



ASTA Door Corporation

Installation Instructions

Models: 201, 202, 203, 204, 205, 211, 231, 232, 233, 234, & 235

USE ASTA DOOR CORPORATION PARTS ONLY • ALL OTHERS SHALL VOID WARRANTY.
SHOULD QUESTIONS ARISE, PLEASE CONTACT ASTA DOOR CORPORATION AT (770) 974-2600

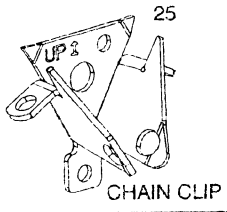


DIAGRAM 1

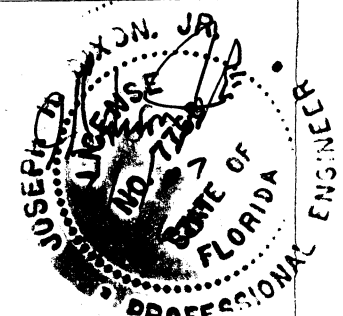
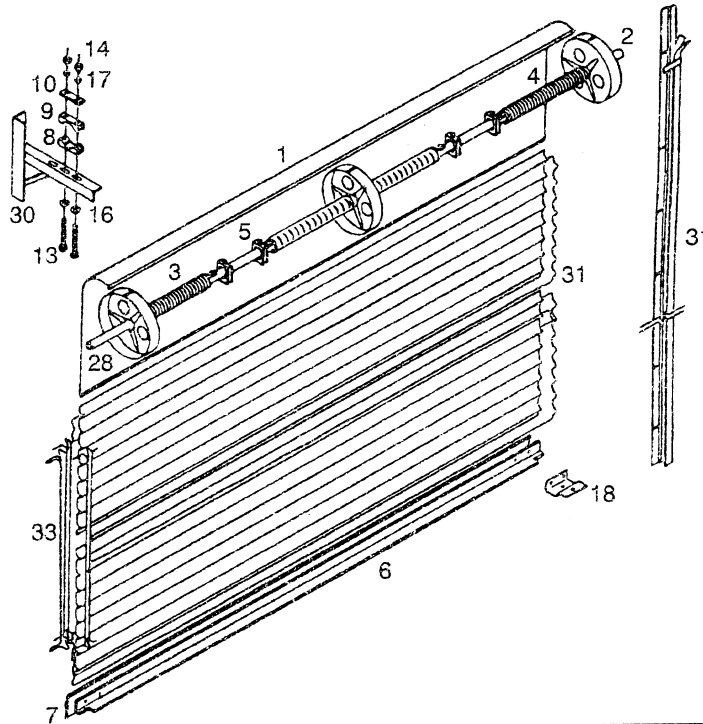


