

# SARGENT® 281 DOOR CLOSERS WITH CPS/CPSH ARMS INSTALLATION INSTRUCTIONS

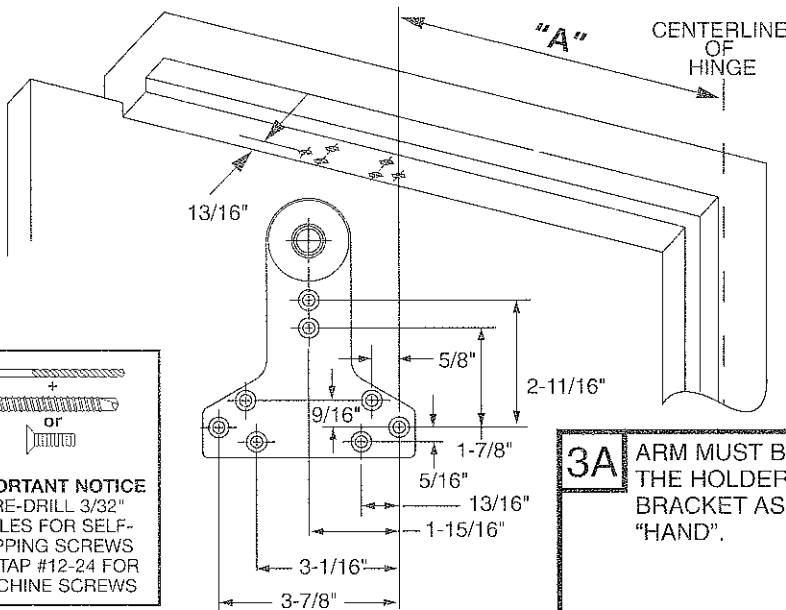
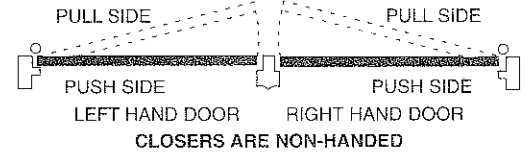
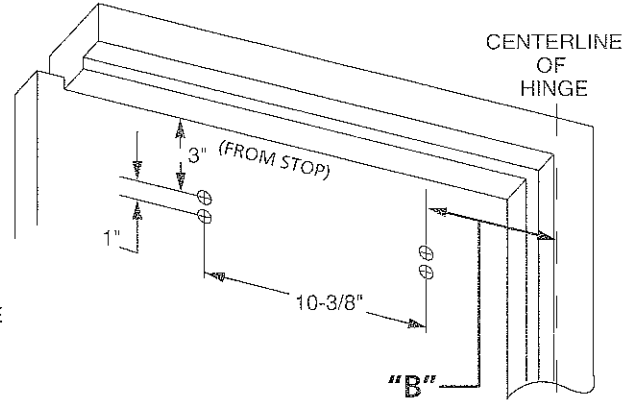
281 ADJUSTABLE FROM SIZE 1 THRU 6

**CAUTION: FAILURE TO INSTALL OR ADJUST PROPERLY MAY RESULT IN INJURY OR DAMAGE.  
FOR ASSISTANCE CALL SARGENT AT 1-800-727-5477.**

**1** DETERMINE MAXIMUM DEGREE OF OPENING OR HOLD OPEN (CPSH) REQUIRED. DRILL AND TAP DOOR AND FRAME FOR #12-24 MACHINE SCREWS. WHEN USING SELF TAPPING SCREWS PROVIDED, PREDRILL WITH A 3/32" DRILL.

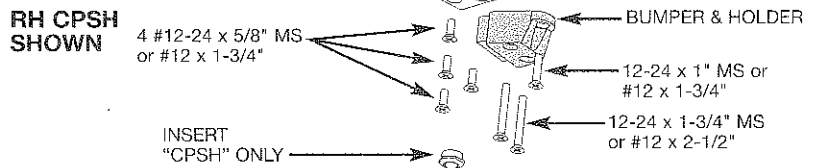
DEGREE OF DOOR OPENING AT "HOLD OPEN" ■					
	85°	90°	95°	100°●	105°●
<b>DIM. "A"</b>	9-7/16"	8-3/4"	8-1/8"	7-9/16"	7-1/16"
<b>DIM. "B"</b>	4-9/16"	3-15/16"	3-5/16"	2-11/16"	2-3/16"

- DO NOT USE SWING CLEAR HINGES FOR DOOR OPENINGS GREATER THAN 95°. USE ALTERNATE TYPE HINGES.
- DIMENSIONS FOR GIVEN DEGREE BASED ON 4-1/2" HINGE. WHEN 3-1/2" TO 6" HINGES ARE USED, HOLD OPEN ANGLE WILL CHANGE BY LESS THAN 1/2°. DEAD STOP OCCURS 3° BEYOND HOLD OPEN.



