

R Y T E C

Powerhouse XL[®]

Installation Manual



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TABLE OF CONTENTS

	PAGE
INTRODUCTION	1
HOW TO USE MANUAL	1
DOOR SERIAL NUMBER	1
ITEMS IN SHIPPING CRATE	1
ELECTRICAL	2
INSTALLATION	2
MATERIAL, TOOLS, AND EQUIPMENT	2
ADDITIONAL REQUIREMENTS	2
Labor and Site Requirements	2
Forklift or Crane Requirements	2
Electrician's Responsibilities	2
GENERAL ARRANGEMENT OF DOOR COMPONENTS	2
ANCHORING METHODS	3
Wood, Block, Brick, or Insulated Walls	3
Metal Walls	3
LOCATING SIDE COLUMNS	4
SIDE COLUMNS AND HEAD ASSEMBLY	5
PHOTO EYES	9
3000 Series	9
Testing Photo Eyes	11
7000 Series	11
Switch Settings	12
Testing Photo Eyes	12
HOOD (OPTIONAL)	13
Dual Drive Model XL: D Size Head.	13
Dual Drive Model XL: D, E, and F Size Heads.	13

ADJUSTMENT . . . . .	.17
DOOR LIMITS . . . . .	.17
Wiring . . . . .	.17
Setting Door Limits . . . . .	.17
MANUAL DOOR PANEL MOVEMENT . . . . .	.18
WIRELESS REVERSING EDGE . . . . .	.19
INSTALLATION AND CONNECTIONS . . . . .	.19
PROGRAMMING . . . . .	.19
Manual Programming . . . . .	.19
TOTAL RESET . . . . .	.19
MISCELLANEOUS . . . . .	.19
FINAL CHECKS . . . . .	.19
FIELD SCHEMATIC . . . . .	.20

INTRODUCTION

The information contained in this manual will allow you to install your Rytec Powerhouse XL® Door in a manner that will ensure maximum life and trouble-free operation.

Any unauthorized changes to these procedures, or failure to follow the steps as outlined, will automatically void the warranty. Any changes to the working parts, assemblies, or specifications as written, which are not authorized by Rytec Corporation, will also cancel the warranty. The responsibility for the successful operation and performance of this door lies with the owner.

DO NOT INSTALL, OPERATE, OR PERFORM MAINTENANCE ON THIS DOOR UNTIL YOU READ AND UNDERSTAND ALL THE INSTRUCTIONS IN THIS MANUAL.

If you have any questions, contact your Rytec representative or call the Rytec Technical Support Department at 1-800-628-1909. Always refer to the serial number of the door when calling your representative or Customer Support. The location of the serial number is on the left side of the head assembly.

The wiring connections and schematics in this manual are for general information purposes only. The actual schematic for your custom installation is located in the crate when the door is delivered.

HOW TO USE MANUAL

Throughout this manual, the following key words are used to alert the reader to potentially hazardous situations, or situations where additional information to successfully perform the procedure is presented:



WARNING is used to indicate the potential for personal injury, if the procedure is not performed as described.



CAUTION is used to indicate the potential for damage to the product or property damage, if the procedure is not followed as described.

IMPORTANT: *IMPORTANT is used to relay information that is CRITICAL to the successful completion of the procedure.*

NOTE: *NOTE is used to provide additional information to aid in the performance of the procedure or operation of the door, but not necessarily safety related.*

DOOR SERIAL NUMBER(S)

To obtain your DOOR SERIAL NUMBER, there are three (3) universal locations that this information can be attained. These are on the left side column assembly (at approximately eye level), on the head assembly, and on the right side column assembly.



When installing multiple doors of the same model, verify & match the serial numbers of all the components for each door (i.e. control panel, side columns, drive assembly, etc.). Mark any items not previously marked.

NOTE: *The following illustration shows the front side of the door. Left and right sides are determined when viewing the front side of the door.*

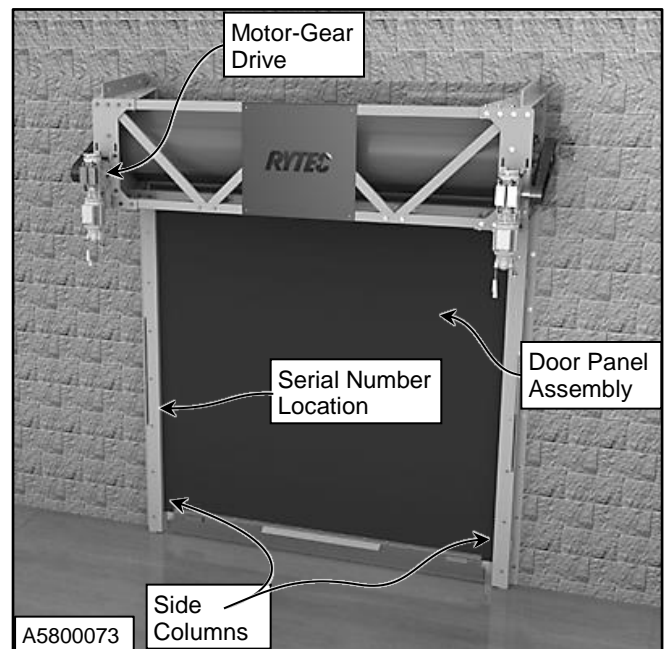


Figure 1

ITEMS IN SHIPPING CRATE

- Header Assembly
- Left and Right Side Columns
- Spreader Bar
- Control Panel
- Installation Manual
- Owner's Manual
- Electrical Schematic (door specific)
- Small Parts Carton

IMPORTANT: *Doors may be shipped in multiple crates. Each Power-house door comes with a door-specific electrical schematic. Doors come in different sizes & configurations so always use the door's specific electrical schematic for installation and/or trouble-shooting.*

ELECTRICAL

- When working with electrical or electronic controls, make sure that the power source has been locked out and tagged according to OSHA regulations and approved local electrical codes.
- Qualified electricians must do all electrical wiring. Wiring must meet all local, state, and federal codes.
- Please check the documentation to determine the specified voltage. Confirm that the power supply meets the voltage required: 208V, 230/240V, or 460/480/575V. Voltage and fuses or breakers should be checked before connecting to the main power supply.

INSTALLATION

MATERIAL, TOOLS, AND EQUIPMENT

1. Threaded rod ($\frac{3}{8}$ -in. and $\frac{1}{2}$ -in. diameter) and other various wall anchor hardware and material. Concrete anchor bolts ($\frac{1}{2}$ -in. diameter). (See “ANCHORING METHODS” on page 3.)

NOTE: *Each side column is anchored to the wall in two places, using $\frac{3}{8}$ -in. diameter anchor hardware. The header frame is anchored to the wall, using $\frac{1}{2}$ -in. diameter anchor hardware; anchor points are predetermined at the factory.*

2. Assorted shim stock.
3. Steel fish tape.
4. Double-sided tape (for attaching shims to wall).
5. Carpenter's level (4-ft. minimum length).
6. Carpenter's square.
7. Hammer drill.
8. Masonry drill bits (for $\frac{1}{2}$ -in. and $\frac{3}{8}$ -in. diameter anchors).
9. Hammer or mallet, and block of wood.
10. Crowbar or pry bar.
11. Assorted hand tools (pliers, tape measure, etc.).
12. Socket and wrench sets.
13. Water level, line level, or transit.
14. Two ladders (taller than height of door opening).
15. Forklift (see “Forklift or Crane Requirements”).

ADDITIONAL REQUIREMENTS

Labor and Site Requirements

1. Two installers.
2. An electrician is required for making all electrical connections.
3. Unlimited accessibility to the door opening during the entire installation process. No traffic should be allowed to pass through the opening while the door is being installed.

Forklift or Crane Requirements

Two forklifts or cranes supplied by the customer, dealer, or installer are mandatory for the safe and proper installation of this door. Each forklift or crane should have:

- sufficient lifting capacity.
- minimum height ability — door height plus 12 in.
- side-shift capability (desired).

Electrician's Responsibilities

For complete details on the responsibilities of the electrician, refer to the wiring diagram and manual that were shipped with the control drive.

GENERAL ARRANGEMENT OF DOOR COMPONENTS

Figure 2 shows the location of the major components of the door and the general placement of the associated sub-assemblies for a typical installation.

NOTE: *These illustrations are for informational purposes only. They should not be relied upon solely during the installation of your door and its sub-assemblies.*

IMPORTANT: *The surface of the wall on which the door is to be installed must be free of any obstructions. Also, any existing door framing on the wall should be removed or the side panels will require shimming before installing.*

NOTE: *Figure 2 shows the front of the door. Left and right are determined when viewing the front of the door.*

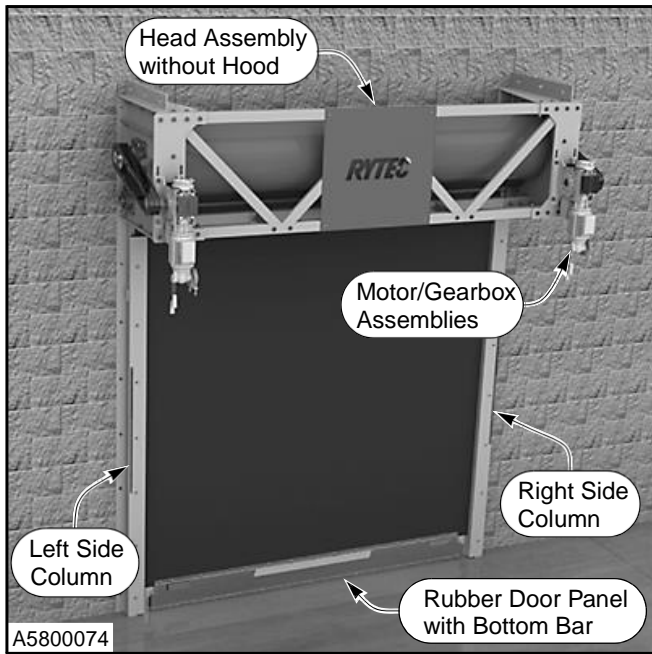


Figure 2

ANCHORING METHODS

Correct anchoring of the side columns and head assembly to the wall is important for the smooth and safe operation of the door. The wall material should be strong enough to support the weight of the door assembly and all wall anchors.

Figure 3 shows an anchoring method for various types of walls. Use the method that is best suited for your particular installation site.

All necessary anchoring hardware and material required for the installation of this door are the responsibility of the door owner. If you have any questions, call your Rytec representative or the Rytec Technical Support Department at 1-800-628-1909.

NOTE: Use $\frac{1}{2}$ -in. diameter threaded through bolts or threaded rods to anchor the door to all wall applications. For most applications, $\frac{3}{8}$ -in. diameter anchors may be used for mounting the jamb and header frame to the wall.

Wood, Block, Brick, or Insulated Walls

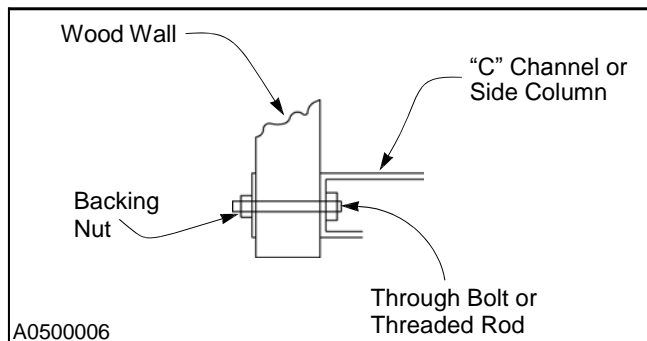


Figure 3

Metal Walls

When installing the Powerhouse XL door to a metal structure, use 4-in. welds every 16-in. on both sides of the side columns. A certified welding professional should be used for this type of installation.

