



DC 2200, DC 2400, DC 2600 Series Universal Door Closers — Regular Arm, Parallel Arm & Jamb Mounted

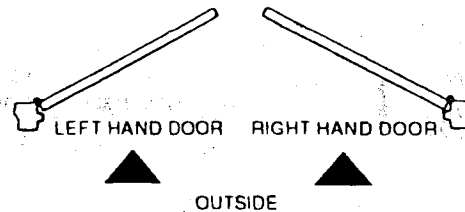
IMPORTANT:

- Door closers must be securely fastened to doors or frames with fasteners which will not loosen or pull out. Add reinforcements when necessary.
- **DO NOT DISASSEMBLE THIS DOOR CLOSER.**
- Repairs must be made only by experienced service personnel.
- Improper setting of closing and/or latching speeds voids product warranty and can result in accidents.

BEFORE INSTALLING:

Handicap Compliant Closer, DC 2200, DC 2210, DC 2220, DC 2401, DC 2411, DC 2412, DC 2421, DC 2601, DC 2611, DC 2621
Closers READ BELOW

TO DETERMINE HAND OF YOUR DOOR:



To meet the Americans with Disabilities Act (ADA) requirements for door closer maximum opening force (5 lbs for interior doors, 8.5 lbs. for exterior doors) use standard templating for regular arm and parallel arm applications. For jamb applications template for 140° of opening to achieve required opening force.

This will not affect the operation of the door closer. Also if this door closer has a size adjustment, it must be unwound to its lowest setting to achieve the required force.

Type of Installation	Size of Door & Door Closer			Recommended Closer Size	SEE NOTE Max. Opening Force lbs/f
	Interior	Exterior In -swinging	Exterior Out -swinging		
Regular & Top Jamb	2'4"	_____	_____	1	8
	3'0"	_____	_____	2	14
	3'6"	2'6"	3'0"	3	16
	4'0"	3'0"	3'6"	4	22
	4'6"	3'6"	4'0"	5	24
	5'0"	4'0"	4'6"	6	26
Parallel Arm	2'4"	_____	_____	1	8
	2'6"	_____	_____	2	14
	3'0"	_____	2'6"	3	16
	3'6"	_____	3'0"	4	22
	4'0"	_____	*3'6"	5	24
	4'6"	_____	*4'0"	6	26

*DC 2400 Series Recommended

NOTE: These forces are for standard templating with bearing type hinges and do not account for pressure differentials and drafts. Half size closers are capable of being adjusted to next higher setting.

Installation Instructions

DC-220C, 2400, 2600 Series

Door Mounted Closer—Regular Arm

Right Hand Application Shown, Left Hand Opposite.

CAUTION:

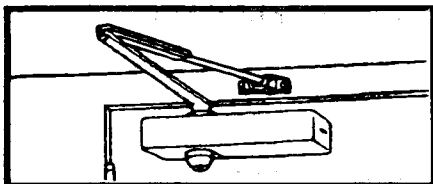
Closer to be installed in a true horizontal position to ensure proper closer performance.

NOTE:

Dimensions given in inches and (mm).

BEFORE PROCEEDING:

- Set spring power adjustment, where applicable, see instructions on page 8.
- Check hand of your door, see page 1.



1.

Mark Door and Jamb

For top rails of less than 2 1/2" (64 mm), use template provided, mark holes for closer bracket and arm bracket. Attach closer bracket. For top rails of 2 1/2" (64 mm) or over, see mounting dimensions chart below.

NOTE:

END OF CLOSER BRACKET WITH PIN RETAINING HOLES NOT COUNTERSUNK MUST BE TOWARD HINGE EDGE OF DOOR.