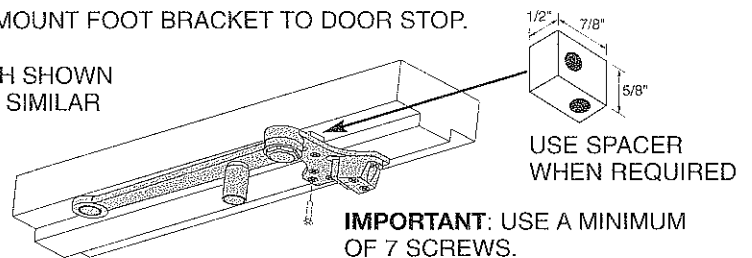
**IMPORTANT NOTICE**  
PRE-DRILL 3/32" HOLES FOR SELF-TAPPING SCREWS OR TAP #12-24 FOR MACHINE SCREWS

**3A** ARM MUST BE THE SAME HAND AS THE DOOR. ASSEMBLE THE HOLDER WITH BUMPER & INSERT (CPSH ONLY) TO FOOT BRACKET AS LOCATION OF THESE PARTS DETERMINES THE "HAND".

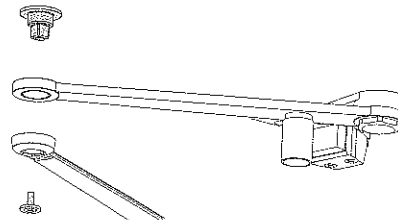


**3B** MOUNT FOOT BRACKET TO DOOR STOP.

CPSH SHOWN  
CPS SIMILAR

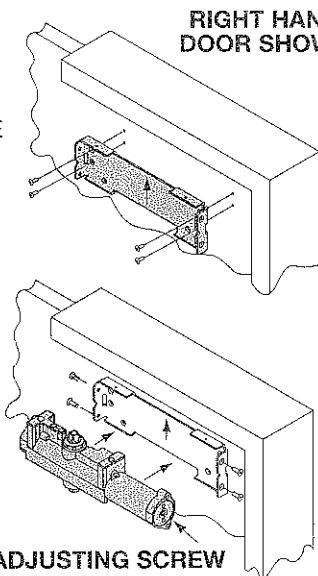


**3C** ALTERNATE: PREASSEMBLE ARMS PRIOR TO ATTACHING TO STOP.



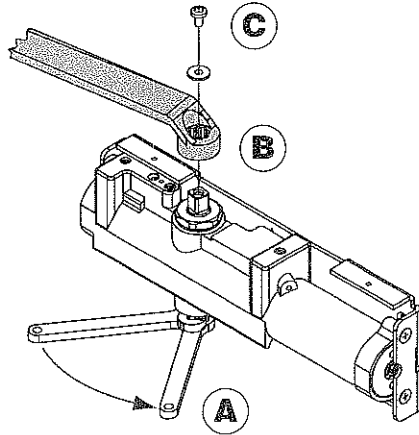
**2** INSTALL MOUNTING BRACKET WITH ARROW POINTING UP FOR BOTH RH & LH DOORS. MOUNT CLOSER WITH SPRING ADJUSTING SCREW TOWARDS HINGE.

DRILL & TAP AND USE SCREWS PROVIDED OR USE MORTISE NUTS WHEN REQUIRED.



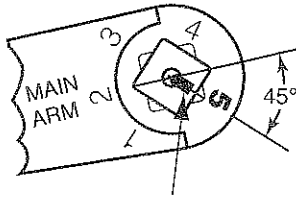
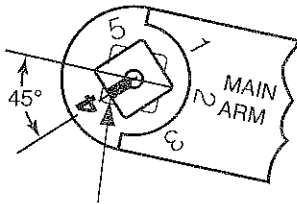
SPRING POWER ADJUSTING SCREW

- 4** \* A. ROTATE BOTTOM SPINDLE WITH WRENCH.  
 B. ASSEMBLE MAIN ARM WITH INDEX MARK POSITIONED AS SHOWN.  
 C. SECURE WITH SCREW AND WASHER.



