

TS93 GSR/EMF 1I, 1A, 2

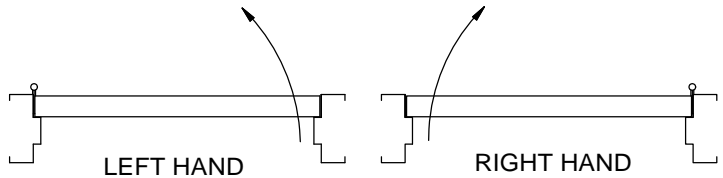
PULL SIDE DOOR CLOSER/COORDINATOR/HOLD OPEN



1 (REFERENCE UNIT CARTON LABEL FOR UNIT TYPE)

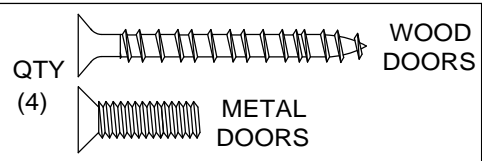
Determine active door and unit type supplied (1I, 1A or 2).
 Prepare door and frame for fasteners according to template 08280042.
 Also prepare for wire access and 1/4" conduit hangers.

CAUTION: SEX NUTS ARE REQUIRED FOR ATTACHMENT OF COMPONENTS TO UNREINFORCED DOORS AND TO WOOD OR PLASTIC FACED COMPOSITE TYPE FIRE DOORS, UNLESS AN ALTERNATIVE METHOD IS IDENTIFIED IN THE INDIVIDUAL DOOR MANUFACTURER'S LISTINGS.

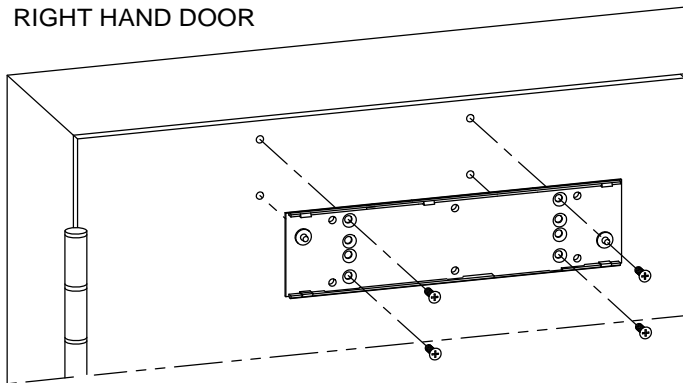


2

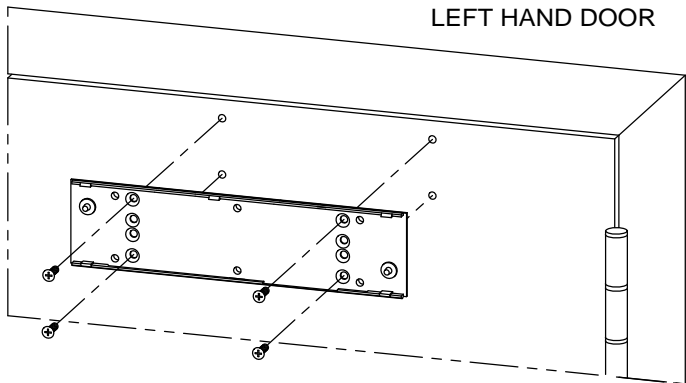
Attach mounting plate to door (arrows pointing up) using a total of 4 screws.



