

Operational & Maintenance Nanua

Products:

Installation Site

Contractor

Architect

Distributor



Dear Customer:

Thank you for choosing [$` | AS[\{] a \} ` As your custom door installation specialist.$

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 $[\ AS[\{]a \}^{a}]$ 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 Table of Contents

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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:

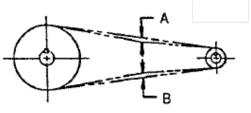
Every three months¹

- 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.



A+B must equal more than 1/4"

Figure A

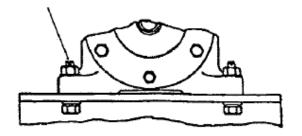


Figure B



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 $\frac{1}{2}$ " or $\frac{3}{4}$ ".
- 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.
 - 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.

OPERATOR DOES NOT RUN. SOLUTION: a. Verify that e

- 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.

SOLUTION:

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	No. U.L. Tag No.			Visual Check		Operation Check		Reset Check	
		Serial No.		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 FireKingTM 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 FACE MOUNTED ROLLING FIRE DOOR with

FireKing RHX OPERATOR

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 308421 Hilti Kwik Bolt Installation Instructions 308577 NFPA 80-2010 Brush Seal Instructions 308222-0001 Rolling Fire Door Test Drop Release Form 308418-0001

Section 1

Safety Information

A WARNING

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 stress important safety information. The word:

A DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

A WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

A CAUTION indicates a potentially hazardous situation which, if not avoided, may result in injury or property damage.

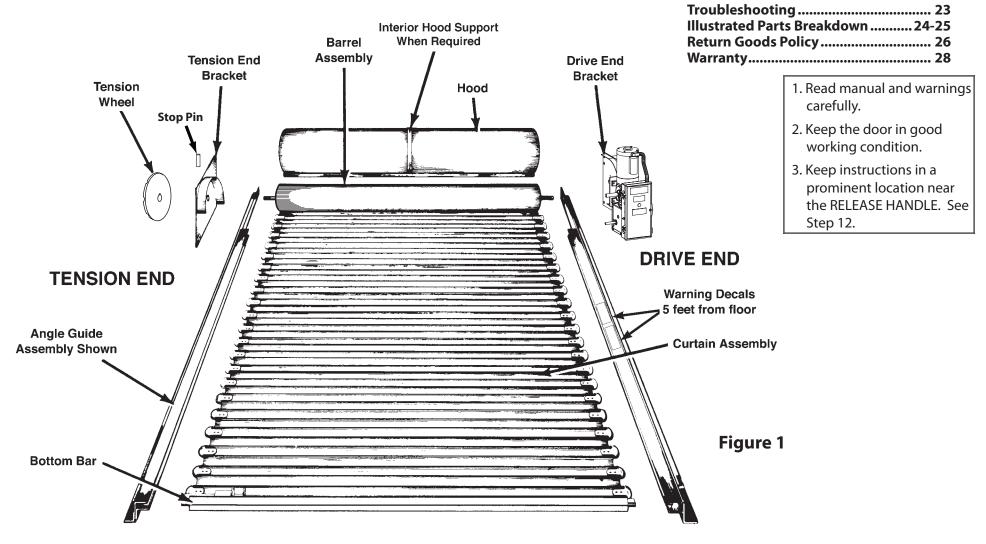
The word **NOTE** is used to indicate important steps to be followed or important considerations.

IMPORTANT SAFETY INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS SAVE THESE INSTRUCTIONS

POTENTIAL HAZARD	EFFECT	PREVENTION
MOVING DOOR	A WARNING Can Cause Serious Injury or Death	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	A WARNING Can Cause Serious Injury or Death	Turn OFF electrical power before removing Control Panel cover. When replacing cover, make sure wires are not pinching or near moving parts. Operator must be properly grounded.
HIGH SPRING TENSION	A WARNING Can Cause Serious Injury or Death	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. Installations, repairs and adjustments must be made by a trained door system technician using proper tools and instructions.

Key Drawing

Pictorial view of a Rolling Fire Door with parts and their names. See, also, the Illustrated Parts Breakdown on pages 24-25.



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

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Maintenance 22

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.

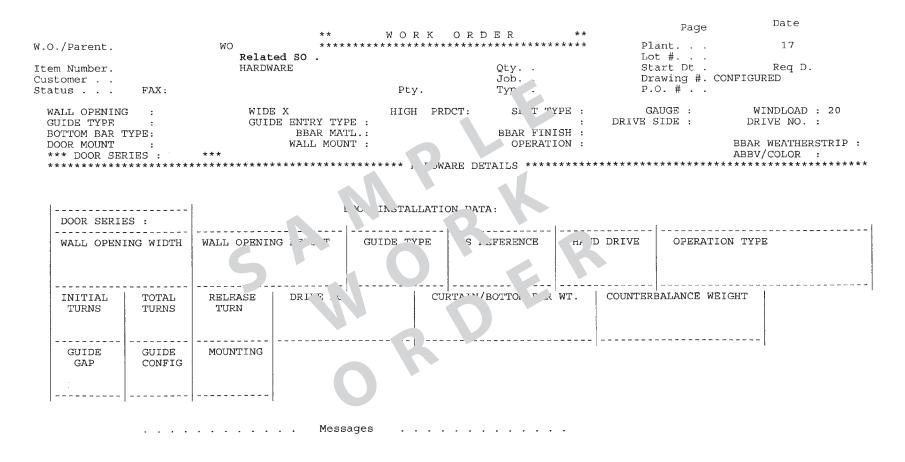


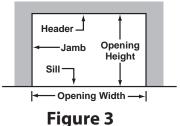
Figure 2

4

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 3.
- 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 4.
- 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 Figure 6.



