Model 101E
Installation Manual

Anthony Inc.
12391 Montero Street, Sylmar, CA 91342
800.772.0900 www.anthonyintl.com

99-18085-I001_B

Anthony products identified in this manual are designed and certified to meet or for safety, and for sanitation standards.
European products meet CE requirements.
Each customer is responsible for final site approval.

TABLE OF CONTENTS

Preliminary Considerations for Door and Frame Servicing Procedures

Safety

Proper safety equipment includes:

safety glasses

work gloves

work shoes

NOTE: TURN OFF ALL ELECTRICAL POWER PRIOR TO BEGINNING WORK ON THE DOOR OR ON ANY ELECTRICAL. USE EXTRA CAUTION WHEN WORKING WITH OR AROUND THE DOOR GLASS PACKAGE.

NOTE: DO NOT USE POWER TOOLS FOR THE FOLLOWING PROCEDURES

Tools

Tools required for this procedure include:

- #2 Phillips-head screwdriver
- Flat-head screwdriver
- Needle-nose pliers
- Rubber or plastic mallet
- $^{7}/_{16}$” and $^{1}/_{2}$” Hand Wrench
- $^{5}/_{32}$” Hex Key
- Wire stripper and cutter
- Soldering iron
- Heat Gun
- Razor Knife

Tips

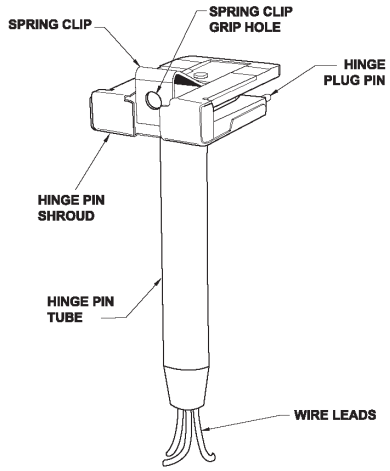
- Complete replacement of wire assemblies is recommended whenever required. Splice wires only if necessary using proper materials such as, electrical tape, wire nuts, flux core solder and heat shrink.
- Apply liquid soap to rail plastic covers and gaskets upon installation to facilitate insertion into mounting grooves.
- Keep doors and frames clean for product efficiency. This can also help reduce energy consumption and potential health hazards.
- Whenever binding gasket or plastic parts, use food grade silicone.

- Whenever replacing fluorescent lamps, always replace lamp covers as well.
- Always use the correct tool for the job to be performed. This ensures proper installation and minimizes safety risks.
- If there is any doubt about the work to be performed, consult with a certified technician or Anthony representative.
- Preventative maintenance is recommended to ensure product longevity.

DOOR REMOVAL & REVERSAL

Removing the Door Assembly from the frame.

1. Using a flat-head screwdriver, loosen the tension on the door by turning the adjustment screw, located on the front of the torquemaster, to the right or clockwise. Refer to A
2. Test the door by opening it, and confirm that the torque tension does not retract the door from open position.
3. If tension remains, continue adjusting the torquemaster until all tension has been removed from the door.



HINGE PIN ASSEMBLY

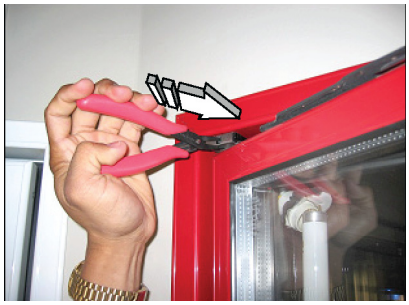
4. Open the door to access the hold open device then loosen and remove hold-open bolt, using a phillips-head screwdriver. Refer to B


A


B

5. Remove the hold open stud using a 7/16” hand wrench.
6. Retract the door to a near-closed position.
7. Insert the top half of the needle-nose pliers into the grip-hole, located in the hinge pin spring-clip, and the bottom half of the pliers beneath the hinge pin shroud. Refer to C

8. Squeeze the pliers to clamp down on the hinge pin spring clip, allowing the clip to release the hinge pin from the receptacle gib of the frame, while simultaneously pulling the top of the door away from the frame. This will release and pull the hinge pin out of the hinge pin receptacle and gib. Refer to D



C

D

E

9. Continue pulling the top of the door assembly away from the frame until the top door rail clears the frame.
10. Lift and remove the door from the torquemaster and carefully set the door aside. Refer to E

Reversing the Door Swing

1. Using a flat-head screwdriver, loosen the torquemaster from its mount by turning the center mounting screw counter-clockwise less than one-half (1/2) of a turn. Refer to A
2. Remove the Torquemaster, exposing the mounting hole in the bottom frame rail. Refer to B
3. Locate the mounting hole at the opposite side of the door opening.
4. Using the flat-head screwdriver, carefully pry underneath the plug cap and remove it. Refer to C

A

B

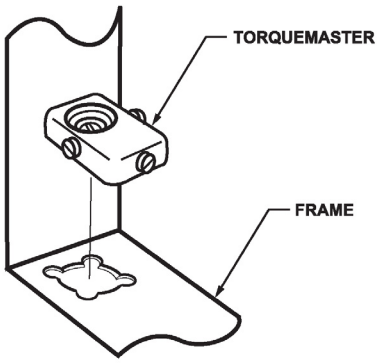
C

5. Place the Torquemaster on the newly opened mounting hole, aligning the flanged corners of the mounting tabs. Refer to D
6. Insert the Torquemaster mounting tabs onto the mounting hole with the hollow end of the Torquemaster against the door frame.
7. Confirm that the mounting flanges on the bottom of the torquemaster align with the corner mounting slots of the mounting hole in the frame.
8. Using a flat-head screwdriver, turn the Torquemaster mounting set-screw clockwise, for 1/2 a turn, to tighten the mount and lock it in place. Confirm that the torquemaster mounting is flush with the door frame.

9. Using a 7/16” open-ended hand wrench, loosen and remove the hold-open detent bolt and standoff. Refer to E

D

E



10. Relocate and install the hold-open detent bolt and standoff into the opposite hold-open mount of the same door frame. Refer to F and refer to G

NOTE: The standoff and screw will be switched from the door rail to the frame and the detent bolt and washer will be switched from the frame to the door.

