



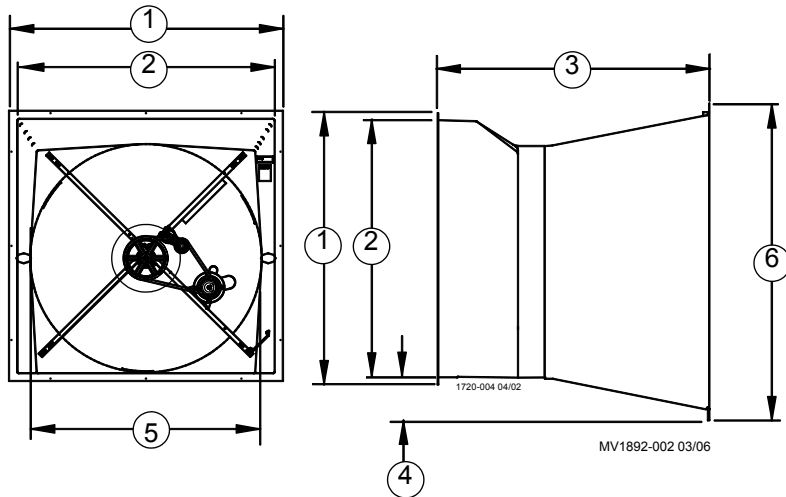
48" Belt Drive Turbo® with Tensioner Cone and Grill Fan Installation and Operators Instruction Manual



Fan Assembly Part Number	Fan Sub-Assembly Part Number	Fan Interior Color	Outlet	Voltage	Hz	Ph	HP	Motor Part No.	V-Belt p/n	Motor sheave Part No.	Fan sheave Part No.
38264-480X	50232-02X	White	Cone						50271 (AX49)	24697 (AK32)	40274 (AK94)
38264-482X	50232-22X	White	Cone	230	60	1	1	37729	50271 (AX49)	24697 (AK32)	40274 (AK94)
38264-483X	50232-32X	White	Cone	220-240	50	1	1	37729	50270 (AX48)	37919 (AK34)	28143 (AK84)
38264-484X	50232-42X	White	Cone	208-230/460	60	3	1	40157	50271 (AX49)	24697 (AK32)	40274 (AK94)
38264-485X	50232-52X	White	Cone	220-240/380-415	50	3	1	36142	50270 (AX48)	37919 (AK34)	28143 (AK84)
38264-487X	50232-72X	White	Cone	200/400	60	3	1	43290	50271 (AX49)	24697 (AK32)	40274 (AK94)
38264-488X	50232-82X	White	Cone	208-230/460	60	3	1	44694	50271 (AX49)	24697 (AK32)	40274 (AK94)
38264-489X	50232-92X	White	Cone	200/400	50	3	1	43290	50270 (AX48)	37919 (AK34)	28143 (AK84)
38264-484XS	50232-42XS	White	Cone	208-230/460	60	3	1	40157	50271 (AX49)	24697 (AK32)	40274 (AK94)
46633-480X	50232-02XB	Black	Cone						50271 (AX49)	24697 (AK32)	40274 (AK94)
46633-482X	50232-22XB	Black	Cone	230	60	1	1	37729	50271 (AX49)	24697 (AK32)	40274 (AK94)
46633-482XS	50232-22XBS	Black	Black Cone	230	60	1	1	37729	50271 (AX49)	24697 (AK32)	40274 (AK94)
46633-482XSW	50232-22XBS	Black	White Cone	230	60	1	1	37729	50271 (AX49)	24697 (AK32)	40274 (AK94)
46633-483X	50232-32XB	Black	Cone	220-240	50	1	1	37729	50270 (AX48)	37919 (AK34)	28143 (AK84)
46633-484X	50232-42XB	Black	Cone	208-230/460	60	3	1	40157	50271 (AX49)	24697 (AK32)	40274 (AK94)
46633-485X	50232-52XB	Black	Cone	220-240/380-415	50	3	1	36142	50270 (AX48)	37919 (AK34)	28143 (AK84)
46633-487X	50232-72XB	Black	Cone	200/400	60	3	1	43290	50271 (AX49)	24697 (AK32)	40274 (AK94)