LEFT HAND DOOR

RIGHT HAND DOOR

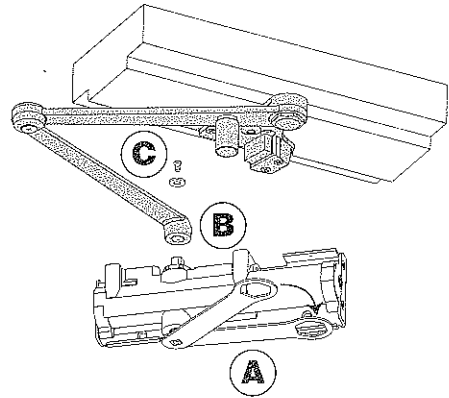


INDEX MARK ON SPINDLE

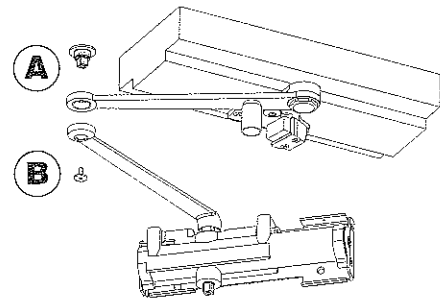
INDEX MARK ON SPINDLE

\* WARNING: IF NOT PROPERLY INDEXED, DOOR CLOSER WILL NOT FUNCTION PROPERLY.

- 4A** ALTERNATE METHOD FOR ATTACHING PREASSEMBLED ARM.

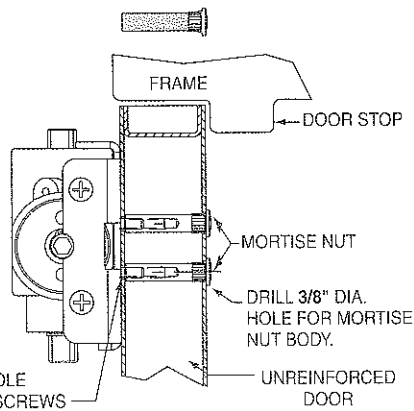


- 5** A. OPEN DOOR AND INSTALL PIVOT AS SHOWN.  
 B. USE SCREW TO SECURE PIVOT AND ARMS AS SHOWN.



## ACCESSORIES

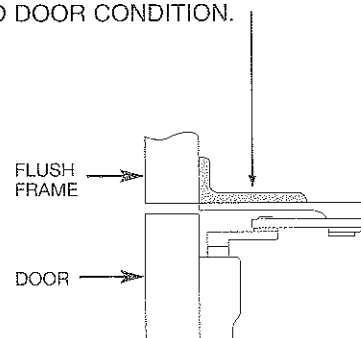
OPTIONAL: USE MORTISE NUTS (#4TB) WHEN THRU-BOLTING IS REQUIRED.



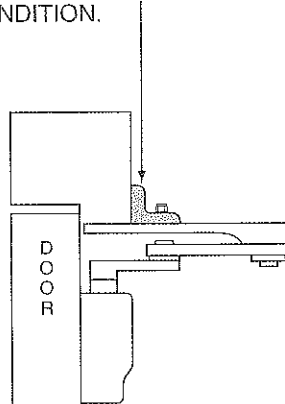
DRILL 1/4" DIA. HOLE FOR MOUNTING SCREWS

SEE PAGES 1 AND 4 FOR TEMPLATING DIMENSIONS

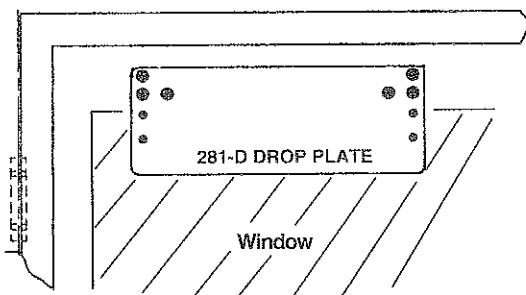
125 VF BRACKET FOR FLUSH FRAME AND DOOR CONDITION.