F

G

11. Open the access portal to the hinge pin wire connections in the rail on the hinge side of the door assembly.

12. Disconnect the Hot, Neutral and Ground wires of the hinge pin from the heater wire circuit and the ground terminal. Refer to H
13. Loosen and completely remove the hinge pin assembly from the top door rail.

NOTE: Refer to the Hinge Pin Replacement instructions in Section II for complete replacement procedures.

14. Using a plastic mallet and a flat-head screwdriver, remove the torque rod from the bottom of the door assembly. (**I**)

NOTE: Refer to the Removing and Replacing Torque Rod instructions in Section II for complete Torque Rod replacement instructions.

H

15. Swap placement of the Hinge Pin and Torque Rod to the other's original mounting hole in the door assembly hinge side rail.
16. Reinstall the hinge pin and the torque rod completely into the ends of the door assembly hinge rail.
17. If necessary, lightly tap on the hinge pin and torque rod with a plastic or rubber mallet until each is fully seated into the top and bottom of the door.
18. Reconnect the hinge in wires and confirm that all connections are secure.
19. Check and confirm torque rod and hinge pin are correctly and completely installed.
20. Reinstall the door into the frame.

NOTE: Refer to door replacement procedures in Section II for complete door installation instructions.

DOOR MAINTENANCE & PARTS REPLACEMENT

Removing and Replacing the Door Gasket

1. Begin removing the door gasket by lifting one corner of the gasket out of the groove. Refer to A and refer to B)

A

B

2. Carefully pull the gasket out of the groove in the plastic rail covers. Refer to C and refer to D

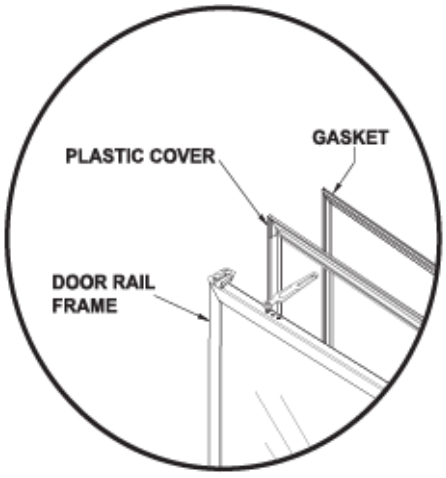
NOTE: The gasket is composed of soft materials with welded miter joints. Use extra care when manually extracting the gasket from the rail grooves to prevent damaging it as well as the plastic rail.Align the two top corners of the replacement gasket onto the top mitered corners of the plastic cover, with the gasket arrow facing the door rail and cover.

C

D

3. Align the two top corners of the replacement gasket onto the top mitered corners of the plastic cover, with the gasket arrow facing the door rail and cover.
4. Press the gasket arrow into the groove in the center of the plastic cover corners until the edges of the gasket arrow catch and the arrow is initially inserted into the groove of the plastic cover.
5. Align the bottom two gasket corners with the bottom mitered corners of the plastic covers, aligning the gasket arrow with the groove in the plastic cover and press the corners into the groove until the arrow is fully inserted.
6. Press the gasket firmly against the top plastic cover, sliding from side to side and applying full pressure against the gasket, forcing the gasket arrow into the of the groove in the plastic top cover. Refer to E
7. Continue pressing the gasket arrow into the grooves of the remaining plastic covers, around the entire door rail perimeter (if necessary, a plastic or rubber mallet can be used to facilitate the arrow into the groove by applying a swift stroke onto the gasket- DO NOT damage the gasket or the glass).
8. Confirm that the entire gasket arrow has been completely inserted into the grove of all four plastic rail covers.

E



Removing and Replacing the Door Rail Plastic Cover

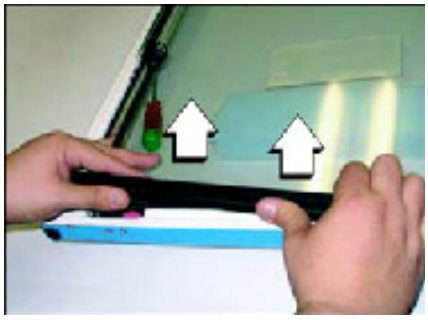
1. Insert the end of a slot head screwdriver in between two plastic cover ends at the corner miter. Refer to A
2. Carefully twist the screwdriver to loosen the corner of the plastic cover lip from the door rail.
3. Continue to pry the plastic cover from the door rail until the entire end of the plastic rail is disengaged. Refer to B

A

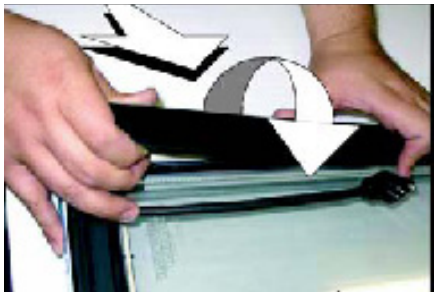
B

4. Pull the plastic cover up and out of door rail grooves until the entire plastic cover is removed from the door rail. Refer to C
5. Repeat Steps Two (2) through Four (4) to loosen and remove the three remaining plastic covers.
6. To install the new, replacement plastic covers, begin by aligning the replacement plastic cover evenly onto the door rail.
7. Insert the outer edge of the plastic cover into the outside groove of one of the door rails. Refer to D
8. Push the plastic cover down and inward, toward from the center of the door.
9. Slide along the entire length of the plastic cover while firmly applying pressure against it. Continue applying pressure down along the length of the entire door rail, inserting both the outside lip and the inside lip into the door rail grooves simultaneously.

