# Operational & Maintenance Manual

**Products:** Enter Product Category / Model Number

**Installation Site**

Enter Project Name/Site info

**Contractor**

Enter Contractor Firm Name here

**Architect**

Enter Architect Firm Info Here

**Distributor**

Overhead Door Company of ABC
123 Eagle Street
Eagle Town, TX 75067

**Enter Company Name Ex: Overhead Door Company of**
Enter Street Address
Enter City, ST zip code

Dear Customer:

Thank you for choosing our company 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 our company 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,

**Enter Company Name Ex: Overhead Door Company of**

# 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:

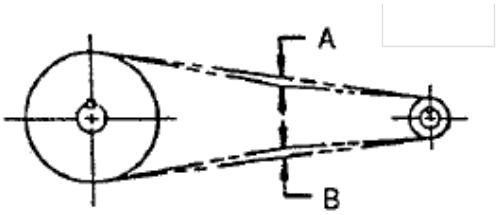
**Every three months**[1]

- 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 months**[1]

- 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.




A+B must equal more than ¼”

**Figure A**

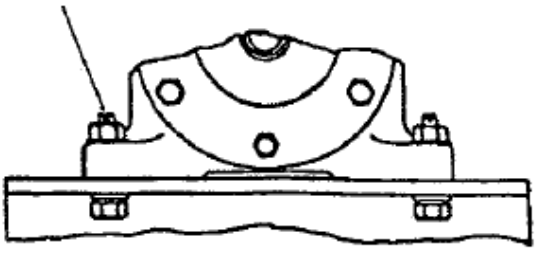


**Figure B**

# 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 ½" or ¾".

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 REACHT 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 form 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

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**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 FACE MOUNTED ROLLING FIRE DOOR with TENSION RELEASE AUTOMATIC CLOSURE GOVERNOR CONTROLLED Series 630/631/634/635*

***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.<br>Do **Not** allow children to play with the Door Operator.<br>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.<br>When replacing cover, make sure wires are not pinching or near moving parts.<br>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.<br>Repairs and adjustments must be made by a trained door system technician using proper tools and instructions. |

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Maintenance ..... 19-20
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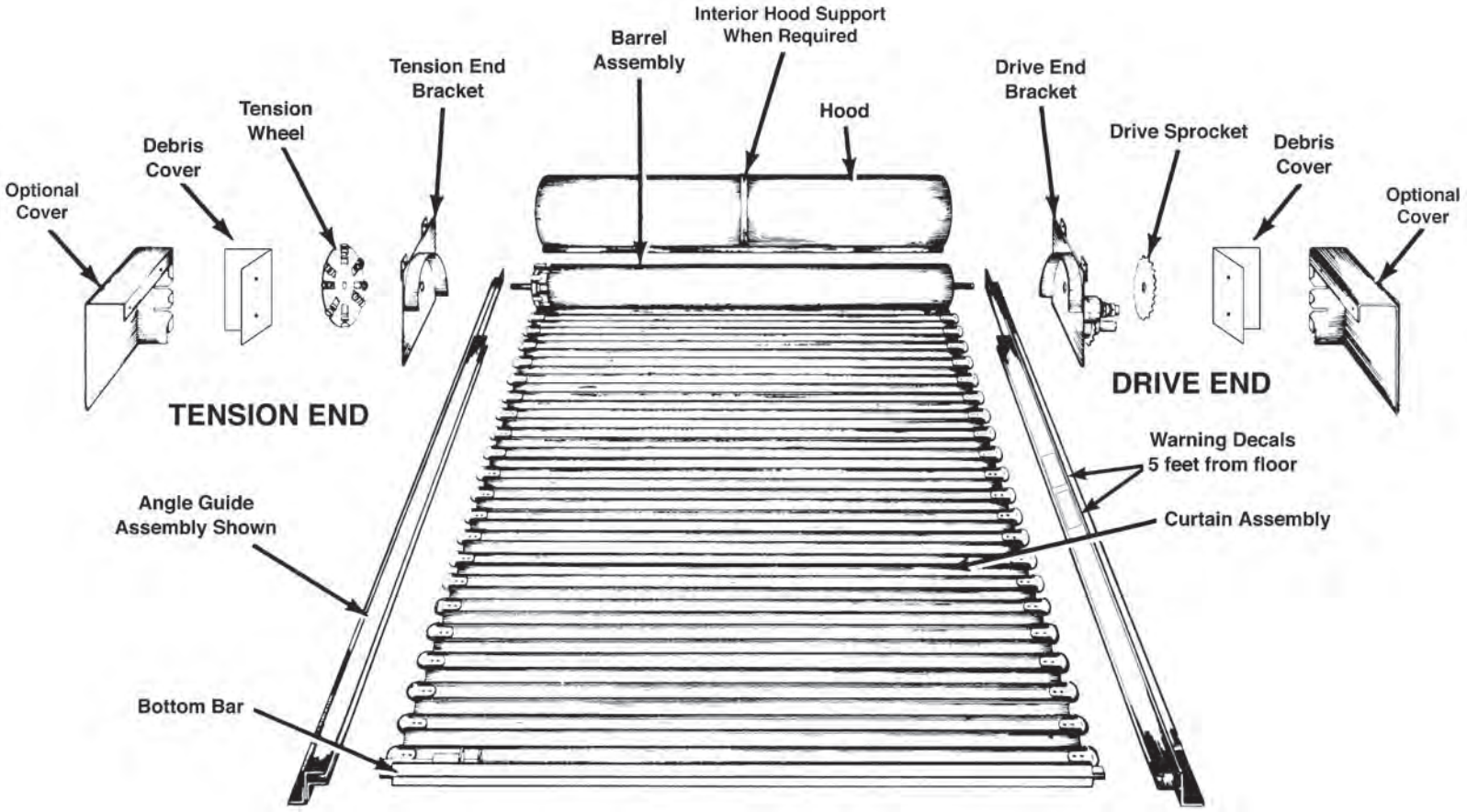
# KEY DRAWING