THREAD FORMING

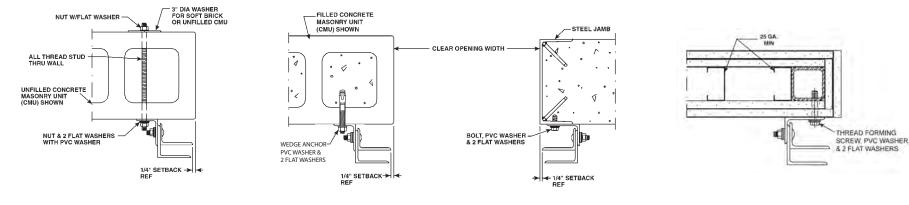
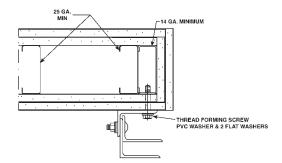
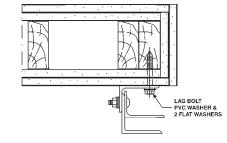
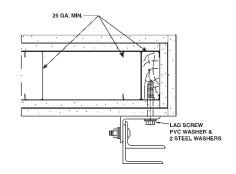


Figure 4







<u>Install</u>

- 1. INSTALL GUIDE ASSEMBLIES
 - Locate the guide assemblies such that "S" dimension exists between the guides as shown in Figure 6.
 - 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 22.
 - 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 13.

WALL ANGLE MIDDLE ANGLE

Figure 5



Figure 6 Masonry jambs shown, non-masonry jamb

installation is similar.

A. 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.

B. 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	1/2" self-tapping screw 1/2" bolt 5/8" bolt	11/32" diameter 27/64" diameter 17/32" diameter	Steel jambs must be minimum 3/16" thick
Concrete	3/8" expansion bolt 1/2" expansion bolt 5/8" expansion bolt	3/8″ diameter 1/2" diameter 5/8″ diameter	Drill hole at least 4" from jamb corner per OHD Installation Instruction 307390.0001.
Filled block	3/8" expansion bolt 1/2" expansion bolt	3/8" diameter 1/2" diameter	Ond installation instruction 507 590.0001.
Wood	1/2" lag screw	3/8" diameter	Drill hole 3" deep
Unfilled block	3/8" thru bolt 1/2" thru bolt 5/8" thru bolt	7/16" diameter 9/16″ diameter 11/16″ diameter	Install 3" O.D. steel washer on opposite side of wall.

D. STEEL JAMBS - Weld Attachment Option

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

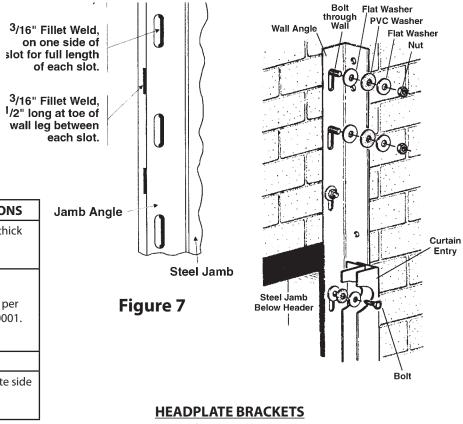
Hold "E" guide wall angle against steel jamb and mark the spot to be drilled at top of slots. Drill holes through the top of slots using drill size shown below. Install all jamb fasteners on one guide. Recheck "S" distance, and continue with installation.

NOTE: When steel jamb does not extend above the opening, use three thru-bolts to fasten each wall angle above the opening. See Figure 7.

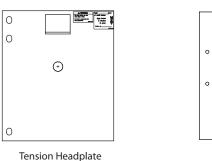
2. IDENTIFY HEADPLATE BRACKETS

See Figure 8.

Right Hand Drive shown; Left Hand Drive is opposite



RH Drive shown, LH Drive opposite





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Figure 8

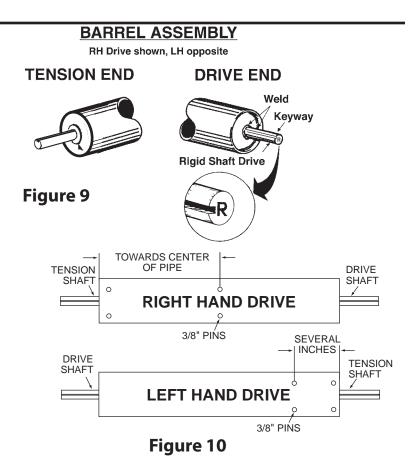
3. IDENTIFY BARREL ASSEMBLY DRIVE END

Right hand drive shown in Figure 9; 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 9.

- 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 10.