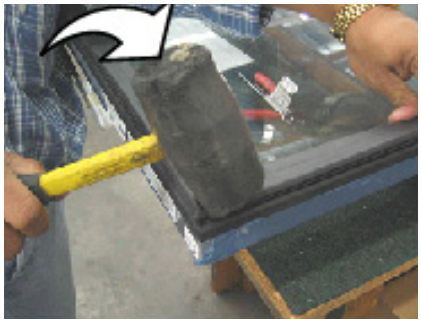
NOTE: *C*arefully tapping the plastic cover using a plastic or rubber mallet with deliberate strokes, outward and away from the glass, may help seat the lips of the plastic cover into the grooves of the do*or rails.* Refer to E



C



D

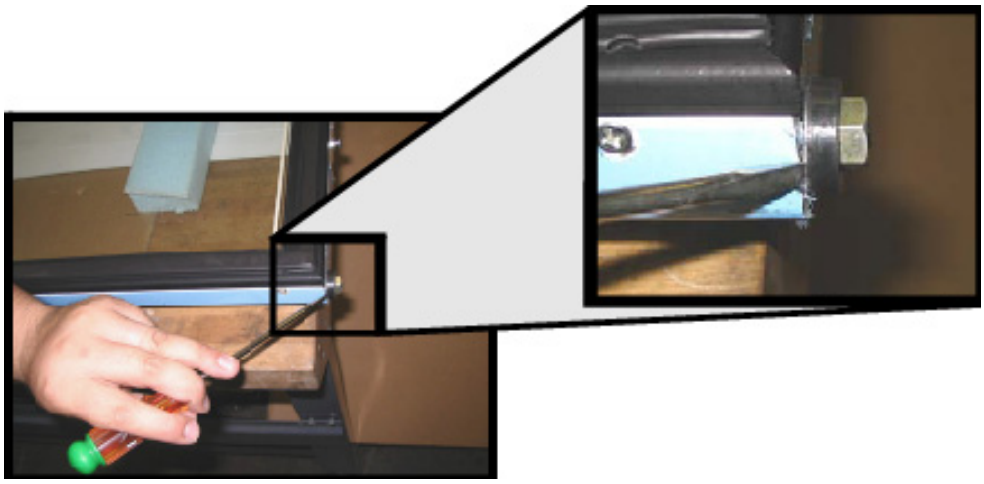


E

10. Check the entire plastic cover and confirm that both the inside and outside lips are fully inserted into the door rail grooves.
11. Repeat this procedure, aligning each mitered corner, with the remaining plastic covers until all four plastic covers are properly installed onto door rails.
12. Confirm that each plastic cover is fully installed and the mitered corners properly aligned.

Removing and Replacing the Torque Rod.

1. Carefully place a flathead screwdriver between the door rail and the washer beneath the torque rod. Refer to A



A

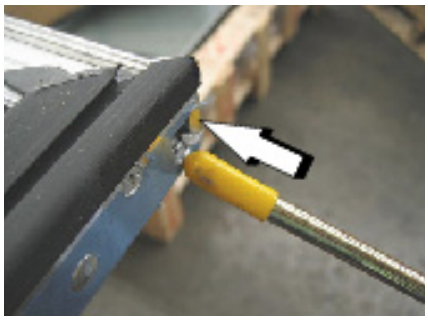
2. Dislodge the torque rod from its mount by pushing on the torque rod or tap it loose using a plastic or rubber mallet. DO NOT use a steel-headed hammer. Refer to B

NOTE: Use caution when striking any tool with another tool. DO NOT use excess force when striking the screwdriver and potentially damaging the door.

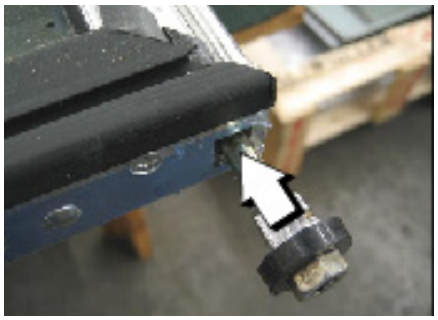
B

3. Continue to carefully tap the torque rod, if necessary, until the torque rod and rod end disengage.
4. Carefully pull the torque rod assembly completely out the door rail.

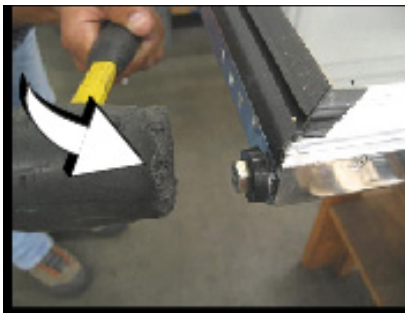
5. Reverse the process to re-install the torque rod assembly into the door rail.
   a. Insert torque rod into the bottom of the door until it is fully seated.
   b. If required, tap the torque rod assembly into the door rail using a plastic or rubber mallet, until the torque rod is fully seated into the door rail socket.



C



D



E

Removing the Hold-Open Assembly

1. Remove screws from the hold-open standoffs, which are located on the door rail and frame. Refer to A
2. Remove the hold open, standoffs and discard them.
3. When replacing the hold-open arm, reverse Step 1 by inserting the screw through the mounting hole in the arm and tightening it into the frame mounting hole using the #2 phillips head screwdriver. Refer to B

A

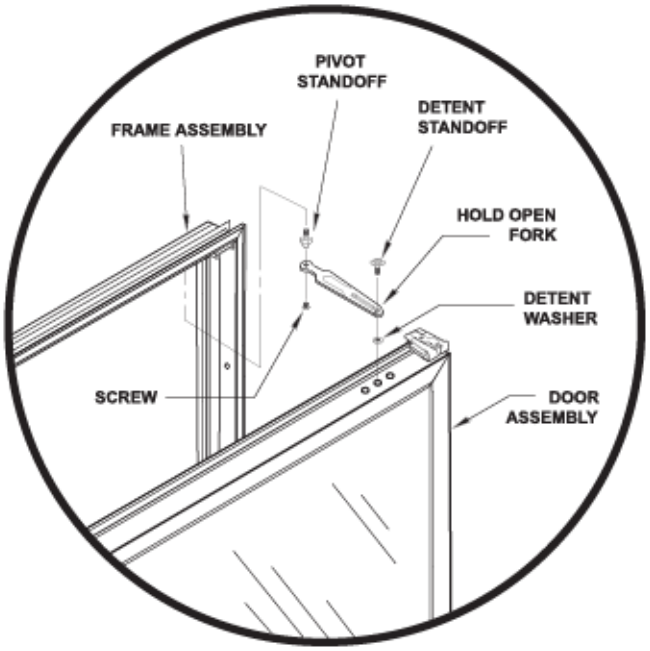
B

* Picture for orientation & reference only. Actual Hold-open assembly may differ from item shown.

Replacing the Hold-Open Assembly

1. Insert the pivot standoff into door. Add Loctite #271 to threads. Torque to 100 in/lb.
2. Place the pivot hole of the new hold open over the pivot standoff that is closest to the hinge pin.
3. Retain with a new truss head screw and torque to 16 in/lb (approximately #2 clutch setting on a professional screw gun).
4. Remove the vinyl cap from the detent bolt.
5. Insert the bolt up thru the hold open slot and then thru the detent spacer (flat side against frame).
6. Add loctite #271 to threads. Use a 7/16 hex wrench and torque into frame to 100 in/lb.
7. Add small amount of grease to detent surface.

