	4	34885-2	4	34885-2	4	34885-2	4	34885-2
27	.375 x .875 x .078 Wshr.	3	546	3	546	3	546	3	546	3	546	3	546	3	546
28	Danger Decal	2	2527-50	2	2527-50	2	2527-50	2	2527-50	2	2527-50	2	2527-50	2	2527-50
29	36" S/W Cone Fan Decal	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies	1	39002-118
30	EZ Fan Screen Clip	16	38891	16	38891							32	38891		
31	Spring Coil Cap	2	44002	2	44002	2	44002	2	44002	2	44002	2	44002	2	44002
32	#10-16 x .50 HxWh Screw	22	3037	22	3037	16	3037	16	3037	16	3037				
33	Wire Screen	1	6023-22	1	6023-22							1	6023-22		
34	48" BD Fan Inlet Screen											1	45865		
35	5/16-18 x 5.5" Bolt	1	4412-24	1	4412-24	1	4412-24	1	4412-24	1	4412-24	1	4412-24	1	4412-24
36	SS Shutter Clip	5	36729	5	36729	5	36729	5	36729	5	36729				
37	Nylon Washer	5	4856	5	4856	5	4856	5	4856	5	4856				
38	3/16" x 3/8" Pop Rivet	9	2569	9	2569	9	2569	9	2569	9	2569				
39	.227 x .515 x .065 Wshr.	2	2955-19	2	2955-19	2	2955-19	2	2955-19	2	2955-19				
40*	Cast Iron Sheave	1	Varies	1	Varies	1	Varies	1	Varies		Varies	1	Varies	1	Varies
41	AX57 V Belt	1	46967			1	46967			1	46967				
	AX55 V Belt			1	46990			1	46990						
	AX56 V Belt											1	43816	1	43816
42	Grill					1	37630	1	37630	1	37630				
43	48" Fan Cone Panel					4	37805	4	37805	4	37805				
44**	48" Shutter	1	Varies	1	Varies	1	Varies	1	Varies	1	Varies				
45	48" Box Fan Panel											4	38391		
46	Cone Mounting Bracket					4	37806	4	37806	4	37806				

* See Motor Specifications Chart on Page 1

** See Shutter Part Numbers on Page 4

Warranty Information

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

Conditions and Limitations

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

The **Manufacturer** shall not be liable for any **Consequential or Special Damage** which any purchaser may suffer or claim to suffer as a result of any defect in the product. **"Consequential"** or **"Special Damages"** *as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.*

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

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

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