

Quick Reference Guide

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Chapter 9 – Installing Exterior Doors

Door & Opening Preparation	<ol style="list-style-type: none"> 1) Inspect for damage. Notify Construction Supervisor if damaged. Remove/discard shipping strike plate. Nail accessories to a king stud. 2) Verify correct door type, size, and swing according to the House Plan. Verify hole for deadbolt. Confirm exterior door from house to garage is "Fire Rated". If not DO NOT INSTALL. Notify Construction Supervisor. 3) Pre-drill 1/8" holes (5,5,1) uniformly-spaced in brickmold (<u>6" from mitered corners</u>). Angle slightly to hit studs/headers. 4) Keeping flush, install #8 2-1/2" trim screws through each side of the brickmold into the middle of the top brickmold. 5) If house wrap extends thru doorway, fold down over threshold area and staple to the deck in the doorway. 6) If not already installed, cut and install length of flashing tape sufficient to cover width and up 2" each side of Jack studs. Install with about half of width on deck, half on foamboard. Cut corners, fold, attach to outside. 7) Install threshold seal tape snug to corners and flush to outside edge of threshold.
Adjust Hinge Side Jack Stud	<ol style="list-style-type: none"> 8) Measure the height of the hinges off the floor and mark these heights on both the hinge and strike side Jack studs 9) Install 3"x5" shims with 5" dimension horizontal and flush with hinge pin side (using 1 1/4" soffit nails) 10) With 6' level check if Jack stud is plumb. If NOT PLUMB, shim top or bottom hinge locations until it is plumb 11) Measure width of door frame at head jamb and width of rough opening at top and bottom hinge locations <ol style="list-style-type: none"> a) If difference between door frame and rough opening at <u>either</u> location is GREATER than 5/8", attach combination of 1/8" & 1/4" 3x5 cardboard shims to Jack stud top & bottom locations until difference is less than 3/8" but greater than or equal to 1/4" at BOTH locations. (At minimum, each Jack stud hinge location should have a 1/8" shim.) b) At either or both locations, if gap is greater than 3/8", add shims to bring the gap to 3/8". c) Keeping 6' level against top & bottom spacers, attach 1/8" and 1/4" flat and/or tapered shims at middle hinge location until flush with the level
Adjust Strike Side Jack Stud	<ol style="list-style-type: none"> 12) Add combination of 3"x5" cardboard shims to strike side Jack stud at top/bottom hinge locations until difference < 3/8" at both locations 13) Place the level against shims and install flat and/or tapered shims at middle hinge location until flush (less than 3/16" gap)
Temporarily Secure the Door	<ol style="list-style-type: none"> 14) Set door in rough opening, <u>tight</u> to foamboard and to hinge side stud. 15) Using tapered shims against the head <u>and threshold</u>, wedge door against hinge side with horizontal pressure. 16) Check reveals between the top of door and head jamb at left & right corners. Shim hinge or strike jamb as needed. 17) Recheck hinge side is still plumb (set level on hinge or hinge plates) 18) Tack brickmold tight to foamboard w/4 16d galvanized finish nails, 2 on each side near top and bottom. 19) Check complete door operation, verify consistent contact with the weatherstripping. If necessary, adjust one or both side jambs and brickmold slightly away from foamboard to ensure proper contact with weatherstripping (max 1/8" gap). Shim behind brickmold to hold in place. Confirm latch and strike are aligned.
Permanently Secure the Door	<ol style="list-style-type: none"> 20) With brickmold <u>tight to foamboard</u>, secure hinge side jamb with 2 1/2" exterior screws at each hinge location, <u>behind weather stripping</u> and through shims. Recheck plumb (on hinges). Adjust shims as required. 21) At top door hinge, replace <u>two</u> screws closest to the doorstop with #10 3" /COMBO construction screws. (Screws can be found in Door Finish Kit.) Adjust for door top reveals. 22) Recheck <u>head jamb</u> reveals are equal at both ends. Adjust strike jamb up/down if needed. 23) Check complete door operation including uniform contact with weatherstripping, latch and strike alignment and all reveals. Adjust shims as required. If necessary, move/shim brickmold away from foamboard (max 1/8" gap). Shim behind brickmold to hold in place. 24) Check reveals at top and bottom of hinge jamb. <ol style="list-style-type: none"> a) Adjust/reinstall tight shims against the head jamb as required until top reveal equals reveal below top hinge. b) Shim bottom of jamb to match the reveal at the top, secure with 2 1/2" exterior screw behind weather stripping. 25) Check reveals top of strike and hinge jambs (minimum 1/8"). Split difference as needed. 26) Check reveals at the top and bottom of the strike jamb. Shim the bottom of jamb until reveals are equal. 27) To ensure proper latch engagement, it may be necessary to have a narrower reveal in the latch area than above and below. Install strike side shims above the deadbolt location, between the deadbolt and latch, and just below the latch location. Install the deadbolt shims where the strike plate security screws will be located. Secure the shims with 2-1/2" exterior screws behind the weatherstripping. Use enough shim to reduce the reveal in the latch area to 1/8". After tightening the screws in all three locations, check that the reveal is no more than 3/16". This step may require multiple adjustments of the shims to ensure that the reveal does not change as the screws are tightened.

NOTE: Continued on next page

- 28) Install shims across from the top and bottom hinge locations, and midway between the latch and top and bottom hinge. If latch area reveal is narrower than at the top and bottom, adjust shims so reveal changes gradually from latch area to top and bottom. This will result in total of seven shims behind the strike side jamb.
- 29) Install & screw shims (behind weather-stripping) at center of head jamb. Adjust for consistent reveal. Secure with 2½" exterior screws behind the weatherstripping.
- 30) Recheck complete door operation, ensuring that contact with the weatherstripping is uniform (no gaps or light visible). Adjust as required.
- 31) Install and secure additional shims between hinge locations to obtain consistent reveals along both side jambs (total 5 each side plus one extra set above the deadbolt. Secure with 2½" exterior screws behind weatherstripping.
- 32) At all shim locations, nail exterior side of jamb into jack stud about 1½'-2' from outside edge of each jamb (between doorstop and brickmold) w/16d galvanized casing nails.
- 33) Conduct final verification of complete door operation, uniform contact with weatherstripping. Adjust as needed.
- 34) Nail brickmold in all remaining predrilled holes with 16d galvanized casing nails. Note: Drill ¼" hole in 3x5 flat shim as a nailing guard.
- 35) Set and caulk all nails with white finish caulk
- 36) Install temporary threshold support (scrap 2x4 or 2x6), tight to the underside of threshold. Use four 4" timber screws.

Quality Points

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- Flashing Tape and threshold seal tape properly installed
- Brick mold is tight to foam on both sides
- Lockset and Deadbolts are installed, easy to operate, key direction is same for both with notches up, deadbolt strike moves in same direction as deadbolt knob
- Special "security" strike plate is installed for deadbolt with long screws provided
- Door hits weather stripping evenly and no gaps or light show thru door reveals (including installation of "corner seal pads" at bottom of side jambs on weather strip side)
- Long screws installed in top hinge
- Uniform reveal at top and sides (especially near lockset or deadbolt)
- Door opens and closes freely and latches easily and snugly to striker plates
- Brick mold is nailed properly (using 16d galvanized casing nails, 5 on each side and 1 in the center of top being sure to hit jack studs or header)
- Temporary threshold support tight to the underside of the threshold