

Installation Instructions

80-9380-9501-005 (8-94)

CAUTION
AN INCORRECTLY INSTALLED OR IMPROPERLY ADJUSTED DOOR CLOSER CAN CAUSE PROPERTY DAMAGE OR PERSONAL INJURY. THESE INSTALLATION INSTRUCTIONS SHOULD BE FOLLOWED TO AVOID THE POSSIBILITY OF MISAPPLICATION OR MISADJUSTMENT.

Non-Hold Open Series TC400(ADA) TC500(ADA)

Non-Hold Open Door Closers

TC400, TC500

Series can be adjusted from power size 2 thru 6.

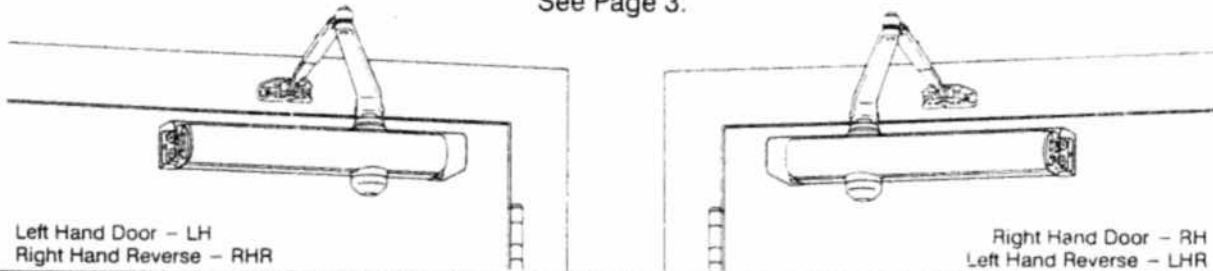
TC400ADA, TC500ADA

Series can be adjusted from power size 1 thru 4; intended for use where doors are operated by the elderly or handicapped.

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.

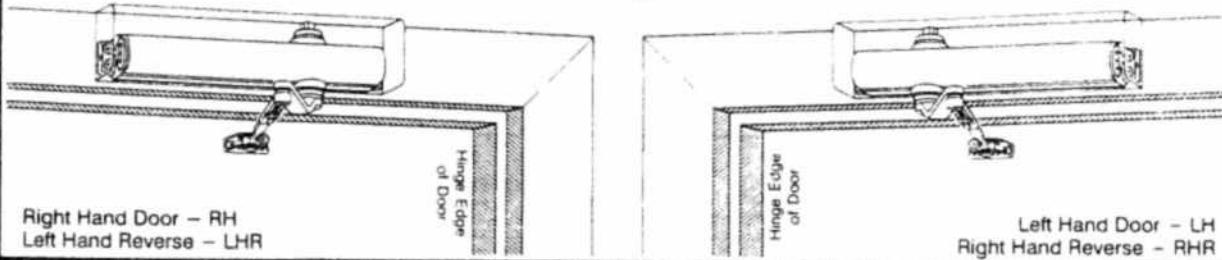
Regular Arm Installation

Closer mounts on hinge (pull) side of door. TC400 model with narrow cover illustrated.
See Page 3.



