



TRADEMARK
HARDWARE

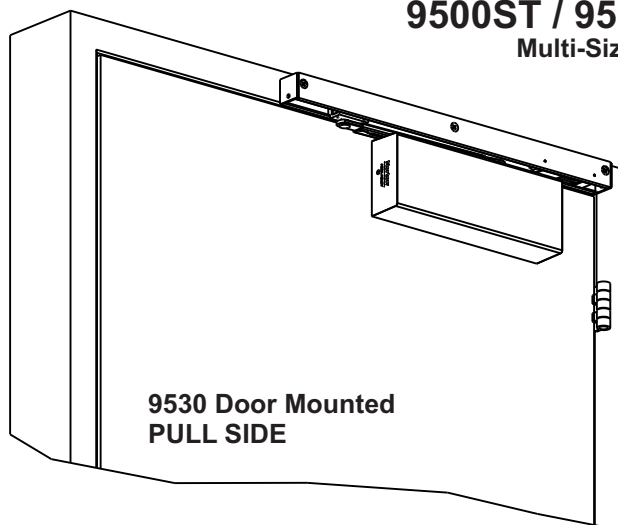


ASSA ABLOY

9510 Series
Installation Instructions
Slide Track Application
(100° Maximum Door Swing)
H.O. Bumper Stop

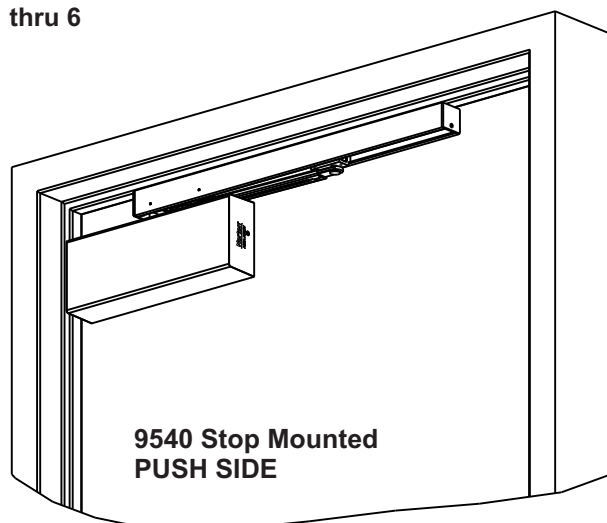
Hinge (Pull) Side
Door Application

9500ST / 9500STH Series
Multi-Sized 1 thru 6



Hinge (Push) Side
Door Application

PS9500ST / PS9500STH Series
Half-Size 1 thru 6



IMPORTANT:

- An improperly installed or incorrectly adjusted door closer may cause **property damage** or **personal injury**; and will void product warranty.
- To avoid personal injury, **DO NOT DISASSEMBLE THIS DOOR CLOSER BODY**.
- Door closers must be securely fastened to a properly reinforced door and frame with fasteners provided.
- Door closers with the HOLD OPEN TRACK option are not permitted to be installed in fire door assemblies.

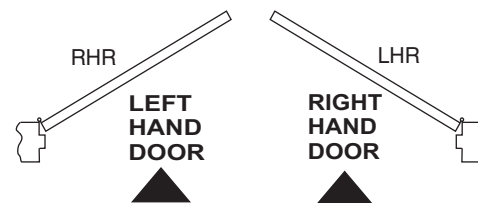
BEFORE INSTALLING:



- The Americans with Disabilities Act (ADA) requires that doors having door closers have an opening force not to exceed 5 lbf.
- The door closer's power size adjustment feature may require adjustment to its lowest setting to comply with ADA opening force guidelines.
- ADA compliant closers are: 9530 & 9540.

