



Operational & Maintenance Manual

Products:

Installation Site

Contractor

Architect

Distributor



Dear Customer:

Thank you for choosing [redacted] as your custom door installation specialist.

The Operation and Maintenance Manual, which is enclosed, has been supplied by Overhead Door Corporation to meet your needs as our customer. Appropriate information for the products installed has been compiled in this manual for your use. We recommend compliance with all of the safety information provided within the manual.

We strongly recommend implementing a preventative maintenance program. Benefits of properly maintaining your door system include:

- Increased operational efficiency and reliability.
- Extended useful life of your equipment.
- Increased probability of dependable equipment performance.
- Elimination of non-budgeted maintenance cost for door service.

As an Overhead Door distributor, we offer you complete product support for your service and maintenance needs. Do not hesitate to call us for assistance.

We hope that you will also continue to consider [redacted] for your future product and installation needs. We are firmly committed to providing the finest in Overhead Door products, accessories, and a level of customer support unmatched in the industry.

Sincerely,



Operation & Maintenance Manual

Rolling Fire Doors

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GENERAL INFORMATION



OVERHEAD DOOR CORPORATION

Overhead Door Corporation, based in Dallas, Texas, is a leading single-source manufacturer of integrated door and operator systems for commercial and residential applications.

Overhead Door is the door solutions provider that delivers expert service and the highest level of performance and reliability. Our comprehensive product line encompasses a wide variety of commercial door solutions including: commercial operators, commercial sectional and rolling service doors, advanced performance rolling doors, and security grilles.

With our nationwide network of more than 400 authorized distributors, we are a leading provider of overhead and garage door systems, and we continue to lead the way with reliable solutions and unmatched professional installation, service and support that keeps customers coming back. The brand trusted for over 90 years, Overhead Door gives home and business owners confidence and peace of mind.



To locate a distributor:

From the United States, call 1-800-929-3667 (DOOR)

International: 1-717-248-0131

<http://www.overheaddoor.com/Pages/distributor-locator.aspx>

Contact Information:

Overhead Door Corporation
2501 S. State Hwy. 121, Suite 200
Lewisville, TX 75067

Telephone: 1-800-275-3290

www.overheaddoor.com



PREVENTATIVE MAINTENANCE



BENEFITS OF PREVENTATIVE MAINTENANCE PROGRAM

- **Increase operational efficiency, safety and reliability**
- **Extend useful life of your equipment**
- **Reduce probability of equipment malfunctioning**
- **Decrease costly downtime**
- **Decrease long-term repair expense**
- **Priority scheduling for service**
- **Establish relationship with experienced, service-oriented professionals**



RECOMMENDED PREVENTATIVE MAINTENANCE

To keep door in good working condition:

Every three months¹

- Oil all moving parts except the clutch mechanism on fire doors and the wool pile in the guides on rolling grilles or counter doors. The guides should be lubricated with a paste wax or silicone spray.
- If electrically operated, check the operator gear reducer for oil leakage. If it is necessary to add oil, use Mobile Synthetic Oil (AGMA 7 #SHC 75W90).
- Check the tension of the roller chain between the operator and the door sprocket (see Figure A). If too loose, loosen the operator mounting bolts and slide the operator to tighten the chain (see Figure B). Retighten the operator mounting bolts.
- Oil the interior roller chain on operators without gear reducer.

Every six months¹

- Oil all exposed roller chains, and on electric operators, dry lube the limit switch shaft threads.
- All bearings provided with grease fittings should be lubricated. If so equipped, find bearings located in the drive bracket and tension end of the counterbalance.
- Fire doors should be drop tested unless more frequent testing is required by other codes. Always use the Drop Test Instructions located inside the tension headplate cover.
- On crank operated doors and grilles, the crank assemblies are sealed with grease and should not require lubrication.

¹ The above frequency of maintenance is for normal operation. Severe duty or unusual operating conditions may require modification of the times between maintenance.

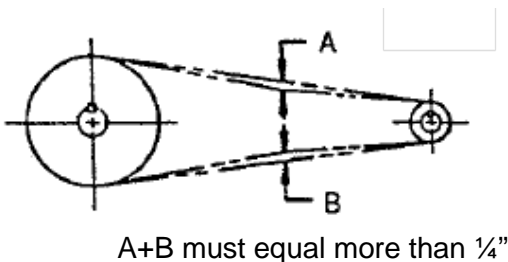


Figure A

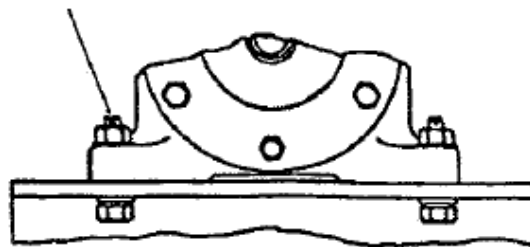


Figure B



TROUBLESHOOTING GUIDE FOR ROLLING SERVICE DOORS

1. DOOR IS HARD TO RAISE BUT EASY TO LOWER.

SOLUTION: Springs require more turns. Raise door to fully opened position and add spring tension (1/8 turn at a time) until the same resistance is felt lowering the door as is felt raising the door. Adjust tension wheel with steel winding bards 3' long and diameter 1/2" or 3/4".

2. DOOR IS HARD TO LOWER BUT EASY TO RAISE.

SOLUTION: Springs require fewer turns. Raise door to fully opened position and remove spring tension (1/8 turn at a time) until results listed in example 1 are achieved.

3. DOOR HANGS UP AT ENTRANCE INTO GUIDES.

SOLUTION:

- a. Bellmouths might be out of position away from the headplate allowing endlocks to wedge. Loosen attachment nut and locate edge of bellmouth snug against headplate and tighten.
- b. Endlocks might have become loose and tilted out of position. Drill out loose fasteners and reattach with suitable fastener.
- c. Curtain might have been bent and damaged enough to wedge in guides. In some cases the bellmouths can be removed from the guide entrance and the curtain lowered outside of the guides and straightened. Be careful not to allow curtain to rapidly unwind off the counterbalance.

4. ELECTRIC OPERATOR STOPS TOO SOON; DOES NOT REACH THE OPEN OR CLOSED POSITION.

SOLUTION: Operator limit switch setting has become out of phase with the door. Reset the limit switches. See operator installation instructions for method of resetting limits.

5. OPERATOR DOES NOT RUN.

SOLUTION:

- a. Verify that electric power is available to the operator.
- b. Verify 24 VAC control voltage from operator transformer.
- c. Verify condition of hoist interlock switch.
- d. Verify condition of slidebolt interlock switch.

Overhead Door Corporation

ROLLING FIRE DOOR DROP TEST FORM AND ANNUAL INSPECTION

NOTE TO OWNER: NFPA-80 requires the annual testing of rolling fire doors to demonstrate proper and full closure. Resetting of the release mechanism must be done in accordance with the manufacturer's instructions. A written record must be maintained and made available to the authority having jurisdiction. NFPA-80 also requires that when damage impairs the door's proper emergency function, that it be repaired with parts obtained from the original door's manufacturer and upon completion of repairs that the door be tested to assure emergency operation and closing.

 **WARNING: SEVERE INJURY OR DEATH MAY RESULT THROUGH IMPROPER ATTEMPTS AT DROP TESTING, REPAIR AND/OR MAINTENANCE.**

Drop testing, repair and/or maintenance should be performed by qualified personnel with a complete knowledge and understanding of this type of door. Before drop testing, conduct a visual inspection for damaged or missing parts that may create a hazard during testing or affect proper operation or resetting. Verify proper installation. Open and close the door to check for correct spring tension. ADDITIONAL INFORMATION ON DROP TESTING IS PROVIDED ON THE REVERSE SIDE OF THIS FORM, IN THE MANUFACTURER'S INSTALLATION/RESET INSTRUCTIONS, AND IN NFPA-80.

PROJECT _____ CONTACT PERSON _____
ADDRESS _____ PHONE _____
_____ DATE _____

Door # Location	Door Size	Door Serial No.	U.L. Tag No.	Visual Check		Operation Check		Reset Check	
				Pass	Fail	Pass	Fail	Pass	Fail
1.									
2.									
3.									
4.									

New Installation _____ Annual Check _____

COMMENTS AND RECOMMENDED WORK (new form needed when work is completed)

Door #1

Door #2

Door #3

Door #4

The doors listed above (noted as "passed" for the drop test) have been installed in accordance with the manufacturer's installation instructions. The automatic release device has been tested to demonstrate proper operation and full closure. They have been reset in accordance with the manufacturer's reset instructions and left in proper working condition, unless otherwise noted above.

TESTED BY _____ WITNESSED BY _____

COMPANY _____ REPRESENTING _____

ADDRESS _____ SIGNATURE _____

_____ RECOMMENDED WORK IS: Authorized _____ Declined _____

SIGNATURE _____ DATE _____

BY _____

SUGGESTED INSPECTION AND DROP TEST GUIDELINE ON REVERSE SIDE

INSPECTION AND DROP TEST GUIDELINES

Refer to the manufacturer's installation/reset instructions and NFPA-80

VISUAL INSPECTION

CAUTION: EVERY COMPONENT OF A DOOR AND ITS INSTALLATION MUST BE CHECKED FOR DETERMINATION OF FACTORS THAT MAY AFFECT A DOOR'S INTENDED OPERATION AND PERFORMANCE. THE LIST BELOW MAY BE INCOMPLETE AND IS PROVIDED AS A GUIDELINE ONLY.

A. Proper installation requirements

1. Curtain, barrel and guides must be aligned level, plumb, and true
2. Attachment to jambs must be with proper bolts, expansion anchors, or as otherwise required by the listing
3. Maintain expansion clearance (top of guides for FireKing™ Fire Door)
4. Fusible links must be located at top of door and within 1 foot of ceiling on both sides of wall

B. Check and repair damaged, incorrect or missing parts, such as:

1. Slats - bent slats, cracked beads, torn ends
2. Endlocks - missing, broken, bent, loose
3. Bottom bar - bent angles, loose bolts, missing washers on bolts (when required)
4. Guide assembly - bent angles, loose bolts, missing galvanized washers or bolts (when required), curtain entry or debris in guide
5. Hood and flame baffle (when baffle required) - bent, rubbing curtain in open position, holes, tears. Attachment to brackets and wall (when required), intermediate supports (when required)
6. Brackets and operating mechanisms - worn, misaligned or badly meshed gears, sprockets or chains, broken parts, and bent shafts
7. Automatic closing and governor mechanisms - missing or broken parts, drop or release arms tied, blocked, or wedged
8. Fusible links, sash chain, S-hooks, eyes, pulleys, etc. - links painted or coated with dust or grease, kinked or pinched cable, twisted or not flexible, obstructed eyes or raceways
9. Mounting and assembly bolts - missing or loose
10. Guide mounting bolts must all be in top of slot for upward expanding FireKing Fire Doors
11. Past replacement of parts not from the original door manufacturer - "homemade" or mismatched parts are not approved and must be replaced
12. Check balance and spring tension of door
13. If chain operated, check hand chain for damaged links. Replace or repair if necessary
14. If motor operated, check door operating jamb sprocket and chain, adjust and lubricate as necessary; readjust limits as necessary

C. Ancillary equipment

1. Smoke detectors/release devices - check continuity (all release devices must be tested)
2. Control panels - check function
3. Miscellaneous other equipment should be checked for proper function and operation

WARNING: SERVICING OF MOTOR OPERATOR SHOULD BE DONE BY A QUALIFIED ELECTRICIAN WITH THE NECESSARY SCHEMATICS AND PROPER KNOWLEDGE OF THE OPERATOR.

OPERATIONAL INSPECTION

Roll door up and down in normal operation to check for spring tension and free movement of curtain in guides.

