

# *DOR-O-MATIC®*

## **Astro-Slide®**

### **General Installation and Service Manual**

#### ***DOR - O - MATIC®***

7350 W. Wilson Ave.

Harwood Heights, IL 60656

Toll Free: 1-800-543-4635

In Illinois: 708-867-7400

Admin. FAX: 708-867-0421

Engineering FAX: 708-867-1177

Booklet No.

8100-984

Price: \$25.00

Printed in U.S.A.

3/31/94

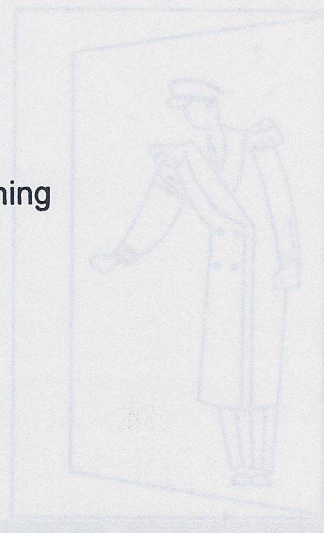


## ILLUSTRATIONS

### FIGURE NUMBER

### TITLE

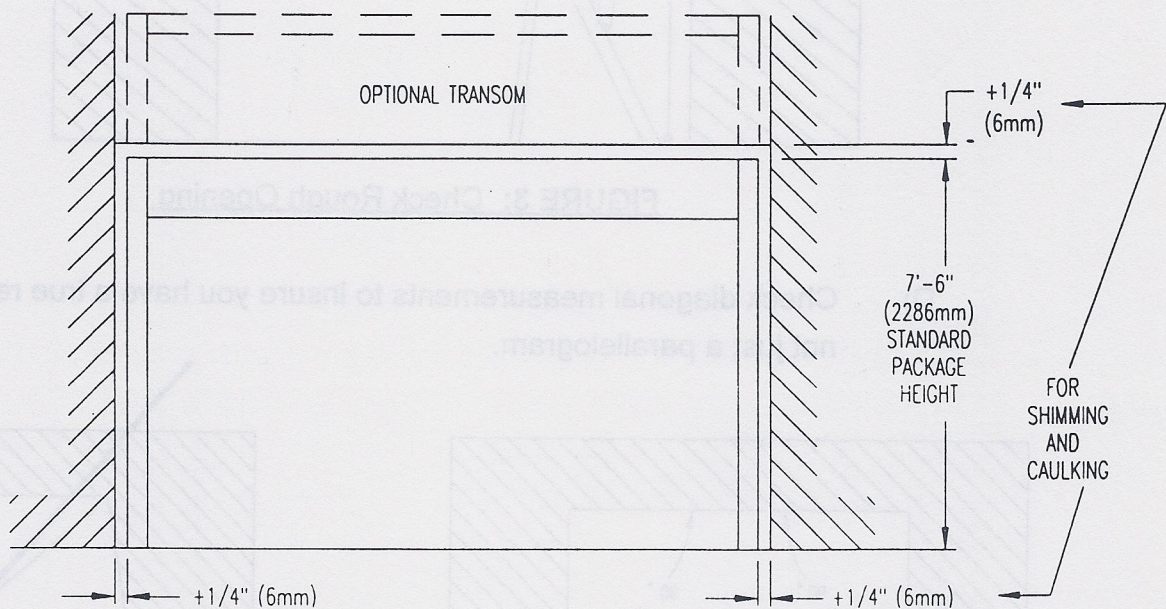
1	Clearance required at rough opening
2	Level floor
3	Check rough opening
4	Check rough opening
5	Swing cover removal
6	Jamb tube attachment to header
7	Jamb tube anchorage
8	Isometric of belt drive assembly
9	Section thru header, door & panel
10	Installation of bottom guide track, panel threshold
11	Bottom panel pivot attachment
12	Top pivot (SO) detail
13	Sidelight installation/removal details
14	Lining up reed switch & magnet, and setting 1/2" (13mm) clearance
15	Carrier breakout/carrier bracket removal
16	Stop bracket attachment to carrier bracket
17	Door height adjustment procedure
18	Installation of door bottom pivot assembly
19	Anti-riser adjustment
20	Door/carrier adjustment
21	Limit arm types
22	Installation of D.O.M. bumper bar for Astro-Slide
23	Astro-Slide electrical connections
24	Glass measurement





**ASTRO-SLIDE INSTALLATION PROCEDURE**  
**(SO-SX-SX-SO) PACKAGE BI-PART INSIDE SLIDE**

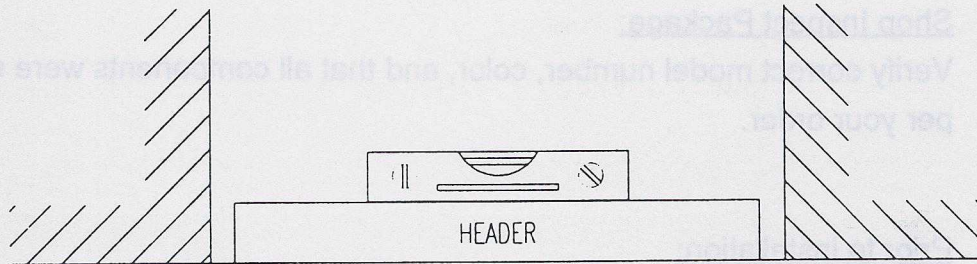
- 1) Shop Inspect Package:  
Verify correct model number, color, and that all components were shipped per your order.
  
- 2) Prior to installation:  
Verify in field that all conditions are correct and in accordance with final approved shop drawings.
  - A) Check that opening is correct size; package width plus 1/2" (13mm), package height plus 1/4" (6mm), for shimming and caulking. (See fig. 1)



**FIGURE 1: Clearance Required at Rough Opening.**

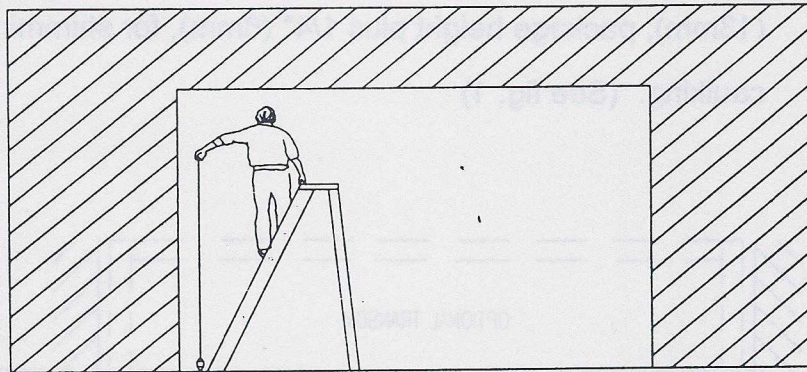


- B) Check that floor is level! Use minimum 6'0" (1829mm) level or use actual aluminum header turned upside down to check floor. (See fig. 2)



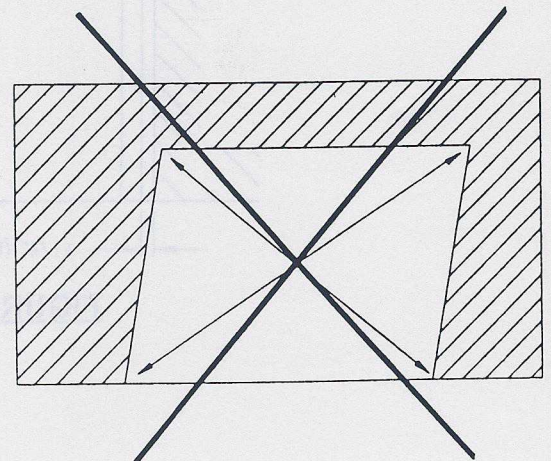
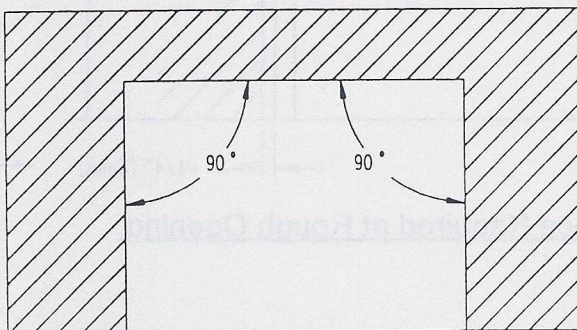
**FIGURE 2: Level Floor.**

- C) Check that rough opening where jambs are to go is vertical. (Use plumb bob)



**FIGURE 3: Check Rough Opening.**

- D) Check diagonal measurements to insure you have a true rectangle, not just a parallelogram.