4. BARREL AND HEADPLATE BRACKETS

- Set barrel assembly on blocks or sawhorses so headplate brackets clear the floor. See Figures 11 and 12.
- Install set collar on tension shaft BEFORE sliding tension headplate on.
- Slide drive end of barrel assembly through drive bracket bearing and tension end through tension bracket.
- The distance between the headplate brackets should be the "S" dimension on the "INSTALLATION DATA" sheet.

ACAUTION

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.

5. TENSION WHEEL

- Secure tension wheel to tension shaft as shown in Figure 11.
- Use a 1/4 or 3/8 key to secure Tension Wheel to shaft. See Figure 13 a and b.
- If Tension Wheel is 11" in diameter or larger, slide set collar next to Tension Wheel and secure to tension shaft as shown in Figure 11.

A WARNING

Tension Wheel holds spring tension. Failure to key shaft could allow Tension Wheel to fall or door to freefall causing severe injury or death. Verify that set collar is installed to retain the adjusting wheel.

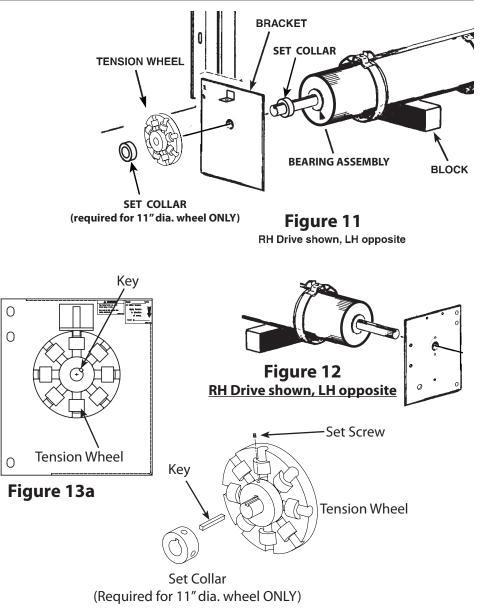


Figure 13b

6. GEAR ASSEMBLY AND HEADPLATE

- Slide Gear Assembly onto Drive Shaft. Place key in Drive Shaft such that it aligns with keyway in Gear Assembly
- Secure Gear Assembly to Drive shaft as shown in Figure 14.
- Tighten Gear Assembly set screw on key and on shaft.

7. 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 15. 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.

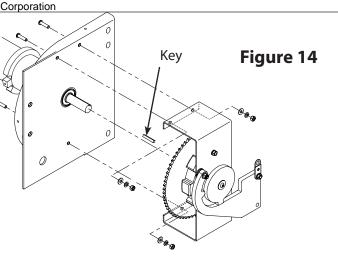
• Tighten setscrews in drive headplate bearing and slide set collar on tension shaft against inside of tension headplate and tighten setscrews to lock counterbalance between headplates. Drive shaft should extend no more than 1-7/16" beyond headplate.

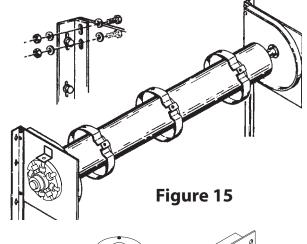
8. RHX OPERATOR

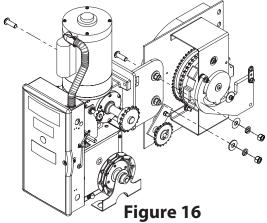
• Secure RHX Operator to Gear Assembly plate as shown in Figure 16. Make sure that the Gear Assembly sprocket is aligned with the RHX Operator sprocket before tightening bolts.

9. RHX ASSEMBLY

- Wrap chain around Gear Assembly sprocket and RHX Operator sprocket and install master link.
- Loosen the two (2) bolts fastening the RHX Operator support to the bracket, see Figures 17 and 18. Slide the RHX Operator towards the front of the bracket to increase the tension on the roller chain.
- Adjust chain until slack is between 1/4" and 1/2", as shown in the illustration below Figure 17. If the chain slack exceeds 1/2", re-cut roller chain.
- Loosen the bolt on the limit chain idler bracket to let the bracket rotate freely. See Figure 16.
- Wrap #410 roller chain around drive limit sprocket, limit switch sprocket and limit chain idler sprocket and then install master link. See Figure 17 and 18.
- Rotate idler bracket to apply tension to the #410 roller chain. Then tighten the bolt on the limit chain idler bracket. See Figure 17 and 18.







A WARNING

Proper installation will result in door being under balanced. Chain slack must be less than 1/2" to prevent chain from coming off, allowing door to free fall, possibly causing severe or fatal injury.

A WARNING

Excessively tight chain can prevent door from dropping properly during drop test or in case of actual fire.

ACAUTION

Use proper lifting equipment and correct lifting procedures to avoid injury.

10. GEAR ASSEMBLY/RHX OPERATOR ROLLER CHAIN ADJUSTMENT

• With the headplates mounted check the RHX Operator roller chain tension again. See Figure 18.

A WARNING

Proper installation will result in door being under balanced. Chain slack must be less than 1/2" to prevent chain from coming off, allowing door to free fall, possibly causing severe or fatal injury.

A WARNING

Excessively tight roller chain can prevent door from dropping properly during drop test or in case of actual fire.

• Re-tighten RHX Operator bracket fastening bolts.