DROP TEST

If the door does not roll up and down properly in normal operation, or if there are damaged or missing parts that will create a hazard or prevent proper operation or reset, THESE CONDITIONS MUST BE CORRECTED BEFORE CONDUCTING A DROP TEST.

Drop test per manufacturer's instructions. Drop test should provide for automatic closing of the curtain at an average speed not less than 6 inches per second, nor more than 24 inches per second, and full closure of the curtain with the bottom bar closing evenly across the floor.

Reset per manufacturer's instruction. Drop test the door a second time to verify that the reset was properly done, this is a requirement of NFPA 80. Complete drop test forms and forward copies to Overhead Door dealer and customers.

ULTIMATE ACCEPTABILITY OF A FIRE DOOR IS THE DECISION OF THE AUTHORITY HAVING JURISDICTION, AS DEFINED BY NFPA-80.



SCOPE OF WORK FOR ROLLING DOORS AND ELECTRIC OPERATORS

For the period _____, 20__, through _____, 20__, the following services and inspections will be provided as part of the Preventative Maintenance Program for the rolling door(s) and operator(s):

ROLLING DOORS:

- 1) Inspect door alignment and level.
- 2) Inspect slats and endlocks for damage.
- 3) Inspect guides, bottom bar and hood for damage.
- 4) Inspect all weather-stripping for wear or damage.
- 5) Adjust spring and lubricate bearings.
- 6) Inspect and tighten fasteners.
- 7) Inspect and lubricate chain hoist.
- 8) Inspect locks for proper operation.
- 9) Inspect and tighten all sprockets and shaft collars.
- 10) Inspect safety labels, placement and condition.

ROLLING FIRE DOORS:

- 1) Inspect fuse links and replace painted fuse links.
- 2) Drop test door for proper operation.
- 3) Check that door is properly reset.
- 4) Test electric fusible links for continuity (where applicable).
- 5) Test smoke detector (where applicable).
- 6) Test hold-open devices and time delays (where applicable).
- 7) Inspect safety labels, placement and condition.

ELECTRIC OPERATORS:

- 1) Inspect and adjust limit switches.
- 2) Inspect and adjust belts.
- 3) Inspect and adjust brake.
- 4) Inspect gear reducer.
- 5) Inspect operator mounting.
- 6) Inspect and test disconnect.
- 7) Inspect and lubricate roller chain.
- 8) Inspect and tighten all sprockets.
- 9) Inspect safety labels, placement and condition.



INSTALLATION INSTRUCTIONS

The Genuine. The Original.



***Installation Instructions for
BETWEEN JAMBS MOUNTED
ROLLING FIRE DOOR
with
TENSION RELEASE AUTOMATIC CLOSURE
GOVERNOR CONTROLLED
Series 630/631/635***

***Rolling Fire Doors may be mounted on openings in fire walls of
masonry construction and non-masonry construction.***

READ COMPLETE INSTRUCTIONS BEFORE INSTALLING DOORS

This document also refers to the following other documents or specifications:

Drop Test Instructions 304952

Hilti Kwik Bolt Installation Instructions 308577

NFPA 80-2007

Brush Seal Instructions 308222-0001

SAFETY INFORMATION

OVERVIEW OF POTENTIAL HAZARDS

Overhead doors are large, heavy objects that move with the help of springs under high tension and electric motors. Since moving objects, springs under tension, and electric motors can cause injuries, your safety and the safety of others depend on you reading the information in this manual. If you have questions or do not understand the information presented, call your nearest trained door system technician.

In this section, and those that follow, the words **Danger**, **Warning**, and **Caution** are used to emphasize important safety information. The word:

▲ **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 potentially hazardous situation which, if not avoided, may result in injury or property damage.

The word **NOTE** is used to indicate important steps to be followed or important considerations.

IMPORTANT SAFETY INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS SAVE THESE INSTRUCTIONS




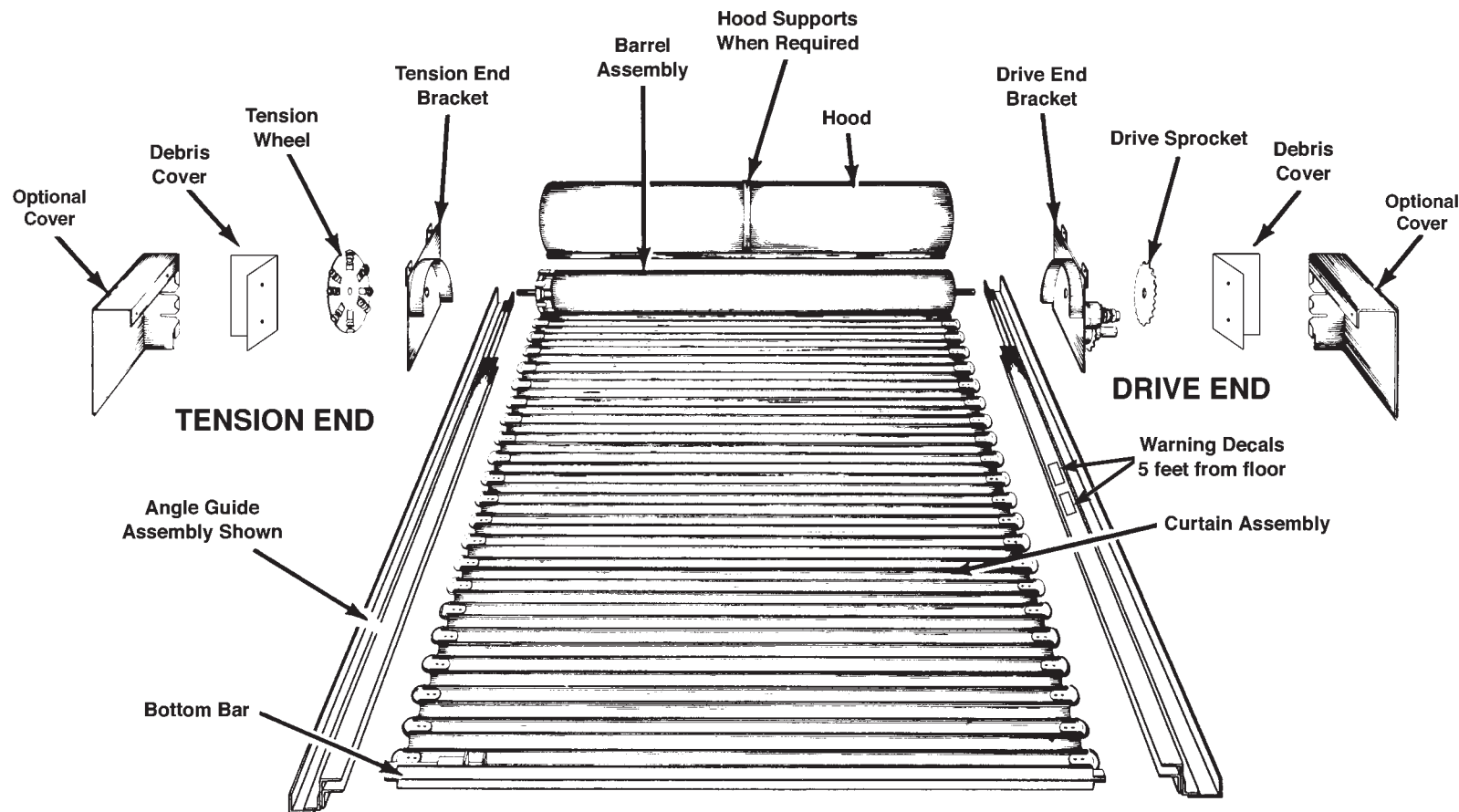
POTENTIAL HAZARD	EFFECT	PREVENTION
 MOVING DOOR	▲ WARNING Could result in death or serious injury.	Keep people clear of opening while Door is moving. Do Not allow children to play with the Door Operator. Do Not operate a Door that jams or one that has a broken spring.
 ELECTRICAL SHOCK	▲ WARNING Could result in death or serious injury.	Turn OFF power before removing operator cover. When replacing cover, make sure wires are not pinching or near moving parts. Operator must be properly grounded.
 HIGH SPRING TENSION	▲ WARNING Could result in death or serious injury.	Do NOT try to remove, install, repair or adjust springs or anything to which door spring parts are fastened, such as, wood blocks, steel brackets, cables or other like items. Repairs and adjustments must be made by a trained door system technician using proper tools and instructions.

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KEY DRAWING

Pictorial view of a Rolling Fire Door with parts and their names.



Right hand door is illustrated. In a left hand drive door, the barrel, both guides and both brackets are reversed.

INSTALLATION DATA SHEET

A sample of the "INSTALLATION DATA" sheet is shown below and is located inside the door hardware box. You will need to refer to the data on the "INSTALLATION DATA" sheet.

Factory order number on door components must match with factory order number on the "INSTALLATION DATA" sheet. Each door has individual "INSTALLATION DATA" sheet.

				** WORK ORDER **		Page		Date

W.O./Parent.		WO		Related SO .		Plant. . .		17
Item Number.		HARDWARE		Qty. .		Lot #. . .		
Customer . .				Job. .		Start Dt .		Req D.
Status . . .		FAX:		Pty.		Drawing #. CONFIGURED		
				Type .		P.O. # . .		
WALL OPENING :		WIDE X		HIGH PRDCT:		SLAT TYPE :		GAUGE :
GUIDE TYPE :		GUIDE ENTRY TYPE :				DRIVE SIDE :		WINDLOAD : 20
BOTTOM BAR TYPE:		BBAR MATL.:		BBAR FINISH :				DRIVE NO. :
DOOR MOUNT :		WALL MOUNT :		OPERATION :				BBAR WEATHERSTRIP :
*** DOOR SERIES :		***						ABBV/COLOR :
***** HARDWARE DETAILS *****								

SAMPLE

DOOR INSTALLATION DATA:					
DOOR SERIES :					
WALL OPENING WIDTH		WALL OPENING HEIGHT		GUIDE TYPE	S REFERENCE
				HAND DRIVE	OPERATION TYPE
INITIAL TURNS	TOTAL TURNS	RELEASE TURN	DRIVE NO.	CURTAIN/BOTTOM BAR WT.	COUNTERBALANCE WEIGHT
GUIDE GAP	GUIDE CONFIG	MOUNTING			

. Messages

PRE-INSTALLATION CHECK LIST

VERIFY THAT THE DOOR INSTALLATION can be accomplished before proceeding:

- Insure the wall opening matches the Opening Width and Height shown on the "Installation Data" sheet and Figure 1.
- Are the jambs suitable to hold the guides? See jambs details below.
- Are the guides you received suitable for the jambs? Compare the guide type shown on the "Installation Data" sheet with Figure 2.
- Can the guides be installed plumb?
- Measure the length of the guide jamb angle and the height of the jamb opening. The difference must allow expansion of the guides 1/8" per foot of opening height. See Figures 3, 6A and 6B.

