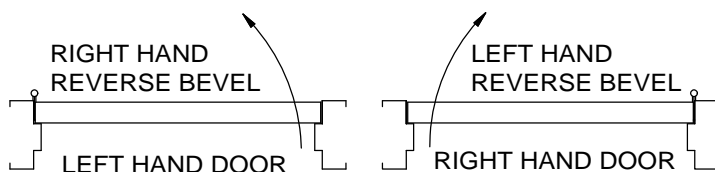


8900 SPA, SPAT, SPAK HEAVY DUTY SUPER PARALLEL ARM MOUNT AND ACCESSORY PLATE DP89

1 (REFERENCE UNIT CARTON FOR ACCESSORIES AND OPTIONS SUPPLIED)

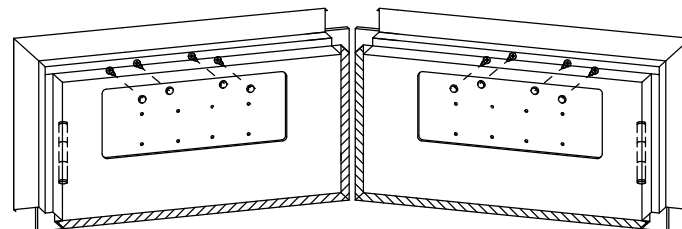
Determine hand of door.
according to template.

Prepare door and frame



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.

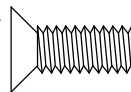
2 DP89 Plate applications only. Attach plate to door as shown.



(LH DOOR)

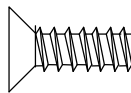
(RH DOOR)

QTY
(4)



METAL DOORS or
SN1 (Sex Nuts)

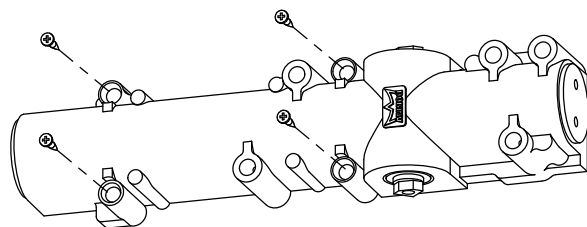
QTY
(4)



WOOD DOORS

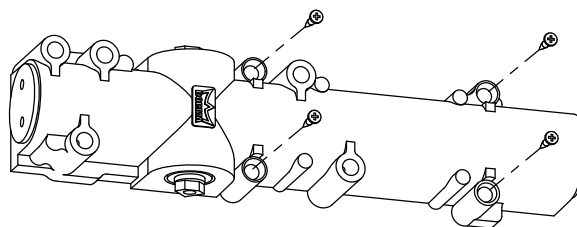
3 Attach closer to door or plate with spring adjustment facing hinges.

HINGES



(LEFT HAND DOOR)

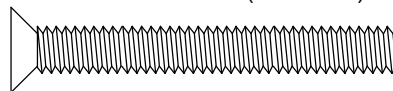
HINGES



(RIGHT HAND DOOR)

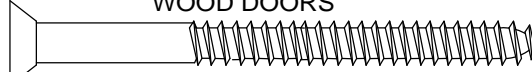
METAL DOORS or SN1 (Sex Nuts)

QTY
(4)



QTY
(4)

WOOD DOORS



PLATE

QTY
(4)



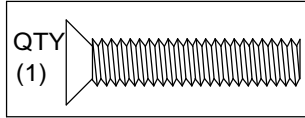
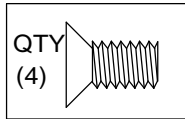
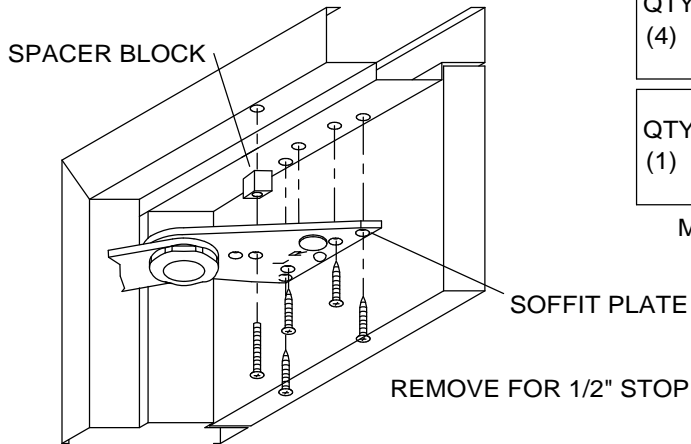
INSPK NO. 08279360 Rev.09/09

4

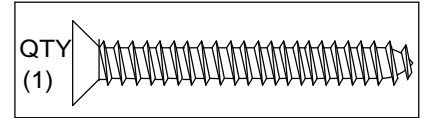
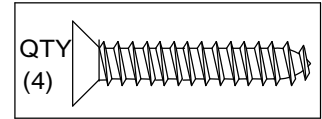
Install soffit plate to frame.