DIAGRAM 2

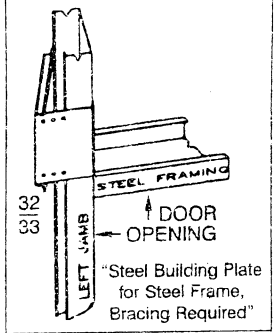


DIAGRAM 3

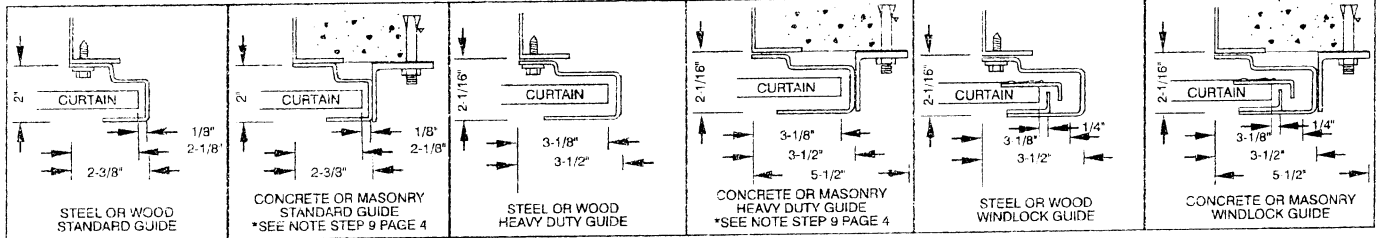
DIAGRAM 4

DIAGRAM 5

DIAGRAM 6

DIAGRAM 7

DIAGRAM 8



PARTS LIST

ALL DOOR MODELS			CHAIN HOIST		
1	Varies	Top Sheet	32	310400	Standard Steel Mounting Plates (Pair)
2	Varies	Axle Pipe	33	310410	Heavy Duty Steel Mounting Plates (Pair)
3	Varies	Spring, L.H.	MODELS: 201, 202, 203 & 204		
4	Varies	Spring, R.H.	34	Varies	Corrugated Door Sheet
5	230003	Spring Clamp Assy.	35	260000	PVC Rubber Sidestrip, Commercial Gray
6	Varies	Bottom Angle	MODELS: 231, 232, 233, 234 & 235		
7	270201	Blade Astragal, Bottom Weatherseal	36	260002	PVC Rubber Sidestrip, Industrial
8	310101	Axle Saddle Casting	37	260001	High Tensile, Steel Sidestrip
9	310103	Axle Saddle Stamping (clamp)	38	750403	PVC Button with Rivet
10	310102	Keeper Plate, Standard (2 hole)	MODELS: 202, 204, 232, 234 - INSULATED ONLY		
11	420101	Keeper Plate, Extended (4 hole)	39	260301	Insulation, Double Foil
12	77031	U-Bolt, 3/8\" - 16	40	260401	Mylar Tape (2\")
13	730103	3/8\" - 24 x 3 1/2\" Hex Head Bolt	41	630002	Top Draft Stop (2 1/2\" Wide)
14	740104	3/8\" - 24 Hex Nut (Fine Thread)	42	630003	Side Draft Stop
15	740103	3/8\" - 16 Hex Nut	MODELS: 203, 204, 233, 234 - WINDLOCK ONLY		
16	750103	Flat Washer, 3/8\"	43	270501	Windlock Clip
17	750203	Lock Washer, 3/8\"	44	720101	5/16\" Rivet
18	280301	Door Stop - Lift Clip	MODELS: 203 & 204		
19	280104	Slide Bolt Lock	45	270502	Windlock Clip Backer Plate
20	730301	1/4\" - 20, Truss Head Slotted Bolt	MODELS: 205 & 235 - WINDBAR ONLY		
21	740201	1/4\" - 20 Self Locking Nut	46	270030	3/4 x 3/4 Square Tube
22	740102	5/16\" - 17 Hex Nut	47	720101	3/16\" Pop Rivet
23	750101	Flat Washer, 1/4\"	ELECTRIC OPERATION		
24	410102	1/4\" Rope	70	440000	EQ Kit Complete Assembly, Old Style
25	420300	Hand Chain Clip	71	440001	Drive Sprocket, #41P, 72 Tooth
26	420400	Hand Chain	72	440002	Flat Bar Brace
27	750104	1 1/16\" ID Round Flat Washer	73	420003	Pipe Spacer, 3/4\" square tube x 7/8\"
28	220303	12\" Drum Assembly w/Bearing	74	730104	3/8\" - 24 x 4 1/2\" Hex Head Bolt
29	310200	Support Bracket, RH	75	440007	EQ Kit Complete Assembly, New Style
30	310300	Support Bracket, LH	76	780001	ASTA Door Label
31	Varies	Door Guide(s)			

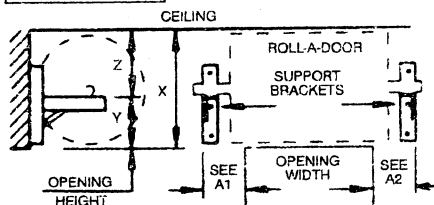
IMPORTANT REMARKS:

DO NOT CUT THE BANDS WHICH HOLD DOOR IN A ROLL. YOU WILL BE TOLD AT A LATER TIME EXACTLY WHEN TO CUT THEM. NO GUARANTEE WILL BE GIVEN OR RESPONSIBILITY ACCEPTED BY THE MANUFACTURER IF THE DOOR IS NOT INSTALLED AS INSTRUCTED. FOR PROPER OPERATION, FOLLOW THE INSTRUCTIONS AS GIVEN. PLEASE REVIEW ALL THE STEPS BEFORE BEGINNING.