46633-488X	50232-82XB	Black	Cone	208-230/460	60	3	1	44694	50271 (AX49)	24697 (AK32)	40274 (AK94)
46633-489X	50232-92XB	Black	Cone	200/400	50	3	1	43290	50270 (AX48)	37919 (AK34)	28143 (AK84)
46633-484XS	50232-42XBS	Black	Black Cone	208-230/460	60	3	1	40157	50271 (AX49)	37919 (AK34)	40274 (AK94)
46633-484XSW	50232-42XBS	Black	White Cone	208-230/460	60	3	1	40157	50271 (AX49)	37919 (AK34)	40274 (AK94)
47898-482X	50232-21X	White	Cone	230	60	1	1.5	49903	50270 (AX48)	24697 (AK32)	28143 (AK84)
47898-484X	50232-41X	White	Cone	208/230-460	60	3	1.5	47693	50270 (AX48)	24697 (AK32)	28143 (AK84)
47898-485X	50232-51X	White	Cone	200	50	3	1.5	50347	50270 (AX48)	24697 (AK32)	49811 (AK69)
47943-482X	50232-21XB	Black	Cone	230	60	1	1.5	49903	50270 (AX48)	24697 (AK32)	28143 (AK84)
47943-484X	50232-41XB	Black	Cone	208/230-460	60	3	1.5	47693	50270 (AX48)	24697 (AK32)	28143 (AK84)
38948-480X	50232-02X	White	Grill						50271 (AX49)	24697 (AK32)	40274 (AK94)
38948-482X	50232-22X	White	Grill	230	60	1	1	37729	50271 (AX49)	24697 (AK32)	40274 (AK94)
38948-483X	50232-32X	White	Grill	220-240	50	1	1	37729	50270 (AX48)	37919 (AK34)	28143 (AK84)
38948-484X	50232-42X	White	Grill	208-230/460	60	3	1	40157	50271 (AX49)	24697 (AK32)	40274 (AK94)
38948-485X	50232-52X	White	Grill	220-240/380-415	50	3	1	36142	50270 (AX48)	37919 (AK34)	28143 (AK84)
38948-487X	50232-72X	White	Grill	200/400	60	3	1	43290	50271 (AX49)	24697 (AK32)	40274 (AK94)
46750-480X	50232-02XB	Black	Grill						50271 (AX49)	24697 (AK32)	40274 (AK94)
46750-482X	50232-22XB	Black	Grill	230	60	1	1	37729	50271 (AX49)	24697 (AK32)	40274 (AK94)
46750-483X	50232-32XB	Black	Grill	220-240	50	1	1	37729	50270 (AX48)	37919 (AK34)	28143 (AK84)
46750-484X	50232-42XB	Black	Grill	208-230/460	60	3	1	40157	50271 (AX49)	24697 (AK32)	40274 (AK94)
46750-485X	50232-52XB	Black	Grill	220-240/380-415	50	3	1	36142	50270 (AX48)	37919 (AK34)	28143 (AK84)
46750-487X	50232-72XB	Black	Grill	200/400	60	3	1	43290	50271 (AX49)	24697 (AK32)	40274 (AK94)

