Yale®

400 Series

CAUTION

An incorrectly installed or improperly adjusted door closer can cause property damage or personal injury. These instructions should be followed to avoid the possibility of misapplication or misadjustment.

Non Hold Open Door Closers
Models – 400
TJS400
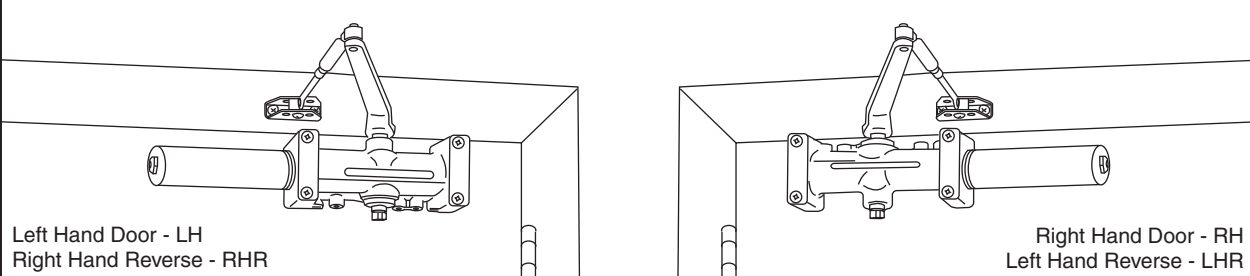**TJ400**
TJL400
PA400

Installation Instructions

80-9344-1101-010 (06-09)

- With or without suffix **"DL"** (Delayed Action) closing.
- With or without suffix **"M"** with metal Cover.

Note: For Special Applications a separate door and frame preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustments only.

Regular Arm Installation
Closer mounts on hinge (pull) side of door.
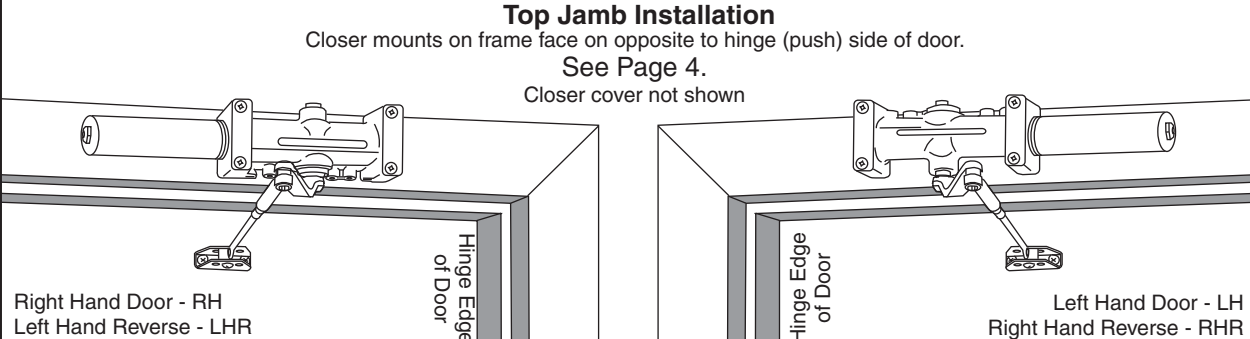See Page 3.
Closer cover not shown

