

**CAUTION**

Do not attempt to operate the door electrically prior to these checks.

**CAUTION**

When limit switches are not set, allow door to travel only a short distance to verify operation, and then stop.

**CAUTION**

If door operation is reversed from the direction selected by the push-button, then motor rotation should be reversed by changing the phase of the motor's source power at the starter.

**CAUTION**

The "OPEN" and "CLOSED" push buttons must be wired to the terminals shown on the wiring diagram. Do not change push-button wiring if the door travels in the wrong direction.

**CAUTION**

Be prepared to stop the door with the "STOP" push-button when adjusting limit switches.

**WARNING**

The motor is operated and controlled by 110 volts power. Secure source power to the motor when conducting maintenance on the door.

**WARNING**

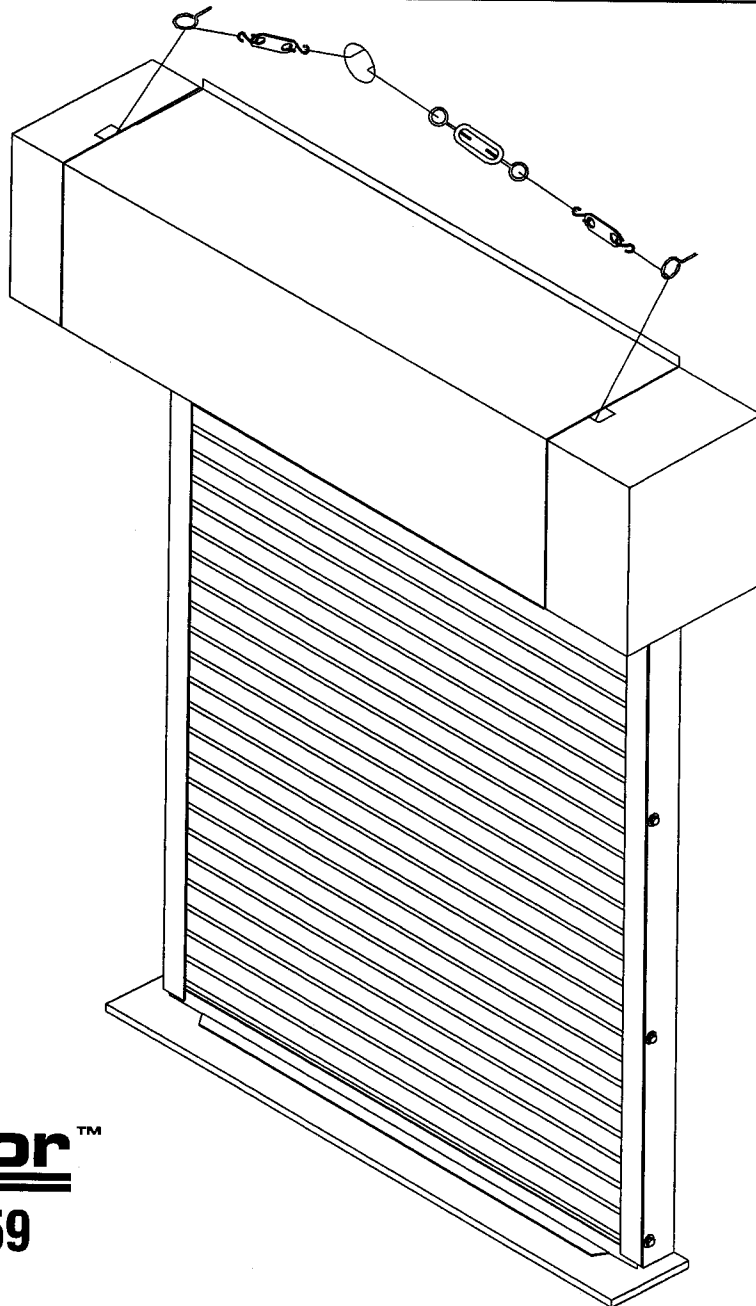
Install the spring charge-retaining pin whenever the curtain weight is removed from the shaft, because without the curtain's dead weight, there is a potential for an uncontrolled discharge of the counterbalance spring.

# INSTALLATION & MAINTENANCE

## Fire Shutter Instructions

Model: \_\_\_\_\_ Contract No. \_\_\_\_\_ Size: \_\_\_\_\_

**Retain This Booklet For Future Reference**



**atlas door**<sup>™</sup>  
**(800) 959-9559**

**Clopay**<sup>®</sup> BUILDING PRODUCTS  
*A Griffon Company*

## Reference Information

<b>Project</b>	_____
<b>Location</b>	_____
<b>Architect</b>	_____
<b>General Contractor</b>	_____
<b>Distributor</b>	_____
<b>Atlas Contract Number</b>	_____
<b>Model</b>	_____
<b>Voltage and Phase</b>	_____
<b>Alarm Voltage and Type</b>	_____
<b>Date of Shipment</b>	_____

# Table of Contents

## ***Introduction and Opening Preparation***

Safety Information .....	4
Before You Begin .....	4
Installation Preparation .....	5

## ***Installing the New Shutter***

Installation Procedure .....	6
Check the Opening .....	6
Check the Hand of Operation .....	6
Installing the Wall Angles .....	6
Installing the Shaft Assembly .....	8
Installing the Curtain Assembly .....	9
Installing the Guides .....	10
Adjusting Spring Counterbalance .....	10
Installing the Operator .....	11
Manual Lift Shutters .....	11
Crank Operated Shutters .....	11
Motor Operated Shutters .....	11
Installing the Hood .....	12
Installing Fusible Links and Routing the Drop Out Chain .....	12
Installing the Express Release Device .....	13
Installation of Optional Guide Weather Stripping (or Smoke Seals) .....	14
Adjusting the Starter Bolt .....	14
Drop Testing the Shutter .....	15
Finishing Steps .....	16
Final Installation Check List .....	17

## ***Troubleshooting/Maintenance/Part List***

Preventative Maintenance Schedule .....	18
Troubleshooting Guide .....	19

# Safety Information

## IMPORTANT!

To Protect Yourself From Injury  
You Must Carefully Read The Following  
Safety Information And Warnings Before  
Installing or Operating the Shutter

This manual is not intended to direct "take-down" procedures of existing shutters. Consult a qualified shutter service person if this is required before new shutters are to be installed.

Before you begin, read the installation and maintenance instructions thoroughly. To protect yourself from injury, carefully read all safety information and warnings before installing the new shutter.

This documents primary function is to assist the **qualified shutter service person** in correctly mounting doors with due regard for safety, operation, and sound construction practices. Reference should be made to construction codes in your area. **If there are any questions about any of the procedures, do not perform the work. Instead, contact the Atlas Door™ Customer Service Department for clarification.**



In the interest of safety this symbol means **WARNING** or **CAUTION**. Personal injury and/or property damage may occur unless instructions are followed carefully.

This document **should be attached to the wall in close proximity to the shutter for future reference.**



### WARNING

Installation, repairs to, and removal of, a spring counterbalanced shutter **CAN BE DANGEROUS**. Only qualified shutter service people should perform such work.

The following instructions are intended to be a guide for professional installers. Lack of adequate knowledge or training can pose a threat of serious injury or death.

To avoid injury, keep hands away from the gears and sprockets while shutter is being operated.

To avoid injury, operate the shutter only when properly adjusted and free of obstructions. Avoid standing in the path of the shutter while shutter is moving.

**DO NOT PERMIT** children to play with the shutter or the electrical controls. The child could get caught between the shutter and counter top causing fatal injury.

**Wear the proper safety clothing and protective safety gear as needed.**

**IMPORTANT:** If repairs to your shutter are ever required, safe and trouble-free operation can be assured by using only original replacement parts.

**IMPORTANT:** To avoid shutter failure, use only the fasteners and hardware provided with the shutter.

Atlas Door™ and Clopay Building Products Company disclaim all liability for any installation that is not in compliance with applicable state, county, or local building codes.

## Before You Begin

Before you begin, read the installation and maintenance instructions thoroughly. **To protect yourself from injury, carefully read all safety information and warnings before installing the new shutter.**

Upon receipt of shipment, immediately check that you have received the correct number of pieces, and that the entire shipment is intact and complete. **Any damage or shortages should be noted on the carrier's bill of lading before signing for the shipment.** If there is no visible damage, sign the shipper's bill: "Received subject to further internal inspection for hidden damage."

Should damage or shortages be found after the shipment has been accepted, notify the delivering carrier at once and confirm such notification in writing to them.

Call the Atlas Door™ Customer Service Department for pricing to replace or repair the items in question and submit this information to the carrier *in writing*. This forms the basis for a freight claim.

All shipments are made FOB (Free On Board) factory, freight allowed. It is the purchaser's responsibility to file all freight claims. Atlas Door™ will provide any necessary back-up paperwork to substantiate your claim, but we cannot file these claims for you, as ownership of the shipment determines who must file the claim.

This document's primary function is to assist **the qualified shutter service person** in correctly mounting shutters with due regard for safety, operation, and sound construction practices. Reference should be made to construction codes in your area. **If there are any questions about any of the procedures, do not perform the work. Instead, contact the Atlas Door™ Customer Service Department for clarification.**



## WARNING

**IMPORTANT:** If the motor operator is an Atlas Door™ “auto resettable fire shutter” type (FireSet™ Series Operators) refer to that manual (supplied with the operator) for the shutter installation process.

## Installation Preparation

Read the entire installation instructions first to become familiar with shutter components and their relationship to each other. It is necessary for the installer to determine the following:

- The dimensions for the opening width, height, head room, and side room. (FIG. 1)
- The “hand” of operation (left or right) as determined from the coil side of the shutter. (FIG. 3)
- The type of mounting. (FIG. 4)
- The type of jamb (steel, masonry, or non-masonry) to which the shutter guides mount.
- The method of operation (manual push up, crank, or motor). (FIG. 8)

Review the supporting documentation supplied with the shipment (found in the hardware bag). Each shutter is identified by a code under “Atlas Code” on the documentation. Shutters of identical size and hand have the same code letter. All shutter components are identified with the contract number and the code letter (excluding bolts, nuts and other miscellaneous hardware).

A typical shutter will have the following components:

- A curtain with interlocking slats and bottom bar.
- Two guide assemblies (one left and one right hand) bolted together with guide hardware.
- One counterbalancing pipe shaft.
- Two steel bracket plates (one adjusting side and one drive side).
- One hood.
- An operator assembly (if selected).
- A hardware bag with fasteners, supporting documentation, installation instructions, and warning labels.

**NOTE:** It is recommended that the shutter be unpacked prior to leaving for the job site, if possible, to verify that all components are present. Check to ensure that all shutter components are present and review the following:

- Does the barrel hand of operation match the required hand? (See Installation Procedure for details).
- Are all options included (i.e., sensor edge, weather stripping, etc.)?

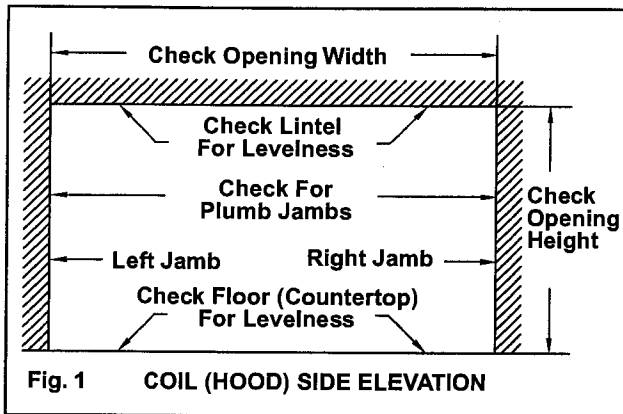
If any components are missing, or “no” is the answer to any of the above questions, stop and check with the Atlas Door™ Customer Service Department for clarification before proceeding.

The installer(s) should be familiar with the fire shutter industry installation guidelines in NFPA 80. Crew chiefs should also consider using a two-person (or more) crew for larger fire shutters.

## Installation Procedure

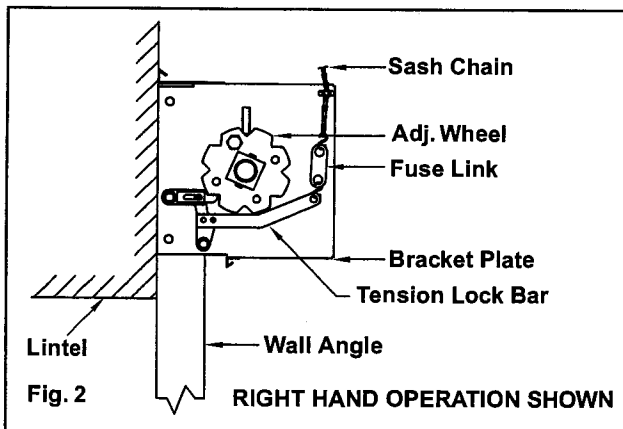
### Check the Opening

Check the opening width and the opening height and compare with the supporting documentation to be sure the opening is the proper size for the shutter. Small variations in the actual opening width or height, or plumbness of the jambs can be ignored when installing the wall angles and guides. Verify that adequate clearances are available. (FIG.1)

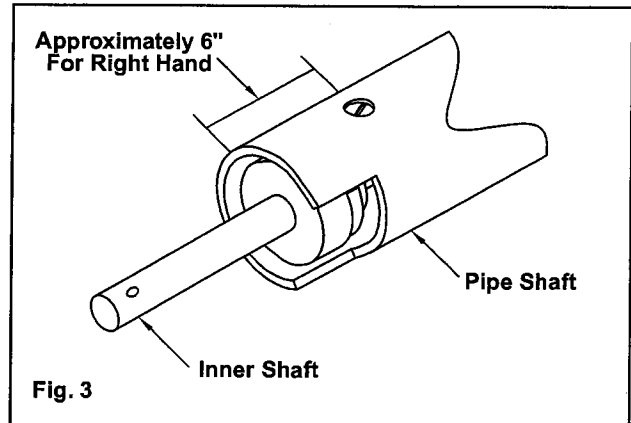


### Check the Hand of Operation

Separate the material into groups forming complete shutters using the Atlas Door™ code letter and determine the "hand" of each shutter. "Hand" is determined by the location of the drive side bracket plate (manual, crank, or motor) when looking at the opening from the side on which the hood will be mounted. A right hand shutter will therefore have the operator on the right with the adjusting bracket plate on the left side. The adjusting bracket plate can be identified as the one with the charge wheel and drop out arm(s) as shown in Figure 2.



Inspect the pipe shaft assembly. The adjusting side of the shaft assembly is fitted with a rotating inner shaft and bearing. The shaft hand should also be verified. If the shaft has three screws, around the diameter, approximately 6" from the bearing end, it is a right hand shaft. (FIG. 3) Left hand shafts will have these screws located towards the middle of the pipe.



### WARNING

It is critical that the "hand" of shutters is verified correctly. Failure to do so may result in incorrect installation, causing possible damage to the springs within the pipe shaft by winding it backwards. This may lead to damage to other parts of the shutter or to serious injury to installation personnel and/or passersby.

### Installing the Wall Angles

Check the documentation supplied, for the required dimension **between the bracket plates**. The bracket plates will be mounted to the out-board face of the wall angles. **This is an extremely critical dimension and must be held to  $\pm 1/8$ " accuracy the entire width.**

Unbolt the guide angle from the wall angle. Install the wall angles as shown in Figure 4 (Views A-E) making sure that they are plumb and that the exact distance between guides is maintained at the top and bottom. Both wall angles are to have a clearance between them and the counter top for expansion during a fire. Raise the bottom of both wall angles  $\frac{1}{2}$ " above the counter top (floor). (FIG. 5). Shim the wall angles if necessary. The hardware used to mount the wall angles will depend on the type of shutter jamb construction. Unfilled concrete block and soft brick jambs are to use through wall threaded rod mounting. Filled concrete block and hard-fired brick jambs are to use sleeve type expansion anchors. Solid concrete jambs are to use wedge type anchors. Steel jambs are to use machine bolt mounting. Use only the fasteners supplied in the hardware bag.

