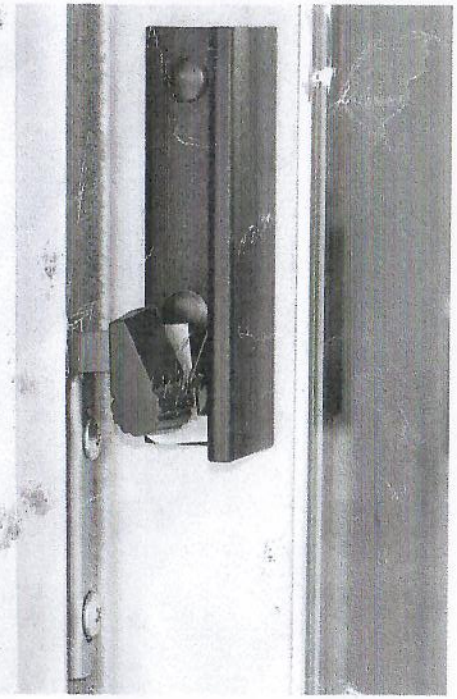
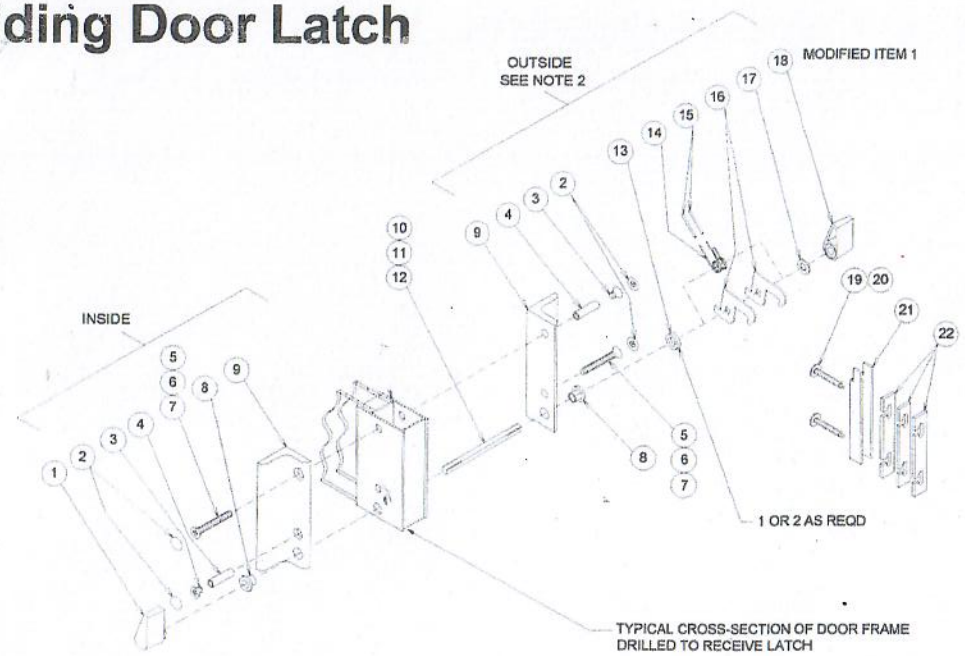


Installation of Sliding Door Latch

The latch can be assembled for right or left opening doors. The following instructions are for a door opening right-to-left as one exits the house. For doors opening left-to-right the illustration would be a mirror image. At right is an exploded view of entire latch.



Tools Required:

3/8-inch electric drill motor, 7/16-inch drill bit, 17/64-inch drill bit, 1/16-inch Allen wrench, No. 2 Phillips screwdriver, No. 2 Phillips hex-drive, center punch, hammer, pencil, tape, and gel-type super glue.

Note on Wood and Vinyl Doors:

The outside assembly may be moved to the inside if there is no appropriate place to mount the Keeper (Item 21) and Shims (Item 22). Or it may be required to cut the flange of the door frame to accommodate these parts.