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

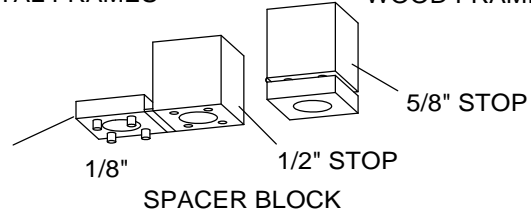
STANDARD



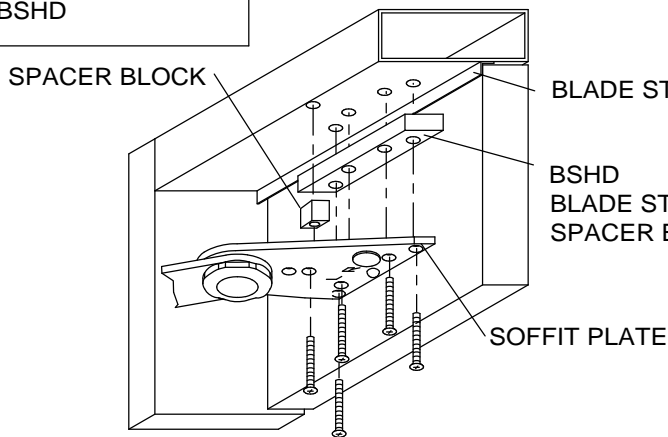
METAL FRAMES



WOOD FRAMES

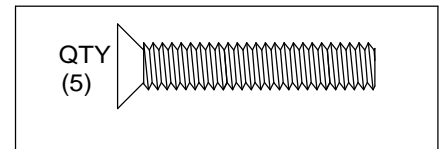


OPTIONAL BSHD

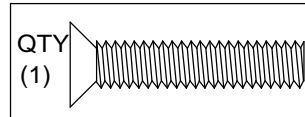
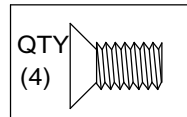
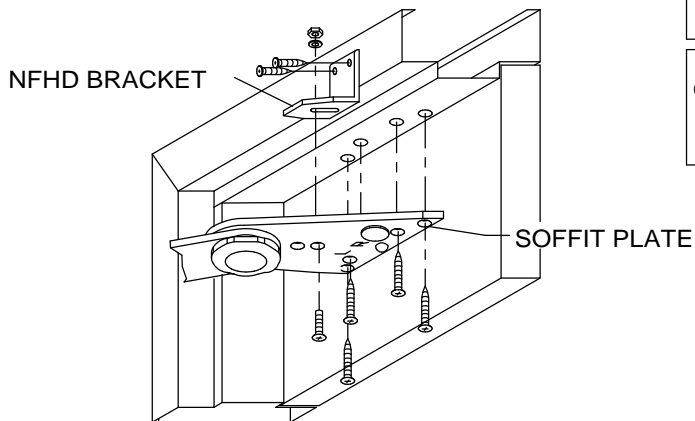


NOTE: IF FRAME WIDTH IS 4-1/2" OR LESS, BRACKET (NFHD) SHOULD BE USED.

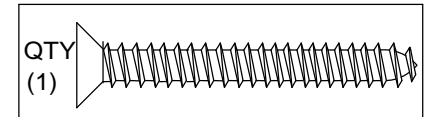
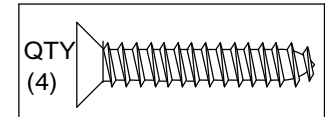
NOTE: INSTALL SPACER BLOCK USING 1/2" HEIGHT