Size of Door & Door Closer					
Type of Installation	Interior	Exterior In-swinging	Exterior Out-swinging	Recommended Closer Size	**Max. Opening Force lbs/f
PULL SIDE Mounting	2'6"	_____	_____	1	8
	3'0"	2'6"	_____	2	14
	3'6"	3'0"	_____	3	16
	4'0"	3'6"	_____	4	22
	_____	*4'0"	_____	5	24
				6	26
PUSH SIDE Mounting	2'6"	_____	2'6"	1	8
	3'0"	_____	3'0"	2	14
	3'6"	_____	*3'6"	3	16
	4'0"	_____	*4'0"	4	22
	_____	_____		5	24
				6	26

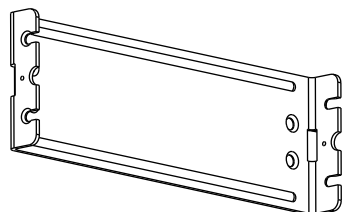
TO DETERMINE HAND OF YOUR DOOR:



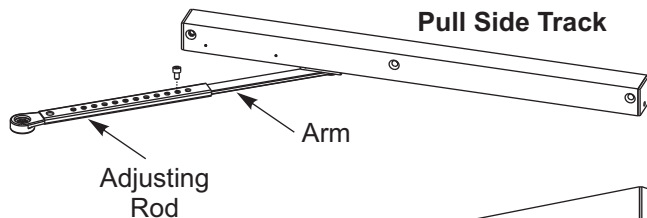
****NOTE:** These forces are for standard templating with bearing type hinges and do not account for pressure differentials and draft.

Components:

Figure 1



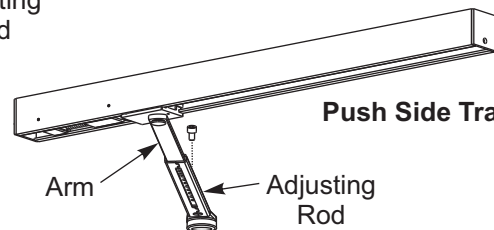
Closers Mounting Bracket



Pull Side Track

Adjusting Rod

Arm

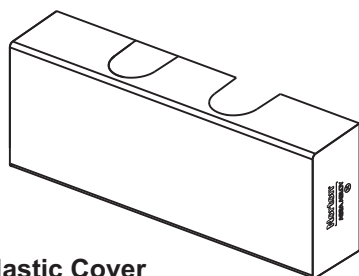
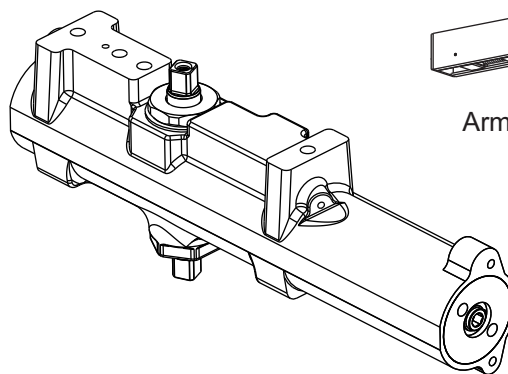


Push Side Track

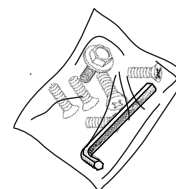
Adjusting Rod

Arm

Closer



Plastic Cover (Standard)