Note on Thickness of Doors:

Doors 1-inch thick	use 7/8-inch-long Screws (Item 5)	and 3-1/4-inch long Axle (Item 10),
Doors 1-1/2 inch thick	use 1-1/2-in-long Screws (Item 6)	and 3-3/4-inch-long Axle (Item 11),
Doors 2-inches thick	use 2-inch-long Screws (Item 7)	and 4-1/4-inch-long Axle (Item 12).

Wood doors are typically 1-3/4 inches thick. You must cut 1/4 inch from the 2-inch-long Screws (Item 7) and 1/4 inch off the 4-1/4-inch-long Axle (Item 12).

Step 1: Mark Outside Holes.

Close sliding door completely. Place the template on the door casement 54 to 60 inches above floor and insert it between the seals until it touches the sill or until the "Handle Clearance" line reaches the sill flange. The holes for the latch are 1-1/4 inch from the sill or the handle must clear the sill flange by 1/16 inch, whichever is greater. Mark the hole centers using a punch and hammer.

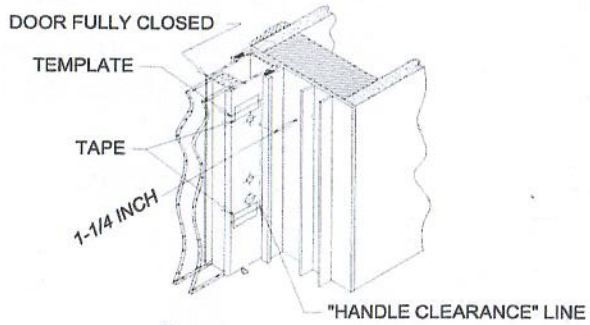


FIGURE 2: MARK OUTSIDE HOLES

Step 2: Drill Outside Holes.

Open door and remove template. Drill the middle 17/64-inch hole through **both walls** of the casement. **Caution: Make sure this middle hole is level and perpendicular to the casement or the latch may bind.**

Drill the top 17/64-inch hole through only **one wall** of the casement and the bottom 7/16-inch hole also through one wall of the casement.

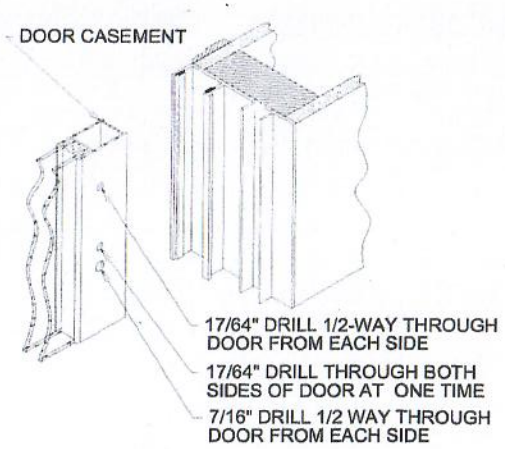


FIGURE 3: DRILL OUTSIDE HOLES

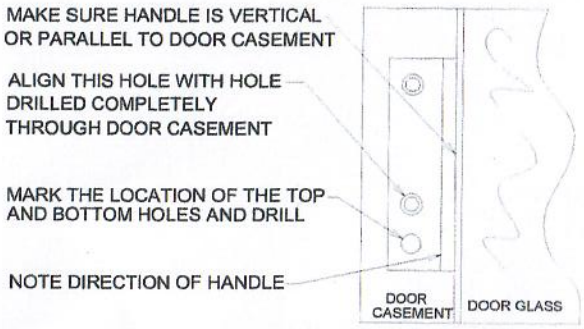


FIGURE 4: MARK AND DRILL INSIDE HOLES

Step 3: Mark and Drill Inside Holes.

Use a latch handle as a template on the inside casement so the middle hole of the handle aligns with the through hole you just drilled. Make sure the handle is aligned vertically the mark the center of the top and bottom holes. Drill the top hole with the 17/64-inch drill bit and the bottom hole with the 37/16-inch drill bit.

Note: The purpose of drilling only the middle hole completely through the door then the top and bottom holes half way through from each side is to insure the holes are parallel. If the middle hole is not drilled as precisely as it should then the same error is transferred to the other holes and the three holes are parallel. The chance of binding is reduced. On wood doors a hole going in cuts cleaner than one coming out, there is less chance of splintering the wood.