The wall angle bolts must be mounted uniformly to allow for thermal expansion during a fire. Check to ensure that the top bolt holes, in both wall angles, are on same level line. Use 4'0" level (minimum) or a "clear tubing level" to check levels.

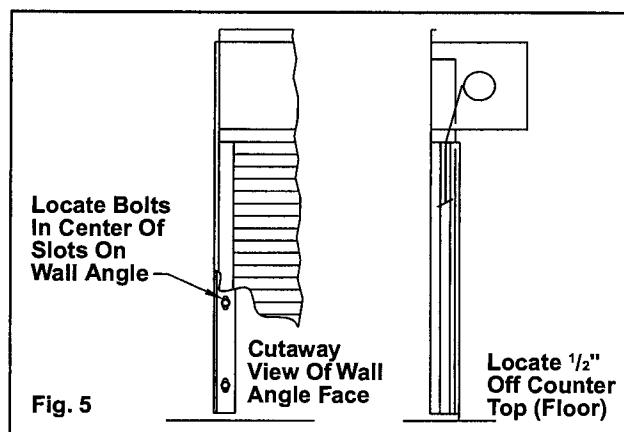
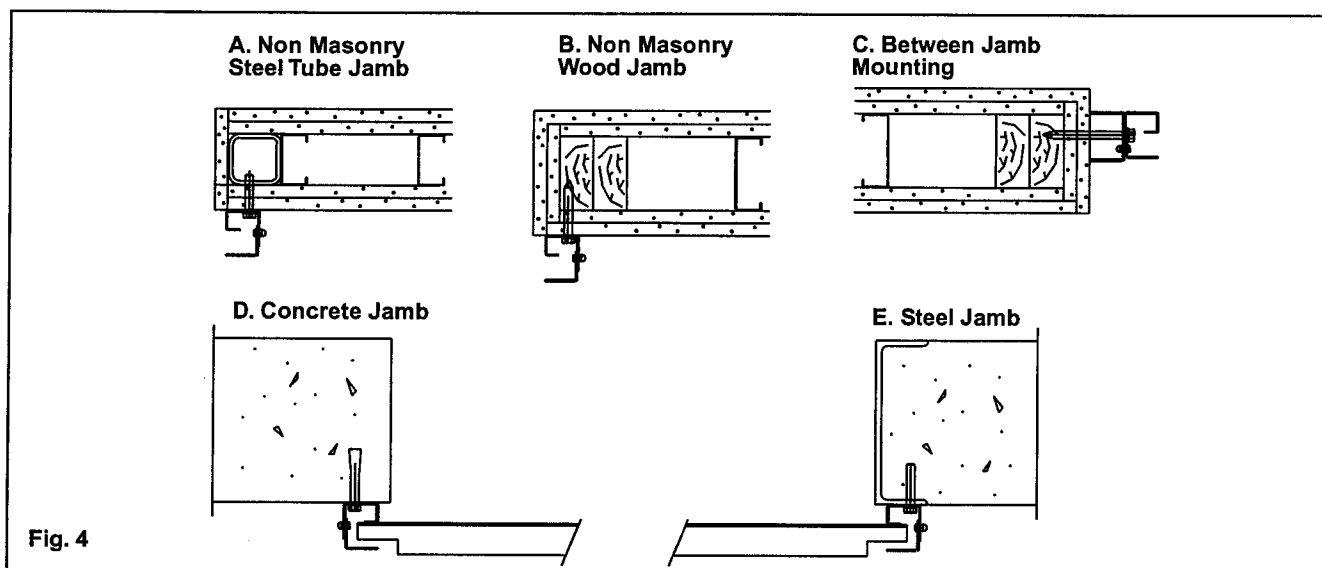
**NOTE:** The bracket plate mounting holes must be absolutely level to obtain a level curtain assembly.



### WARNING

**Shutter may fall out of track if the wall angles are improperly located or aligned.**

**IMPORTANT:** Failure to exactly follow these instructions may cause the shutter to be inoperable.





# Installing the Shaft Assembly

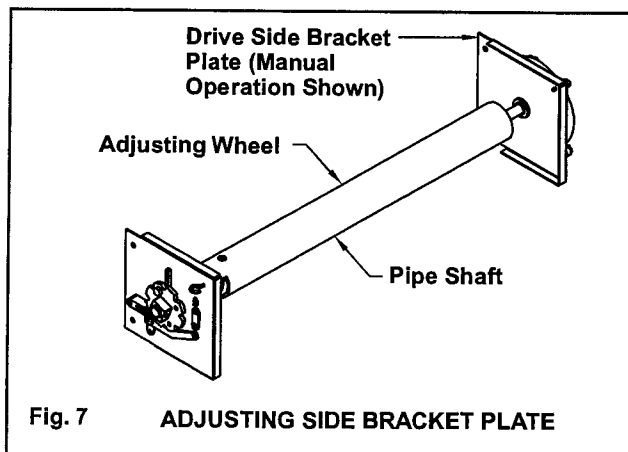
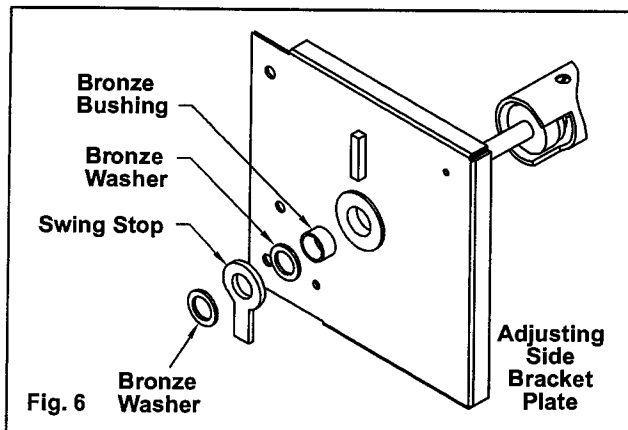


## WARNING

Bracket and curtain assemblies on larger shutters, particularly with an operator, can be extremely heavy. Persons with back problems or other physical conditions which may limit them from lifting heavy objects should not perform the next step.

Remove the adjustment wheel, swing stop, and washers from the adjusting end of the pipe shaft. Slide the adjusting side bracket plate onto the inner pipe shaft. Be certain that the bracket plate is mounted to the correct "hand side." Reinstall the swing stop and washers per Figure 6. The swing stop should rotate freely on the bronze bushing protruding through the bracket plate. Reinstall the adjusting wheel onto the inner pipe shaft using the fasteners provided with the pipe shaft.

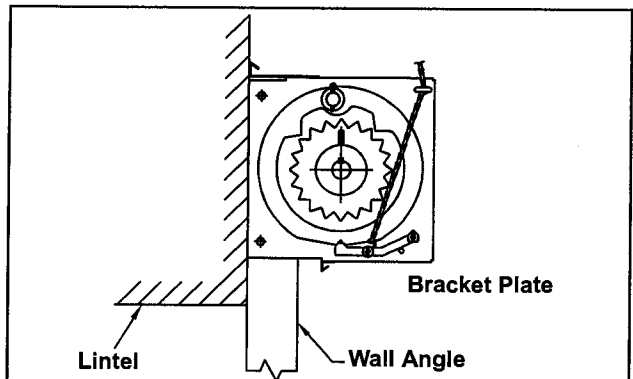
Slide the operating side bracket plate onto the inner pipe shaft. Install the appropriate drive side hardware and governor wheel to the inner pipe shaft at this time. (FIG. 7) Some motor operated shutters will



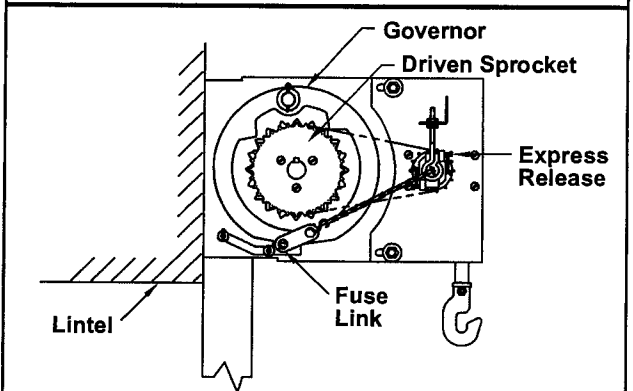
require a driven sprocket on the inner shaft depending on the fire release mechanism. Very small shutters may not require a governor. Reference Figure 8A-8C for various drive side configurations.

Check to ensure that the stop arm engages the governor when the fuse link chain is released.

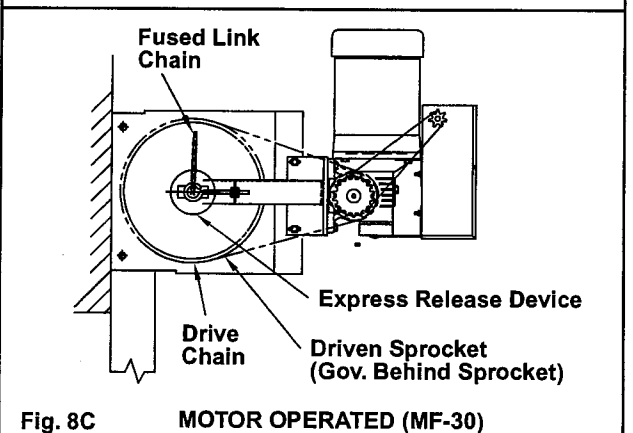
Check to ensure that the drive gear meshes properly with the driven gear, and that it turns freely. Tighten all fasteners on the gears, sprockets, etc. to lock the bracket plate onto the inner shaft. Please note that the drive side inner shaft components may need to be adjusted later on.



MANUAL OPERATION



CRANK OPERATED

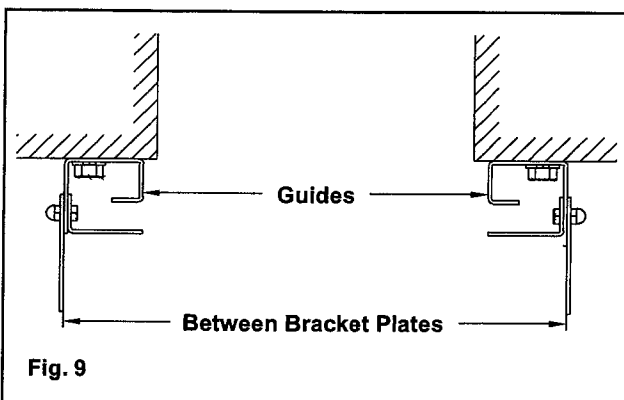


MOTOR OPERATED (MF-30)

Hoist the assembly up by using a safe mechanical means. Position the assembly at the required coil height and bolt the bracket plates to the wall angles using the bolts, nuts, and washers supplied.

**NOTE:** Between jamb configurations will require an additional clearance above for the operator and/or adjusting wheel. A pocket is also required in the wall to permit the drop out mechanisms to operate interference free.

**NOTE:** The bracket plates are to be mounted to the **outboard face of the wall angles**. The bolt heads are to be located on the wall angle side. (FIG. 9)



Tighten all bracket plate bolts to the wall angle. Check to ensure that the shaft will move freely by rotating the assembly by hand. It should turn on the bearings without a lot of resistance. Check to ensure the bracket plates are square with the wall. Adjust if necessary.

**NOTE:** Check all drop out mechanisms for interference-free operation to ensure proper automatic closing action during the fire mode.

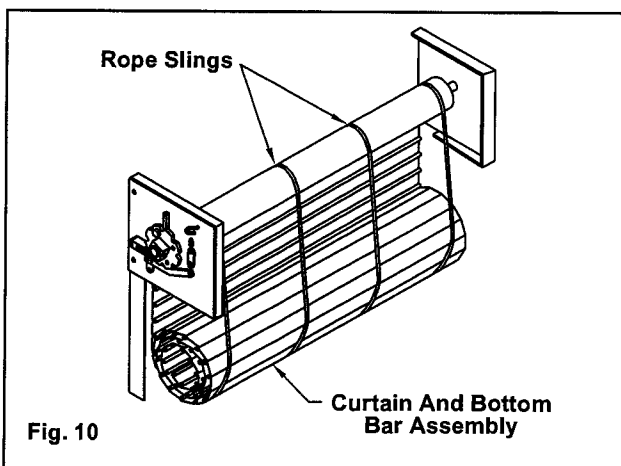
**NOTE:** The shaft assembly **must be absolutely level** to ensure that the curtain will roll up evenly.

## Installing the Curtain Assembly

Place the coiled curtain under the shaft assembly above. Position the curtain so that the outside of the shutter will unroll towards the opening. Lift the coiled curtain up by using a safe mechanical means. Position the curtain about 18" below the shaft assembly with the top slats exposed facing up. Care must be used to prevent damage to the shutter.

**IMPORTANT:** Distribute the load evenly. Do not support the entire weight of the assembly under the curtain at one point. This may cause permanent slat damage.

Install heavy rope slings around the curtain and the shaft assembly. The installer must use a sufficient number of slings, evenly distributed, to prevent the curtain from being deformed during this process (one every three feet is recommended). (FIG. 10)



Turn the shaft assembly by hand, or with the drive mechanism, so that the slings carry the top slats upward to the pipe shaft. Line up the holes in the top slats with the holes on the shaft assembly. **Verify that the curtain is centered between the bracket plates.** Slide the outermost top slats firmly against the curtain's endlocks of the slat directly below them. This will help to prevent curtain movement from side to side, during normal operation of shutter. If the pre-punched holes in the top slats do not line up during this step, the installer must punch an additional hole in the top slat to meet this requirement. Fasten the curtain to the shaft using the fasteners provided with the unit.

Wind the curtain onto the shaft assembly. Stop winding the curtain when it is completely wound on shaft, and the bottom bar is about 1" below the bottom of the bracket plates. Do not remove the slings. Secure the rolled up curtain in place using a large rope or safety strap in the center of the coil or clamp the bottom bar to the wall angle.



### WARNING

**Do not let the curtain rotate in free fall. No tension has yet been applied to the springs. A free falling curtain could strike someone causing severe injury or death.**

## Installing the Guides

Fasten the guides to the wall angle beginning with the center slotted hole in the guide. The center bolt should be placed at the bottom of its slot. The remaining bolts should be inserted in the same manner. This allows for expansion of the guides during a fire.

## Adjusting Spring Counterbalance



### WARNING

**SPRING TENSION IS DANGEROUS!** A sudden release of the springs could result in severe injury or death. Proceed with caution, following these instructions carefully.

Do not use loose fitting wrenches or tools that could slip off the hub and cause severe injury or death. Always stand to one side - never wind the spring directly in front of you.



### CAUTION

Always wind tension when the shutter is in the up position. The springs are under the least amount of tension at this point.

Adjust the spring tension by turning the adjusting wheel in the direction shown in Figure 11 using a large pipe wrench. Make sure the wrench has a

positive grip on the hub of the adjusting wheel. Springs will exert a large force on the wheel that must be held securely to avoid an accident. Turn the adjusting wheel one "recess notch" at a time.