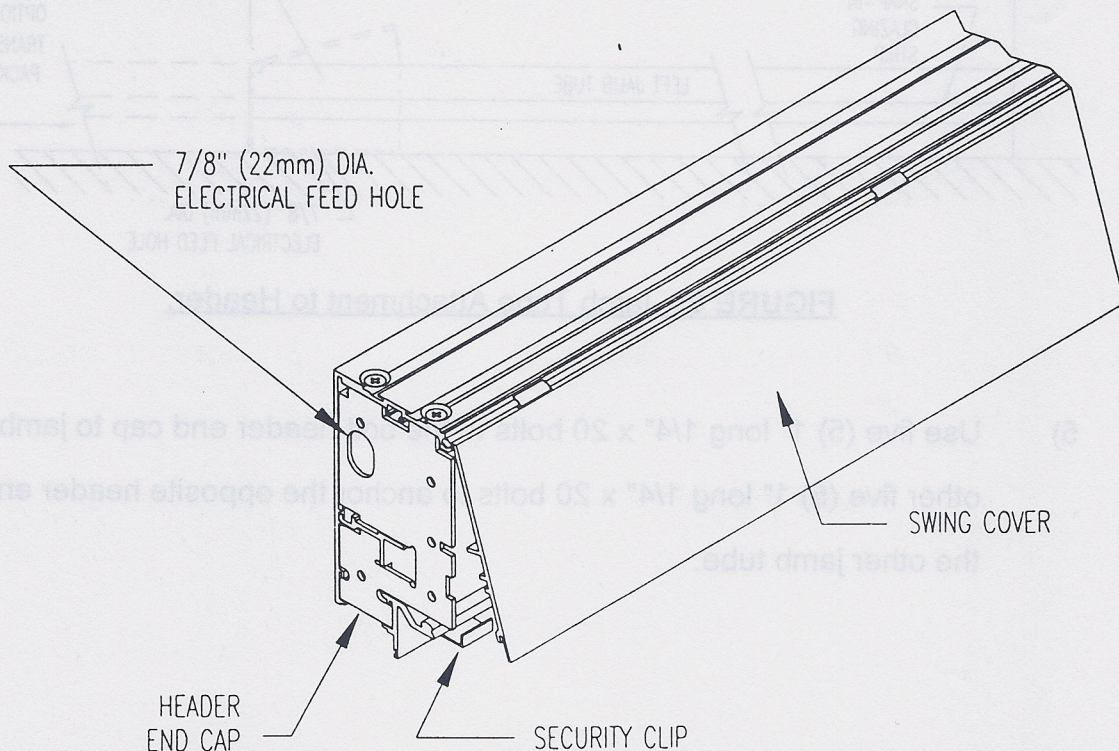
**FIGURE 4: Check Rough Opening.**



- E) Check that electrical feed (120V, 15A, 1 phase for U.S.A. and Canada; 220/240V, 5A, 1 ph. for Europe, Middle East, etc.) is correctly located in accordance with final approved shop drawings and all conduits and electrical junction boxes for push plates or other activation devices (if required) are likewise correctly located.

If the above items are not correct, do not attempt to install the Astro-Slide package! Report any incorrect items to the general contractor immediately! Do not proceed until all conditions are correct!

- 3) Open up carton marked 'header.' Remove header, lay on piece of cardboard with swing cover up. Loosen 2-3 security clips holding cover down and swing cover up.

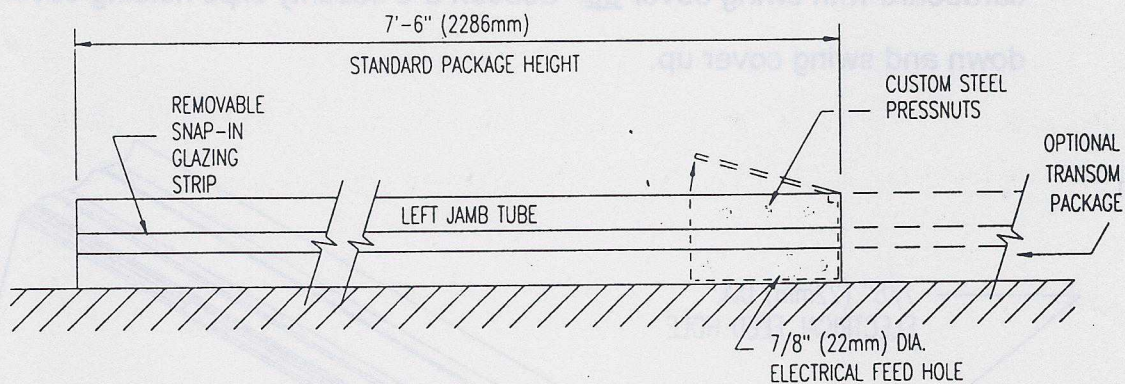


**FIGURE 5: Swing Cover Removal.**



Within header, (mounted in factory) are motor gear box with drive pulley, belt drive, control box, safety beam wiring, any switches, motion detector wiring, idler pulley with tensioner bracket, transformer (120VAC to 12VAC for U.S.A. and Canada; 220/240VAC for Europe, Middle East, etc.), and electrical junction box. Note that you can turn header upside down to verify that floor is level across door opening. Lay out the items shipped in "blister" pack at a convenient location.

- 4) Locate the jamb tube with the 7/8" (22mm) diameter electric feed hole. Lay down this jamb tube alongside header end, closest to the junction box, so that holes line up.



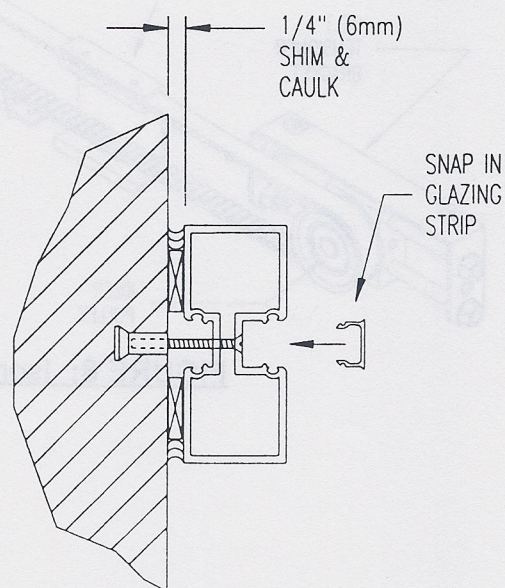
**FIGURE 6: Jamb Tube Attachment to Header.**

- 5) Use five (5) 1" long 1/4" x 20 bolts to the bolt header end cap to jamb, use other five (5) 1" long 1/4" x 20 bolts to anchor the opposite header end to the other jamb tube.



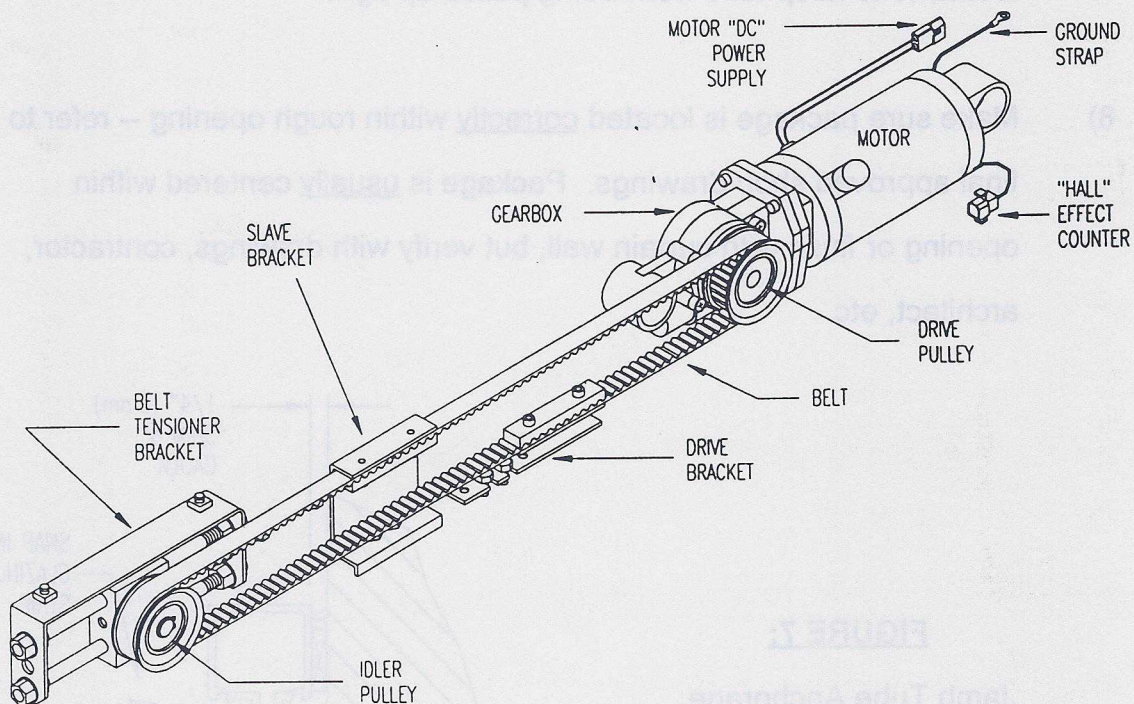
- 6) Using a helper, tip up jamb/header assembly, (be sure header swing cover will be on correct side). Lift carefully, to prevent any twisting of package and slip into existing rough opening that you have previously checked for size and squareness. Provide temporary support for header until final anchorage is complete. Bring 120V for U.S.A. and Canada (220/240V for Europe, Middle East, etc.) electric feed thru 7/8" (22mm) diameter hole on side closest to junction box and transformer in your package (should have been verified on shop drawings).
- 7) Insert wood tapered "shims" at each jamb to plumb each jamb. Insert 1/4" (6mm) spacers around header or horizontal transom tube at anchor locations to keep tube from being pulled up tight.
- 8) Make sure package is located correctly within rough opening -- refer to final approved shop drawings. Package is usually centered within opening or flush with curtain wall, but verify with drawings, contractor, architect, etc.