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

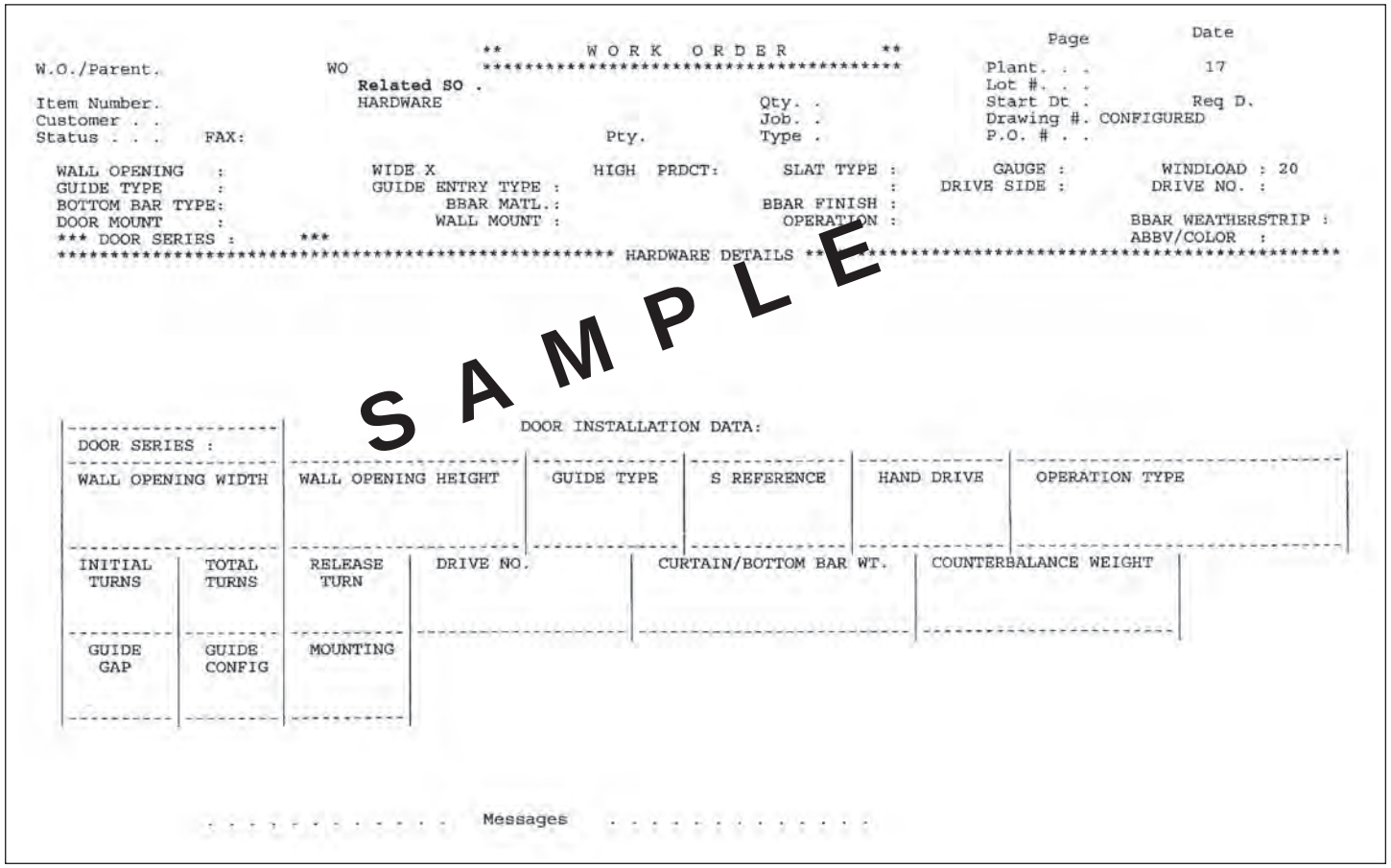



Right hand door is illustrated. In a left hand door the barrel and both brackets are reversed.
Guides for masonry jambs shown.

# 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 a individual ”INSTALLATION DATA” sheet.



** W O R K  O R D E R **

W.O./Parent. WO — Page — Date

Related SO .

Item Number. — HARDWARE — Qty. . — Plant. . . 17

Customer . . — Job. . — Lot #. . .

Status . . . FAX: — Pty. — Type . — Start Dt . — Req D.

Drawing #. CONFIGURED

P.O. # . .

WALL OPENING : — WIDE X — HIGH PRDCT: — SLAT TYPE : — GAUGE : — WINDLOAD : 20

GUIDE TYPE : — GUIDE ENTRY TYPE : — : — DRIVE SIDE : — DRIVE NO. :

BOTTOM BAR TYPE: — BBAR MATL.: — BBAR FINISH :

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:

- Does the wall opening match 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 in Figure 1-A.
- 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?
- Check the sill for level. If sill is not level, mark the high sill location on the low side jamb, see Step 28 on page 19 regarding installation of guide bottom seal.
- See page 7 for weld attachment option.

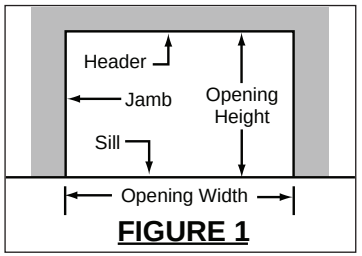



**FIGURE 1**

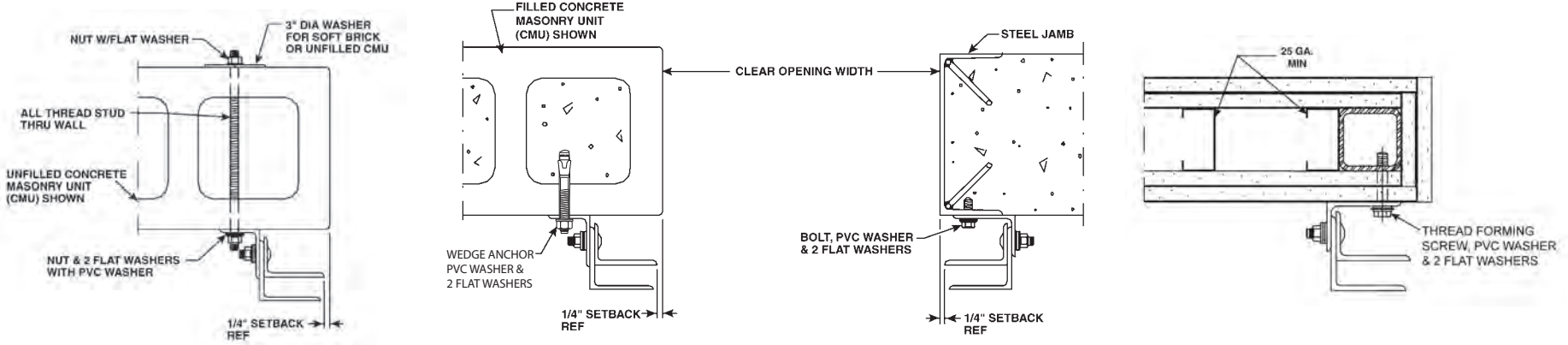
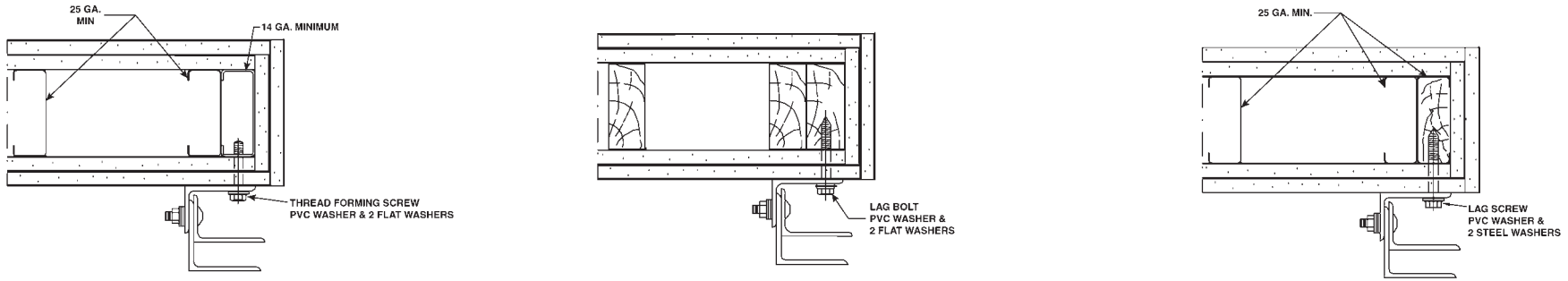



**FIGURE 1-A**



# INSTALL

## STEP 1

INSTALL GUIDE ASSEMBLIES

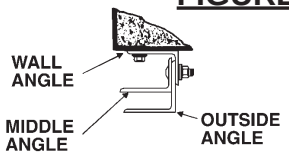
- Locate the guide assemblies such that ”S” dimension exists between the guides as shown in Figure 2.
- The ”S” dimension is shown on the ”INSTALLATION DATA” sheet.
- Both guides MUST be on a level line and both guides MUST be plumb.
- The ”S” dimension must be held within 1/8” over the entire height of guides.
- Guide assemblies are designed to rest on floor.
  **NOTE:** If the bottom of one guide is above floor, see Step 28 on page 19.
- See page 7 for weld attachment option.

**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.

**NOTE:** If outside angle is flared, then unbolt the Outside Angle and the Middle Angle from the Wall Angle. They will be bolted to the Wall Angle after the curtain installation is complete in Step 10.

**FIGURE 2-A**



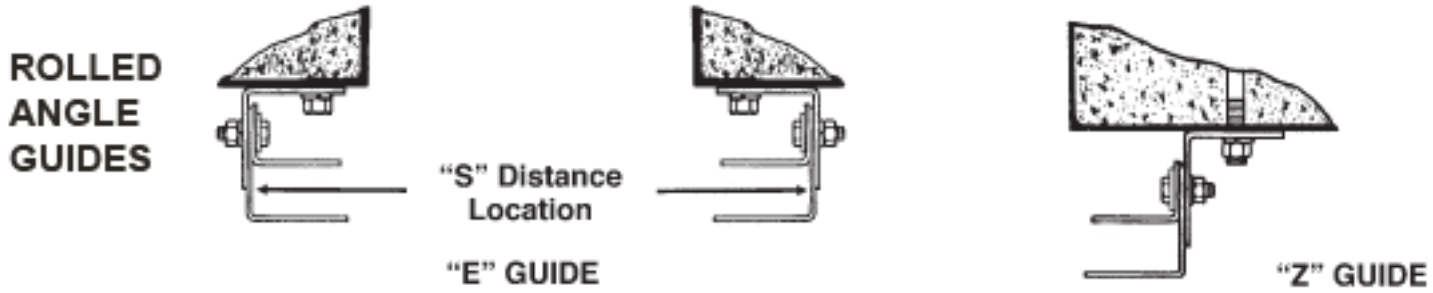




**FIGURE 2**

Masonry jambs shown, non-masonry jamb installation is similar.