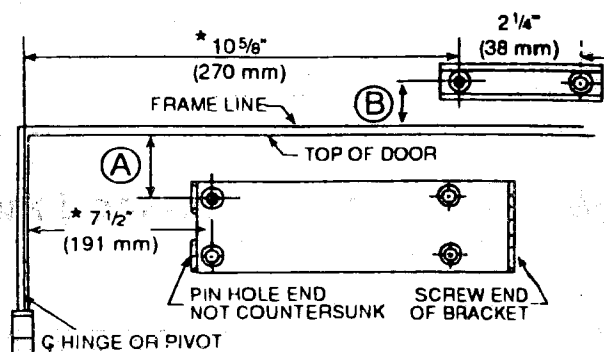
MOUNTING DIMENSIONS

TOP RAIL	A	B	MINIMUM CLEARANCE REQUIRED OVER DOOR	
			NON-HOLD OPEN	HOLD OPEN
2 1/2" & OVER (64 mm)	7/8" (23 mm)	7/8" (23 mm)	1 1/2" (39 mm)	1 11/16" (43 mm)
1 3/4" MIN. (44 mm)	1/2" (13 mm)	1 1/4" (32 mm)	1 7/8" (48 mm)	2 1/16" (53 mm)

* To obtain extra closing force add 3" (77 mm) to dimensions marked. This will limit degree of door opening to 110°

NOTE:

All degrees of opening are dependent on door and frame conditions permitting.



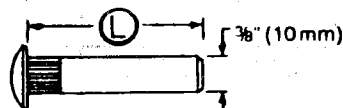
MOUNTING SCREW SPECIFICATIONS

ARM AND CLOSER BRACKET

1/4 - 20 x 1/2" oval head machine screw or #14 oval head wood screws

NOTE:

SEX NUTS FURNISHED WHEN ORDERED



DOOR THICKNESS	SEX NUT LENGTH "L"
1 3/8" (35 mm)	1 9/32" (33 mm)
1 3/4" (44 mm) & OVER	1 21/32" (42 mm)

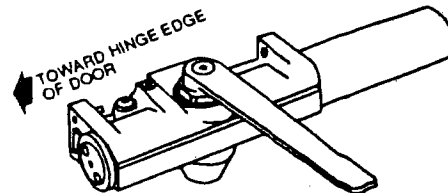
2.

Position Arm on Closer

Remove screw and arm washer from spindle. Place arm on proper spindle so that it extends out from front of closer and is at a right angle to closer body.

TO DETERMINE PROPER SPINDLE:

Hold closer so that spindle end is TOWARD hinge edge of door. Arm goes on top spindle. Be sure arm is against shoulder when attached. DO NOT FORCE. Replace arm washer and tightly secure screw.

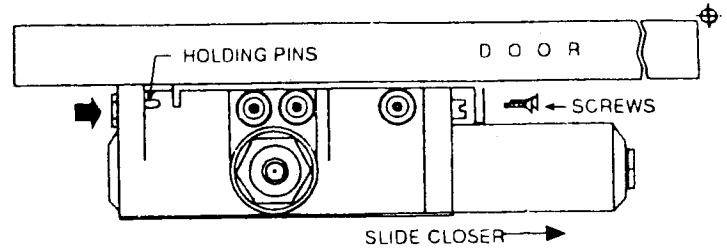


DC-2200, 2400, 2600 Series Door Mounted Closer—Regular Arm Right Hand Application Shown, Left Hand Opposite.

3. Mount Closer on Door

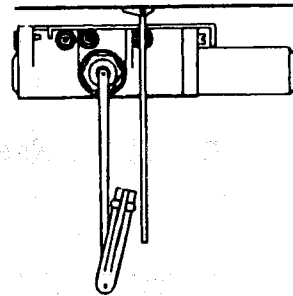
Slip closer into bracket, engaging two holding pins with holes not countersunk on end of bracket nearest hinge edge of door. Insert #1/4 - 20 x 1/2" machine screw furnished, through opposite end of bracket into closer. **TIGHTEN SECURELY.**

NOTE:
Bracket mounting screws are self locking and may require extra torque.