**FIGURE 7:**  
Jamb Tube Anchorage.





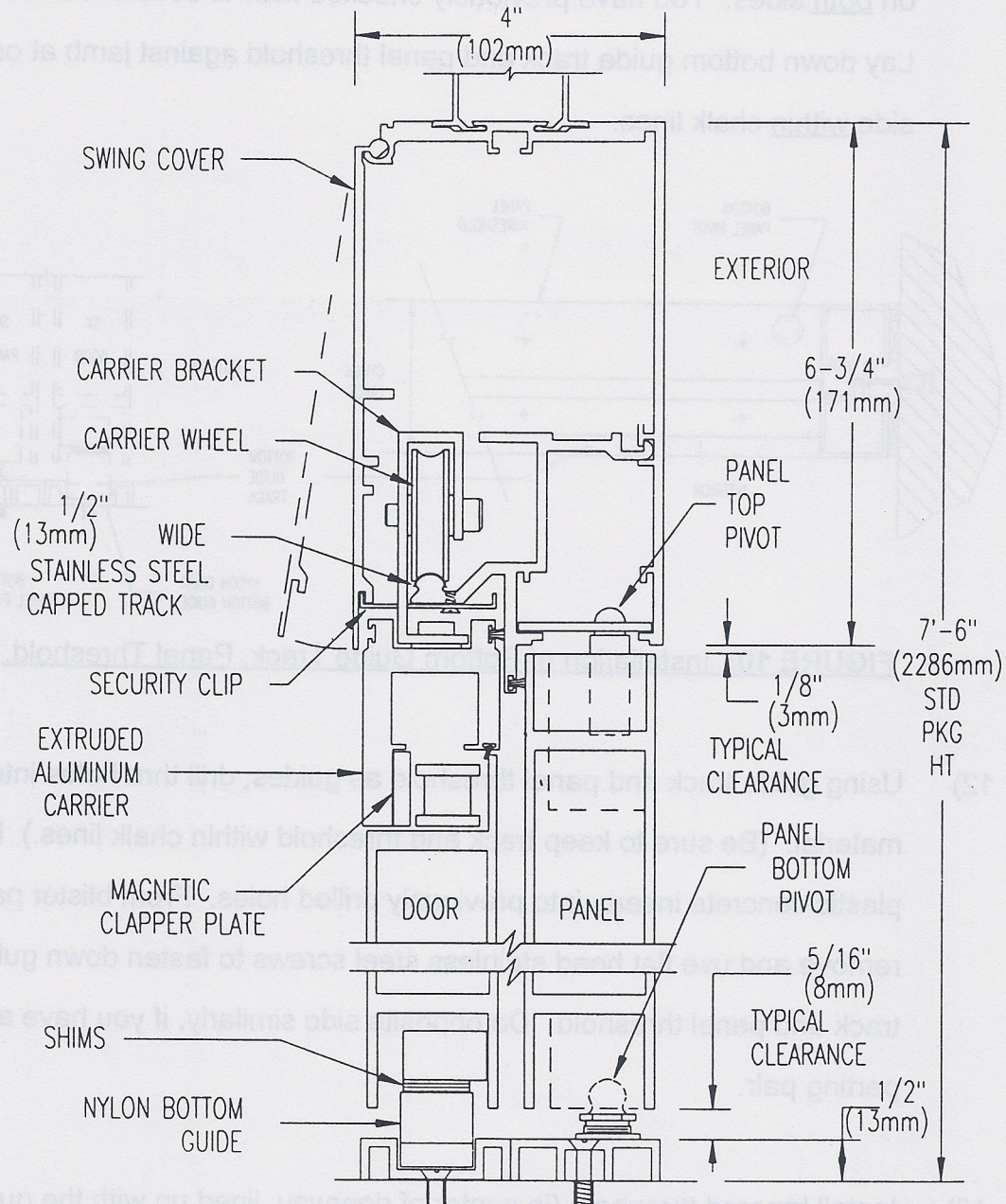
- 9) Use appropriate fasteners (@ four per jamb) to anchor thru glazing recess to wall or adjacent framing. Check jamb tubes with level to be sure tubes have not been pulled in by anchors. Install snap-in glazing strips provided with package into the jamb tube as shown above.
- 10) The standard package height is 7'6" (2286mm) as shown on page 7. Sometimes the approved shop drawings require a package height of 7'5 1/2" (2274mm) If this is the case, cut off 1/2" (13mm) from the bottom of each jamb tube in the field.



**FIGURE 8: Isometric of Belt Drive Assembly.**



-- ASTRO-SLIDE (TYPICAL INSIDE SLIDE) --  
SECTION THRU NEW HEADER, DOOR & PANEL

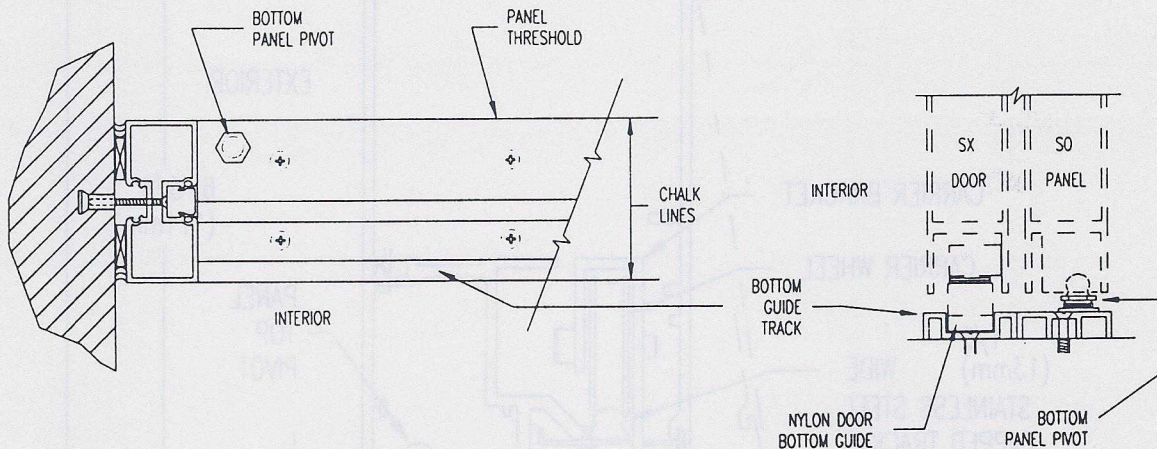


**FIGURE 9: Section Thru Header, Door & Panel.**

NOTE: If the package being installed is over 10'0" (3048mm) wide and has a transom, a vertical transom tube must be anchored securely to the top transom tube in order order to prevent deflection in the header.



- 11) Using a "chalk line", snap a line on floor from face of jamb to face of jamb, on both sides. You have previously checked floor to assure it is level. Lay down bottom guide track and panel threshold against jamb at one side within chalk lines.



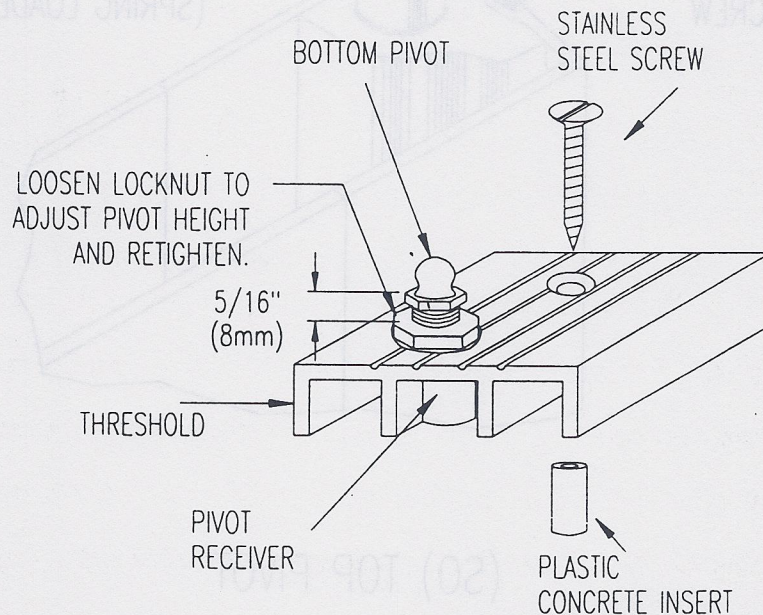
**FIGURE 10: Installation of Bottom Guide Track, Panel Threshold.**

- 12) Using guide track and panel threshold as guides, drill thru holes into floor material. (Be sure to keep track and threshold within chalk lines.) Place plastic concrete inserts into previously drilled holes. From blister pack, remove and use flat head stainless steel screws to fasten down guide track and panel threshold. Do opposite side similarly, if you have a bi-parting pair.
- 13) Install tapered threshold (in center of doorway, lined up with the guide track and panel threshold(s) you have just screwed down to floor). Drill 1/4" (6mm) holes and countersink. Use plastic inserts and stainless steel screws to anchor to floor as above.



**NOTE:** Certain owners or builders prefer not to install a threshold across the door opening. Refer to final approved shop drawings, general contractor, architect, etc.