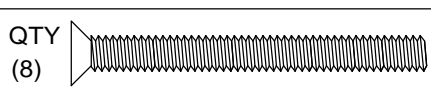
RIGHT HAND DOOR



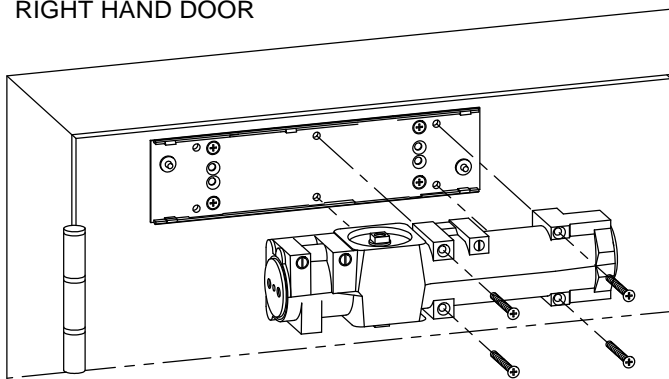
LEFT HAND DOOR



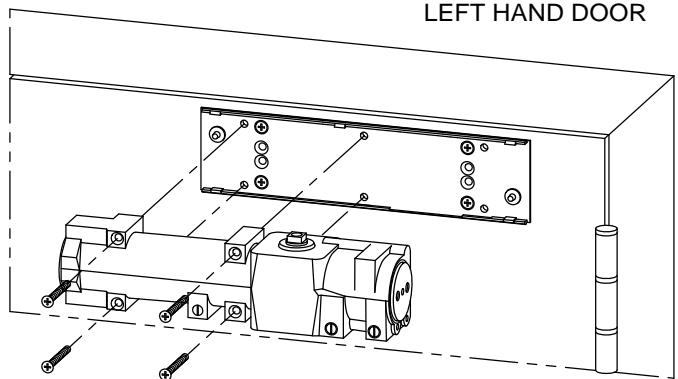
3 Attach closer to mounting plate.



RIGHT HAND DOOR



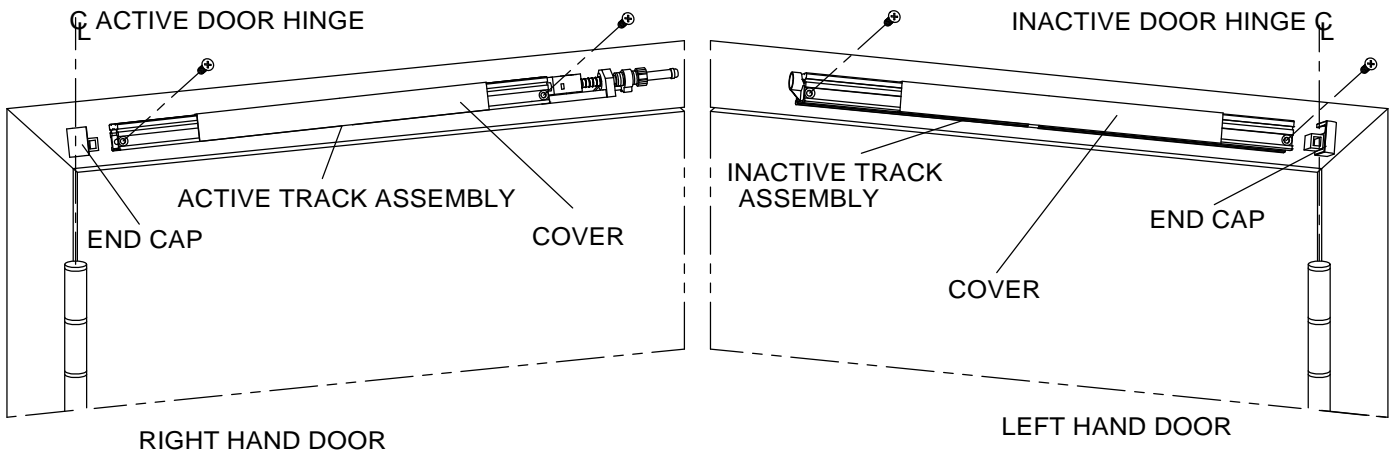
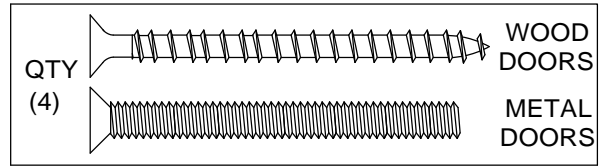
LEFT HAND DOOR