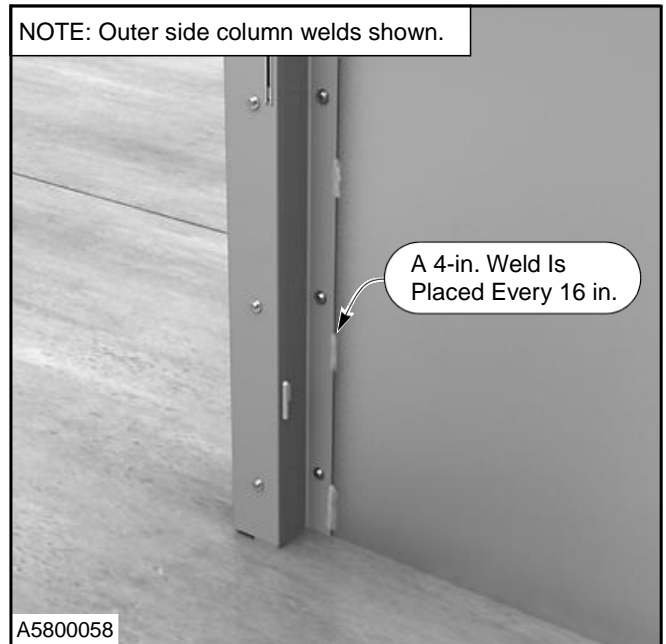


Figure 4

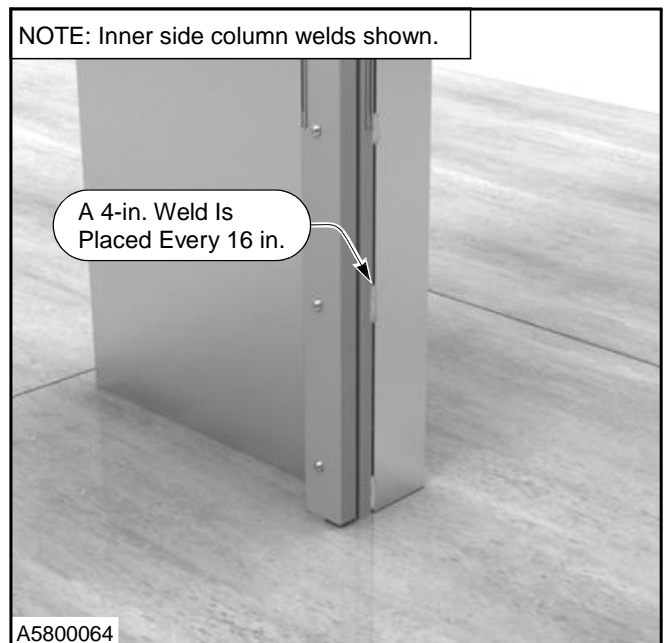


Figure 5

NOTE: The door assembly, walls, and building structure **MUST BE** properly grounded.

INSTALLATION—LOCATING SIDE COLUMNS

LOCATING SIDE COLUMNS

1. Locate the layout drawing of the door. It should be attached to the small parts carton. This drawing identifies the production width of your door.
2. Using the centerline as a reference point, lay out and mark half of the door's production width along the floor. (See Figure 6)

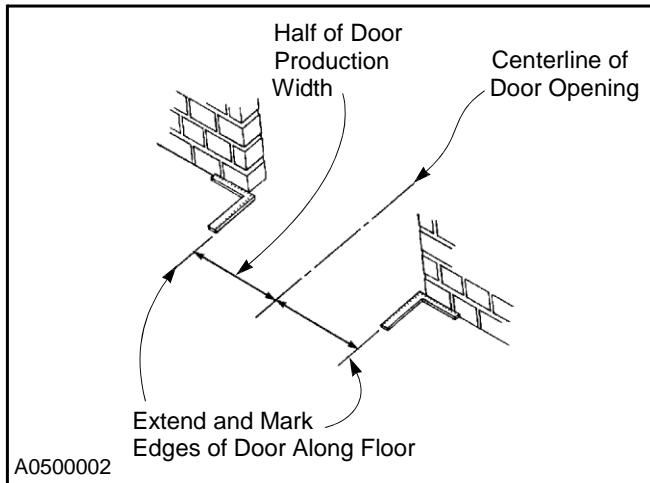


Figure 6

3. With a carpenter's square placed against the wall, mark both sides of the door along the floor. Extend the line along each edge.
4. Check that the floor is level across the door opening. The floor must be level within 0.12 in. (3 mm) from side to side. If one side of the opening is higher than the other, a shim under the side column will be required.

Figure 7 and Figure 8 show two recommended methods that can be used to ensure a level side column installation.

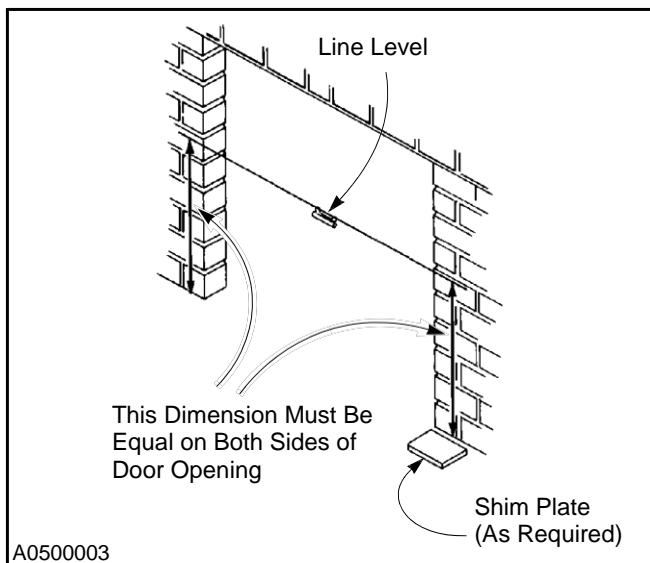


Figure 7

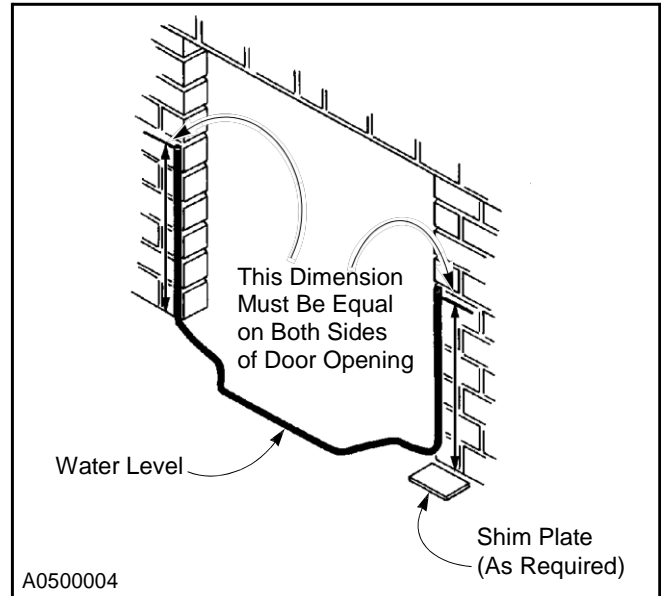


Figure 8

NOTE: Contact the Rytec Technical Support Department if the floor is more than 1 in. out of level.

5. Use a plumb bob or carpenter's level to check the wall for plumb in the areas where the side columns are to be mounted. Also, inspect the wall for any obstructions.

If the wall is not plumb, use shims. If you find an obstruction, remove it or shim the column to avoid the obstruction. (See Figure 9)

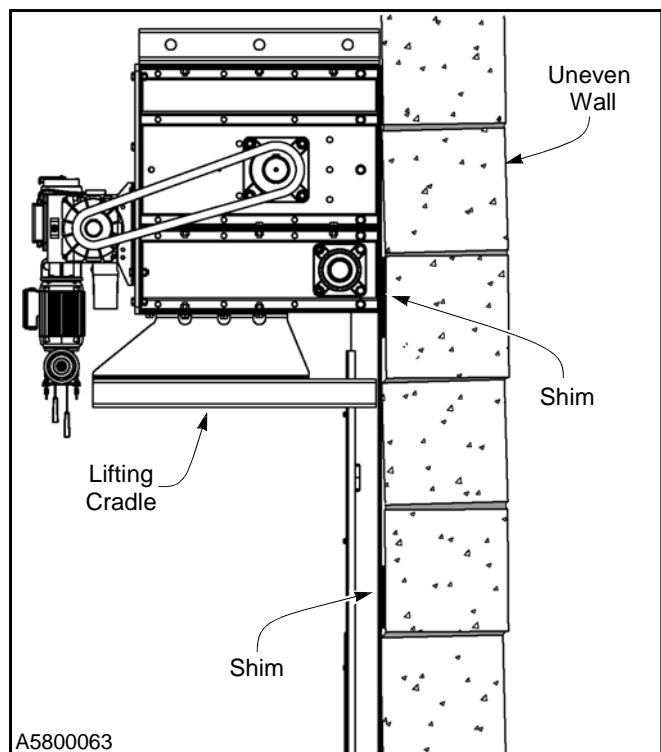


Figure 9

NOTE: If the door requires more than 1/2 in. to shim around the wall obstruction, longer anchors will be required.

SIDE COLUMNS AND HEAD ASSEMBLY

The side columns come completely assembled. They are installed with LED light assemblies at the factory to make the routing and connecting of cables and wires more efficient.

NOTE: The side columns come with preset anchor points for your custom door height. **DO NOT** add additional anchor points as this will void the door warranty. Contact the Rytec Technical Support Department at 1-800-628-1909 for engineering support.

Production width is measured from the inner side columns. The door must be installed centered in the opening and, in most instances, flush with the wall jamb.

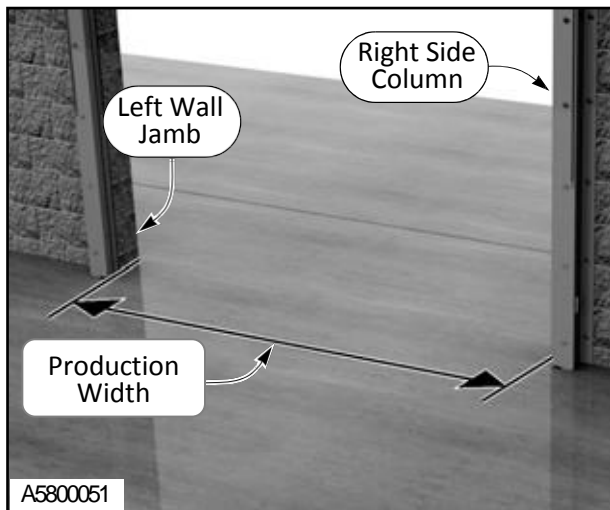


Figure 10

1. Remove the right side column from the shipping crate.

IMPORTANT: It is critical that the side columns are mounted square and plumb with the wall and level across the door opening. Using a 4-ft. level and carpenter's square will help ensure the columns are correctly set. Place shims where necessary.

In addition, the use of bar clamps will allow you to temporarily secure the columns to the wall, while allowing you to make slight adjustments during the installation process.

WARNING

Before drilling any holes, ensure there are no electrical wires, water pipes, gas lines, etc., buried in the floor or hidden in the wall.

2. Stand the right side column on the floor. Place it against the wall and align it flush with the wall jamb.
3. Once the side column is set plumb and square, bar clamp it to the wall. (See Figure 11)

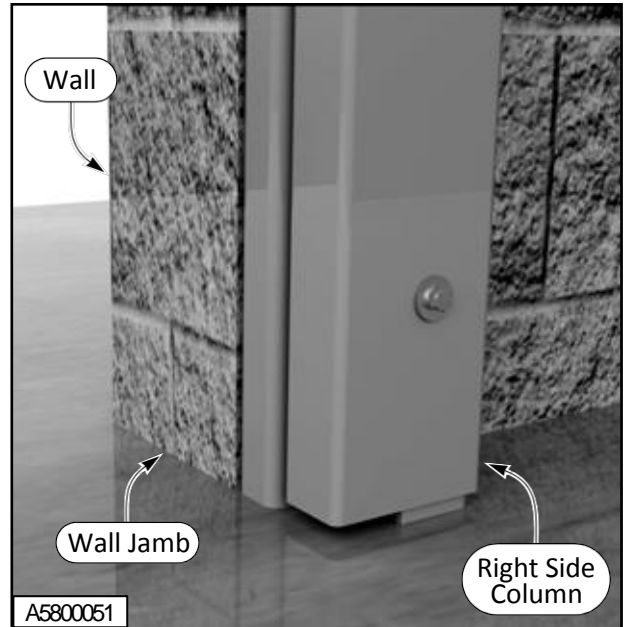


Figure 11

4. Anchor the side column. (See “ANCHORING METHODS” on page 3.) **DO NOT** completely tighten the anchors at this time — they must be tightened **after** the head assembly is installed. (See Figure 12)

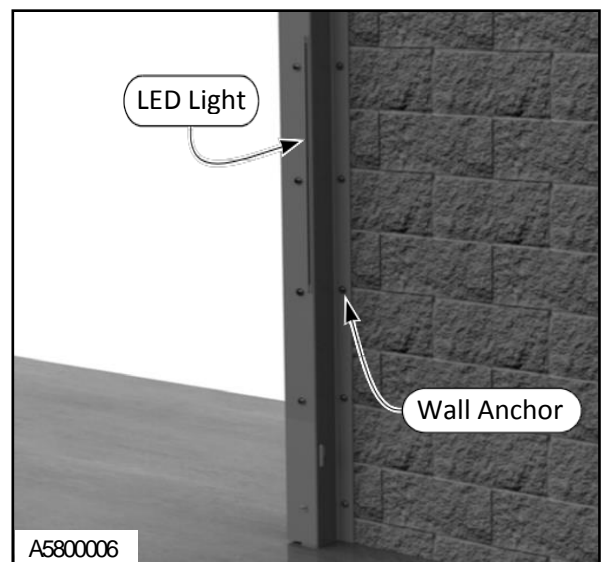


Figure 12

INSTALLATION—SIDE COLUMNS AND HEAD ASSEMBLY

NOTE: Use all anchor holes to anchor the side columns to the wall.