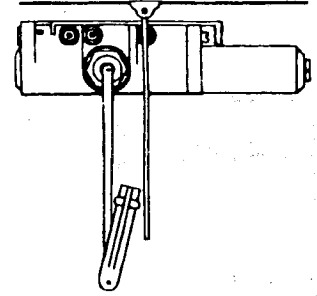


4. Mount Arm Bracket on Jamb

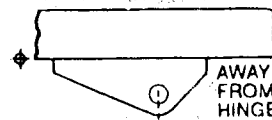
Using holes spotted in step 1, mount arm bracket on jamb.



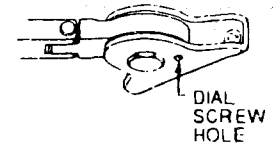
NON HOLD-OPEN ARM:
Position with pivot point
AWAY from hinge



HOLD-OPEN ARM:
Position so that dial
screw hole is on
UNDERSIDE of bracket.



**AWAY
FROM
HINGE**

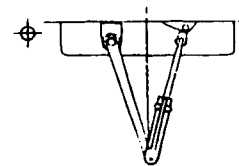


**DIAL
SCREW
HOLE**

5. Position Arms For Use

Open door and slide arm bracket rod into arm loop. Close door, swing arms so that they form a "V" position. With hex key **TIGHTEN SCREW IN ARM LOOP SECURELY.**

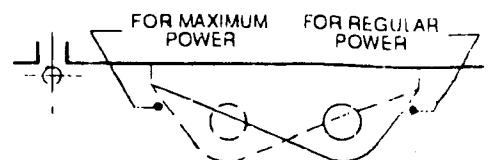
NOTE:
With hold-open arms when 85° opening is required, frame arm **MUST** be perpendicular.



**NOTE ARMS IN "V"
POSITION**

For Additional 15% Closing Power

REGULAR DOOR MOUNTED CLOSERS ONLY:
Reposition arm mounting bracket so that pivot point is **TOWARD** hinge.



**FOR MAXIMUM
POWER**

**FOR REGULAR
POWER**

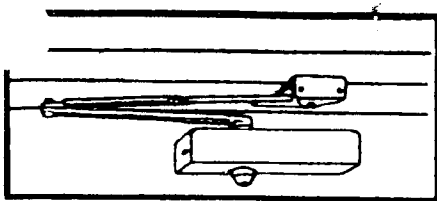
To adjust Hold Open, Closing Speed, Latching Speed, Backcheck, Delayed Action and Spring Power, see page 8.

Installation Instructions

2210, 2410, 2610 Series

Parallel Arm Mounting Closer

Right Hand Application Shown, Left Hand Opposite



CAUTION:

Closer to be installed in a true horizontal position to ensure proper closer performance.

NOTES:

- To obtain extra closing force, add 3" (77 mm) to dimensions marked. This will limit degree of door opening to 110°.
- Dimensions given in inches and (mm).
- Minimum top rail: 4⁹/₁₆" (116 mm)

BEFORE INSTALLING:

- Set spring power adjustment; see instructions on page 8.
- Check hand of your door (See page 1).

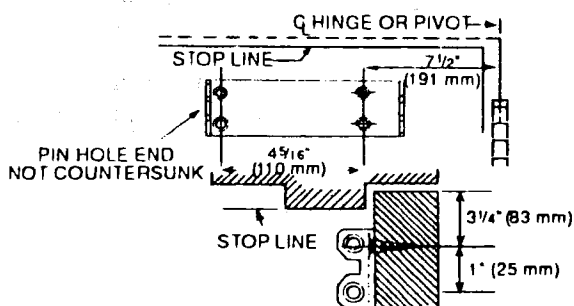
1.