Screw Pack

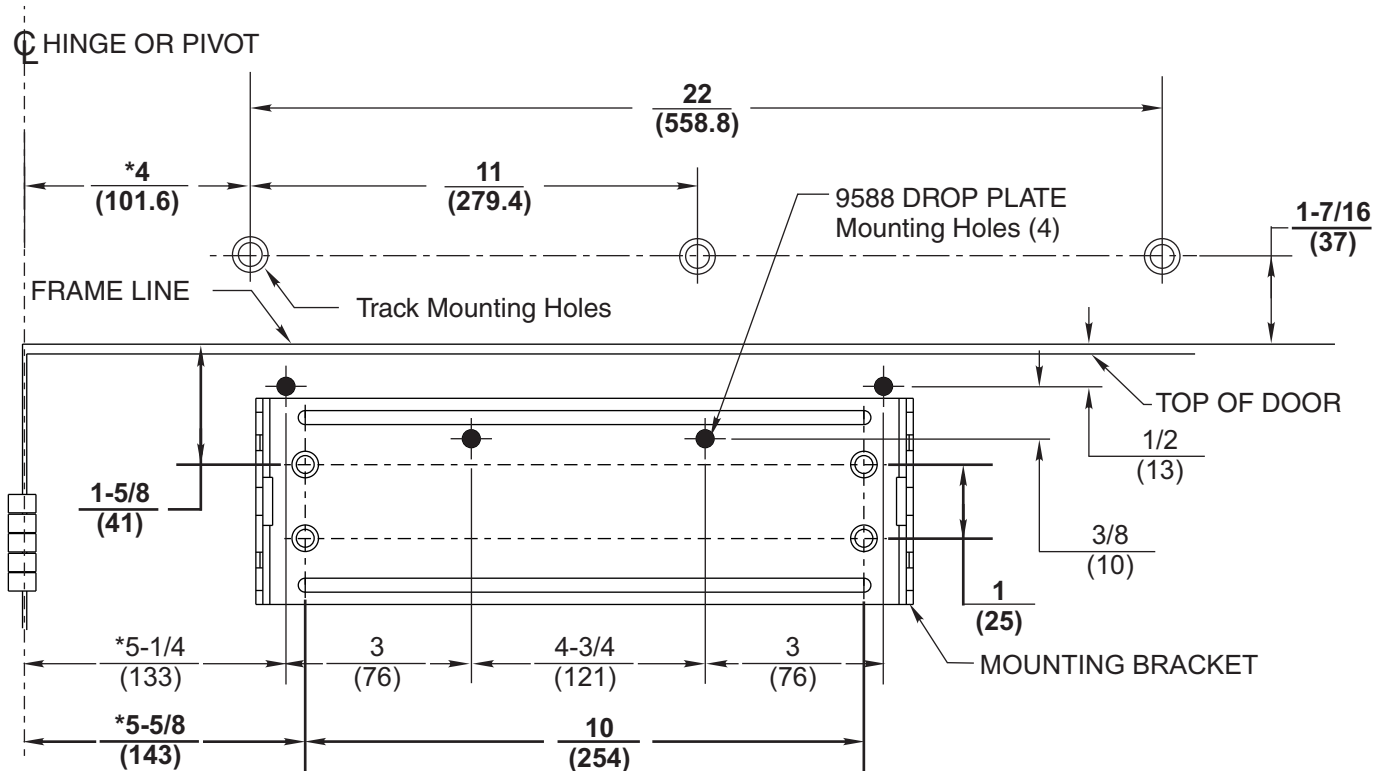
Preparation for Fasteners			Figure 2
	Fasteners	Door or Frame	Drill-Sizes
Standard	#12-14 Self-Drilling Screw	Aluminum or Metal	No drill required
		Wood (see Note)	3/16" (4.30 mm)
	1/4" - 20 machine screw	Metal	Drill: #7 (0.201" dia.) Tap: 1/4" - 20
Optional	Sleeve nuts and bolts 1-9/32" (33) = 1-3/8" (35) Door Thk. 1-21/32 (42) = 1-3/4" (44) & Over Dr. Thk.	Hollow Metal	9/32" (7 mm) through; 3/8" (9.5 mm) door face opposite to closer
		Aluminum or Wood	3/8" (9.5 mm) through
	Through-bolts and grommet-nuts	All	9/32" (7 mm); 3/8" (9.5 mm) dia. x 3/8" (9.5 mm) deep on door opposite to closer

Note: Wood doors/frames: drill 1/8" (3.2) pilot hole when using Self-Drilling Screws.

Always consult door/frame manufacturer for fastener compatibility with the material of their door/frame.