IMPORTANT: Use $\frac{1}{2}$ -in. stud-type anchors for concrete walls. Use through bolts or threaded rods for brick walls.

5. Install left side column in the same manner as the right.
6. Install rear spreader assembly as follows:

For D Head Assembly:

- a. Install rear spreader assembly between the two side columns using four $\frac{1}{2}$ x $1\frac{1}{2}$ -in. hex head cap screws, $\frac{1}{2}$ -in. lock washers, and $\frac{1}{2}$ -in. flat washers. (See Figure 13)

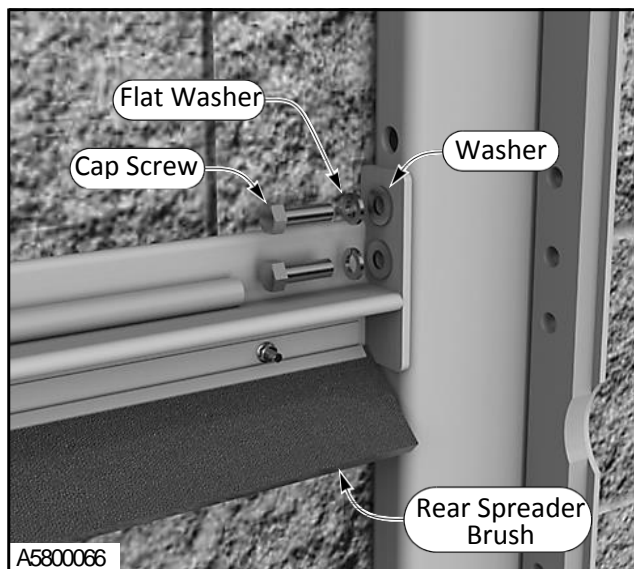


Figure 13

For E and F Head Assemblies:

- b. Install the ends of the rear spreader to the side columns using (4) $\frac{3}{8}$ -16 x 4-in. Long Hex Head Cap screws, (4) $\frac{3}{8}$ in. Lock Washers, and (8) $\frac{3}{8}$ -in. Flat Washers. (See Figure 14)
- c. Connect the rear spreaders in the middle using (4) $\frac{3}{8}$ -16 x 7-in. Long Hex Head Cap screws, (4) $\frac{3}{8}$ -in. lock washers, and (8) $\frac{3}{8}$ -in. Flat Washers. (See Figure 15)

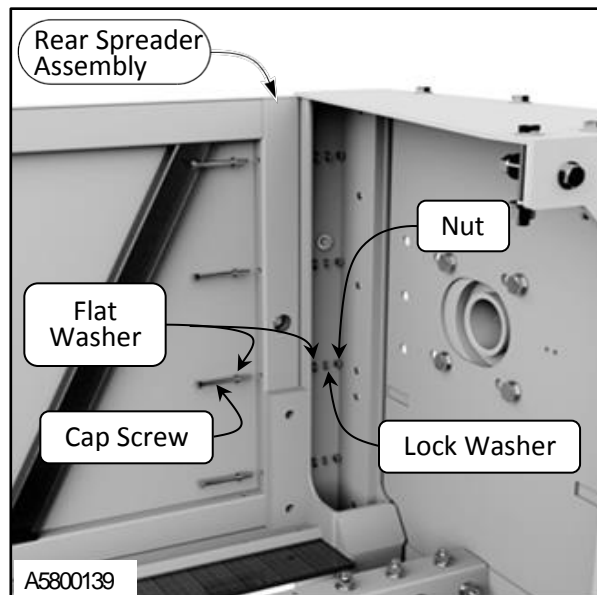


Figure 14

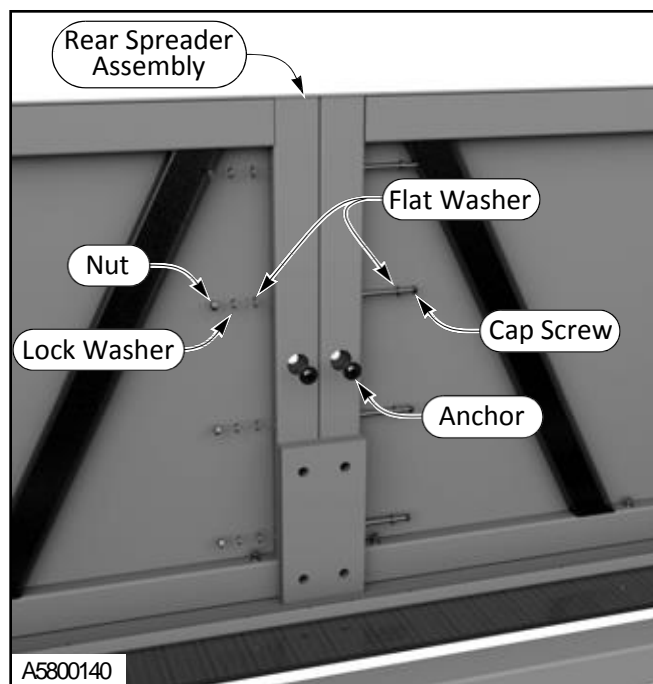


Figure 15

8. Install anchors into the rear spreader assembly. (See Figure 16 and 17)

For D Head Assembly:

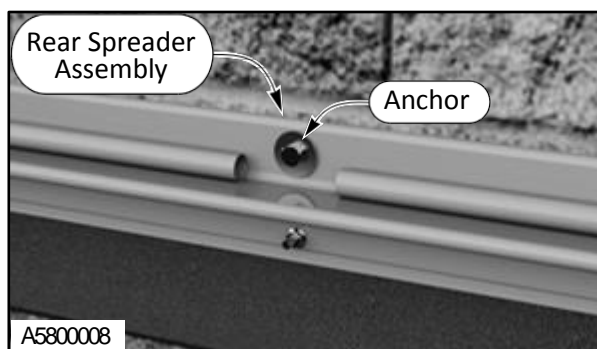


Figure 16

Compare the diagonal measurements and the upper and lower horizontal measurements across the columns. The columns are square and parallel when the diagonal measurements are equal and the horizontal measurements are equal.

If either column requires slight repositioning (when the difference of either comparison is greater than $\frac{1}{4}$ in.), use a block of wood and a mallet to nudge the column into position.

INSTALLATION—SIDE COLUMNS AND HEAD ASSEMBLY

For E and F Head Assemblies:

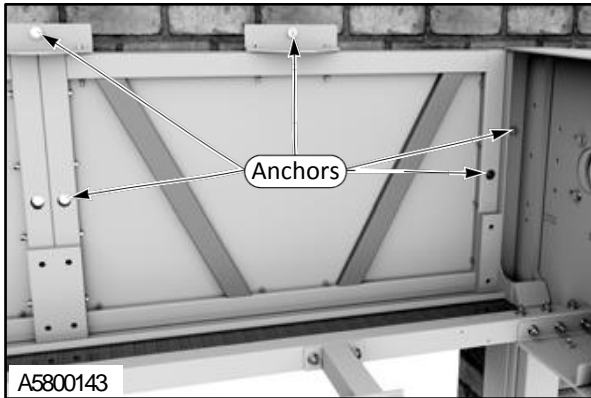


Figure 17

NOTE: Use a laser level along the bottom of the spreader to ensure it is leveled. The use of a forklift may be required to lift and support the spreader until it is anchored to the wall. The anchor count varies with the door width.

9. Lift the head assembly into place:

The head assembly on the Powerhouse XL door is extremely heavy, with the weight measured in tons. Use equipment rated to lift the head assembly safely. If using cranes, attach the appropriate rated chains or cables to the lifting brackets of the head assembly. (See Figure 18 and 19)

NOTE: The lifting brackets should not be modified. When using chains or cables to lift the head assembly into place, the angle cannot be less than 75°. Anything less than that will cause the assembly to bow, and improper alignment and fitting will result. An angle of 90° or perpendicular to the assembly would be ideal.

NOTE: Maintain 75° to 90° angle on the chains.

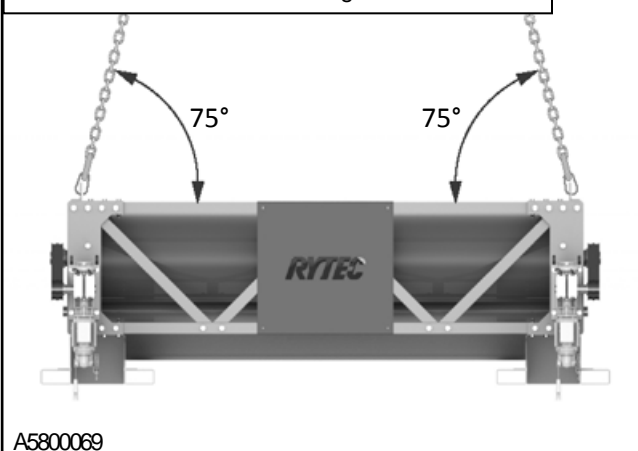


Figure 18

A spreader bar can be used to cut down on sharp chain or cable angles. This is a viable option for a one-crane operation. (See Figure 19)

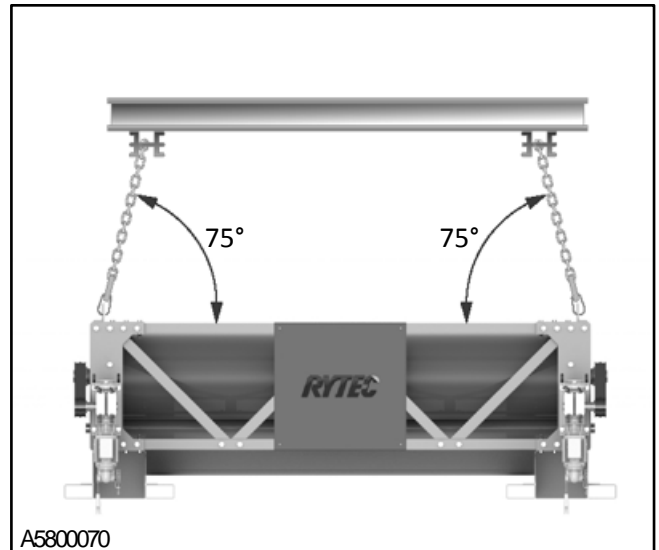


Figure 19

The head assembly has two forklift pockets. Use a properly rated forklift with side-shift capability on each end to complete the installation. (See Figure 20)

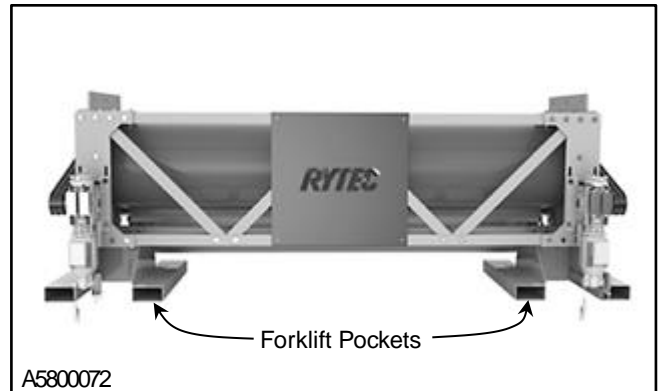


Figure 20

INSTALLATION—SIDE COLUMNS AND HEAD ASSEMBLY

10. Lift the head assembly into position and align it with the side columns. Install (16) $\frac{5}{8}$ -11NC x $1\frac{1}{2}$ -in. cap screws, $\varnothing\frac{5}{8}$ -in. lock washers, and $\varnothing\frac{5}{8}$ -in. cap screws. (See Figure 21 and 22)

NOTE: The motor/gearbox is factory installed to the head assembly. Take extreme care when lifting and attaching the head assembly to the side columns.