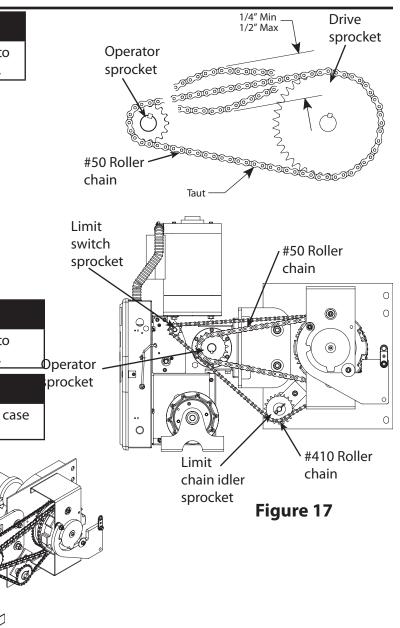
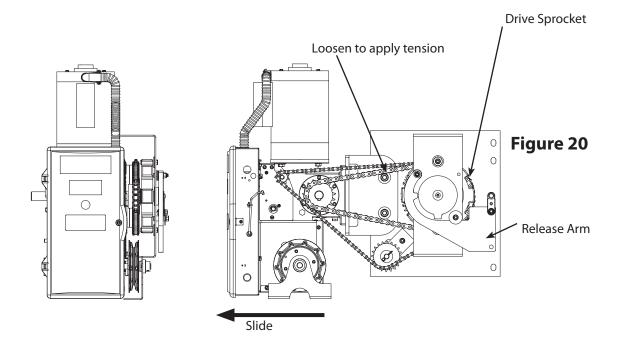


Figure 18

Figure 20 shows RHX Operator configurations. Tension adjustments the RHX Operator can be done by loosening the two bolts shown and sliding the RHX Operator assembly away from the Gear Assembly.



11. INSTALL CURTAIN

See Figure 22

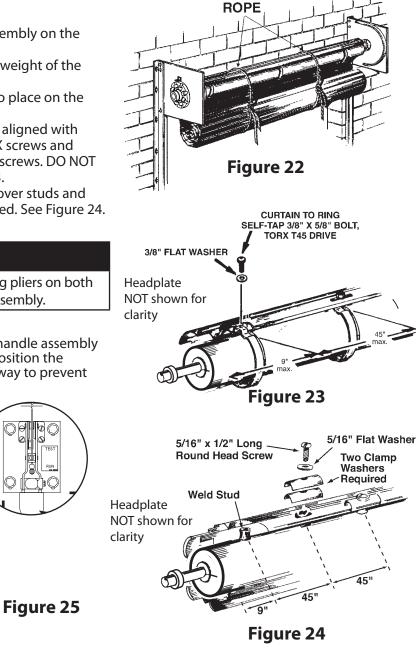
- The Sling Method is recommended because rolling the curtain onto the barrel assembly on the floor can cause curtain damage.
- Suspend the curtain below the barrel on two or more slings or ropes rated for the weight of the curtain shown on the "INSTALLATION DATA" sheet.
- Fasten the top slat to sling/rope 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 23.
- 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 24.
- Coil curtain completely onto barrel using chain hoist.

AWARNING

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.

12. RELEASE HANDLE MOUNTING

Carefully read the instructions packaged with the release handle assembly. The release handle assembly is designed to be mounted to the wall on the operator side of the door. It is desired to position the release handle assembly in a location that is easily accessible, yet sufficiently out of the way to prevent interference with chain hoist operation.



Floor

Release handle

🗕 3″ to 12″

Guide

GUIDE GAP

SCREW

FASTENER

Installation (continued)

13. COMPLETE GUIDE INSTALLATION

- If guides are flared, then bolt the middle angles and the outside angles to the wall angles like Figure 29.
- The Guide Gap MUST be set to the value shown on the "INSTALLATION DATA" sheet.

14. INSTALL SLIDE STOPS

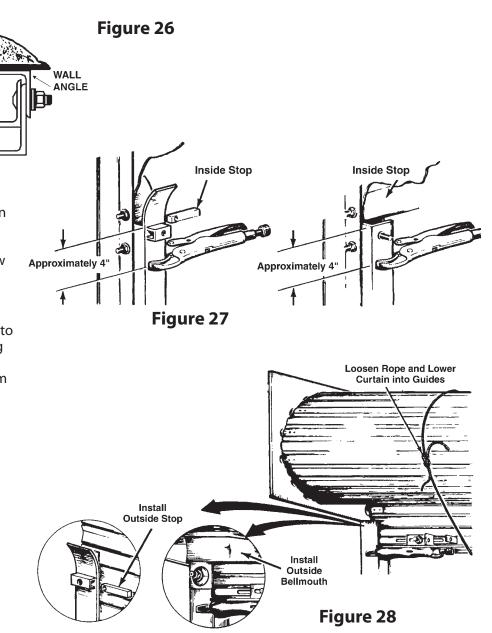
- Install Inside Stop on LH and RH guides as shown in Figures 27 and 28.
- If the door has flared guides:
 Slide stop into inside channel holder and secure with 3/8-16 x 1/2" round head screw and washer.
 Attach locking pliers approximately 4" below the top of channel holder on both LH and RH guides as shown in Figure 27.
- 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 28.