Left Hand Door - LH
Right Hand Reverse - RHR

Right Hand Door - RH
Left Hand Reverse - LHR

Top Jamb Installation
Closer mounts on frame face on opposite to hinge (push) side of door.
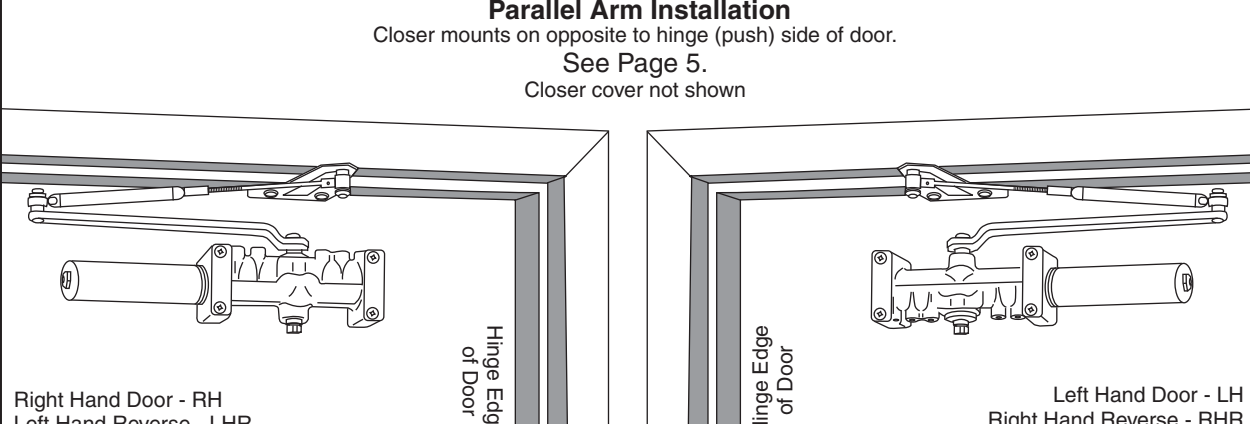See Page 4.
Closer cover not shown

Right Hand Door - RH
Left Hand Reverse - LHR

Hinge Edge of Door

Hinge Edge of Door

Left Hand Door - LH
Right Hand Reverse - RHR

Parallel Arm Installation
Closer mounts on opposite to hinge (push) side of door.
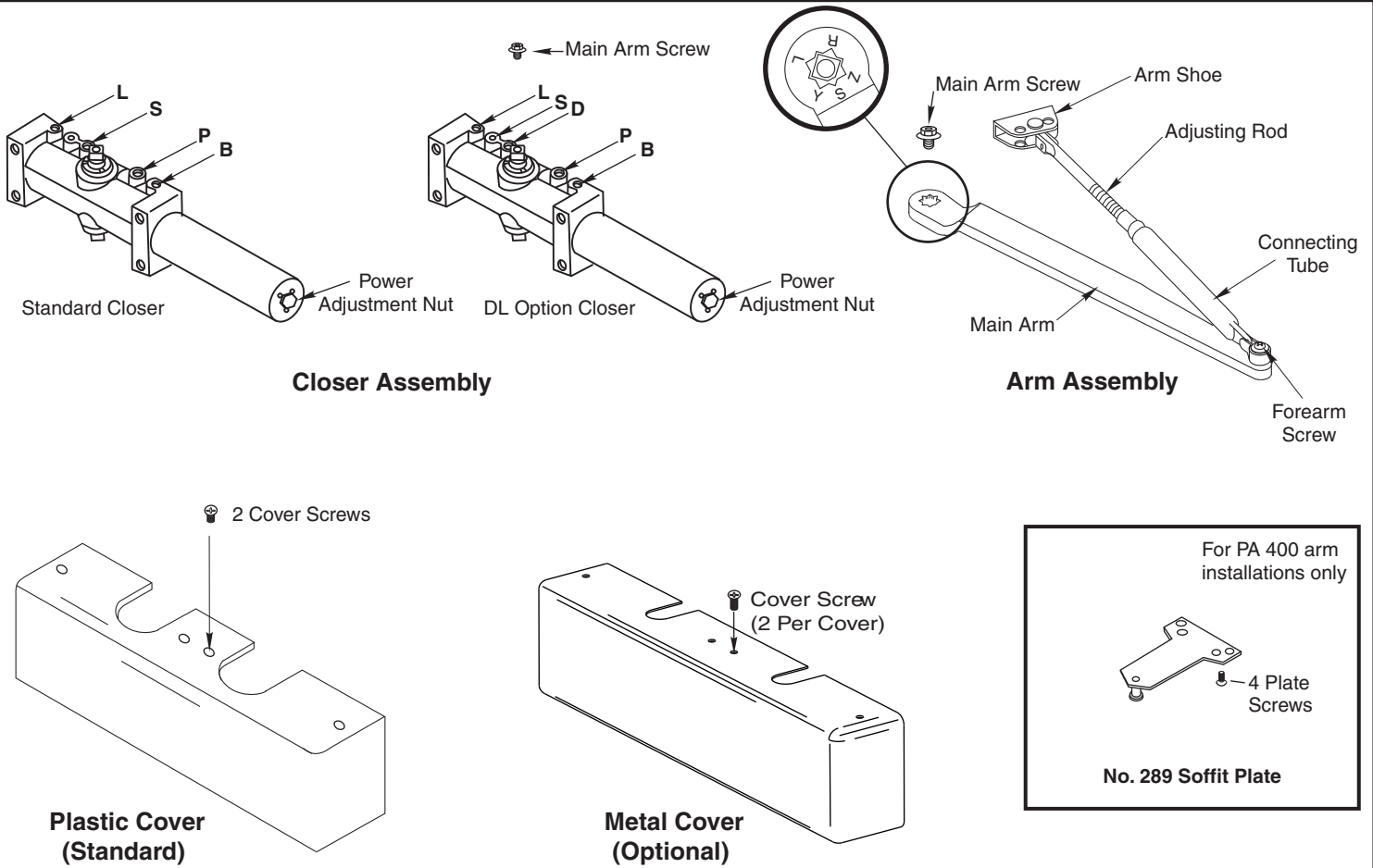See Page 5.
Closer cover not shown

