

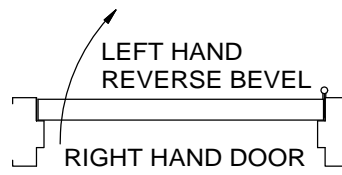
8900 SPA SP-9 PARALLEL ARM MOUNT 180 DEGREE (SWING CLEAR HINGE)



1 (REFERENCE UNIT CARTON FOR ACCESSORIES AND OPTIONS SUPPLIED)

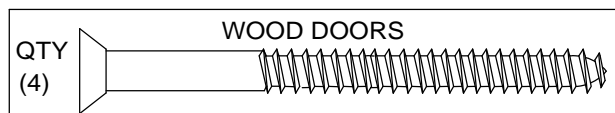
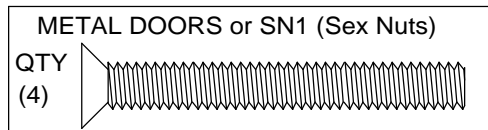
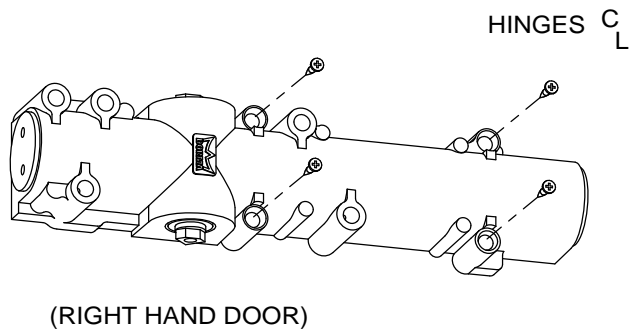
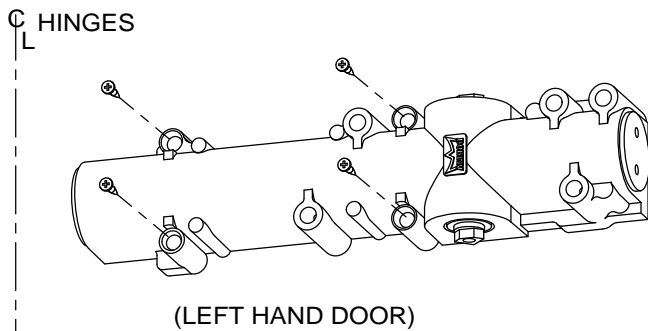
Determine hand of door.

Prepare door and frame utilizing template 08279392.



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 closer to door with spring adjustment facing hinges.



3

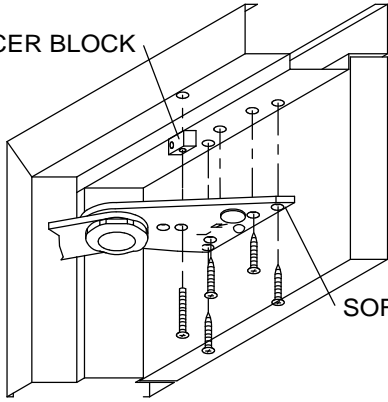
Install soffit plate to frame.

NOTE: SPA ARMS ARE FURNISHED WITH A SPACER BLOCK STANDARD. OPTIONAL ACCESSORIES (BSHD) AND (NFHD) MUST BE SPECIFIED WHEN ORDERED.

STANDARD

NOTE: SPACER BLOCK IS TWO DIMENSIONAL FOR 1/2" AND 5/8" STOP HEIGHTS. ROTATE BLOCK ACCORDINGLY.

SPACER BLOCK



SOFFIT PLATE

QTY (4)



QTY (1)



METAL FRAMES

QTY (4)



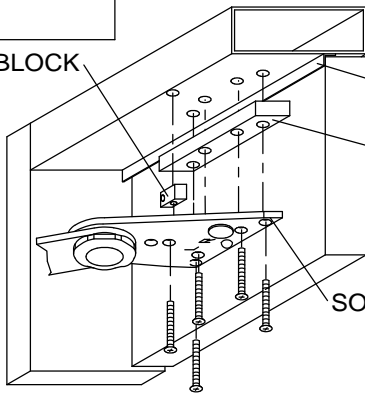
QTY (1)



WOOD FRAMES

OPTIONAL BSHD

SPACER BLOCK



BLADE STOP

BSHD
BLADE STOP
SPACER BLOCK

SOFFIT PLATE

NOTE: IF FRAME WIDTH IS 4-1/2" OR LESS, BRACKET (NFHD) SHOULD BE USED.