STEP #1 - CHECK THE OPENING

- Check the height and width of the opening.
- Check if the jambs are plumb.
- Check if the floor and header are level.
- Check the dimension panel for side room and head room requirements. (SEE DIAGRAM 9)

DIAGRAM 9



STEP #2 - INSTALL BRACKETS

- Mark the horizontal location of the support brackets (SEE DIAGRAM 9).
- Mark the vertical location of the support brackets by using a transit or water level.

THE DOOR MUST BE LEVEL.

NOTE:

Verify minimum headroom requirements. Dimension "X". If sufficient, lower the brackets until "Z" is obtained. If the bracket is lowered more than 2" this will reduce the opening height. The guide height should also be reduced accordingly.

- Drill holes and fasten the brackets with the proper wall fasteners required to obtain a solid mounting. Use through bolts on soft block or brick.

CLEARANCE REQUIREMENTS (HEADROOM)

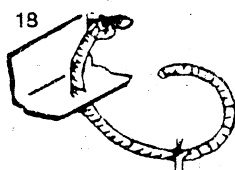
HEIGHT	X	Y	Z
Up to 8'-0"	20"	9-1/2"	10-1/2"
Up to 10'-0"	21"	10"	11"
Up to 16'-0"	23"	11"	12"
Up to 20'-0"	24"	12"	12"

DRIVE TYPE	A1*	A2	* Shown as Left Hand Drive Side. Right is opposite
Push Up / Rope	6"	6"	
Direct Drive	9"	6"	
Pocket Wheel Reduction Gear	9"	6"	
Cast Reduction Gear	9"	6"	
Electric Operator	9"	6"	

NOTE:

- Doors with Heavy Duty Guides, add 1" to A1 and A2 dimensions.
- All Windlock Doors add 1" to A1 and A2 Dimensions.
- Note proper bracket location and provide adequate backing.

DIAGRAM 10



STEP #3 - DRIVE INSTALLATION

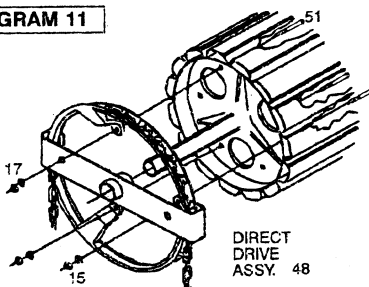
A. Install ROPE (if equipped) as follows:

- Drill minimum 3/8" hole in center of bottom angle. Thread 1/4" rope through hole and tie knot in both ends.

B. Install DIRECT DRIVE CHAIN HOIST (If Equipped) as follows:

- Slide Direct Drive Assembly (48) onto door axle.
- Align holes and install 3/8" x 1 1/2" Hex Bolt (51) through rear of end drum.
- Install 3/8" nut (15) and lock washer (17) and tighten securely. Repeat.
- Feed Hand Chain through the Drive Assembly, (SEE DIAGRAM 11)

DIAGRAM 11



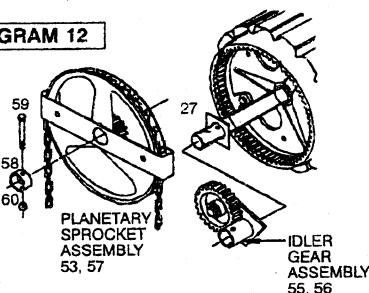
C. Install the CAST REDUCTION GEAR CHAIN HOIST (If Equipped) as follows:

- Slide round flat washer (27) onto door axle.
- Slide Idler Gear Assembly (55, 56) onto door axle.
- Slide Planetary Sprocket assembly (53) and Chain Guide Assembly (57) onto door axle and over idler gear carrier tube.
- Slide collar over the idler gear tube and align holes.
- Secure with 5/16" x 3" hex head bolt (59) and 5/16" self locking nut (60). (SEE DIAGRAM 12)

NOTE:

Keep Idler Gear at a 10 or 2 o'clock position with the bottom angle being at 6 o'clock.