Right Hand Door - RH
Left Hand Reverse - LHR

Hinge Edge of Door

Hinge Edge of Door

Left Hand Door - LH
Right Hand Reverse - RHR

Components: Figure 1

Standard Closer · L S P B · Power Adjustment Nut

DL Option Closer · L S D P B · Power Adjustment Nut · Main Arm Screw

Closer Assembly

Main Arm Screw · Arm Shoe · Adjusting Rod · Connecting Tube · Main Arm · Forearm Screw

Arm Assembly

2 Cover Screws

**Plastic Cover
(Standard)**

Cover Screw
(2 Per Cover)

**Metal Cover
(Optional)**

For PA 400 arm installations only

4 Plate Screws

No. 289 Soffit Plate
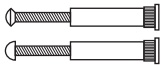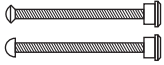
- It is recommended that the door, on which the door closer will be installed, be hung on ball bearing hinges. Door must swing freely.
- A separate door stop, supplied by others, is recommended to prevent damage to the door closer, closer arm; or to the door, frame or adjacent walls.
- Door and Frame 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.

Preparation for Fasteners   Figure 2

	Fasteners	Door or Frame	Drill-Sizes
Standard	#14 type "A" S.M. screw Arm: 1-1/4" (32 mm.) Closer: 2-3/4" (70 mm.)	Wood	7/32" (5.56 mm.)
	1/4" - 20 machine screw	Metal	drill: #7 (0.201" dia.) tap: 1/4" - 20
Optional	Sex nuts and bolts	Hollow-Metal	9/32" (7.00 mm.) through; 3/8" (9.50 mm.) on door face opposite to closer
		Aluminum or Wood	3/8" (9.50 mm.) through
	Through-bolts and grommet-nuts	All	9/32" (7.00 mm.) through; 3/8" (9.50 mm.) dia. x 3/8" (9.50 mm.) deep on door face opposite to closer