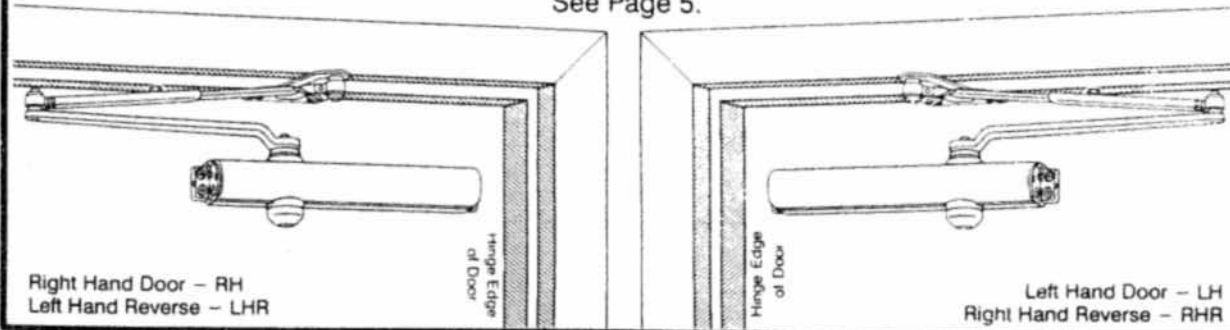
Top Jamb Installation

Closer on frame face opposite to hinge (push) side of door. TC500 model with full cover illustrated.
See Page 4.

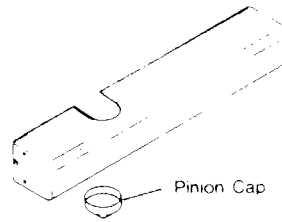
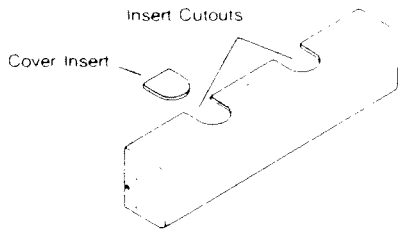
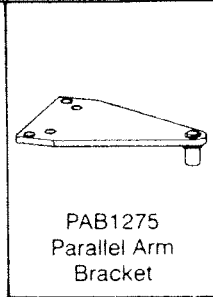
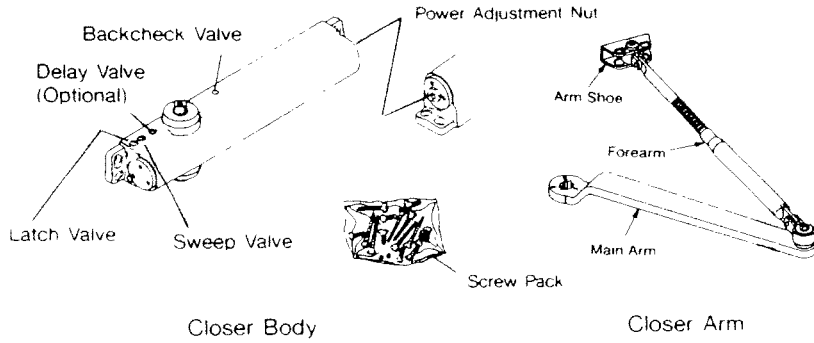


Parallel Arm Installation

Closer mounts on door opposite to hinge (push) side. Closers illustrated without covers.
See Page 5.