DIAGRAM 12



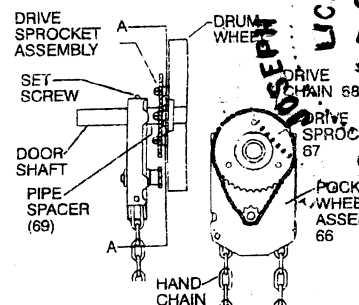
D. Install the POCKET WHEEL REDUCTION GEAR CHAIN HOIST (If Equipped) as follows:

- Install Drive Sprocket (67) on preferred side using 3/8" x 1 1/2" Hex Bolt (51).
- Slide 1" pipe spacer (69) onto door axle.
- Slide pocket wheel assembly (66) onto door axle and align sprockets parallel to each other.
- Connect drive chain (68) around both sprockets using the master link provided.
- After door tension has been adjusted. (STEP 6) Tighten set screws on pocket wheel assembly.

NOTE:

If further adjustment is needed, set screws must be loosened for adjustment and retighten after adjustment. (SEE DIAGRAM 13)

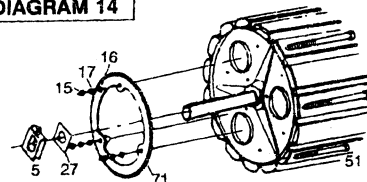
DIAGRAM 13



E. Install "NEW STYLE" ELECTRIC OPERATOR KIT (If Equipped) as follows:

- Install E.O. Sprocket (71) to end drum of door on preferred side using 3/8" x 1 1/2" Hex Bolt (51), 3/8" Nuts (15) and 3/8" Lock Washer (17).
- Slide flat round washer (27) and spring clamp assembly (5) onto door axle and secure set screw with clamp and washer against bearing of the end drum. (SEE DIAGRAM 14)

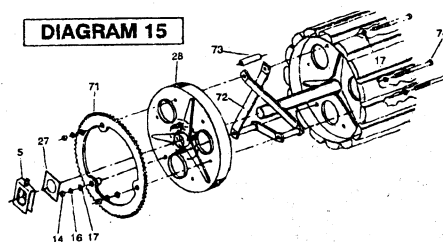
DIAGRAM 14



F. Install "OLD STYLE" ELECTRIC OPERATOR KIT (If Equipped) as follows:

- Remove spring clamp assembly (5) from door axle (if supplied).
- Insert 3/8" x 4 1/2" bolts (74), with 3/8" lock washer (17) through every other 3/8" hole in end drum.
- Slide one end of flat bar brace (72) over each bolt and then slide 3/4" pipe spacer (73) over each bolt. Slide opposite end of flat bar brace over the next bolt in counter clockwise rotation.
- Slide bearing drum assembly over the three bolts.
- Attach and tighten 3/8" flat washers (16), 3/8" (17) Lock Washers, and 3/8" nuts (14) to end of bolts.
- Slide round flat washer (27) and spring clamp assembly (5) onto door axle and secure against the bearing drum assembly (28). (SEE DIAGRAM 15)

DIAGRAM 15



NOTE:

New Style E.O. Kits are to be used with "flush" end drum position, and Old Style E.O. Kits are to be used with "recessed" end drum position.

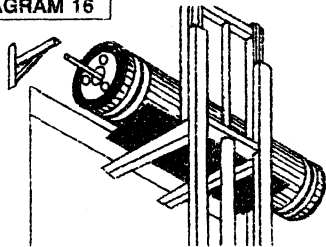
STEP #4 - POSITION DOOR ASSEMBLY

- A. Place the axle clamp (9) or axle casting (8) on to door support bracket (29,30). Lift the door assembly up onto the support bracket. (SEE DIAGRAM 16). Center door assembly in the opening, if side-ways movement is necessary, be certain the door curtain and the axle move together.

NOTE:

Position the door as close to the header as possible. Allow room to spin the door. Do not allow the door curtain to scrape the header. Do not use forklifts or genie lifts with unprotected arms/forks. This can cause irreparable damage to door curtain.