Template
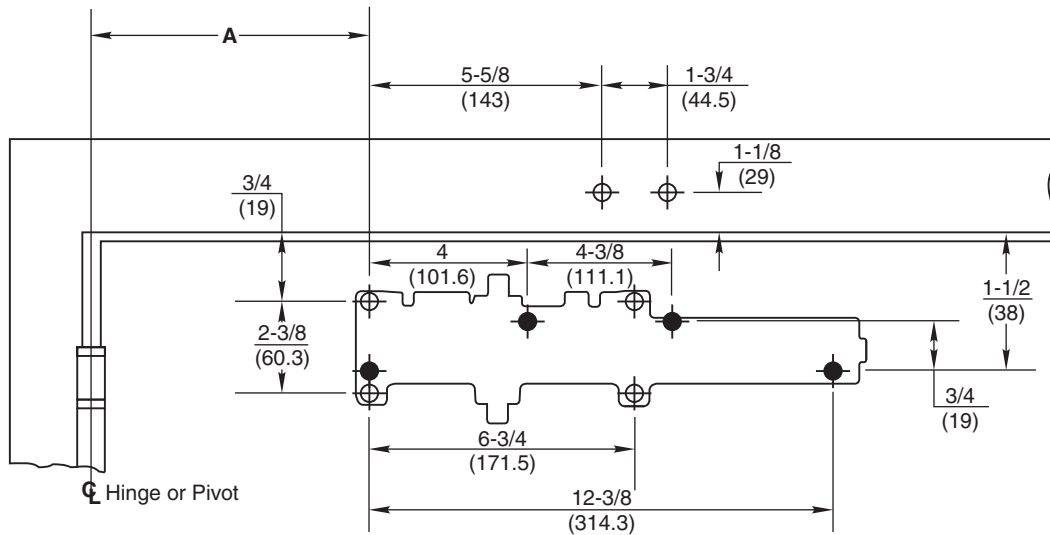
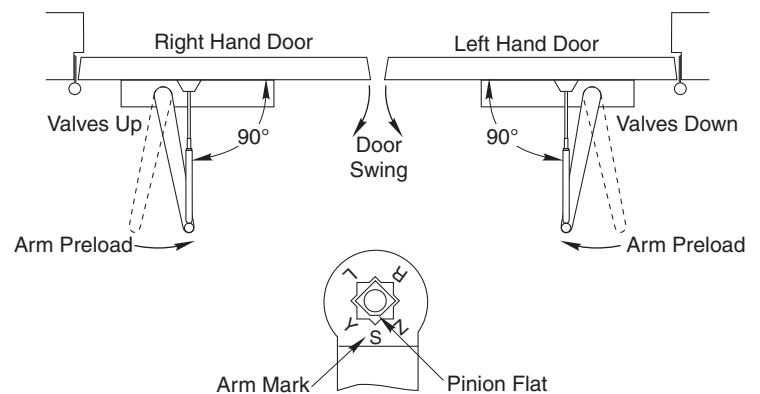Do Not Scale Drawing

Right Hand Door Shown

Dimensions are in inches (mm).

● 486 Backplate Mounting Hole Only

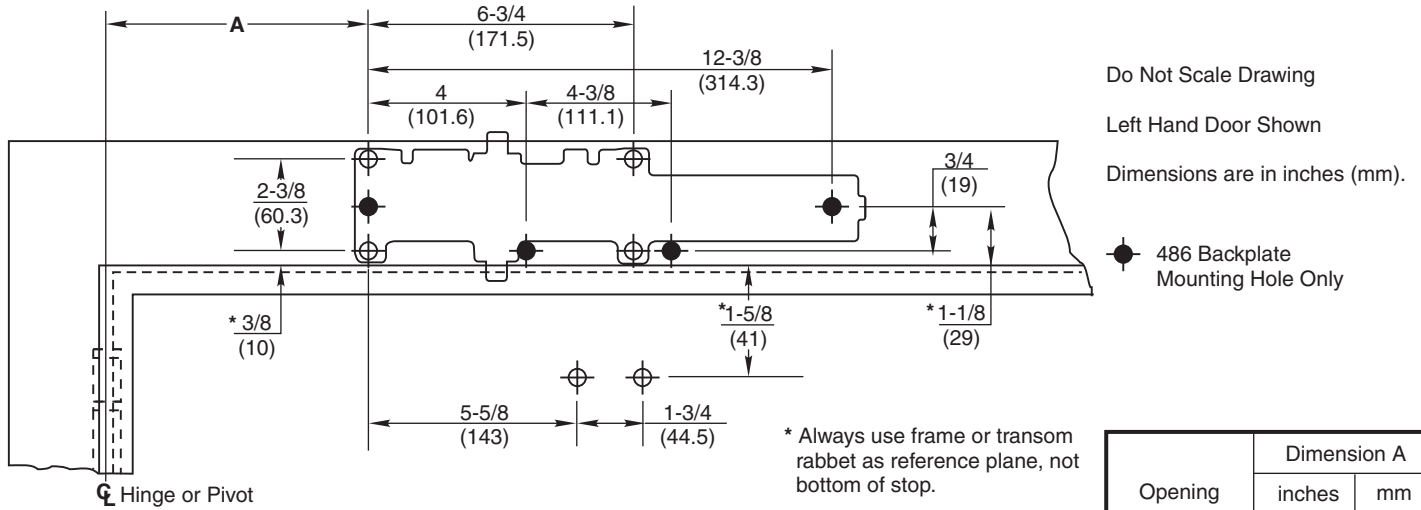| | Dimension A | |
Opening	inches	mm
To 100°	7-5/8	194
101° to 120°	6-5/8	168
121° to 150°	4-5/8	117
151° to 180°	4-1/8	105