MASONRY JAMBS

Hold ”Z” guide wall angle against wall and drill mounting holes through the top of slots using drill size shown below. Install jamb fasteners on one guide. Recheck ”S” distance, and continue with installation. Refer also to Expansion Anchor Instructions 307390-0001.

STEEL JAMBS–Screw Attachment Option

Hold ”E” guide wall angle against steel jamb and mark the spot to be drilled at top of slots. Drill holes through the top of slots using drill size shown below. Install all jamb fasteners on one guide. Recheck ”S” distance, and continue with installation.

| JAMB | FASTENER | DRILL SIZE | JAMB FASTENER SPECIFICATIONS |
|---|---|---|---|
| Steel | 3/8" Self-Tap Screw<br>1/2" Bolt<br>5/8" Bolt | 11/32" Dia.<br>27/64" Dia.<br>17/32" Dia. | Steel jambs must be minimum 3/16" thick |
| Concrete | 3/8" Wedge Anchor<br>1/2" Wedge Anchor<br>5/8" Wedge Anchor | 3/8" Dia.<br>1/2" Dia.<br>5/8" Dia. | Drill holes at least 4 inches from jamb corner per Overhead Door instruction 308577 available at odcexchange.com |
| Filled Block | 3/8" Wedge Anchor<br>1/2" Wedge Anchor | 3/8" Dia.<br>1/2" Dia. | |
| Wood | 3/8" Lag Screw | 1/4" Dia. | Drill hole 3" deep |
| Unfilled Block | 3/8" Thru Bolt<br>1/2" Thru Bolt<br>5/8" Thru Bolt | 7/16" Dia.<br>9/16" Dia.<br>11/16" Dia. | Install 3" O.D. steel washer on opposite side of wall |

STEEL JAMBS–Weld Attachment Option For Face Mount Guides is UL approved. NOTE: Not approved by Factory Mutual.

Hold ”E” guide wall angle against steel jamb and tack weld wall angle in place. Recheck ”S” distance before proceeding. Apply vertical welds as shown in Figure 3 using welding electrodes E6010, E6011 or E7014. All welds must be good quality 3/16” fillet welds. Weld the wall angle to the steel jamb along the top of the angle. Figure 3 is shown without the middle angle and outside angle attached to wall angle.

**NOTE:** When steel jamb does not extend above the opening, use three thru-bolts to fasten each wall angle above the opening. See Figure 4.

## STEP 2

IDENTIFY HEADPLATE BRACKETS—See Figure 5.

Right Hand Drive shown; Left Hand Drive is opposite.

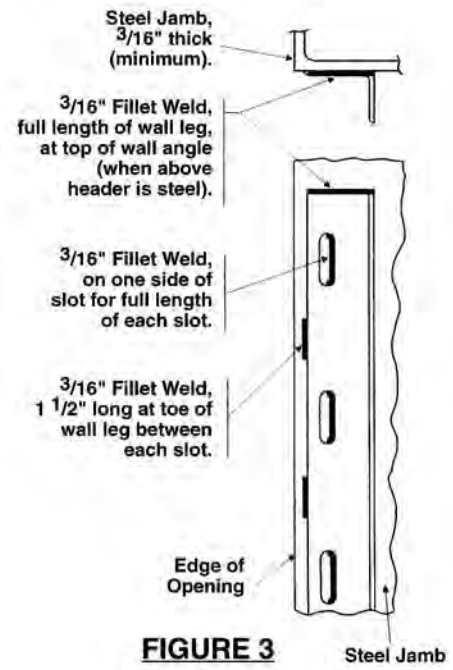



FIGURE 3

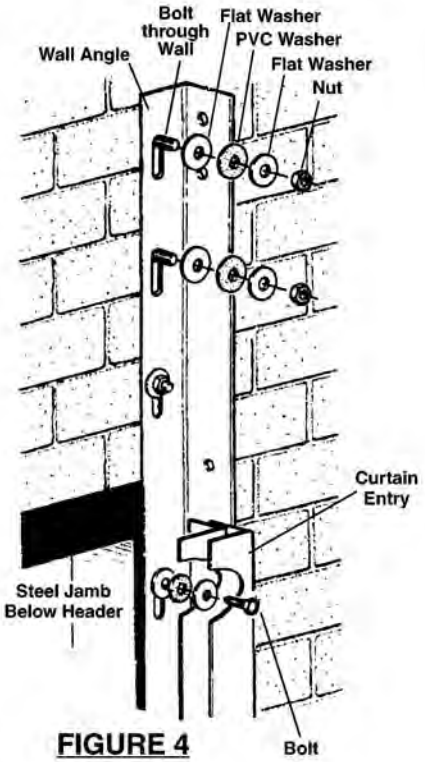



FIGURE 4

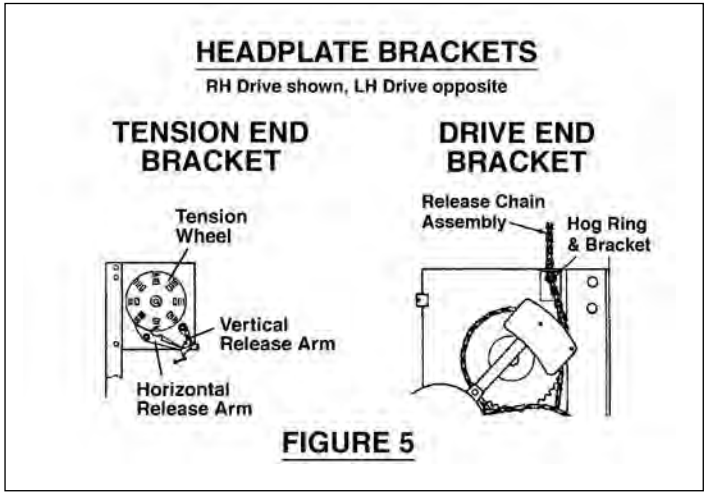



FIGURE 5

## STEP 3

IDENTIFY BARREL ASSEMBLY DRIVE END

Right hand drive shown in Figure 6; 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.

SPRING CONFIGURATION—See Figure 7.

- Left hand drive configuration has end of spring pinned to barrel near tension end.
- Right hand drive counterbalance has end of spring pinned to barrel several feet from tension end.
- At tension end of barrel the bearing assembly is pinned to the barrel as shown in Figure 7.

## STEP 4

IMPACT PAWL POSITIONING

- Inspect position of impact pawl. The left hand and right hand tension end assemblies MUST be as shown in Figure 8.

**⚠ 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 damage; left hand drive headplate and left hand barrel must also match.

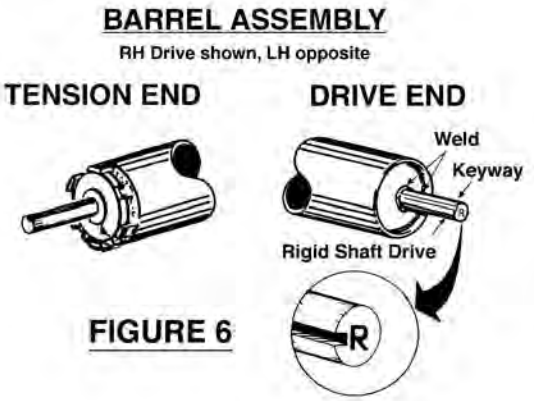



FIGURE 6

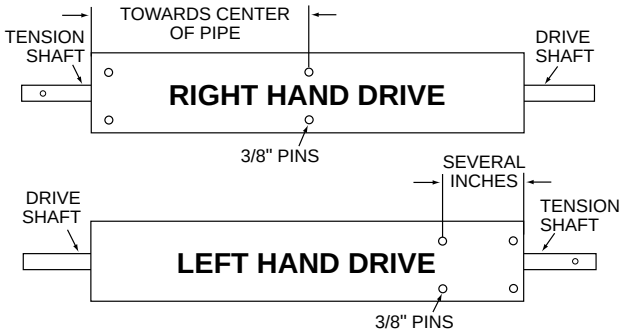



FIGURE 7

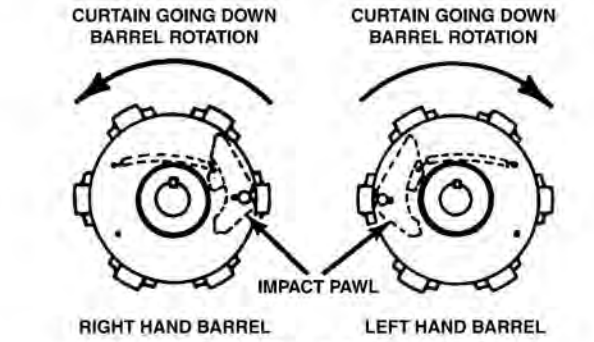



FIGURE 8

## STEP 5

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 9.