-
- It is recommended that the door, on which the door closer will be installed, be hung on ball bearing hinges. Door must swing freely.
 - A separate door stop, supplied by others, is recommended to prevent damage to the door closer, closer arm; or to the door, frame or adjacent walls.
 - Door and Frame must be properly reinforced, or use of special fasteners employed, to prevent the mounting screws from pulling out.
 - All dimensions are given in inches with corresponding metric dimensions (millimeters) in parentheses.
-

9530 Pull Side Track Template



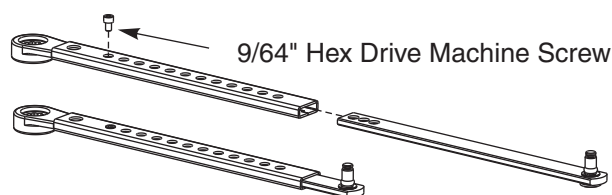
- Door will travel additional 5° to dead stop.
- Door hold open position adjustable from 85° to 120° of door opening.

NOTES:

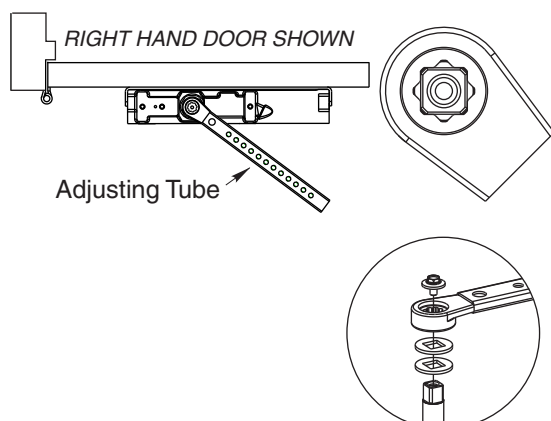
- Check hand of door, see page 2.
- Right Hand Application Shown. Left Hand Opposite.
- Dimensions given in inches (mm). Do Not Scale Drawing.
- Closer must be installed mounted level to ensure proper closer performance.
- Minimum clearance required over door: 2" (51).
- Minimum top rail: Without drop plate 3" (76), With drop plate 1-1/4" (32).

9530 Pull Side Track Installation Sequence

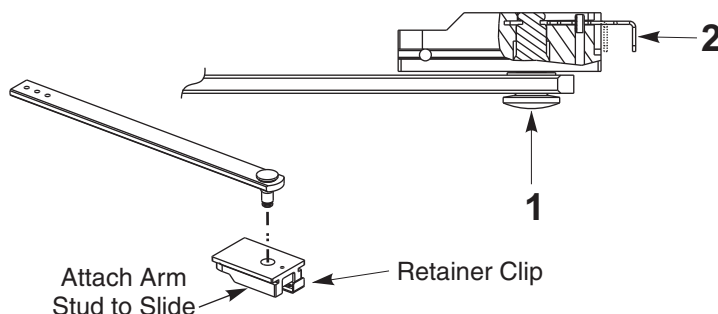
- Select angle of opening and use dimensions shown in template to locate 4 holes $\oplus$ on door for Closer Mounting Bracket (or 4 holes $\bullet$ for optional drop plate) and 3 holes on jamb for track.
For applications that are different from above, a separate template will be supplied for door and frame preparation.
- Prepare door and frame for fasteners using "Preparation for Fasteners" chart, Figure 2, Page 4.
- Fasten Closer Mounting Bracket to door. Fasten optional drop plate to door, only if it is required for the door conditions.
- Install closer body with tube end **away** from hinge, with valves: **Down** for **Left Hand** door / **UP** for **Right Hand** door.
- Attach Track to Frame. With spring buffer toward hinge edge of frame and open side facing down, fasten track assembly to frame.
- Adjust Arm to Shortest Length. Install 9/64" hex drive socket head screw from screw pack to the arm's shortest length as shown.



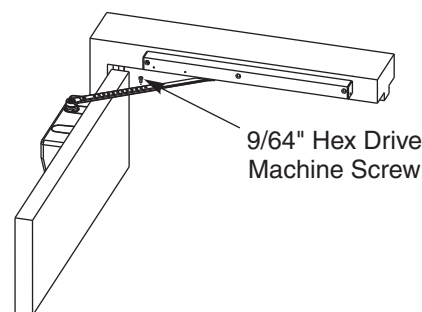
- Place Slide Arm on Pinion Shaft. Place the slide arm and two washers on the pinion shaft, indexed as shown below. Secure the arm with the arm screw and washer as indicated.