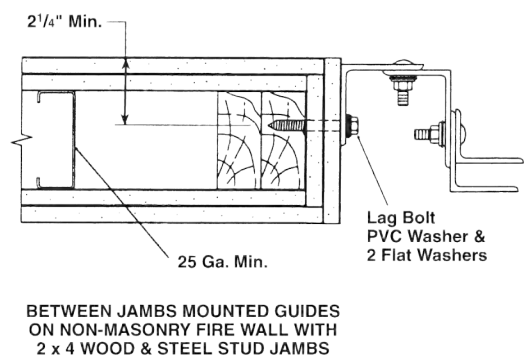
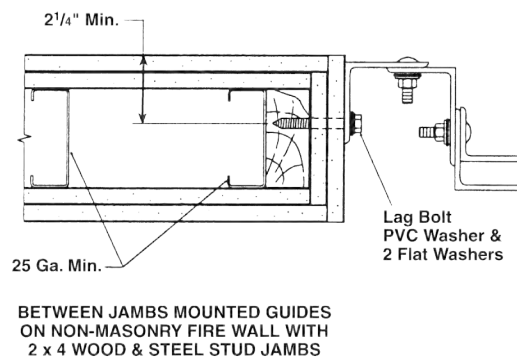
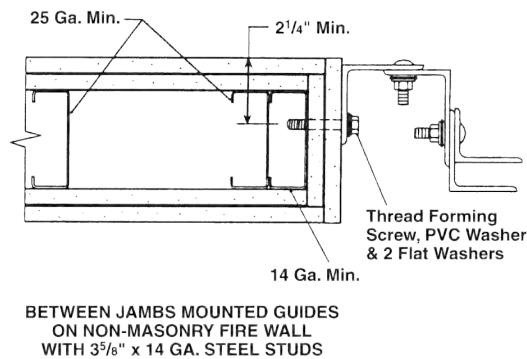
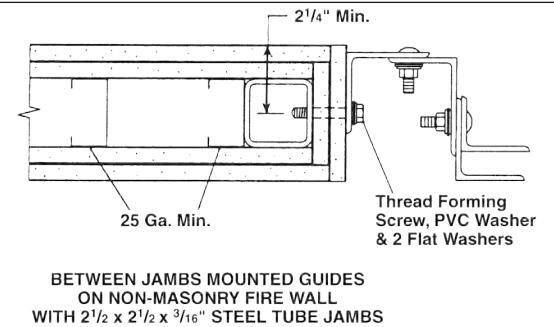
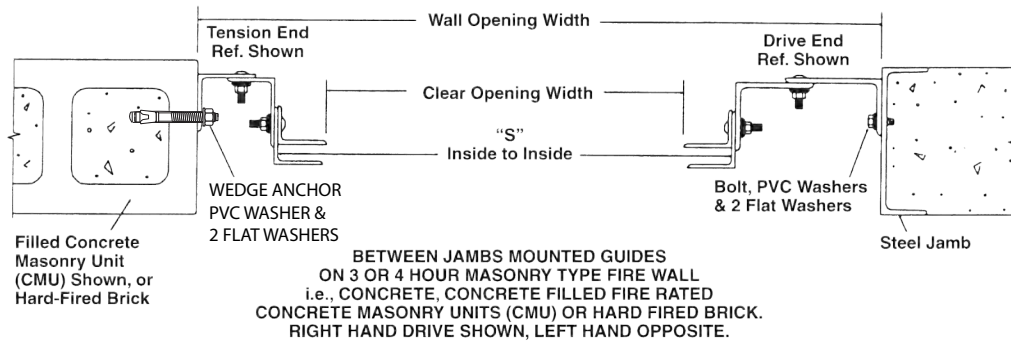
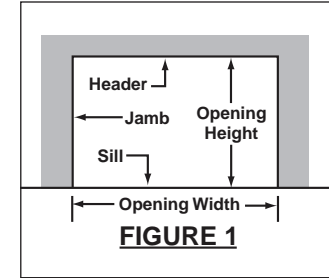


FIGURE 2

INSTALL

STEP 1

INSTALL GUIDE ASSEMBLIES

- Locate the guide assemblies such that "S" dimension exists between the guides as shown in Figure 2.
- The "S" dimension is shown on the "Installation Data" sheet.
- Both guides MUST be on a level line and both guides MUST be plumb.
- The "S" dimension must be held within 1/8" over the entire height of guides.
- Guide assemblies are designed to rest on floor. If the bottom of one guide is above floor, install a sheet metal bottom seal. See Figure 5.

STEP 2

JAMB ANGLE ATTACHMENT

- See jamb angle fastener chart.
- Use fasteners provided in manufacturer's door hardware box.
- Drill holes in jamb so the fasteners are at the top of the slots.
- Install the high jamb angle. Then clamp other angle in place to determine that angles are level and achieve the "S" dimension.

NOTE: If optional brush seals are to be installed with this door, please refer to Brush Seal instructions, 308222-0001, at this time.

IMPORTANT: If Smoke 'S' Label is present on the bottom bar then the provided brush seals and retainers MUST be installed to remain compliant.

A. CONCRETE, FILLED CMU AND BRICK JAMBS

The jamb angle expansion anchors must be set back from the corner of the jamb by a distance in inches equal to 6 times the drill bit diameter in inches. See Figure 4. Refer also to Expansion Anchor Instructions 307390-0001.

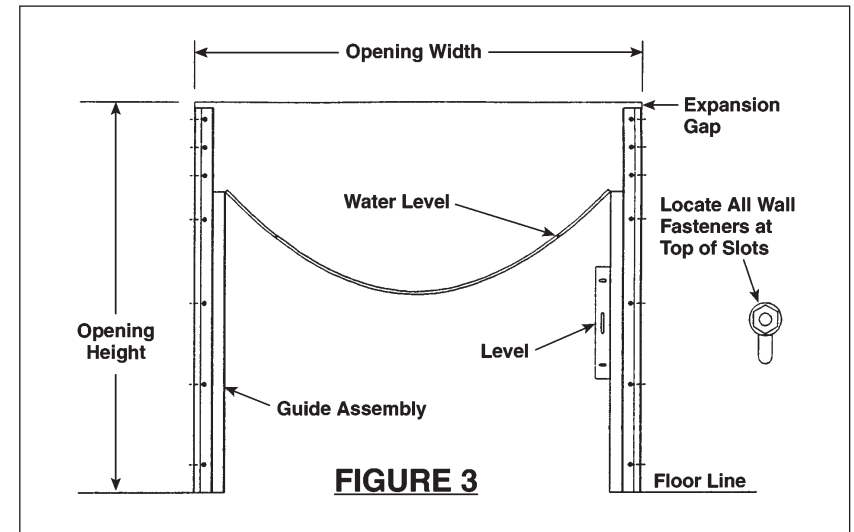


FIGURE 3

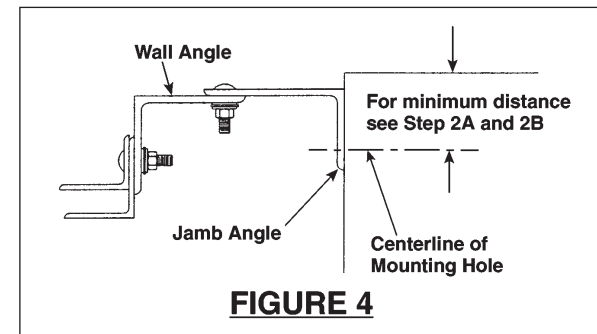


FIGURE 4

JAMB ANGLE FASTENER CHART			
JAMB	FASTENER	DRILL SIZE	JAMB FASTENER SPECIFICATIONS
Steel	3/8" Self-Tap Screw 1/2" Bolt 5/8" Bolt	11/32" Dia. 27/64" Dia. 17/32" Dia.	Steel jambs must be minimum 3/16" thick
Concrete	3/8" Wedge Anchor 1/2" Wedge Anchor 5/8" Wedge Anchor	3/8" Dia. 1/2" Dia. 5/8" Dia.	Drill holes as shown on Overhead Door installation instruction 308577 on odcexchange.com
Filled Block	3/8" Wedge Anchor 1/2" Wedge Anchor	3/8" Dia. 1/2" Dia.	
Wood	3/8" Lag Screw	1/4" Dia.	Drill hole 3" deep

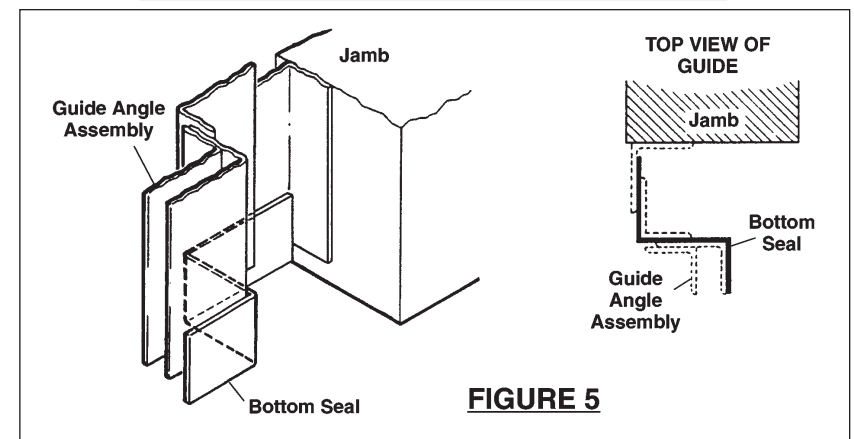


FIGURE 5

B. NON-MASONRY JAMBS

The jamb angle fasteners must be set back from the corner of the jamb by at least 2-1/4" inches. See Figure 4.

C. HOLLOW CMU JAMBS

Do not attempt to fasten the jamb angle to a hollow CMU jamb. Contact the OHD plant to discuss the option of mounting the guides to steel tubes set against the face of the jambs. Steel tubes mounted between jambs is not approved by UL and FM.

D. STEEL JAMBS – Screw attachment option

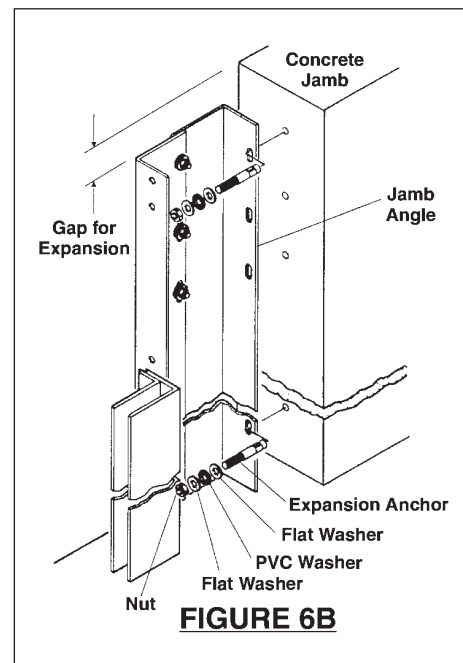
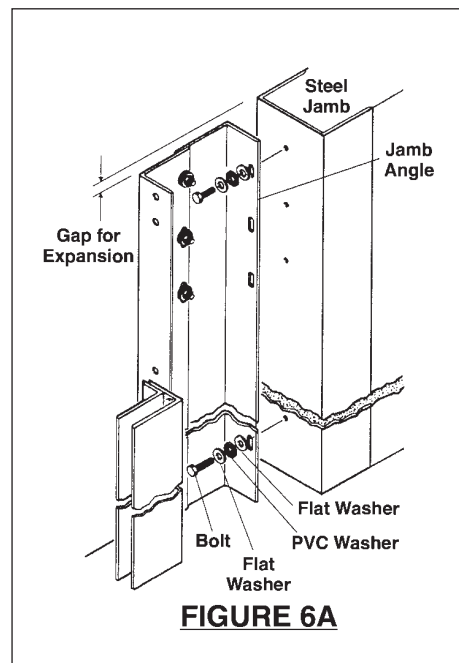
Use screws to fasten the jamb angle to the steel jamb. See Figure 6A.