15. 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 28 for flared guides and for guides with bellmouths.

A 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.



A WARNING

Verify that at this point, the Tension Wheel is free and there is no spring tension.

A WARNING

Tension Wheel will be placed under high spring tension and it could spin rapidly resulting in death or serious injury. Door must be open when adjusting spring tension. Use two steel rods 3/4" diameter x 3 feet long (not provided) as winding bars.

AWARNING

Winding bar must fit snugly into holes in Tension Wheel. DO NOT use loose fitting bar or screwdriver which could dislodge resulting in possible serious injury or death.

16. COUNTERBALANCE ADJUSTMENT

- Align Tension Wheel under bracket so Stop Pin can rest in Tension Wheel slot.
- Set Stop Pin in place. See Figure 29D.

Read completely before you set initial turns to the value shown on INSTALLATION DATA and on Tension Headplate decal.

Locate the door in the full up position such that the bottom bar is against the bottom bar stops and place a clamp on each guide no more than 6" below the bottom bar. Make certain that the clamping force will be sufficient to stop the door when it rests on the clamps.

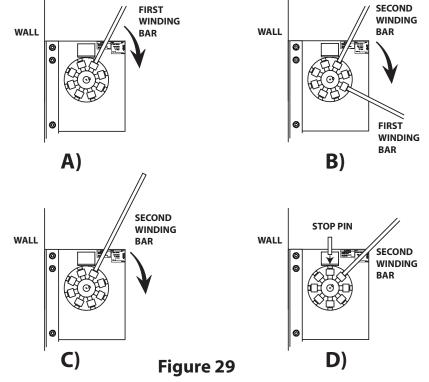
Carefully lower the curtain using the chain hoist so that the bottom bar rests on the clamps. By hand, rotate the Tension Wheel slightly both directions to determine the neutral point of the spring counterbalance. Mark the hole in the TENSION WHEEL that is nearest to the retaining lug on the bracket.

Note: Tension is applied in the direction the coil would turn as the door moves upward.

- Insert winding bar into tension wheel and pull down. See Figure 29 A.
- Rotate tension wheel 1/8 to 1/4 turn and stop.
- Hold first bar and insert second bar into tension wheel. See Figure 29 B and C.
- Pull down on second bar while removing the first bar.

A WARNING

Tension Wheel holds spring tension. Failure to stop pin shaft could allow Tension Wheel to spin uncontrolled possibly causing serious injury or death.



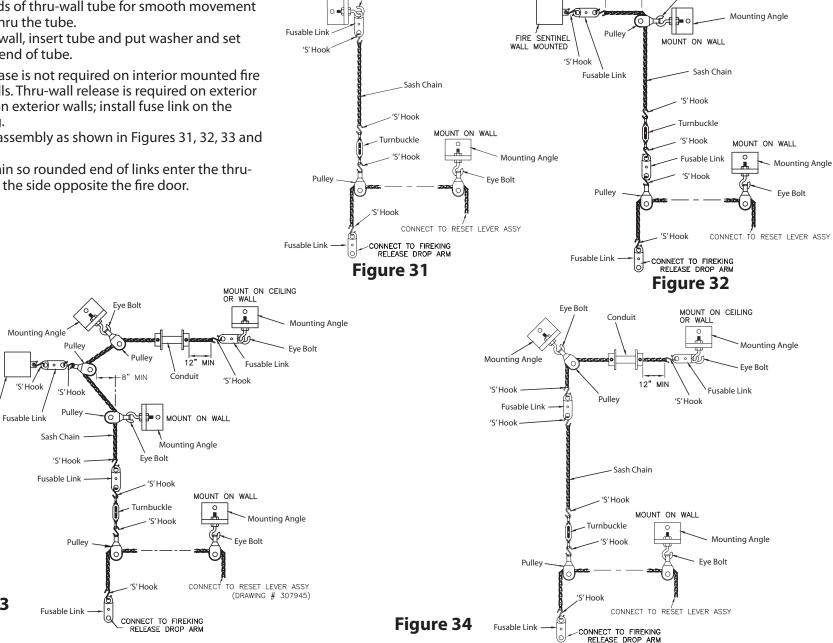
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17. DOOR RELEASE ASSEMBLY ROUTING

- 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 31, 32, 33 and 34 as required.
- Install sash chain so rounded end of links enter the thruwall tube from the side opposite the fire door.



12" MINIMUM

Eve Bolt

FIRE SENTINEL

Figure 33

WALL MOUNTED

Mounting Angle

Eye Bolt

18. RELEASE CHAIN FINAL STEPS

• Tighten the turn-buckles in the release chain assembly.

19. CHECK DOOR OPERATION

- Clear area in path of door.
- Lower and raise the curtain using the Operator at least twice to test for proper operation. The bottom bar must rest against the floor/sill.

A WARNING

Door descends rapidly during test procedure. Rope off opening and keep persons from entering area during test drop. Keep all persons clear of opening or serious injury or death could occur. Secure the hand chain in the chain keeper before all drop tests.

A CAUTION

Keep opening free of objects and debris. Door could strike such objects causing injury or property damage.

20. DROP TEST

All fire doors must be drop tested at least once 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 80-2010.

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.
- With door resting on bottom bar stops, stand clear of the door opening and move the release handle to the test, or up position.