- Insert Arm Stud into Slide Block
 - 1) Insert the arm stud into the slide block in the track assembly.
 - 2) Secure by pushing in on the retainer clip that extends from the slide block in the track, until it is flush with the slide block.

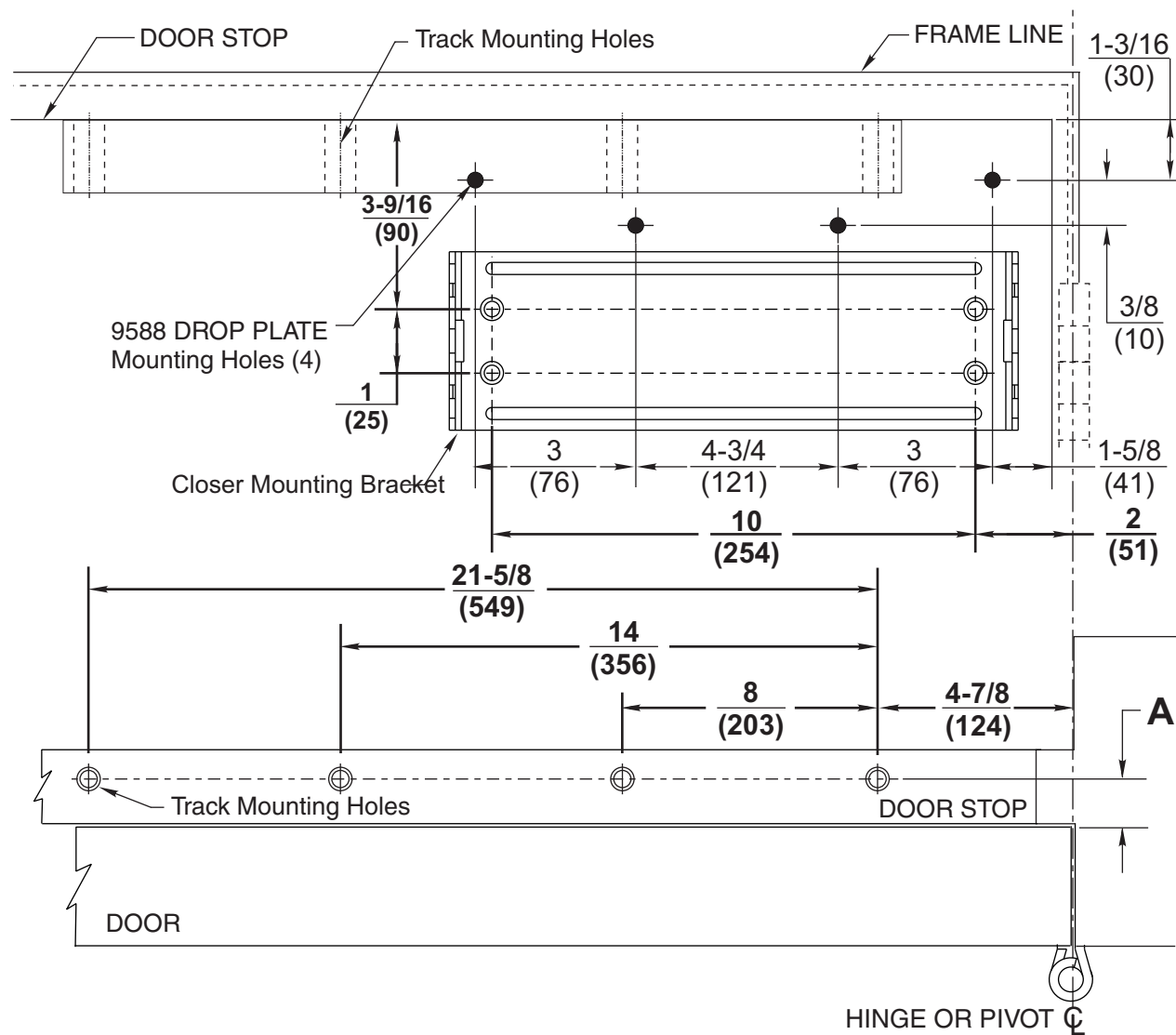


- Adjusting Door Opening / Hold Open Angle
Open the door until the slider is against the cushioned stop or engaged in hold open (A1 Option only). Remove the 9/64" hex drive socket head screw from the arm. Open the door to the desired angle and install the hex-drive screw into the hole in the adjusting rod that is aligned with the hole in the adjusting tube.