8. Insure the truss head screw is seated on the end of the standoff and not the hold open.



Door Heater Wire Replacement

WARNING:Use extreme caution when working with or handling electrical wiring. Confirm that all power has been removed from the circuit prior to starting.

1. Remove door assembly from the frame. Refer to “DOOR REMOVAL & REVERSAL on page 2
2. Remove door gasket (refer to door gasket removal section for gasket removal procedure).
3. Remove plastic cover from all door rails (refer to plastic cover removal section for the removal procedure).
4. Using a small, flat-head screwdriver, remove the access cover from the frame, to access the wiring (as with the plastic frame cover). Refer to A

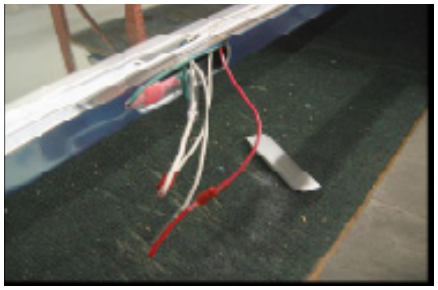
NOTE: Use caution, when using a metal or edged tool to remove the heater wire, to avoid damaging the wire or wire shielding.

NOTE: The wiring configuration differs per model and individual facility requirements. Make the necessary adjustments that may be required to complete this procedure.

5. Locate the mounting plate (if applicable) and two mounting screws for the cord and wire harness mounts, on the outside of the adjacent door rail.
6. Using a phillips-head screwdriver, loosen and remove each screw.

7. Carefully pull out and remove strain relief harness, as well as the loop terminal for the ground (green) wire. Refer to B

A

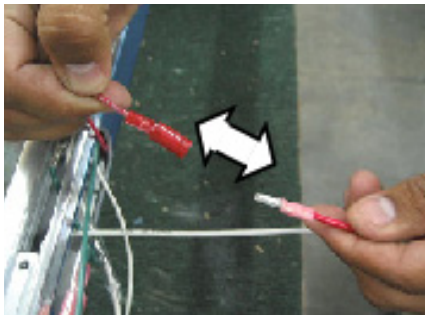


B

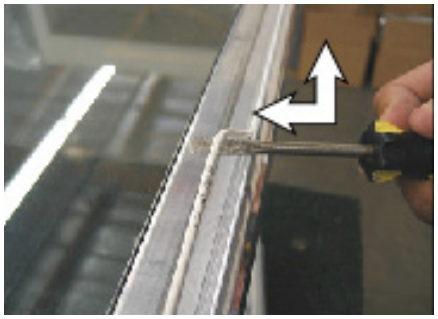
8. Remove the wire terminals from the door rails.

NOTE: Two terminals adjoin the ends of the heater wire with the hot and neutral wires from the power cord. Two different methods can be used to disconnect the heater wire from the power cord.

9. Open the wire terminals and remove the terminated wire ends. Refer to C
10. Locate the heater wire in the grooves of all four door rails. The heater wire is usually shielded with a woven fiber-glass sleeve.
11. Using a flathead screwdriver, pull the heater wire out from door rails. Refer to D
12. Manually pull out and remove the remaining heater wire. Refer to E



C



D

E

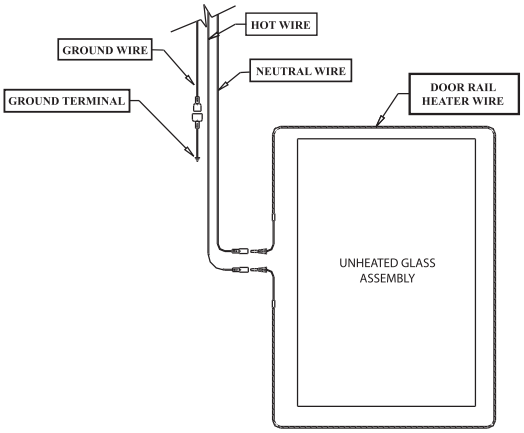
13. Install the terminated wire ends from the replacement heater wire, then close the wire terminals. (**F**)

F

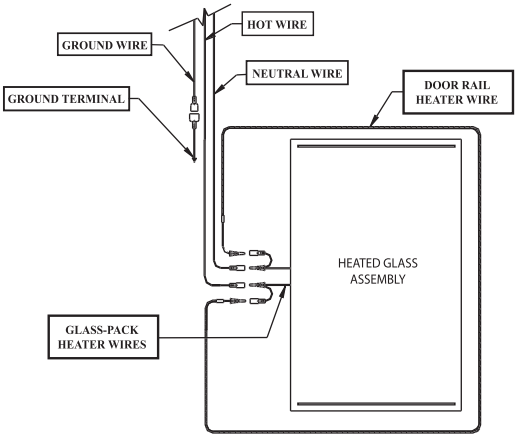
NOTE: If the replacement heater wire does not have terminated ends, then splice the wires together using wire nuts or solder and heat shrink.

Splicing wire ends with solder and shrink tubing

14. Cut the (black and white) power wires, after the terminals.
15. Strip a minimum of 12 mm of insulation from each wire, exposing the end of the each cut wire.
16. Strip a minimum of 12 mm of insulation from each end of the heater wire.
17. Insert one, two inch heat-shrink tube (not supplied) over each end of heater wire.
18. Slide each tube down, away from the wire ends.
19. Join the exposed end of each stripped wire, from the power cord, with each end of the stripped heater wire.
20. Twist the wire ends together and solder the adjoined wire ends using a soldering iron, flux and solder.
21. Slide each heat-shrink tube back up the heater wire and over the soldered wire joints.
22. Using a heat gun, apply a steady flow of heated air onto each shrink tube, covering the soldered wire joints, to shrink the tubing and insulate the joints.
23. Insert the entire replacement heater wire into the groove inside the door rails and arrange the wire assembly to the same configuration that it had prior to disassembly.
24. Carefully re-install the wire assembly into the door rail and the power cord into strain relief by inserting the wire into the groove located along all four door rails by using a blunt tool or instrument, such as a screwdriver handle, in order to facilitate the insertion. Be certain to match the original wire installation configuration.
25. Replace plastic covers and gasket to the door.



