

Premium Dry Freight (Plywood) Door Installation

- A **Premium** door can be identified as usually having a two-spring balancer, 2" diameter (nominal) rollers, and end hinges with removable covers. If your Whiting door has any of these features, it probably is a Premium door.

Procedures:

1. Check sizes on the shipping label with your ordering information.

Orders are processed using these 4 critical measurements:

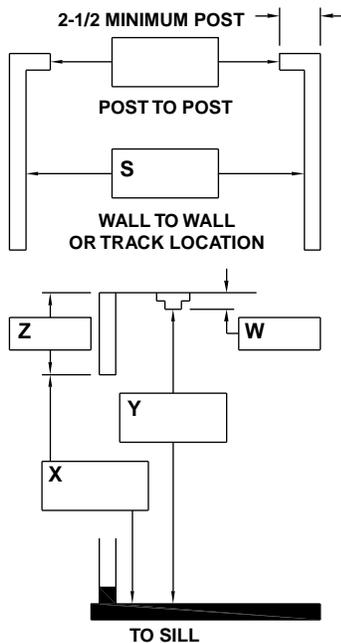


FIGURE 1

REFERENCE FIGURE 1

- a.) **Sill-to-Header**, this is the vertical distance between the underside (bottom) of the header and sill (surface on which the door is resting when closed).
DIMENSION "X"
- b.) **Depth of Header**, dimension from the underside (bottom of header **up** to the roof skin or liner).
DIMENSION "Z"
- c.) **Roof Bow Depth**, measured from the bottom of the bow up to the roof skin. A bow is a channel-shaped piece that spans the body from side to side, holding the roof skin. A typical bow can range from 3/4" to 2" deep.
DIMENSION "W"
- d.) **Wall-to-Wall**, this is the finished dimension between vertical track assembly mounting surfaces.
Note: the standard post width is **2-1/2"**.
DIMENSION "S"

Note: header size, minus roof bow depth, equals effective header. Generally, the minimum effective header height required is **7"**. If you have less than that, build the header down with a channel or other formed metal.

2. Gather tools:

- a.) (2) Step ladders
- b.) Welder
- c.) Saw or cutting torch
- d.) Light
- e.) Several locking pliers
- f.) Tape measure
- g.) (2) 3/8" X 12" Winding bars
- h.) 7/16" and 1/2" Wrench
- i.) Hammer
- j.) Approx. 4" x 4" steel shim
- k.) Square
- l.) Scribing tool
- m.) Sealant

It is important to understand each step in the installation procedure before attempting to install the door.

3. Check Components

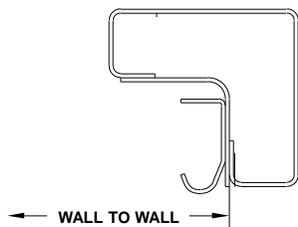
The component parts should be checked to make sure you have all the necessary items and are familiar with them.

For a complete new installation, you should have (standard packaging):
bundle - containing the door, cables, hardware box, and side seals (if ordered),
balancer spring assembly,
set of vertical tracks,
set of horizontal tracks.

4. Install Vertical Track

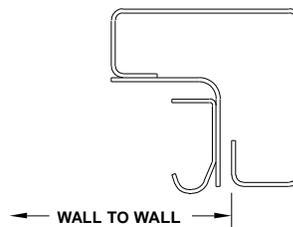
a.) Temporarily secure track so that they are square against the sidewall and post.

SEE FIGURES 2, 3 AND 4



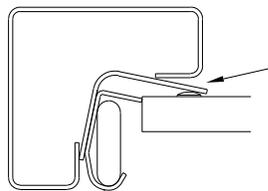
CORRECT

Figure 2



WRONG

Figure 3



WRONG

Figure 4

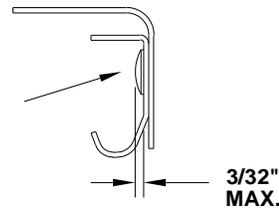


Figure 5

b.) Check that they are parallel with each other by taking measurements at top, bottom and middle. Allow no more than 1/8" difference. Shim accordingly, if necessary. Do not force. Secure in place by welding, riveting or bolting. Caution: be very careful when putting anything into the tracks. Fasteners should be chosen that have a low head profile. They must be installed squarely - never at an angle. A protruding head will interfere with roller travel, causing the door to work hard. Such an installation will cause a door to develop hardware and maintenance trouble later on. SEE FIGURE 5

NOTE: some tracks are supplied with balancer brackets already attached. Make sure the bracket is positioned close to the roof, and welded securely near the top.

c.) Secure vertical track to post and sidewall, by welding.

d.) Use sealant along seam, between mounting angle and post.