Mark Door and Jamb

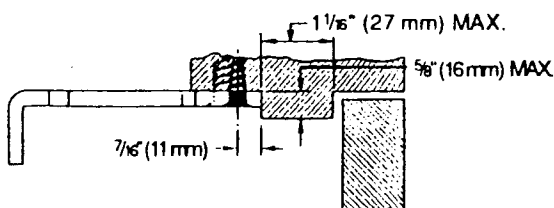
Using template provided mark holes for closer body mounting bracket. Attach closer bracket.

NOTE:

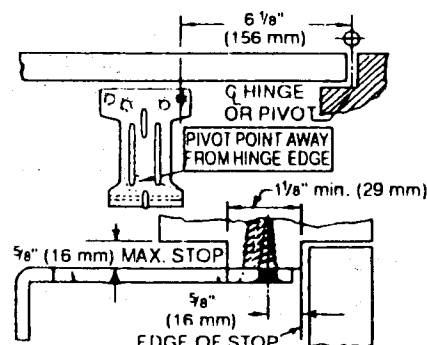
End of closer bracket with pin retaining holes NOT counter sunk must be away from hinge edge of door.



RABBET MOUNTED



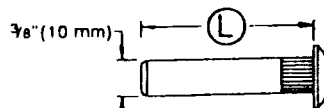
ADAPTER PLATE BRACKET



MOUNTING SCREW SPECIFICATIONS

ARM AND CLOSER BRACKET

1/4 - 20 x 1/2" oval head machine screw or #14 oval head wood screws
NOTE: SEX NUTS FURNISHED WHEN ORDERED

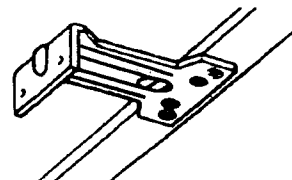


DOOR THICKNESS	SEX NUT LENGTH "L"
1 3/8" (35 mm)	1 9/32" (33 mm)
1 3/4" (44 mm) & OVER	1 21/32" (42 mm)

2.

Mount Adapter Plate Bracket on Jamb

Using holes spotted on soffit or stop in Step 1, mount adapter plate bracket.



3. Mount Arm Bracket

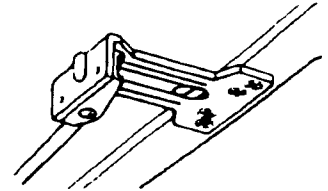
Mount arm bracket to adapter plate bracket using 1/4-20 x 1/2" screws furnished.

NON-HOLD OPEN ARM:

Pivot point must be AWAY from hinge edge of door.

HOLD-OPEN ARM:

Position so that dial screw hole is on UNDERSIDE of bracket.

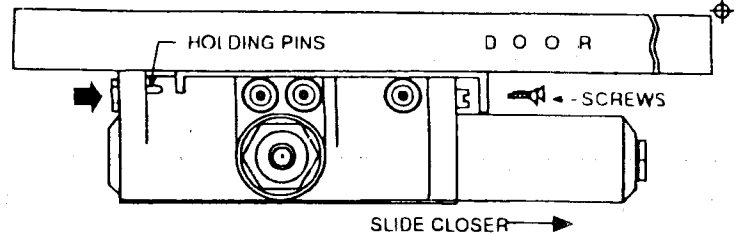


4. Mount Closer on Door

Slip closer into bracket, engaging two holding pins with holes not countersunk on end of bracket away from hinge edge of door. Insert #1/4- 20 x 1/2" machine screws furnished through opposite end of bracket into closer. **TIGHTEN SECURELY.** (If necessary, open door to provide room to tighten screws).

NOTE:

Bracket mounting screws are self locking and may require extra torque.