UNHEATED GLASS

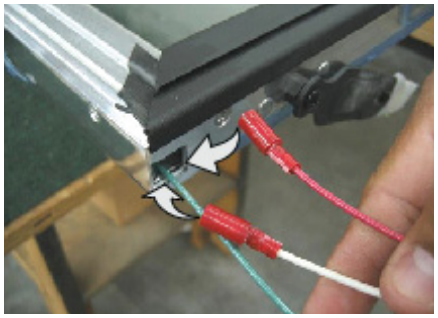


HEATED GLASS

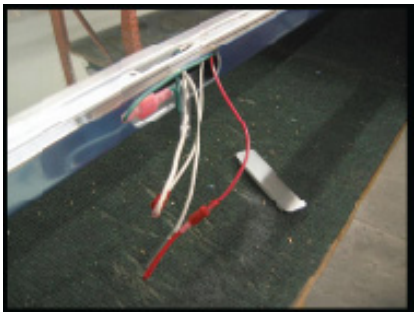
Removing and Replacing the Hinge Pin

1. With the access cover removed, pull the hinge pin wires out and separate all three wires (Hot, Neutral and Ground) from the door wire harness by carefully pulling the terminations apart.
2. Using a flat-head screwdriver, pry the hinge pin loose from the mount in the top door frame rail.
3. Pull the hinge pin out of the door frame until the pin and the wires are completely removed. Refer to A
4. Upon replacing the hinge pin, insert all three wires into the hinge pin hole in the door rail. Refer to B
5. Thread the wires through the rail to the access opening. Refer to C
6. Connect the hinge pin wires to the terminated door wires.

A

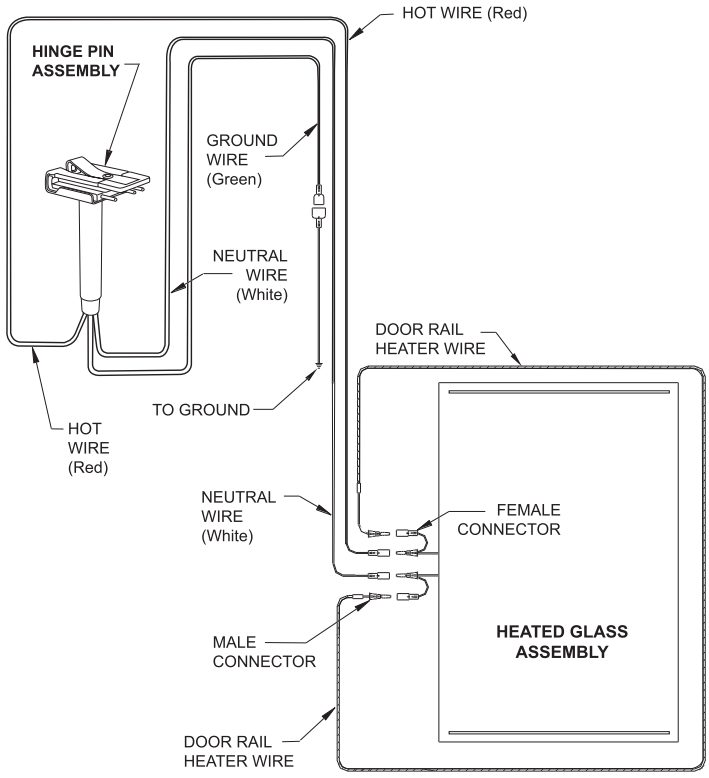


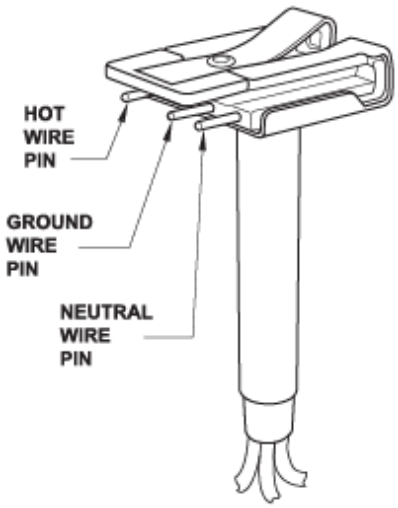
B



C

7. Insert the remainder of the hinge pin into the frame mounting hole until the hinge pin is fully seated.
8. Harness wires together using a tie-wrap and insert the harness into the door rail and install the access cover.
9. Reassemble door by following the aforementioned reassembly instructions per section.



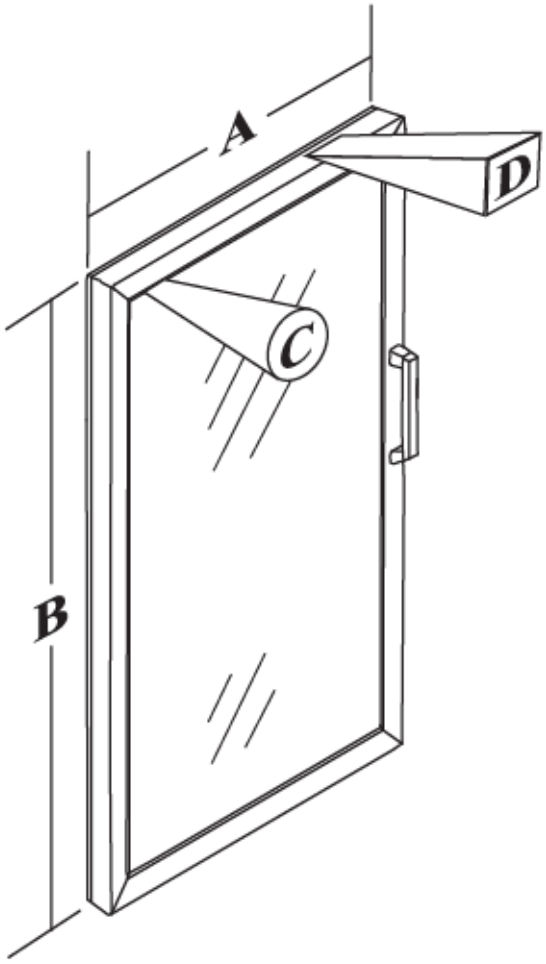


HINGE PIN ASSEMBLY
PIN CONFIGURATION

Ordering Replacement Doors

When ordering replacement doors, call Anthony International customer service at 800.772.0900 or VAL, and specify to the representative the need to order a replacement door. Be sure to provide all of the information and specifications that are required for ordering replacement doors (refer to diagram for the complete door ordering configuration):