DIAGRAM 16

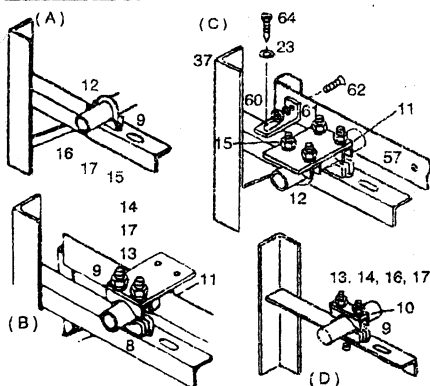


STEP #5 - AXLE HARDWARE

A. MANUAL PUSH-UP / ROPE DRIVE: (Both sides)

1. Place axle clamp (9) onto horizontal member of the support bracket (29,30) and under the door axle.
2. Place $\frac{3}{8}$ " U-Bolt (12) over door axle and through axle clamp.
3. Fasten U-Bolt using $\frac{3}{8}$ " nut (15), $\frac{3}{8}$ " flat washer (16) and $\frac{3}{8}$ " lock washer (17) — tighten securely. (SEE DIAGRAM 17A)

DIAGRAM 17



B. DIRECT DRIVE CHAIN HOIST (Drive Side):

1. Place axle saddle casting (8) onto horizontal member of support bracket and under the door axle.
2. Place the axle clamp (9) and the extended keeper plate (11) over the door axle as shown to extend keeper plate over the direct drive chain guide channel (50).
3. Fasten together using $\frac{3}{8}$ " x $3\frac{1}{2}$ " hex bolt (13), $\frac{3}{8}$ " lock washer (17), $\frac{3}{8}$ " flat washers (16), and $\frac{3}{8}$ " nuts (fine thread) (14) — tighten securely. (SEE DIAGRAM 17B)

C. CAST REDUCTION DRIVE CHAIN HOIST (Drive Side):

1. Place the axle saddle casting (8) onto the support bracket (29,30) and under the door axle.
2. Place the two axle clamps (9) and extended keeper plate (11) on top of the door axle as shown.
3. Fasten axle saddle casting, axle clamp and extended keeper plate together using $\frac{3}{8}$ " x $3\frac{1}{2}$ " hex bolts (13), $\frac{3}{8}$ " lock washers (17), $\frac{3}{8}$ " flat washers (16), and $\frac{3}{8}$ " nuts (fine thread) (14) — tighten securely. (SEE DIAGRAM 17C)

4. Fasten secondary axle clamp, extended keeper plate and $\frac{3}{8}$ " U-Bolt (12) using $\frac{3}{8}$ " lock washers (17), $\frac{3}{8}$ " flat washers (16), $\frac{3}{8}$ " nuts (15) — tighten securely. (SEE DIAGRAM 17C)
5. Install stay brace (61) onto chain guide channel (57) using $\frac{1}{2}$ " x $1\frac{1}{4}$ " flat head bolt (62) and $\frac{1}{2}$ " nut (60) and tighten securely.
6. Fasten the stay brace to the support bracket using a (64) #14 Tek Screw and $\frac{1}{4}$ " flat washer (23). (SEE DIAGRAM 17C)

D. POCKET WHEEL REDUCTION DRIVE CHAIN HOIST (Drive Side) and OLD OR NEW STYLE KITS FOR ELECTRIC OPERATION:

1. Same steps as "Cast Reduction Drive" with the exception of #5 and #6. Pocket wheel reduction drive and E.O. kits do not require a stay brace.

E. NON-DRIVE SIDE (for Direct Drive, Cast or Pocket Wheel Reduction Drives and E.O. Kits):

1. Place axle saddle casting (8) onto horizontal member of support bracket and under the door axle.
2. Place the axle clamp (9) and the standard keeper plate (10) over the door axle as shown.
3. Fasten together using $\frac{3}{8}$ " x $3\frac{1}{2}$ " hex bolt (13), $\frac{3}{8}$ " lock washer (17), $\frac{3}{8}$ " flat washers (16), and $\frac{3}{8}$ " nuts (fine thread) (14) — tighten securely. (SEE DIAGRAM 17D)

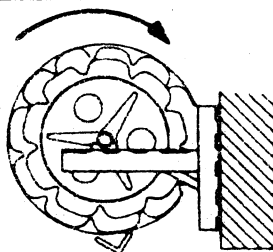
NOTE:

Requires a minimum of 40 lbs. torque to properly secure hardware.