If tension is adjusted properly, the door should fall from the bottom bar stops and descend to the closed position.

If door does not fall, repeat tension removal procedure. If door falls, re-engage release handle as instructed above and push open button to raise the door to the open position.

• Melt a fusible link on side opposite door or unscrew a turnbuckle in release chain assembly, this will activate the release arm at drive end. (Test door release assembly at each fuse link/detector.)

• Release the handle and record the amount of time the door takes to close and verify it falls between 6 and 24 inches per second. The bottom bar must come to rest on floor.

If door falls slower than 6 inches per second, remove spring tension per STEP 16, and recheck descent speed.

If door falls faster than 24 inches per second, add spring tension per STEP 16, and recheck descent speed.

- Raise door to fully open position several times and repeat drop procedure to verify it is working correctly and consistently.
- If the door does not close during drop test, clamp locking pliers to both guides under the bottom bar. Refer to TROUBLESHOOTING on page 23.

21. RESET DOOR AFTER DROP TEST

ELECTRICAL OPERATED DOORS:

- Reengage the release handle and complete the release form provided in the hardware bag.
- Press the open button to open the door to the full open position, the door is now reset. Note: If push button is constant pressure, hold the open button in, if monetary press and release open button.

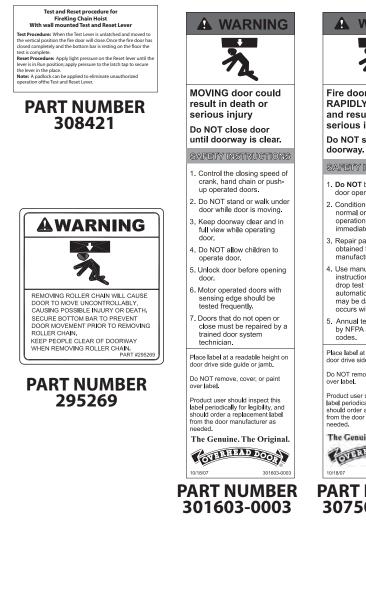
23. CHECK THE FOLLOWING ITEMS BEFORE INSTALLING HOOD

- 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

22. 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.
- Attach Roller Chain Label, 295269, to the drive side Governor Support Plate.
- Find the 5"x 5" Drop Test Instruction, 308421, in door hardware box. 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 interfere with door operation. Notify building occupant regarding the instruction location:
- Demonstrate to the door user the correct way to control the closing speed of the rolling door with hand chain 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.





Fire door could close RAPIDLY at any time and result in death or serious injury

Do NOT stand in

SAFETY INSTRUCTIONS

- 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

Place label at a readable height on door drive side quide or jamb.

Do NOT remove, cover, or paint

Product user should inspect this label periodically for legibility, and should order a replacement label from the door manufacturer as

The Genuine. The Original.

OVERHEAD DOON 307500-0003

PART NUMBER 307500-0003

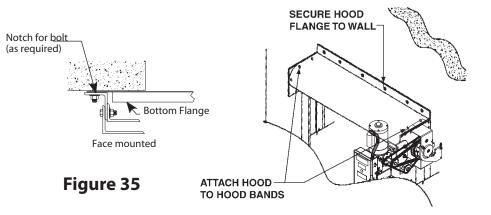
- nd that cur tain is not binding on the guides.
- If curtain is level at bottom and not level at top, put shims between curtain and barrel on the low side.
- The guides may be lubricated with paste wax or silicone spray. DO NOT USE GREASE.
- Verify good mechanical connection and tightness of all fasteners, i.e., guides, headplates, set screws and roller chain links.
- Apply all warning labels in the appropriate locations before leaving the installation site.
- Check the area for any extra parts, and be sure these were not omitted in the installation process.
- Re-check all bolted connections to verify all are securely tightened.
- Clean up the area and make sure it is secure, with the handle engaged with the pin provided.
- If the building owner or facility manager is unfamiliar with the product, demonstrate the operation of the door and any optional equipment before leaving the job site. Be sure to demonstrate how to safely drop test the door and point out the importance of Pad-Locking the release handle to avoid possible tampering.
- Have the customer or his representative sign off on the installation using the "Rolling Fire Door Test Drop Release Form" provided in the hardware bag. Keep a completed copy of this form in your maintenance files. Exchange all documentation and keys to locks at this time.
- Be sure to report (in writing) to the factory any complaints or recommendations the customer may register at the completion of the installation that may have a bearing on future designs.
- Important: WARNING LABEL MUST BE APPLIED TO OPERATED SIDE OF THE ROLLING DOOR, ON THE GUIDE, 5 FEET ABOVE THE FLOOR.

24. 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 37 on page 21.
- Install hood support at each hood splice if required.

25. INSTALLATION FOR HOOD SEGMENTS AND HOOD SUPPORTS

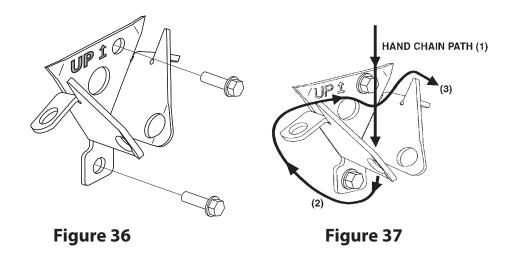
- Snap a chalk line across the header at the top of headplate brackets.
- Measure the length of the top flange on the left hand hood segment.
- Position top of internal hood support just under chalk line with right hand edge of hood support at a distance from the headplate that is equal to length of 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 35.