Installation Sequence

- Select angle of opening and use dimensions shown to locate 4 holes on door for closer body *or backplate* and 2 holes on frame face for arm shoe. For applications that are different from above, a separate template will be required.

- Prepare door and frame for fasteners. See "Preparation for Fasteners", Figure 2, Page 2.

- *Mount 486 Backplate ... only if required.*

- Install closer with power adjustment nut toward lock edge of door. **Valves UP for Right hand door – Valves DOWN for Left hand door.**

- Remove forearm screw from elbow joint and disassemble arm. See Figure 1. Fasten arm shoe (with rod and tube assembled) to frame face.

- Mount main arm onto closer pinion shaft, aligning arm mark "S" with pinion flat. Secure with main arm screw.

- **Reassemble arm.** Adjust forearm length so that it will be perpendicular (at a 90° angle) to the door face when connected to the main arm. Secure with forearm screw.

- Adjust closer (see Page 6) and install cover.

Top Jamb

Template

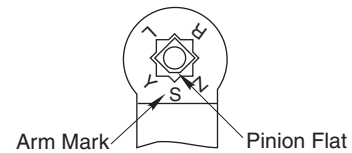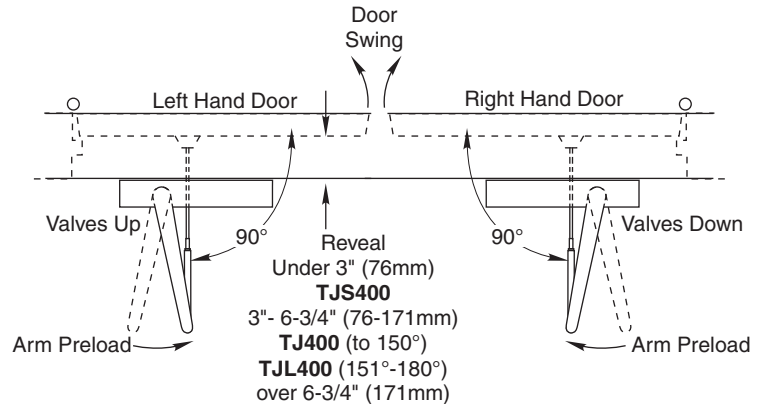

Do Not Scale Drawing

Left Hand Door Shown

Dimensions are in inches (mm).

● 486 Backplate
Mounting Hole Only

* Always use frame or transom
rabbet as reference plane, not
bottom of stop.

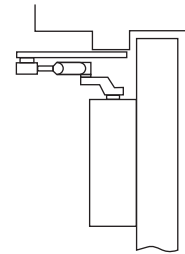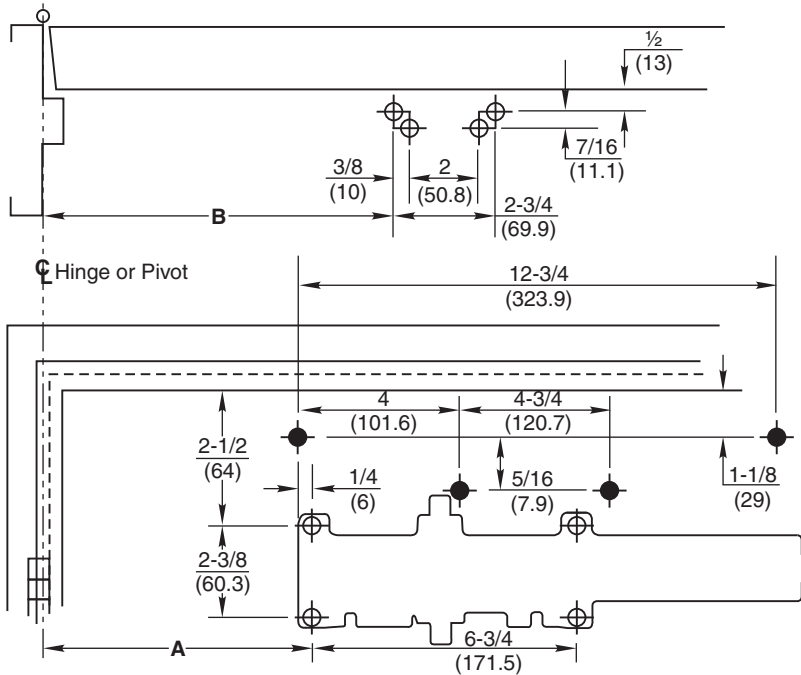|	Dimension A	
Opening	inches	mm
To 100°	7-5/8	194
101° to 120°	6-5/8	168
121° to 150°	4-5/8	117
151° to 180°	4-1/8	105