Components



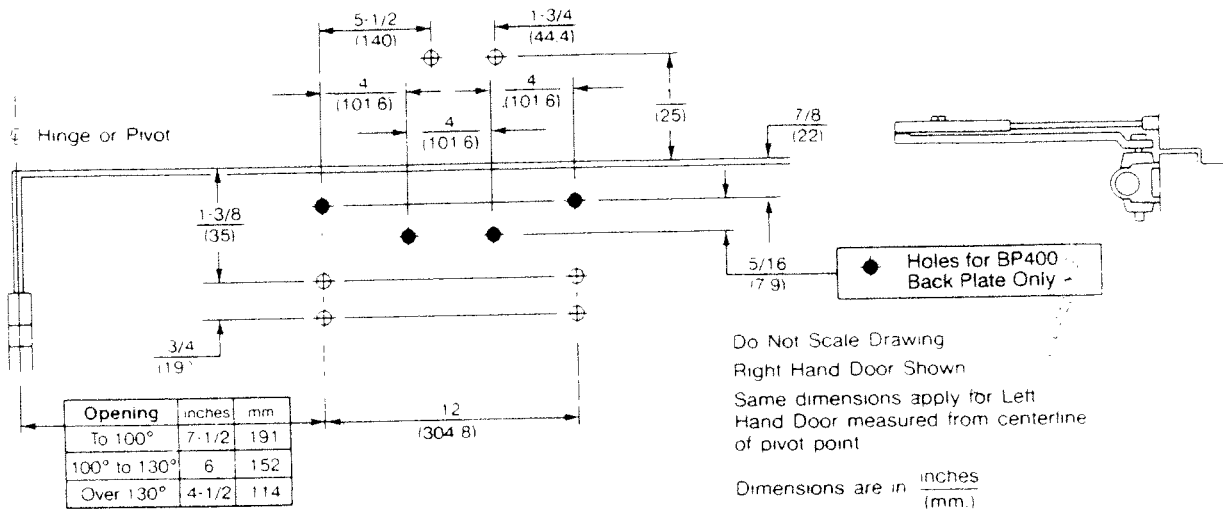
Preparation for Fasteners

	Fasteners	Door or Frame	Drill-Sizes
Standard	#14 type "A" S.M. screw Arm: 1-1/4" (32mm.) Closer: 1-1/2" (38mm.)	Wood	7/32" (5.50mm.)
	1/4"-20 machine screw	Metal	drill: #7 (.201" dia.) tap: 1/4"-20
Optional	Sex nuts and bolts	Hollow Metal	9/32" (7.00mm.) through, 3/8" (9.50mm.) on door opposite to closer
		Aluminum or Wood	3/8" (9.50mm.) through

Installation Instructions

Regular Arm

Template



NOTE: Door openings to 180° conditions permitting

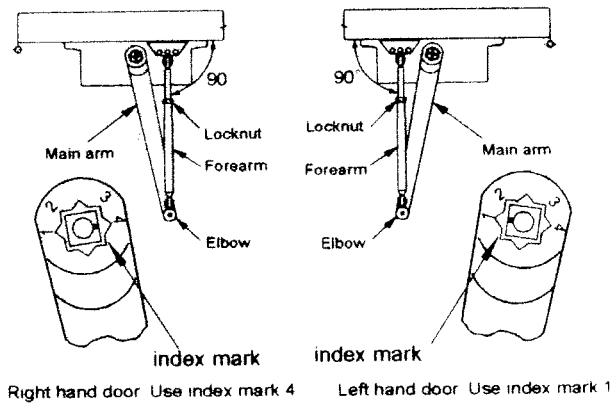
Do Not Scale Drawing
 Right Hand Door Shown
 Same dimensions apply for Left Hand Door measured from centerline of pivot point

Dimensions are in $\frac{\text{inches}}{\text{(mm.)}}$

Installation Sequence

- Select angle of opening and use dimensions shown to locate 4 holes on door for closer body or if used, BP400 back plate 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", page 2.
- Mount BP400 back plate only if required.
- Set closing power for door size using "Power Adjustment Chart", below right.
- Mount closer body on door. If using backplate, mount it first then closer body to backplate. Be sure that power adjustment nut is away from hinge.

POSITION OF ARMS AND INDEX SETTINGS



- Remove connecting rod and shoe from arm assembly and fasten connecting rod and shoe to frame.
- Mount main arm onto closer pinion shaft, indexing main arm mark "S" with pinion flat as shown at right. Secure with main arm screw.
- Open door to allow connecting rod to be inserted into arm slide. Insert rod and close door. Rotate main arm away from hinge until forearm is perpendicular to door. Secure with forearm screw.
- Adjust closer and install cover
 See back page for closer adjustment.