- Make closer adjustments using information on page 9, then install closer cover. See Page 6 for ENGAGE/DISENGAGE Hold Open instructions.

9540 Push Side Track Template



NOTES:

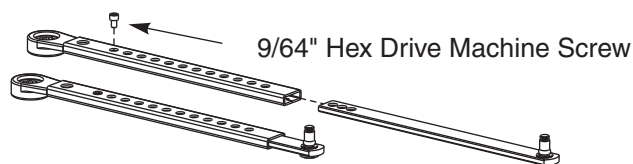
- Check hand of door, see page 2.
- Right Hand Application Shown. Left Hand Opposite.
- Dimensions given in inches (mm). Do Not Scale Drawing.
- Closer must be installed in a true horizontal plane to ensure proper closer performance.
- Minimum stop width: See Dimension A on the chart below.
- Minimum top rail: Without drop plate 5-1/2" (140), With drop plate 2-1/2" (64).
- Door will travel additional 5° to dead stop.
- Door hold open position adjustable from 85° to 110° of door opening.

Mount the Track **CENTERED** on the Stop with the following minimum distances from the door side of the stop.

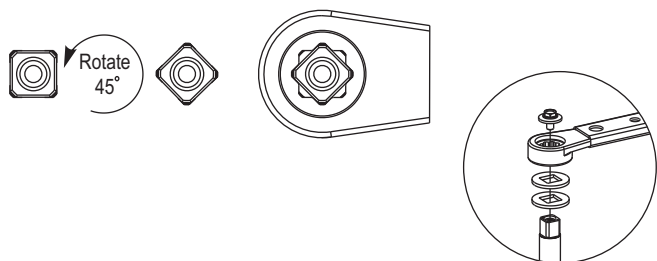
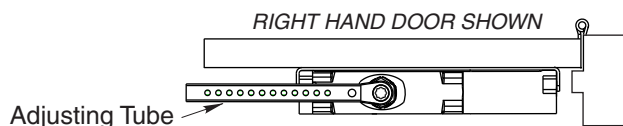
	A Min	Min Stop Width
With Drop Plate	1 (25)	1-3/4 (45)
Without Drop Plate	3/4 (19)	1-1/2 (38)

9540 Push Side Track Installation Sequence

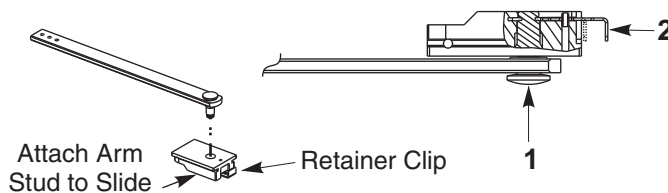
- Select angle of opening and use dimensions shown in template to locate 4 holes $\oplus$ on door for Closer Mounting Bracket (or 4 holes $\bullet$ for optional drop plate) and 4 holes on jamb for track.
For applications that are different from above, a separate template will be supplied for door and frame preparation.
- Prepare door and frame for fasteners using "Preparation for Fasteners" chart, Figure 2, Page 4.
- Fasten Closer Mounting Bracket to door. Fasten optional drop plate to door, only if it is required for the door conditions.
- Install closer body with tube end **TOWARDS** hinge, with valves: **DOWN** for **Left Hand** door / **UP** for **Right Hand** door.
- Attach Track to Frame. With spring buffer toward hinge edge of frame and open side facing down, fasten track assembly to frame.
- Adjust Arm to Shortest Length. Install 9/64" hex drive socket head screw from screw pack to the arm's shortest length as shown.