E. STEEL JAMBS – Weld attachment option

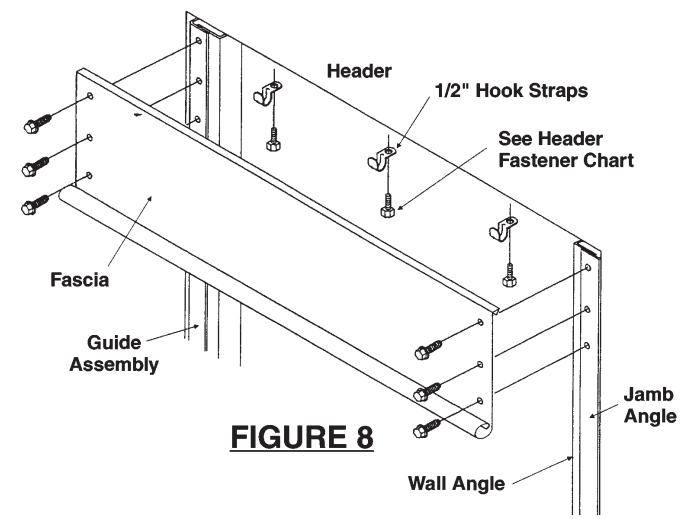
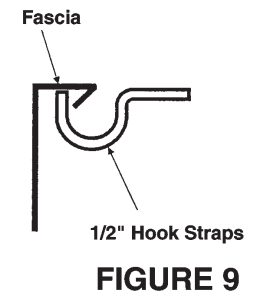
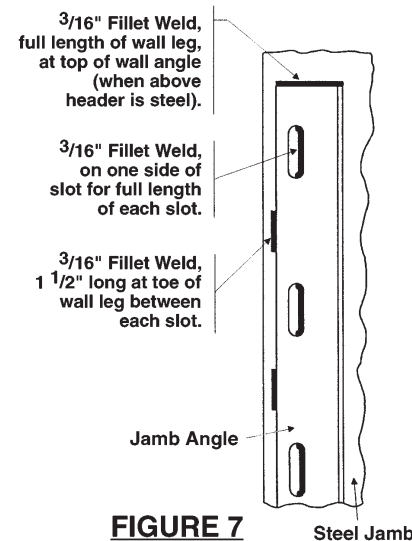
UL approved. Not FM approved. Hold jamb angle against steel jamb and tack weld in place. Recheck "S" dimension before proceeding. Apply vertical welds as in Figure 7 using electrode E6010, 6011 or E7014. Apply good quality 3/16" fillet welds. Figure 7 shows jamb angle with wall angle and guide angles removed.

STEP 3

FASCIA INSTALLATION—The fascia is designed to cover the curtain barrel area which is left exposed when installing a door between jambs. It must be installed before the barrel/curtain assembly



- Remove top three bolts that fasten jamb angle to wall angle. See Figure 4.
- Position top of fascia against underneath side of header and against guides.
- Match drill jamb angle holes, three at each end. Fasten fascia to guides as shown in Figure 8 using fasteners previously removed.
- Attach 1/2" strap hooks to underneath side of header and against top lip of fascia as shown in Figure 9. (Flatten and enlarge hole in straps as required.) See Fascia Fastener Chart on page 8 for type of fasteners to use on different types of headers. Different width doors will have different number of hooks. Space hooks evenly.



FASCIA FASTENER CHART (for Figure 8)		
HEADER TYPE	FASTENER	DRILL SIZE
Steel	Screw, Hex Tap, Type "B" 1/4-14 x 3/4"	15/64" Dia.
Concrete, Filled CMU Block or Hard-Fired Brick	Anchor, Exp. Sleeve 1/4 x 13/8"	1/4" Dia.
Steel Tube or Steel Stud in Non-Masonry Wall	Screw, Hex Tap, Type "B" 1/4-14 x 2"	15/64" Dia.
Wood Stud in Non-Masonry Wall	Screw, Wood Lag 1/4-10 x 2"	1/8" Dia.

STEP 4

IDENTIFY HEADPLATE BRACKETS—See Figure 10
Right hand drive shown; Left hand drive is opposite.

STEP 5

IDENTIFY BARREL ASSEMBLY DRIVE END

Right hand drive shown in Figure 11; left hand drive is opposite. Look for an "R" for right hand drive or an "L" for left hand drive stamped on the end of the drive shaft.

STEP 6

Inspect position of impact pawl. The left hand or right hand tension end assemblies MUST be as shown in Figure 12.

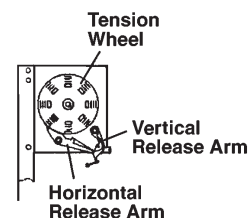
⚠ WARNING

Counterbalance damage could allow curtain to close rapidly which could result in death or serious injury. A right hand drive headplate must be used with right hand barrel assembly to prevent such damage; left hand drive headplate and left hand barrel must also match.

HEADPLATE BRACKETS

RH Drive shown, LH Drive opposite

TENSION END BRACKET



DRIVE END BRACKET

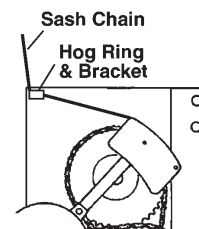
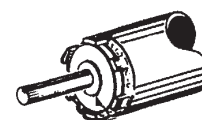


FIGURE 10

BARREL ASSEMBLY

RH Drive shown, LH opposite

TENSION END



DRIVE END

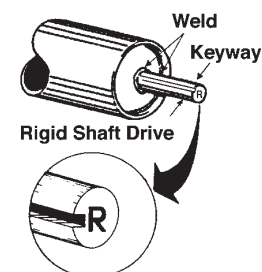
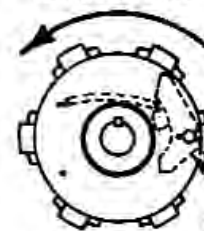


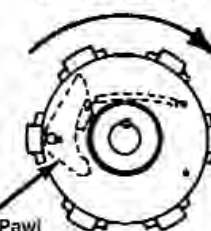
FIGURE 11

CURTAIN GOING DOWN
BARREL ROTATION



Right Hand Barrel

CURTAIN GOING DOWN
BARREL ROTATION



Left Hand Barrel

Impact Pawl

FIGURE 12

STEP 7

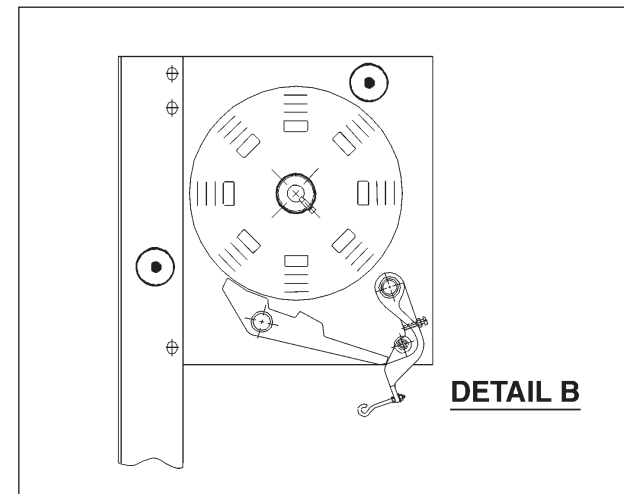
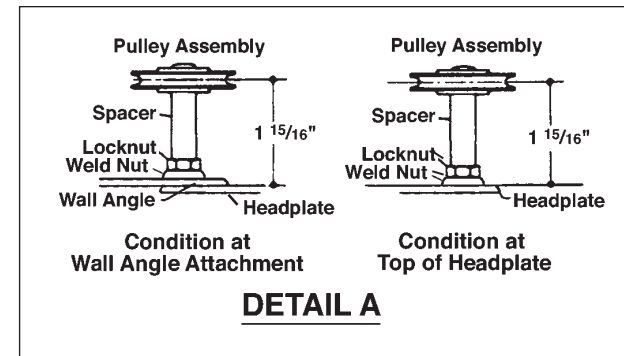
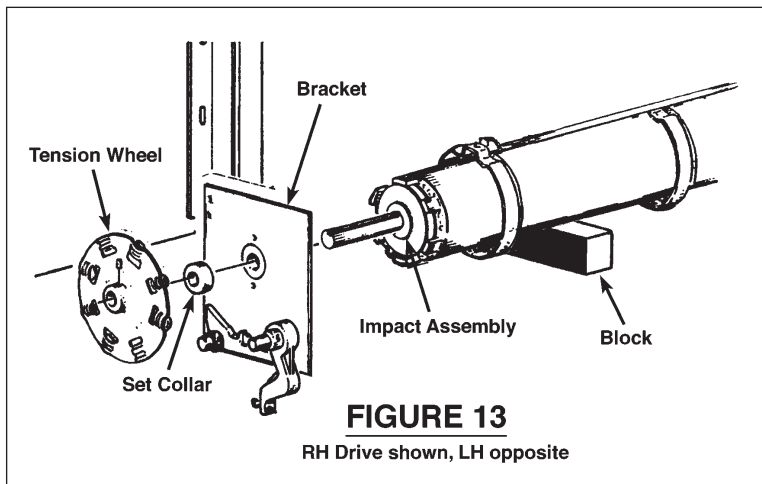
TENSION HEADPLATE BRACKET

Install pulley assemblies on tension headplate and on guide angle as shown in Details A and B. Set the pulley centerline approximately 2" from the headplate & guide angle. This should be accomplished before the headplate is positioned on the tension shaft of the counterbalance. Routing of the sash chain will be described on page 15.

STEP 8

BARREL AND HEADPLATE BRACKETS

- Set barrel assembly on blocks or sawhorses so headplate brackets clear the floor.
- Slide drive end of barrel assembly through drive bracket bearing and tension end through tension bracket bearing.
- The distance between the headplate brackets should be the "S" dimension on the "Installation Data" sheet.
- Install set collars on shafts on outside of headplate bracket.
- Secure tension wheel to tension shaft as shown in Figure 13.



STEP 9

LIFT BARREL AND HEADPLATE BRACKETS AND BOLT THEM TO GUIDE WALL ANGLES

- Use hex bolts to fasten headplate brackets to the inside of the guide wall angle.
- Bolt heads must be on the inside of the headplate brackets. See Figure 14. Brackets may have 2 or 3 mounting slots.
- Put flat steel washer under bolt head and under nut.
- Headplate brackets must be square to the wall and parallel.
- Center barrel between brackets.
- Barrel must be level.
- Drive headplate with cast flange bearing needs two set collars on drive shaft.

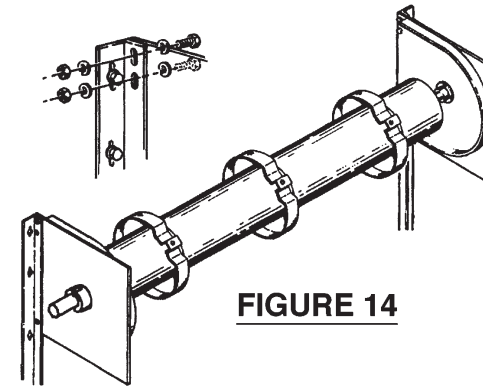


FIGURE 14

STEP 10

TENSION BRACKET ASSEMBLIES

- Position tension wheel in vertical alignment with release arms. Insert key and tighten set screw. NOTE: Right Hand Drive shown in Figure 15; LH opposite.
- Use S-hook to attach turnbuckle to eyebolt on vertical release arm. See Figure 15.

▲ CAUTION: Use proper lifting equipment and correct lifting procedure to avoid injury.

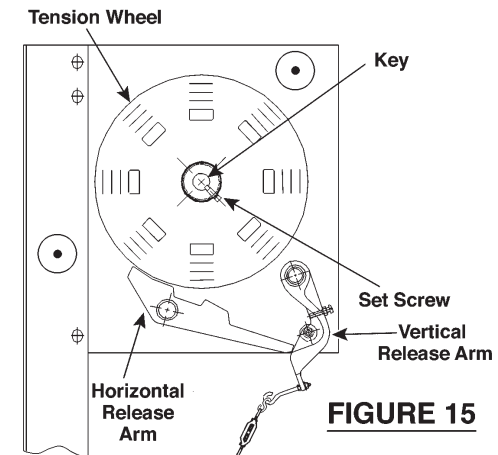


FIGURE 15

STEP 11

DRIVE BRACKET ASSEMBLY: See Figure 16

- Install drive sprocket and roller chain; sprockets must be aligned. Right hand drive shown, left hand opposite.
- For hand chain operation, complete installation by threading hand chain through pocket wheel and closing the link. DO NOT ALLOW TWIST IN CHAIN.
- Install shaft spreader on all No. 5 drive bracket. Tighten set screw. Adjust nut to maintain distance between shafts. Tighten lock nut.