Figure 21

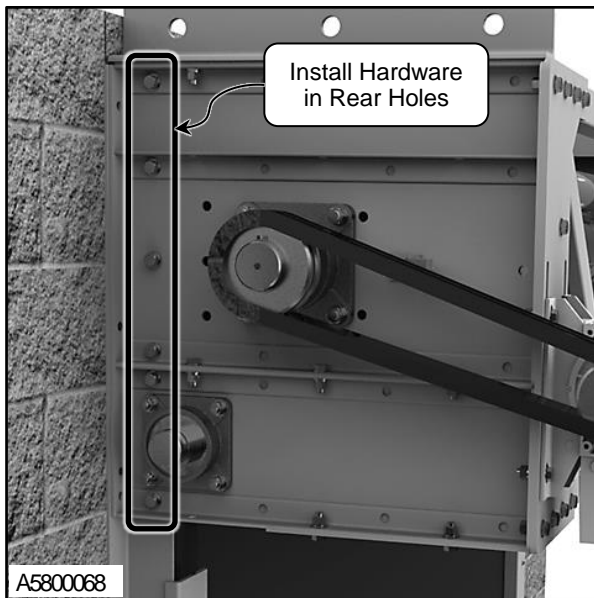


Figure 22

11. Remove the motor support bracket(s) from the head assembly by removing the bolts securing it/them in place. (See Figures 23 and 24)

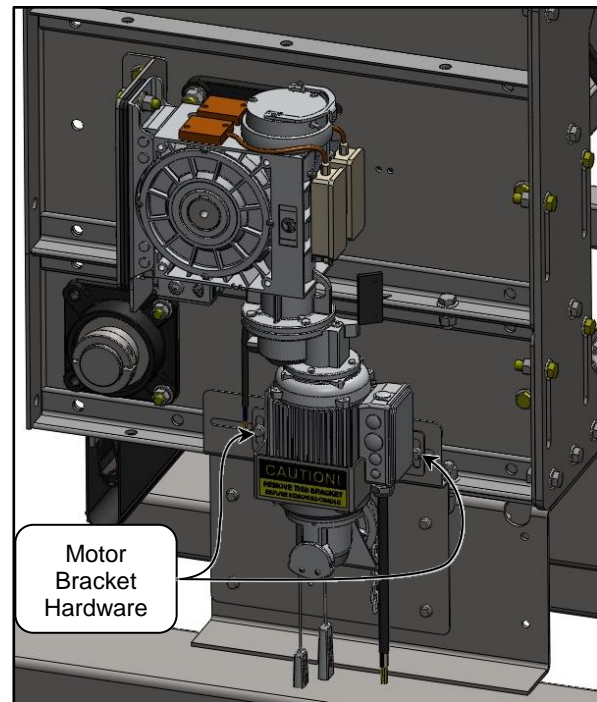


Figure 23

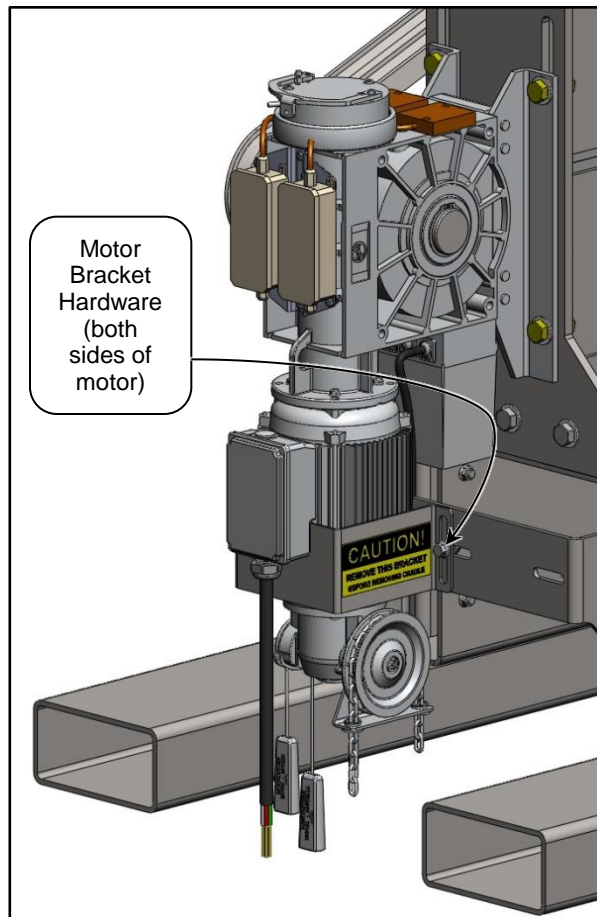


Figure 24

12. Using a carpenter's level (4-ft. minimum length), check that the head assembly is level and tighten all hardware and anchors.
13. Tighten all anchors and associated hardware.
14. Remove shipping straps from the door panel.
15. Check and adjust the routing of the bottom bar and the door panel over the idler roller. (See Figure 25)

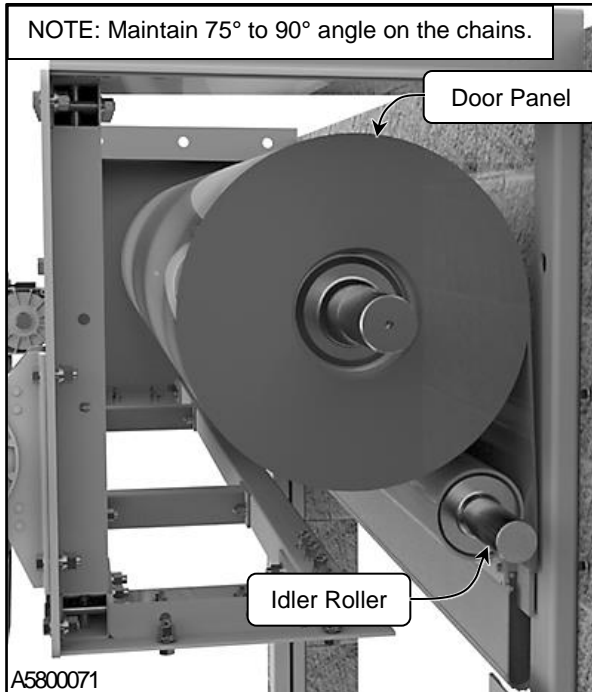


Figure 25

16. Remove the motor support cradle assemblies from the head. (See Figure 26)

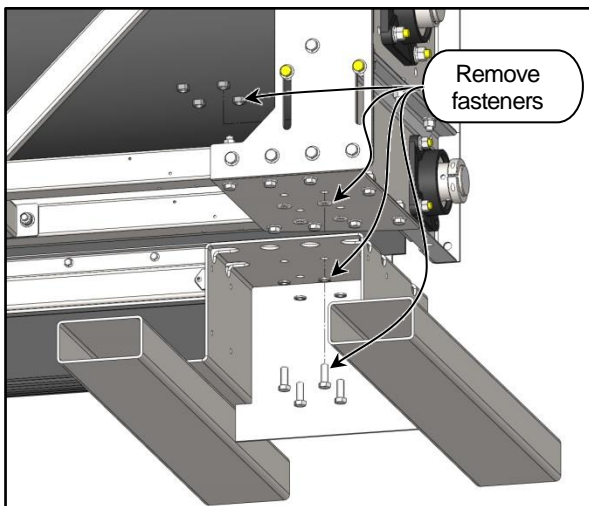


Figure 26

PHOTO EYES

3000 Series

IMPORTANT: These are used on doors with a width of 30 ft. or less.



WARNING
The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

The photo eyes are provided as a safety feature. If the photo eyes are correctly installed, interrupting either set of eyes as the door is closing will reverse the direction of the door and hold it in the fully open position until the interruption is removed.

Your Powerhouse XL door is equipped with two sets of photo eyes. The front set of eyes monitors the front side of the door, and the rear set of eyes monitors the back side of the door.

The transmitter and receiver can be identified in two ways. The transmitter is designated SMT 3000 on the white label or by a single green light that comes on at the clear end of the transmitter. (See Figure 27) The receiver is designated SMR 3215 on the white label or by a yellow light that illuminates only when it is in proper alignment with the transmitter. (See Figure 28)

NOTE: When the cable is connected to the photo eye, there is only a 1/4-in. window to see the green or yellow LED light.

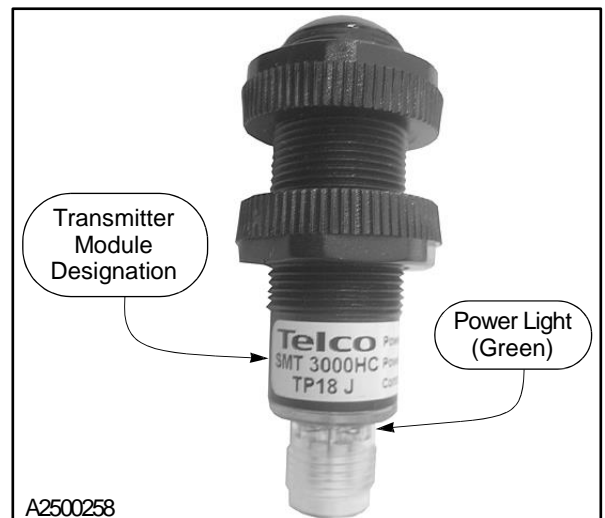


Figure 27

INSTALLATION—PHOTO EYES



Figure 28

The front and rear photo eyes, their required wire cables, and mounting brackets are located in the small parts carton. You must provide the hardware to install the brackets on your particular wall.

NOTE: The front set of eyes is to be located on the wall, adjacent to the front side of the door. Each eye must be located 6 to 8 in. above the floor and as close to the door as possible. They must also be mounted directly across from each other. (See Figure 29)

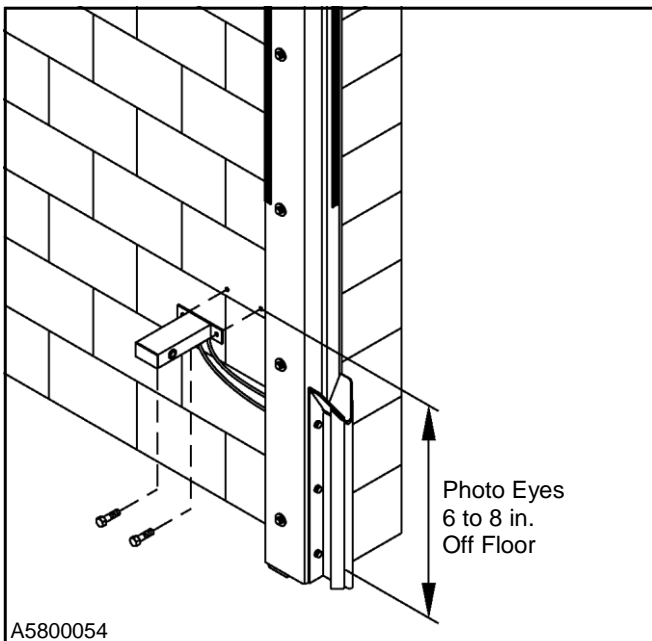


Figure 29

IMPORTANT: To prevent the eyes on the front of the door from interfering with the eyes on the back of the door, the transmitter and receiver modules must be installed as shown. (See Figure 30)

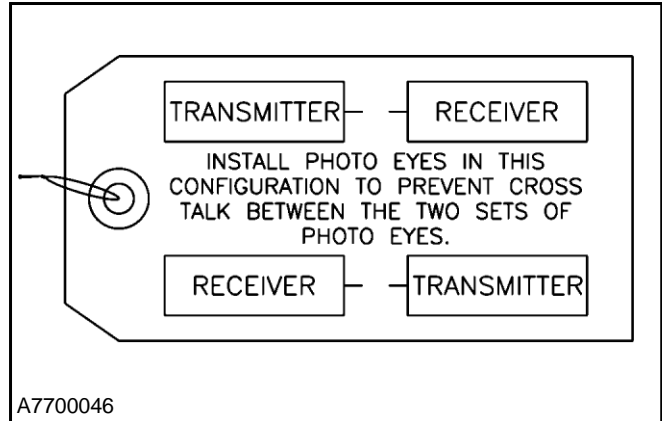


Figure 30

1. After the mounting brackets are in place, install the transmitter module in the left bracket and the receiver module in the right bracket.

IMPORTANT: To prevent the eyes on the front of the door from interfering with the eyes on the back of the door, the transmitter and receiver modules must be installed as specified above.

2. Thread the connector found on the terminated end of each wire cable onto the end of the photo eyes.

NOTE: Be sure the path through which the wire cables are routed hides and protects them from damage. If necessary, run conduit to each mounting bracket to protect the cables.

3. Route the wire cables from the field-installed photo eyes to the control panel in a manner conforming to all applicable codes and regulations. Shielded cable is recommended for all photo eye wires.
4. Connect the cable to the junction box according to the schematic.
5. After all work is complete, clean the lens of each photo eye using window cleaner and a soft, clean cloth.