Installation Sequence

- Select angle of opening and use dimensions shown to locate 4 holes on frame face for closer body *or backplate* and 2 holes on door for arm shoe. For applications that are different from above, a separate template will be required.

- Prepare door and frame for fasteners. See "Preparation for Fasteners", Figure 2, Page 2.

- *Mount 486 Backplate ... only if required.*

- Install closer with power adjustment nut toward lock edge of door. **Valves UP for Left hand door – Valves DOWN for Right hand door.**

- Remove forearm screw from elbow joint and disassemble arm. See Figure 1. Fasten arm shoe (with rod and tube assembled) to door.

- Mount main arm onto closer pinion shaft, aligning arm mark "S" with pinion flat. Secure with main arm screw.

- **Reassemble arm.** Adjust forearm length so that it will be perpendicular (at a 90° angle) to the door face when connected to the main arm. Secure with forearm screw.

- Adjust closer (see Page 6) and install cover.

Door Swing

Left Hand Door   Right Hand Door

Valves Up   90°   90°   Valves Down

Reveal
Under 3" (76mm)
TJS400
3"- 6-3/4" (76-171mm)
TJ400 (to 150°)
TJL400 (151°-180°)
over 6-3/4" (171mm)

Arm Preload   Arm Preload

Arm Mark   Pinion Flat

Parallel Arm

Template

Do Not Scale Drawing

Left Hand Door Shown

Dimensions are in inches (mm).

Opening	Dimension A		Dimension B	
	inches	mm	inches	mm
To 100°	8-3/4	222	9-1/4	235
101° to 130°	7-1/4	184	7-3/4	197
131° to 150°	6-1/4	159	6-3/4	171
151° to 180°	5-1/4	133	5-3/4	146

488 Dropplate
Mounting Hole Only

Installation Sequence

• Select angle of opening and use dimensions shown to locate 4 holes on door for closer body *or dropplate* and 4 holes on underside of frame for soffit plate. For applications that are different from above, a separate template will be required.

• Prepare door and frame for fasteners. See "Preparation for Fasteners", Figure 2, Page 2.

• *Mount 488 Dropplate ... only if required.*

• Install closer with power adjustment nut toward lock edge of door. **Valves DOWN for Left hand door – Valves UP for Right hand door.**

• Mount soffit plate to frame. Disassemble arm at forearm-screw (See Figure 1) and attach adjusting rod and connecting tube to soffit plate.

• Install main arm on pinion shaft ...See Main Arm Installation Instructions at right.

• **Reassemble arm.** Preload is accomplished by adjusting forearm length so that it will set arm elbow about 1-1/2" (38mm) from the door face when connected to the main arm. Secure with forearm screw.

• Connect to main arm. Secure with forearm screw.

• Adjust closer (see Page 6) and install cover.