> ⚠ **CAUTION:** Use proper lifting equipment and correct lifting procedure to avoid injury.

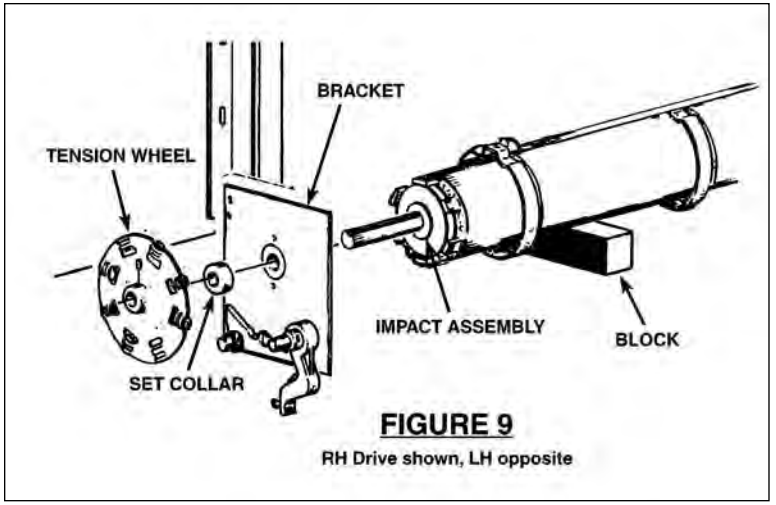



**FIGURE 9**

RH Drive shown, LH opposite

## STEP 6

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

- Use hex bolts to fasten head plate brackets to the inside of the guide wall angle.
- Bolt heads must be on the inside of the headplate brackets. See Figure 10. 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.

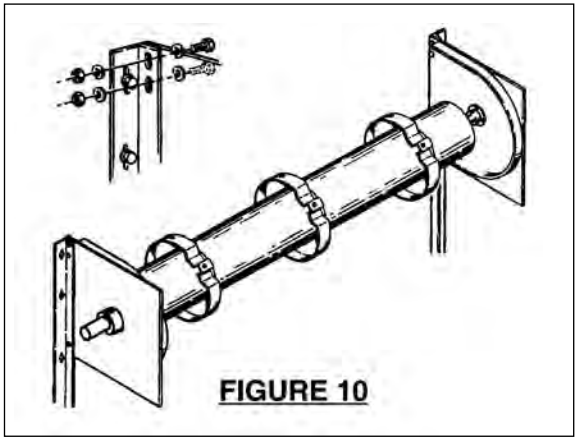


**FIGURE 10**

## ⚠ 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.

## STEP 7

DRIVE BRACKET ASSEMBLY (See Figures 11A through 11E)

- 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 connecting link. DO NOT ALLOW TWIST IN CHAIN.
- Install shaft spreader on all No. 5 drive headplates. Tighten set screw. Adjust nut to maintain distance between shafts. Tighten lock nut.
- Pull up on sash chain until connecting link contacts the bracket. Tie connecting link to bracket with twine. (NOT on push up door)

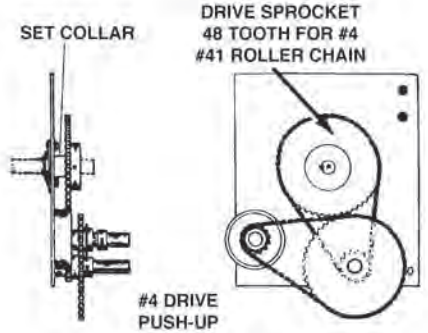



FIGURE 11A

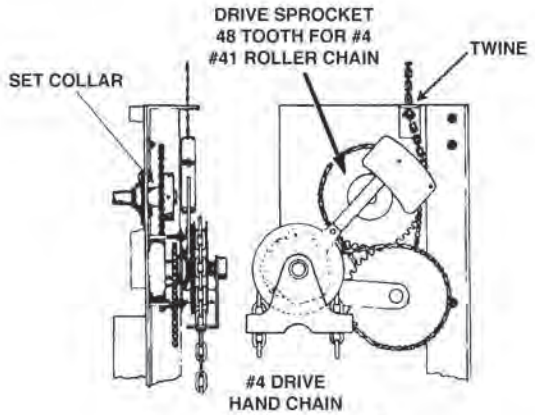



FIGURE 11B

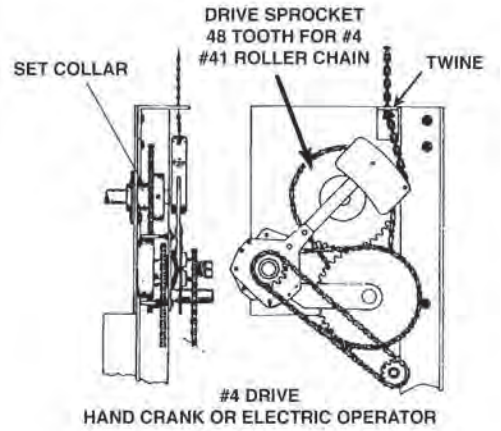



FIGURE 11C

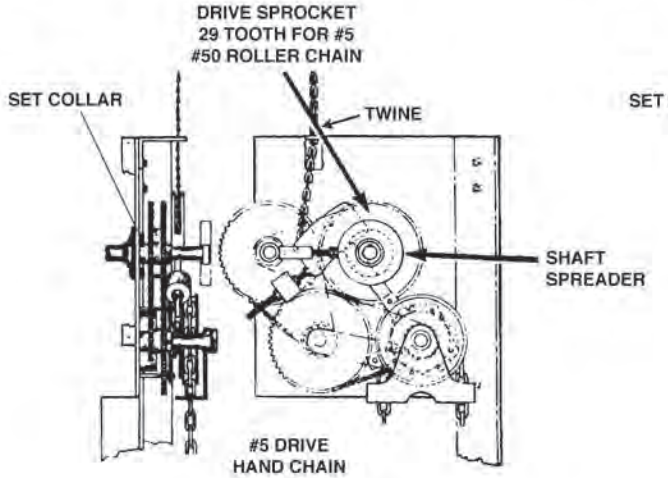



FIGURE 11D

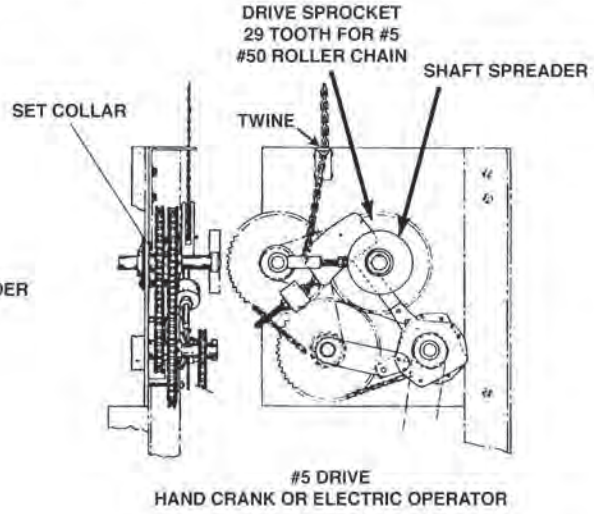



FIGURE 11E

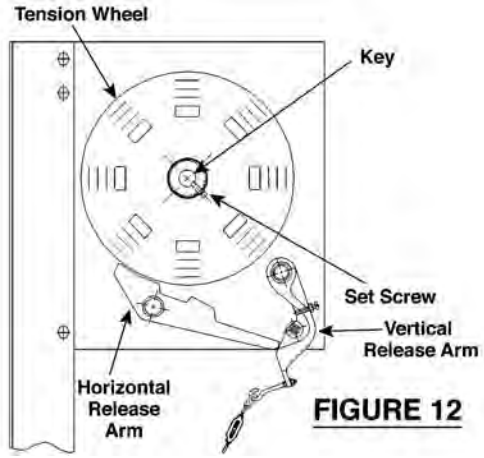


FIGURE 12

## STEP 8

TENSION BRACKET ASSEMBLIES

- Position tension wheel in vertical alignment with release levers. Insert key and tighten set screw. NOTE: Right Hand Drive shown in Figure 12; LH opposite.