Testing Photo Eyes

With the power on, the green light on the transmitter indicates the photo eye module is powered up. When the yellow light on the receiver module is also lit, the transmitter and receiver modules are properly aligned.

Placing your hand in front of the receiver breaks the light path and causes the yellow light to go out. Removing your hand causes the yellow light to go back on.

7000 Series

IMPORTANT: *These are used on doors with a width of 30 ft. or more.*



The disconnect must be in the OFF position and properly locked and tagged before performing the following procedure.

The photo eyes are provided as a safety feature. If the photo eyes are correctly installed, interrupting either set of eyes as the door is closing will reverse the direction of the door and hold it in the fully open position until the interruption is removed.

Your Powerhouse XL door is equipped with two sets of photo eyes. The front set of eyes monitors the front side of the door, and the rear set of eyes monitors the back side of the door.

The receiver SMX 7600 module has two lights — one is green and the other is yellow. In addition, the receiver module has two small adjustable switches. (See Figure 31) The transmitter SMT 7000 module can be identified by the single green light located along the barrel of the module. (See Figure 32)

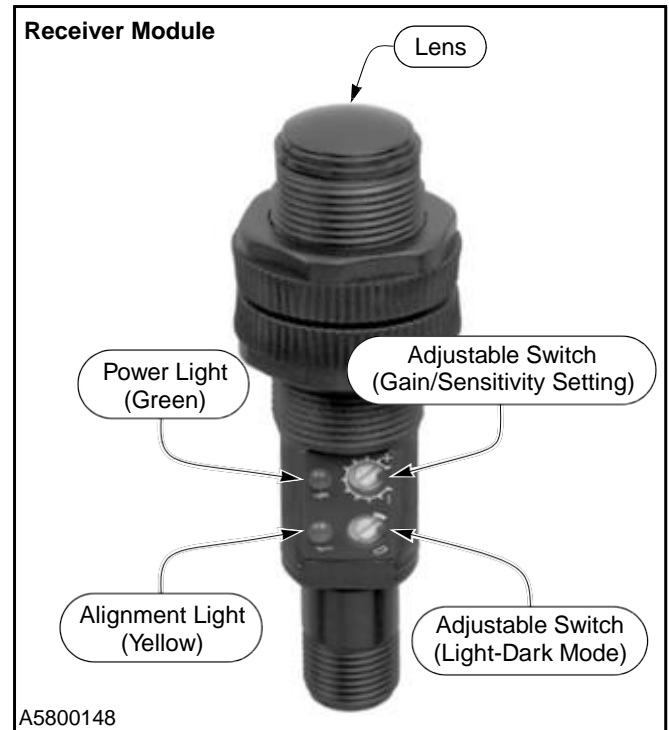


Figure 31

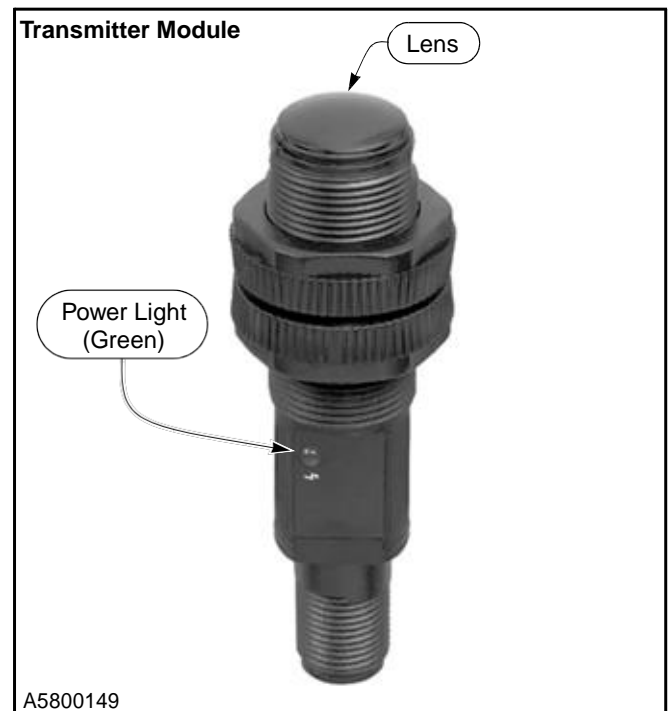


Figure 32

The front and rear photo eyes, their required wire cables, and mounting brackets are located in the small parts carton. You must provide the hardware to install the brackets on your particular wall.

INSTALLATION—PHOTO EYES

NOTE: The front set of eyes is to be located on the wall, adjacent to the front side of the door. Each eye must be located 6 to 8 in. above the floor and as close to the door as possible. They must also be mounted directly across from each other. (See Figure 33)

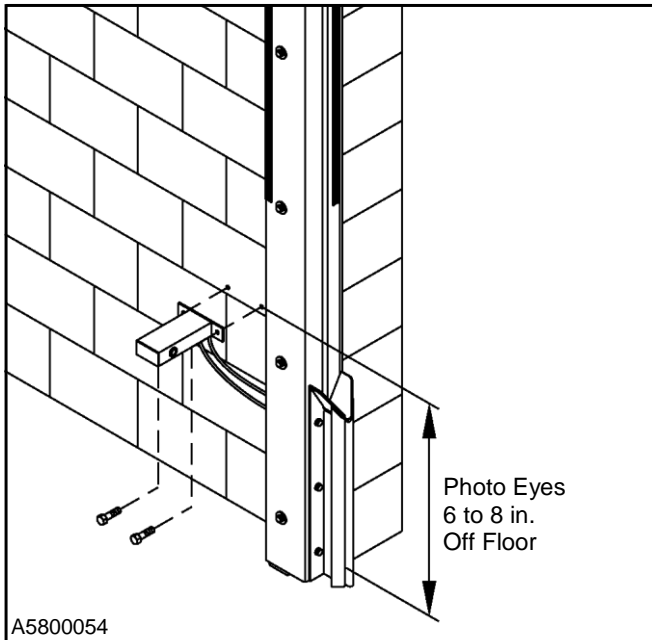


Figure 33

IMPORTANT: To prevent the eyes on the front of the door from interfering with the eyes on the back of the door, the transmitter and receiver modules must be installed as shown. (See Figure 34)

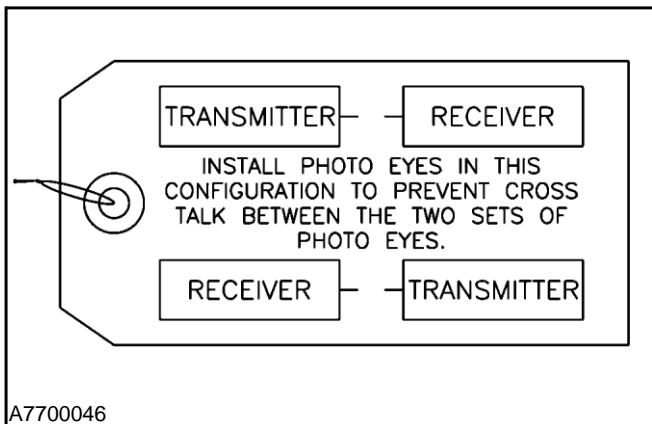


Figure 34

1. After the mounting brackets are in place, install the transmitter module in the left bracket and the receiver module in the right bracket.

IMPORTANT: To prevent the eyes on the front of the door from interfering with the eyes on the back of the door, the transmitter and receiver modules must be installed as specified above.

2. Thread the connector found on the terminated end of each wire cable onto the end of the photo eyes.

NOTE: Be sure the path through which the wire cables are routed hides and protects them from damage. If necessary, run conduit to each mounting bracket to protect the cables.

3. Route the wire cables from the field-installed photo eyes to the control panel in a manner conforming to all applicable codes and regulations. Shielded cable is recommended for all photo eye wires.
4. Connect the cable to the junction box according to the schematic.
5. After all work is complete, clean the lens of each photo eye using window cleaner and a soft, clean cloth.

Switch Settings

Before the door is operated, check the factory settings of the adjustable switches on both receiver modules.

The switch farthest from the lens of the photo eye controls the light-dark mode. It should be set on the light mode (fully clockwise). The switch closest to the lens controls the gain/sensitivity setting. It should be set to maximum gain (fully clockwise).

Testing Photo Eyes

With the power on, the green light on the transmitter indicates the photo eye module is powered up. When the yellow light on the receiver module is also lit, the transmitter and receiver modules are properly aligned.

Placing your hand in front of the receiver breaks the light path and causes the yellow light to go out. Removing your hand causes the yellow light to go back on.

IMPORTANT: Prior to installing the hood assembly or switching power on for the first time, make sure all wires and cables are properly routed and secure. Wires and cables should not interfere with any moving parts.

HOOD (OPTIONAL)

Dual Drive Model XL: D Size Head.

IMPORTANT: Installation of hood spreader is required.

1. Install hood spreader between side columns using four $\frac{1}{2}$ -in. flat washers, lock washers, and $\frac{1}{2}$ -13 x $1\frac{1}{2}$ hex head cap screws.
2. Anchor hood spreader to wall. (See Figure 35)

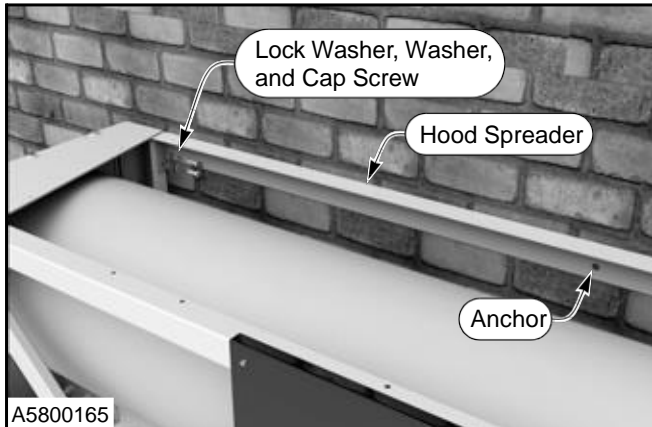


Figure 35

3. Proceed to step 1 below.

Dual Drive Model XL: D, E, and F Size Heads.

1. Install front center cover behind the front truss.
2. Secure front center cover to front truss using $\frac{1}{4}$ -14 x $\frac{3}{4}$ self-drilling screws. (See Figure 36 and Figure 37)

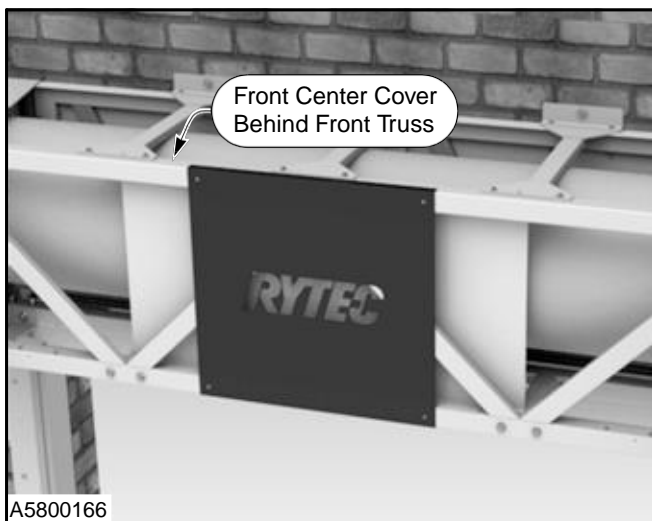


Figure 36

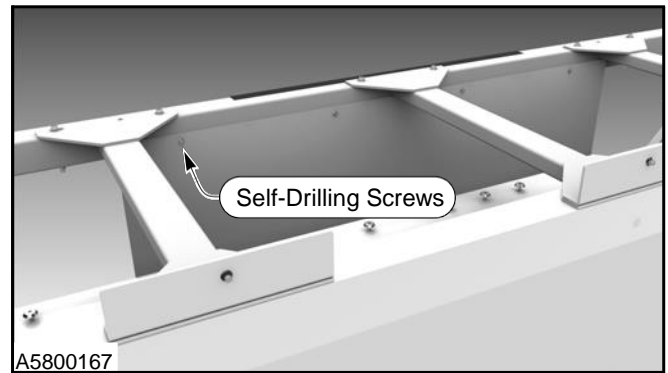


Figure 37

3. Install left and right front covers behind the front truss.
4. Secure left and right front covers to front truss using $\frac{1}{4}$ -14 x $\frac{3}{4}$ self-drilling screws. (See Figure 38)

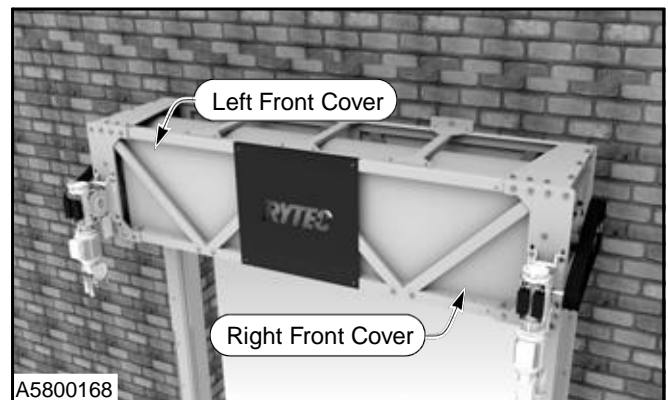


Figure 38

5. Locate and mark the center of head assembly.
6. Install hood frame center on the centerline of the head assembly. With the back side of the hood frame center against the wall, there should be $1\frac{1}{2}$ in. from the front of the hood frame center to the edge of the front truss.