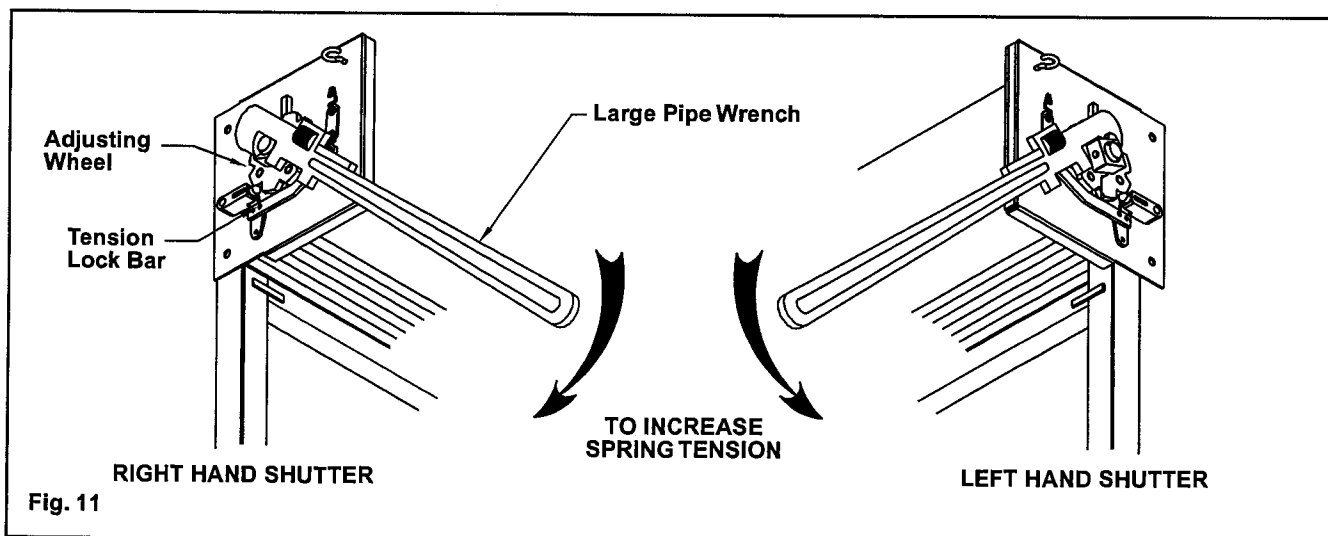


### WARNING

**Exercise extreme caution when increasing or decreasing spring counterbalance. Never permit the adjusting wheel to rotate rapidly when releasing spring counterbalance. Contact with a rapidly rotating adjusting wheel or expelled winding tool can cause severe injury or death.**

Continue to adjust the spring tension until the curtain bottom bar slowly rotates upward against the guide stops. The number of adjusting wheel turns to achieve optimum counterbalance, will vary with each shutter size. Apply only enough tension to hold the shutter in the up position against the stops. This is typically the optimum setting. Lock the charge setting in place by securing the fusible link chain. Test the shutter for proper balance. The curtain will remain down in the closed position and open against the stops in the up position. Do not over charge the spring. After the shutter counterbalance has been properly adjusted, carefully remove all safety ropes, straps or wall angle clamps.

**IMPORTANT:** Increasing the initial tension will reduce the lift effort but can prevent the shutter from completely closing to the counter top. Over charging the shutter may result in premature spring failure.



## Installing the Operator

Depending on the type of fire shutter and the options selected, the unit will be supplied with the materials for either a manual lift shutter, a crank operated shutter, or a motor operated shutter. Refer to Figures 8A-8C.

### Manual Lift Shutters

Manual lift shutters are supplied with a set screw for the drive side shaft. From previous steps, the set screw should be located on the inner shaft. Adjust the governor and lock it in position using the hardware provided.

### Crank Operated Shutters



#### WARNING

**Gears and mechanisms move freely and quickly. To avoid severe injury or death, keep hands, arms, and clothing, free of moving mechanisms and meshing gears.**

Crank operated shutters are supplied with the components mounted to the bracket plate. The large diameter spur gear should be located on the driven shaft. Adjust the gear (if necessary) to line up with the crank gear below. Tighten set screws securely. Refer to Figure 8B.

### Motor Operated Shutters



#### WARNING

**To reduce the risk of injury to persons, use only Atlas Door™ operators on this fire shutter.**

Motor operated shutters are supplied with the motor assembly which is packaged in a separate carton. The motor assembly and mounting brackets (if required) are to be fastened together using the four  $\frac{3}{8}$ -16 x  $1\frac{1}{4}$ " bolts, nuts, and washers provided with the shutter. When motor operators are furnished, check the documentation supplied for the correct mounting arrangement. Refer to Figure 8C.



#### WARNING

**Shutters equipped with motor operators can cause serious injury or death if not properly adjusted, installed, or operated. Refer to the motor operator manual for specific warnings.**

**IMPORTANT: If the shutter is now, or later becomes, electrically operated, any locking devices must be disengaged or electrically interlocked.**

The motor mounting bracket is to be fastened to the two studs on the outside edge of the drive side bracket plate using two  $\frac{1}{2}$ -13 nuts and washers provided. From previous steps, the chain sprocket should be located on the driven shaft. Adjust the shutter sprocket to line up with the drive sprocket located on the motor assembly. Tighten the set screws securely. Using the mounting bracket, adjust the location of the motor so that proper roller chain tension is obtained. Use half links for fine adjustment if necessary.

**IMPORTANT: The motor should be diagonally braced to the adjacent wall construction by the installer if sideways movement is present. The bracing is to be of sufficient strength to prevent movement of the bracket plate and motor when the shutter is operating. Bracing should not interfere with the proper operation of the shutter. Bracing is to be supplied by the installer.**



#### WARNING

**Failure to adequately brace the bracket plate and motor operator may result in chain disengagement, causing the shutter to unexpectedly drop if unbalanced, which could cause serious injury or death.**

Wiring of the motor operator is to be performed only by qualified personnel. Reference the wiring diagram located inside the operator control box.

Set the operator limit switches per the "Limit Switch Adjustment for Motor Operators" sheet included with the Motor Operator.

If the motor operator is not yet electrified, the limit switches must be temporarily adjusted to avoid override in case of accidental operation with power, prior to the final setting of the limit switches. Lower the shutter bottom bar to within two feet of the upper bellmouth stops. Push down on the pressure plate and move the "open groove nut" until it contacts its micro switch. Lower the shutter to within two feet of the counter top. Push down on pressure plate and move the "close groove nut" until it contacts its micro switch.

On "M" and "H" series motor operators the emergency hand chain is engaged by pulling another separate lighter chain. This lighter chain is held by a lock lever which must be mounted on the wall with the bracket provided in the motor box. Lock the lever in the down position and attach it to the lighter chain. Pull the chain so that it engages the manual operator. Holding the chain taut, bolt the lever bracket to the wall at about four feet from the counter top. Release the lever and check that the manual operator has disengaged.

## Installing the Hood



### WARNING

The hood must be installed to ensure the structural integrity of the shutter and operator as well as providing proper fire protection.

Place the hood across the coil of the shutter, resting it on the hood bands located on the out-

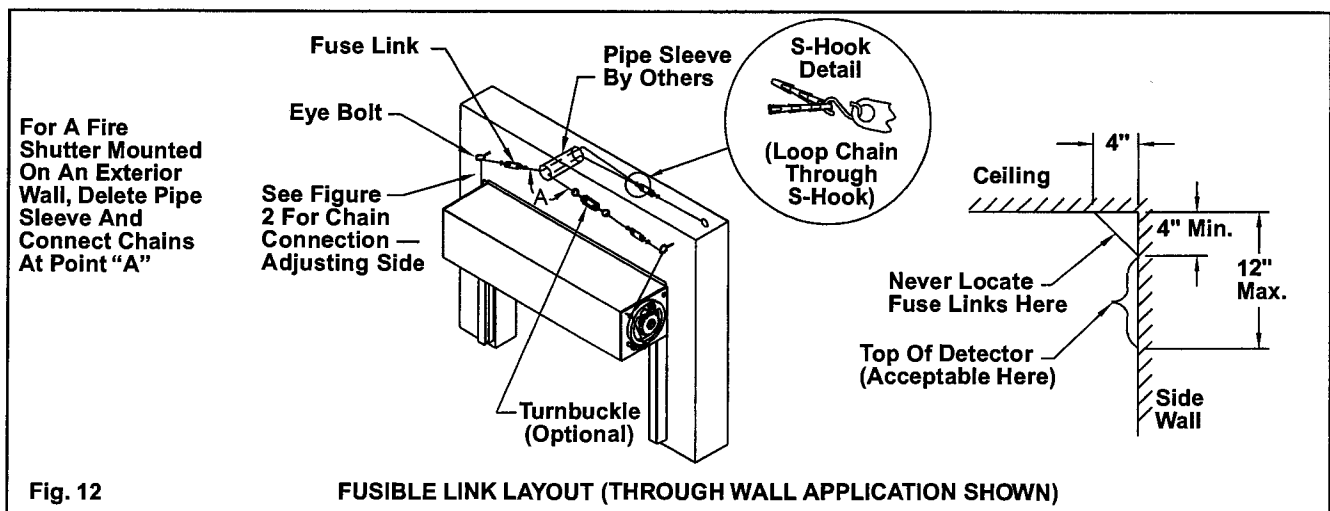
side edges of the bracket plates. The hood must fit flush with the wall at the top of the coil. Fasten it to the wall first by drilling through the hood, into the wall, and using the 1/4" expansion shields provided. Fasten the ends of the hood to the bands located on the bracket plates using the self tapping number 14 x 1/2" screws provided (Use 5 per side). Thoroughly caulk the hood and all covers.

If a fascia is provided, hold it in position on the ends of the bracket plates. If it is to be bolted under the lintel, drill holes for 1/4" bolts or expansion shields in the upper flange of the fascia using a hole spacing of 24" on center maximum. Bolt the fascia into position using the 1/4" bolts and washers. On some shutters, clips may be provided to hold fascia in place.

## Installing Fusible Links and Routing the Drop Out Chain

Fusible links should be placed where they are most exposed to possible fire. A chain is to connect the fusible links to all release mechanisms, and should be free to move smoothly. The fusible links and chain shall be installed and routed so that the failure (or melting) of any single fusible link shall permit the shutter to drop. One fusible link must be within 12" of the ceiling per NFPA80. All wall mounted eye bolts must be completely threaded into wall. When all routings and shutter mechanisms are set, check to ensure that all fuse link chains are taut. (FIG. 12)

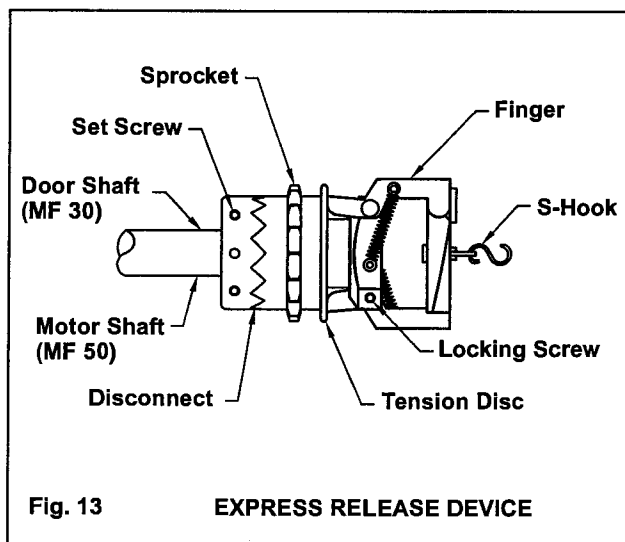
**NOTE:** Through-wall fusible links are not required when the shutter is mounted on the interior side of an exterior wall of the building.



## Installing the Express Release Device

If the shutter is either crank or motor operated it will be supplied with the Atlas patented Express Release device. The shutter size will determine the express release device layout. It will be either an MF 30 (smaller shutter) or an MF 50 (larger shutters) configuration. See your shutter specifications to determine which it is. On the MF 30 the Express Release device is mounted on the main shutter shaft. On the MF 50 the Express Release device is mounted on the motor operator shaft. Install the Express Release device on the correct shaft (motor or shutter) via the two set screws supplied with the assembly. Adjust the two "fingers" against the tension disc and lock in place via tightening the locking screw. (FIG. 13) Run the fusible link chain to the bracket holding the two fingers in place and attach via "s-hook." Route the fusible link chain through the eye bolt. Be sure the eye bolt is positioned properly in front of the s-hook so that the fusible link chain is set at 90° to the bracket plate. Remove the plastic shipping clip (near the s-hook) prior to drop testing.

Attach the end of the Express Release fusible link chain to the fusible link chain that engages the governor device. Check to ensure that the chain is taut, the tension disc set screws are tight, and that

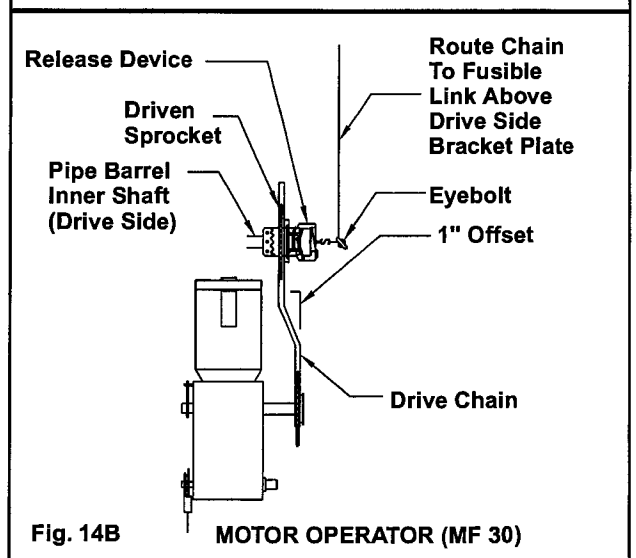
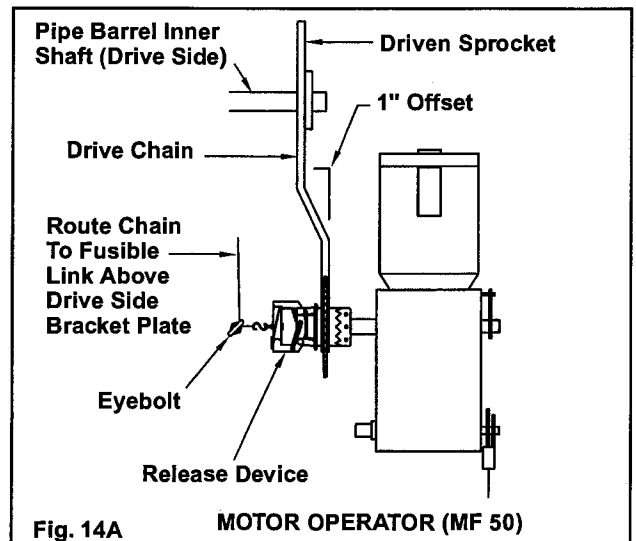


the eye bolt and mounting arm will not interfere with the governor engagement mechanism when it is released. Attach the motor drive chain between the driven sprocket on the operating end of the shaft and the drive sprocket on the motor shaft. Be sure the chain is tensioned properly.



### WARNING

**IMPORTANT:** To provide proper separation of the release device, the drive chain must be mounted as shown in Figure 14A or B with a one (1) inch offset between sprockets.