125 V BRACKET FOR NARROW FRAME CONDITION.



281 DROP PLATE USED WITH NARROW TOP RAILS.




**2**

A7319E

## FINAL ADJUSTMENT AND REGULATING PROCEDURES

**6** MINIMUM RECOMMENDED DOOR CLOSING TIME IS 6 SECONDS FOR DOORS OPENED TO 90 DEGREES.

**SPEED UP**  **SLOW DOWN** USE 1/8" HEX (ALLEN) WRENCH TO ADJUST VALVES AS NEEDED.

**CLOSING AND LATCHING SPEEDS:**

TURN VALVES CLOCKWISE TO SLOW DOWN OR COUNTERCLOCKWISE TO SPEED UP DOOR MOVEMENT.

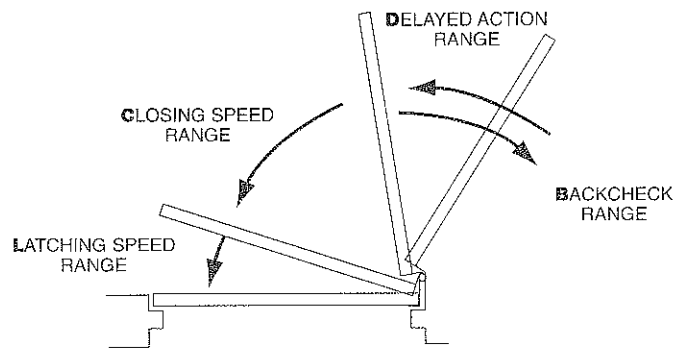
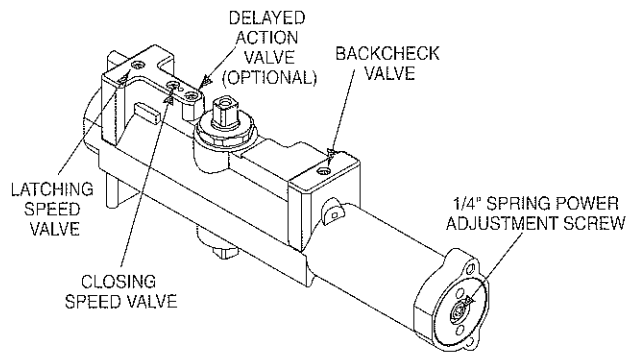
**BACKCHECK:**

TO REGULATE THE INTENSITY OF BACKCHECK ACTION TURN VALVE CLOCKWISE TO INCREASE OR COUNTERCLOCKWISE TO DECREASE CHECKING.

**CAUTION: SET VALVE FOR SLIGHT CUSHIONING EFFECT; CLOSER CAN BE DAMAGED IF THE CHECKING ACTION IS TOO ABRUPT. NEVER USE THE BACKCHECK AS A DOOR STOP. ALWAYS USE A DOOR STOP TO STOP THE DOOR.**

**DELAYED ACTION FEATURE (OPTIONAL FEATURE ON SOME MODELS):**

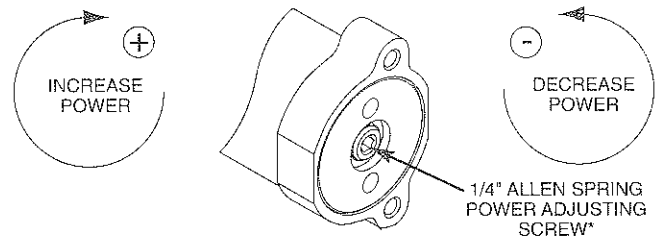
"DELAYED ACTION" PROVIDES SLOW DOOR CLOSING THROUGH THE DELAYED ACTION RANGE. TURN VALVE CLOCKWISE TO SLOW DOWN OR COUNTERCLOCKWISE TO SPEED UP DOOR MOVEMENT.