INSTALLATION—HOOD (OPTIONAL)

7. Use four $\frac{1}{4}$ -14 x $\frac{3}{4}$ self-drilling screws to secure the front of the hood frame center to the truss. (See Figure 39)

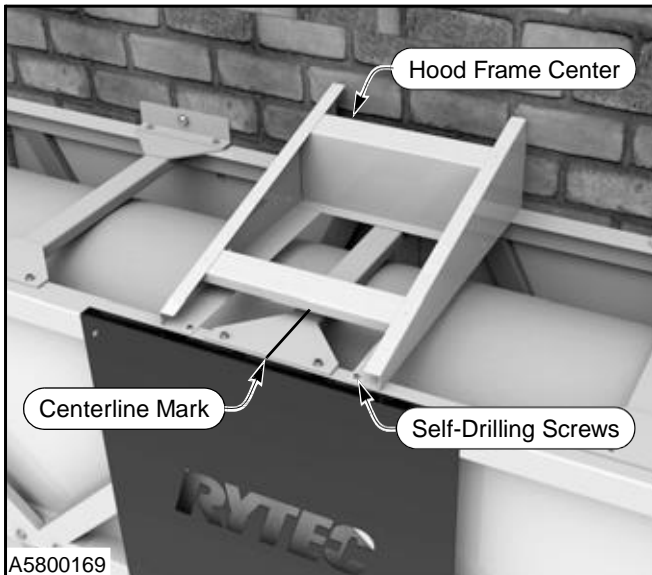


Figure 39

8. Place hood frame centers side-by-side along the width of the head assembly. (See Figure 40)

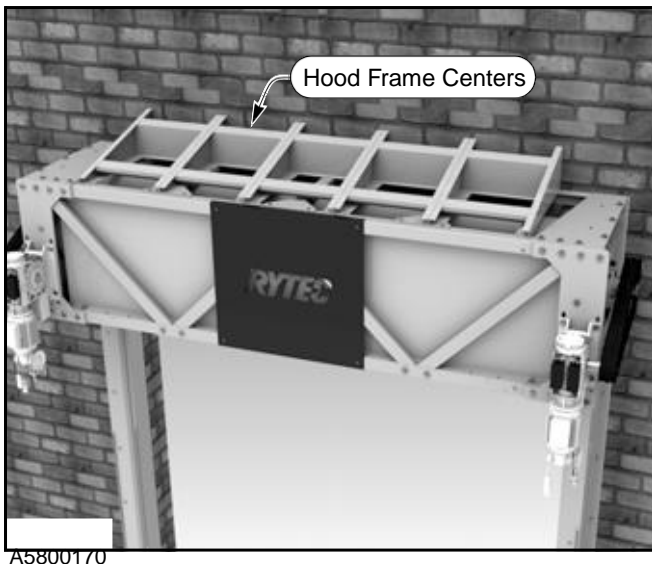


Figure 40

9. Connect all hood frames centers together using $\frac{1}{4}$ -20 x $\frac{3}{4}$ hex flange screws and $\frac{1}{4}$ -20 flange lock nuts.
10. Use $\frac{1}{4}$ -14 x $\frac{3}{4}$ self-drilling screws to secure the front of the hood frame centers to the truss and the back to the rear spreader. (See Figure 41)

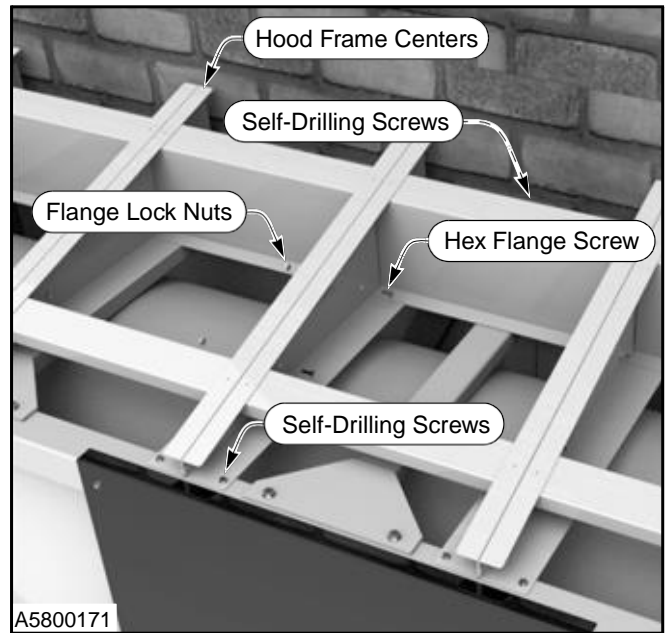


Figure 41

11. Place the left and right hood frame ends on the top plates of the head assembly.
12. Use $\frac{1}{4}$ -20 x $\frac{3}{4}$ hex flange screws to secure hood frame ends to the hood frame centers.
13. Use $\frac{1}{4}$ -14 x $\frac{3}{4}$ self-drilling screws to secure hood frame ends to the top plate of the head assembly.
14. Check the overhang measurement. It should be approximately 6 $\frac{1}{2}$ in. from the outer edge of the top plate. (See Figure 42)

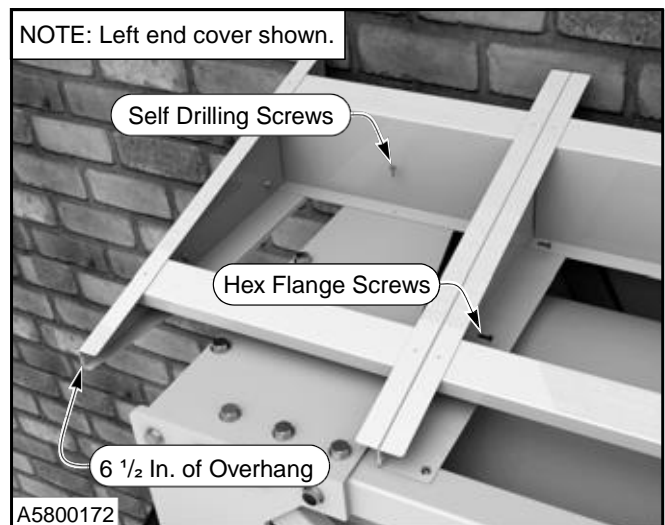


Figure 42

15. Install left and right motor end covers using $\frac{1}{4}$ -20 x $\frac{3}{4}$ hex flange screws. (See Figure 43)

NOTE: Install anchors to the end covers after the hood is fully assembled.

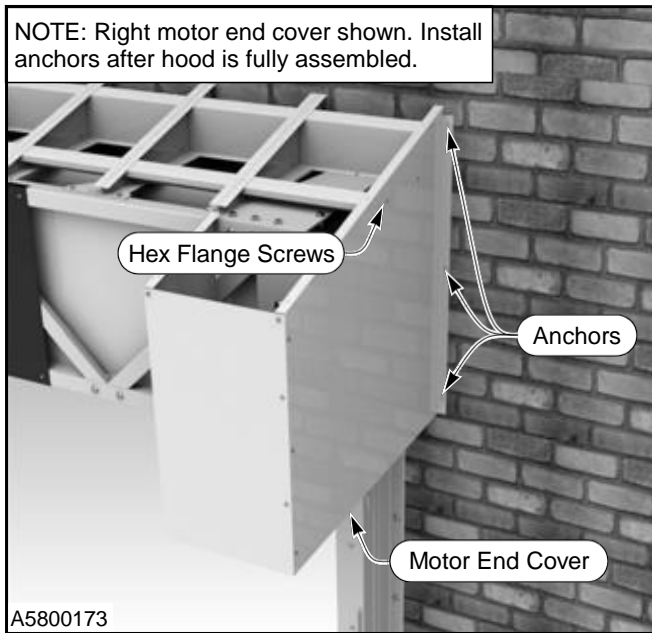


Figure 43

16. Install left and right motor covers to motor end covers using $\frac{1}{4}$ -20 x $\frac{3}{4}$ hex flange screws.
17. Secure motor covers to truss using $\frac{1}{4}$ -14 x $\frac{3}{4}$ self-drilling screws. (See Figure 44 and Figure 45)

NOTE: Motor cover inside/top flange holes must be in-line with frame weldment holes for hood to fit properly.

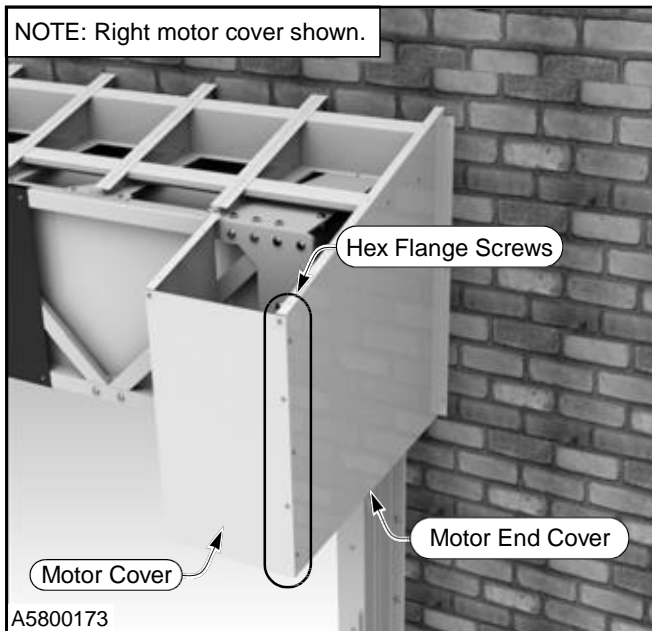


Figure 44

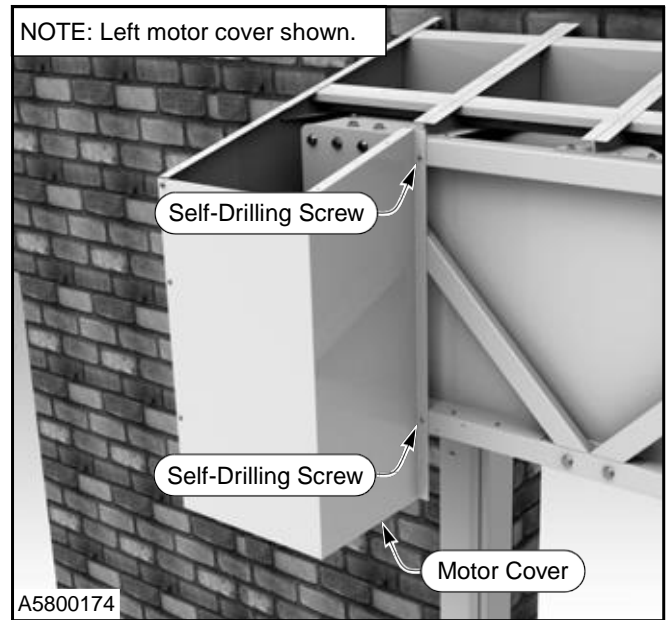


Figure 45

18. Lay inner center hood on top of the center frame.
19. Lay left and right inner hoods on top of the center frame. (See Figure 46)

NOTE: Do not install screws at this time. Be sure to install the inner hoods with the notch facing the motor cover. (See Figure 47)

IMPORTANT: *If the panels have a tendency to slide off the center frames, use a double sided masking tape to hold the panels in place.*

WARNING

The potential for personal injury is present by the inner center hoods sliding off or getting picked up by the wind and landing on a worker. The inner center hoods are not held in place by any hardware until the outer center hoods are placed on top and hardware installed.