STEP #6 - PRE-TENSION SPRINGS

1. Install chain clip (25) approximately 4'0" above floor on chain operated doors. Installation must be secure.
2. Apply pre-tension to the springs by rotating the door two (2) turns in a forward direction (SEE DIAGRAM 18). The bottom angle is to be in a 6 o'clock position.

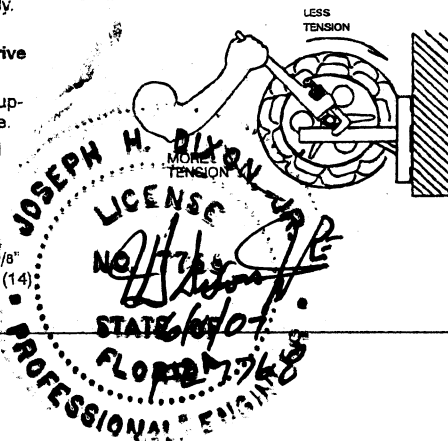
DIAGRAM 18



3. If you're unable to rotate door to pre-tension use a pipe wrench to rotate axle in opposite direction. With one person on each side of door, each person should firmly place a large pipe wrench on the door axle as shown in DIAGRAM 19. Pull down to apply tension incrementally until you achieve 2 full rotations of the door axle. Then tighten the axle hardware.

4. Repeat Step C if adjustment is necessary.

DIAGRAM 19



STEP #7 - CUT THE BANDS

WARNING:

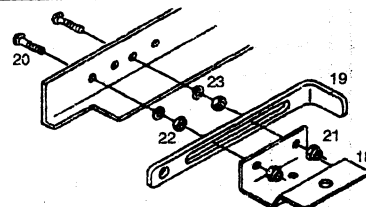
The door is now under tension. Before cutting the bands, take hold of the door roll by the bottom angle.

1. Cut the bands and bring the curtain down no further than $\frac{1}{4}$ the height of the door opening. Secure chain over the chain retainer or wedge a wood prop between the bottom angle and the door roll to prevent upward travel.

STEP #8 - INSTALL DOOR STOPS (Lift Clips) AND SLIDE BOLT LOCKS

1. Install the door stops (18) and the slide bolt locks using $\frac{1}{4}$ " x $1\frac{1}{4}$ " truss head bolt (20), $\frac{1}{4}$ " flat washers (23), $\frac{5}{16}$ " nut (22), and $\frac{1}{4}$ " self locking nut (21) per side.
2. Electrically operated doors still require door stops (lift clips) to be installed.

DIAGRAM 20



NOTE:

When installing slide bolt locks, the threads from the truss head bolt protruding from the self locking nut should be removed to a flush position with the self locking nut to prevent door from hanging up on the head stops. Clamp a pair of vice grips onto the thread and break off.

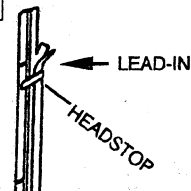
STEP #9 - INSTALL DOOR GUIDES

1. The head stops on the guides should be no more than 1" higher (to bottom of stops) than the door header. If not, cut the bottom of the guides to match your opening height and relocate slide bolt notch at bottom of guide.
2. Models 201, 202, 205, 211, 231, 232, 235: Raise the door curtain so the bottom angle is approximately 3" below the header. Slide the guide over the door curtain and position against the door opening allowing $\frac{1}{4}$ " clearance from edge of curtain to inside the guide.

Install the top fasteners, lower curtain into guides slowly, maintaining proper clearance and stop at 6" above the floor. Install bottom fasteners. Check if the guides are plumb using a level. The fasteners should be located approximately every 24" starting 6" from finished floor. Install balance of fasteners and bend the lead-in at the top of the guide to a 45 degree angle.