26. HAND CHAIN KEEPER

The emergency hand chain for this fire door can be locked.

- Attach chain keeper to wall or guide on drive side of door as shown in Figure 36.
- Instruct door users to wrap hand chain as shown in Figure 37 below.

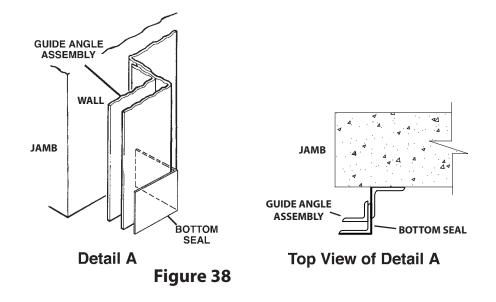


27. GUIDE SEAL INSTALLATION

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 38. 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 21.
- Remove barricades or warning cones and notify customer that the repair is complete.
- Perform Annual Drop Test in accordance with Drop Test Instructions 308421.

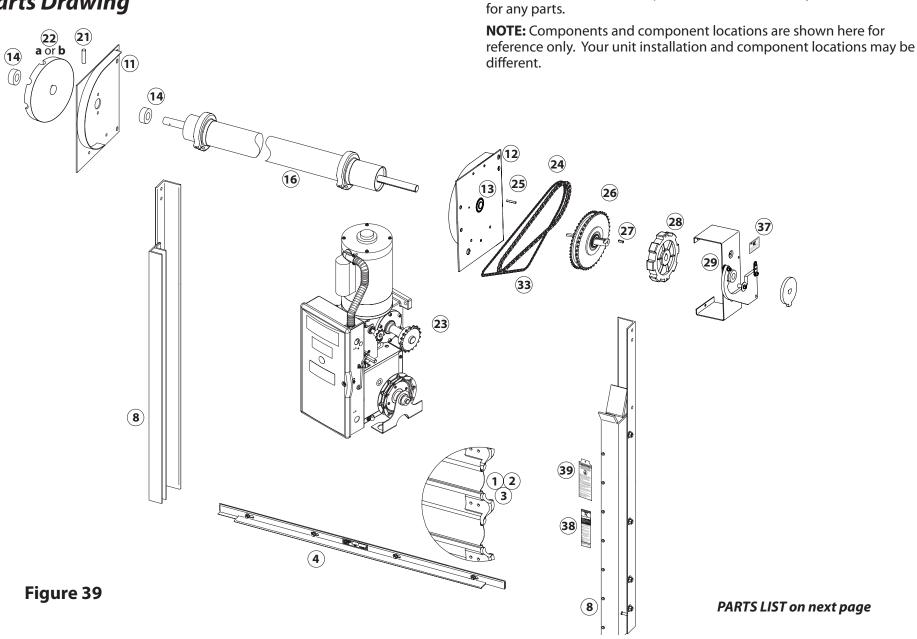
TROUBLESHOOTING

The chart below is a list of possible problems with the operation of the fire door. The possible causes listed are the most common, and are not meant to include all possibilities. With the variety of the product and the field conditions, other factors may be involved. If assistance beyond this troubleshooting chart is needed, please contact your Overhead Door Distributor. Factory support is available to them, should it be necessary, in order to resolve your problem.

Trouble	Possible Cause(s)	Remedy
Door drops very slow during test	*Roller chain is too tight *Too much spring tension *Binding of door	*Verify roller chain slack is within limits defined in STEP 8 *Remove spring tension as instructed in STEP 17 *Check for binding/ interference and correct
Door drops too fast during test	*Too little spring tension	*Add spring tension per STEP 17
Door does not drop during test	*Too much spring tension	*Remove spring tension as instructed in STEP 17
Curtain runs to one side	*Broken endlocks *Barrel not level	*Check and replace *Check and level barrel
Door sticks when closing	*Bent guide angle(s)	*Inspect for bent or kinked guides. *Straighten guides and check width of groove.
Door coil makes cracking sound	*Bent slats	*Inspect, remove and straighten or replace
Door squeaks when operating	*Tight guides *Dirty guides	*Check alignment and distance between guides. *Inspect and clean inside of guide. Do not lubricate with grease. Use WD-40 or silicone spray.
Door is difficult to raise, will not stay open	*Insufficient Counterbalance *Broken spring	*Increase spring tension and repeat drop test procedure *Remove barrel and replace.
Operator moves, door does not operate	*Release arm is disengaged	*Verify release handle is locked down *Increase release cable tension