INSTALLATION—HOOD (OPTIONAL)

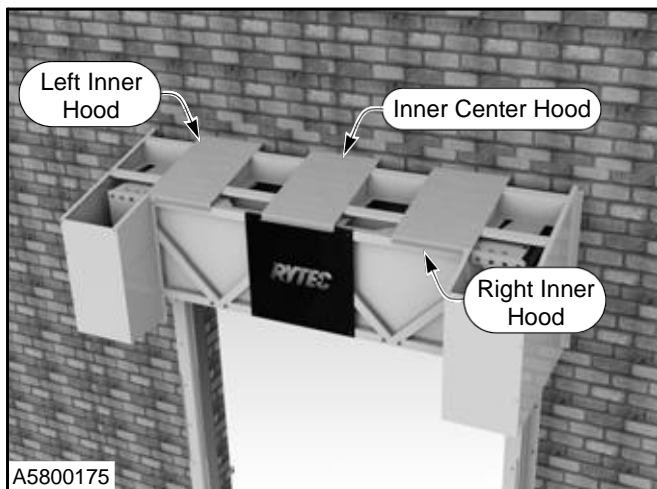


Figure 46

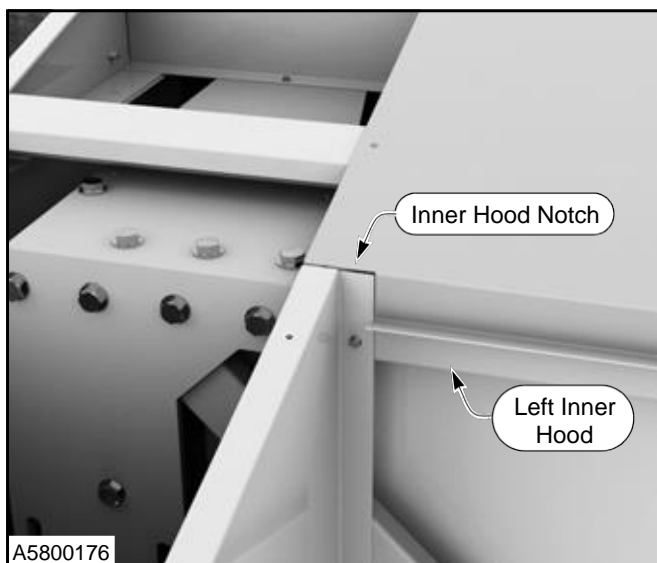


Figure 47

20. Install outer center hoods over the inner hoods. Use $\frac{1}{4}$ -14 x $\frac{3}{4}$ self-drilling screws to secure panels in place. (See Figure 48)

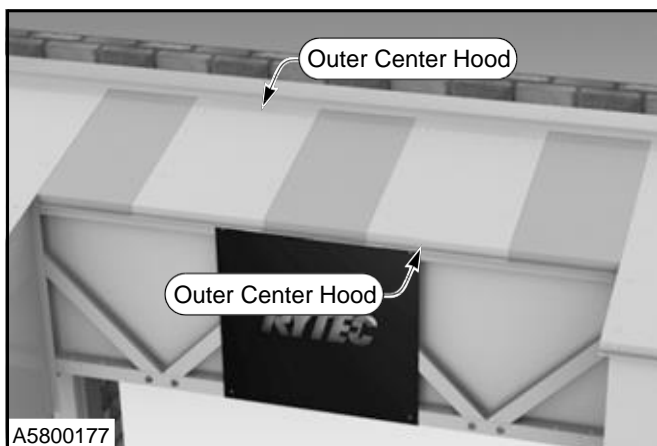


Figure 48

21. Install left and right outer end hoods. Use $\frac{1}{4}$ -14 x $\frac{3}{4}$ self-drilling screws and $\frac{1}{4}$ -20 x $\frac{3}{4}$ hex flange screws with $\frac{1}{4}$ -20 flange lock nuts to secure outer hood ends in place. (See Figure 49 and Figure 50)

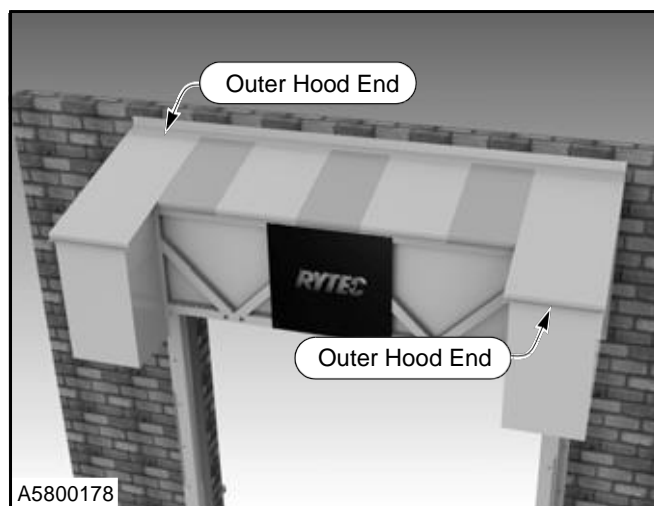


Figure 49

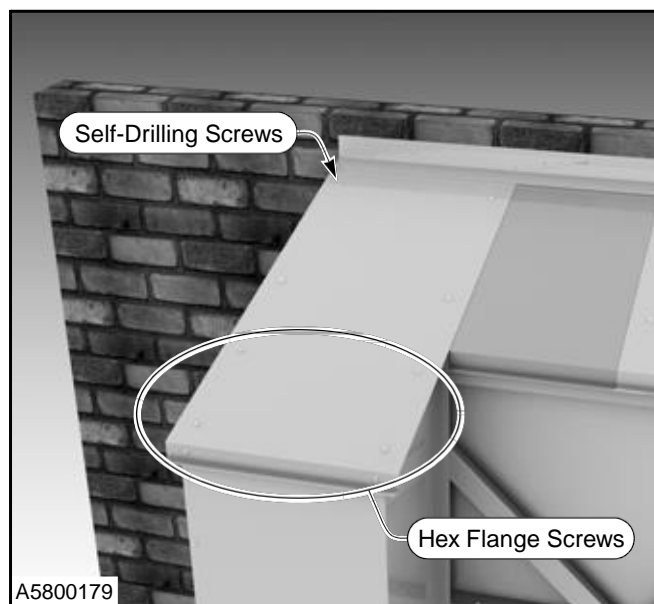


Figure 50

22. Install flashing across the top of the hood assembly.
23. Caulk flashing to wall.

ADJUSTMENT

DOOR LIMITS

Wiring

The limit switch assembly is used to disable the photo eyes as the bottom edge of the door panel is approximately 2 in. above the photo eyes. Disabling the photo eyes will eliminate the false tripping condition caused by the door panel deflecting in a high-wind situation. The limit switch assembly (black housing) is factory wired. (See Figure 51)

NOTE: See the wire schematic that came with door.

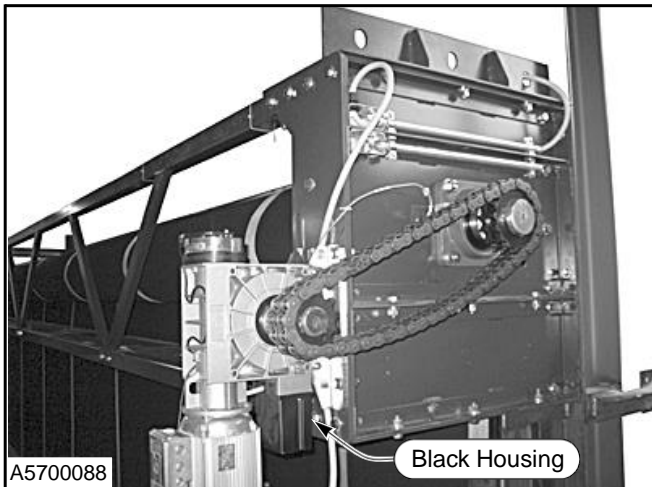


Figure 51

Setting Door Limits

A 2.5 mm hex wrench (included) is required to adjust the limit switch cams. Two set screws are on each cam. One is the locking set screw for coarse adjustment, and the other is for very fine adjustment of the cam.

IMPORTANT: If the limits are set in reverse order, close limit before open limit, there is the potential of over-traveling the door in the opening position. Use the chain fall or jog mode when the bottom bar is within 2 in. of the limit position.

NOTE: When using the chain fall, disengage both motor/gearboxes. (See “MANUAL DOOR PANEL MOVEMENT” on page 18.) Chain falls should be used in tandem, never one gearbox at a time unless there has been a catastrophic failure. If one gearbox has to be used, both brakes have to be mechanically disengaged.

1. Open the door using jog mode. Move the door panel until the bottom bar is set as shown in Figure 52.

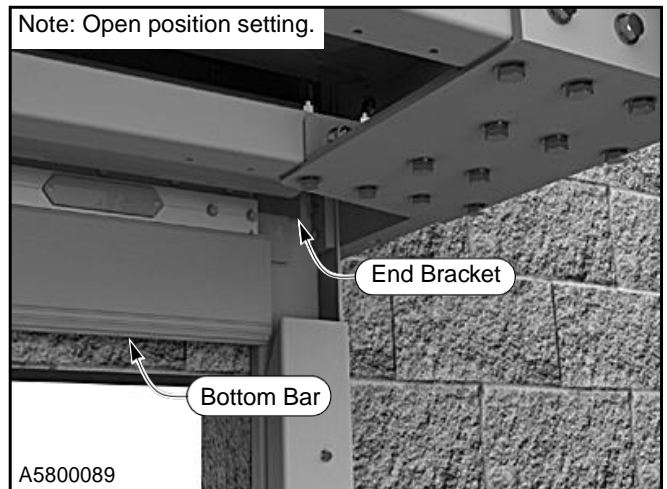


Figure 52

2. Rotate the open-limit cam switch (S3) clockwise until you hear the micro-switch click, and tighten the coarse adjustment locking set screw using the supplied hex key. (See Figure 54 and Figure 55)
3. Rotate the safety close-limit cam switch (S1) clockwise until you hear the micro-switch click. (See Figure 54 and Figure 55)

NOTE: The micro-switch click point for the safety switches (S1 and S2) must be corrected using the fine-adjustment screw. The door must stop safely if the direction of rotation is reversed or if the operating limit switch fails.

4. Close the door using jog mode. Lower the door panel until the bottom edge makes light contact with the floor across the entire opening. (See Figure 53)

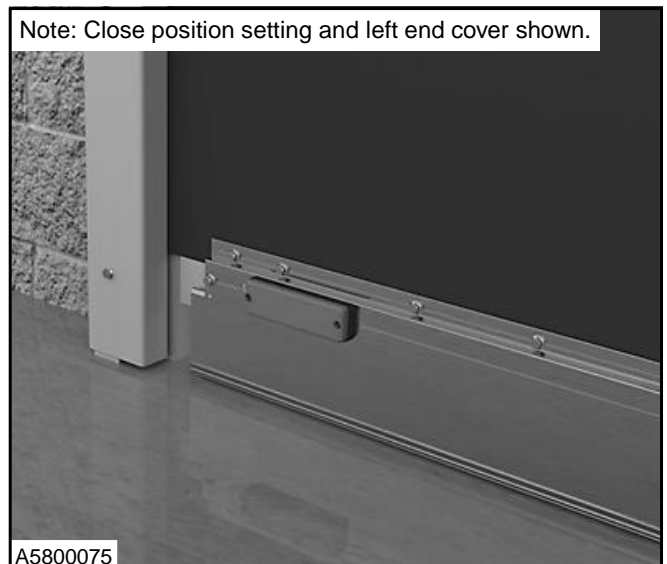


Figure 53

ADJUSTMENT—MANUAL DOOR PANEL MOVEMENT

5. Rotate the close-limit cam switch (S4) clockwise until you hear the micro-switch click, and tighten the coarse adjustment locking set screw using the supplied hex key. (See Figure 54 and Figure 55.)
6. Rotate the safety close-limit cam switch (S2) clockwise until you hear the micro-switch click. (See Figure 54 and Figure 55.)

Limit Switch Designations

- S1 — Safety Open

IMPORTANT: Each limit wheel, except S1 and S2, has a coarse-adjustment screw. S1 is fine adjustment only. This should be very close to the open limit; less than 1 in. This is used as a backup; set only if open limit fails.

- S2 — Safety Close

IMPORTANT: Each limit wheel, except S1 and S2, has a course adjustment screw. S2 is fine adjustment only. This should be very close to the close limit; less than 1 in. This is used as a backup; set only if close limit fails.