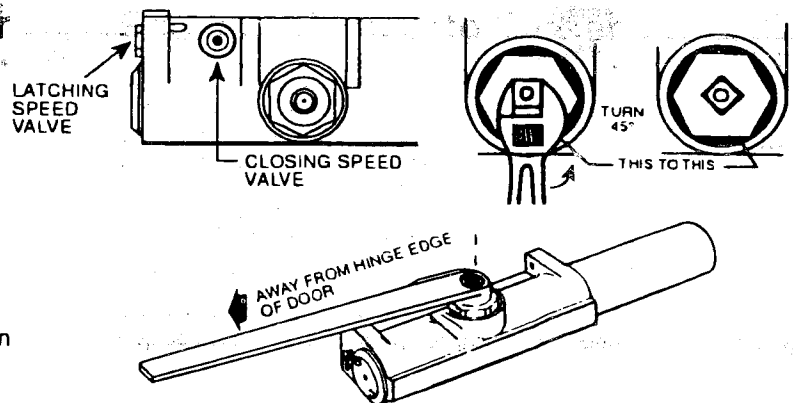
5. Position Arm onto Closer

Remove screw and arm washer from spindle. Using hex wrench provided turn closing speed and latching speed (see page 8) valves clockwise and close completely. **DO NOT OVER TIGHTEN.**

Using a wrench turn under side of spindle 45° toward the closer tube until it reaches the diamond position.

Immediately place arm on spindle so that it is parallel to the closer body.

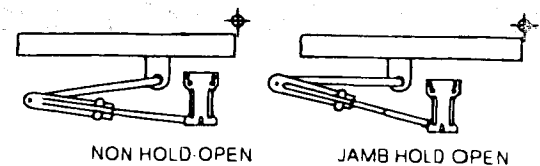
Replace arm washer tightly, secure screw. Open valves with hex wrench counter-clockwise (See page 8 for adjustments).



6. Connect and Position Arms

Open door and slide arm bracket rod into arm loop. Close door, swing arms so that they are in a "V" position. With hex wrench **TIGHTEN SCREW IN ARM LOOP SECURELY.**

To adjust Hold Open, Closing Speed, Latching Speed, Backcheck, Delayed Action and Spring Power, see page 8.

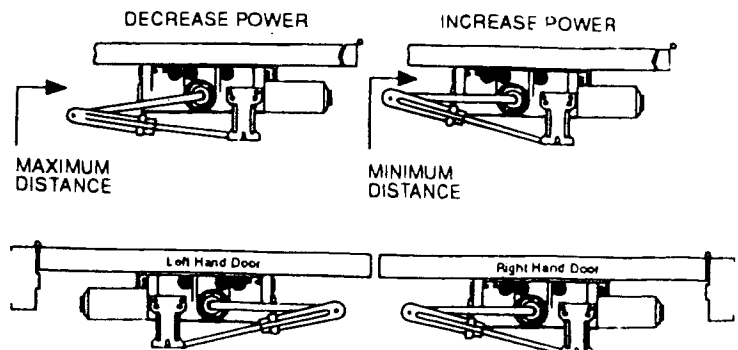


7. Power Adjustments

To increase the power of the closer, readjust the arm so it is nearer the door. To decrease power, readjust the arm so it is farther away from the door and then secure screw in arm loop.

NOTE:

Spring tube points toward hinge side.

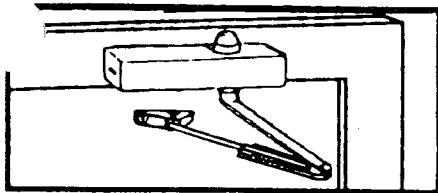


Installation Instructions

2220, 2420, 2620 Series

Jamb Mounted Inverted Closer

Right Hand Application Shown, Left Hand Opposite



BEFORE PROCEEDING:

- Set spring power adjustment where applicable. See instructions on page 8.
- Check hand of your door. (See page 1).
- Check for your application in the chart below.

NOTE:

Dimensions given in inches and (mm). Minimum 1 3/4" (44 mm) required for top rail.

CAUTION:

Closer to be installed in a true horizontal position to ensure proper closer performance. DO NOT USE PAPER TEMPLATE. Use mounting dimensions chart below.

IMPORTANT NOTICE: A door closer is NOT to be used as a door stop.