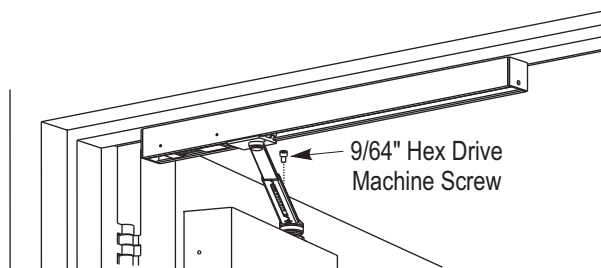
- Place Slide Arm on Pinion Shaft. Continued at right, place the slide arm and two washers on the pinion shaft, indexed as shown at right. Secure the arm with the arm screw and washer as indicated.



- Insert Arm Stud into Slide Block
 - 1) Insert the arm stud into the slide block in the track assembly.
 - 2) Secure by pushing in on the retainer clip that extends from the slide block in the track, until it is flush with the slide block.



- Adjusting Door Opening / Hold Open Angle
Open the door until the slider is against the cushioned stop or engaged in hold open.
Remove the 9/64" hex drive socket head screw from the arm. Open the door to the desired angle and install the hex-drive screw into the hole in the adjusting rod that is aligned with the hole in the adjusting tube.



- Make closer adjustments using information on page 9, then install closer cover. See Page 10 for ENGAGE/DISENGAGE Hold Open instructions.

Unit Adjustment



Spring Power Adjustment

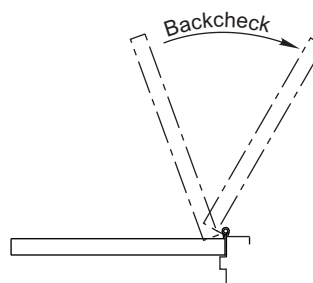
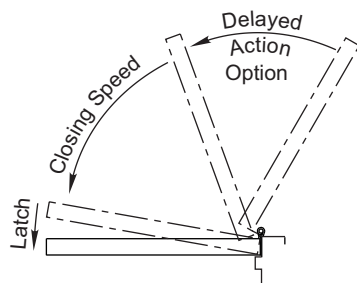
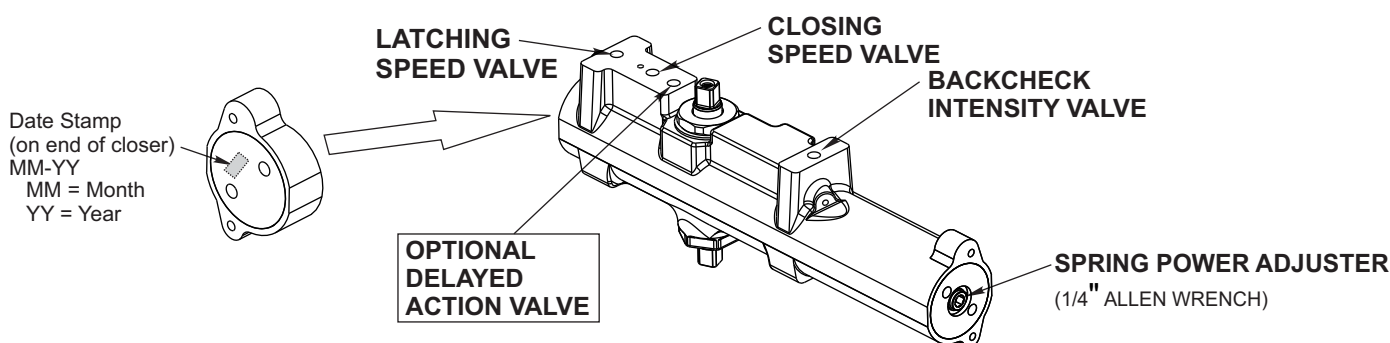
Locate spring power adjuster from illustration below

Size 1 thru 6 Adjustment See Chart

SPRING POWER ADJUSTMENT CHART

- All 9500 closers are factory set at an approximate **Size 3**.
- Adjust closer as necessary for door size using this chart.
- Readjustment may be required to suit prevailing conditions.