- S3 — Open
- S4 — Close
- S5 — Spare (unused at this time)
- S6 — Photo Eye Bypass

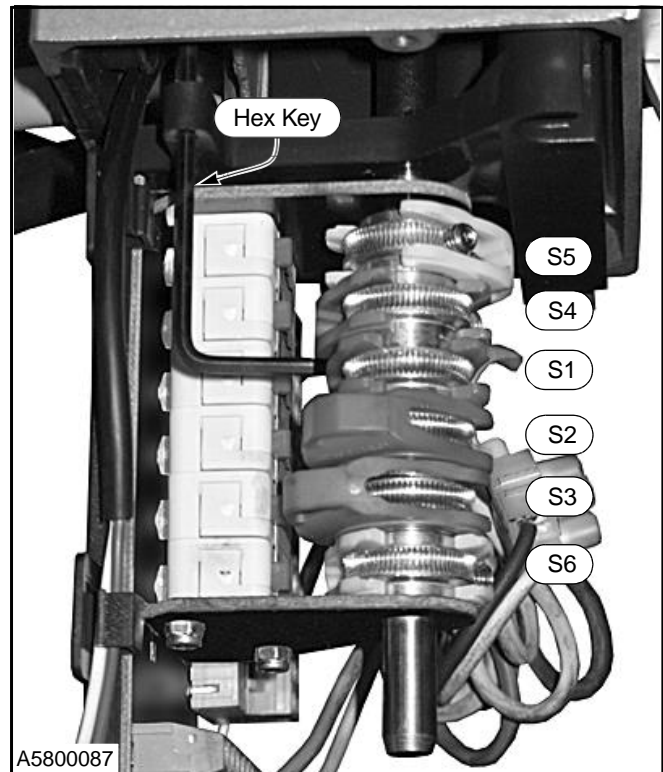


Figure 55

MANUAL DOOR PANEL MOVEMENT

The drive motor has red and green handles hanging from the bottom of the motor. When the green handle is pulled or in the lowest position, the drive motor is engaged to run on electrical power. When the red handle is pulled or in the lowest position, electrical power has been disengaged and manual door operation is required using the chain. Also, when the red handle is pulled, a sensor is engaged and will not allow electrical power to the door.

NOTE: When using the chain fall, disengage both motor/gearboxes. (See “MANUAL DOOR PANEL MOVEMENT” on page 18.) Chain falls should be used in tandem, never one gearbox at a time unless there has been a catastrophic failure. If one gearbox has to be used, both brakes have to be mechanically disengaged.

Electrical power can be shut off anytime to operate the door in manual mode. Control panel limit settings will not be affected when switching the power off and back on. The door will return to normal operating mode. (See Figure 56)

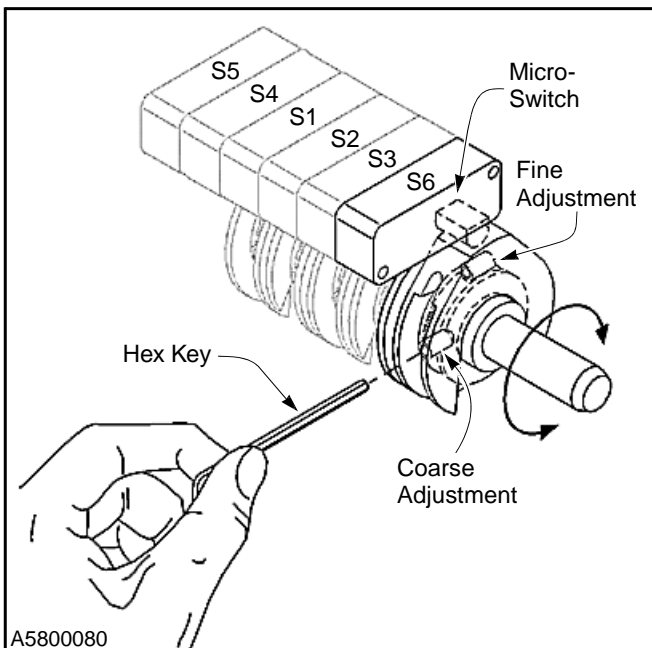


Figure 54

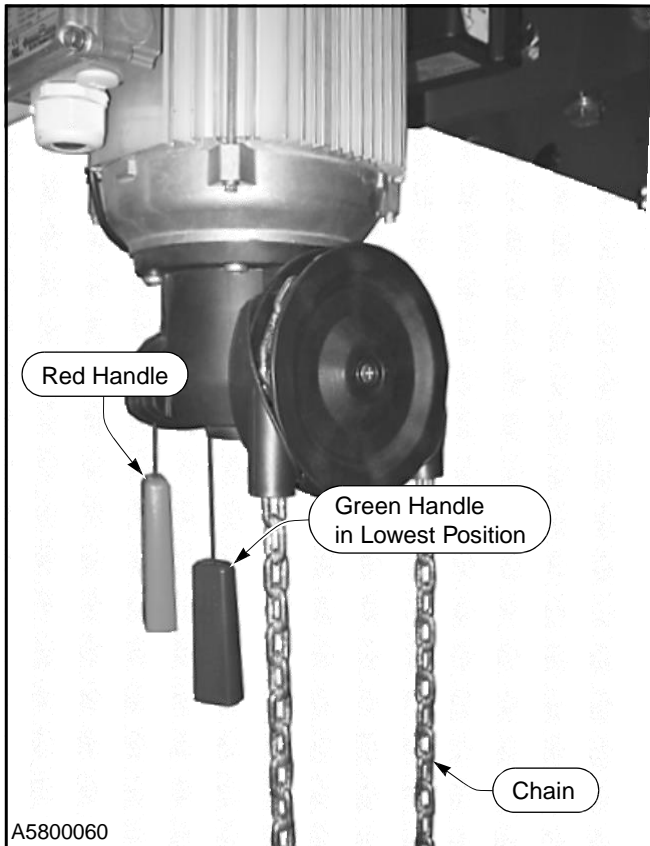


Figure 56

WIRELESS REVERSING EDGE INSTALLATION AND CONNECTIONS

The wireless reversing edge has been programmed at Rytec Corporation. Wire the wireless reversing edge receiver per the schematic received with your control panel. In the event the wireless reversing edge appears not to function, perform the total reset procedure and manual programming steps.

PROGRAMMING

Manual Programming

Press the receiver programming button for 1 sec. and an acoustic signal will be heard. The receiver will enter standard programming. Every time a transmitter is programmed, the receiver will issue an acoustic signal for

0.5 sec. After 10 sec. without programming or pressing the first two transmitter buttons or pressing the PROG button, the receiver will exit programming mode, issuing two acoustic signals of 1 sec. If upon programming a transmitter the receiver memory is full, it will issue 7 acoustic signals of 0.5 sec. and exit programming.

TOTAL RESET

In programming mode, the programming button is held down and a reset jumper is bridged for 3 sec. The receiver will issue 10 short acoustic warning signals followed by others at a faster pace to indicate that the operation has been successful. The receiver is now in programming mode.

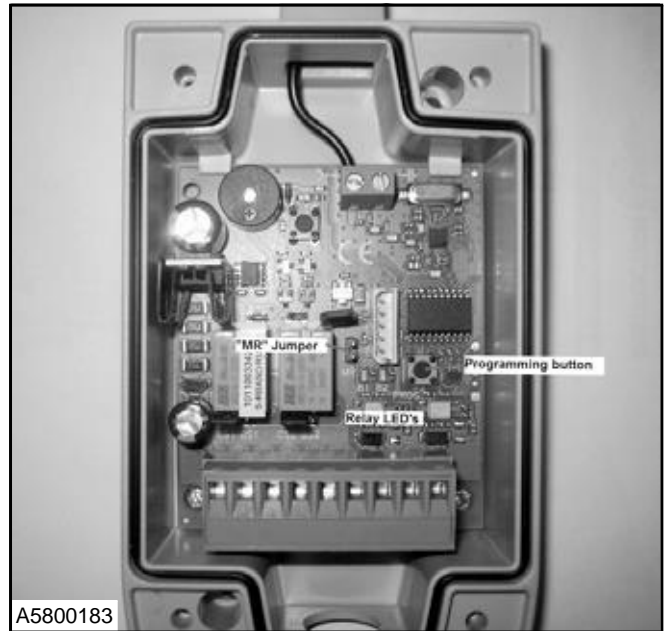


Figure 57

After 10 seconds without programming or quickly pressing the programming button, the receiver will exit programming mode, issuing two acoustic signals of 1 sec. (See Figure 57)

MISCELLANEOUS

FINAL CHECKS

NOTE: Check the following door systems and components after the door panel has been cycled at least 20 times.

Head Assembly: Check that all mounting hardware is in place and tight.

Side Columns: Check that the side columns are plumb and square and that all anchor bolts are tightly secured.

Activators: Check to see that the activators operate as specified by the manufacturer.

Open and Close Limits: Check open and close limits. See "DOOR LIMITS" on page 17.

Caulk: Ensure that all edges of the jamb and header frames and pullouts are sealed where they meet the wall of the building. Use a high-quality caulk rated for the environment in which the door is installed, as required.

FIELD SCHEMATIC—FINAL CHECKS

FIELD SCHEMATIC

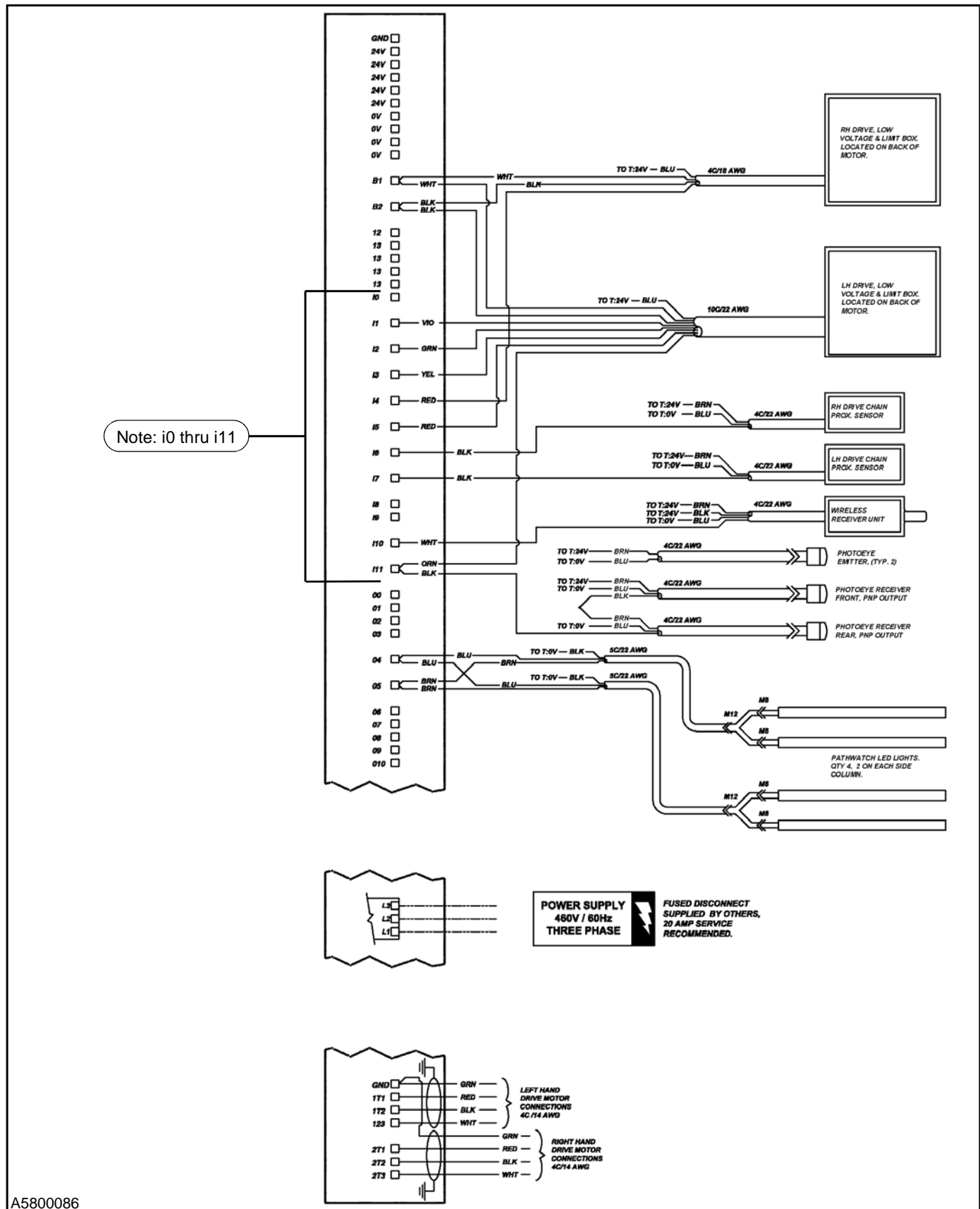


Figure 58