## Installation of Optional Guide Weather Stripping (or Smoke Seals)

The guide weather stripping is typically shipped in the carton space between the guide angles. There are two primary types of weather stripping. The first is the brush type which typically screws onto the outside guide edge. The second type is an all vinyl construction that is to be firmly pressed on to the inside guide edge, with the flexible lip towards the curtain. If the weather stripping can not be seated on the edge by hand, use a small mallet and a block of wood to lightly tap the material in place. Open the shutter to the full open position to install these components. Snip off the top corner of the flexible portion of weather strip down at a 45° angle. Open and close the shutter to ensure no interference is encountered.

## Adjusting the Starter Bolt

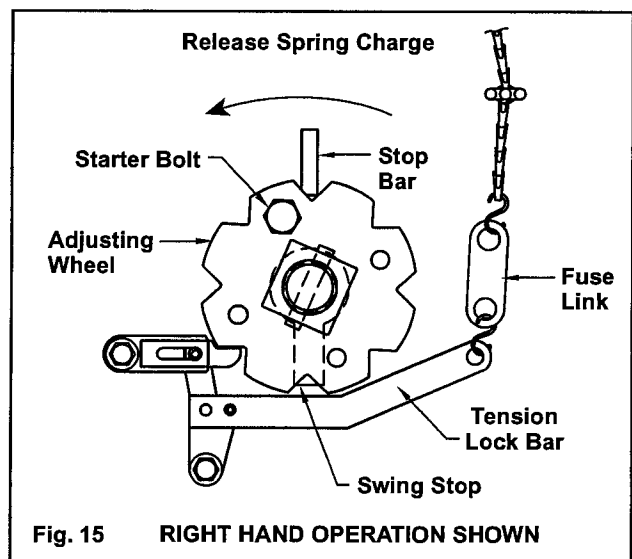


### WARNING

**SPRING TENSION ADJUSTMENTS CAN BE DANGEROUS!** A sudden release of the springs could result in severe injury or death. Adjustments should only be made by a qualified shutter service person. Proceed with caution, following these instructions carefully.

Due to variations between fire shutter sizes and spring rates, the proper amount of "spring release," which is used to start the shutter's descent, changes from shutter to shutter.

In order to set the starter bolt, some background information may be useful. The fusible links hold up the drop out arm that engages the tension lock bar holding the adjusting wheel. (FIG. 15) When the fusible links melt during a fire (at 165° F), the drop out arm and tension lock bar drop out. With no means to hold the spring force, the shaft (to which the adjusting wheel is pinned) begins to rotate rapidly, releasing wheel spring tension. This action forces the "dog" on the kick-off pawl to move outward until one strikes the shaft kicker, forcing the pipe to turn, and the shutter to close. In order to allow only a portion of the spring force to be used to automatically close the shutter, a "starter bolt" is located in one of four positions on the face of the adjusting wheel. As the adjusting wheel rotates, the end of the starter bolt strikes the swing stop, behind the adjusting wheel. Both components rotate together until they are restricted by the stop bar (a 1/2" x 1/2" x 2" long bar welded to the bracket plate).



First, make sure that the shutter is properly balanced. Place a chalk mark on the adjusting wheel and the bracket plate so that the adjusting wheel may be returned to the same position after each test drop.



### WARNING

**Failure to perform the next procedure correctly may result in the shutter dropping too fast. This may lead to shutter damage and/or to serious injury to installation personnel and/or passersby.**

To adjust the drop rate correctly, it is best to start by “under-releasing” spring charge, and then increase the amount until the shutter drops at the correct rate. (Adjustments to the spring balance charge are typically not necessary.) The spring release adjustment is made by changing the location of the starter bolt, in the face of the adjusting wheel.

When the stop bar on the bracket plate is located at the 10 o'clock position (on right hand shutters), and the starter bolt is located at approximately 5 o'clock (under the swing stop located at 4 o'clock), both will rotate and stop when they meet the welded bar, releasing approximately  $\frac{3}{8}$  turn of spring force. The bolt at 7 o'clock (with the swing stop at 6 o'clock) will release  $\frac{5}{8}$  turn of spring force. Placing the bolt at 10 o'clock (with the swing stop at 6 o'clock) will release  $\frac{7}{8}$  turn of spring force. Placing the bolt at 2 o'clock (with the swing stop at 6 o'clock) will release  $1\frac{1}{8}$  turns of spring force. Placing the bolt at 5 o'clock (with the swing stop at 6 o'clock) will release  $1\frac{3}{8}$  turns of spring force. Before conducting the test-drop, set the starter bolt to release  $\frac{3}{8}$  turn.

## Drop Testing the Shutter

Prior to drop testing the shutter, a few precautionary steps should be taken. The shutter area should be roped off on both sides. Check to ensure that all fire release mechanisms operate freely.



### WARNING

**Failure to check all mechanisms for proper operation, including the governor system, may result in the shutter dropping too fast. This may lead to shutter damage and/or to serious injury to installation personnel and/or passersby.**

After all adjustments have been made, test-drop the shutter by releasing the fusible link chain. The shutter should lower gradually to the floor. Reference local fire shutter codes for descent rate. If no local codes are applicable, all testing should be in accordance with NFPA 80 in which the shutter descent rate is between 6 and 24 inches per second. After a successful test drop, return the adjusting wheel to the chalk marked position and reconnect the fusible links to the chain(s). All disconnect levers must be fastened to the fusible link chains. Under no circumstances should disconnect levers be fastened to bracket plates or walls without having a fusible link in the line.

If the shutter drops too slow or does not start to drop at all, relocate the starter bolt to release another  $\frac{1}{4}$ " turn. Continue drop testing until shutter drops within 6-24" per second. **If proper drop test speeds cannot be obtained, call the Atlas Door™ Customer Service Department at 1-800-959-9559.**

**IMPORTANT:** It is the responsibility of the installer to ensure that the shutter is operating properly, and that it has been successfully test dropped, and documented, before leaving the job site. Be sure to have the facility manager, or end user, witness the drop test.

**IMPORTANT:** Use an industry standard “Fire Shutter Inspection and Drop Test Form” to document all customer approval signature(s). If there is a problem, notify Atlas Door™, in writing, immediately.



## Finishing Steps

Apply all warning labels in the appropriate locations. Reference the label mounting instruction sheet included in the bolt bag for details.

Double check all bolts and hardware for tightness.

Locate the end plate covers on the bracket plates and clamp them in place. Drill two  $\frac{3}{8}$ " holes placed 2" from each end on the top, front and bottom of the covers. (Drill through both the cover and bracket plate flange) Use self tapping number 14 sheet metal screws provided to screw the cover to the brackets. (FIG.16)

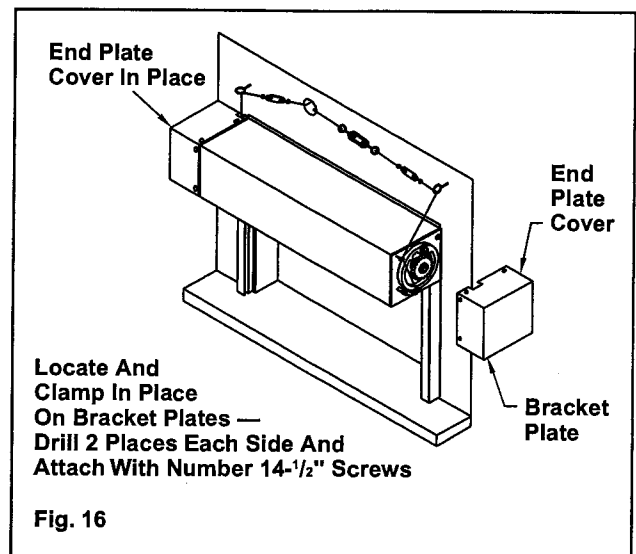
The shutter guides should be adequately greased, and thoroughly lubricate all gears and drive mechanisms with WD-40(c), silicone spray lubricant, graphite grease, lithium grease, or similar material.



### WARNING

**Never place hands or fingers between gears, or chain and sprockets, while the shutter is being operated. Doing so may result in crush injuries, broken bones or serious lacerations.**

Locate this manual near the shutter.



## Final Installation Check List

In order to assure the customer that the shutter has been installed correctly, and in a safe manner, please check the following before leaving the job site.

- ☐ Check to see that all warning labels are mounted in the appropriate locations.
- ☐ Make certain that the proper amount of tension has been applied to the springs to properly counterbalance the weight of the curtain. The shutter should raise and lower with ease, and remain open (in the upper position) when resting against the stops.
- ☐ Check to see that the adjusting wheel is securely fastened in place.
- ☐ Inspect all sprockets and gears requiring keys, to ensure that they are installed and seated properly.
- ☐ Recheck all set screws (one over the key - the other located at 45° from the key) in each sprocket or gear for tightness.
- ☐ Check all fasteners holding guides to the building structure as well as those used in assembling the shutter components are secure.
- ☐ Check the area for any extra parts, and be sure these were not omitted during the installation process.
- ☐ Instruct the customer or their representative in the proper method of operating the shutter. Be sure to demonstrate any optional equipment, show the location of the bottom bar contract number label, and inform them of the preventative maintenance schedule before leaving the job site.
- ☐ Instruct the customer to read the **IMPORTANT SAFETY INFORMATION** section of this document.
- ☐ Have the customer or their representative sign off on the installation, and exchange all documentation at this time.
- ☐ Be sure that this manual is located near the shutter or given to the customer.
- ☐ Be sure not to leave a mess. Clean up the area and make sure it is secure if you are the last one to leave.

Your input on this product is welcomed. Please report in writing any issues or recommendations that would improve the product or installation method. These comments should be forwarded to the Atlas Door™ Customer Services Department or call 1-800-959-9559.

## Preventative Maintenance Schedule

Fire Shutters have been engineered to provide years of trouble free service under normal use. A visual inspection of the shutter should be performed quarterly to determine if any components are malfunctioning, damaged, or missing. To ensure the longest possible life from your shutter, the following maintenance guidelines should be implemented.

- Lubrication is the most important maintenance to be performed on the shutter. Apply grease to the guides quarterly (or more frequently if high usage or dusty conditions are present). Failure to do this may void warranty claims in the area of slat wear. Lubricate all moving mechanisms quarterly with WD-40(c), silicone spray lubricant, graphite grease, lithium grease, or similar material.
- Check the slats and bottom bar for bent or punctured areas. Any damaged components should be replaced or corrected to enable smooth operation through the guides.
- Check painted curtains for scratches. Touch up work should be performed as soon as possible to prevent rust and corrosion.
- Check endlocks for proper fastening to the slats. Fix or replace loose fitting components.
- Check the guides for proper opening spacing. Adjust if necessary.

- Check all wall angle and guide angle bolts to ensure that they are secure. Tighten if necessary.
- Check the pipe shaft for signs of wear around the bearing and bracket plate areas. Fix or replace worn components if necessary.
- Check the bracket plates for secure attachment to the wall angles. Tighten if necessary.
- Check all drop out components for loose or missing hardware, and proper operation. Fix or replace components if necessary.
- Check the fuse link chain for tautness. Tighten if necessary.
- Check all gears, sprockets, and chains drives for proper alignment and/or tautness. Adjust if necessary.
- Check all fasteners and bolted connections to ensure they are secure. Tighten if necessary.

**As stated in NFPA 80, the shutter should be drop tested at least once a year by a qualified shutter service person to ensure proper operation.**

Contact a qualified shutter service person for any repairs. Use only Atlas replacement parts.

## Troubleshooting Guide

The chart below is a list of possible problems associated with the operation of coiling fire shutters. This table covers the most common issues, and is not meant to include all possibilities. Other factors may be involved due to the large variety of product combinations and the field conditions.

PROBLEM	PROBABLE CAUSE	REMEDY
Shutter raises hard, closes easily or will not stay open	Insufficient counterbalance	Increase spring tension 1 notch
Shutter drifts down from stops	Insufficient counterbalance	Increase spring tension 1 notch
Shutter closes hard, raises easily	Too much counterbalance	Decrease spring tension 1 notch
Shutter jumps up from floor	Too much counterbalance	Decrease spring tension 1 notch
Curtain runs to one side	Shaft not level	Check and level shaft Check and straighten or replace
Shutter sticks when closing	Bent guide angle(s)	Inspect for bent guides; straighten if necessary
	Guide angle distance incorrect	Adjust width of guide angles
Shutter coil makes cracking sound	Bent slats	Inspect, remove and straighten or replace
Shutter squeaks when operating	Tight guides	Check alignment and distance between guides
	Dirty guides	Inspect and clean inside of guide
	Insufficient lubrication	Grease guides or spray mechanisms with WD-40(r) or similar lubricant
Motor runs, shutter does not operate	Curtain jammed	Inspect and remove obstruction
	Emergency hand chain engaged	Disengage emergency hand chain
	Insufficient counterbalance	Increase spring tension 1/2 turn (2 notches)
Shutter drops too slow	Insufficient spring release	Increase stop bolt position 1 hole
Shutter drops too fast	Too much spring release	Decrease stop bolt position 1 hole

**atlas door**<sup>™</sup>

** Clopay**<sup>®</sup>

**BUILDING PRODUCTS**  
A Griffin Company

**312 Walnut Street, Suite 1600, Cincinnati, OH 45202 • (800) 959-9559**

---

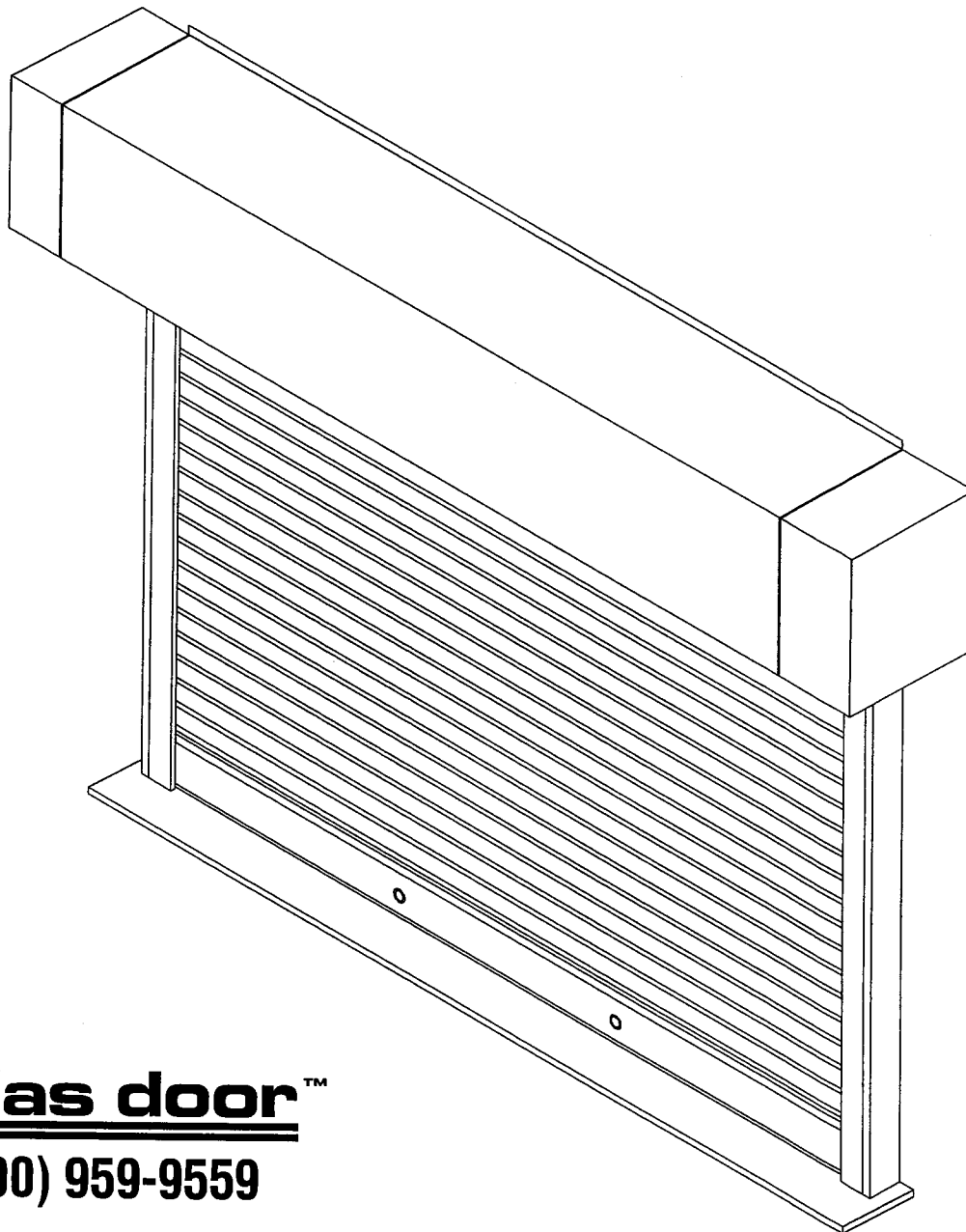
# INSTALLATION & MAINTENANCE

## Counter Shutter Instructions

Model: \_\_\_\_\_ Contract No. \_\_\_\_\_ Size: \_\_\_\_\_

**Retain This Booklet For Future Reference**

---



**atlas door**<sup>™</sup>  
**(800) 959-9559**

**Clopay**<sup>®</sup> **BUILDING PRODUCTS**  
*A Griffon Company*

## Reference Information

<b>Project</b>	_____
<b>Location</b>	_____
<b>Architect</b>	_____
<b>General Contractor</b>	_____
<b>Distributor</b>	_____
<b>Atlas Contract Number</b>	_____
<b>Model</b>	_____
<b>Voltage and Phase</b>	_____
<b>Date of Shipment</b>	_____