⚠ WARNING

The use of electric operator during installation of the door could result in death or serious injury. Do not connect power to electric operator until door installation is complete including hood and covers.

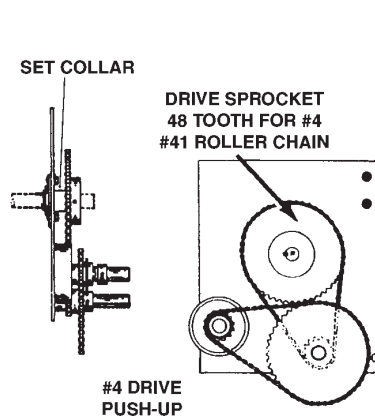


FIGURE 16A

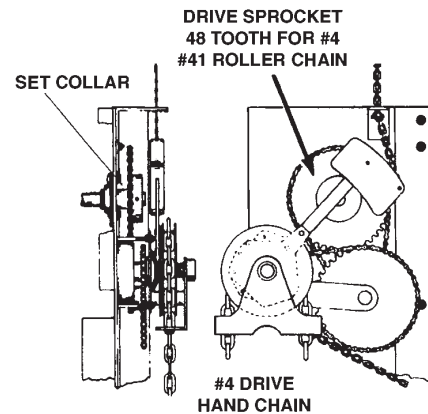


FIGURE 16B

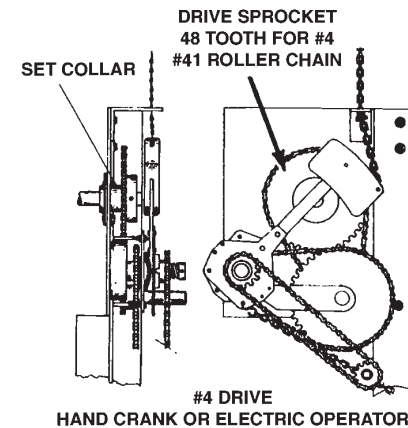


FIGURE 16C

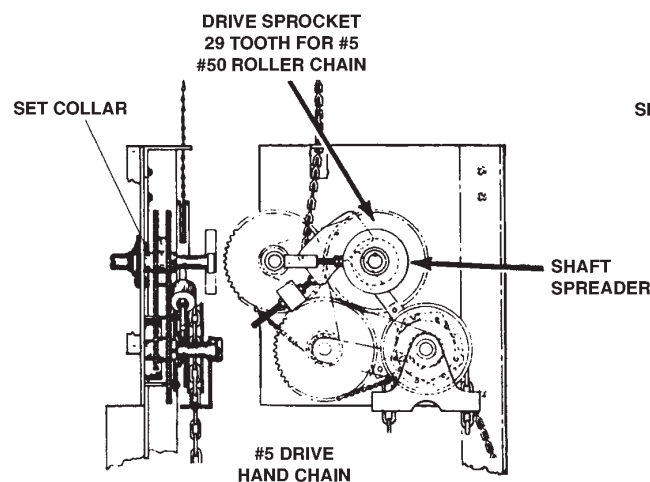


FIGURE 16D

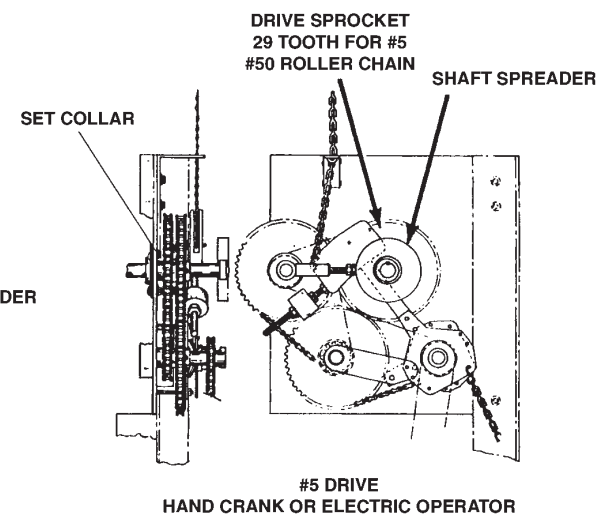


FIGURE 16E

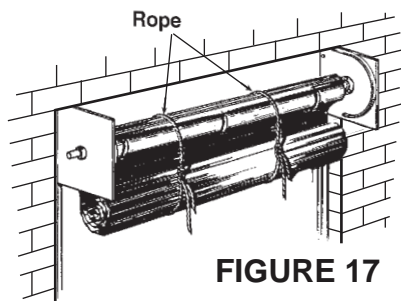


FIGURE 17

STEP 12

INSTALLATION OF CURTAIN: See Figure 17

- The Sling Method is recommended because rolling the curtain onto the barrel assembly on the floor can cause curtain damage.
- Suspend the curtain below the barrel on two or more slings or ropes rated for the weight of the curtain shown on the "Installation Data" sheet.
- Fasten the top slat to sling/rope and rotate the sling/rope to bring the top slat into place.
- If the barrel has rings, pull the curtain up and hold the top slat against the rings. Make holes in the top slat aligned with the holes in the rings. Use drill/driver to attach top slat to rings with 3/8" round head Torx screws and washers provided. Set the drill/driver clutch to minimum torque required to drive screws. DO NOT use impact wrench because it will strip the threads in the rings. See Figure 18.
- If the barrel has studs, the top slat will have slots to attach to barrel. Hook curtain over studs and fasten with 5/16" round head screws and washers provided. See Figure 19.
- Coil curtain completely onto barrel.

⚠ WARNING

Rapidly closing curtain could result in death or serious injury. Use slings/ropes and locking pliers on both guides to keep curtain in the open position until spring tension is applied to the barrel assembly.

STEP 13

COMPLETE GUIDE INSTALLATION

- If guides are flared, then bolt the middle angles and the outside angles to the wall angles like Figure 20.
- The Guide Gap MUST be set to the value shown on the "Installation Data" sheet.

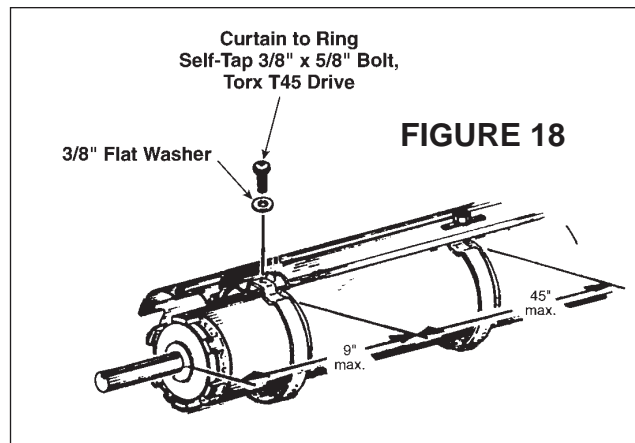


FIGURE 18

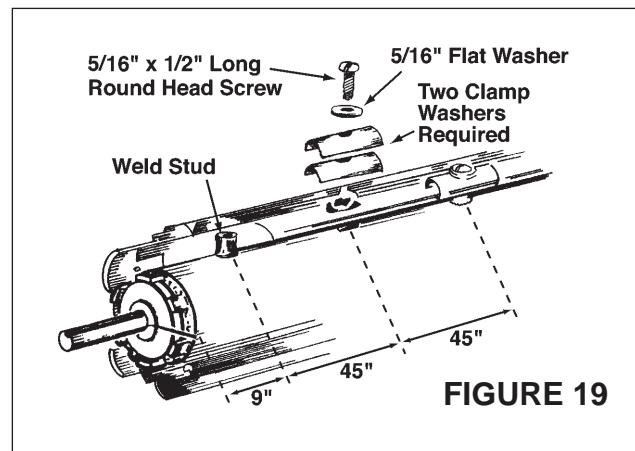


FIGURE 19

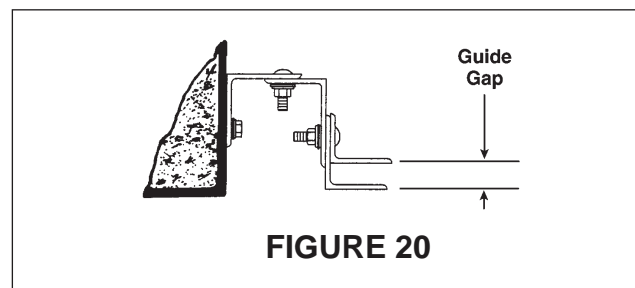


FIGURE 20

STEP 14

INSIDE STOPS

- If the door has flared guides:
Install "Inside Stop" on LH and RH guides as shown in Figure 21.
Slide stop into inside channel holder and secure with 3/8-16 x 1/2" capscrew and washer. Attach locking pliers approximately 4" below the top of channel holder on both LH and RH guides as shown in Figure 21.
- If the door uses bellmouths:
Install inside bellmouths and attach locking pliers approximately 4" below entrance to both LH and RH guides as shown in Figure 22.

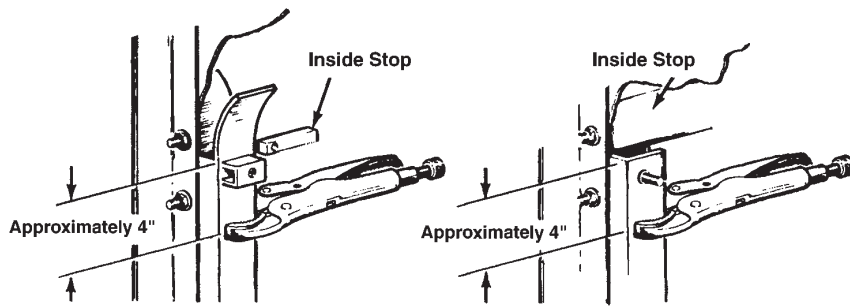


FIGURE 21

FIGURE 22

STEP 15

SPRING TENSION

- The next step is to lower curtain into guides, but before loosening the ropes which holds the coiled curtain, enough initial spring tension must be applied to cause the bottom bar to rotate about 45 degrees; then leave one winding bar in the tension wheel with the winding bar resting against the header.
- Loosen ropes and lower curtain into guides. **Do not remove slings/ropes now, wait until STEP 19.** Bottom bar angles will pass by inside stops by twisting angle and come to rest against locking pliers.
- Install outside stops. See Figure 23 for flared guides and Figure 24 for guides with bellmouths.