*Replace the "X" in Fan P/N with a "2" for a Flat White Plastic Shutter, "4" for a Flat Gray Plastic Shutter, "5" for a White Plastic Inlet Bell Shutter, "6" for Gray Plastic Inlet Bell Shutter, "B" for Black Shutter.

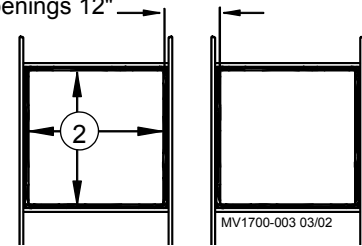
Fan and Fan Framing Dimensions



Slant Wall Fan	
Item	Description
1	58" [147.32 cm]
2	55" [139.70 cm]
3	50.25" [127.63 cm]
4	8" [20.32 cm]
5	48.5" [123.2 cm]
6	64.5" [163.83 cm]

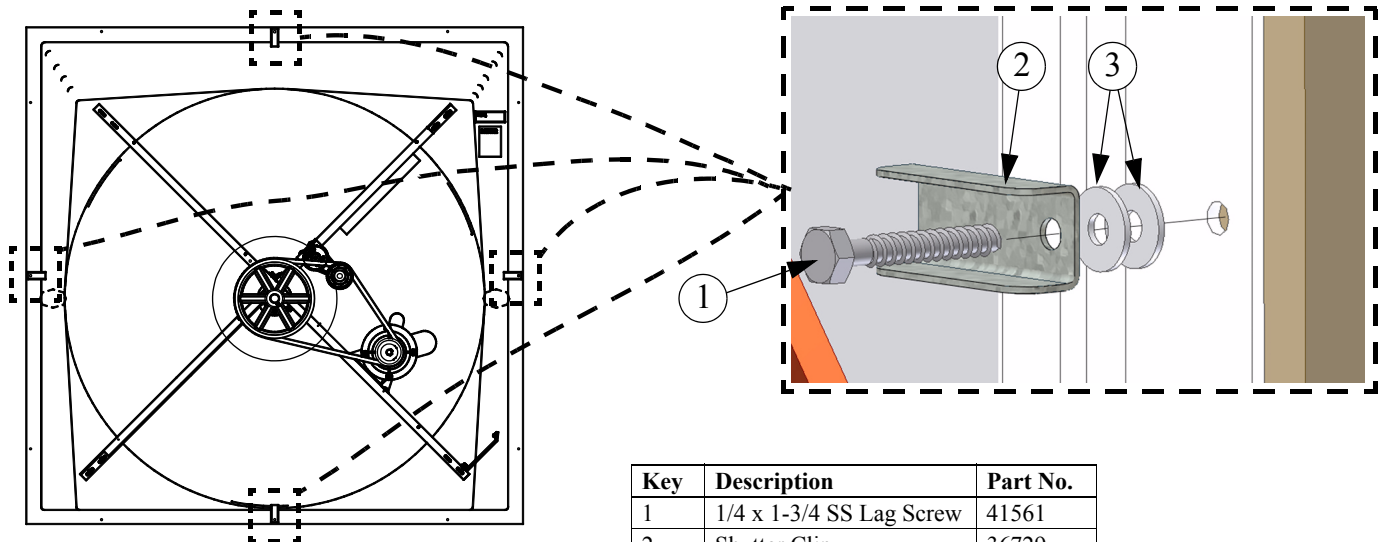
Planning the layout of the spacing between fans is very important. Spacing too close together will cause interference with the flanges. Allow a minimum of 12" between framed openings of adjacent fans.

Spacing Between Framed Openings 12"



Installation

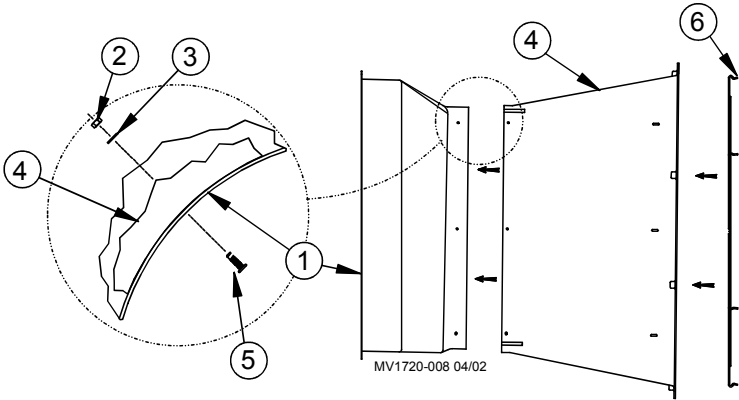
Insert the Fan Assembly in the wall opening and secure using the (12) 1/4 x 1-3/4 Lag Screws, (6) Shutter Clips, and (6) Nylon Washers provided. The Shroud is pre-drilled. The hardware must be installed as shown in the **Figure below**. This allows for rotation of the Shutter Clips when installing Shutter.



Key	Description	Part No.
1	1/4 x 1-3/4 SS Lag Screw	41561
2	Shutter Clip	36729
3	Nylon Washer	4856

Installing the Cone and Grill to the Fiberglass Fan

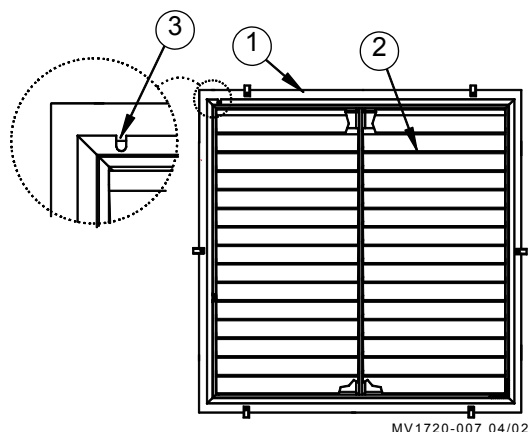
- 1. Slide the Cone onto the Shroud—the Shroud fits inside the Cone. (See Figure below)
4" slots are cut into the edge of the cone to allow expansion as the Cone is slid onto the Shroud.
- 2. Align the holes in the Shroud with the slots in the Cone.
- 3. Insert the (6) Wafer Head Bolts from inside the Shroud through the Cone, place the Nylon Washers on the Wafer Head Bolts, and thread the Nylon Nuts onto ends of the Wafer Head Bolts.
- 4. Snap the Cone Grill into the slots on the outlet end of the Cone.