# Table of Contents

## ***Introduction and Opening Preparation***

Safety Information .....	4
Before You Begin .....	4
Installation Preparation .....	5

## ***Installing the New Shutter***

Installation Procedure .....	6
Check the Opening .....	6
Check the Hand of Operation .....	6
Installing the Wall Angle Extrusions .....	7
Installing the Shaft Assembly .....	8
Installing the Curtain Assembly .....	9
Adjusting Spring Counterbalance .....	10
Installing the Guides .....	12
Installing the Operator .....	12
Installing the Hood .....	14
Finishing Steps .....	14
Final Installation Check List .....	15

## ***Troubleshooting/Maintenance/Part List***

Preventative Maintenance Schedule .....	16
Troubleshooting Guide .....	17



# Safety Information

## IMPORTANT!

To Protect Yourself From Injury  
You Must Carefully Read The Following  
Safety Information And Warnings Before  
Installing or Operating the Shutter

Before you begin, read the installation and maintenance instructions thoroughly. To protect yourself from injury, carefully read all safety information and warnings before installing the new shutter.

The primary function of this document is to assist the **qualified shutter service person** in correctly mounting shutters with due regard for safety, operation, and sound construction practices. Reference should be made to construction codes in your area. This manual is not intended to direct the removal of existing shutters. **If there are any questions about any of the procedures, do not perform the work. Instead, contact the Atlas Door™ Customer Service Department for clarification.**



In the interest of safety this symbol means **WARNING** or **CAUTION**. Personal injury and/or property damage may occur unless instructions are followed carefully.

This document should be attached to the wall in close proximity to the shutter for future reference.



### WARNING

Installation, repairs to, and removal of, a spring counterbalanced shutter **CAN BE DANGEROUS**. Only qualified shutter service people should perform such work.

The following instructions are intended to be a guide for professional installers. Lack of adequate knowledge or training can pose a threat of serious injury or death.

To avoid injury, keep hands away from the gears and sprockets while shutter is being operated.

To avoid injury, operate the shutter only when properly adjusted and free of obstructions. Avoid standing in the path of the shutter while shutter is moving.

**DO NOT PERMIT** children to play with the shutter or the electrical controls. The child could get caught between the shutter and counter top causing fatal injury.

**Wear the proper safety clothing and protective safety gear as needed.**

**IMPORTANT:** If repairs to your shutter are ever required, safe and trouble-free operation can be assured by using only original replacement parts.

**IMPORTANT:** To avoid shutter failure, use only the fasteners and hardware provided with the shutter.

Atlas Door™ and Clopay Building Products Company disclaim all liability for any installation that is not in compliance with applicable state, county, or local building codes.

## Before You Begin

Before you begin, read the installation and maintenance instructions thoroughly. **To protect yourself from injury, carefully read all safety information and warnings before installing the new shutter.**

Upon receipt of shipment, immediately check that you have received the correct number of pieces, and that the entire shipment is intact and complete. **Any damage or shortages should be noted on the carrier's bill of lading before signing for the shipment.** If there is no visible damage, sign the shipper's bill: "Received subject to further internal inspection for hidden damage."

Should damage or shortages be found after the shipment has been accepted, notify the delivering carrier at once and confirm such notification in writing to them.

Call the Atlas Door™ Customer Service Department for pricing to replace or repair the items in question and submit this information to the carrier *in writing*. This forms the basis for a freight claim.

All shipments are made FOB (Free On Board) factory, freight allowed. It is the purchaser's responsibility to file all freight claims. Atlas Door™ will provide any necessary back-up paperwork to substantiate your claim, but we cannot file these claims for you, as ownership of the shipment determines who must file the claim.

## Installation Preparation

Read the entire installation instructions first to become familiar with shutter components and their relationship to each other. It is necessary for the installer to determine the following:

- The dimensions for the opening width, height, head room, and side room. (FIG. 1)
- The "hand" of operation (left or right) as determined from the coil side of the shutter. (FIG. 2)
- The type of mounting. (FIG. 4 )
- The type of jamb (steel, masonry, or non-masonry) to which the shutter guides mount.
- The method of applying charge (external charge wheel or inner shaft fitted with "charge holes"). (FIG. 2)
- The method of operation (manual push up, crank, or motor). (FIG. 5)

Review the supporting documentation supplied with the shipment (found in the hardware bag). Each shutter is identified by a code under "Atlas Code" on the documentation. Shutters of identical size and hand have the same code letter. All shutter components are identified with the contract number and the code letter (excluding bolts, nuts and other miscellaneous hardware).

A typical shutter will have the following components:

- A curtain with interlocking slats and bottom bar.
- Two shutter guide extrusions (one adjusting side and one drive side).<sup>\*\*</sup>
- Two shutter wall angle extrusions (one adjusting side and one drive side).<sup>\*\*</sup>
- One counterbalancing pipe shaft.
- Two steel bracket plates (one adjusting side and one drive side).

- One hood.
- An operator assembly (if selected).
- A hardware bag with fasteners, supporting documentation, installation instructions, and warning labels.

<sup>\*\*</sup> Steel guide angles are used for special circumstances only and are not covered in this manual. The installation of steel guide angles is covered in the Fire Shutter Installation Manual.

**NOTE:** It is recommended that the shutter be unpacked prior to leaving for the job site, if possible, to verify that all components are present. Check to ensure that all shutter components are present and review the following:

- Does the barrel hand of operation match the required hand? (See Installation Procedure for details).
- Are all options included (i.e., sensor edge, weather stripping, etc.)?

If any components are missing, or "no" is the answer to any of the above questions, stop and check with the Atlas Door™ Customer Service Department for clarification before proceeding.

Crew chiefs should consider using a two-person (or more) crew for larger shutters.

## Installation Procedure

### Check the Opening

Check the opening width and the opening height and compare with the supporting documentation to be sure the opening is the proper size for the shutter. Small variations in the actual opening width or height, or plumbness of the jambs can be ignored when installing the wall angle extrusions and guides. Verify that adequate clearances are available. (FIG. 1)

### Check the Hand of Operation

Separate the material into groups forming complete shutters using the Atlas Door™ code letter and determine the “hand” of each shutter. “Hand” is determined by the location of the drive side bracket plate (manual, crank, or motor) when looking at the opening from the side on which the hood will be mounted. A right hand shutter will therefore have the operator on the right with the adjusting bracket plate on the left side.

The adjusting bracket plate can be identified as the one fitted for an outside charge wheel. (FIG. 2A) If the charge wheel is not included, then the adjusting bracket plate will be fitted with an internal shaft holder bracket. (FIG. 2B)

The shaft hand should also be verified. The adjusting side of the shaft assembly is fitted with a rotating inner shaft and bearing. (FIG. 2A) If the shaft assembly is fitted with bearings on both ends, then the adjusting side is also fitted with two (2) holes located on the inner shaft, 90° apart. (FIG. 2B)



#### WARNING

It is critical that the “hand” of shutters is verified correctly. Failure to do so may result in incorrect installation, causing possible damage to the springs within the pipe shaft by winding it backwards. This may lead to damage to other parts of the shutter or to serious injury to installation personnel and/or passersby.

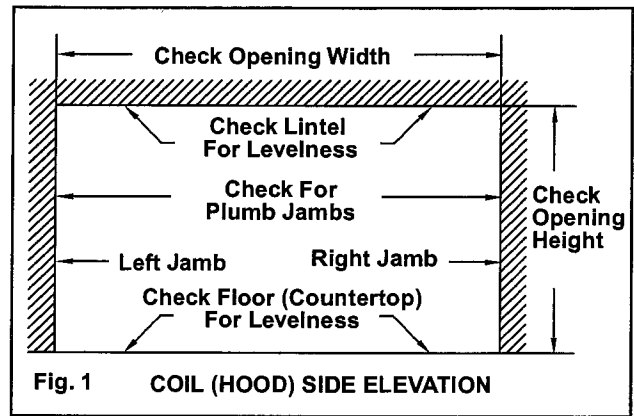


Fig. 1 COIL (HOOD) SIDE ELEVATION

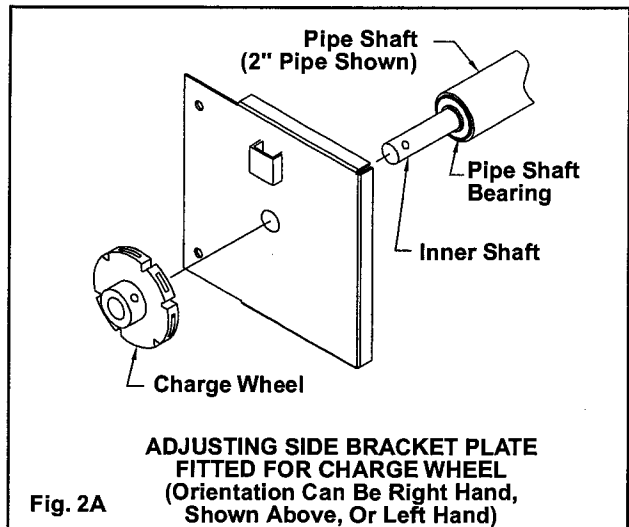


Fig. 2A

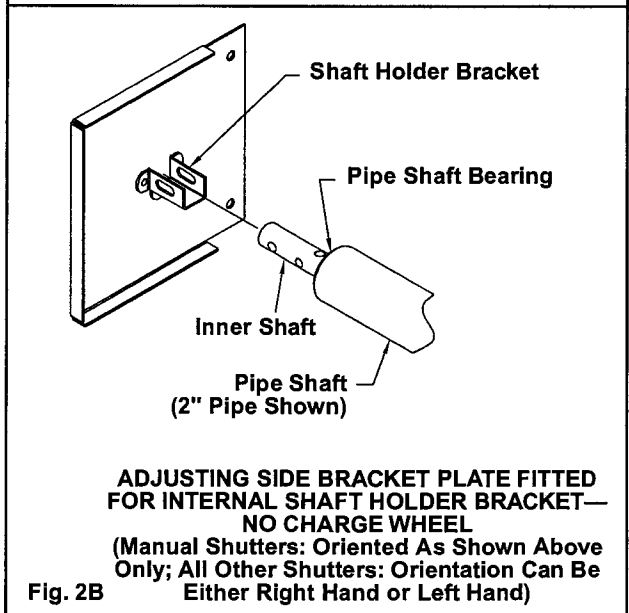


Fig. 2B

## Installing the Wall Angle Extrusions\*\*

Check the documentation supplied, for the required dimension **between the bracket plates**. The bracket plates will be mounted to the inside of the wall angle extrusions.(FIG. 3) **This is an extremely critical dimension and must be held to  $\pm 1/8$ " accuracy the entire width.**

Install the wall angle extrusions as shown in Figure 4 making sure that they are plumb and that the exact distance between guides is maintained at the top and bottom. Shim the wall angle extrusions if necessary. The hardware, used to mount the packout channel (if required) and the wall angle extrusions, is included in the hardware bag. A packout channel is required on any—between jam mounting—side equipped with a charge wheel, crank, or motor. A manual shutter, mounted between the jams, with internal adjustment will not require any packout channels. A shutter, mounted between the jams, with an outside charge wheel will require a packout channel on the adjusting side. A shutter, mounted between the jams, with either a crank or motor operation will require a packout channel on the drive side.

The wall angle extrusion bolts must be mounted uniformly. Check to ensure that the top bolt holes, in both wall angles, are on same level line. Use 4'0" level (minimum) or a "clear tubing level" to check levels.

**NOTE:** The bracket plate mounting holes must be absolutely level to obtain a level curtain assembly.

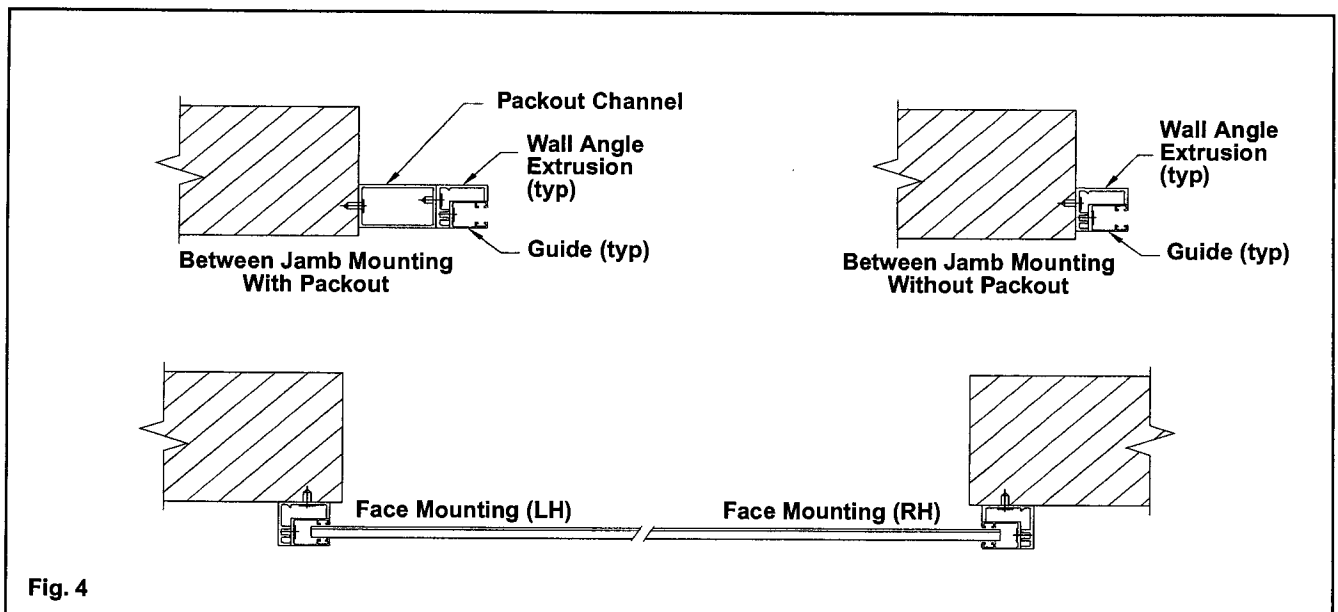
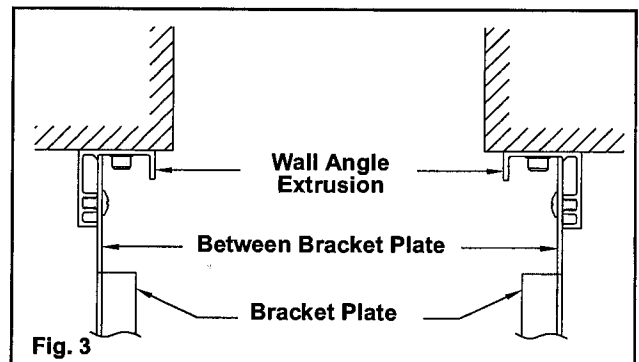


### WARNING

**Shutter may fall out of track if the wall angles are improperly located or aligned.**

**IMPORTANT:** Failure to exactly follow these instructions may cause the shutter to be inoperable.

\*\* Steel guide angles are used for special circumstances only and are not covered in this manual. The installation of steel guide angles is covered in the Fire Shutter Installation Manual.