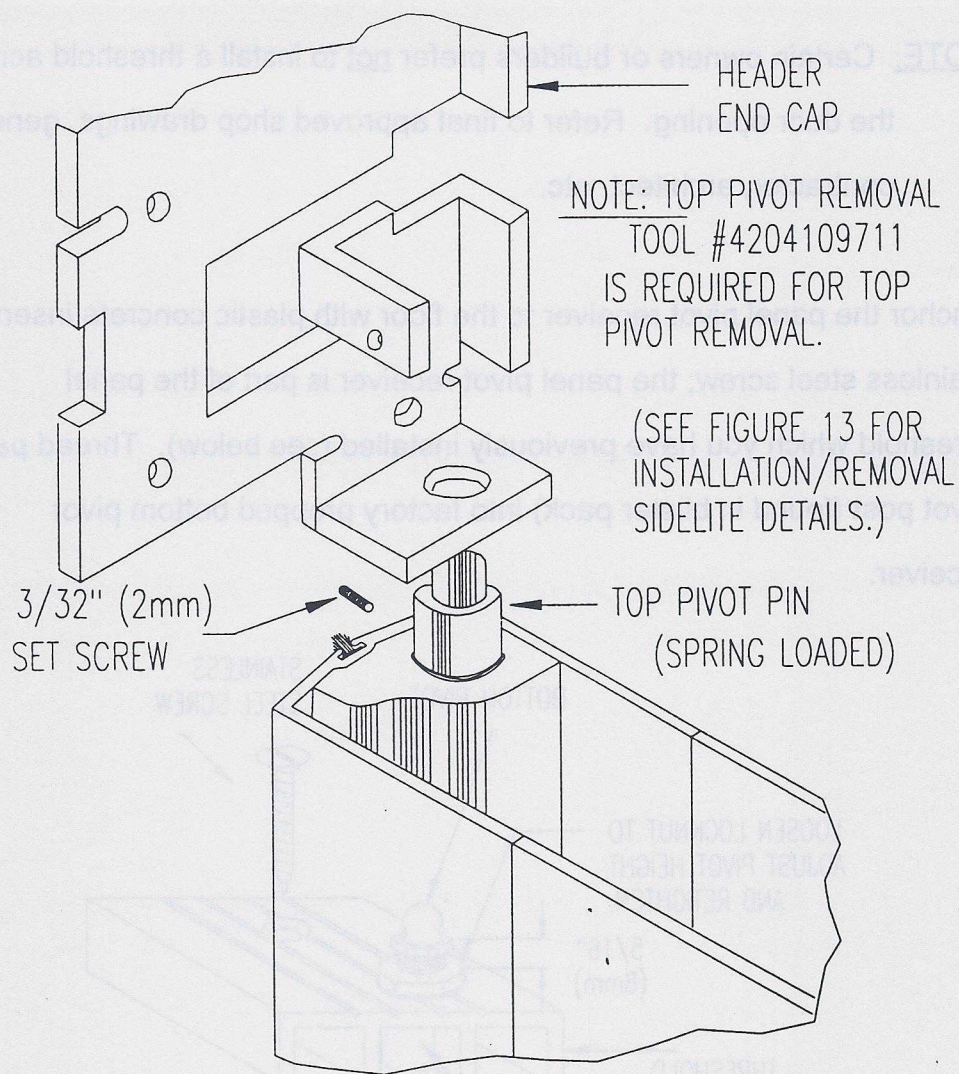
- 14) Anchor the panel pivot receiver to the floor with plastic concrete insert & stainless steel screw; the panel pivot receiver is part of the panel threshold which you have previously installed (see below). Thread panel pivot post (found in blister pack) into factory prepped bottom pivot receiver.



**FIGURE 11: Bottom Panel Pivot Attachment.**

- 15) Remove panel(s) from shipping carton. Lift panel from carton and place bottom pivot block (factory prepped and factory installed in panel bottom stile) on to bottom pivot. Swing and proceed to install top pivot pin into header, end up, as shown below. Top pivot pin is shipped in retracted position from factory. Refer to figures 12 & 13 on the following pages for correct removal and installation procedures of top pivot pin.





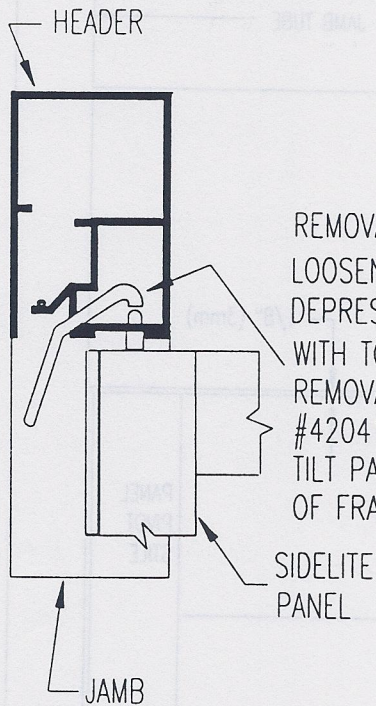
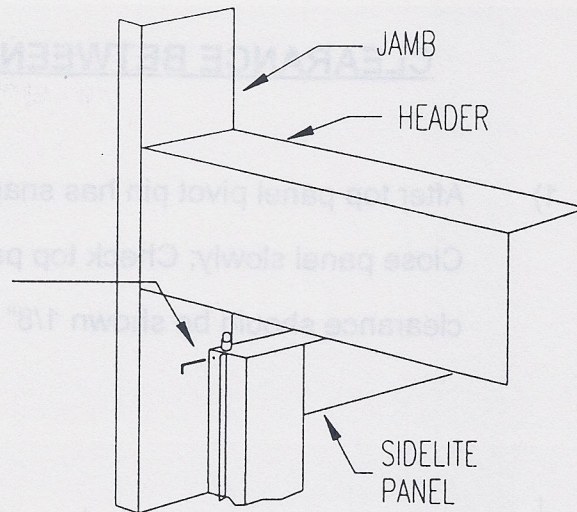
(SO) TOP PIVOT

**FIGURE 12: Top Pivot (SO) Detail.**

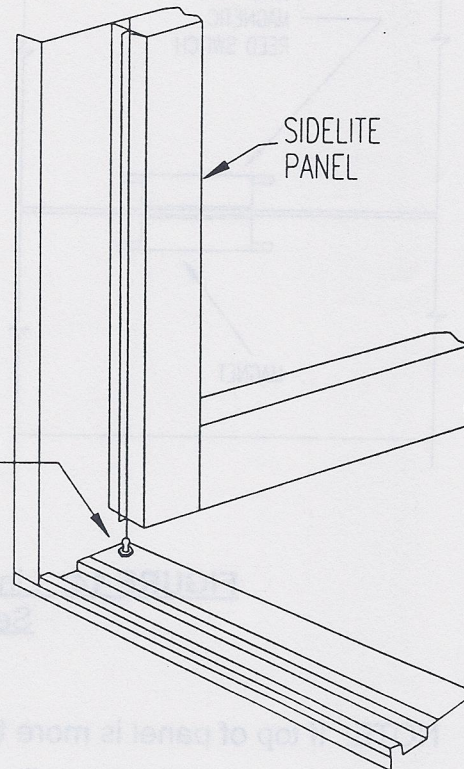


# INSTALLATION

TILT PANEL IN PLACE OVER  
BOTTOM PIVOT. ALIGN TOP  
PIVOT WITH HOLE IN HEADER.  
LOOSEN SET SCREW WITH 3/32" (2mm)  
ALLEN WRENCH TO RELEASE  
TOP PIVOT INTO HEADER.  
RETIGHTEN SET SCREW.



REMOVAL  
LOOSEN SET SCREW.  
DEPRESS TOP PIVOT  
WITH TOP PIVOT  
REMOVAL TOOL  
#4204109711.  
TILT PANEL OUT  
OF FRAME.



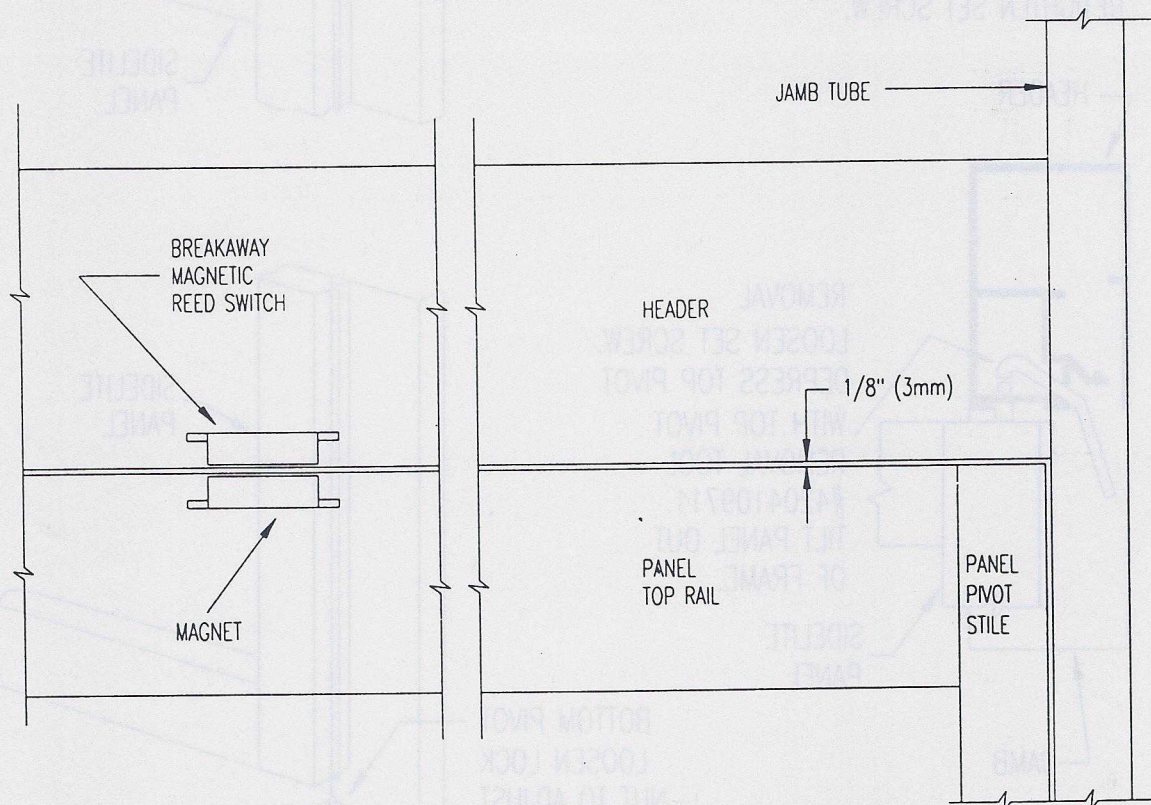
BOTTOM PIVOT  
LOOSEN LOCK  
NUT TO ADJUST  
UP OR DOWN  
AS REQ'D TO  
GIVE 1/8" CLEARANCE  
AT TOP OF PANEL.  
RETIGHTEN LOCK NUT.