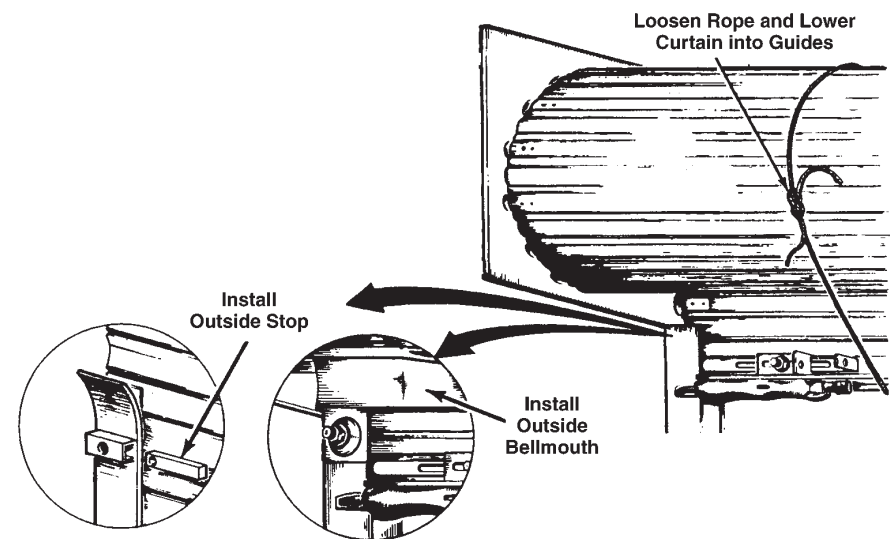


FIGURE 23

FIGURE 24

⚠ WARNING

Tension wheel is under high spring tension and could spin rapidly which could result in death or serious injury. Door must be open when adjusting spring tension. Use two (not provided) winding bars 3/4" diameter steel rod, 2 to 3 feet long.

STEP 16

COUNTERBALANCE ADJUSTMENT— Read completely before you set initial turns to the value shown on Installation Data and on Tension Headplate decal.

- Insert winding bar into tension wheel and pull down. See Figure A.
- Rotate tension wheel 1/8 to 1/4 turn and stop.
- Hold first bar and insert second bar into tension wheel. See Figure B.
- Pull down on second bar while removing the first bar.
- Repeat procedure until the bottom bar moves up against the curtain stops, or you set the initial turns shown on Tension Headplate. Insert winding bar to rest against wall or lintel as shown in Figure C.
- Install 3/4 x 2-1/2" bolt and jam nut in tension wheel as shown in Figure C.
- Using winding bars, slowly rotate tension wheel until tension wheel bolt rests in the offset in horizontal release arm as shown in Figure D.
- Set release arms as shown in Figure D.
- Temporarily secure the Vertical Release Arm in position at this time. Locking pliers may be clamped onto the bottom of the headplate as shown in Figure D; you may need a small piece of angle and the locking pliers on large headplates.
- Remove winding bar.

STEP 17

DRIVE BRACKET ASSEMBLY

- Put drive sprocket on counterbalance shaft aligned with small sprocket on sprocket reducer assembly.
- Install key and tighten the set screws on drive sprocket.
- Install roller chain between the two sprockets.
- On hand chain, hand crank, or electric operation doors the drive is disconnected by a dentil release assembly shown in Figure 25. The face of the stationary release assemble **MUST NOT** press against the governor washer. If adjustment is required move drop weight arm to down position. Use threaded stud and hex nuts to set gap of 1/32" to 1/16" between face of stationary dentil release assembly and washer on governor drive hub assembly. Tighten jamb nuts after gap is set.
- Pull sash chain until the hog ring contacts the bracket and tie the hog ring to the bracket with twine. See Figure 26.
- Rotate the sprocket or pocket wheel until the dentils engage. Set spring compression to be 3/4".

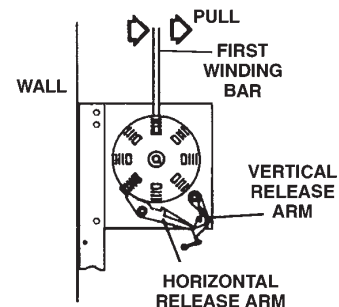


FIGURE A

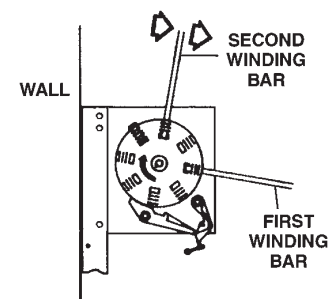


FIGURE B

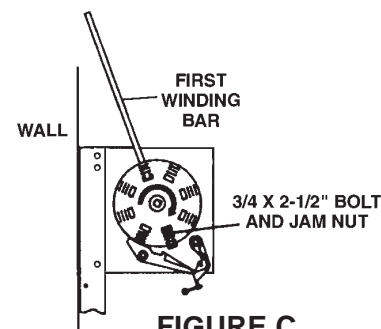


FIGURE C

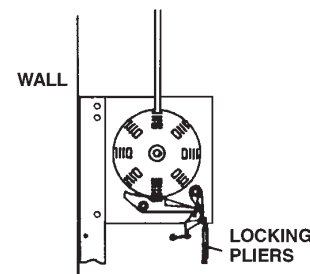


FIGURE D

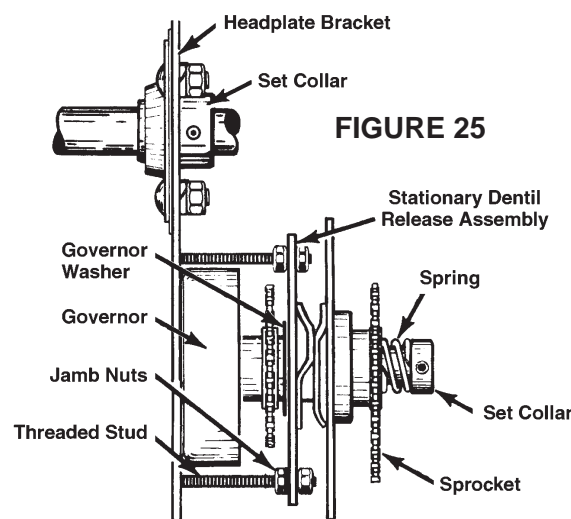


FIGURE 25

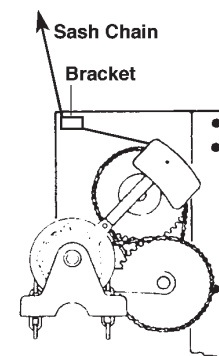


FIGURE 26

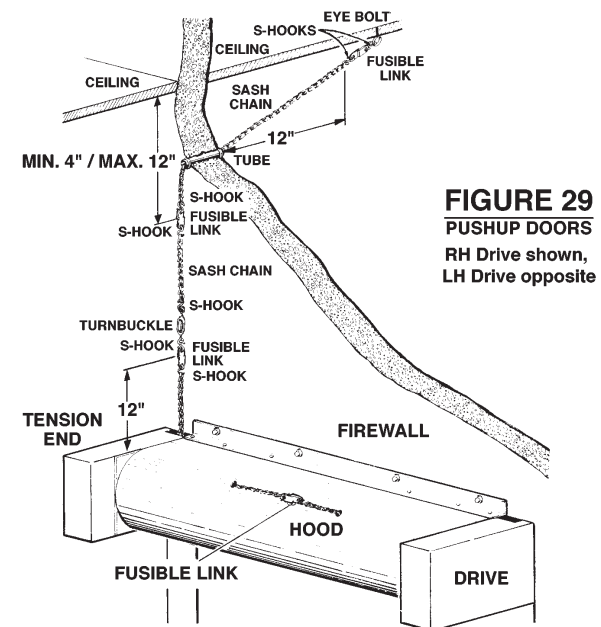
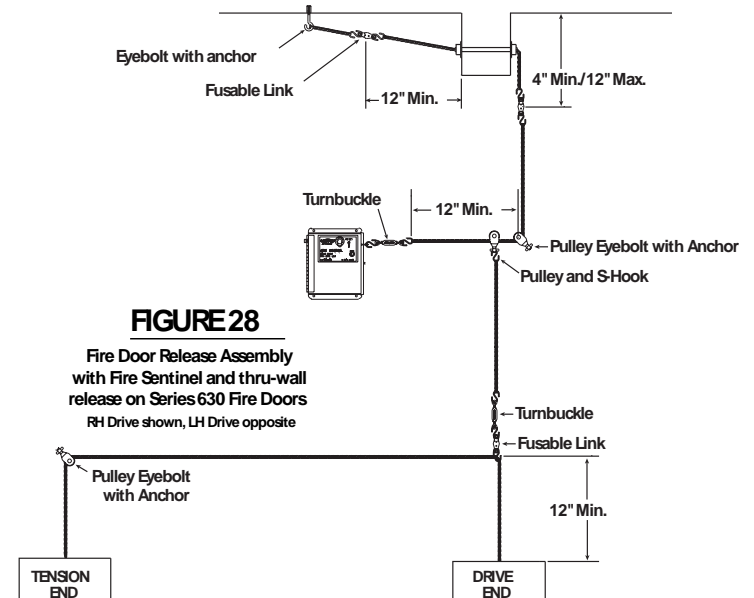
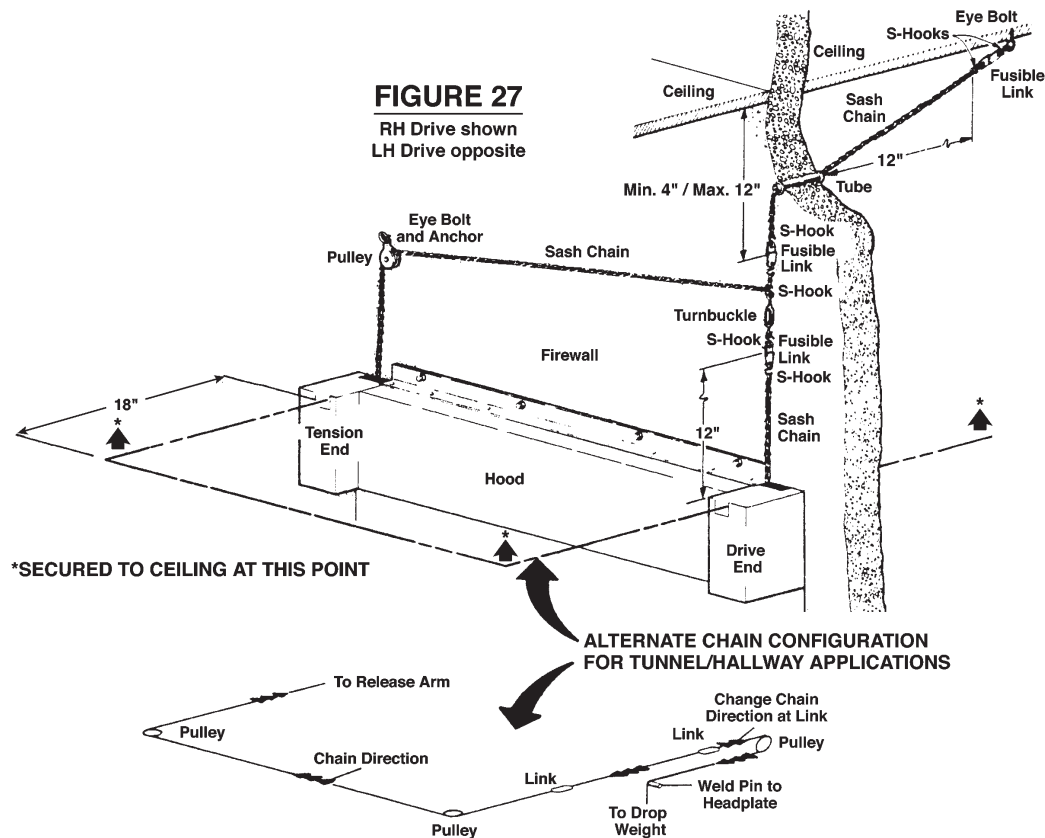
STEP 18

DOOR RELEASE ASSEMBLY ROUTING

- Ream both ends of thru-wall tube for smooth movement of sash chain thru the tube.
- Drill hole thru wall, insert tube and put washer and set collar on each end of tube.

NOTE: Thru-wall release is not required on interior mounted fire doors on exterior walls. Thru-wall release is required on exterior mounted fire doors on exterior walls; install fuse link on the inside of the building.