## STEP 9

INSTALLATION OF CURTAIN (See Figure 13)

- 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 on the barrel.
- If the barrel has rings, hold the top slat on the rings and make holes in the top slat aligned with holes in 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 screw threads in rings. See Figure 14.
- 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 and TWO clamp washers provided. See Figure 15.
- 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.

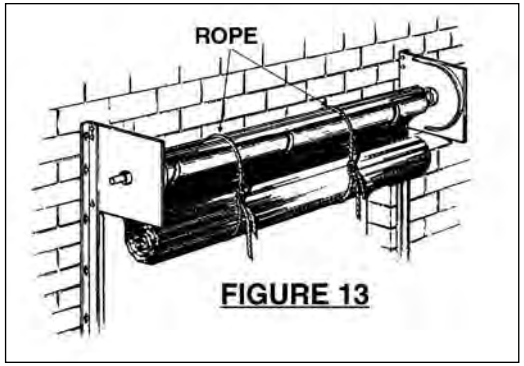


FIGURE 13

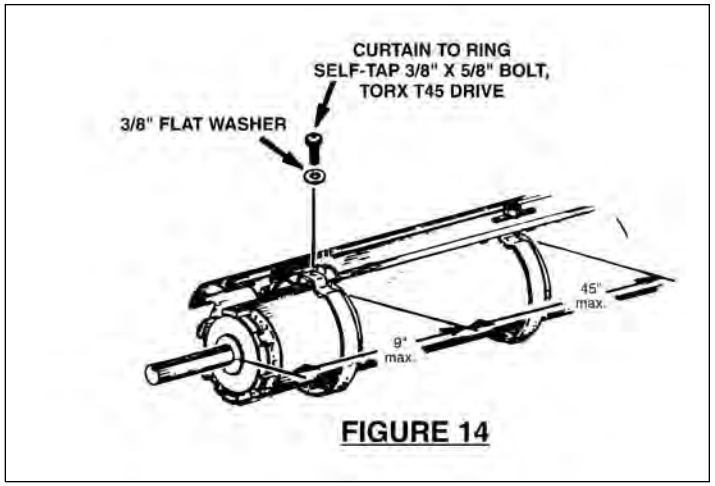


FIGURE 14

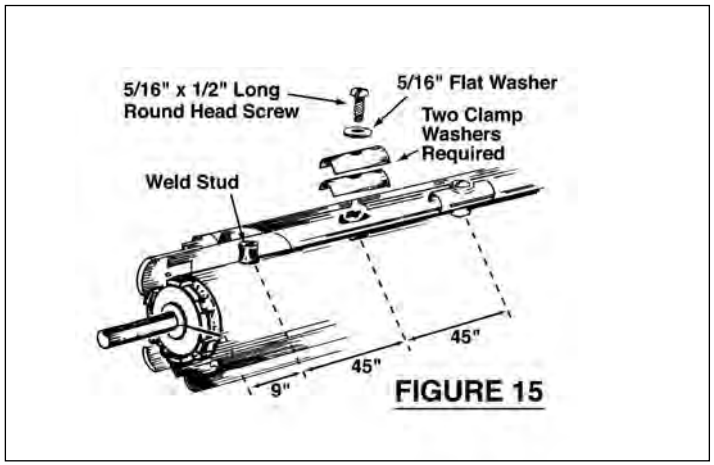


FIGURE 15

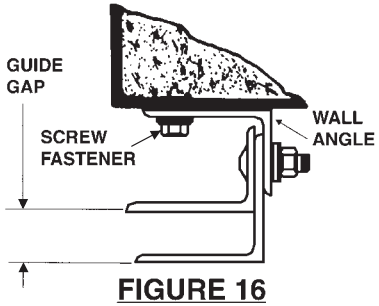


FIGURE 16

## STEP 10

COMPLETE GUIDE INSTALLATION

- If guides are flared, then bolt the middle angles and the outside angles to the wall angles like Figure 16.
- The Guide Gap MUST be set to the value shown on the ”INSTALLATION DATA” sheet.

## STEP 11

INSTALL SLIDE STOPS

- Install Inside Stop on LH and RH guides as shown in Figures 17 and 18.
- If the door has flared guides:
  Slide stop into inside channel holder and secure with 3/8-16 x 1/2” round head screw and washer. Attach locking pliers approximately 4” below the top of channel holder on both LH and RH guides as shown in Figure 17.
- 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 20.

## STEP 12

LOWER CURTAIN INTO GUIDES

- The next step is to lower curtain into guides. But before loosening the ropes which holds the coiled curtain, apply enough initial spring tension to cause the bottom bar to rotate about 45 degrees; then leave one winding bar in the tension wheel with the bar resting against the wall.
- Loosen ropes and lower curtain into guides. **Do not remove ropes.** Bottom bar angles will pass by inside stops by twisting angle and come to rest against locking pliers.
- Install outside stops. See Figure 19 for flared guides and Figure 20 for guides with bellmouths.

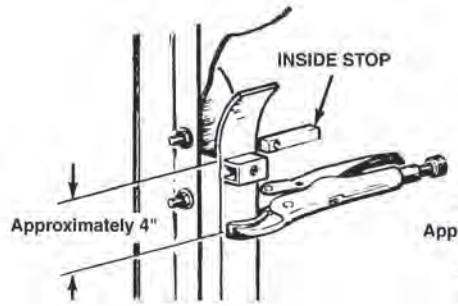


FIGURE 17

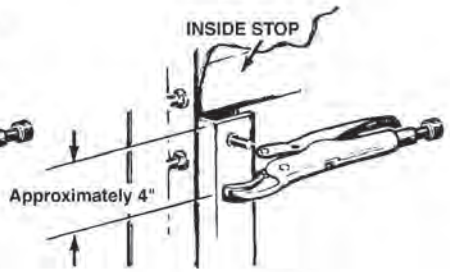


FIGURE 18

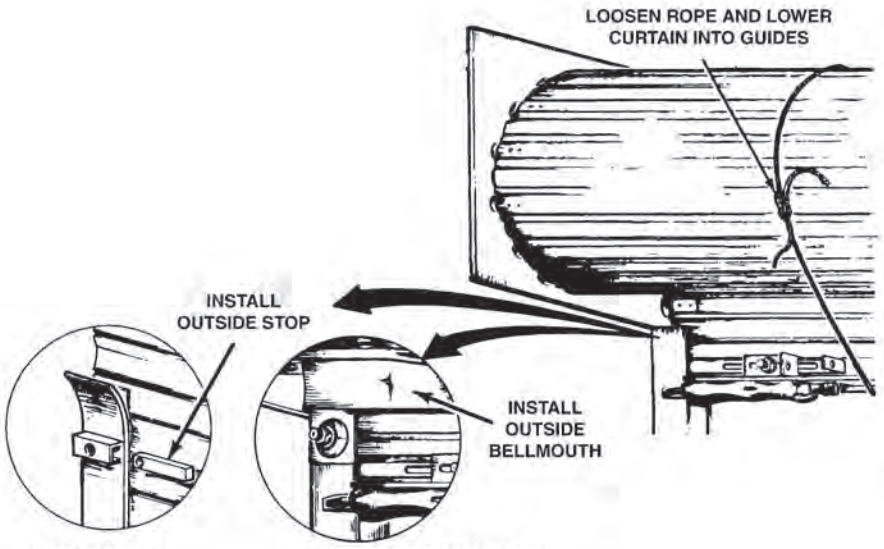


FIGURE 19

FIGURE 20

**⚠ 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.

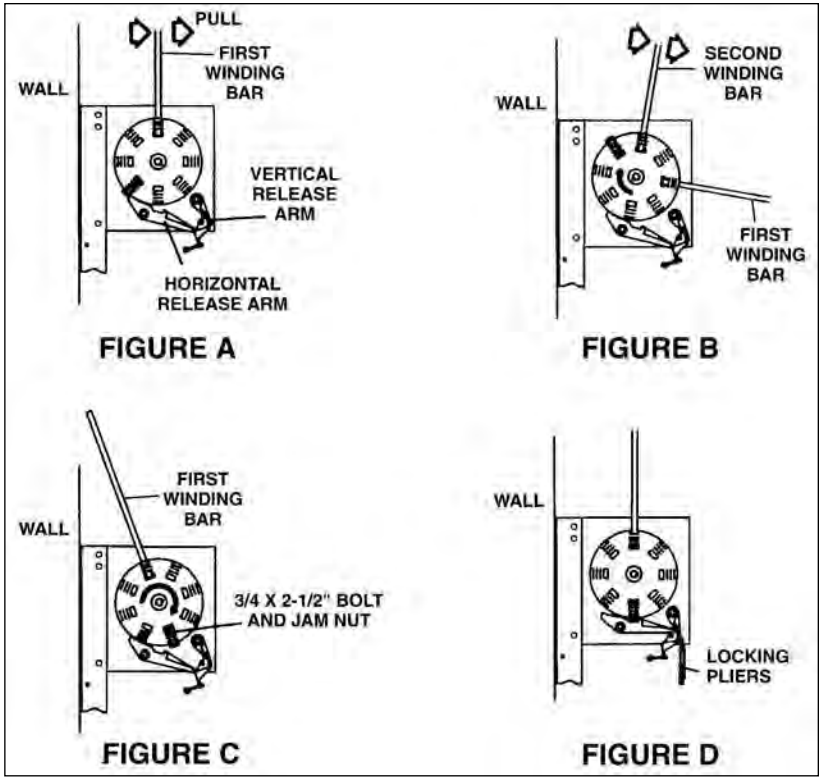
## ⚠ WARNING

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 13

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 14

MOUNT 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 is Figure 21-A. 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 21-B.
- Rotate the sprocket or pocket wheel until the dentils engage. Set spring compression to be 3/4".