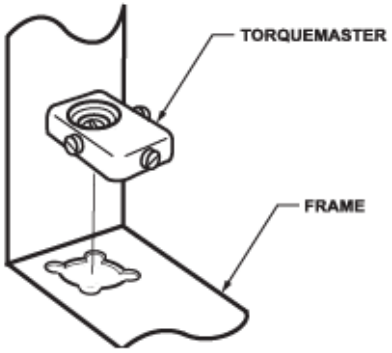
- Measure and specify the width (**A)** of the door to the nearest 1 mm**.**
- Measure and specify the height (**B)** of the door to the nearest 1 mm**.**
- Furnish the date of the original order or the Anthony invoice number. (the original manufacturing date will be stamped on the spacer bar, between panes of glass (**C**)**.**
- Specify whether the replacement door will require a heated glass-package or not.
- Which way does the door hinge (left or right), as well as the type of hinge, will need to be specified.
- The Anthony representative will also need to know if the replacement door is for a cooler or a freezer.
- The need for door locks and installation hardware must be specified.
- The correct electrical voltage is required for the order.
- Are there any custom items with the original order? If so, please specify them as well as the details of those items.
- Work Order number from Data Tag (if present-**D**).



REPLACEMENT DOOR INSTALLATION

Installing the Door Assembly into the Frame

1. If replacing the Torquemaster, insert it with the hollowed end towards the frame corner. Align the mounting flanges on the bottom of the torquemaster with the divots in the corners of the mounting hole.
2. Using a flat-head screwdriver, turn the Torquemaster mounting screw clock-wise to tighten the mount. Confirm that the torquemaster mounting is flush with the door frame. Refer to A
3. Handling the door carefully, install it into the frame by inserting the torque rod-end into the cavity of the Torquemaster. Refer to B
4. Tilt the top of the door up and toward the frame, inserting the hinge pin into the Gib, located in the top of the door frame. Refer to C
5. Extend the hold-open device towards the mounting hole in the top frame rail.
6. Insert the hold-open bolt through the elongated hold-open slot.



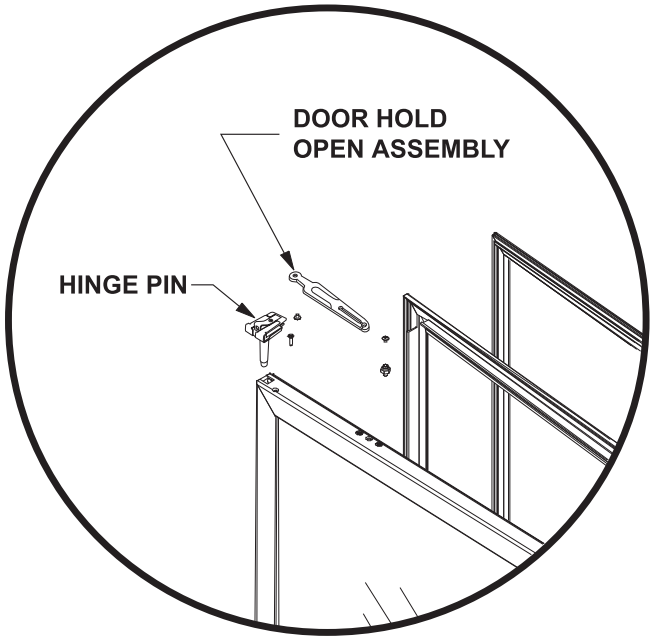
A

B

C

7. Install the washer and the hold-open bolt into the frame mounting hole and tighten the bolt. Refer to D

NOTE: Do not over-tighten the hold-open bolt. Be certain the hold-open does not bind while sliding along the hold-open bolt. Adjust as necessary.



D

Torque and Sag Adjustment

The Torquemaster is the component into which the door is hinged, at the bottom torque rod. The Torquemaster regulates the speed and tension of the door swing, as well as the angle at which the door is mounted.

1.Using a flat-head screwdriver, turn the outside screw to adjust the torque rod tension on the Torquemaster:

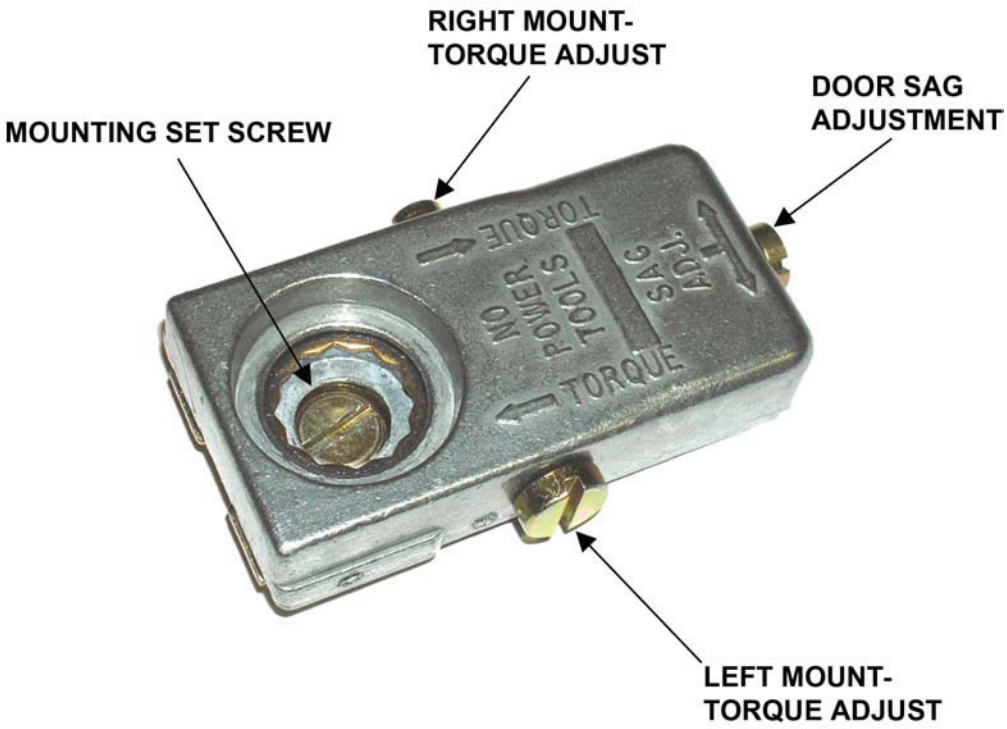
a. Turn the screw counter-clockwise to increase the tension.

b. Turn the tension screw clock-wise to decrease the tension.