Illustrated Parts Breakdown

Parts Drawing



NOTE: Fasteners and some parts not shown for clarity. Check the Parts List

Table of Part Numbers

2 3	Description urtain Assembly, Complete Slat Endlock / Windlock ottom Bar Assembly	Reference Part Number Inquire Inquire	Built to Order? Yes Yes	ltem 25	Description		Built to
2 3 4 Bo	Slat Endlock / Windlock	•		25		Number	Order?
3 4 Bo 5	Endlock / Windlock	Inquire	Yes	25	Key, 1/4 x 1.50"	080340-0016	Yes
4 Bc 5		Inquire			Key, 3/8 x 1.50"	080340-0029	Yes
5	ottom Bar Assembly	Inquire		26	Gear system asembly	308359	Yes
		inquire	Yes	27	Key, 1/4 x 7/8"	080340-0074	Yes
6				28	Governor	308396	Yes
				29	Governor support plate assembly, RH	308352-0000	Yes
7					Governor support plate assembly, LH	308353-0000	Yes
8 GI	uide Assembly	Inquire	Yes				
10							
	ension end head plate assy	308309	Yes				
12 Dr	rive end head plate assy	308313	Yes	30	Hood Assembly, Service Door	Inquire	Yes
13 Be	earing assembly kit	308399	Yes		Hood Logo, Service Doors (not shown)		
14 Se	et Collar		Yes	31	Exterior Hood Assembly, Service Door	Inquire	Yes
15					Hood Logo, Service Doors (not shown)		
				32			
				33	Roller chain, #410	080837-xxx8	Yes
16 Co	ounterbalance Assembly,	308415	Yes	34			
		308416	Yes	35			
		308417	Yes	36	Reset Lever Label	308421	
L				37	Gear Box Assembly Label	295269	
20				38	Safety Label	800372	
	ension end stop pin	046167	Yes	39	Motor Brake Release Tag	810220	
	ension wheel, 6-3/4" 00	307585	Yes		OPTIONAL ACCESSORIES		
	ension wheel, (for 11")	307953	Yes				
	HX, 1/2 HP		Yes				
	HX, 1 HP		Yes				
R	HX, 3 HP		Yes				
L			Yes				
			Yes				
			Yes				
24 Rc	oller chain, #50	080837-xxx	(4 Yes				

"Built to Order" parts are specific to each door manufactured, and may be subject to manufacturer's standard lead-times.

Return Goods Policy

Return Procedure for FACE MOUNTED ROLLING FIRE DOOR Series 630,631, 634, and 635

The Overhead Door Rolling Steel Division will only accept returned materials that are in warranty. Products being returned must be accompanied by a Return Authorization (RA) Tag. To obtain a RA Tag please use the following guidelines;

- Complete Door Systems will not be replaced without prior approval from an Rolling Steel Division Commercial RM Coordinator. Every attempt will be made to correct the malfunction to the installed product in the field.
- To return a defective part, the authorized Overhead Door Distributor must contact the Customer Service Group of the Rolling Steel Division at 1-800-929-2553. The Factory Order number is required (found on the bottom bar of door). The Customer Service Group will issue, via mail, an RA Tag for the defective part.
- Upon receipt of the defective part, the Rolling Steel Division will evaluate the part for a manufactured defect in material and/or workmanship. If it is determined there is a defect, the Overhead Door Distributor will be credited the cost of the part. If it is determined there is not a defect in material and/or workmanship, no credit will be issued.



WARRANTY

The Genuine. The Original.



Oberhead Boor Corporation Rolling Fire Boor and Operator System Limited Warranty

Overhead Door Corporation ("Seller") warrants to the original purchaser of the Series 630, 631, 634 or 635 commercial rolling fire door ("Door") and the model RHX[®] commercial door operator ("Operator") (Door and Operator purchased and installed together collectively referred to as the "System"), subject to all of the terms and conditions hereof, that the System and all components thereof will be free from defects in materials and workmanship under normal use for the following periods, measured from the date of installation:

• Seller warrants all parts and components of the System, except the counterbalance spring and finish, to be free from defects in materials and workmanship for three (3) years from the date of installation or 20,000 cycles¹, whichever occurs first.

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 for any defective Door part or component is included for a period of one (1) year from the date of installation. After that, any labor charges are excluded and will be the responsibility of the purchaser. Labor charges related to any Operator defect are excluded and will be the responsibility of the purchaser.

This warranty is made to the original purchaser of the System only, and is not transferable or assignable. This warranty does not apply to any unauthorized alteration or repair of the System, or to any System or component which has been damaged or deteriorated due to misuse, neglect, accident, failure to provide necessary maintenance, normal wear and tear, or acts of God or any other cause beyond the reasonable control of Seller. This warranty does not cover replacement batteries or 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 applies only to Systems (a Door and Operator purchased and installed together simultaneously) and not to any Door or Operator purchased independently from the other, regardless of whether subsequently paired together.

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 System 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. This Warranty is not valid unless the fields below are completed by the installer at the time of installation.

The number of cycles referred to herein shall be measured by an integrated cycle counter contained in or attached to the Operator. If the cycle counter is rendered inoperable, Seller shall use other reasonable means to determine the cycle count

DOOR	TVDE

OPERATOR TYPE:	
----------------	--

CUSTOMER NAME (ORIGINAL PURCHASER):

CUSTOMER INSTALLATION LOCATION:

ORDER # _

DATE OF INSTALLATION:

NAME OF DISTRIBUTOR/INSTALLER:

SIGNATURE OF DISTRIBUTOR/INSTALLER:

C900-946



Overhead Door Corporation 2501 S. State Hwy 121 Bus., Suite 200 Lewisville, TX 75067 1-800-929-3667(DOOR) www.overheaddoor.com