**FIGURE 13: Sidelight Installation/Removal Details (SO)**



## CLEARANCE BETWEEN HEADER AND SO PANEL

- 1) After top panel pivot pin has snapped into position, retighten set screw.  
Close panel slowly; Check top panel clearance from bottom of header;  
clearance should be shown 1/8" (3mm) as shown below.



**FIGURE 14: Lining Up Reed Switch & Magnet, and Setting 1/2" (13mm) Clearance.**

NOTE: If top of panel is more than 1/8" (3mm) from bottom of header, the magnet in the top rail of the panel (see fig. 14 above) may not be close enough to reed switch in header to complete circuit for door activation. If panel does not close or clearance is not correct, refer to (fig. 13), (fig. 17) and (fig. 20) for panel removal and adjustment.

Install second panel as above, with the bi-part package.



- 2) Remove doors from carton, swing out "breakout" aluminum carrier 90 degree to door. Use caution if package has hydraulic closer, as carrier will tend to "scissor" close, if not propped open adequately.

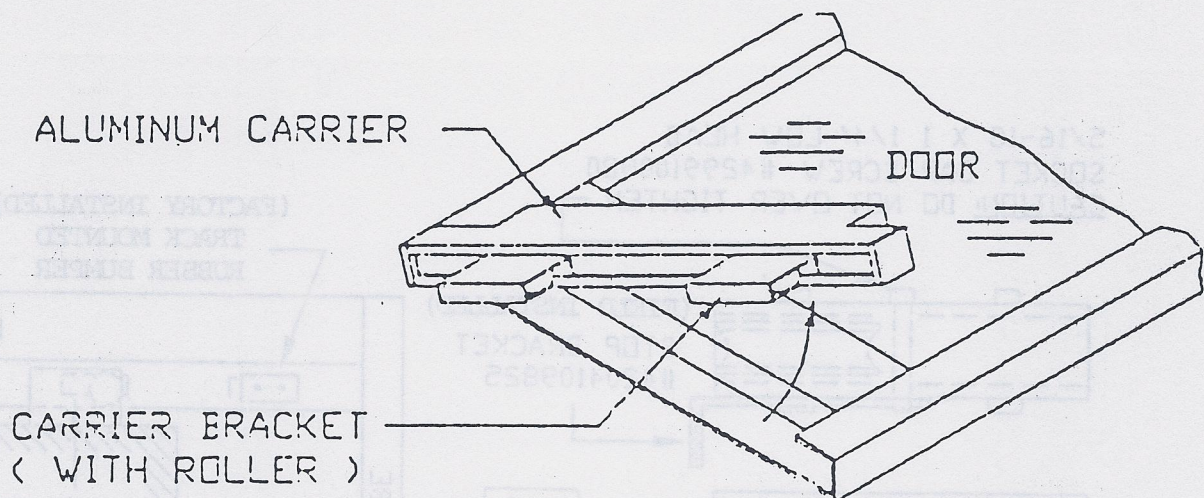


Fig. 15    CARRIER BREAKOUT/CARRIER BRACKET REMOVAL

- 3) Remove rollers and felt wiper from carrier brackets, and lay aside. With door laying on floor and carrier propped open, insert two 5/16 x 18 x 3/4" low head socket cap screws up thru carrier and into the bottoms of one of the carrier brackets (open face of carrier brackets facing down). Tighten down cap screws. Install the second carrier bracket on the door in a similar manner. Install the brackets on second door in a similar manner (for bi-part).



- 4) Install stop bracket(s) on carrier brackets (single slide one, bi-part two) as shown at hinge side of door with 5/16" x 18 x 1 1/4" low head cap screw - (Rubber bumper (s) are installed in header at factory). For door height adjustment procedure please refer to the following page.

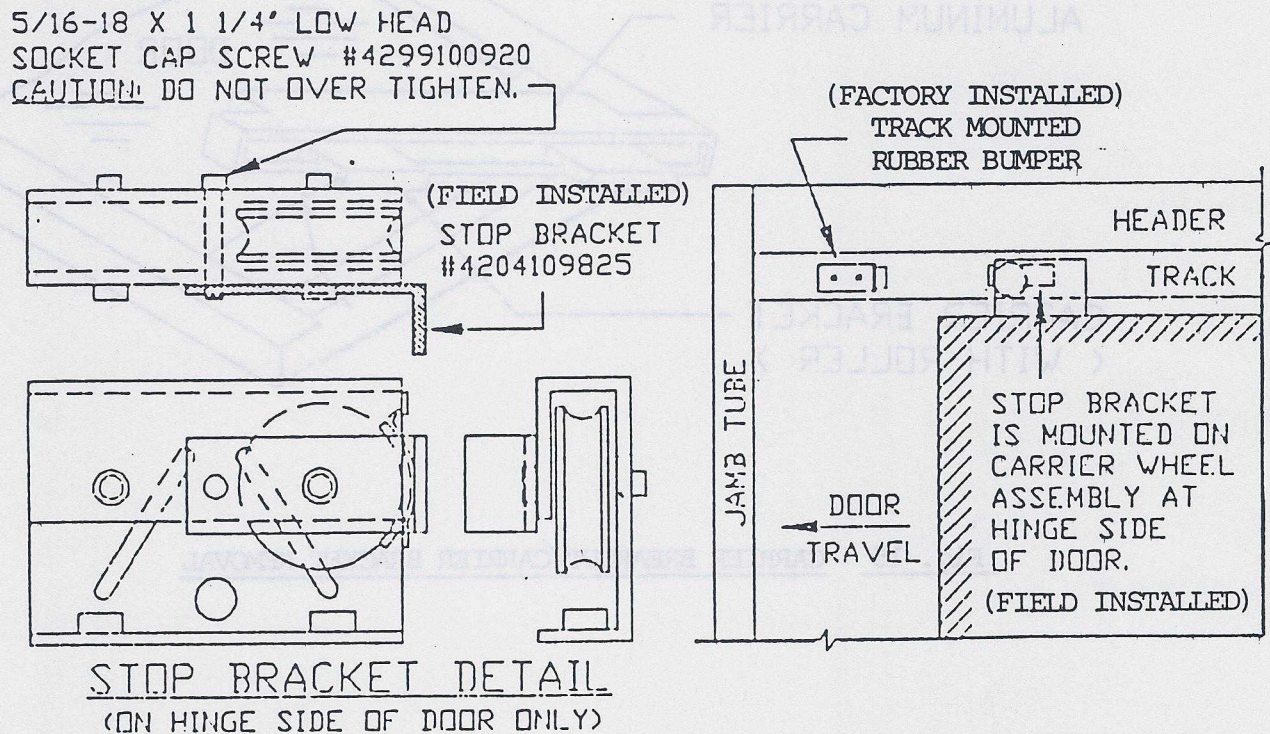
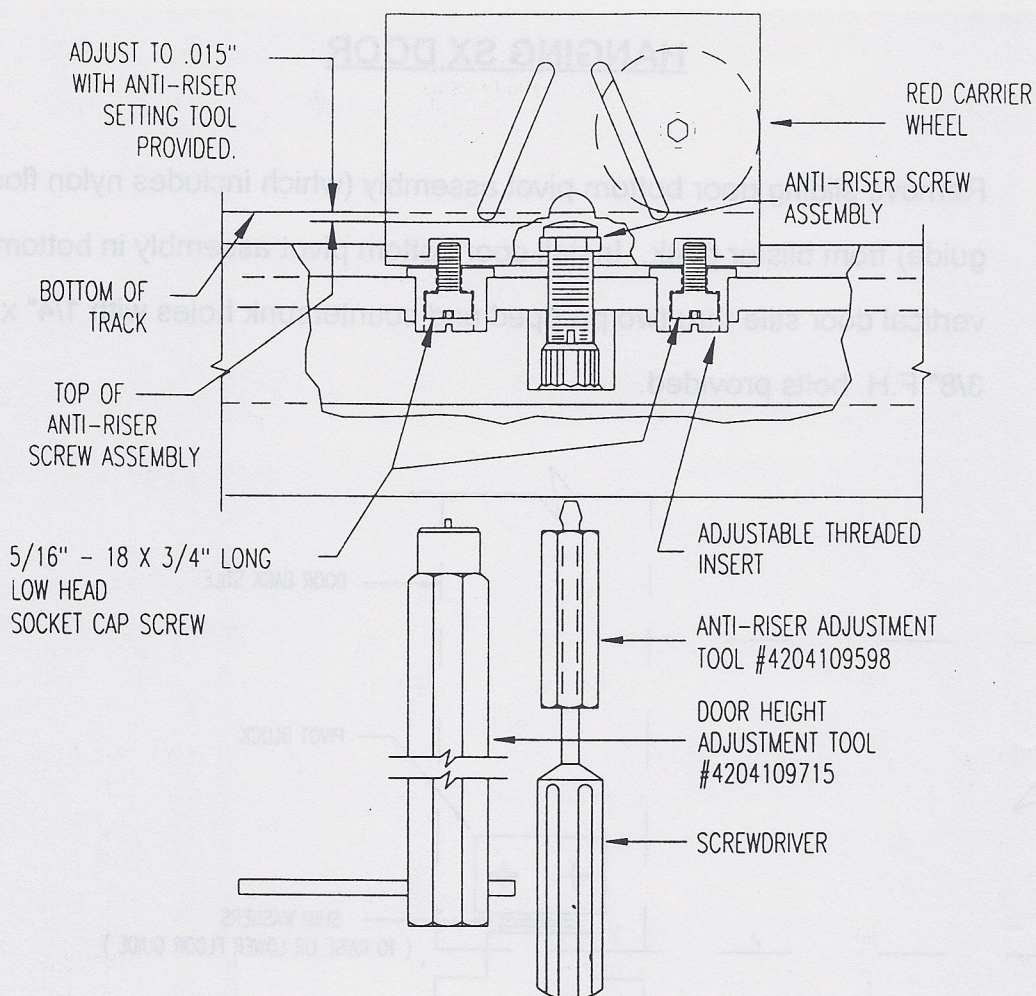