Size of Door			Spring Power Adjustment No. Full Turns Clockwise	Equivalent Closer Size (Approx.)
Interior	Exterior In Swing	Exterior Out Swing		
2' 4" (712)	2' 6" (764)		2-7	3
2' 6" (764)	3' 0" (915)		7-11	4
3' 0" (915)	3' 6" (1067)	2' 6" (764)	11-15	5
3' 6" (1067)	4' 0" (1219)	3' 0" (915)	15-17	6



Closing Speed Valve (1/8 Allen Wrench Provided)

Factory preset for typical doors.

To adjust speed of door closing from fully open to a position 2" to 5" from closed, turn Closing Speed Valve **CLOCKWISE** to SLOW closing, **COUNTER-CLOCKWISE** to SPEED closing.

Latching Speed Valve (1/8 Allen Wrench Provided)

Factory preset for typical doors.

After closing speed has been obtained, turn latching speed valve **CLOCKWISE** to SLOW latching or **COUNTER-CLOCKWISE** to SPEED latching for last 2" to 5" of door travel.

NOTE: Set combination of CLOSING and LATCHING speeds to between 3 and 7 seconds Use of door by handicapped, elderly or small children may require even greater closing time.

Delayed Action Valve (1/8 Allen Wrench Provided)

Factory preset for typical doors.

Turn valve **CLOCKWISE** to SLOW closing, **COUNTER-CLOCKWISE** to SPEED closing. Delayed action may be adjusted from 20 seconds to 90 seconds, depending on degree of door swing. Delay occurs at the beginning of the door closing cycle from fully open down to 70°, where the closing speed valve then begins its control.

Backcheck Intensity Valve

Factory preset for typical doors.

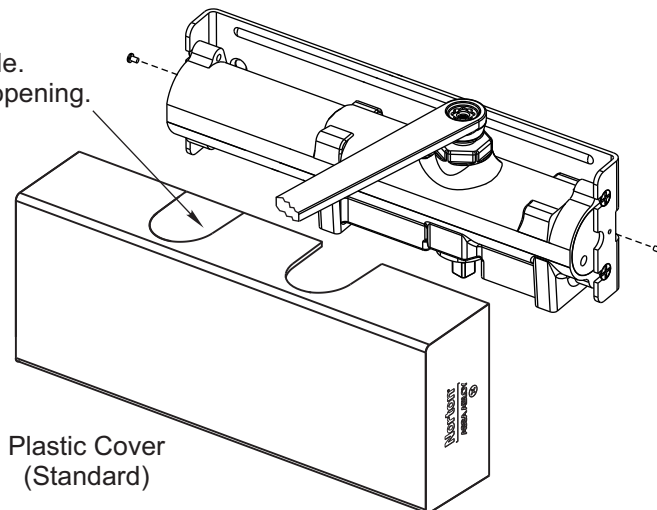
Turn valve **COUNTER-CLOCKWISE** to reduce backcheck or **CLOCKWISE** to increase backcheck. (Backcheck should be set to give a soft cushioning action, not a sudden stop.)

Installing Cover



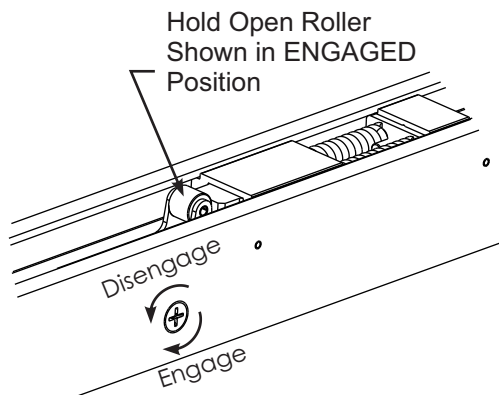
- Slip cover over closer.
- Hold tightly against Closer Mounting Bracket surface.
- Secure on each side with 6-32 x 1/4" screws.

Insert is removable.
Place in unused opening.



Engage/Disengage Hold Open

Hold Open Models Only:
Turn Screw 1/2 Revolution
to Engage / Disengage
Hold Open.



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