Key	Description	Part No.
1	Shroud (White)	37914
	Shroud (Black Interior)	46631
2	1/4-20 Nylon Hex Nut	8916
3	Nylon Washer	4856
4	Cone (White)	38268
	Cone (Black)	46630
5	1/4-20 x 7/8 Wafer Head Bolt	40775
6	Cone Grill	35199

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. Cut a 3/8" slot in the upper left flange of the Shutter frame, or cut an exit hole in the side of the Shroud to route the cord to a power source. **If exiting through the side of the Shroud use conduit and make sure that wires or conduit do not interfere with the Fan Blades or Shutter operation.**

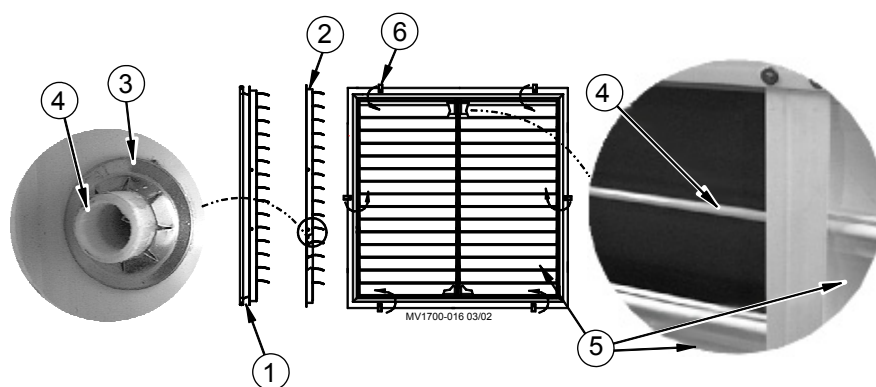


Key	Description
1	Shroud
2	Shutter
3	3/8" Slot to Route Motor Cord

MV1720-007 04/02

Shutter Installation and Part Numbers

Position the Shutter, centered in the Fan Shroud, and rotate the Shutter Clips to lock the Shutter in place. Check the Shutter for proper operation—the shutter must be able to open and close freely without obstructions.



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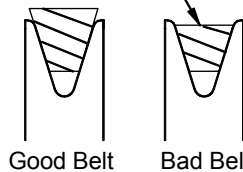
Item	Description	Part No.
1	Belled Plastic Shutter (White)	48291
	Belled Plastic Shutter (Gray)	48296
2	Flat Plastic Shutter (White)	38029
	Flat Plastic Shutter (Gray)	46716
3	Push Nut 1/4"	38032
4	Shutter Pivot Rod	38702-4
5	Shutter Louver (White)	38038-4
	Shutter Louver (Gray)	46715-4
6	Shutter Clip	36729

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 Below)
- Keep Shutters, Blades, and Housing clear of obstacles for best air performance.
- The motor and fan shaft bearings are prelubricated. Grease zerks are provided on the fan shaft bearings for installations where relubrication is needed. Relubrication 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 Sheaves for wear. Replace if Sheave groove is worn. (See Figure to the Right).
- Check Belt Tension. The Belt should be tensioned just tight enough to minimize Belt slippage. Over tensioning the belt will cause premature Belt and Bearing wear. With a new Belt, the notches on the outside wheel (Item 1, below) of the Tensioner should line up with the mark on the inside wheel (Item 2) of the Tensioner based on the chart below.