2.To adjust the door sag, or square it in the frame, use the flathead screw-driver to change the setting on the screw that is marked SAG ADJ. (Sag Adjustment), located on the end of the Torquemaster.

a. Turn the screw clockwise to lower the handle side of the door.

b. Turn the screw counter-clockwise to raise the handle side of the door.



FRAME MAINTENANCE & PARTS PLACEMENT

TorqueMaster Replacement

1. Using a large slot-head or flat-head screwdriver, loosen the installation mounting screw located in the center of the torque rod mounting socket of the TorqueMaster. Refer to A
2. Remove the Torquemaster from the frame mount.
3. Replace the Torquemaster to the mount located on the frame.
4. If necessary, remove the plug cap located on the lower frame near the corner. Be certain to remove the plug cap that correlates with the side of the frame in which the door is to be installed. Refer to B
5. Place the torquemaster on the newly opened mounting pocket in the frame, with the hollowed end of the torque-master towards the frame.

6. Align the mounting flanges on the bottom of the torquemaster with the divots or slots in the corners of the mounting hole. Be certain the Torquemaster is fully seated onto the frame. Refer to C

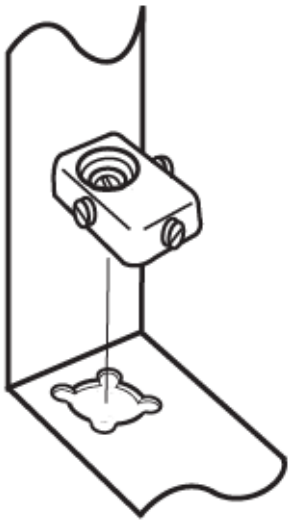
A

B

C

7. Turn the mounting set-screw clockwise to engage the mounting mechanism underneath the frame lining, then confirm that the Torquemaster is securely mounted.

NOTE: To adjust the Torquemaster settings, refer to the Torquemaster and Door Sag adjustment procedures.



Power Receptacle Replacement

1. Carefully peel and remove the foam tape securing the wire leads to the power receptacle. Refer to A
2. Using a #2 phillips-head screwdriver, remove the screws securing the receptacle to the top frame.
3. Remove the receptacle and slowly pull the connected wires out, away from the frame. Refer to B)

A

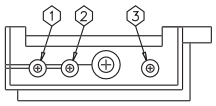
B

4. Disconnect the receptacle wires from the frame wires by separating the quick-connectors or using wire cutters, cut the wire connections between the receptacle and the frame, leaving ample slack with the spared end of the wires.
   - Single Receptacles are composed of three wires:

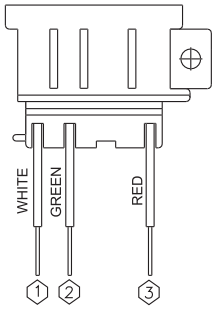
     ① - WHITE is the neutral wire
     ② - GREEN is the ground wire
     ③ - RED is the hot wire

   - Double Receptacles utilize two sets of the same three wires. These receptacles are located by the center mullions and are used to for back to back, door mounting alignment whenever required.
5. Thread the wires for the replacement receptacle into the frame.
6. Mate each socket conductor lead with the newly stripped leads to the frame wiring.
7. Join the replacement wires with the frame power wires by plugging the quick-connectors together, or by mating each stripped socket lead wire with the correlating frame wire lead and slightly twist the wire leads together.

SINGLE STATION SOCKET CONNECTOR

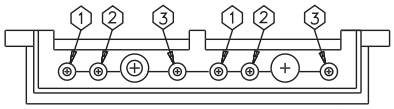


FRONT VIEW

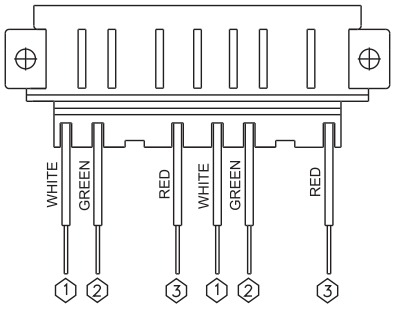


BOTTOM VIEW

DUAL STATION SOCKET CONNECTOR



FRONT VIEW

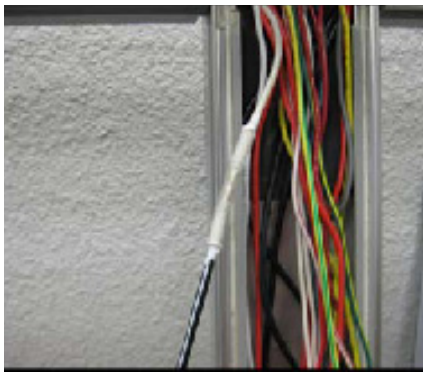


BOTTOM VIEW

8. Insert the joined eighteen gauge (18 AWG) leads into compatible wire nuts and twist the wire nuts until the leads are securely joined.
9. A Butt Splice can also be used as another method of adjoining the wires.
   - Insert each stripped wire end into the butt splice tube.
   - Crimp tube firmly until both wires a securely joined.

10. Carefully place the wire assembly back into the frame and reassemble the contact plates and zipper strips.

Bottom, Mullion and Full Perimeter Fiberglass Heater Wire Replacement



A

If the heater wire requires servicing or replacement, perform the following tasks:

1.Remove the appropriate Zipper strip(s) to gain access to the heater wire(s).

2.With the contact plate(s) removed from the frame mullion and frame rails, locate the appropriate heater wire in the frame. Refer to A

3.Disconnect the heater wire assembly from the Waggo connectors.