Power Adjustment Chart

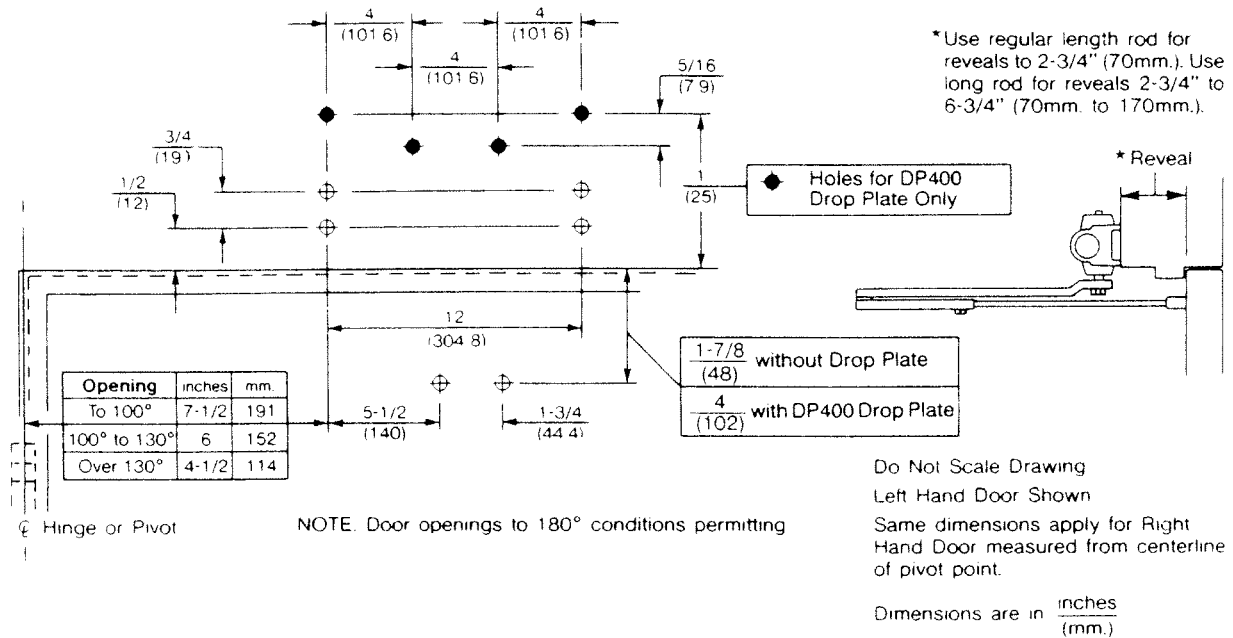
Door Size inches (mm.)	Full Clockwise Turns of Closer Power Adjustment Nut			
	TC400/TC500 ONLY		TC400ADA/TC500ADA ONLY	
	Interior Door	Exterior Door	Interior Door	Exterior Door
28-32 (0.70-0.80)	0	2	1	4
33-36 (0.85-0.90)	2	5	3	6
37-42 (0.95-1.05)	5	8	5	Not Recommended • USE TC400/TC500
42-48 (1.10-1.20)	8	11	8	

Closer is shipped set at lowest power setting.

Installation Instructions

Top Jamb

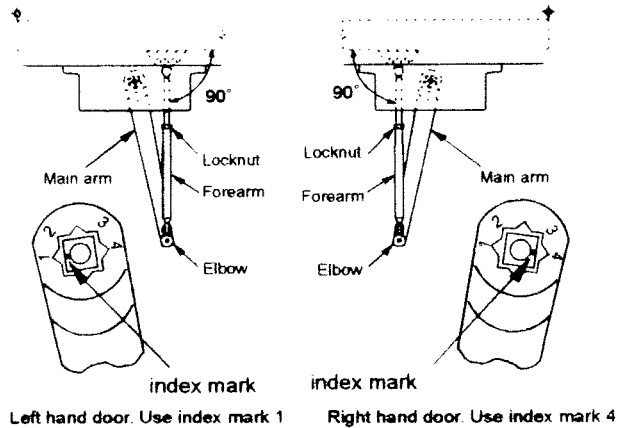
Template



Installation Sequence

- Select angle of opening and use dimensions shown to locate 4 holes on frame face for closer body or if used, DP400 drop plate 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", page 2.
- Mount DP400 drop plate only if required.
- Set closing power for door size using "Power Adjustment Chart", below right.
- Mount closer body on door. If using dropplate, mount it first then closer body to dropplate. Be sure that power adjustment nut is away from hinge.