5. Install Horizontal Track

a.) It is very important to maintain whatever track spacing on the vertical is, onto the horizontal as well. In order to do this, place a shim of proper thickness (5/16" is standard) between track and mounting angle in the vertical, and allow it to extend into the horizontal approx. 10".

b.) Align horizontal tracks with vertical, using the tongue and groove notches provided. Make sure they do not overlap. This provides a smooth transition for rollers.

c.) Check that top of track is parallel with roof. Standard measurement is 2-3/4" (2" min) from bottom of

roof bow to top of track. Secure in place with rivets, bolts or weld in a minimum of 4 places (SEE FIGURE 5). Plug weld holes are provided for attachment, near the vertical. A variety of clips or shims are available to ease attachment. Make sure distance between tracks is maintained throughout, especially in the radius. This could be an area where door clearance is tight.

6. Install Balancer (2 spring, 2 cable type balancer).

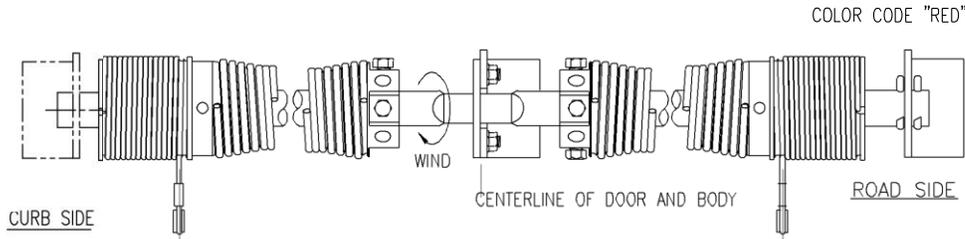


FIGURE 6

- a.) 3 mounting brackets are required - center, roadside* and curbside*. It is important that mounting surface is flush (in line) to all three locations. If necessary, install mounting plates of sufficient size to serve as a base for the balancer brackets. SEE FIGURE 6
- b.) Locate center bracket at centerline of header. Position it so pointed tab is at top, angled section at bottom. **SEE FIGURE 6**
- c.) The location from centerline for both end brackets can be determined by subtracting 1-1/4" from shaft length and dividing by 2. For example: 93" shaft, less 1-1/4", equals 91-3/4"; divided by 2 equals 45-7/8".
- d.) Brackets should be located as high as possible on header with triangle-shaped portion of bracket up to roof or liner of body.
- e.) Attach brackets to header securely.
- f.) Install a cotter pin in end of balancer shaft, through hole closest to the cable drum painted red.
- g.) Insert other end of shaft into curbside balancer bracket.
- h.) Move balancer so that squared portion of shaft fits into center bracket
- i.) Mount the red end into **roadside** bracket and install second cotter pin to hold it from shifting sideways.
- j.) Fasten center clamp on center bracket, making sure the angled edge is towards the bottom.

* When looking out from the rear of the unit, "curbside" is on your left, "roadside" is on your right.

Note: some installations have a very narrow header, called a "shallow header". In this case, special balancer brackets are required. Also, a shallow header installation differs from the standard procedure, as the end of the balancer, which is painted red, mounts on the **curbside**.

7. Door Unit (3 people necessary).

- a.) Place a locking pliers **firmly** in the horizontal track (both sides) just before the radius, about 16" from the header. This will keep the door from closing once it is rolled into the track.
- b.) Using 2 people, carry the lower half of the door into the unit, face up, with break joint first, bottom of door nearest rear.
- c.) Tip door slightly to pass by the frame.
- d.) Lower one edge only, resting it on the floor; install rollers into opposite side end hinges and bottom roller bracket* (3 people).
- e.) Bring door back to level and repeat with opposite side*. **NOTE:** keep door against sidewall, and slide down wall, to keep rollers from falling out.
- f.) Move door section to the front of unit, by sliding it along the floor on the rollers of one edge.
- g.) Place 2 stepladders at end on horizontal track.
- h.) Position 2 people at bottom seal (both sides) and 1 person in center of break joint.
- i.) Keeping door flat, raise section and insert rollers into track.
- j.) Push door down track until the locking pliers stop it.
- k.) Repeat procedure with top section*.
- l.) Install rubber track stops, bolts and nuts.
- m.) Join two halves of door together. Be careful not to over tighten nut. Doing so, will pull the head of bolt into the wood.