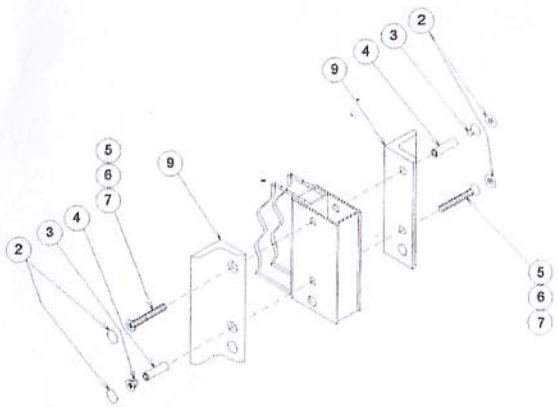


FIGURE 5: MOUNT HANDLES

Step 4: Mount Handles (Item 9).

The #10-32 by 1/4-inch-long Screw (Item 3) and the Threaded Sleeve (Item 4) should come already assembled. If not then apply a drop of super glue to the threads of Item 3 and tighten together.

Fasten the Handles (Item 9) to the door using the Screw-Sleeve assemblies just completed and Long Screws Items 5, 6, or 7. See "Note on Thickness of Doors" on previous page.

Place Screw Covers on heads of screws. It is recommended that a small drop of silicon glue be placed on the screw's head to secure the Screw Cover. Be careful not to get glue into the cross-recess of the screws as this will make it difficult to get the screws out for future latch service.

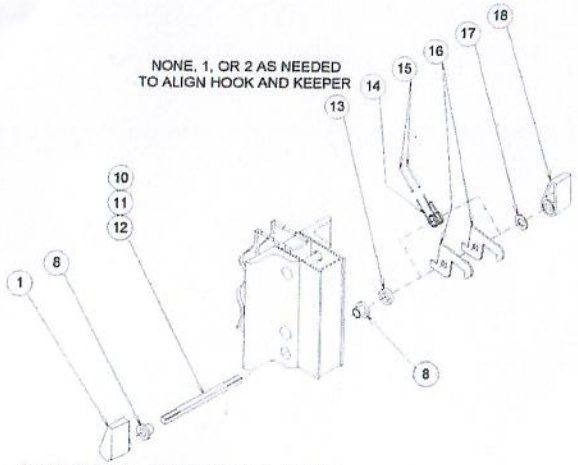


FIGURE 6: ASSEMBLE AXLE

Step 5: Assemble Axle and Install as Shown.

The Heat-shrink Tubing (Item 15) should come attached to the legs of Spring (Item 14). If not then apply small drop of super glue to legs of spring and place tubing over them. Apply heat to shrink tubing.

Insert Axle (Item 10, 11, or 12) through Flange Bearing (Item 8), and attach Knob (Item 1) using 1/16-inch Allen wrench. **Important note**: The Knobs (Items 1 and 18) each have two set-screws to hold the them to the Axle. A set-screw in the Knob on the left in Figure 6 (Item 1) will be covered by the Handle (Item 9) and access to this screw impaired. **Attach the Knob with the hidden set-screw first.**

Push Axle through mounted Handles and populate Axle with second Plastic Bearing (Item 8), Plastic Spacer(s) (Item 13), two Hooks (Item 16), and Spring Assembly (Items 14 and 15). Note the Spring straddles the Hooks, the Axle goes through one set of Spring coils, through the Hooks, and out the other spring coils. The Spring's short "looped" leg pushes against Hooks while two longer legs push against Handle (Item 9).

Install Steel Washer (Item 17) and second Knob (Item 18) onto Axle assembly. **Do not push the second Knob on too tightly, the Axle Assembly needs to rotate freely.**

Step 6: Attach and Adjust Keeper

Attached the Keeper (Item 21) to the sill using 2 Self-drilling Screws (Item 19 or 20) and as many Keeper Shims (Item 22) as required. The Keeper is usually flush with the sill flange. Adjust the Keeper up-and-down until Keeper just clear the Hook (there should be no more than 1/16 inch gap) and tighten screws.