Bad Belt
(Needs Replaced)



Good Belt

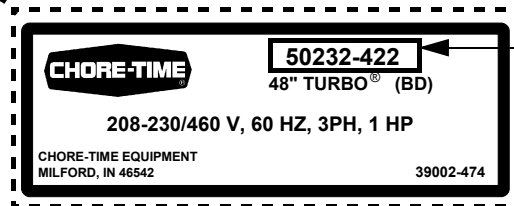
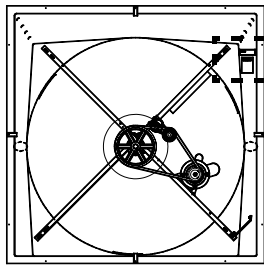
Bad Belt

Worn Sheave
(Needs Replaced)



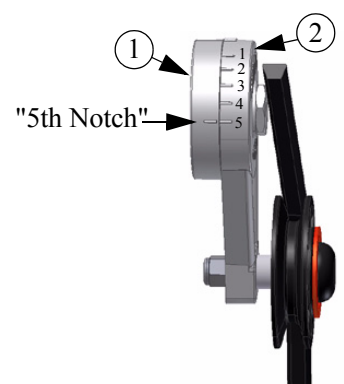
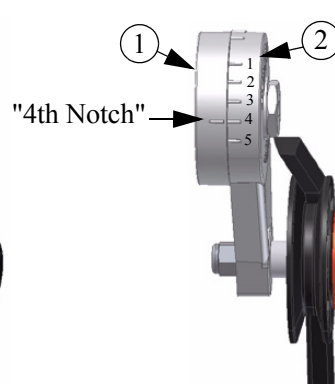
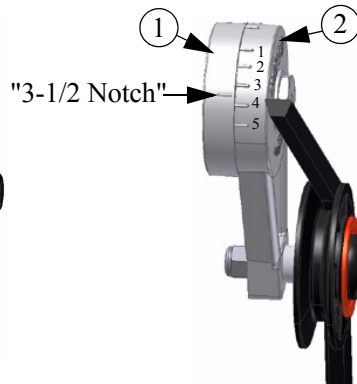
Good Sheave

Bad Sheave



Fan Model Number

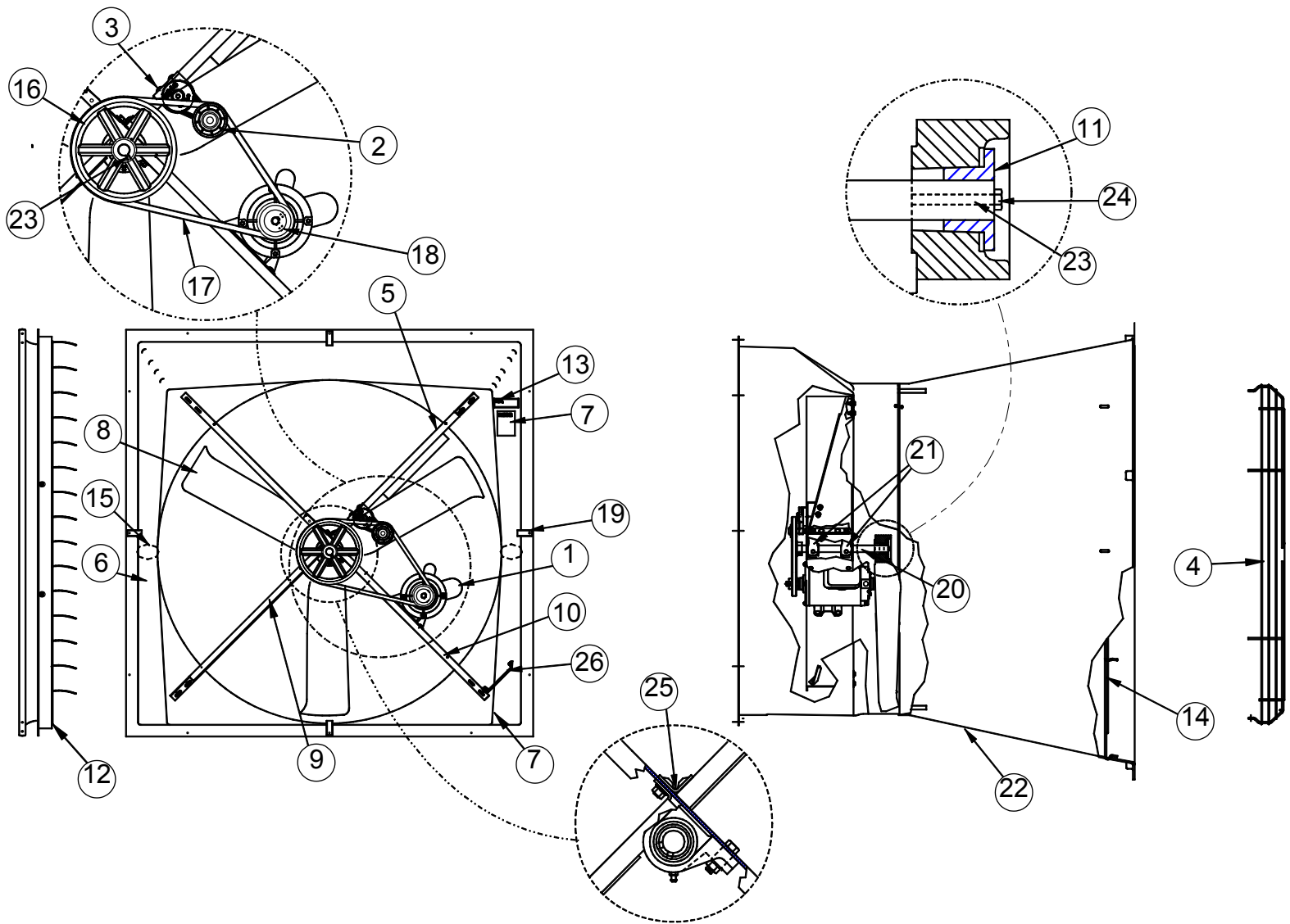
(see chart for correct Tensioner positioning with belt installed)