INSPK NO. 08280030 Rev.03/08

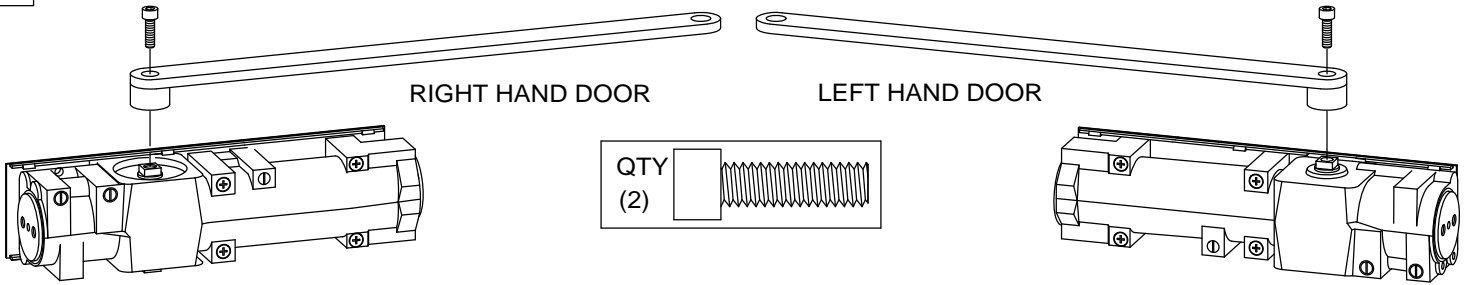
4 Install active door track. Remove wire harness (EMF 11,2) and install inactive door track.

Attach slide track. Slide cover on track. Install screw towards middle of door first. Slide cover to give access for screw on hinge side. Insert end cap, attach end cap and track with screw. Slide cover to meet end cap.



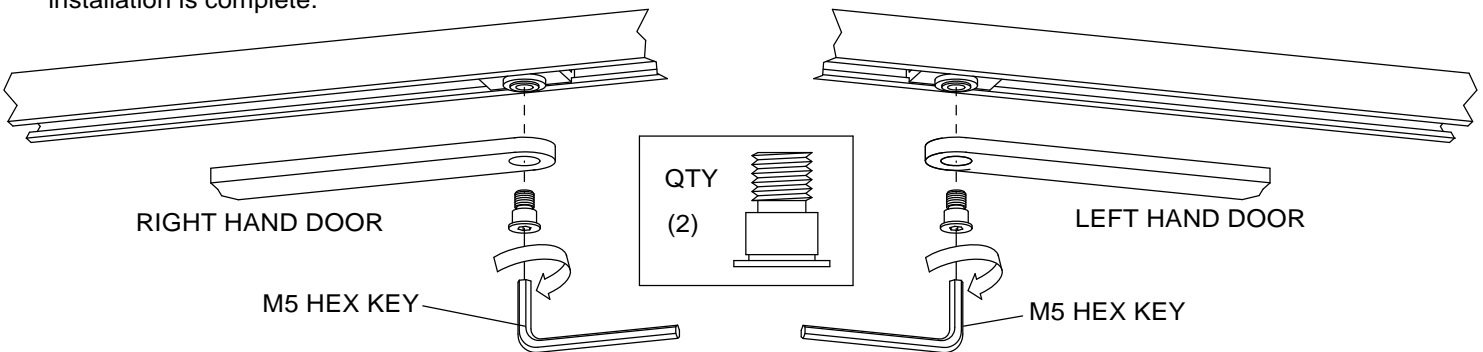
NOTE: Right Hand Active door shown. For Left Hand Active installations install active track assembly on left hand door and inactive track assembly on right hand door.

5 Attach arm to pinion of closer, parallel to door.



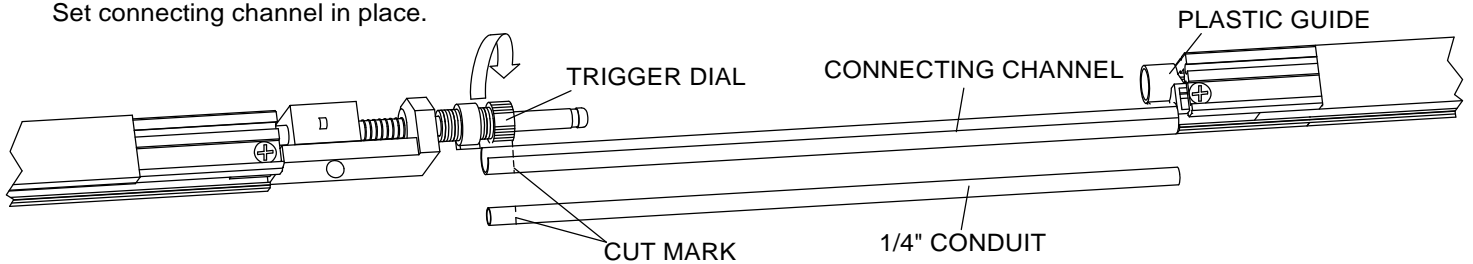
6 Attach arm to slide shoe. Rotate arm until parallel to door and align with slide shoe in track. Insert screw and tighten securely.