POSITION OF ARMS AND INDEX SETTINGS



- Remove connecting rod and shoe from arm assembly and fasten connecting rod and shoe to door.
- Mount main arm onto closer pinion shaft, indexing main arm mark "S" with pinion flat as shown at right. Secure with main arm screw.
- Open door to allow connecting rod to be inserted into arm slide. Insert rod and close door. Rotate main arm away from hinge until forearm is perpendicular to door. Secure with forearm screw.
- Adjust closer and install cover.

See back page for closer adjustments.

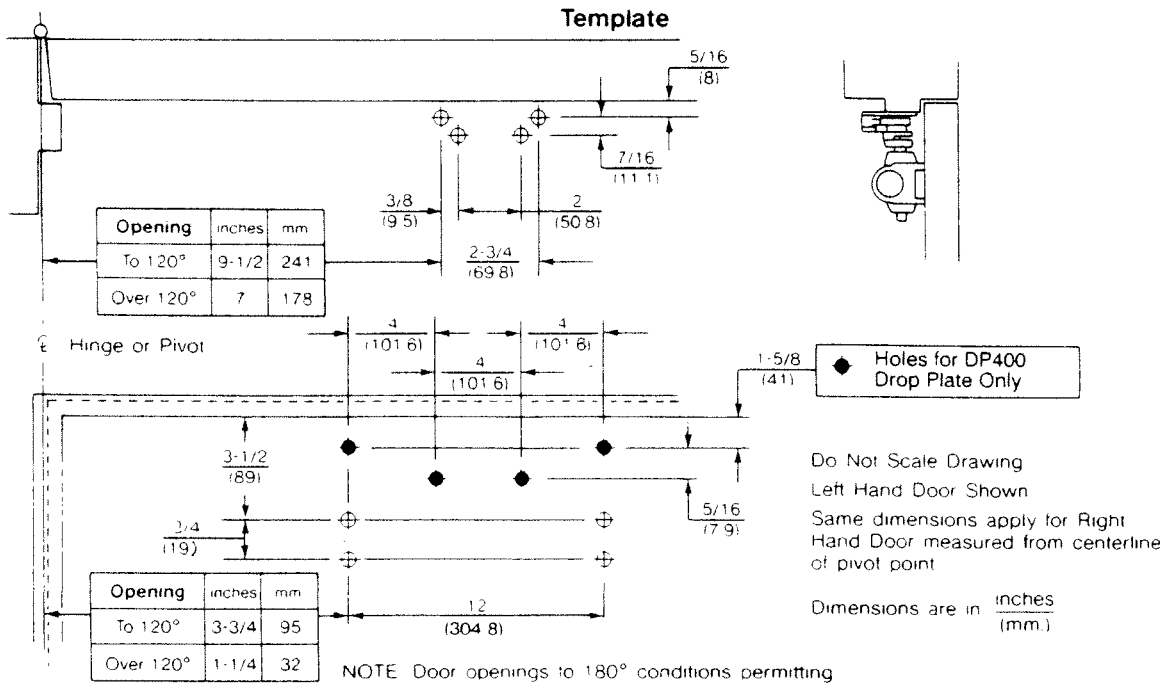
Power Adjustment Chart

Door Size inches (mm.)	Full Clockwise Turns of Closer Power Adjustment Nut			
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28-32 (0.70-0.80)	0	2	1	4
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37-42 (0.95-1.05)	5	8	5	Not Recommended • USE TC400/TC500
42-48 (1.10-1.20)	8	11	8	

Closer is shipped set at lowest power setting.