Main Arm Installation Instructions
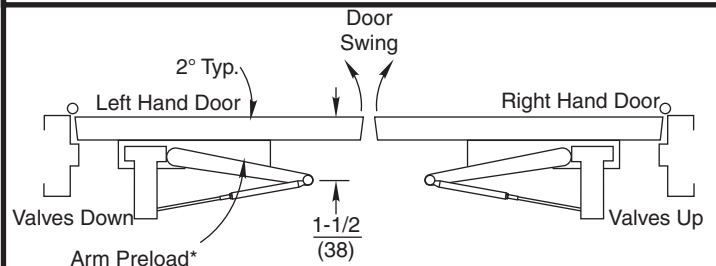
*Note: To mount main-arm close closer-valve "S" and turn pinion-shaft over 50° to overcome door interference.
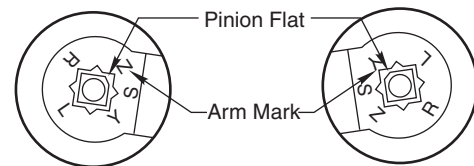
To Install Main Arm:
• Close Valves S & L.
• Rotate Pinion Shaft in excess of 50°.
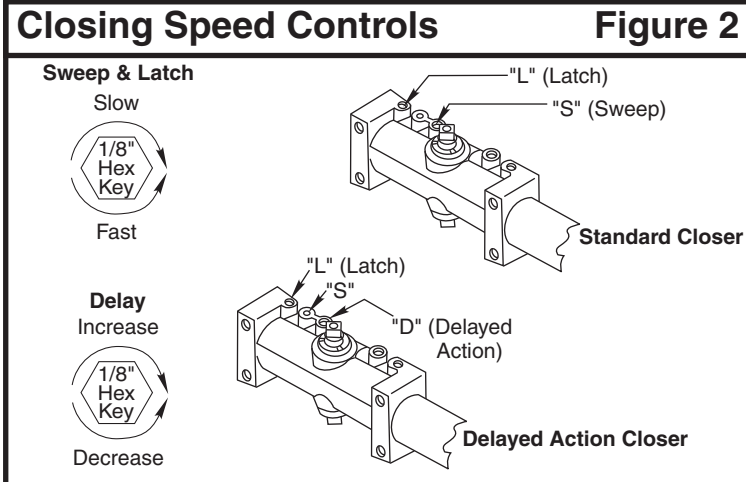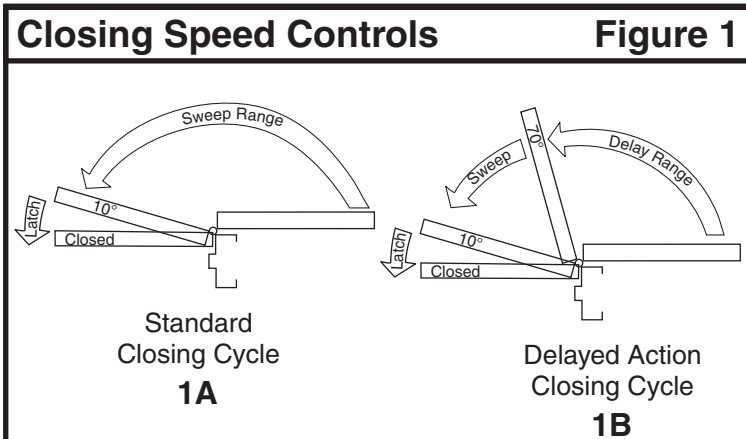• Align Arm Mark with Pinion Flat, **"Y"** **Right Hand Door, "Z" Left Hand Door.**
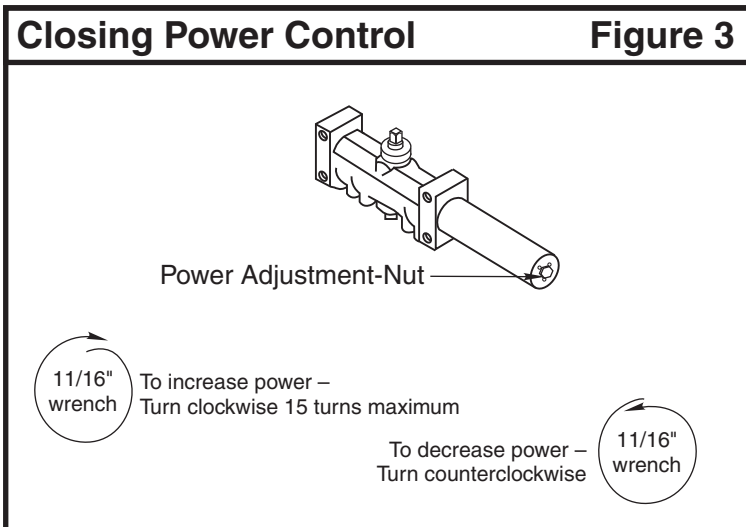• Secure with main arm screw.