Fig. 16 STOP BRACKET ATTACHMENT TO CARRIER BRACKET





## DOOR HEIGHT ADJUSTMENT PROCEDURE

### DOOR HEIGHT ADJUSTMENT

- LOOSEN ALLEN HEAD SCREW WITH 5/32" ALLEN WRENCH.
- RAISE OR LOWER THE ADJUSTABLE THREADED INSERT WITH TOOL #4204109715, AND RETIGHTEN THE ALLEN HEAD SCREW.

### ANTI-RISER ADJUSTMENT (ALSO SEE FIGURE 19)

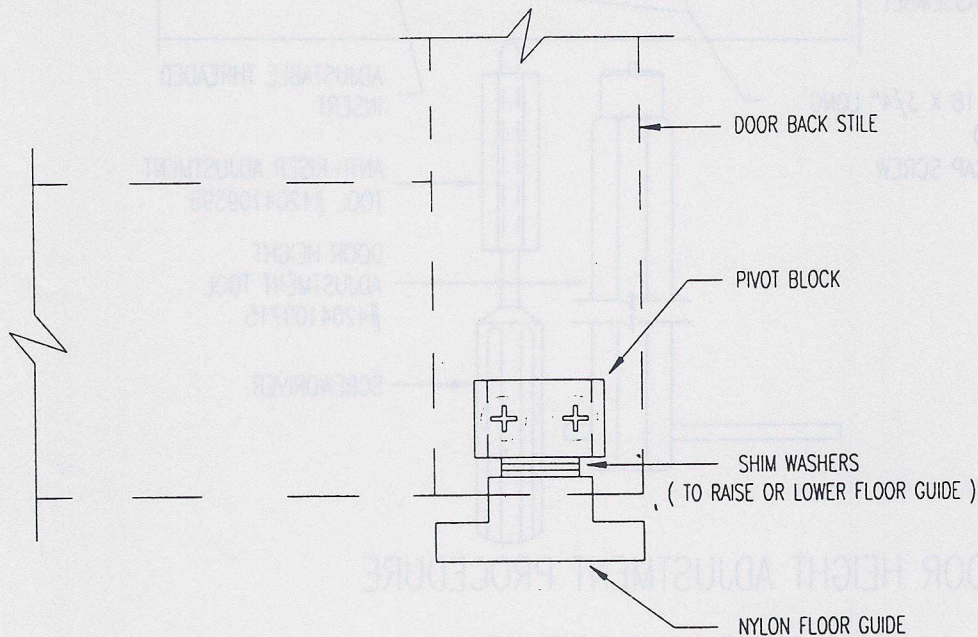
- LOOSEN ANTI-RISER ASSEMBLY WITH TOOL #4204109598.
- ADJUST WITH A SCREWDRIVER TO .015" TO BOTTOM OF TRACK. RETIGHTEN TO COMPLETE ADJUSTMENTS. BE SURE TO RE-CHECK .015" CLEARANCE.

**FIGURE 17: Door Height Adjustment Procedure.**



## HANGING SX DOOR

- 1) Remove sliding door bottom pivot assembly (which includes nylon floor guide) from blister pack. Install door bottom pivot assembly in bottom vertical door stile thru two prepped and countersunk holes with 1/4" x 20 x 3/8" F.H. bolts provided.



**FIGURE 18: Installation of Door Bottom Pivot Assembly.**

- 2) Stand up door and proceed to position door carrier brackets over track in header. Make certain bottom guide is in floor track. Install red carrier wheel felt wiper you have previously removed, bolt bumper bracket to carrier bracket.
- 3) Wheel should now be "on track" with carrier wheel towards outside edges of carrier bracket. Slowly slide door back and forth to see that door slides smoothly. Check to see if nylon floor guide is deep enough in track. You may have to add or remove "shim" washers as required.



- 4) With bi-part door package install second leaf as above. Be sure low head socket cap screws that hold carrier bracket to carrier are tight.

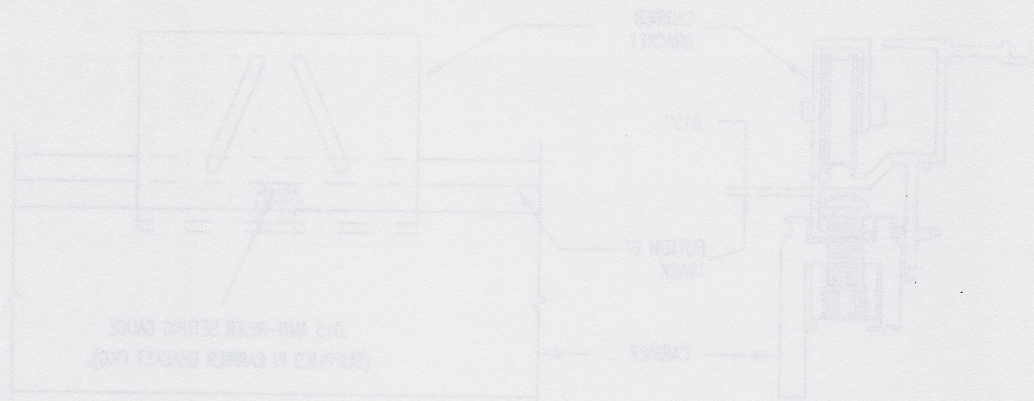


FIGURE 19: Anti-Riser Adjustment

Door leveling adjustment  
Break open door and panel. Slowly close door and check clearance from top of door to carrier bottom. If clearance is not correct, proceed to loosen 1/4" allen head set screw at bottom pivot end of carrier. Adjust up or down by means of large allen head bolt. Check clearance, adjust as required. Re-tighten 1/4" allen head set screw.