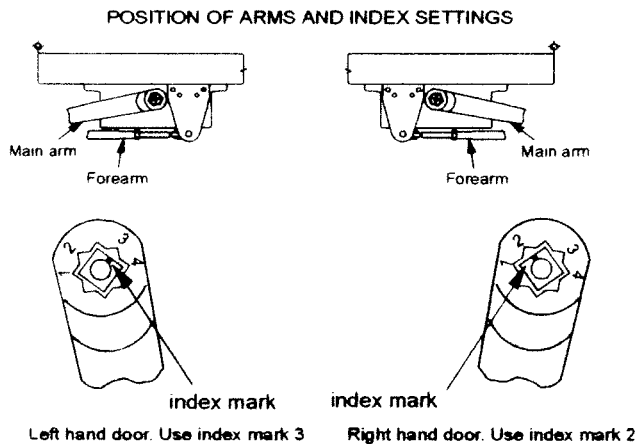
Installation Instructions

Parallel Arm



Installation Sequence

- Select angle of opening and use dimensions shown to locate 4 holes on door for closer body *or if used, DP400 drop plate* and 4 holes on soffit for PAB1245 bracket. For applications that are different from above, a separate template will be required.
- Prepare door and frame for fasteners. See "Preparation for Fasteners", page 2.
- *Mount DP400 drop plate only if required*
- Set closing power for door size using "Power Adjustment Chart", below right.
- Mount closer body on door. If using dropplate, mount it first then closer body to dropplate. Be sure that power adjustment nut is toward hinge



NOTE:
 TO install main arm, pinion shaft must be rotated in excess of 50° to permit alignment with proper arm mark.

- Remove connecting rod and shoe from arm assembly. Place main arm on closer pinion shaft, indexing main arm mark "L" or "R" with pinion flat as shown in diagram at right.
 - Remove shoe from connecting rod and discard. Assemble PAB1245 bracket and connecting rod. Fasten assembled bracket and connecting rod to soffit.
 - Open door to allow connecting rod to be inserted into holder loop. Insert rod and close door. Rotate main arm until main arm is 1-1/2" (38mm.) from parallel with door. Secure with forearm screw
 - Adjust closer and install cover.
- See back page for closer adjustments

Door Size inches (mm)	Full Clockwise Turns of Closer Power Adjustment Nut			
	TC400/TC500 ONLY		TC400ADA/TC500ADA ONLY	
	Interior Door	Exterior Door	Interior Door	Exterior Door
28-32 (0.70-0.80)	0	2	0	5
33-36 (0.85-0.90)	0	5	1	6
37-42 (0.95-1.05)	2	8	2	Not Recommended • USE TC400/TC500
42-48 (1.10-1.20)	5	11	3	

NOTE: Maximum of 15 turns (360°) of Power Adjustment Nut. Closer is shipped set at lowest power setting.