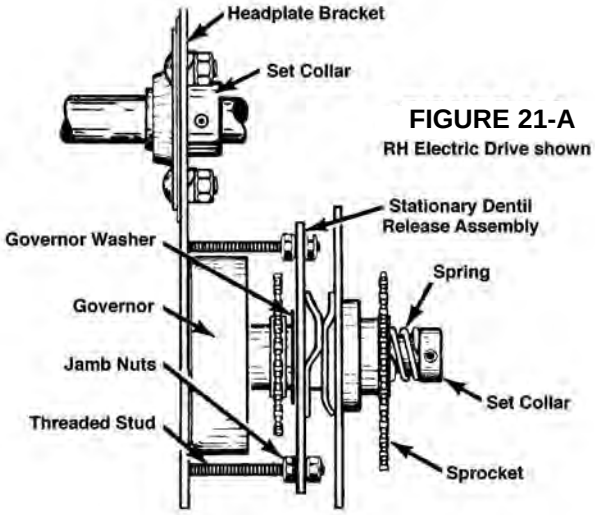



**FIGURE 21-A**
RH Electric Drive shown

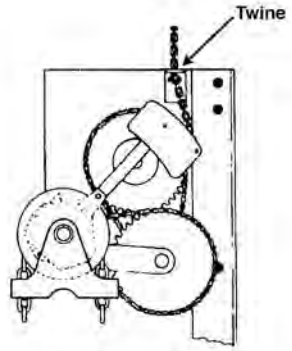



**FIGURE 21-B**
RH Hand Chain Drive shown

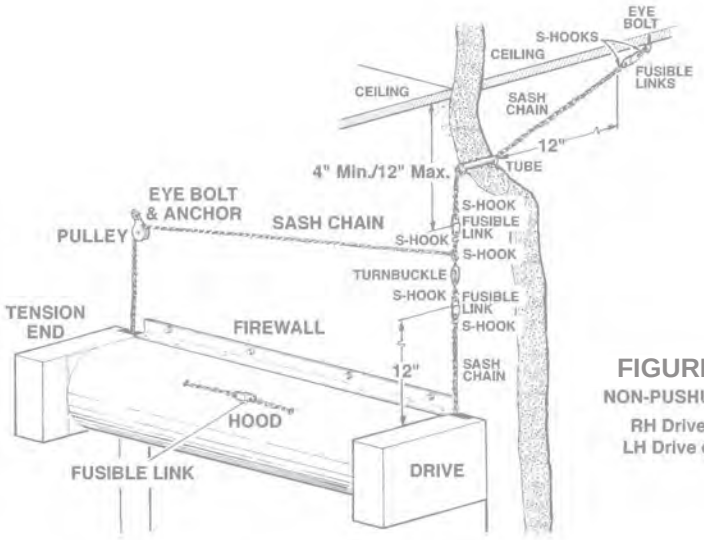



**FIGURE 22-A**
**NON-PUSHUP DOORS**
**RH Drive shown**
**LH Drive opposite**

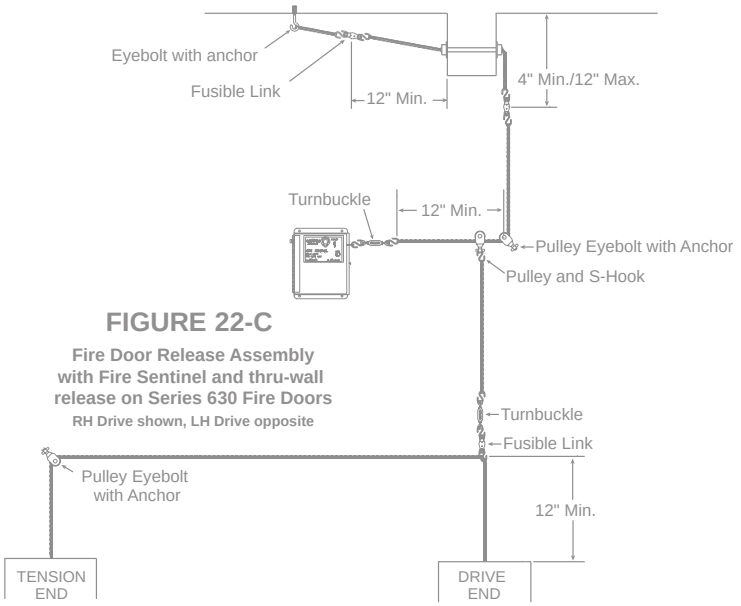



**FIGURE 22-C**
**Fire Door Release Assembly with Fire Sentinel and thru-wall release on Series 630 Fire Doors**
**RH Drive shown, LH Drive opposite**

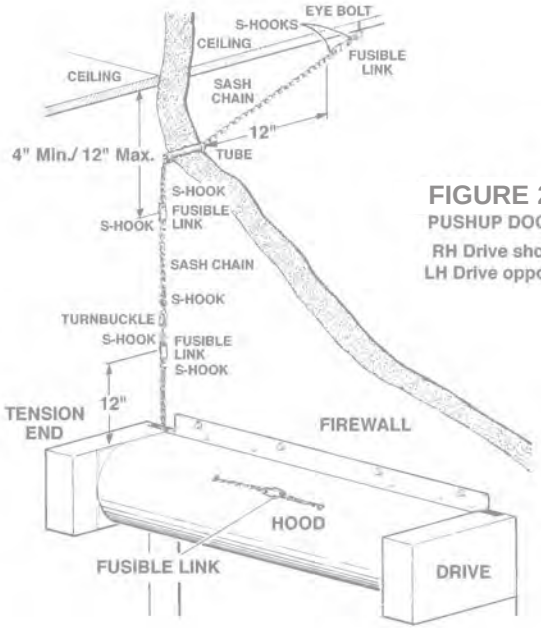



**FIGURE 22-B**
**PUSHUP DOORS**
**RH Drive shown**
**LH Drive opposite**

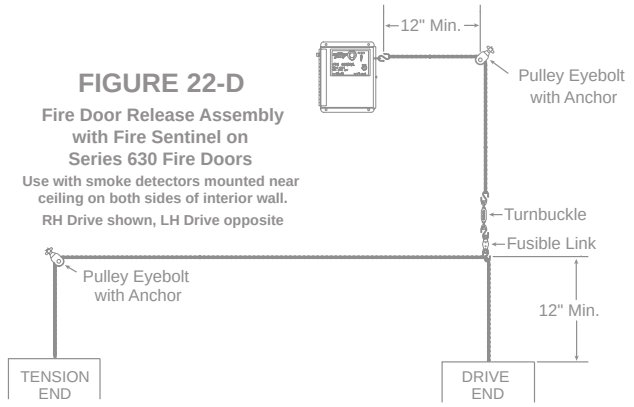



**FIGURE 22-D**
**Fire Door Release Assembly with Fire Sentinel on Series 630 Fire Doors**
**Use with smoke detectors mounted near ceiling on both sides of interior wall.**
**RH Drive shown, LH Drive opposite**