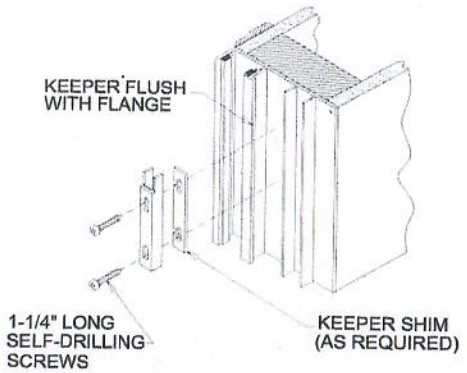


FIGURE 7: MOUNT AND ADJUST KEEPER

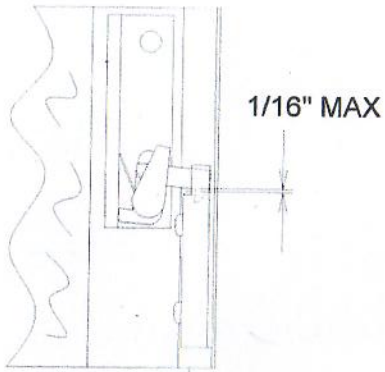
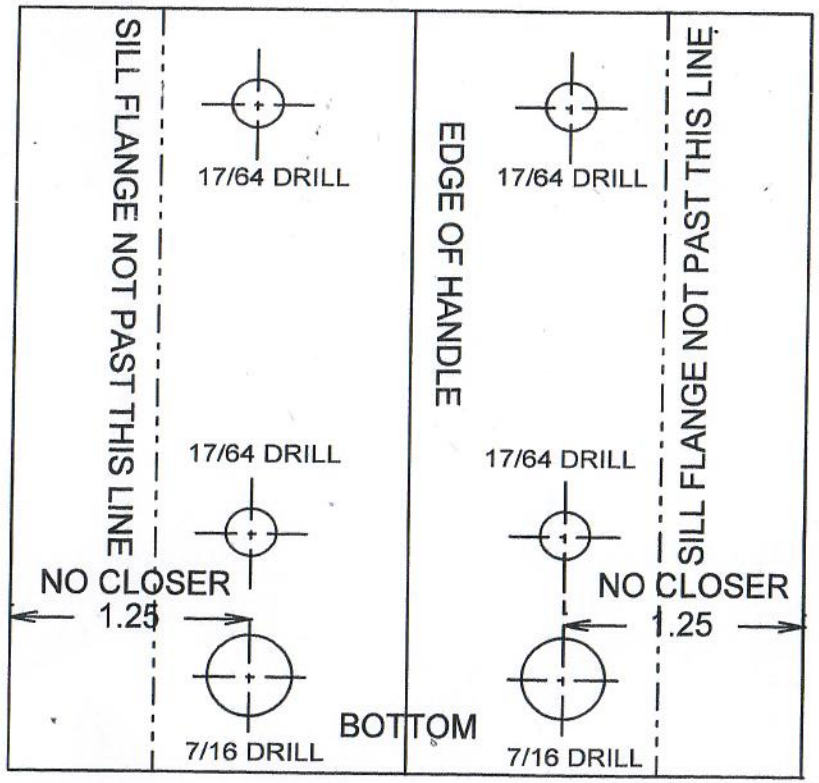


FIGURE 8: ADJUST KEEPER



Drill Template

Installation is complete.