# Installing the Shaft Assembly



## WARNING

Bracket and curtain assemblies on larger shutters, particularly with an operator, can be extremely heavy. Persons with back problems or other physical conditions which may limit them from lifting heavy objects should not perform the next step.

**NOTE:** If shutter is lightweight, the curtain can be pre-rolled onto the pipe shaft assembly at this time. To do so, attach the curtain starter slats to the shaft assembly and roll the curtain onto the shaft. Roll the curtain such that the outside of the shutter will unroll towards the opening. Maintain care to not damage or mar the surface of the curtain or bottom bar. Secure the rolled up curtain in place using a large rope or safety strap at the center of the coil.

## Manually Operated Shutters

Bolt the drive side bracket plate to the wall angle using the bolts supplied. The drive side bracket plate is to be mounted to the inside of the wall angle. The bolt heads are to be located as shown in Figure 3.

## Crank Operated Shutters

Slide the drive side bracket plate, with crank assembly attached, onto the inner pipe shaft per the correct "hand" of operation. Fasten crank assembly to the inner shaft with the supplied bolts and nuts. (FIG. 5A)

## Outboard Motor Operated Shutters

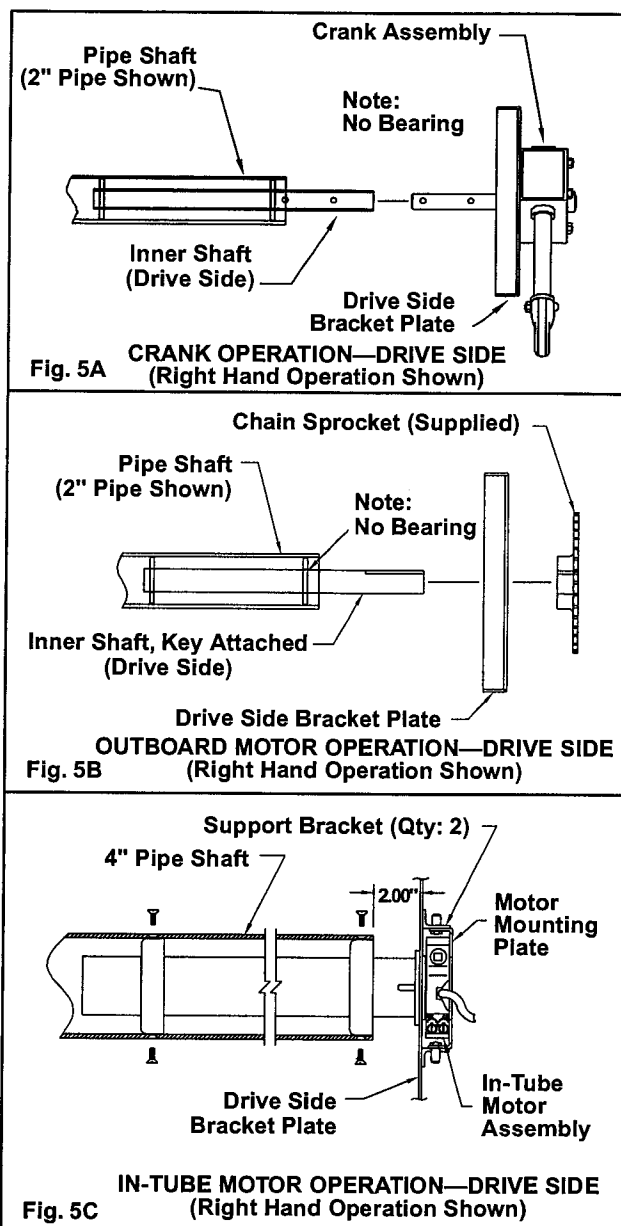
Slide the drive side bracket plate onto the inner pipe shaft per the correct "hand" of operation. Install the supplied (chain) sprocket on to the drive side inner shaft (location not important at this time). (FIG. 5B)

## In-Tube Motor Operated Shutters

Slide the In-Tube motor assembly through the drive side bracket plate per the correct "hand" of operation. Attach the In-Tube motor assembly to the drive side bracket plate with the motor mounting plate, support brackets, and hardware supplied. Attach the In-Tube motor assembly to the pipe using the flat head screws supplied. (FIG. 5C)

## Shutters WITH Charge Wheel

Remove the charge wheel from the adjusting end of the pipe shaft. Slide the adjusting bracket plate onto the inner pipe shaft. Be certain that the



bracket plate is mounted to the correct "hand side". Reinstall the charge wheel onto the inner pipe shaft using the fasteners provided with the pipe shaft. (FIG. 2A)

Hoist the assembly up by using a safe mechanical means. Position the assembly at the required coil height and bolt the bracket plate(s) to the inside of the wall angle(s) using the bolts supplied. (FIG. 3)

## Shutters WITHOUT Charge Wheel

Position the adjusting side bracket plate per the correct "hand side" ensuring that the shaft holder bracket is EITHER level with the, already mounted, drive side shaft holder bracket (manually operated shutters only) OR at the required coil height. Bolt the bracket plate to the wall angle using the bolts supplied. (FIG. 3)

Hoist the pipe shaft assembly into the shaft holder bracket(s) affixed to the bracket plate(s). The adjusting side (two holes located on the inner shaft, 90° apart) of the pipe shaft should be located in the shaft holder bracket per Figure 2B. **Do not insert bolts through shaft holder brackets at this time.** Position and bolt the drive side bracket plate (crank and motor operation only), level with the adjusting side bracket plate, to the inside of the wall angle using the bolts supplied. (FIG. 3)

### All Shutters

Confirm the 'between bracket plate' dimension (supplied with documentation package) to within  $\pm 1/8$ " tolerance. Adjust wall angles if necessary. (FIG. 3)

**NOTE:** Between jamb configurations will require an additional clearance above the bracket plate for the operator and/or charge wheel.

**NOTE:** The bracket plates are to be mounted, level with each other, to the **inside of the wall angles**. The bolt heads are to be located as shown in Figure 3.

Check to ensure that the pipe is horizontal and that the bracket plates are square with the wall. As a double check, verify that the shaft (manual and outboard motor operators only) will move freely by rotating the assembly by hand. The shaft should turn on the bearings without a lot of resistance. Adjust if necessary. Tighten all bracket plate bolts to the wall angle extrusion.

**NOTE:** The pipe shaft assembly must be level to ensure that the curtain will roll up evenly.

## Installing the Curtain Assembly

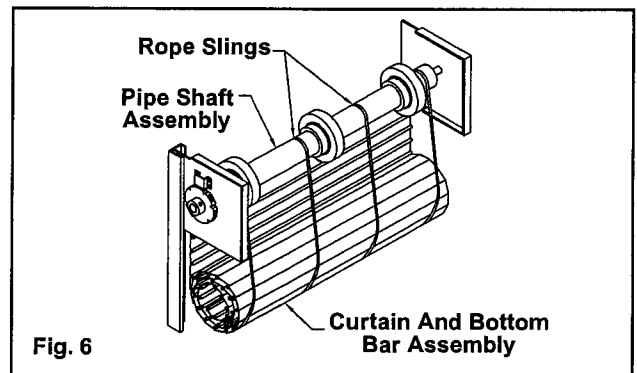
If the coiled curtain has not been pre-rolled onto the shaft assembly, then place the coiled curtain under the shaft assembly above. Position the curtain so that the outside of the shutter will unroll towards the opening. Lift the coiled curtain up by using a safe mechanical means. Position the curtain about 18" below the shaft assembly with the top slats exposed facing up. Care must be used to prevent damage to the shutter.

**IMPORTANT:** Distribute the load evenly. Do not support the entire weight of the assembly under the curtain at one point. This may cause permanent slat damage.

Install heavy rope slings around the curtain and the shaft assembly. The installer must use a

sufficient number of slings, evenly distributed, to prevent the curtain from being deformed during this process (one every three feet is recommended). (FIG. 6)

Turn the shaft assembly by hand, or with the drive mechanism, so that the slings carry the top slats upward to the pipe shaft. (FIG. 6) Line up the holes in the top slats with the holes on the shaft assembly. **Verify that the curtain is centered between the bracket plates.** Slide the outermost top slats firmly against the curtain's endlocks of the slat directly below them. This will help to prevent curtain movement from side to side, during normal operation of shutter. If the pre-punched holes in the top slats do not line up during this step, the installer must punch an additional hole in the top slat to meet this requirement. Fasten the curtain to the shaft using the fasteners provided with the unit.



### Shutters WITHOUT Charge Wheel

Carefully uninstall slings and unroll curtain.

**NOTE:** When curtain is fully unrolled, the bottom bar will be resting on the counter top. Maintain care to not damage or mar the surface of the bottom bar.

### Shutters WITH Charge Wheel

Wind the curtain onto the shaft assembly. Stop winding the curtain when it is completely wound on shaft, and the bottom bar is about 1" below the bottom of the bracket plates. Do not remove the slings. Secure the rolled up curtain in place using a large rope or safety strap in the center of the coil or clamp the bottom bar to the wall angle.



### WARNING

**Do not let the curtain rotate in free fall. No tension has yet been applied to the springs. A free falling curtain could strike someone causing severe injury or death.**

# Adjusting Spring Counterbalance



## WARNING

**SPRING TENSION IS DANGEROUS!** A sudden release of the springs could result in severe injury or death. Proceed with caution, following these instructions carefully.

Do not use tools that could slip and cause severe injury or death. Always stand to one side—never wind the spring directly in front of you.



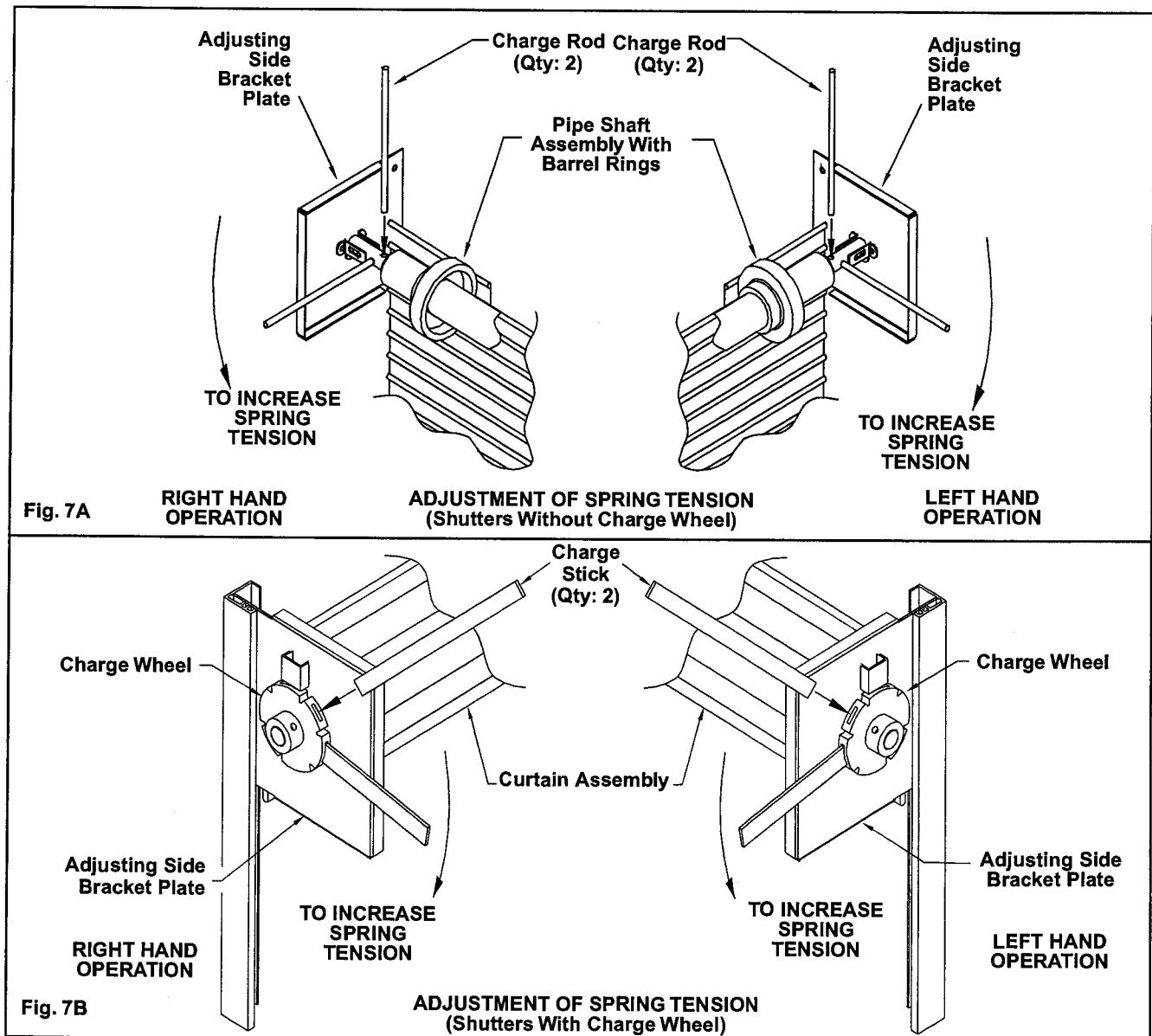
## WARNING

If shutter is supplied **WITH** a charge wheel, always wind tension when the shutter is in the up position. The springs are under the least amount of tension at this point.

If shutter is supplied **WITHOUT** a charge wheel, tension is applied while shutter is in down position. This can be a very dangerous operation. Instructions and Warnings should be followed carefully.

## Shutters WITHOUT Charge Wheel

Adjustment of the spring tension requires two (2)  $\frac{3}{8}$ " diameter steel charge rods. Find the (2) holes (90° apart) on the adjusting side of the



inner shaft. Insert first rod into one of the holes. Rotate the rod in the direction shown in Figure 7A until the second rod can be inserted into the next hole. Make sure that a positive grip is always maintained on at least one of the charge rods. The spring will exert a large force on the charge rods. These rods must be held securely to avoid an accident. Rotate the second charge rod until a positive grip can be secured on the first rod again.