(SEE DIAGRAMS 3 THRU 8 and 21)

DIAGRAM 21



3. Model 203, 204, 233, 234: Use same procedure as above allowing $\frac{1}{4}$ " clearance between curtain and the Windlock spur. Lower the curtain into the guides slowly. Be sure there is sufficient clearance for the windlock clips to enter the guides. (SEE DIAGRAM 7 and 8)
4. For "Windload Certified Doors" refer to drawing for fastener/anchor type and frequency.
5. Spray silicone lubricant in guides for ease of operation.

NOTE:

Doors ordered for concrete/masonry application will include 1/4 x 2 1/2" tapcons for guide installation. Block clips welded to back of guide for concrete/masonry application are optional on Models 201, 202, 205, 211, 231, 232, 235. Block clips are standard for concrete/masonry application on Models 203, 204, 233, 234.

STEP #10 - CHECK AND ADJUST BALANCE

If door lowers easily and raises hard, more tension is required. If the door lowers hard and raises easily, less tension is required. (SEE DIAGRAM 19)

CAUTION:

For all door drives: Before adjusting the springs, pull the doors into the up position. Secure the door by the following methods:

1. Tie a rope around the door roll.
2. Place a clamp at the top of the guide channel to secure the curtain in the guides.

A. Cast Reduction Drive Doors Only**WARNING:**

When the axle clamps are loosened, the chain leads will be under tension. Use extreme care when handling the chain leads.

Secure both leads of the chain to the chain retainer (25). Score a horizontal line on the axle. Loosen axle hardware to allow axle to spin freely. Grip both leads of the chain securely. Note direction axle must turn to add or reduce tension (SEE DIAGRAM 19). Rotate axle as required. Secure both chain leads to chain retainer. Tighten all axle hardware. Repeat this operation if more or less tension is required.

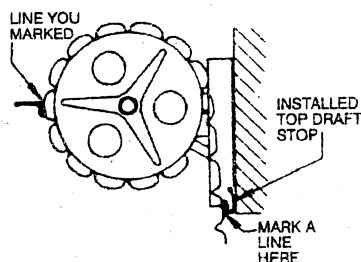
B. All other doors:**WARNING:**

When the axle clamps are loosened, the springs will be very strong. You will need two people to adjust the door tension safely.

1. Each person should firmly place a large pipe wrench on the axle as shown in **DIAGRAM 19**. Loosen the axle clamps and pull down for more tension and up for less tension. For Pocket Wheel Reduction Drive doors, remember to loosen set screws prior to adjustment and retighten securely after adjustment.
2. Retighten the axle clamp hardware.
3. Repeat the above steps if further adjustment is necessary. begin at **STEP 6B**.

STEP #11 - TOP DRAFT STOP

- A. Top Draft Stop comes standard with Models 202, 204, 232, 234 Insulated Doors. All other Models optional.
- B. Pull door down and lock. Go outside and mark a line on the door curtain as shown. (SEE **DIAGRAM 22**)
- C. Raise door 2'6" from floor, or until mark is accessible. Place top draft stop (41) in position as shown and secure with Tek screws. Stretch rubber slightly and secure other end. Locate and install the remainder of Tek screws at 6" O.C.

DIAGRAM 22**SERVICE AND MAINTENANCE HINTS**

The following hints would help you to obtain free operation.

1. DOOR CURTAIN DRAGS IN GUIDES.

- A. Check that door support brackets are plumb.
- B. Adjust location of guides for 1/8" - 1/4" side clearance. Top and bottom.
- C. Door Drum Assembly may be set too close or too far from wall. Note slotted brackets for adjustment.
- D. Check guides for foreign matter, such as dirt, etc.
- E. Check for damaged guides.
- F. Adjust lead-in bend at top inside of guides. (SEE **DIAGRAM 21**)

2. DOOR OPERATES HARD IN ONE DIRECTION:

- A. Check all the above points.
- B. Re-check Step No. 10.
- C. If problem door has reduction drive, check 5/16" x 3" bolt (59) that goes through axle that locks idler gear carrier. If self locking nut (60) is over tightened, it will cause the idler gear carrier shaft to become egg-shaped and bind the chain wheel.