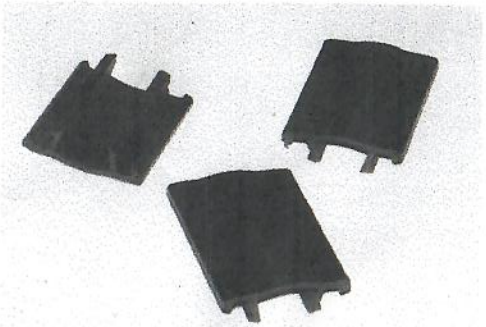
How to Install Sliding Door Closer

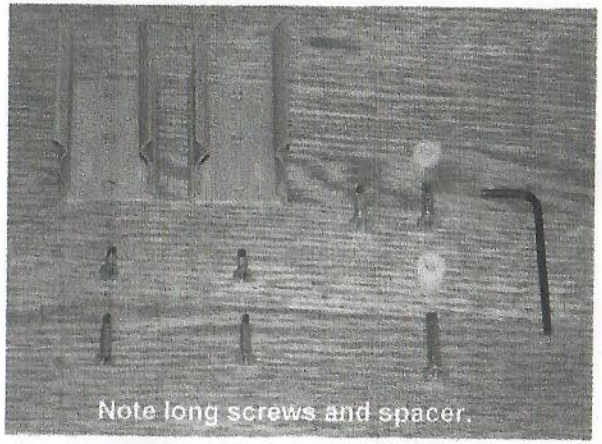
The sliding door must operate properly before installing the closer. The door must move freely in its track, if given a push it should coast open or closed. There should be no binding of the door and track. There are two criteria the door must meet:

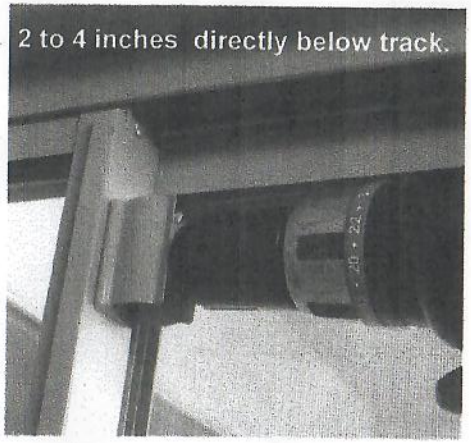
(1) A credit card must be able to pass easily between the felt seals of the door inside, outside, top, bottom, and along the vertical sill where the door closes and
(2) The door must close with no more than 5-pounds of force at any point.

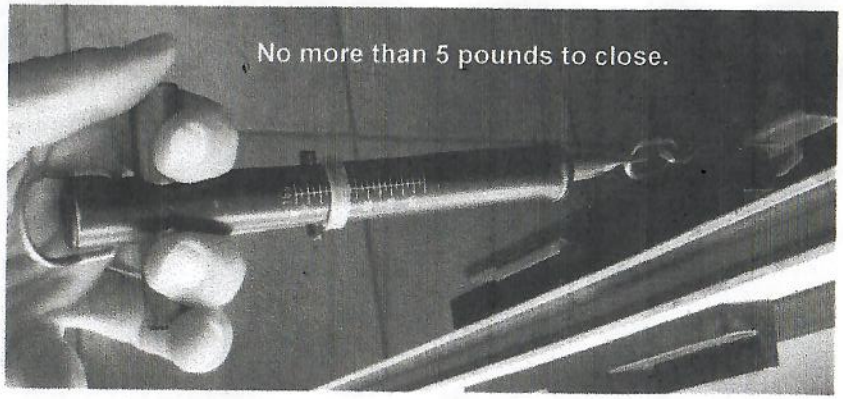
If there are any plastic clips hidden on top of door inside the upper track then hey must be removed. See picture upper right.


Must move freely.


Forbidden!


Note long screws and spacer.


2 to 4 inches directly below track.


No more than 5 pounds to close.

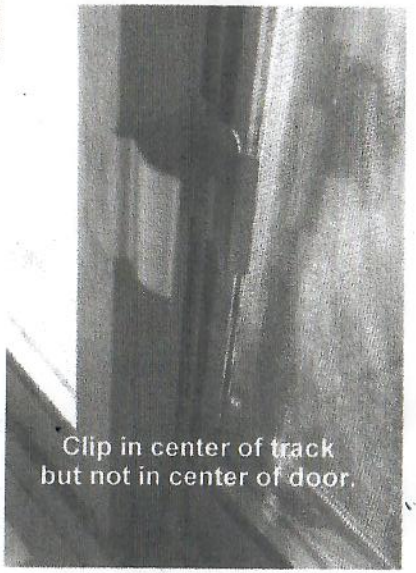
Tools Required:

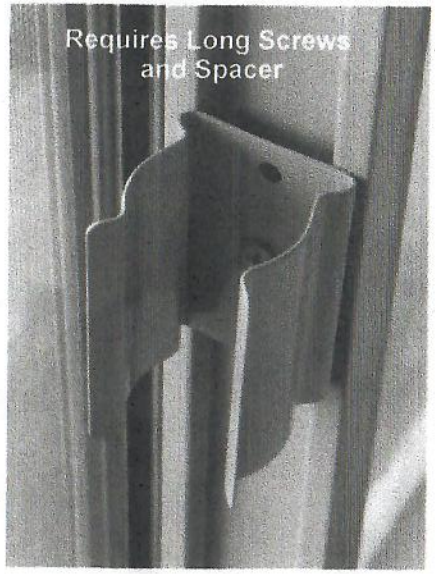
Cordless electric drill with variable speed and torque, #2 point Phillips hex-drive 2-inches long, measuring tape or ruler, and pencil.

Step 1: Mount Clips to Edge of Door.

The top clip is mounted 2 to 4 inches below the upper track and the bottom clip is mounted 4 to 6 inches from the bottom of the closer. Important: The clips must be mounted along the center of the track. This may not be in the center of casement, see picture in center.

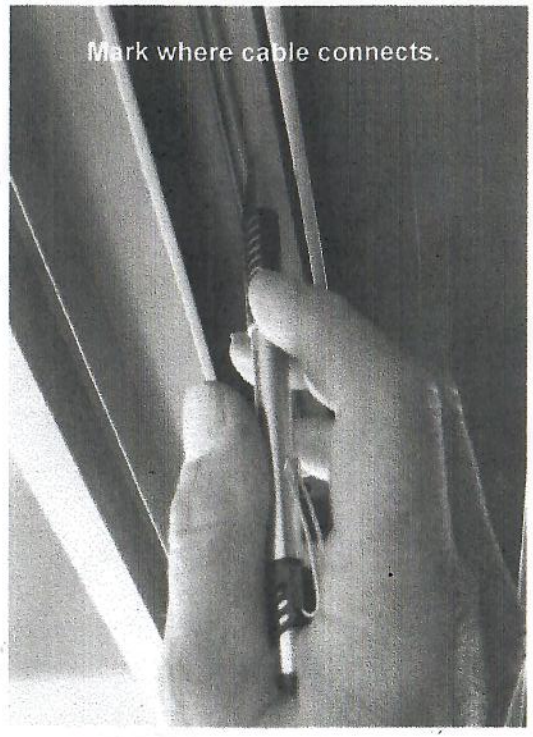
Some doors have a channel as shown in picture far right. Use longer screws and spacer for this type of door.


Clip in center of track but not in center of door.


Requires Long Screws and Spacer

Step 2: Attach Cable to Upper Track.

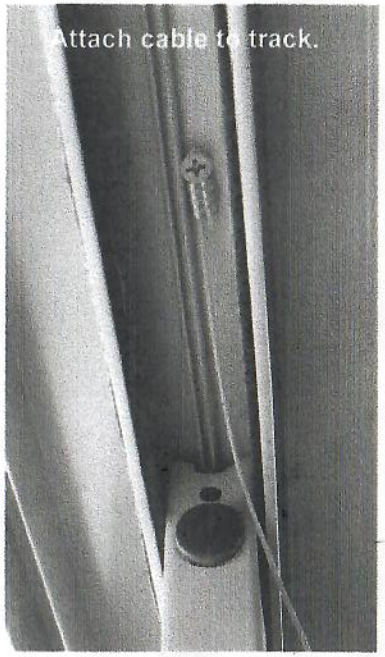
The closer must be mounted to the door such that:
1. The door closes before the weight in the closer reached the bottom,
2. The closer is in the center of the track so the pulley head does not rub,
3. The closer is not mounted too high such that the pulley head hits the track, and
4. The closer is not mounted too low such that the cable drags against the door.