Unit Adjustment

Closing Speed Controls (Figure 1A or 1B and 2.)
• Valve "S" Controls Sweep Range.
• Valve "L" Controls Latch Range.
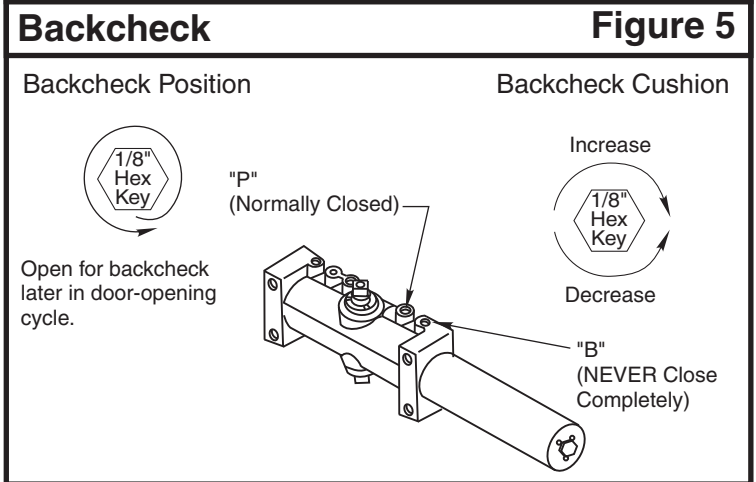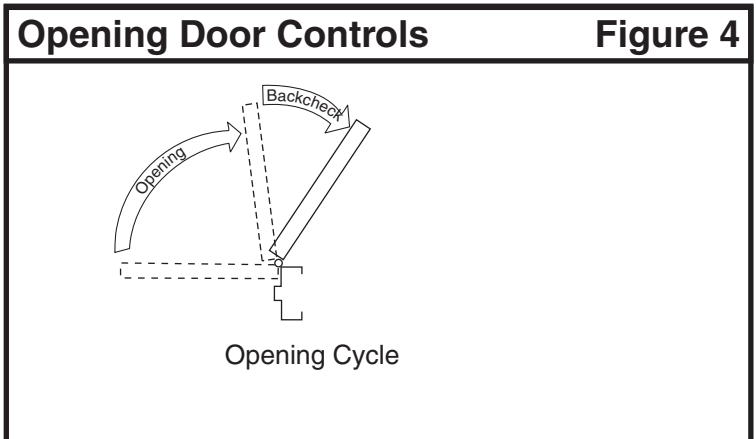• Optional Valve "D" Controls Delay Range

Opening Door Control (Figure 4.)
• Backcheck ("B") valve controls the hydraulic resistance to door opening. NEVER close this valve completely – it is not to provide a positive stop.

• Backcheck position ("P") valve controls the door angle where backcheck cushioning starts. Valve normally closed.

Closing Speed Controls — Figure 1

Sweep Range

Latch
10°
Closed

Standard
Closing Cycle
1A

Sweep
10°
Delay Range
Latch
10°
Closed

Delayed Action
Closing Cycle
1B

Closing Speed Controls — Figure 2

Sweep & Latch
Slow
1/8" Hex Key
Fast

"L" (Latch)
"S" (Sweep)

Standard Closer

Delay
Increase
1/8" Hex Key
Decrease

"L" (Latch)
"S"
"D" (Delayed Action)

Delayed Action Closer

Opening Door Controls — Figure 4

Opening
Backcheck

Opening Cycle

Backcheck — Figure 5

Backcheck Position

1/8" Hex Key

Open for backcheck later in door-opening cycle.

"P" (Normally Closed)

Backcheck Cushion

Increase
1/8" Hex Key
Decrease

"B" (NEVER Close Completely)

Closing Power Control (Figure 3)
• Adjust as required.

Closing Power Control — Figure 3

Power Adjustment-Nut

11/16" wrench
To increase power –
Turn clockwise 15 turns maximum

To decrease power –
Turn counterclockwise
11/16" wrench