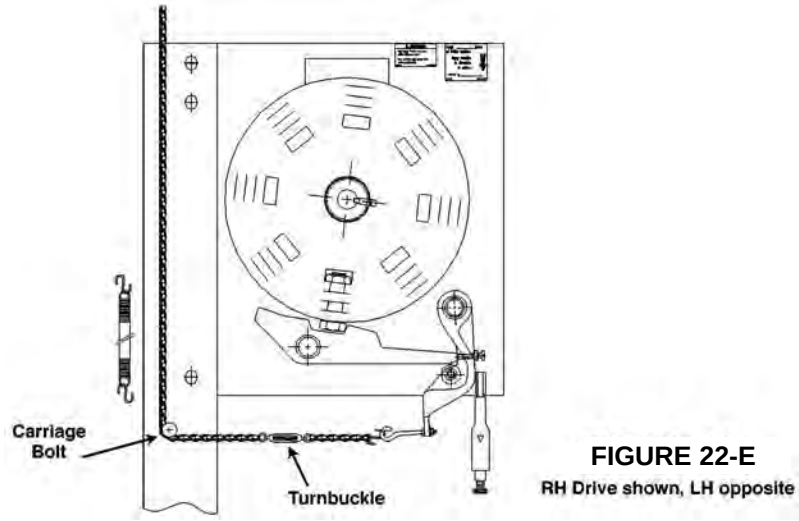



**FIGURE 22-E**
RH Drive shown, LH opposite

## STEP 15

DOOR RELEASE ASSEMBLY

- Ream both ends of the thru-wall tube for smooth movement of the sash chain through the tube.
- Drill hole through wall, insert tube through the wall and put washer and set collar on each end of tube. 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 inside of building.
- Install door release assembly as shown in Figures 22-A, B, C, D or E as required.
- Install sash chain so rounded end of links enter the thru-wall tube from the side opposite the fire door.
- Locate pulleys as shown in Figures 22-A, C or D using wall anchor, eyebolt with nut and washer. Use lock nut and washer to hold each eyebolt in proper position.
- Use turnbuckles to remove all slack from sash chain.
- See Figure 22-E. Attach S-hook on end of 9” spring and install S-hook and spring on carriage bolt and close ends of S-hook. Install S-hook on other end of 9” spring and close S-hook onto spring end. Stretch the spring upward 3” and hook S-hook into sash chain above the carriage bolt. NOTE. During fire emergency or drop test, the 9” spring must pull slack in the sash chain to allow rotation of the tension release arms.
- Remove lock pliers from tension headplate. Remove twine from top of drive headplate which was installed in Step 7.
- Test Door Release Assembly at each fuse link or detector. When released the sash chain slack must be sufficient to release drive and tension release mechanisms.
- After successful link/detector test and reset, remove locking pliers from guides and remove ropes/slings from around the curtain.

## STEP 16

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 13: COUNTERBALANCE ADJUSTMENT.

**⚠ 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 17

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 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 22-A, B, C and D 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 20.

## STEP 18

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 or less.
- 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 22e.
- Reset the fire door release chain assembly. Figure 22 a, b, c or d.
- Remove locking pliers from tension headplate. See Figure 22e.
- Remove twine on drive headplate sash chain.
- Remove locking pliers from guides.

## STEP 19

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 20

CHECK THE FOLLOWING ITEMS BEFORE INSTALLING HOOD.

- Verify through entire travel of the door that the endlocks on each side of the curtain are not rubbing on the headplate brackets. Operate 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 curtain is not binding on the guides.
- If curtain is level at bottom and not level at 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 links.

## STEP 21- A

HOOD INSTALLATION FOR ONE PIECE HOOD

- Hood flange must be securely fastened to the wall.
- On masonry walls use masonry fasteners through each hole in the hood flange.
- On non-masonry walls the hood flange must be fastened to each available wall stud by drilling holes through the hood flange and into wall stud.
- Attach the hood to the hood band on headplate bracket by drilling a 7/32” hole through the hood and band. Then secure hood with 1/4” tapping screw, maximum length 7/16”. Longer screws can prevent door closing. Use four screws per bracket. See Figure 23.
- Install hood support at each hood splice if required.

## STEP 21- B

INSTALLATION FOR HOOD SEGMENTS AND HOOD SUPPORTS

- Snap a chalk line across the header at the top of headplate brackets.
- Measure the length of the top flange on the left hand hood segment.
- Position top of internal hood support just under chalk line with right hand edge of hood support at a distance from the headplate that is equal to length of top flange on LH hood segment; and fasten hood support to wall.
- Place the LH hood segment of the headplate hood bands and on hood support. The distance between the flame baffle and the hood support should be one inch or less. Flame baffle must be free to drop without interference with hood support. Series 631 fire door has no flame baffle.
- Fasten hood flange to wall with fasteners appropriate for wall construction.
- Place second hood segment onto headplate hood bands and hood support and fasten hood flange to wall with fasteners appropriate for wall construction.
- Attach the hood to hood bands and hood support with 1/4” dia. by 3/8” long tapping screws; longer screws may prevent door closure. Use four screws on each hood band and support.
- See Figure 23.

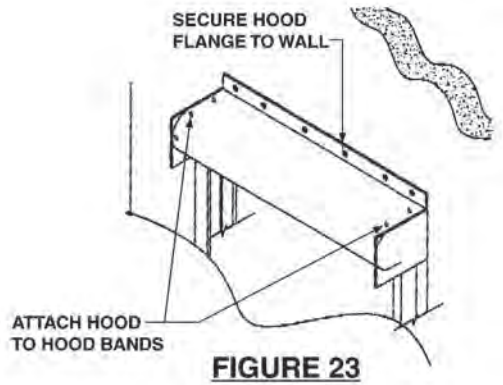
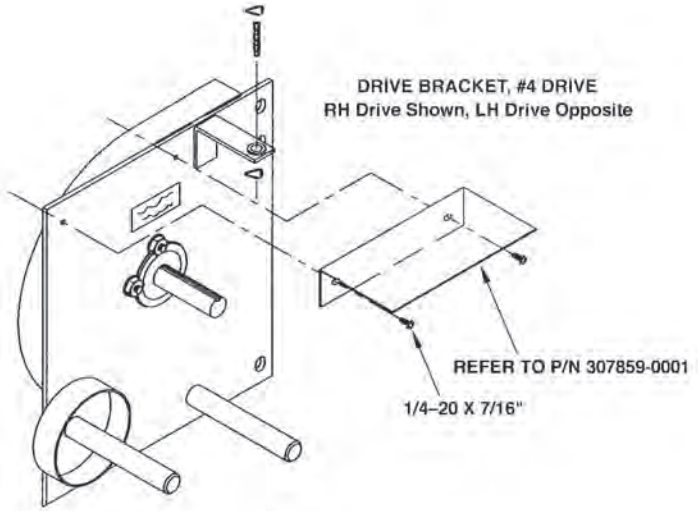


FIGURE 23



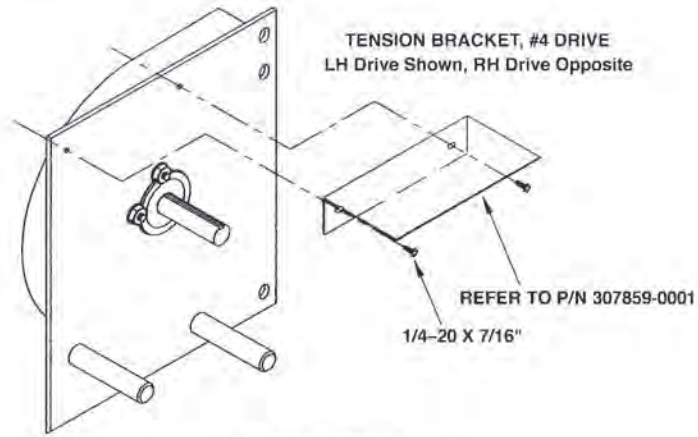
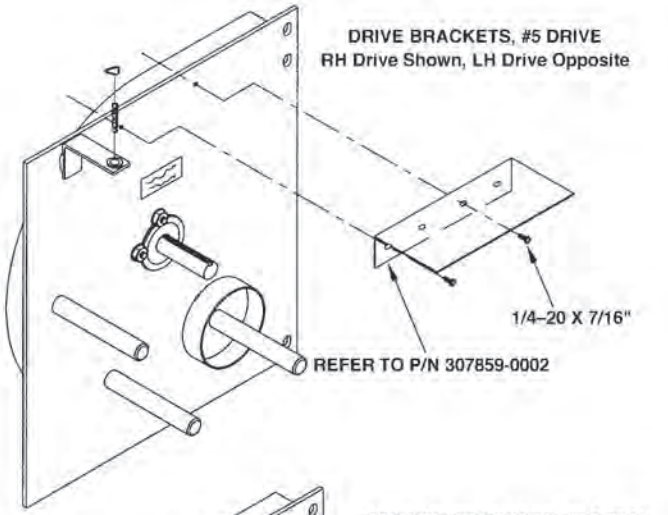