## WARNING

**Exercise extreme caution when increasing or decreasing spring counterbalance. Never permit the charge rod (or the shaft assembly) to rotate rapidly when releasing spring counterbalance. Contact with a rapidly rotating shaft assembly or expelled charge rods can cause severe injury or death.**

Continue to rotate charge rods until the curtain tends to lift from the floor or counter top. This will require several revolutions. The number of turns to achieve optimum counterbalance will vary with each shutter size. Continue to rotate the rods, allowing the curtain to partially wrap around the shaft assembly, until the hole in the inner shaft lines-up with the slot in the shaft holder bracket and the bottom bar tends to lift from the floor or counter top. If the partially coiled curtain obstructs the insertion of the charge rod, then manually unwrap the curtain—holding the inner shaft in place with the first charge rod, until the second hole is clear for the insertion of the second charge rod. Lock the charge setting in place by inserting the supplied bolt through the slot in the shaft holder bracket and through the hole in the inner shaft per Figure 8A. Secure the bolt tightly with the supplied nut. Remove the charge rods. Test the shutter for proper balance. The curtain will remain down in the closed position and open against the stops in the up position. If adjustment is required, carefully lower curtain, insert charge rods, and acquire a positive grip before the bolt is removed (bolt should be completely relieved of tension prior to removal). Rotate in appropriate direction until the desired counterbalance is achieved. Lock shutter in place and test for proper balance. Repeat as necessary.

After balancing shutter, lower the curtain to the down position. Insert the supplied bolt through the slot in the shaft holder bracket and through the hole in the inner shaft at the **drive side bracket plate**. Secure connection with a nut.

## Shutters WITH Charge Wheel

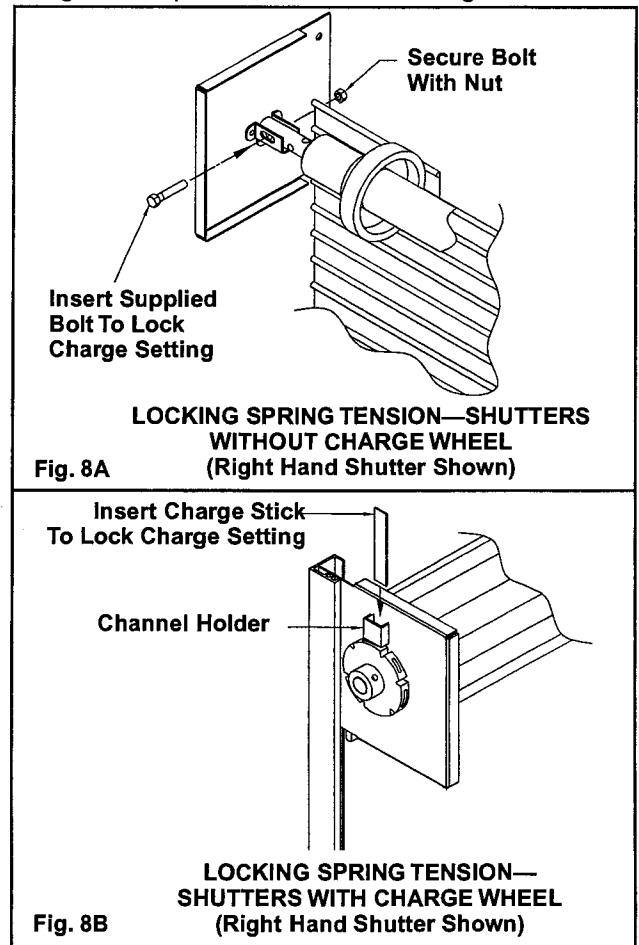
Adjustment of the spring tension requires two (2)  $\frac{1}{8}$ " x 1" steel charge sticks. Insert first stick into one of the slots on the charge wheel. Rotate the charge wheel in the direction shown in Figure 7B until the second stick can be inserted into the next slot. Make sure that a positive grip is always maintained on at least one of the charge sticks. The spring will exert a large force on the charge wheel. The charge wheel must be held securely to avoid an accident. Rotate the second charge stick until a positive grip can be secured on the first stick again.



## WARNING

**Exercise extreme caution when increasing or decreasing spring counterbalance. Never permit the charge wheel to rotate rapidly when releasing spring counterbalance. Contact with a rapidly rotating charge wheel or expelled winding tool can cause severe injury or death.**

Continue to adjust the spring tension until the curtain bottom bar slowly rotates upward against the guide stops. The number of charge wheel





turns to achieve optimum counterbalance will vary with each shutter size. Apply only enough tension to hold the shutter in the up position against the stops. This is typically the optimum setting. Continue to rotate the charge sticks either forward or backwards until a slot in the charge wheel lines-up with the channel holder on the bracket plate. Lock the charge setting in place by inserting the charge stick through the channel holder and into the charge wheel per Figure 8B. Test the shutter for proper balance. The curtain will remain down in the closed position and open against the stops in the up position. Do not over charge the spring. After the shutter counterbalance has been properly adjusted, carefully remove all safety ropes, straps or wall angle clamps.

**IMPORTANT:** Increasing the initial tension will reduce the lift effort but can prevent the shutter from completely closing to the counter top. Over charging the shutter may result in premature spring failure.

## Installing the Guides

Position the guides such that the bottom of the guide's line up with the bottom of the wall angles. Fasten the guides to the wall angles with the fasteners supplied.

## Installing the Operator

### Manual Lift Shutters

No operator required.

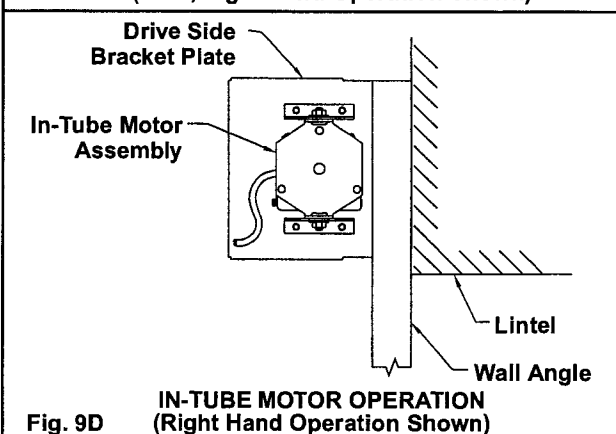
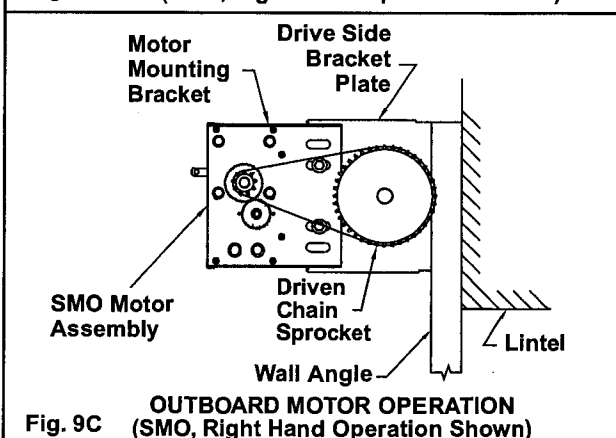
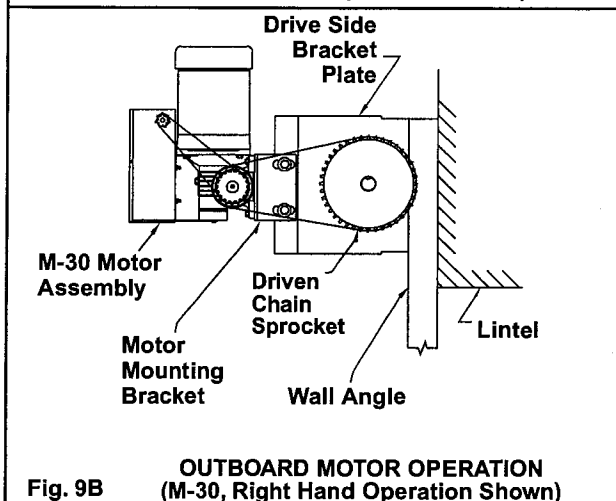
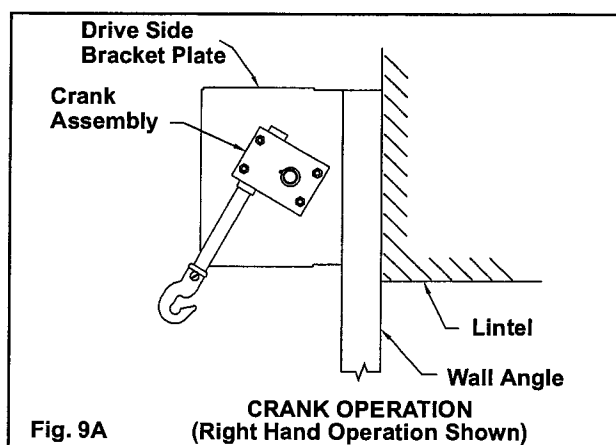
### Crank Operated Shutters



### WARNING

Gears and mechanisms move freely and quickly. To avoid severe injury or death, keep hands, arms, and clothing, free of moving mechanisms and meshing gears.

Crank operated shutters are supplied with the components mounted to the bracket plate. (FIG. 9A) No further installation is required.



## Motor Operated Shutters



### WARNING

To reduce the risk of injury to persons, use only Atlas Door™ operators on this counter shutter.

Refer to Figure 9B regarding “M” series outboard motor operation, Figure 9C regarding “SMO” outboard motor operation, and Figure 9D regarding in-tube motor operation.



### WARNING

Shutters equipped with motor operators can cause serious injury or death if not properly adjusted, installed, or operated. Refer to the motor operator manual for specific warnings.

**IMPORTANT:** If the shutter is now, or later becomes, electrically operated, any locking devices must be disengaged or electrically interlocked.

## Outboard Motor Operated Shutters

Outboard Motor operated shutters are supplied with the motor assembly packaged in a separate carton. If required, the motor assembly and mounting brackets are to be fastened together using the four  $\frac{3}{8}$ -16 x  $1\frac{1}{4}$ " bolts, nuts, and washers provided with the shutter. When motor operators are furnished, check the documentation supplied for the correct mounting arrangement.

The motor mounting bracket is to be fastened to the two studs (“SMO” style motor uses two  $\frac{1}{2}$ " bolts instead) on the outside edge of the drive side bracket plate using two  $\frac{1}{2}$ -13 nuts and washers provided. From previous steps, the chain sprocket should be located on the driven shaft. (FIG. 5B) Adjust the chain sprocket to line up with the drive sprocket located on the motor assembly. Tighten the set screws securely. Using the motor mounting bracket, adjust the location of the motor so that proper roller chain tension is obtained. Use half links for fine adjustment if necessary.

**IMPORTANT:** The motor should be diagonally braced to the adjacent wall construction by the installer if sideways movement is present. The bracing is to be of sufficient strength to prevent movement of the bracket plate and motor when the shutter is operating. Bracing should not interfere with the proper operation of the shutter. Bracing is to be supplied by the installer.



### WARNING

Failure to adequately brace the bracket plate and motor operator may result in chain disengagement, causing the shutter to unexpectedly drop if unbalanced, which could cause serious injury or death.

## All Motor Operated Shutters

Wiring of the motor operator is to be performed only by qualified personnel. Reference the wiring diagram located inside the operator control box.

Set the operator limit switches per the “Limit Switch Adjustment for Motor Operators” sheet included with the Motor Operator.

If the motor operator is not yet electrified, the limit switches must be temporarily adjusted to avoid override in case of accidental operation with power, prior to the final setting of the limit switches. Lower the shutter bottom bar to within two feet of the upper bellmouth stops. Push down on the pressure plate and move the “open groove nut” until it contacts its micro switch. Lower the shutter to within two feet of the counter top. Push down on pressure plate and move the “close groove nut” until it contacts its micro switch.

On “M” and “H” series motor operators the emergency hand chain is engaged by pulling another separate lighter chain. This lighter chain is held by a lock lever which must be mounted on the wall with the bracket provided in the motor box. Lock the lever in the down position and attach it to the lighter chain. Pull the chain so that it engages the manual operator. Holding the chain taut, bolt the lever bracket to the wall at about four feet from the counter top. Release the lever and check that the manual operator has disengaged.

## Installing the Hood



### WARNING

The hood must be installed to ensure the structural integrity of the shutter and operator.

Place the hood across the coil of the shutter, resting it on the hood bands located on the outside edges of the bracket plates. Fasten the ends of the hood to the bands located on the bracket plates using four (two on top, two on bottom) self tapping number 14 x 1/2" screws per side. Allow 1/2" of band to remain exposed to mount end plate covers. (FIG. 10)

If a fascia is provided (between-jam mounting configuration only), hold it in position, even with the hood, covering the exposed shutter coil. Fasten the fascia to the packout channels with the 1/4" hardware and 1/2" channel spacers provided.

## Finishing Steps

Apply all warning labels in the appropriate locations. Reference the label mounting instruction sheet included in the bolt bag for details.

Double check all bolts and hardware for tightness.

If end plate covers were supplied (see **NOTE** below), locate them on the bracket plates and clamp them in place. Drill two 1/4" holes placed 2" from each end on the top, and bottom of the covers. (Drill through both the cover and bracket plate flange) Use self tapping number 14 sheet metal screws provided to screw the cover to the brackets. (FIG. 10)

**NOTE:** End plate covers (End Caps) are standard only on shutters up to 5'2" high and face of wall mount per the following restrictions: Cover supplied on charge side on all operations. Drive side cover supplied on manual and in-tube motor operation only. End caps are provided when curtain is either a tan or gray baked finish coat or clear anodized aluminum. All other shutters must have end caps specified, subject to availability and lead times.

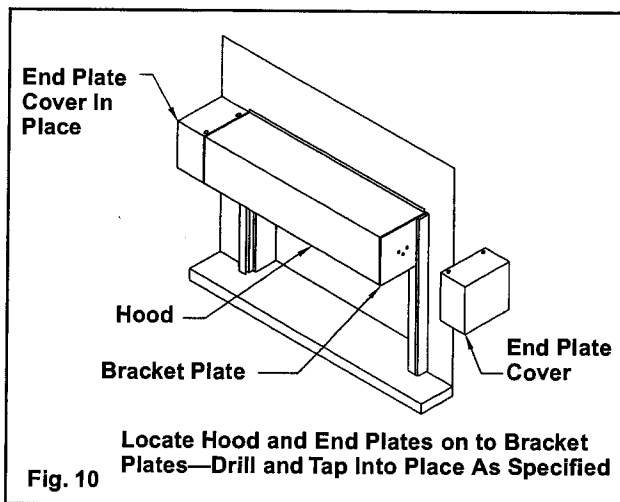
The shutter guides should be adequately greased, and thoroughly lubricate all gears and drive mechanisms with WD-40(c), silicone spray lubricant, graphite grease, lithium grease, or similar material.



### WARNING

Never place hands or fingers between gears, or chain and sprockets, while the shutter is being operated. Doing so may result in crush injuries, broken bones or serious lacerations.

Locate this manual near the shutter.



## Final Installation Check List

In order to assure the customer that the shutter has been installed correctly, and in a safe manner, please check the following before leaving the job site.