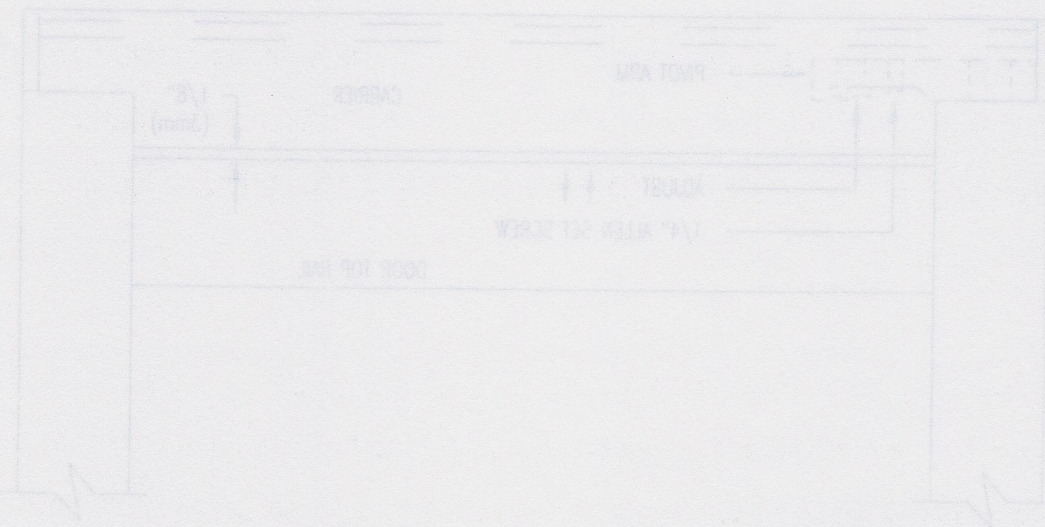


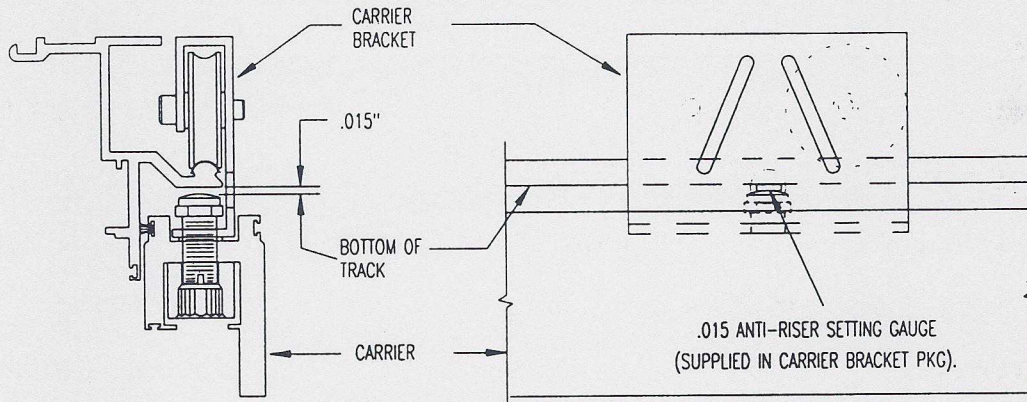
FIGURE 20: Door Carrier Adjustment



## FINAL ADJUSTMENTS TO SX DOOR

### Anti Riser Adjustment

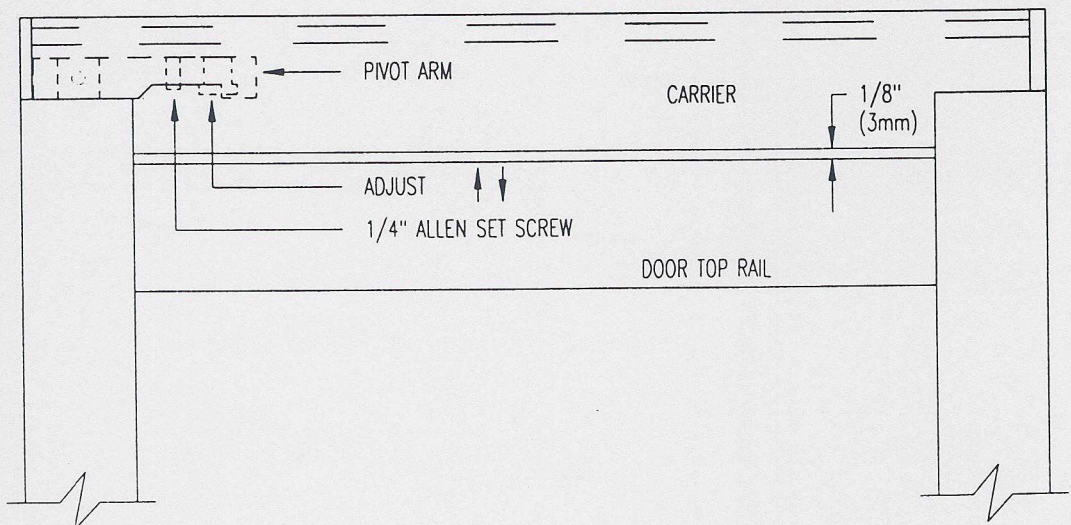
Using .015 anti riser setting gauge supplied, place gauge in middle bottom hole of carrier bracket, gauge should be on bottom surface of track extrusion, adjust as required for .015 clearance and tighten, remove gauge with "sliding" clearance. (See fig. 19)



**FIGURE 19: Anti-Riser Adjustment**

### Door levelling adjustment

Break open door and panel. Slowly close door and check clearance from top of door to carrier bottom. If clearance is not correct, proceed to loosen 1/4" allen head set screw at bottom pivot end of carrier. Adjust up or down by means of large allen head bolt. Check clearances, adjust as required. Re-tighten 1/4" allen head set screw.



**FIGURE 20: Door/Carrier Adjustment.**

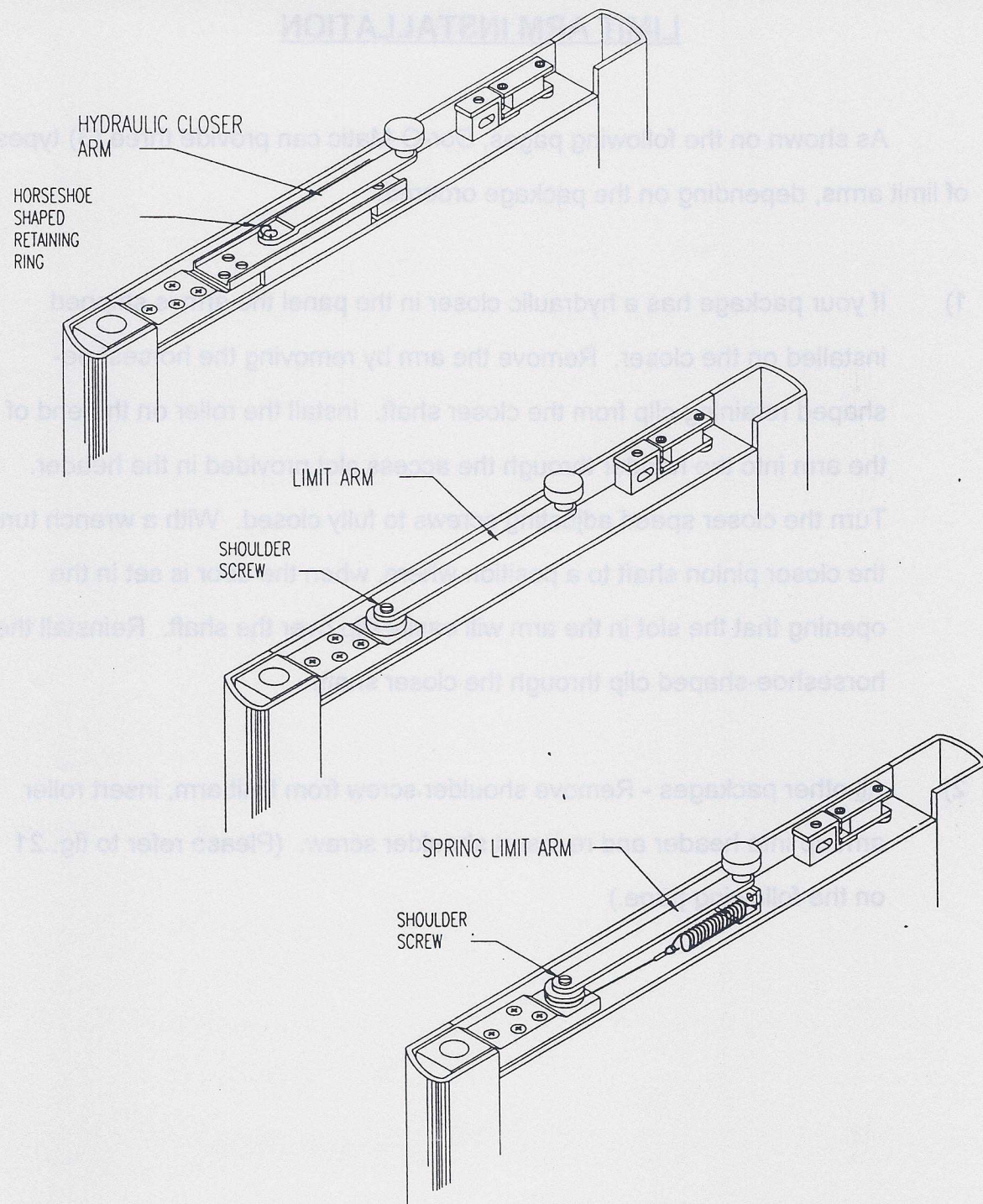


## LIMIT ARM INSTALLATION

As shown on the following pages, Dor-O-Matic can provide three (3) types of limit arms, depending on the package ordered.

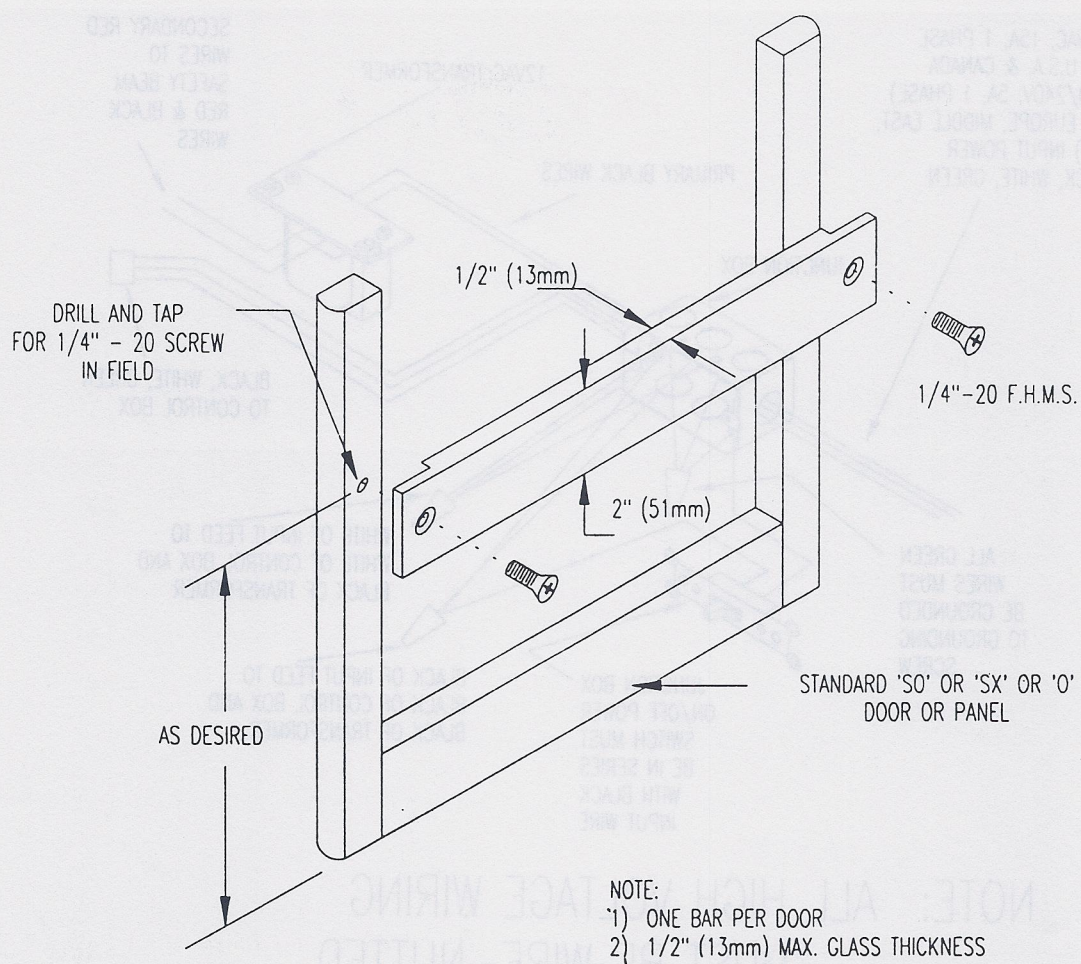
- 1) If your package has a hydraulic closer in the panel the arm is shipped installed on the closer. Remove the arm by removing the horseshoe-shaped retaining clip from the closer shaft. Install the roller on the end of the arm into the header through the access slot provided in the header. Turn the closer speed adjusting screws to fully closed. With a wrench turn the closer pinion shaft to a position where, when the door is set in the opening that the slot in the arm will easily slip over the shaft. Reinstall the horseshoe-shaped clip through the closer shaft.
- 2) All other packages - Remove shoulder screw from limit arm, insert roller arm up into header and re-insert shoulder screw. (Please refer to fig. 21 on the following page.)