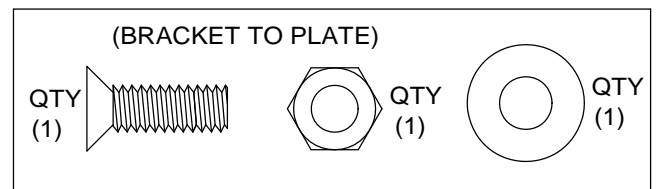
OPTIONAL NFHD



METAL FRAMES

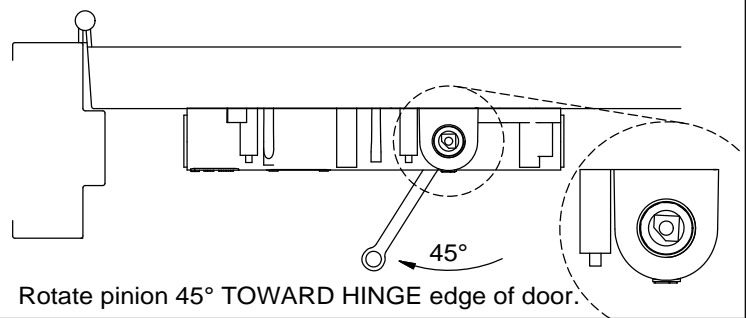
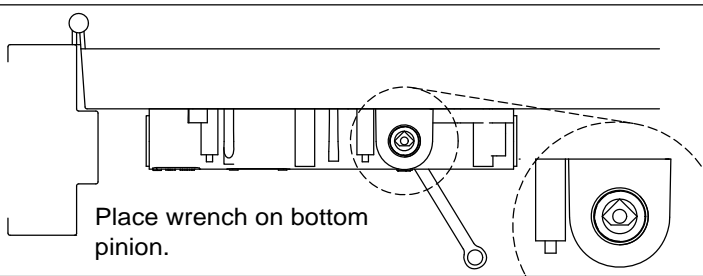


WOOD FRAMES

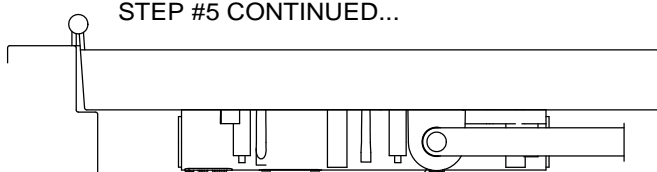


5

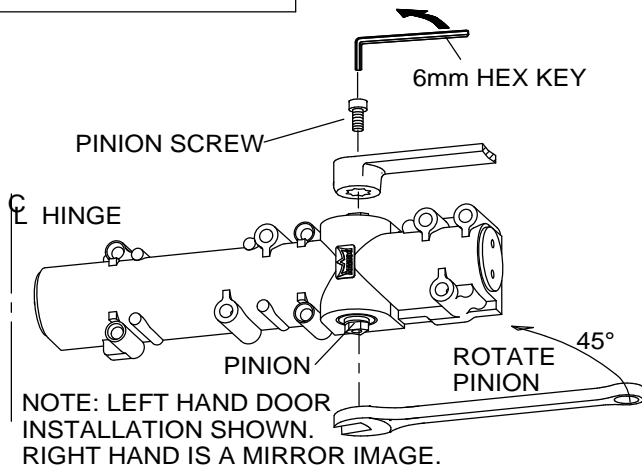
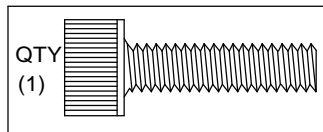
Install main arm



STEP #5 CONTINUED...



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



- 6 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

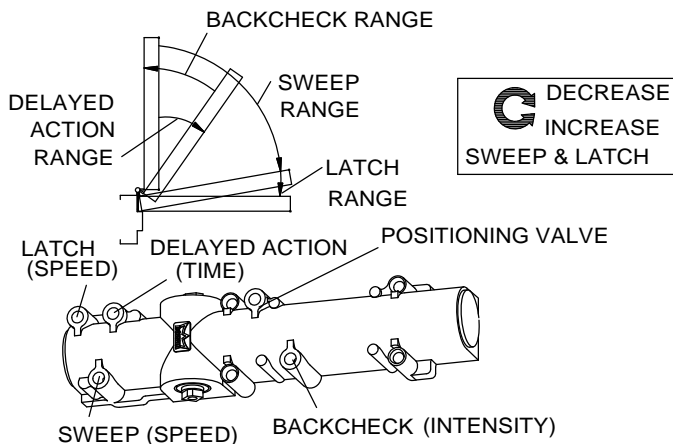
ADJUST SPRING TENSION ACCORDING TO THE FOLLOWING CHART.

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

- 7 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. Closing the backcheck positioning valve fully clockwise advances the backcheck range approximately 15°. Backcheck position valve is shipped in the "on" position (to turn off, rotate valve counterclockwise only 1/2 turn).

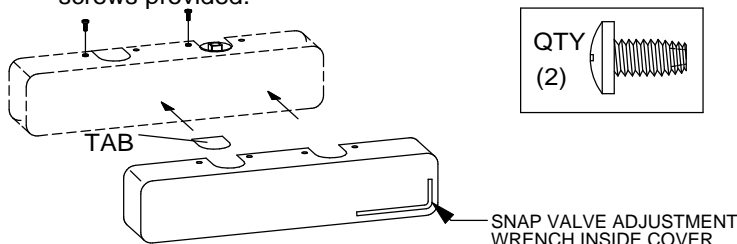
Optional delayed action offers additional closing speed control when extra time is required to pass through the door. All valve adjustments are made with a 3/32" hex key.

CAUTION: DO NOT REMOVE VALVES.



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

- 8 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.

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