1.

Mark Door and Jamb

Following dimensions given for your frame conditions and desired degree of door opening, mark door and jamb with ONE closer bracket mounting hole and ONE arm bracket mounting hole as shown. Position brackets and spot balance of holes. Mount closer bracket on jamb.

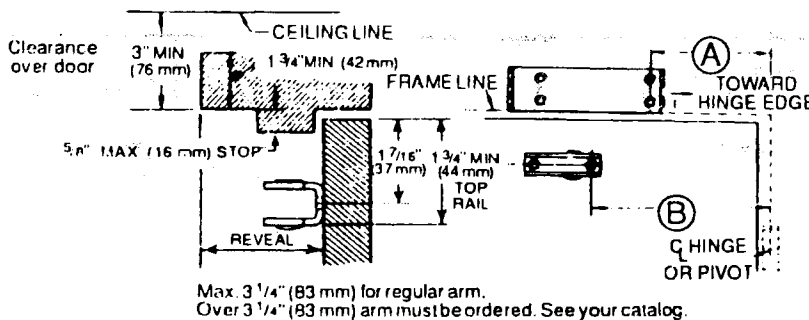
NOTE:
END OF BRACKET WITH PIN RETAINING HOLES NOT COUNTERSUNK MUST BE TOWARD HINGE EDGE OF DOOR.

MOUNTING DIMENSIONS

OPENING MAXIMUM	A	B	HINGE CONDITION
110°	8 7/8" (225 mm)	13 3/8" (340 mm)	Butts, Offset Pivots, and Swing Clear Hinges
140°	7 3/8" (187 mm)	11 7/8" (302 mm)	
180°	5 7/8" (149 mm)	10 3/8" (264 mm)	
140°	7 3/8" (187 mm)	11 7/8" (302 mm)	*Center Hung

Dimensions "A" and "B" are located from centerline of hinge as shown and apply to pivot point of swing clear hinges, offset and centerhung pivots.

* Must be single acting door.

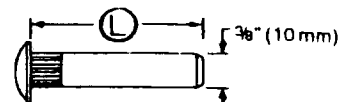


MOUNTING SCREW SPECIFICATIONS

ARM AND CLOSER BRACKET

1/4 - 20 x 1/2 oval head machine screw or #14 oval head wood screws

NOTE:
SEX NUTS FURNISHED WHEN ORDERED



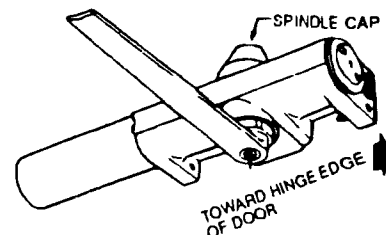
DOOR THICKNESS	SEX NUT LENGTH "L"
1 3/8" (35 mm)	1 9/32" (33 mm)
1 3/4" (44 mm) & OVER	1 21/32" (42 mm)

2.

Position Arm on Closer

Remove screw and arm washer from spindle. Place arm on proper spindle so that it extends out from front of closer and is at a right angle to closer body.

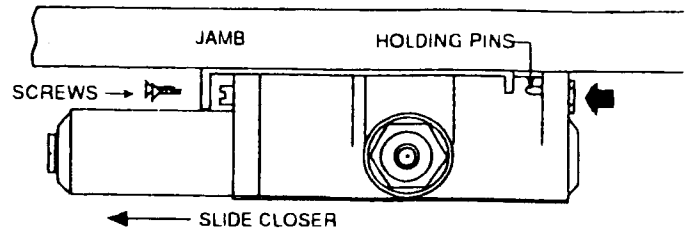
TO DETERMINE PROPER SPINDLE: Hold closer up to jamb so that spindle end is TOWARD hinge edge of door. Arm goes on bottom spindle. Be sure arm is against shoulder when attached. DO NOT FORCE. Replace arm washer and tightly secure screw, position spindle cap now. (See page 8).