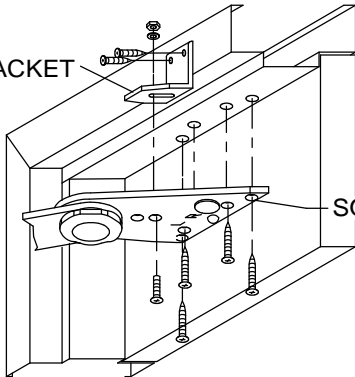
NOTE: INSTALL SPACER BLOCK USING 1/2" HEIGHT

QTY (5)



OPTIONAL NFHD

NFHD BRACKET



SOFFIT PLATE

QTY (4)



QTY (1)



METAL FRAMES

QTY (4)



QTY (1)



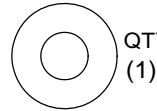
WOOD FRAMES

(BRACKET TO PLATE)

QTY (1)



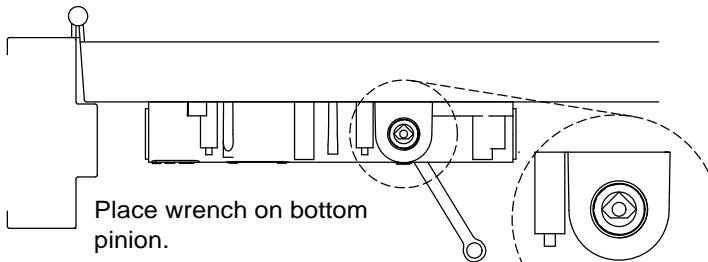
QTY (1)



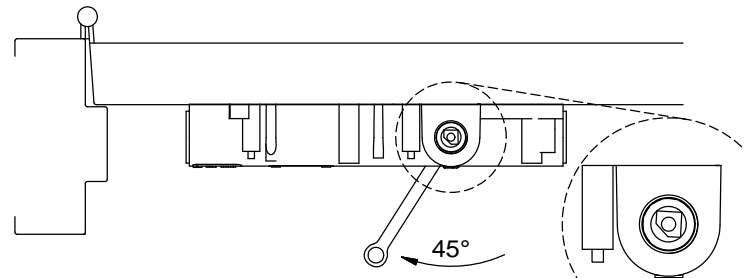
QTY (1)

4

Install main arm



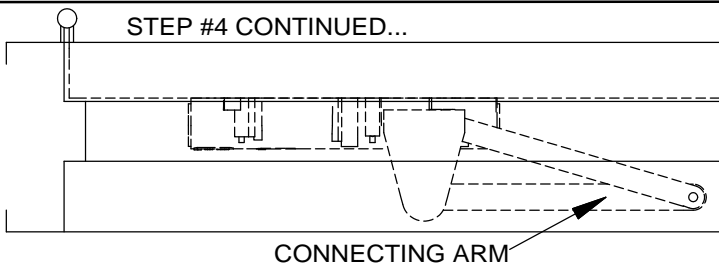
Place wrench on bottom pinion.



45°

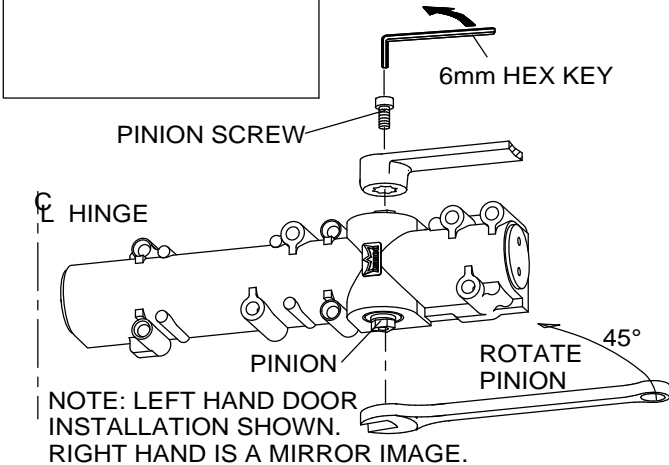
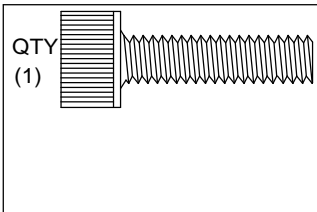
Rotate pinion 45° TOWARD HINGE edge of door.

STEP #4 CONTINUED...



CONNECTING ARM

With connecting arm parallel to door, place main arm onto top pinion. Fasten securely with pinion screw and washer.



NOTE: LEFT HAND DOOR INSTALLATION SHOWN. RIGHT HAND IS A MIRROR IMAGE.