Note: Depress trigger dial to allow the active slide shoe to move freely. Locking pin may fall out, and can be discarded after installation is complete.



7 Close both door leaves.

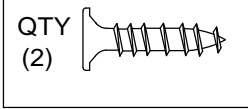
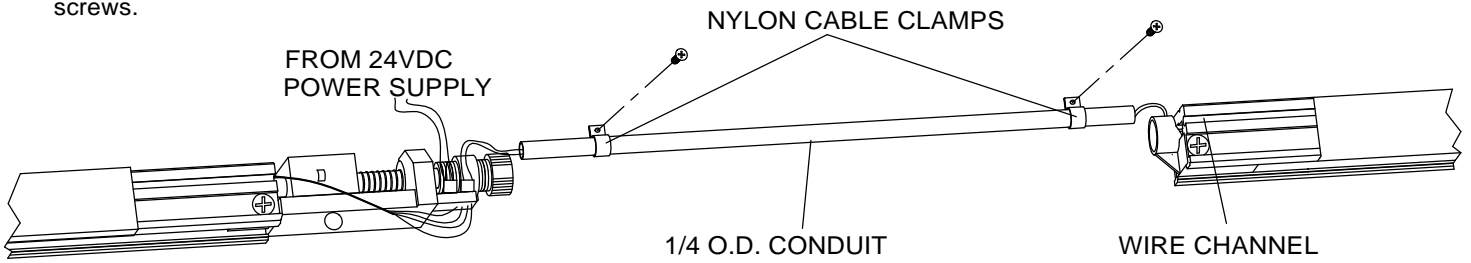
Mark the required connecting channel and conduit lengths. In doing so ensure that the plastic guide element is pushed up against the slide shoe and that the trigger dial has been fully wound in clockwise. Saw off connecting channel and conduit at the cut mark. Remove burrs from end of 1/4" conduit after cutting. Set connecting channel in place.



NOTE: CONNECTING CHANNEL AND CONDUIT ARE CUT TO SAME LENGTH.

8 For 1I & 2 versions:

Install conduit. Insert wires through conduit. Using nylon cable clamps supplied, secure conduit to frame, with 8-32 x 5/8" screws.

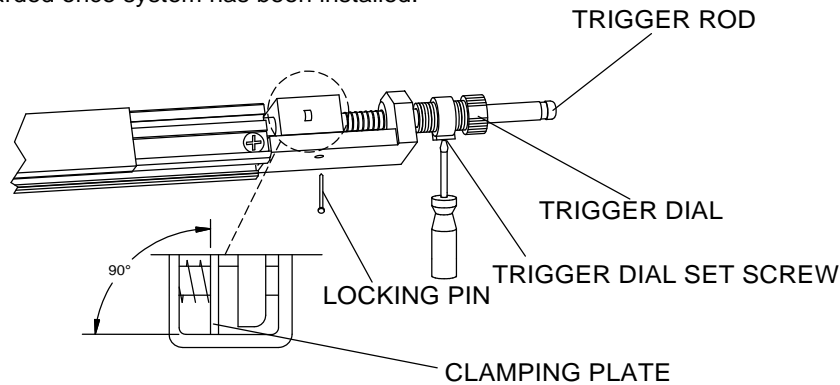


NOTE:
Must run Inactive Solenoid Wire through wire channel on wall side of track.

9 Open active leaf to retract clamping rod. Insert the connecting channel into the trigger dial of the active leaf slide track, and then insert into the inactive leaf plastic guide.

Unwind the trigger dial (turn counter clockwise) by hand until active door starts to close. During this process, ensure that the clamping plate is perpendicular (90°) to the clamping rod. Tighten set screw to secure trigger dial.

Note: Pin can be discarded once system has been installed.



The clamping rod will only operate smoothly if the clamping plate has been properly adjusted. Only then will the active leaf swing freely with the inactive leaf closed.

10 Attach plug-in side of wire harness to 4 pin terminal block on active track assembly. For 1A, 2: Attach wires to hold open screw terminal on active track.