3. CHAIN JUMPS OFF CHAIN GEAR

- A. Chain Guide Assembly could be on axle backwards. Make sure drive parts are assembled correctly. See Diagram 11 for Direct Drive, and Diagram 12 or 13 for Reduction Drives.
- B. Chain Guide could be bent out of alignment with chain wheel.
- C. Check for defects in cast chain wheel or chain.
- D. On Electric Operator Doors or "Pocket Wheel" Reduction Gear Doors, check for sprocket alignment and proper chain tension. Also check that set screws on Pocket Wheel Assembly are securely fastened.

4. DOOR DOES NOT CONTACT FLOOR LEVEL

- A. Use spirit level to check whether door or floor is off level. If door is out of level, proceed to check the following points:
- B. Check if "Support Brackets" and guides are level.
- C. If "A" and "B" check out all right, roll door all the way up and see if curtain rolls up straight on drums. End of door should be square. If cone shaped, go to Section 5.
- D. Models 231, 232, 233, 234, 235: If all of the above check out and curtain is no more than 1/2" out of level, the following method of curtain straightening may be used. The long side of the curtain can be shrunk as follows: Roll door all the way down. On the outside of the door curtain is a steel strip 1 1/8" wide. This strip holds the curtain square. Take a screwdriver and slightly depress strip into corrugated rib. A small amount in each of the lower ten ribs. Door curtain will shrink on that side.

5. DOOR DOES NOT ROLL UP STRAIGHT

- A. Check all points in Section 1.
- B. An alternative solution to correct the coning door is to raise the curtain up to the stops and determine which side of the bottom angle touches the stops first.
- C. Secure hand chain, remove guides, lower curtain down to floor level. Install a drum wedge on side of the door from which the bottom angle touches first.
- D. Proceed to Step 9 to reinstall the door guides.
- E. If problem continues, consult factory.

INSTALLATION OF REPAIR PANELS**1. FOR ALL DOOR MODELS**

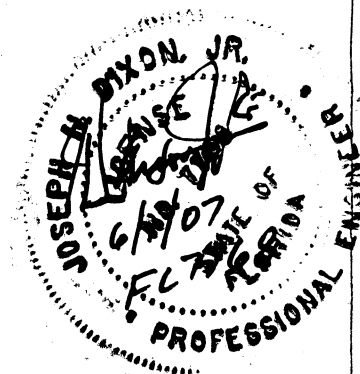
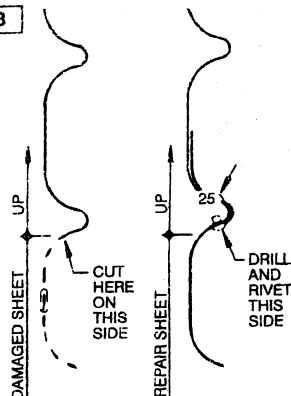
Determine the number of sheets which need to be replaced. Starting from the bottom of door curtain, the lock seams occur on about 26" centers. When ordering, please give exact length of sheet and location on door (i.e., bottom, bottom and one intermediate, etc.)

2. REMOVE DAMAGED SHEETS

- A. Secure door in its full down position by locking the chain on the chain retainer or by wedging a strong piece of wood or pipe in hole at the end of roll, against bracket. When door sheet is cut off, the door will have a strong tendency to roll up.
- B. Remove door guides.
- C. Cut off damaged sheet. (see Diagram 23). Scribe a straight line and cut door sheet off using nibblers.
- D. Cut the sidestripping and remove damaged sheet(s).

3. INSTALL NEW SHEET(S)

- A. Clamp new sheet in location as shown.
- B. Drill holes for 1/8" dia. rivets (#30) at 8" O.C., top and bottom and shown. Pop rivet as you go.
- C. Trim sidestrip as follows: Overlap steel/rubber 3 corrugations. Install the buttons and rivets. Trim PVC Rubber as close as possible to the nearest staple.

DIAGRAM 23

ASTA Door Corporation

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FAX: 770-974-1455

WEBSITE: www.astadoor.com