Fan Part No.	Tensioner Position
50232-32X Series	"3rd Notch"
50232-52X Series	
50232-92X Series	
50232-22X Series	"3-1/2 Notch"
50232-42X Series	
50232-72X Series	
50232-82X Series	"4th Notch"
50232-21X Series	
50232-51X Series	
50232-41X Series	"5th Notch"

Item	Description
1	Outside wheel on Tensioner
2	Inside wheel on Tensioner

Itemized Parts



Part Numbers

Turbo® Fan Part Numbers		
Item	Description	Part No.
1	Motor	Varies**
2	3.5" Arm 3" Dia. Tensioner Assembly	48429
3	48" Tensioner Bracket	50233
4	Fiberglass Fan Shroud Grill	37921
5	Upper Motor Mount Support	50266
6	Fan Shroud (White)	37914
	Fan Shroud (Black Interior)	46631
7	Danger Decal	2527-50
8	48" Cast Aluminum Fan Blade	38903
9	Lower Motor Mount Support	37732
10	48" Fan Motor Mount	50267
11	1" Taper Lock Hub	38909
12	48" Shutter	Varies*
13	Identification Decal	Varies
14	Cone Grill	35199
15	Chore-Time Decal	2525-4

Item	Description	Part No.
16	Sheave	Varies**
17	Grip Notch V-Belt	Varies**
18	Motor Sheave	Varies**
19	Turbo Fan Shutter Retainer	36729
20	1" Shaft	39688
21	1" Pillow Block Bearing	48428
22	Outlet Cone (White)	38268
	Outlet Cone (Black)	46630
23	1/4x1-1/8 Sq. Key	2419-2
24	1/4-20x1.00 SS Hx Hd Bolt	4404-11
25	Motor Mount Connector Angle	47877
26	48" Turbo® Fan Motor Mount Brace	39710

*See Shutter Part Numbers on Page 3
 **See Motor Specifications and Part Numbers on Page 1

Warranty Information

Chore-Time Equipment warrants new TURBO[®] Fans and components manufactured by it to be free from defects in material or workmanship from the date of initial installation by the original purchaser until expiration of the appropriate period set forth below. If such a defect is found by Chore-Time to exist within the applicable 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. The extended warranty is provided to the original purchaser for the following periods:

- *1. **TURBO[®] Fan** fiberglass housings and cast aluminum blades - for as long as the original purchaser owns the product.
- *2. **TURBO[®] Fan** motors and bearings - for two years from date of installation.
- *3. **TURBO[®] Fan** components, including plastic shutters and polyethylene cones - for three years from date of installation.

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.

Chore-Time Distributors are not authorized to modify or extend the terms and conditions of this Warranty in any manner or to offer or grant any other warranties for Chore-Time products in addition to those terms expressly stated above. An officer of CTB, Inc. must authorize any exceptions to this Warranty in writing. The Manufacturer reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

Safety

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

Keep Hands away. Disconnect power before servicing. Fan may start automatically. Do not operate the Fan without the screens in place.

Disregard to the above mentioned **Danger** may cause serious injury including death.

- Keep all Safety Signs and decals in good condition.

Replace damaged or missing decals.





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

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Revisions to this Manual

Page No.	Description of Change
Various	Obsoleted 48617-XXX fans and replaced with 50232-XXX
2	changed Lag Screw from 40938 to 41561
7	Changed Pillow Block Bearing from 37912 to 48428

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

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