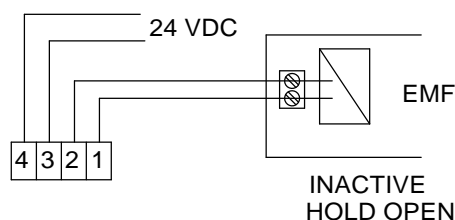
Connect to incoming 24 VDC power supply. Make sure power is off while making connection. Connect plug-in side of incoming power wire harness to final 2 terminals of 4 pin terminal block on active track assembly.

Power unit.

Connect wires as follows:

3 — 24 VDC-from UL listed power supply.
4 —

1 — EMF inactive door
2 —



ELECTRICAL SPECIFICATION:

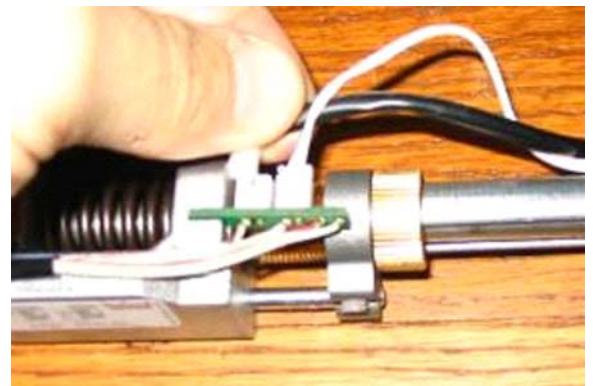
Voltage input: 24 VDC +10% -15%

Maximum input current:

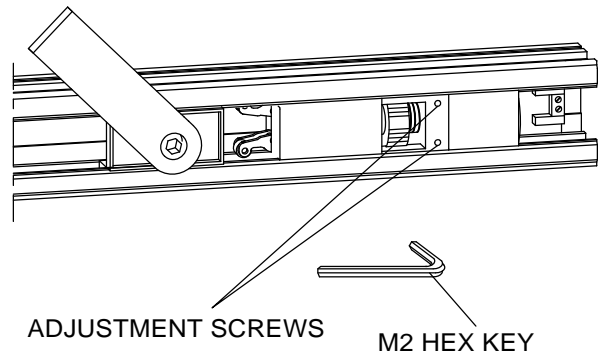
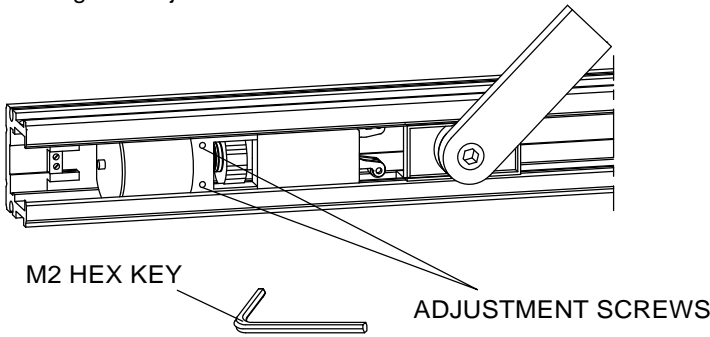
GSR/EMF 1I 24VDC - .067ma

GSR/EMF 1A 24VDC - .067ma

GSR/EMF 2 24VDC - .134ma



- 11 Setting the hold open point.
Open door leaf(s) until engaged in hold open. If another degree of hold open is desired, loosen adjustment screws. Slide the electric hold open mechanism in the appropriate direction for an increase or decrease of hold open degree and retighten adjustment screws.



GSR/EMF 1I (ACTIVE DOOR & INACTIVE DOOR HOLDS OPEN TOGETHER)

The GSR/EMF 1I incorporates an Electric hold open mechanism in the inactive leaf. The coordinator mechanism tied to the inactive leaf in turn holds the active leaf at whatever degree of opening it is placed. Both doors will close in sequence (inactive first) from any point upon signal from the fire alarm system or when electrical current is interrupted.