- Install release assembly as shown in Figures 27, 28, 29 and 30 as required.
- Install sash chain so rounded end of links enter the thru-wall tube from the side opposite the fire door.
- See tension headplate instructions on page 16.



TENSION HEADPLATE

- See Figure 30 for release assembly installation on tension headplate. Attach S-hooks to both ends of the 9" spring with one S-hook over the base of the screw on Pulley A in Figure 30. Stretch spring and S-hook about 3" and attach S-hook into the sash chain as shown.
- **IMPORTANT:** During a fire emergency, or drop test, the 9" spring must pull slack in the sash chain to allow for rotation of the vertical release arm.

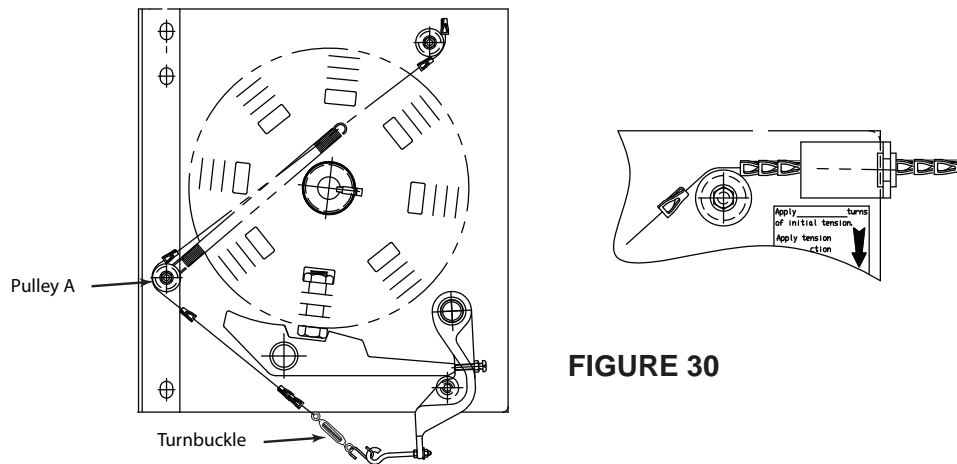


FIGURE 30

STEP 19

RELEASE CHAIN FINAL STEPS

- Tighten the turn-buckles in the release chain assembly.
- Remove twine from drive headplate sash chain installed in STEP 17.
- Remove locking pliers from tension headplate.
- Remove sling/ropes around curtain and pipe.

STEP 20

CHECK DOOR OPERATION

- Clear area in path of door.
- Lower and raise the curtain at least twice to test for proper operation. The bottom bar must rest against the floor/sill.
- If door is difficult to open, raise the door to the open position and increase spring tension. If the bottom bar does not rest on the floor, raise the door to the open position and decrease spring tension. Refer to STEP 24.

STEP 21

CHECK THE FOLLOWING ITEMS BEFORE HOOD INSTALLATION

- Verify through entire travel of the door that endlocks on each side of the curtain are not rubbing on the headplate brackets. Operate the door several times in order to make this determination.
- Verify that the bottom bar is level in full down and full up positions and that the curtain does not bind in the guides.
- If curtain is level at bottom and not level at the top, put shims between curtain and barrel on the low side.
- The guides may be lubricated with paste wax or silicone spray. **DO NOT USE GREASE.**
- Verify good mechanical connection and tightness of all fasteners, i.e., guides, headplates, set screws and roller chain.

STEP 22

HOOD INSTALLATION

- Position hood on headplates hoodbands and secure in place.
- Position hood angle centered on the hood against header/lintel/ceiling. The hood angle is designed to extend beyond each end of the hood. See Figure 31a and 31b.
- Mark hood angle mounting location on hood. Using holes in hood angle as a guide, mark fastener hole locations on header/lintel/ceiling.
- Remove hood and hood angle from headplates.
- Clamp hood angle in mounting position on hood. Disconnect flame baffle and let it fall. Using holes in hood angle as a guide, match drill holes in hood and secure hood to hood angle with **STEEL RIVETS**.
- Remove clamps and reconnect flame baffle.

**Mounting Position
for Hall or
Tunnel Openings**

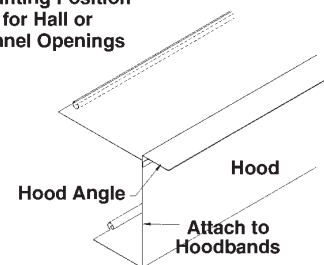


FIGURE 31a
(Flame Baffle not shown)

**Approximate Mounting
Position for Standard
Door Openings**

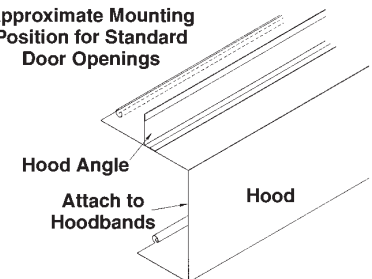


FIGURE 31b
(Flame Baffle not shown)

(STEP 22 continued)

- Drill mounting holes in header/lintel/ceiling for hood angle.
- Reposition hood on headplates and secure hood angle to header/lintel/ceiling. Hood must be securely fastened to the wall or header or ceiling and to hoodband. On masonry walls use masonry fasteners through each hole in the hood angle. On non-masonry walls the hood angle must be fastened to each available wall stud by drilling holes through the hood angle and into the wall stud.
- Attach the hood to the hoodband on each headplate by drilling a 7/32" hole through hood and band. Then secure hood with 1/4" tapping screws, maximum length 7/16". Longer screws can prevent door closing. Use five or six screws per headplate.
- Reconnect flame baffle release chain.

STEP 23

HOOD SUPPORT INSTALLATION

- Position hood support onto the hood.
- Set the hood support bracket onto the hood support and against the header/lintel for standard door installations. Mark location for welding the two parts.
- Clamp the two parts and weld them together.
- Place hood support assembly onto the hood and attach it securely to the header/lintel as shown in Figure 32.

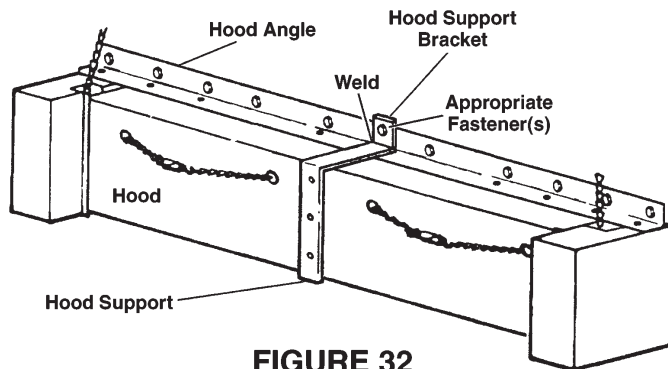


FIGURE 32
(Opening Width over 19' Shown)

⚠ WARNING

Door will close rapidly during drop test which could result in death or serious injury. Clear area in the path of the door before performing drop test.

Tension wheel will spin rapidly during a drop test which could result in death or serious injury. Keep hands, tools and other objects away from tension wheel during drop test.

STEP 24

DROP TEST

All fire doors shall be drop tested annually by a trained door system technician to ensure the installation has been completed properly. Two successive drop tests are required — one to demonstrate proper operation and full closure, and a second to verify that the fire door was properly set. Reference NFPA 80-2007. Retain a written record of the drop test results including names of witnesses.

- Clear the area in the path of the fire door and place barricades on each side of the wall opening.
- Door must be raised to full open position.
- Melt a fusible link on side opposite door or unscrew a turnbuckle in release chain assembly, this will activate the release arms at tension end and drive end. Do not use the tension headplate turnbuckle for drop test.
- The tension wheel will rotate 7/8 turn and cause the pipe/curtain to rotate. Curtain should close at speed between 2 ft/sec and 6 inches/sec. The bottom bar must come to rest on floor. If the door closes too fast, relocate the 3/4" bolt to increase tension; or if door closes too slow, relocate the 3/4" bolt to release tension. Door must be open before tension change.
- Test door release assembly at each fuse link/detector. When released the sash chain slack must be sufficient to release the drive and tension mechanisms.
- After successful link/detector tests reset the release assembly as shown in figures 27, 28, 29 & 30 as required.
- If the door does not close during drop test, clamp locking pliers to both guides under the bottom bar and refer to TROUBLESHOOTING section on page 18.

STEP 25

RESET DOOR AFTER DROP TEST

ELECTRIC OPERATED DOORS:

- Drive headplate drop arm must be released and in the "down" position.
- Press the "close" button to run the operator limit switch to the closed position.

ELECTRIC, HAND CHAIN & CRANK OPERATED DOORS:

- On drive headplate pull up on sash chain until the hog ring contacts the bracket; then tie the hog ring to bracket with twine. (Not on push-up doors)
- Reengage drive dentil by turning sprocket 1/2 turn.
- Raise the door to open position.
- Clamp locking pliers on both guides below bottom bar.
- Use two winding bars to return the 3/4" bolt to proper position against the horizontal release arm as shown in Figure 30 and Figure D.
- Reset the fire door release chain assembly. See pages 15 and 16.
- Remove locking pliers from tension headplate. See Figure D on page 14.
- Remove twine on drive headplate sash chain.
- Remove locking pliers from guides.

STEP 26

ELECTRIC OPERATION DOOR

- Reset "Open" and "Close" limit switches.
- The "open" limit must be adjusted so the roller chain does not exert a pressure when the door is open. An improperly adjusted "open" limit can prevent the release of the drive headplate during a fire emergency so the door will not close. Adjust the "open" limit to be activated as the bottom bar approaches the stops on the guides. The spring tension should hold the door open, NOT the operator.

STEP 27

PRODUCT SAFETY INSTRUCTIONS



The door installer has the following responsibilities:



- Find labels in hardware box.
- Attach Product Safety Label 301603 and 307500 as directed on label.
- Demonstrate to the door user the correct way to control the closing speed of the rolling door with crank, hand chain or push-up operation; show that two hands should be used to control the hand chain.
- Inform the door user about the following requirements from ANSI Z535.4: "Product safety labels should be periodically inspected and cleaned by the product user as necessary to maintain good legibility." The product user should order replacement safety labels from the door manufacturer as required to maintain legibility.

STEP 28

DROP TEST INSTRUCTIONS

- Find the 5"x 8" laminated Drop Test Instruction in door hardware box; the part number is 304952. Use the nylon tie provided to fasten the instruction to a hook on the wall adjacent to drive side guide. Notify building occupant regarding the instruction location.