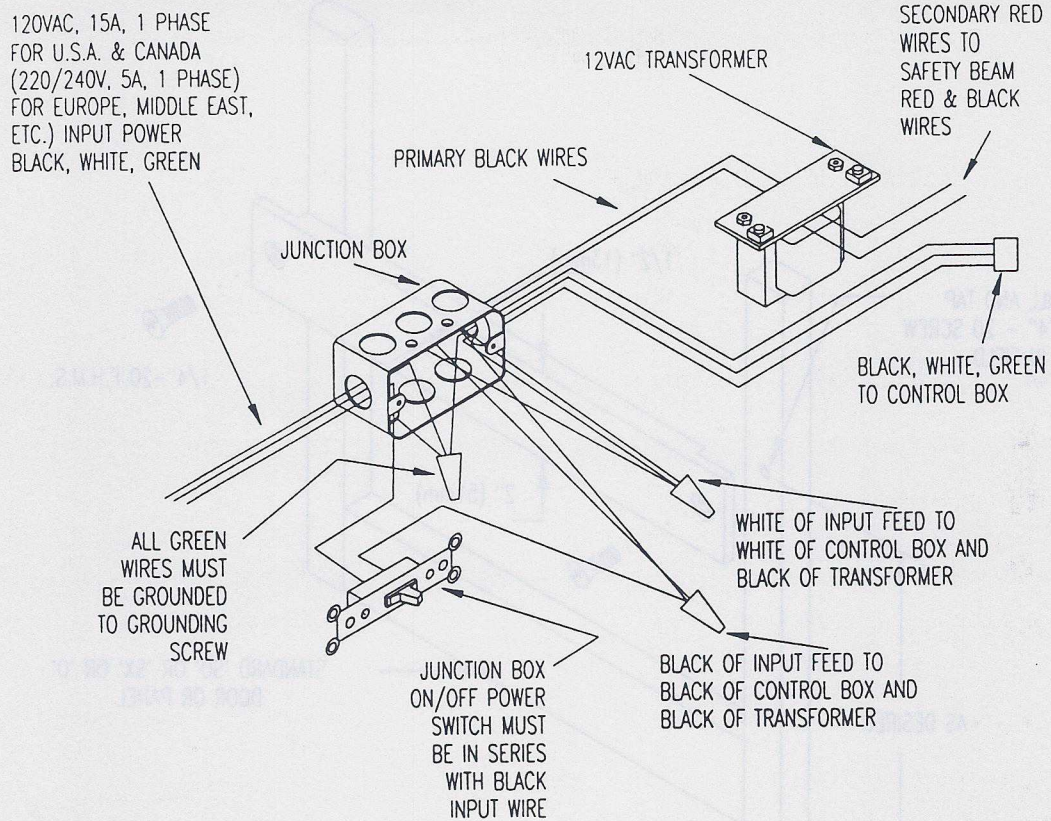
**FIGURE 21: Limit Arm Types.**





**FIGURE 22: Installation of D.O.M. Bumper Bar for Astro-Slide.**





NOTE: ALL HIGH VOLTAGE WIRING  
MUST BE WIRE-NUTTED  
IN THE JUNCTION BOX!

**FIGURE 23: Astro-Slide Electrical Connections**



## GLAZING

If glass and glazing are to be included in your bid, you should go about it as follows:

- 1) If unit is a "standard package" the glass sizes (with 2" (51mm) muntins and without) are called out in the Dor-O-Matic details and specifications book along with the model number of the unit.

Remember that tempered glass (or laminated) is required in doors and panels, per code, (A.N.S.I.Z97.1-1972).

<b>Weight Restrictions</b>	<b>Max. weight of Door &amp; Glass</b>	<b>Max. Glass Thickness</b>
SX Inside Slide	150 lbs. 68 kg.	1" 25mm
SX Outside Slide	150 lbs. 68 kg.	1" 25mm
SO Swing Out Sidelite	200 lbs. 90 kg.	5/8" 16mm
O Fixed Sidelite	200 lbs. 90 kg.	1" 25mm
X Sliding Door	200 lbs. 90 kg.	1" 25mm
Transom	Varies Varies	1/4"-1" 6mm-25mm

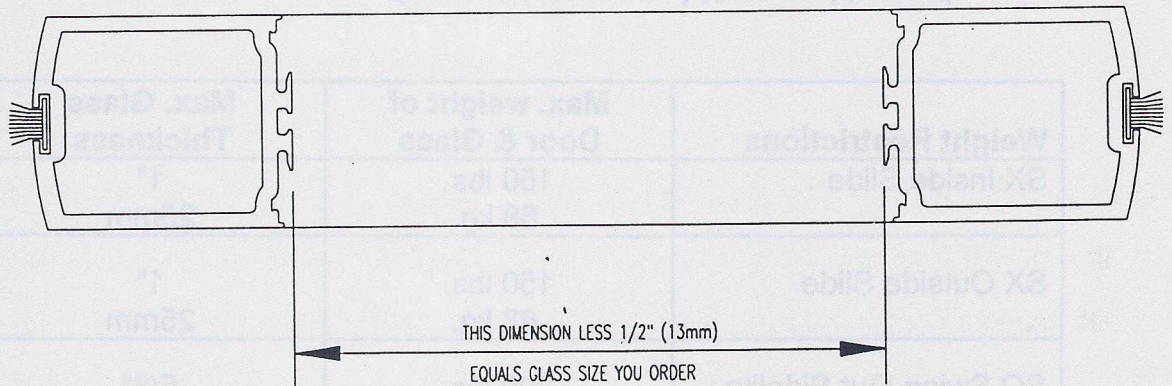
NOTE: Average weight of a 42" (1067mm) door or sidelite less glass is 40 lbs. (18 kg.).

(Remember to order glass stops for the correct width of glass). Transom glass (size is field measured) can be 1/4" or 6mm up to 1" or 25mm (non-tempered). Remember to use one or two transom hanger tubes for packages over 10'0" (3048mm) wide to prevent header deflection.



NOTE: Final opening, closing speed adjustments should be made after glazing is installed.

- 2) If unit is not a standard package (fig. 24)
  - a) Measure "daylight" opening width innerface of stile extrusion, to innerface of stile extrusion. Subtract 1/2" (13mm). This is glass size you will order.
  - b) Measure height in a similar fashion.



**FIGURE 24: Glass Measurement**



## SECURITY GLAZING

Another unique feature of Dor-O-Matic is our "security glazing system". When you are ready to "glaze" the doors and panels, snap in two horizontal and two vertical exterior glazing stops. Be sure stops are securely "snapped" into rails and stiles. Place bottom of glass on two nylon glazing blocks and tilt up and into vertical position. With larger pieces of glass a helper can be on opposite "exterior" side to help hold glass in position while you start to "snap in" interior glazing stops.

Once the two horizontal and two vertical interior glazing stops are "snapped" in, place the unique design of Dor-O-Matic's rails and stiles "inter-lock" to make the glass non-removable from the exterior.

Finally, check to be sure rubber fingers of glazing stops are not "pinched" or "tucked" against the glass. Run a pocket knife or small scraper around perimeter of glass to take care of any such problems.

Clean glass. Install all safety, traffic control, and instruction decals to the door as required. This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done. Present keys to owner/general contractor. Demonstrate unit, review safety features and "safety" check to be performed by owner each morning.

END



## SECURITY GLAZING

Another unique feature of Dor-O-Matic is our "security glazing system". When you are ready to "glaze" the doors and panels, snap in two horizontal and two vertical exterior glazing stops. The stops are securely "snapped" into tails and stiles. Place bottom of glass on two nylon glazing blocks and tilt up and into vertical position. With larger pieces of glass a helper can be on opposite "exterior" side to help hold glass in position while you start to "snap in" interior glazing stops.

Once the two horizontal and two vertical interior glazing stops are "snapped" in, place the unique design of Dor-O-Matic's tails and stiles "interlock" to make the glass non-removable from the exterior. Finally, check to be sure rubber fingers of glazing stops are not "pinched" or "tucked" against the glass. Run a pocket knife or small scraper around perimeter of glass to take care of any such problems.

Clean glass. Install all safety, traffic control, and instruction decals to the door as required. This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done. Present keys to owner/general contractor. Demonstrate unit, review safety features and "safety" check to be performed by owner each morning.

END