**FIGURE 24**
DEBRIS SHIELD
INSTALLATION INSTRUCTION
#4 DRIVE



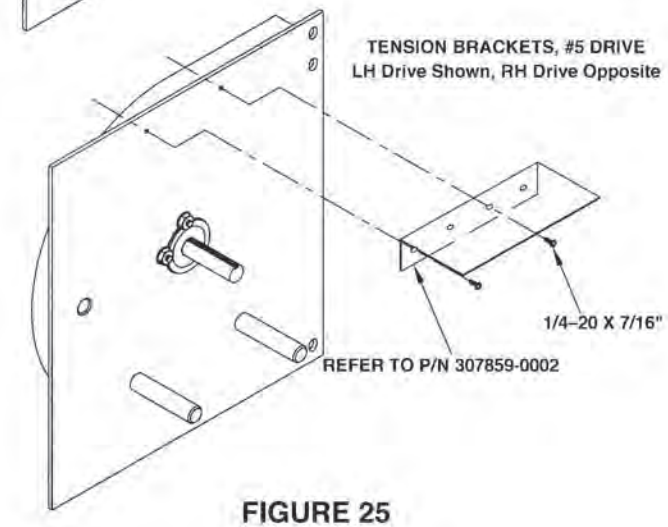




**FIGURE 25**
DEBRIS SHIELD
INSTALLATION INSTRUCTION
#5 DRIVE

## STEP 22

HEADPLATE DEBRIS SHIELDS

- Debris shields are standard items and should be installed as shown in Figure 24 and Figure 25.
- Bracket covers are optional extra items. Attach the covers to brackets. See optional covers on page 3. Use of 1/4” diameter by 7/16” long screws is mandatory because a longer screw can prevent door closing during a fire.

## NOTE:

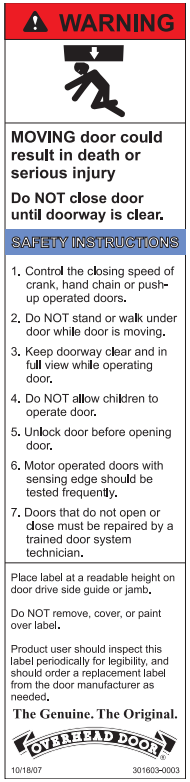
Drop Test Instructions, part number 304952, will be attached to the drive side debris shield in a later step.

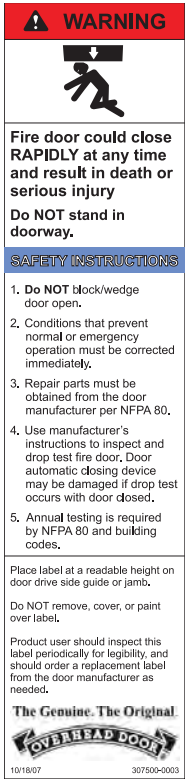
## STEP 23

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 each 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 of the following recommendations per 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 regularly clean each label surface to maintain legibility or order replacement safety labels from the door manufacturer as required to maintain legibility.
- Electric operators must be installed on the door in accordance with the instructions from the manufacturer of the operator.
- Doors with sensing edge must have Safety Label 607873 attached to the bottom bar and at eye level on the drive side guide or jamb.

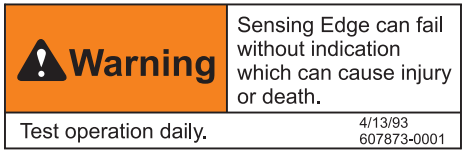



## STEP 24

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.




## STEP 25

HAND CHAIN KEEPER

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 26

CHAIN AND RELEASE CABLE STORAGE

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 27

ATTACH 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 sheet to the debris shield adjacent to drive side guide. Ensure the Instruction Sheet is visible to users and that it will NOT interfer with door operation. Notify building occupant regarding the instruction location.

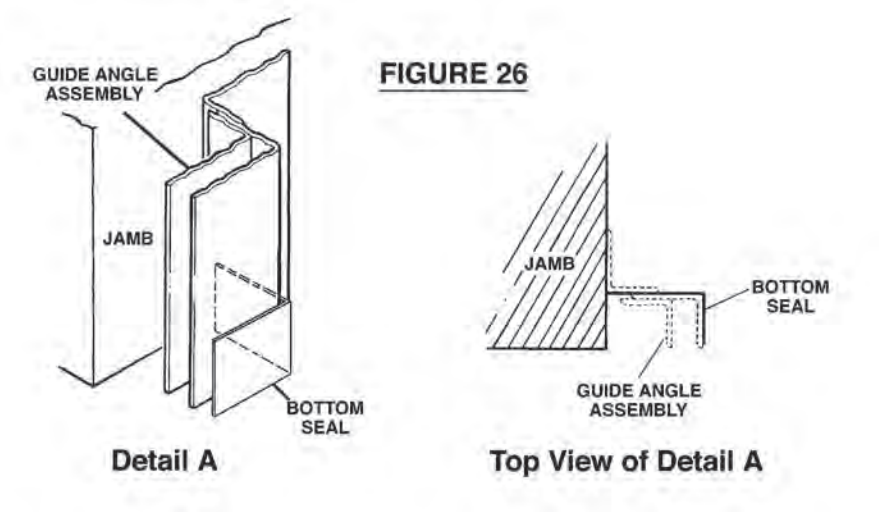
## STEP 28

GUIDE SEAL INSTALLATION

NOTE: A Guide Bottom Seal is a UL requirement for each fire door with an unlevel floor to keep fire from passing thru the gap under the guide mounted off the floor. The Bottom Seal is not optional and must be installed, when required, to fill the gap.

Guide Angle Assemblies normally rest on the floor, but if one guide assembly is installed above the floor because the floor is not level, then the gap under the guide must be closed by a sheet of metal (Bottom Seal) as shown in Figure 26. The sheet metal must be at least 24 gauge steel. It must be sandwiched between the Guide Angles and bent as shown below.

NOTE: If door is equipped with slide bolts, notch Bottom Seal, as required for slide bolt to project through.




# MAINTENANCE

BOTTOM BAR REPLACEMENT

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, (Wind Lock 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, (Wind Lock 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 18.
- Remove barricades or warning cones and notify customer that the repair is complete.
- Perform Annual Drop Test in accordance with Drop Test Instructions 304952.

VERTICAL RELEASE ADJUSTMENT

The screw adjustment on the vertical release 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 27.

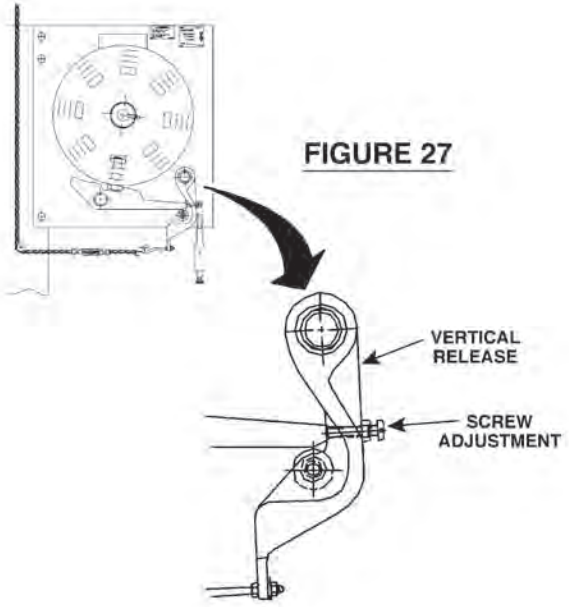



FIGURE 27

# TROUBLESHOOTING

TROUBLESHOOTING

- Sash chain shown in Figures 22-A, 22-B, 22-C and 22-D must have free movement when they are released.
- The released tension headplate assembly should look like Figure 12.
- The released drive assembly drop arm should be down and the dentil sprocket disconnected as in Figure 21. Make sure that twine is removed from bracket on drive headplate. The drop arm pre-released positions are shown in Figure11.
- Verify adjustments in Step 14.
- Roller chain must not exert pressure on the 14 tooth dentil sprocket. With electric operation, verify ”open” limit switch setting as in Step 19. Hand chain or crank operation must not be locked in place.
- Call nearest Overhead Door Distributor for assistance.

# WARRANTY

# The Genuine. The Original.

OVERHEAD DOOR®

## 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: _____

C900-732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