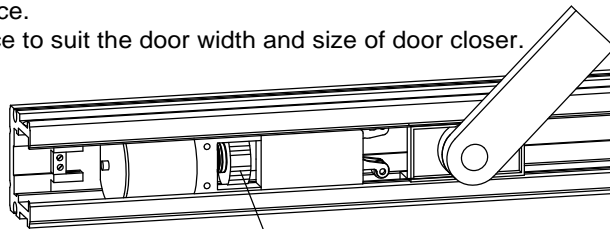
GSR/EMF 1A (ACTIVE DOOR HOLD OPEN)

The GSR/EMF 1A incorporates an Electric hold open mechanism in the active leaf. This eliminates the need to hold the inactive leaf in the open position to initiate hold open of the active leaf. This version permits the active leaf to be held open at a preselected point when the inactive leaf is in the closed position. The door will close from any point upon signal from the fire alarm system or when electrical current is interrupted.

GSR/EMF 2 (ACTIVE DOOR HOLD OPEN ONLY OR INACTIVE & ACTIVE HOLD OPEN TOGETHER)

The GSR/EMF 2 incorporates an Electric hold open mechanism in both door leaves. This enables both leaves to be held open when the inactive door is placed in the preselected hold open position and also enables the active door to be held open independently when the inactive door is in the closed position. Both doors will close in sequence (inactive first) from any point upon signal from the fire alarm system or when electrical current is interrupted.

- 12 Setting the release force.
Adjust the release force to suit the door width and size of door closer.



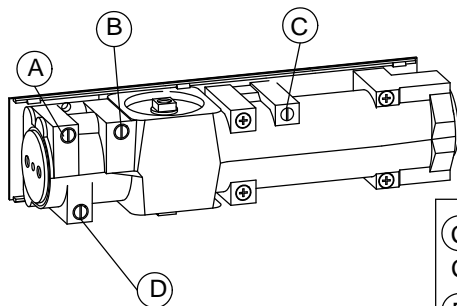
HOLD OPEN STRENGTH ADJUSTMENT

C DECREASE
INCREASE

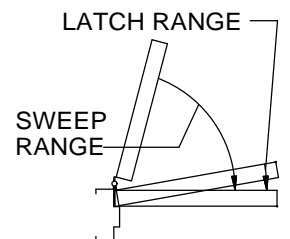
NOTE: If the release force is set too high, damage might occur to door, hinges, or GSR system.

- 13 Adjust sweep, latch, backcheck and delayed action valves.

CAUTION: DO NOT REMOVE VALVES.

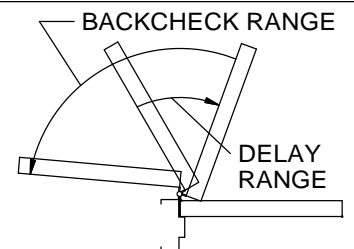


- C** DECREASE
INCREASE
(A) - SWEEP speed from 70° opening to 0°.
(B) - LATCH speed from approx. 7° to 0°-(INCREASE ONLY)



- BACKCHECK (INTENSITY)
OR
DELAYED ACTION (TIME) **C** INCREASE
DECREASE

- (C) - BACKCHECK cushion effect.
CAUTION: DO NOT CLOSE VALVE COMPLETELY.
(D) - DELAY speed from approx. 135° to 70°.

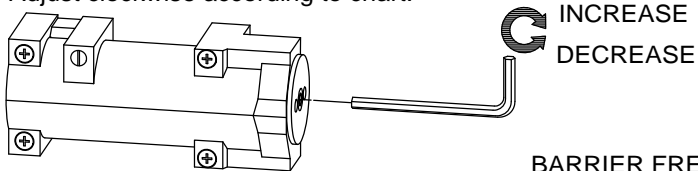


14 Adjust spring power.

IMPORTANT:

Adjust clockwise according to chart.