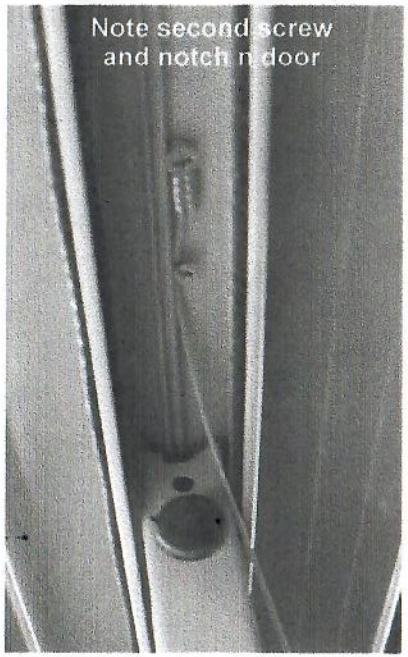


Close sliding door, stand closer next to clips where it is to be mounted, pull cable over pulley and extend it horizontally toward latch side of door. Mark a position inside the upper track 1 to 2 inches further from the loop at end of the cable. The weight will come to rest 1 to 2 inches from the bottom when the door closes.

Attach the end of the cable to the upper track in the spot just marked using a #8 by 3/4 long flat-head screw. This screw only needs to be snug, do not over tighten it or the compression sleeve in the loop will tilt down and hit the door.

The gap between the top of the door and the track should be a minimum of 1/4 inch. One some doors this is not possible and with one manufacturer inadequate clearance is a frequent problem. These doors can be identified by a rib in the center of the track as shown in the pictures to the right.





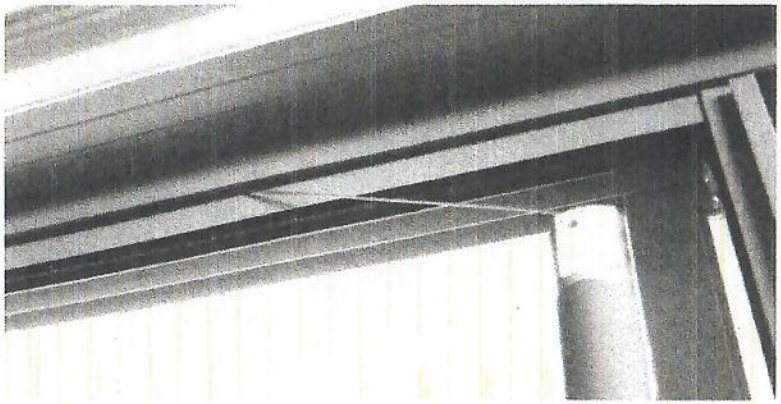
Whenever this make of door is seen use a second #6 x 3/4 inch flat-head screw to trap the cable against the rib as shown at left.

Sometimes it is necessary to cut or bend a notch to clear the screws and compression sleeve on one or boths sides of the door. See picture at left once again.

Important Note:
All upper tracks sag over time and the clearance may vanish and the door will no longer close. A door repair company or handyman may be able to raise the track using 3-inch long dry-wall screws to restore adequate clearance.

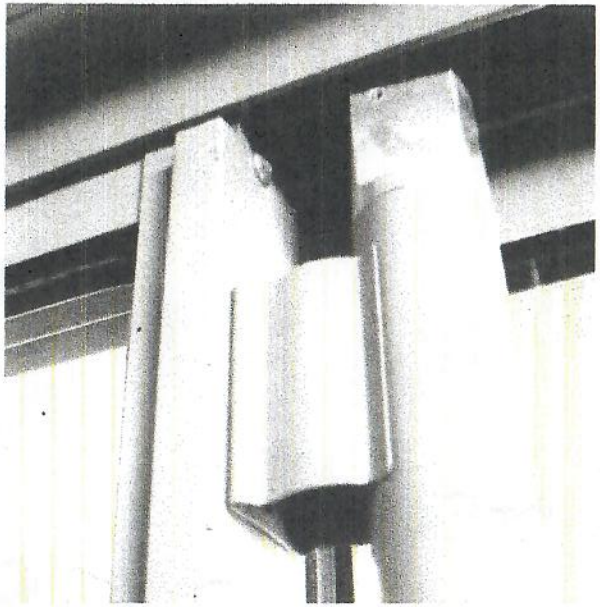
Step 3: Move Closer to Back of Door and Determine Correct Mounting Height.

Slip the cable over the top of the door casement and move the closer to the back of the door.



The cable must be in the middle of the gap between the upper track and door. The head must not touch the track and the cable must not touch the door.