* Special washers should be placed on roller shafts at first joint (second roller) from bottom, and top of door. Depending upon the amount of side movement, 3 or 4 spacer washers (total of 16) should be installed. These washers are very important, as they accurately position the door, keeping it from binding on the track, help cables wind on the drum, provide for correct side seal and lock operation.

8. Balancer Winding (2 spring-style - wind with door **open**)

Note: 1. Cotter pins and center clamp have been installed previously.
2. Instructions are for a standard header, NOT a shallow header.

- a.) Loosen set screws in winding cone.
- b.) Wind cable onto cable drum following grooves. It is important that end of cable is inserted fully into notch. If this is not done properly, it could interfere with drum movement. **SEE FIGURE 7**



- c.) When all cable has been put onto drum, continue to wind **4 full turns**. Pull **down** on winding bar for standard header*. Make sure cable drum is positioned about 1/4" from balancer bracket and tighten all setscrews in winding cone.
- d.) Repeat for opposite side.
- e.) Remove both locking pliers from tracks. Be aware that door will rebound down to "normal" open position.
- f.) Check door operation. Cable should wind onto drum evenly and not be pulled over onto spring area, or on top of cable that is already on the drum.
- g.) Adjust turns if necessary by adding or subtracting 1/4" turns. A properly adjusted door should be "balanced" and neither rise nor fall without assistance. When newly installed, the door may creep upward slowly, but never downward. If necessary, carefully adjust spring tension in 1/4 turn increments

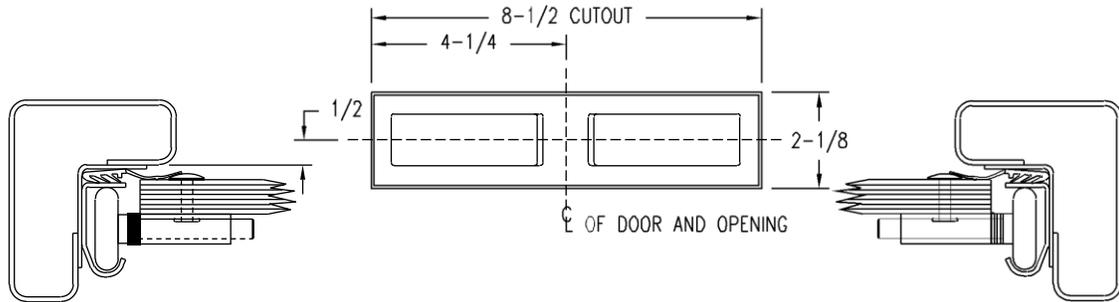
* Shallow Header notes:

- Cable comes off **top** of drum.
- Wind spring by pushing **up** on winding bar.

9. Latch Plate

Note: Latch plate is attached to the sill, usually by welding. They vary in type, style, material size and location, depending upon the type of lock, thickness of door, and part number of side seals. If you are not using a latch plate supplied by Whiting Door Manufacturing, make sure it is of equal thickness and strength. If track spacing is not 5/16", latch plate location must be changed. Not all are automatically placed on the centerline of the sill.

- a.) Mark sill using latch plate as template.
- b.) Check location by lowering door and comparing with lock.
- c.) Cut sill if necessary.
- d.) Position evenly with top of sill (very important).
- e.) Weld
- f.) Allow sill to cool, close door.
- g.) Check lock operation.



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10. Top Panel

Adjustment

- a.) Bring a light in and close door.
- b.) Using 1/2" wrench, remove the 2 nuts on top closure base. c.) Insert roller in track and then into top closure bracket.
- d.) Place bracket on base, with tapered end down.
- e.) Adjust. (Moving bracket down will bring top seal closer to header. It will also seal against side seals better. Adjusting it down too far may also cause it to hit the balancer when door is opened).
- f.) Tighten nuts.
- g.) Notch top seal for cables.

11. Side Seals - optional. Install after door and rear frame paint are cured. a.) Cut to length - opening height plus one inch

- b.) If friction-fit type, push into gap between track and mounting angle using a piece of 4" x 4" shim stock.

Start at bottom and work up. Do not try to push all of it in at one time, but make several passes.

- c.) If brush type, cut to length with wire or bolt cutters. Position on post so that brushes are slightly crushed against door. It is important that brushes maintain contact, as door moves in track. Use blind rivets or sheet metal screws to secure.

12. Final Check List

- Lock operation
- Balancer adjustment
- Top panel adjustment
- Cables move unobstructed
- Door centered in opening

- ❑ Door operates freely
- ❑ Side, top and bottom seals function properly
- ❑ Cosmetics