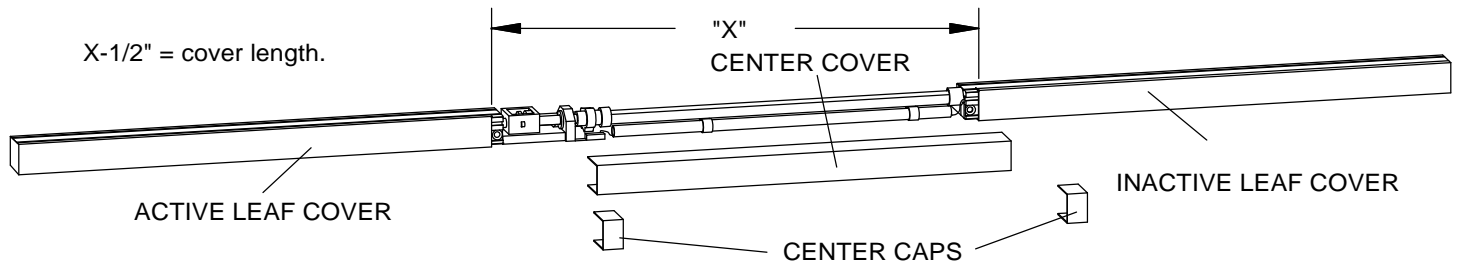
CAUTION: DO NOT OVERTIGHTEN



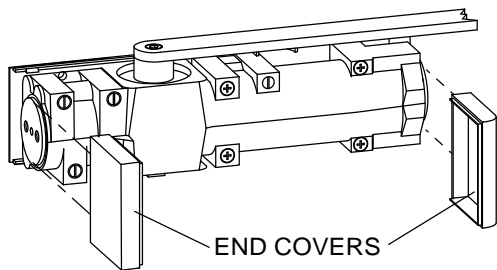
	ULC ONLY DOOR WT.	DOOR WIDTH		NUMBER OF FULL TURNS	CLOSER SIZE
		INT.	EXT.		
TS93-1	100 LBS.	2'6"	---	5	2
	125 LBS.	3'	2'6"	9	3
	150 LBS.	3'6"	3'	14	4
	200 LBS.	4'	3'6"	18	5
TS93-5	200 LBS.	4'	3'6"	-4	5
	250 LBS.	4'6"	4'	0	6

BARRIER FREE OPENINGS SHOULD BE ADJUSTED TO USE THE MINIMUM CLOSING FORCE REQUIRED TO CLOSE AND LATCH THE DOOR.

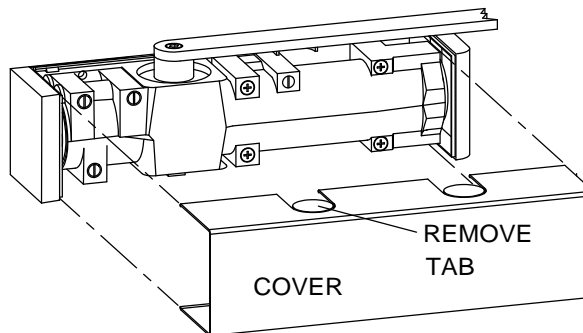
15 Install track covers (narrow side of each toward center) and center cover. Slide end covers into grooves. Measure distance between inactive leaf cover and active leaf cover then subtract 1/2 inch. Cut center cover to length. Clip on center cover then both plastic covers.



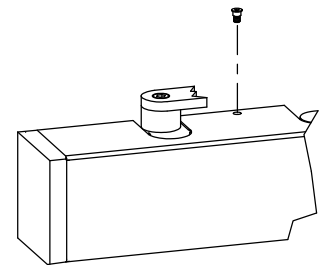
16 Install closer covers and end covers.



Slide end covers over closer body end caps.



Remove tab that aligns with arm hub. Slide cover onto plate.



Secure with locking screw.

17 Install carrybar.

A carrybar should be installed to insure that the active door is opened enough for the inactive door to close. DORMA carrybars MK-397 (up to 3'-6" wide door) and MK-398 (3'-6" and wider door) are recommended. Installation instructions are included with carry-bar.

FINAL INSTALLATION AND TEST

1. After installation is completed, check all connections.
2. Open doors to desired positions.
3. Activate system in alarm so the electromagnet(s) releases and the doors close.

OPERATION

NORMAL - The unit's electromagnet(s) will be energized by the alarm system, applying 24VDC power supply.

FIRE ALARM - When the alarm sounds, current will automatically be cut causing the electromagnet(s) to release, allowing the door(s) to close.

IMPORTANT: THE UNIT MUST BE TESTED AFTER INSTALLATION, BY THE END USER, TO BE CERTAIN THAT THE DOOR CLOSER UNIT FUNCTIONS PROPERLY WHEN THE ALARM SYSTEM IS ACTIVATED. THE ENTIRE SYSTEM MUST ALSO BE TESTED PERIODICALLY AFTER THE INITIAL INSTALLATION TEST, IN CONJUNCTION WITH THE TESTING OF THE FIRE ALARM SYSTEM. THE END USER IS ALSO RESPONSIBLE FOR MAINTAINING THE DOOR CLOSING SYSTEM.