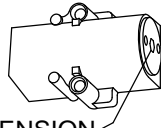
5

Adjust spring tension, if required, using a 1/4" wrench.
NOTE: 8916 supplied with size 4 spring setting.
8956 supplied with size 6 setting.



CRITICAL

SPRING TENSION ADJUSTER



8916 ONLY
BARRIER-FREE OPENINGS - Take an opening force reading from the pull on the door. If required, adjust the spring tension to meet the barrier-free requirement. Maximum number of turns counter clockwise=8. Maximum number of turns clockwise =14. Depending on opening conditions, a door adjusted to meet barrier-free forces may not have sufficient power to reliably close and latch the door.

NON-BARRIER-FREE OPENINGS - Adjust according to chart.

CLOSER TYPE	DOOR WIDTH		FULL TURNS OF SPRING ADJUSTER	SPRING SIZE
	EXTERIOR	INTERIOR		
8916	-	2'-6"	-12	3
	2'-6"	3'-0"	0	4
	3'-0"	3'-6"	+4	5
	3'-6"	4'-0"	+12	6
8956	3'-0"	3'-6"	-6	5
	3'-6"	4'-0"	0	6
	4'-0"	-	+6	6+

ULC LABELED UNITS ONLY

ADJUST SPRING TENSION ACCORDING TO THE FOLLOWING CHART.

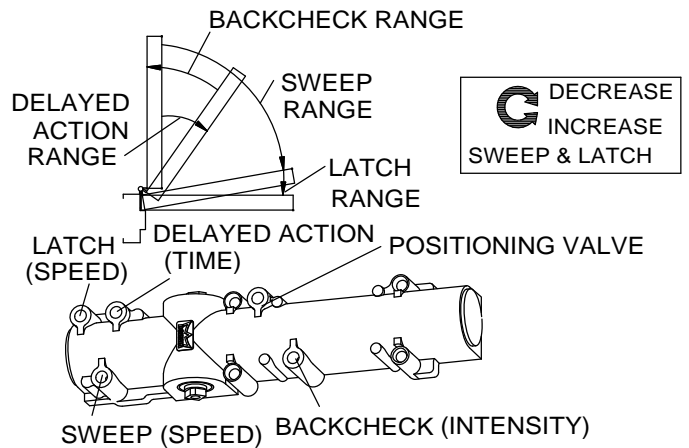
CLOSER TYPE	MAX. DOOR WEIGHT	SPRING SIZE	FULL TURNS OF SPRING ADJUSTING NUT
8916	100	3	-12
	125	4	0
	150	5	+4
	200	6	+12
8956	150	5	-6
	200	6	0
	250	6+	+6

6

Adjust sweep, latch and backcheck valves.

Closing time from 90° to 15° (sweep range) is generally adjusted to take a minimum of 3 seconds. Closing time from 15° to fully closed (latch range) should take a minimum of 1.5 seconds. Backcheck intensity should be adjusted to insure that the door is under control during the opening cycle protecting the door and objects behind the door. Thinking backcheck feature provides full intensity for doors opened quickly and less intensity for doors opened slower. Closing the backcheck positioning valve (clockwise turns) advances the backcheck range approximately 15°. Optional delayed action offers additional closing speed control when extra time is required to pass through the door. All valve adjustments are made with a 3/32" hex key.

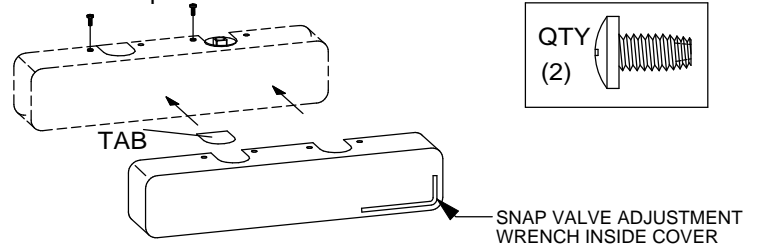
CAUTION: DO NOT REMOVE VALVES.



C INCREASE BACKCHECK OR DELAYED ACTION
DECREASE
NOTE: DELAYED ACTION IS AN OPTIONAL FEATURE.

7

Place tab in cover slot opposite main arm. Place cover over closer and fasten securely with screws provided.



NOTE: LEFT HAND INSTALLATION SHOWN. RIGHT HAND IS A MIRROR IMAGE.

8

(HOLD OPEN UNITS ONLY)
Engage SPAT/SPAK with turn. Open door until mechanism locks onto ball on plate.