- ☐ Check to see that all warning labels are mounted in the appropriate locations.
- ☐ Make certain that the proper amount of tension has been applied to the springs to properly counterbalance the weight of the curtain. The shutter should raise and lower with ease, and remain open (in the upper position) when resting against the stops.
- ☐ Check to see that the charge wheel is securely fastened in place.
- ☐ Inspect all sprockets and gears requiring keys, to ensure that they are installed and seated properly.
- ☐ Recheck all set screws (one over the key—the other located at 45° from the key) in each sprocket or gear for tightness.
- ☐ Check all fasteners holding guides to the building structure as well as those used in assembling the shutter components are secure.
- ☐ Check the area for any extra parts, and be sure these were not omitted during the installation process.
- ☐ Instruct the customer or their representative in the proper method of operating the shutter. Be sure to demonstrate any optional equipment, show the location of the bottom bar contract number label, and inform them of the preventative maintenance schedule before leaving the job site.
- ☐ Instruct the customer to read the **IMPORTANT SAFETY INFORMATION** section of this document.
- ☐ Have the customer or their representative sign off on the installation, and exchange all documentation at this time.
- ☐ Be sure that this manual is located near the shutter or given to the customer.
- ☐ Be sure not to leave a mess. Clean up the area and make sure it is secure if you are the last one to leave.

Your input on this product is welcomed. Please report in writing any issues or recommendations that would improve the product or installation method. These comments should be forwarded to the Atlas Door™ Customer Services Department or call 1-800-959-9559.

## **Preventative Maintenance Schedule**

Counter Shutters have been engineered to provide years of trouble free service under normal use. A visual inspection of the shutter should be performed quarterly to determine if any components are malfunctioning, damaged, or missing. To ensure the longest possible life from your shutter, the following maintenance guidelines should be implemented.

- Lubrication is the most important maintenance to be performed on the shutter. Apply grease to the guides quarterly (or more frequently if high usage or dusty conditions are present). Failure to do this may void warranty claims in the area of slat wear. Lubricate all moving mechanisms quarterly with WD-40(c), silicone spray lubricant, graphite grease, lithium grease, or similar material.
- Check the slats and bottom bar for bent or punctured areas. Any damaged components should be replaced or corrected to enable smooth operation through the guides.
- Check painted curtains for scratches. Touch up work should be performed as soon as possible to prevent rust and corrosion.
- Check endlocks for proper fastening to the slats. Fix or replace loose fitting components.
- Check the guides for proper opening spacing. Adjust if necessary.
- Check all wall angle and guide angle bolts to ensure that they are secure. Tighten if necessary.
- Check the pipe shaft for signs of wear around the bearing and bracket plate areas. Fix or replace worn components if necessary.
- Check the bracket plates for secure attachment to the wall angles. Tighten if necessary.
- Check charge wheel, locking plate, and channel holder for corrosion or any other potential signs of failure. Replace components if necessary.
- Check all gears, sprockets, and chains drives for proper alignment and/or tautness. Adjust if necessary.
- Check all fasteners and bolted connections to ensure they are secure. Tighten if necessary.

Contact a qualified shutter service person for any repairs. Use only Atlas replacement parts.

## Troubleshooting Guide

The chart below is a list of possible problems associated with the operation of coiling counter shutters. This table covers the most common issues, and is not meant to include all possibilities. Other factors may be involved due to the large variety of product combinations and the field conditions.

PROBLEM	PROBABLE CAUSE	REMEDY
Shutter raises hard, closes easily or will not stay open	Insufficient counterbalance	Increase spring tension 1 increment (Charge wheel: 1/8 turn; no charge wheel: 1/2 turn)
Shutter drifts down from stops	Insufficient counterbalance	Increase spring tension 1 increment (Charge wheel: 1/8 turn; no charge wheel: 1/2 turn)
Shutter closes hard, raises easily	Too much counterbalance	Decrease spring tension 1 increment (Charge wheel: 1/8 turn; no charge wheel: 1/2 turn)
Shutter jumps up from floor	Too much counterbalance	Decrease spring tension 1 increment (Charge wheel: 1/8 turn; no charge wheel: 1/2 turn)
Curtain runs to one side	Shaft not level	Check and level shaft, replace if necessary
Shutter sticks when closing	Bent guide angle(s)	Inspect for bent guides; straighten or replace if necessary
Shutter coil makes cracking sound	Bent slats	Inspect, remove and straighten or replace
Shutter squeaks when operating	Tight guides	Check alignment and distance between wall angle extrusions
	Dirty guides	Inspect and clean inside of guide
	Insufficient lubrication mechanisms with WD-40(r) or similar lubricant	Grease guides or spray
Motor runs, shutter does not operate	Curtain jammed	Inspect and remove obstruction
	Emergency hand chain engaged	Disengage emergency hand chain
	Insufficient counterbalance	Increase spring tension 1/2 turn

**atlas door**<sup>™</sup>



**BUILDING PRODUCTS**  
A Griffon Company

**312 Walnut Street, Suite 1600, Cincinnati, OH 45202 • (800) 959-9559**

# **SECTION 3**



# Troubleshooting Guide

The chart below is a list of possible problems associated with the operation of Atlas Operators. This table covers the most common issues, and is not meant to include all possibilities. Other factors may be involved due to the large variety of product combinations and the field conditions. For troubleshooting information specificity for solid state operators, see next section.

PROBLEM	PROBABLE CAUSE	REMEDY
Motor does not run	Hand chain disconnect chain engaged.  Stop button not wired correctly.  Wrong voltage.  External interlock circuit.	Release disconnect chain.  Stop button is a N/C circuit. Jumper required between 4 & 5 if not used.  Verify that the incoming voltage is the same as listed on the operator nameplate.  If supplied, check wiring of guide mounted interlocks. Jumper required between 10 & 11 if not used.
Door closes as soon as it reaches the full open position or as soon as power is applied.	For Fire Power™ operators, alarm not connected or functioning properly.  Control Stations are wired incorrectly.	Connect up the alarm. Verify that the operator is wired for the correct type of alarm. See wiring diagram.  Remove all control stations. Place jumper on and 5. Jump from 5 to 6 to open and from 5 to 7 to close. If door functions, then double check control wiring.
Door opens as soon as power is applied.	Control Stations are wired incorrectly.  Failsafe sensor edge (when specified) is not wired or functioning properly.  Sensor edge is not wired correctly or functioning properly.	Remove all control stations. Place jumper on 4 and 5. Jump from 5 to 6 to open and from 5 to 7 to close. If door functions, then double check control wiring.  Double check sensor edge wiring. Verify the two edge loops are wired as per the diagram. Green wire of reelite must go to the terminal indicated.  Double check sensor edge wiring.
Operator runs in only one direction.	Motor failure or wiring problem.  Control system failure or wiring problem.	Remove the drive chain. Reverse the wires going to T5 and T8 at the motor connections. If motor still runs in the same direction, the motor or motor wiring is the problem. If motor runs in opposite direction, then control system or wiring is the problem.
Door limits are not staying as adjusted.	Limit nuts not engaged by pressure plate.  Make sure the limit chain is tight.	Make sure that the pressure plate is fully engaged in the slot of the limit nuts.  Adjust electrical box to tension limit chain if required.
Door does not cycle on an obstruction in Fire Power™ mode.	Timer not set properly.  Sensor edge is not wired correctly or functioning properly.	See section on setting the Fire Power™ Timer.  Verify sensor edge is working and connected to terminals 8 & 9.

# **TROUBLE SHOOTING GUIDE**

*Atlas Door™ Solid State Operator . DOC-6000*

**Note:** This troubleshooting guide does not apply to hand wired motor operators.

## **1.0 NOTHING HAPPENS, GREEN LIGHT IS OFF**

- 1.1 Temporarily jumper 4 to 5 on the terminal block. If the green light comes on, the stop push button is wired incorrectly.
- 1.2 Temporarily jumper 5 to 11 on the terminal block. If the green light comes on, the interlock switch is open or wired incorrectly.
- 1.3 Measure the incoming power for the correct voltage on the L1 and L2 pins of the power terminal block.
- 1.4 Measure between 24-29 volts AC across the two red transformer leads. If the voltage measures zero, replace this transformer.
- 1.5 If the voltage is correct, check the continuity through the interlock switch and the motor overload switch.
- 1.6 If the voltage measures low, remove any wires from pin 12 of the terminal block, one at a time. When the green light comes on, the wire that was just removed is connected to a shorted accessory.
- 1.7 Unplug the 14-pin DIP connector from the circuit board. If the green light comes on, one of the accessories is shorted. Re-connect the 14-pin DIP connector. Disconnect one accessory board at a time until the green light comes on. The last accessory board disconnected when the green light comes on must be replaced.
- 1.8 If the green light is still off, replace the main circuit board.

## **2.0 NOTHING HAPPENS, GREEN LIGHT IS ON**

- 2.1 Check the amber Sensor Edge light if it is on, the door is in the open position, and the door will not close, check the sensor edge for correct wiring.
- 2.2 Unplug the 14-pin DIP connector from the circuit board. If the unit now operates, the accessory board needs to be checked.

- 2.3 If the open yellow light is on and the door is not opening, or if the close red light is on and the door is not closing, check the high voltage on the motor wires from 4 to 5 on the circuit board. If the correct high voltage is present, check for a motor failure or a locked motor.
- 2.4 If the high voltage is not present or if the open and close lights will not come on, replace the main circuit board.

## **3.0 DOOR WILL NOT CLOSE, RED LIGHT IS OFF**

- 3.1 See 2.1
- 3.2 If the close push button located on the circuit board will close the door but the remote push button station will not, check the wiring from pin 7 of the terminal block to the remote station.
- 3.3 Check the close limit switch. It should not be activated and a voltmeter across its terminals must read zero volts DC. When activated, the voltage will rise to 12 volts DC. If it does not, replace the limit switch.
- 3.4 Unplug the 14-pin DIP connector from the circuit board. If the door closes, one of the accessories is shorted. Reconnect the 14 pin DIP connector. Disconnect one accessory board at a time until the red light comes on. The last accessory disconnected when the red light comes on must be replaced.
- 3.5 If none of the above correct the problem, replace the main circuit board.

## **4.0 DOOR WILL NOT CLOSE, RED LIGHT IS ON**

- 4.1 Check the high voltage on the motor wires from 4 to 5 on the circuit board. If the correct power line voltage is present, check the motor if no power line voltage is present, replace the main circuit board.
- 4.2 If the door "jogs" closed a few inches but then re-opens automatically, check the amber sensor edge light while the door is closing. If it flashes just before the door opens, repair the sensor edge circuitry. If the amber light stays off, check for a short in the remote push button that connects to pin 6 of the terminal block. The voltage from pin 6 to ground should be 12 volts DC when not activated and zero volts when activated.

## **5.0 DOOR WILL NOT OPEN, YELLOW LIGHT IS OFF**

- 5.1 If the open push button located on the circuit board will open the door but the remote push button station will not, then check the wiring from pin 6 of the terminal block to the remote station. You must measure 12 volts DC from pin 6 to ground normally and zero volts when activated.
- 5.2 Check the open limit switch. It should not be activated and a voltmeter across its terminals must read zero volts DC. When activated, the voltage will rise to 12 volts DC. If it does not, replace the limit switch.
- 5.3 Unplug the 14-pin DIP connector from the circuit board. If the door opens, one of the accessories is shorted. Re-connect the 14-pin DIP connector. Disconnect one accessory board at a time until the yellow light comes on. The last accessory disconnected when the yellow light comes on must be replaced.
- 5.4 If none of the above correct the problem, replace the main circuit board.

## **6.0 DOOR WILL NOT OPEN, YELLOW LIGHT IS ON**

- 6.1 Check the high voltage on the motor wires from 4 to 5 on the circuit board. If the correct power line voltage is present, check the motor. If no power line voltage is present, replace the main circuit board.

## **7.0 STOP PUSH BUTTON WILL NOT STOP THE DOOR**

- 7.1 If the stop push button located on the circuit board will stop the door but the remote push button station will not, press the remote stop button. The green light should go off. If it does not, check for a short or a jumper from pin 4 to 5 on the terminal block and remove it permanently.
- 7.2 If the green light will not go off after 7.1, temporarily remove the wire from the stop push button connected to pin 5 of the terminal block. If the green light goes off, check the wiring in the remote station for a short.
- 7.3 If the green light does not go off after 7.1 and 7.2, unplug the 14-pin DIP connector from the circuit board. If the green light is now off, one of the accessories is shorted. Reconnect the 14-pin DIP connector. Disconnect one accessory board one at a time until the green light goes off. The last accessory disconnected when the green light goes off must be replaced.
- 7.4 If the green light is still on, replace the main circuit board.

If you are unable to get the operator to work properly or you require parts or assistance, please contact the Atlas Door™ Customer Service Department at 1-800-959-9559.

**08333 – METAL ROLLING COUNTER SHUTTERS**

**(DATA PACKAGE 1)**

**C. WARRANTY INFORMATION.**



# DUCHARME DOOR CORP.

*Commercial Roll-ups, Special Fire Doors, Operable Walls, Folding Partitions  
Installations, Sales, Repairs, & Service*

CA. Lic. #694969

NV. Lic. #004661

## WARRANTY

Re: **Medical / Dental Clinic**

General Contractor: [REDACTED]

DuCharme Door Corp. Job No.: [REDACTED]

We hereby will warrant that the **Atlas Steel Fire Shutter and Alum Counter Shutter** which we have install for **Medical / Dental Clinic** located in **El Segundo, CA** will be performed in accordance with the drawings and specifications and that the work as installed will fulfill the requirements of the guarantee/warranty included in the specifications.

We agree to repair or replace any or all of our work together with any or all other work which may be displaced or damaged by so doing, that may prove to be defective in its workmanship, materials, or failure to conform to Contract provisions and requirements within a period of ONE (1) year(s) from the Date of Substantial Completion of the above named structure by the Owner without expenses whatever to the said Owner, Ordinary wear and tear and unusual abuse or neglect expected.

DuCharme Door Corp. reserves the right to payment in full on project in order for warranty to be fully binding. Warranty is considered void if serviced or repaired by personnel other than DuCharme Door Corp. during warranty period.

DuCharme Door Corp. [Signature]

Date: July 1, 2002

Countersigned: \_\_\_\_\_  
General Contractor

Date: July 1, 2002

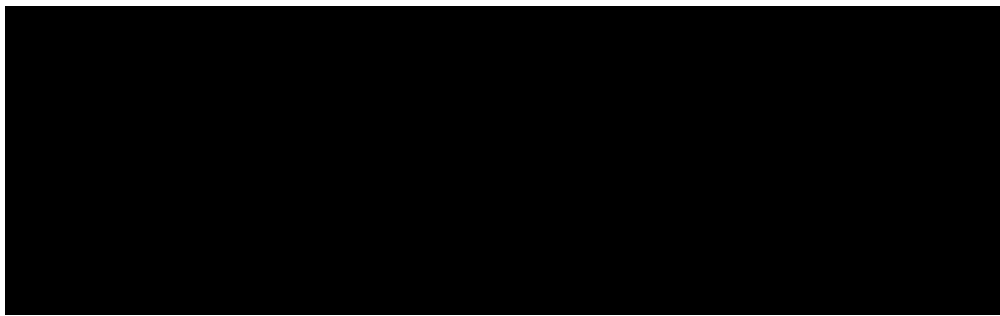
**Contact for Service:** **DuCharme Door Corp.**  
**8536 Central Ave.**  
**Stanton, CA 90680**  
**(714) 761-2033 Fax (714) 761-2029**

**08333 – METAL ROLLING COUNTER SHUTTERS**

(DATA PACKAGE 1)

**D. CONTRACTOR INFORMATION.**

**DuCharme Door Corp.  
8536 Central Ave.  
Stanton, CA 90680**



**For non-emergency calls please refer  
to our office # (714) 761-2033**