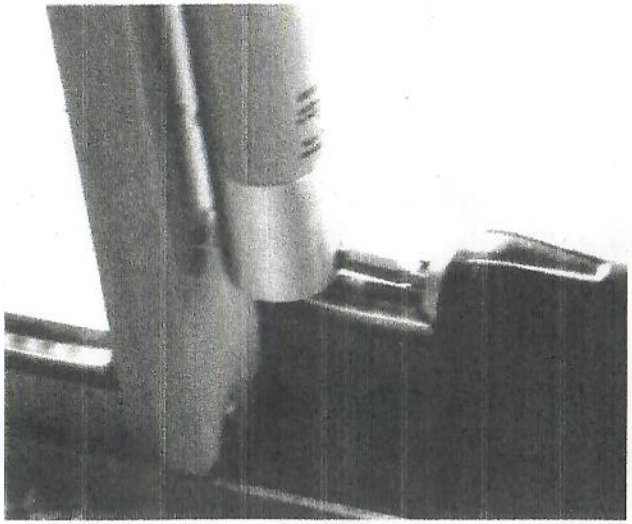
A good method of locating the closer vertically is to push the closer up until the head hits the track, put a pencil mark on the closer at the bottom of the upper clip then lower the closer until the cable is in the center of the gap at the top of the door. Measure this distance and use it to anchor the closer in the next step.

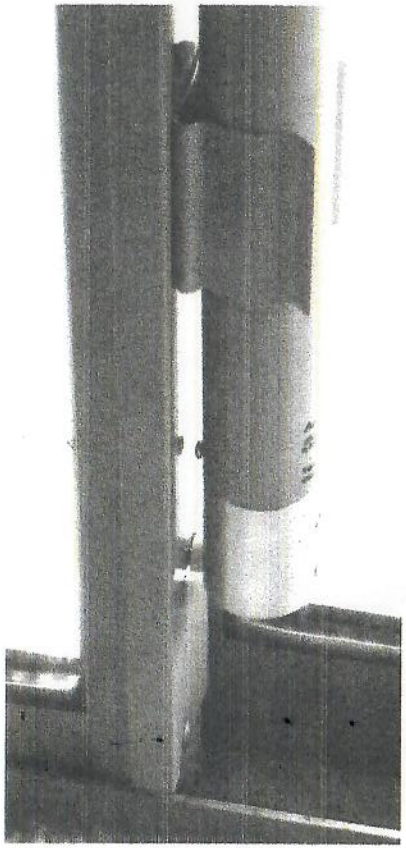


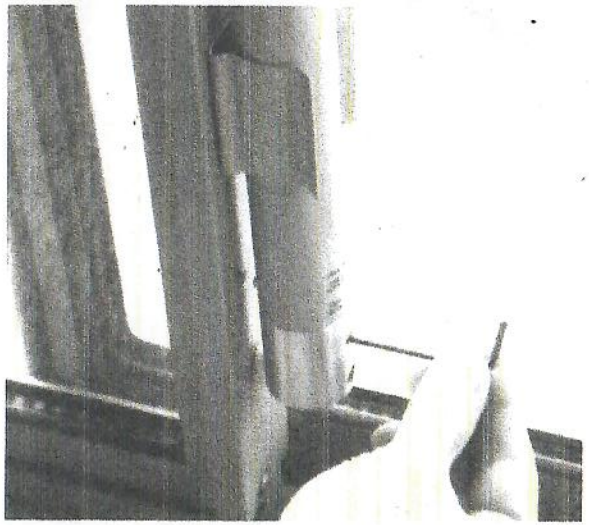
Step 4: Anchor Closer to Door, Check Clearances, and Adjust Speed.

Snap closer into clips, slide it up and down through clips so cable at top of closer is in middle of clearance between the door and track. Now anchor it in place using a plastic spacer and a #8 flat-head screw provided. The screw needs only be snug.

A plastic spacer shown more clearly at right is required to prevent bending of closer.







Adjust speed. The door should start quickly and slow just before closing with enough speed to tuck the door into the seals as it closes. The closer should make a hissing sound.

You may have to spread track further at this time.

Installation is complete.