3. Mount Closer on Jamb

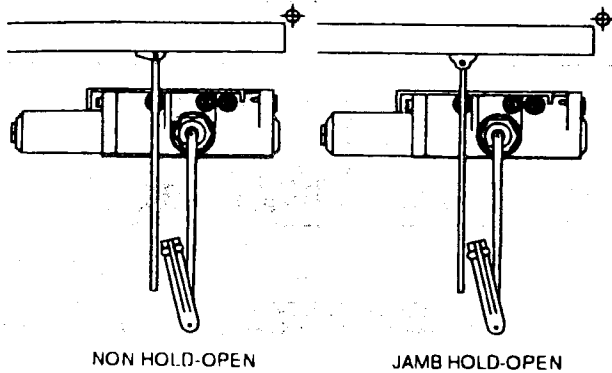
Slip closer into bracket, engaging two holding pins with holes not countersunk on end of bracket nearest edge of door. Insert #1/4 - 20 x 1/2" machine screws furnished through opposite end of bracket into closer. **TIGHTEN SECURELY.**

NOTE:
 Bracket mounting screws are self locking and may require extra torque.



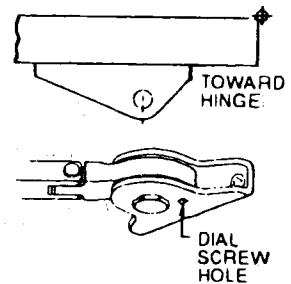
4. Mount Arm Bracket on Door

Using holes spotted in step 1, mount arm bracket on door.



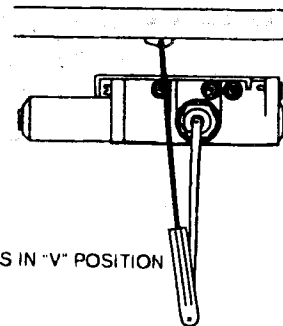
NON-HOLD-OPEN ARM:
 Position with pivot point
 TOWARD hinge.

HOLD-OPEN ARM:
 Position so that dial screw
 hole is on **UNDERSIDE** of
 bracket.



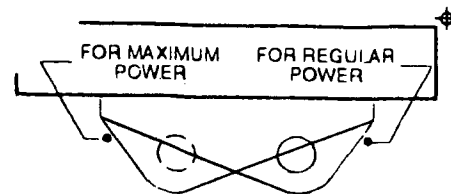
5. Position Arms For Use

Open door and slide arm bracket rod into arm loop. Close door, swing arms so that they form in a "V" position. With hex key **TIGHTEN SCREW IN ARM LOOP SECURELY.**



6. For Additional 15% Closing Power

TOP JAMB DOOR MOUNTED CLOSERS ONLY:
 Reposition arm mounting bracket so that pivot is
 TOWARD hinge.



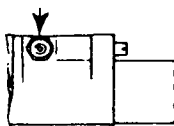
To adjust Hold Open, Closing Speed, Latching Speed, Backcheck, Delayed Action and Spring Power, see page 8.

To Adjust Your Closer

Multiple Backcheck Location Valve

Valve is preset at factory closed. To open up the valve and thereby change where backcheck takes effect, turn valve counter-clockwise with hex key provided. Valve should be flush with retaining nut. **DO NOT EXTEND VALVE BEYOND THE NUT.** (Degrees are approximate)

FULLY OPENED FLUSH WITH TOP OF NUT

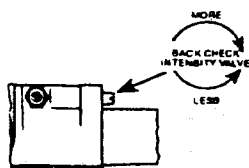


	Regular	Parallel Arm	Top Jamb	Track
CLOSED	60° - 65°	65° - 70°	70° - 75°	65° - 70°
OPEN	85° - 90°	95° - 100°	90° - 95°	95° - 100°

Backcheck Intensity Valve

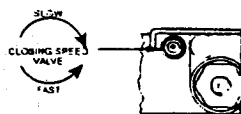
Turn valve COUNTER-CLOCKWISE for LESS backcheck or CLOCKWISE for MORE backcheck.