⚠ WARNING

MOVING door could result in death or serious injury Do NOT close door until doorway is clear.
SAFETY INSTRUCTIONS
<ol style="list-style-type: none">1. Control the closing speed of crank, hand chain or push-up operated doors.2. Do NOT stand or walk under door while door is moving.3. Keep doorway clear and in full view while operating door.4. Do NOT allow children to operate door.5. Unlock door before opening door.6. Motor operated doors with sensing edge should be tested frequently.7. Doors that do not open or close must be repaired by a trained door system technician.
Place label at a readable height on door drive side guide or jamb. Do NOT remove, cover, or paint over label. Product user should inspect this label periodically for legibility, and should order a replacement label from the door manufacturer as needed. The Genuine. The Original.  10/18/07 301603-0003

⚠ WARNING

Fire door could close RAPIDLY at any time and result in death or serious injury Do NOT stand in doorway.
SAFETY INSTRUCTIONS
<ol style="list-style-type: none">1. Do NOT block/wedge door open.2. Conditions that prevent normal or emergency operation must be corrected immediately.3. Repair parts must be obtained from the door manufacturer per NFPA 80.4. Use manufacturer's instructions to inspect and drop test fire door. Door automatic closing device may be damaged if drop test occurs with door closed.5. Annual testing is required by NFPA 80 and building codes.
Place label at a readable height on door drive side guide or jamb. Do NOT remove, cover, or paint over label. Product user should inspect this label periodically for legibility, and should order a replacement label from the door manufacturer as needed. The Genuine. The Original.  10/18/07 307500-0003

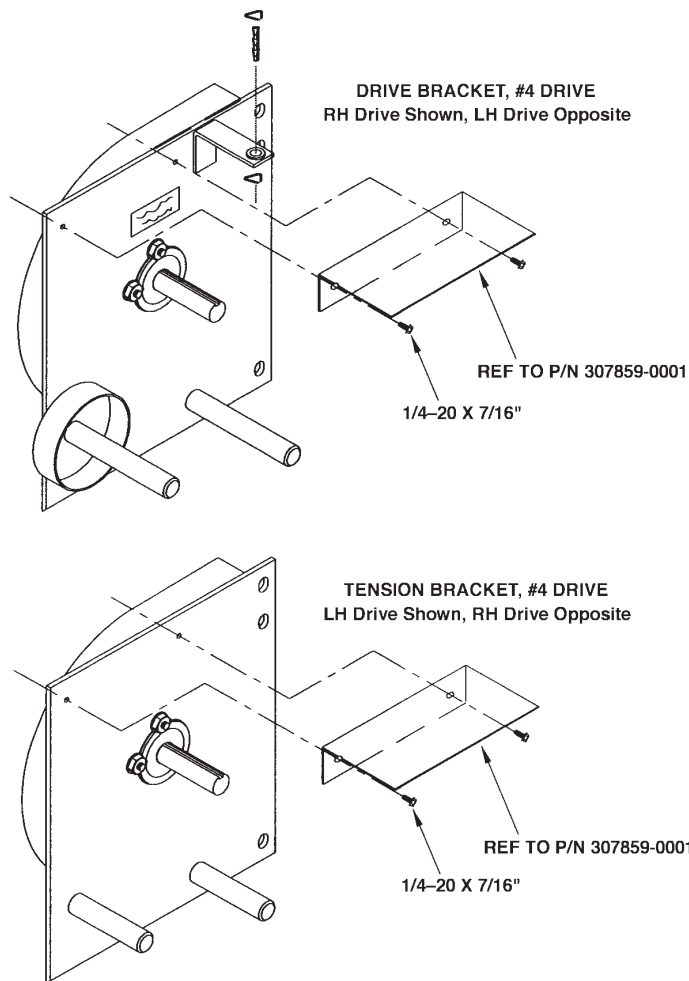


FIGURE 33
DEBRIS SHIELD
INSTALLATION INSTRUCTION
#4 DRIVE

STEP 29

HEADPLATE DEBRIS SHIELDS

- Debris shields are standard items and should be installed as shown in Figure 33 and Figure 34.
- Bracket covers are optional extra items. Attach the covers to brackets. Use of 1/4" diameter by 7/16" long screws is mandatory because a longer screw can prevent door closing during a fire. Optional covers shown on page 3.

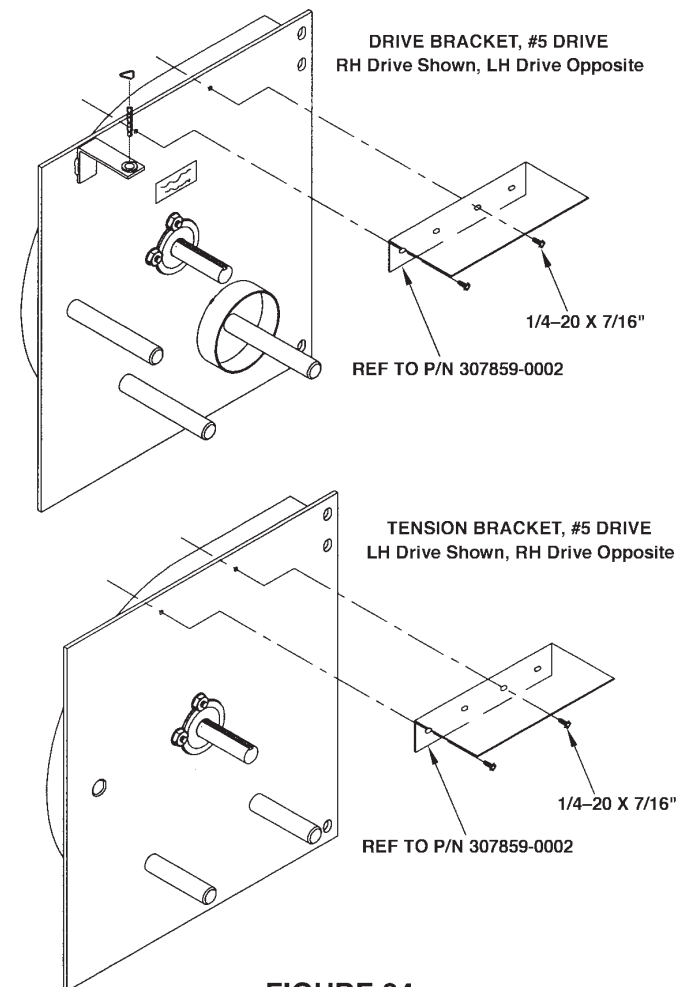


FIGURE 34
DEBRIS SHIELD
INSTALLATION INSTRUCTION
#5 DRIVE

STEP 30

BOTTOM BAR WARNING DECAL

Doors with sensing edge on the bottom bar must have the warning decal shown below mounted on the bottom bar and at eye level on the drive side guide or jamb.

 Warning	Sensing Edge can fail without indication which can cause injury or death.
	Test operation daily. <small>4/13/93 607873-0001</small>

STEP 31

Hand chain operated doors are provided without a hand chain "keeper" provided with rolling service doors; this type chain keeper **MUST NOT** be installed on rolling fire doors. The hand chain must not be used to hold the fire door in the open position because this could prevent the fire door closing during a fire emergency. For safety reasons the hand chain may be held out of the opening by a wire loop fastened to a wall with the hand chain hanging inside the loop.

STEP 32

Electric operators have a hand chain and release cables hanging below the operator in the opening. For safety reasons the hand chain and release cables may be stowed in a bag below the operator, or held out of the opening by a wire loop fastened to a wall with the hand chain hanging inside the loop.

STEP 33

The screw adjustment on the vertical release arm is normally set at the factory so that the release arms will separate when the sash chain does not pull the vertical release arm toward the wall. The screw adjustment should look like Figure 35.

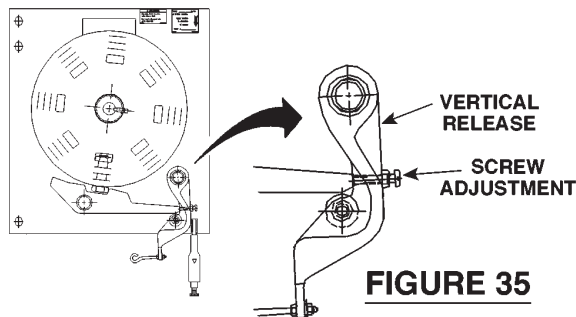


FIGURE 35

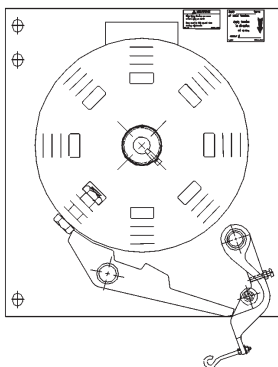


FIGURE 36

MAINTENANCE

REPLACEMENT BOTTOM BAR

This procedure is for replacing a bottom bar and slats or adding additional slats. Verify that the replacement bottom bar and slats are suitable for the fire door mounted on the wall opening.

- Obtain permission to block traffic thru the opening in the fire wall.
- Set up barricades or warning cones to prevent traffic thru the opening from both directions and provide a safe work area.
- Open the fire door.
- Remove the stops from the top of the guides
- Remove the bottom bar and curtain from between the guide angles. Lower the curtain and bottom bar outside the guides to a working position above the floor.
- Remove one endlock, (windlock type, if applicable), so the damaged bottom bar (and damaged slats) can be removed from the curtain.
- Insert the replacement bottom bar and slats onto the bottom of the curtain and reattach the endlock, (windlock type, if applicable).
- Carefully raise bottom bar back to the top of guide angles. **BEWARE OF RAPID MOVEMENT OF BOTTOM BAR PAST TOP OF THE GUIDES.**
- Insert the bottom bar and curtain back into the guide angles and lower the bottom bar 6" into the guides.
- Install locking pliers below bottom bar.
- Attach the stops to the top of the guide angles.
- Remove locking pliers.
- Open and close the door to verify proper operation.
- Open the door and perform a drop test. Reset the fire door in accordance with STEP 25.
- Remove barricades or warning cones and notify customer that the repair is complete.
- Perform Annual Drop Test in accordance with Drop Test Instructions 304952.

TROUBLESHOOTING

- Sash chain shown in Figures 27 through 30 must have free movement when they are released.
- The released tension headplate assembly should look like Figure 36 (see page 20).
- The released drive assembly drop arm should be down and the dentil sprocket disconnected as in Figure 25. The drop arm pre-released positions are shown in Figure 16.
- Verify adjustments in STEP 17.
- Roller chain must not exert pressure on the 14 tooth dentil sprocket. With electric operation, verify "open" limit switch setting as in STEP 26. Hand chain or crank operation must not be locked in place.
- Call nearest Overhead Door Distributor for assistance.



WARRANTY

The Genuine. The Original.



**FireKing® Series
Rolling Service Fire Doors Limited Warranty**

The Distributor of Overhead Door Corporation products whose name appears below ("Seller") warrants to the original purchaser of FireKing® Series 630, 631, 634 or 635 rolling service fire doors ("Product"), subject to all of the terms and conditions hereof, that the Product and all components thereof will be free from defects in materials and workmanship under normal use for the following period, measured from the date of installation:

- TWENTY FOUR (24) MONTHS

Seller's obligation under this warranty is specifically limited to repairing or replacing, at its option, any part which is determined by Seller to be defective during the applicable warranty period. Repair or replacement labor is included for one (1) year from the date of installation. After that, any labor charges are excluded and will be the responsibility of the purchaser.

This warranty is made to the original purchaser of the Product only, and is not transferable or assignable. This warranty does not apply to any unauthorized alteration or repair of the Product, or to any Product or component which has been damaged or deteriorated due to misuse, neglect, accident, failure to provide necessary maintenance, normal wear and tear (including the paint finish), or acts of God or any other cause beyond the reasonable control of Seller. This warranty does not apply to any damage or deterioration caused by door slats rubbing together as the door rolls up upon itself or caused by exposure to salt water, chemical fumes or other corrosive or aggressive environments, whether naturally occurring or man-made, including, but not limited to, environments with a high degree of humidity, sand, dirt or grease.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL SELLER BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, even if Seller has been advised of the possibility of such damages. Such excluded damages include, but are not limited to, loss of goodwill, loss of profits, loss of use, cost of any substitute product, interruption of business, or other similar indirect financial loss.

Claims under this warranty must be made promptly after discovery, within the applicable warranty period, and in writing to the Seller or to the authorized distributor or installer whose name and address appear below. The purchaser must allow Seller a reasonable opportunity to inspect any Product claimed to be defective prior to removal or any alteration of its condition. Proof of the purchase and/or installation date, and identification as the original purchaser, may be required.

ORIGINAL PURCHASER _____

INSTALLATION ADDRESS _____

SELLER: _____

SELLER'S ADDRESS: _____

FACTORY ORDER #: _____

DATE OF INSTALLATION: _____

SIGNATURE OF SELLER: _____



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