Unit Adjustment

Closing Power Adjustment—

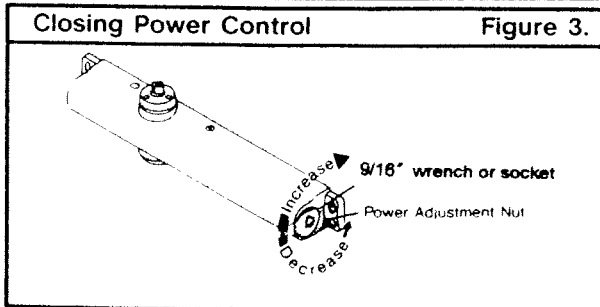
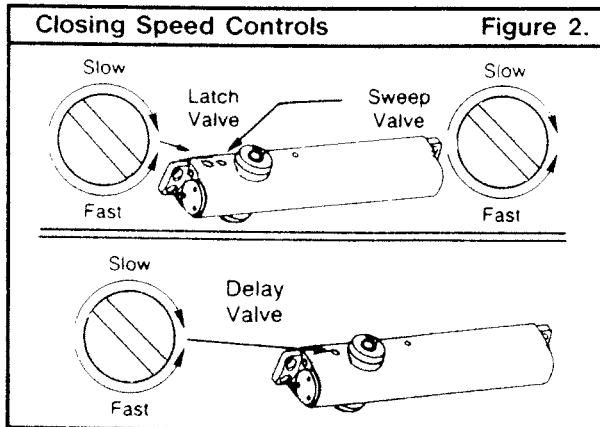
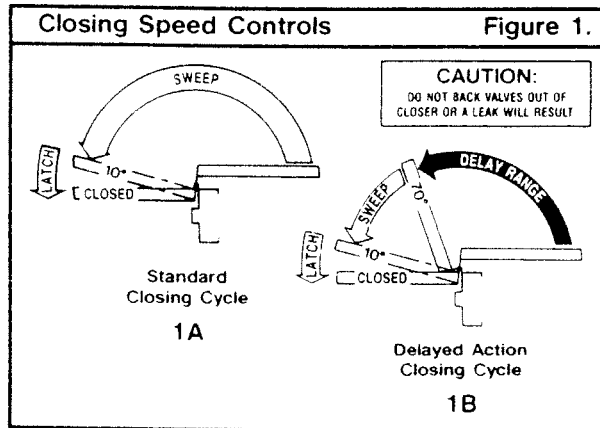
Using "Power Adjustment Chart" from page 3, 4 or 5, select the correct number of turns for power adjustment nut that corresponds with the installation. With 9/16" wrench or socket, rotate adjustment nut full 360° clockwise turns to desired setting. After closer has been installed and proper adjustments made to the sweep and latch, it may be necessary to readjust spring power for good closing action.

Control Valve Adjustments

(see Figure 2)

Closing Speed Controls (Figure 1A or 1B And 2.)

- Valve "S" Controls Sweep Range.
- Valve "L" Controls Latch Range.
- Valve "D" Controls Delay Range.
- Optional for all models.



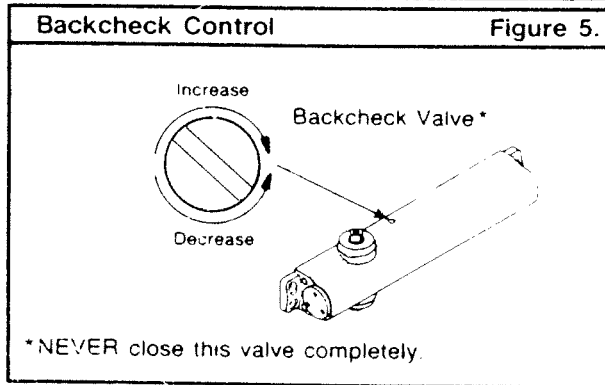
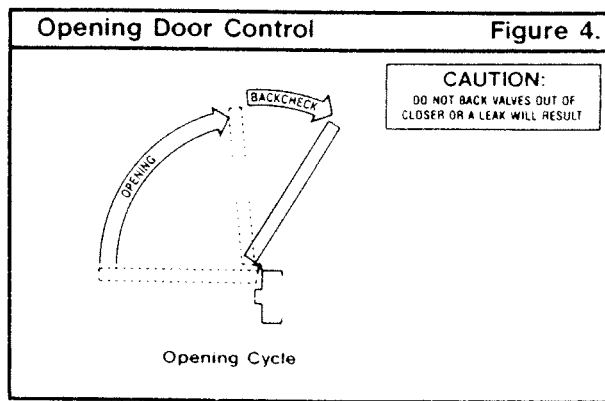
Opening Cycle

- "Backcheck" valve controls the strength of cushioning in Backcheck Range. NEVER close this valve completely - it is not to provide a positive stop. (see Figure 4 and Figure 5).

Cover—

Full cover: Slide cover insert into the un-used cutout in cover. Install cover using screws provided.

Narrow cover: Install cover using screws provided. Press pinion cap over pinion shaft.



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