**7** ADJUST POWER TO ALLOW DOOR TO CLOSE AND LATCH.

**NUMBER OF TURNS OF SPRING POWER ADJUSTING NUT**

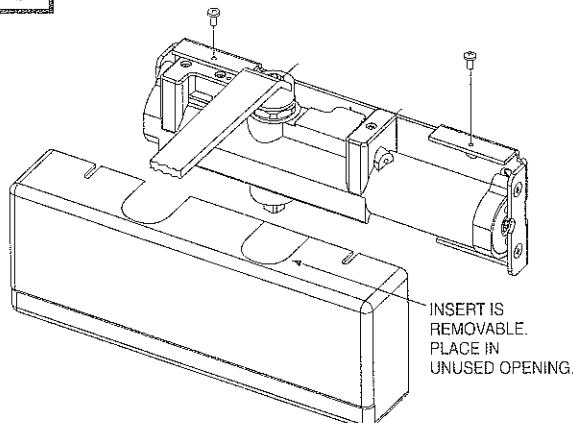
DOOR WIDTH (INCHES)	EXTERIOR DOORS	*INTERIOR DOORS
24-30	Turn screw 2-7 )	Turn screw 1-5 (
30-36	Turn screw 7-11 )	Turn screw 3-6 (
36-42	Turn screw 11-15 )	FACTORY SET
42-48	Turn screw 15-17 )	Turn screw 8 & up )



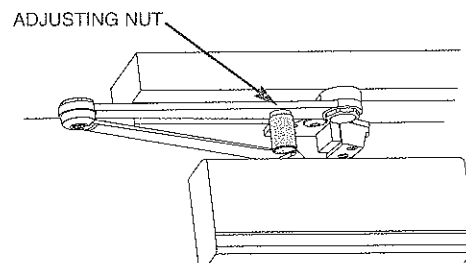
\*IF INTERIOR DOORS DO NOT HAVE TO COMPLY WITH ADA REQUIREMENTS, EXTERIOR DOOR SETTINGS ARE RECOMMENDED. WHERE STRONG DRAFTS EXIST, INCREASE SPRING POWER AS NEEDED.

DOOR ADJUSTED TO CLOSE DUE TO HIGH DRAFT CONDITIONS MAY EXCEED ADA STANDARDS. CONSULT LOCAL ORDINANCES WHEN FIRE DOORS ARE INVOLVED.

**8** INSTALL COVER WITH TWO SCREWS AS SHOWN.

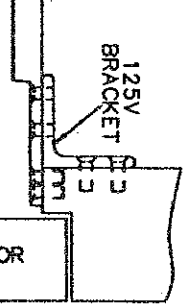
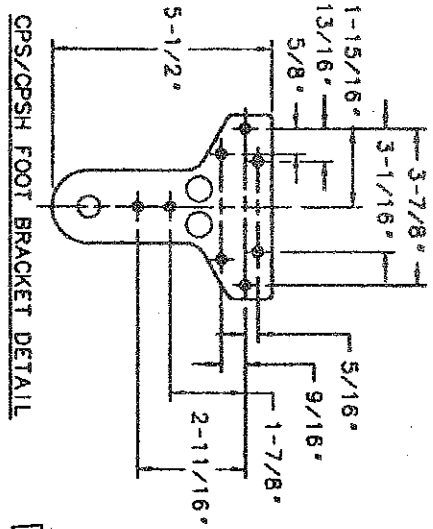
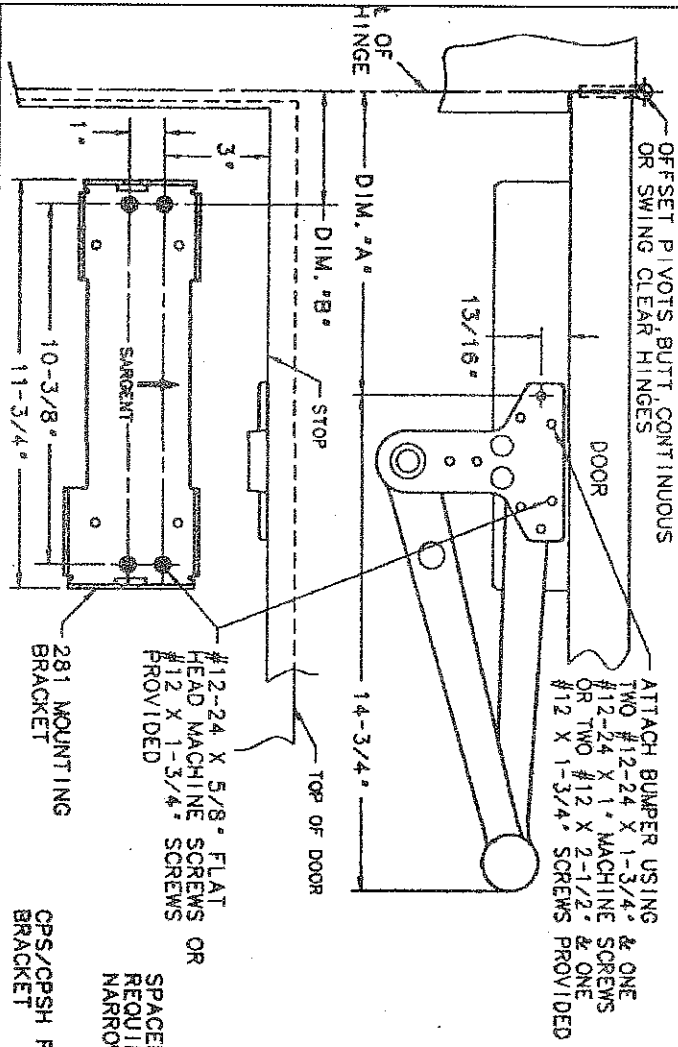