Backcheck should be set to give a soft, cushioning action, not a sudden stop.



Closing Speed Valve

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



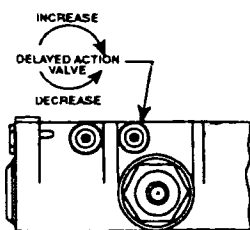
Latching Speed Valve

After closing speed has been obtained, turn latching speed valve CLOCKWISE to SLOW latching or COUNTER-CLOCKWISE to SPEED latching for 2" to 5" of door travel. Adjustments to the CLOSING TIME should be made depending on user traffic such as physically or visually handicapped persons to allow for passage through the door opening without interference from the door.



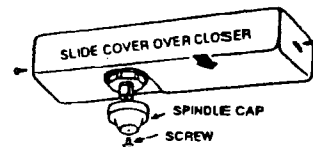
Delayed Action Valve

Turn valve CLOCKWISE to INCREASE hold-open time or COUNTER-CLOCKWISE to decrease it. Delayed action may be adjusted from 20 seconds to 90 seconds, depending on door closer size. It takes effect between 90° to 70° of door closing.



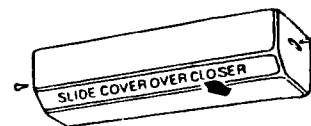
Position Cover Standard Cover

Slip cover over closer tightly against closer mounting surface. Secure on each side with phillips screws. Position spindle cap over unused spindle and secure with truss head screw.

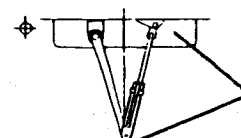


Full Cover (If furnished)

Slip cover over closer tightly against closer mounting surface. Secure on each side with phillips screws.



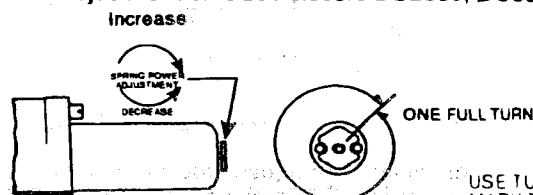
Typical Lubrication



LUBRICATE PIVOT POINTS PERIODICALLY ON ALL INSTALLATIONS

Spring Power Adjustment (Where Applicable)

- Size 1-6 adjust on DC2200, DC3200
- Half size adjustment on DC2400
- No adjustment on sized closers DC2600, DC3600



USE TURN INDICATOR MARK TO COUNT NUMBER OF TURNS.

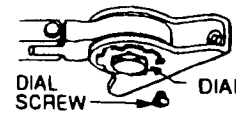
SPRING POWER ADJUSTMENT CHART

Size of Door			Number of Full (360°) Adjusting Turns Clockwise	Spring Power Equivalent Approx. Size
Interior	Exterior Inswinging	Exterior Outswinging		
2' 4" (712 mm)	-	-	4	2
2' 6" (764 mm)	-	-	8	3
3' 0" (915 mm)	-	2' 6" (764 mm)	12	4
3' 6" (1067 mm)	-	3' 0" (915 mm)	16	5

All "non-size" closers leave the factory with the spring power adjustment at approx. size 3. Find your type of installation and door size from the chart on page 1. Turn the spring power adjusting nut as necessary with the wrench furnished.

To Adjust Hold Open

Open the door to desired position and tighten the hold open screw firmly (For RH application, turn screw on underside CLOCKWISE. For LH application, turn screw COUNTER-CLOCKWISE.) Place the hold open dial over the hex head of the bracket screw so that one of the slots in the dial is directly over small screw hole tapped in bracket. Seat the dial tightly over the bracket. INSERT DIAL SCREW AND TIGHTEN SECURELY.



Corbin
sswin

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Berlin, Connecticut 06037 USA