**9** TO ADJUST HOLDER ARM (CPSH ONLY) ALL CPSH ARMS ARE SHIPPED NON-HOLD OPEN FROM THE FACTORY. TO SET IN HOLD OPEN, TURN THE ADJUSTING NUT APPROXIMATELY 1-1/2 TURNS CLOCKWISE.



DEGREE OF DOOR OPENING AT HOLD OPEN

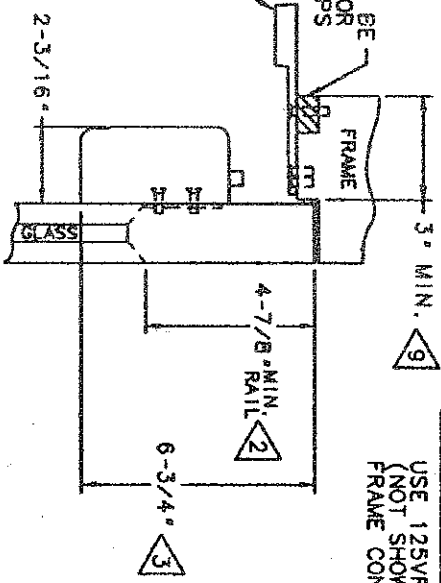
DIM. "A"	85°	90°	95°	100°	105°
DIM. "B"	9-7/16"	8-3/4"	8-1/8"	7-9/16"	7-1/16"
	4-9/16"	3-15/16"	3-5/16"	2-11/16"	2-3/16"



NARROW FRAME INSTALLATION  
USE 125V BRACKET (NOT SHOWN) FOR FLUSH FRAME CONDITIONS.

NOTES:

1. REINFORCE METAL DOORS AND FRAMES PER ANSI A250.8 AND SD1-100 STANDARDS, 12 GAUGE RECOMMENDED.
2. FOR THIN RAIL DOORS, USE 281-D DROP PLATE, SEE DATA SHEET A7244.
3. 281-J COVER PLATE MAY BE USED WHEN CLOSER IS VISIBLE THROUGH GLASS.
4. DO NOT USE THESE MOUNTINGS FOR SWING CLEAR HINGES.
5. LEFT HAND DOOR SHOWN, RIGHT HAND OPPOSITE.
6. DIMENSIONS "A" & "B" ARE BASED ON A 4-1/2" BUTT HINGE. IF A 3-1/2" OR 6" BUTT HINGE IS USED, THE HOLD OPEN ANGLE WILL CHANGE BY LESS THAN 1/2°.
7. DEAD STOP OCCURS APPROX. 3" BEYOND HOLD OPEN.
8. IF DOOR CLOSER INTERFERES WITH LIGHT KIT USE 281-B PLATE.
9. SEE DATA SHEET A7242 FOR PLATE DIMENSIONS ONLY.
10. WHEN SOFFIT IS LESS THAN 3" USE A 125V BRACKET.



**SARGENT Manufacturing Company**  
100 Sargent Drive New Haven, CT 06511

DATA SHEET: 281 SERIES DOOR CLOSER WITH CPS OR CPSSH HEAVY DUTY PARALLEL ARM

STRUCTURE DATE: AUG. 02  
TEMPLATE NO.: A7389 B