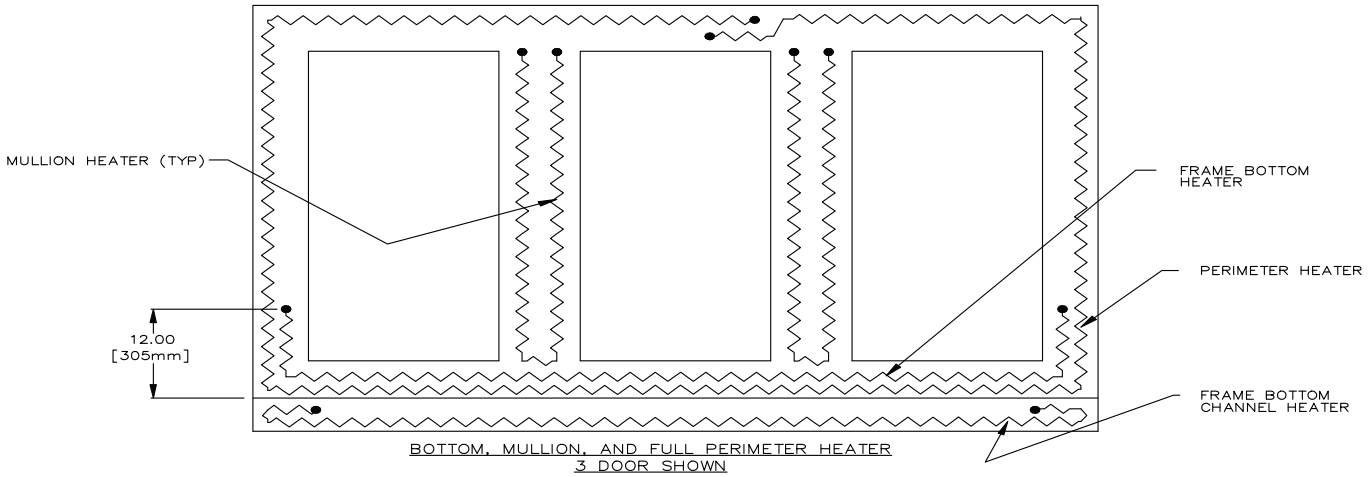
4.Carefully dislodge the heater wire from the groove mounts along the frame rails.

5.Lay the replacement wire out in a fashion that will avoid knots and tangling during re-installation into the frame.

6.Using a screwdriver handle or a putty knife, insert the entire replacement heater wire into the groove inside the frame and arrange the wire assembly to the same configuration that it had prior to disassembly.

NOTE: The end of the frame bottom heater wire must be only 305 mm from the bottom as shown in Refer to B .

7. Install the wire ends from the replacement heater wire in each Waggo removed in step 3.
8. Replace the contact plate(s) in step 3.
9. Replace the Zipper strip removed in step 1.



B

SALES FRAME LAYOUT

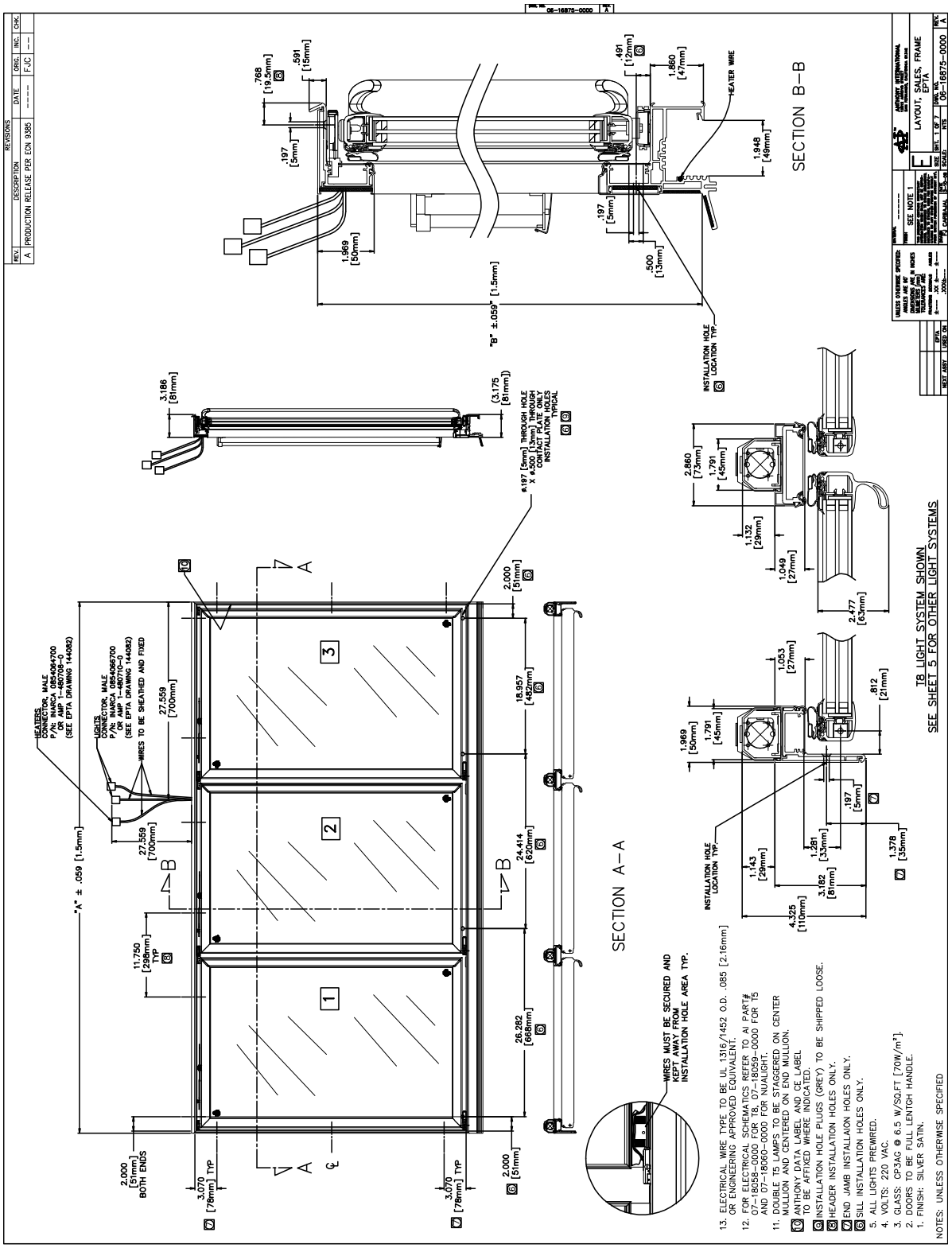


Figure 1 06-16875-0000 (Sheet 1 of 7)

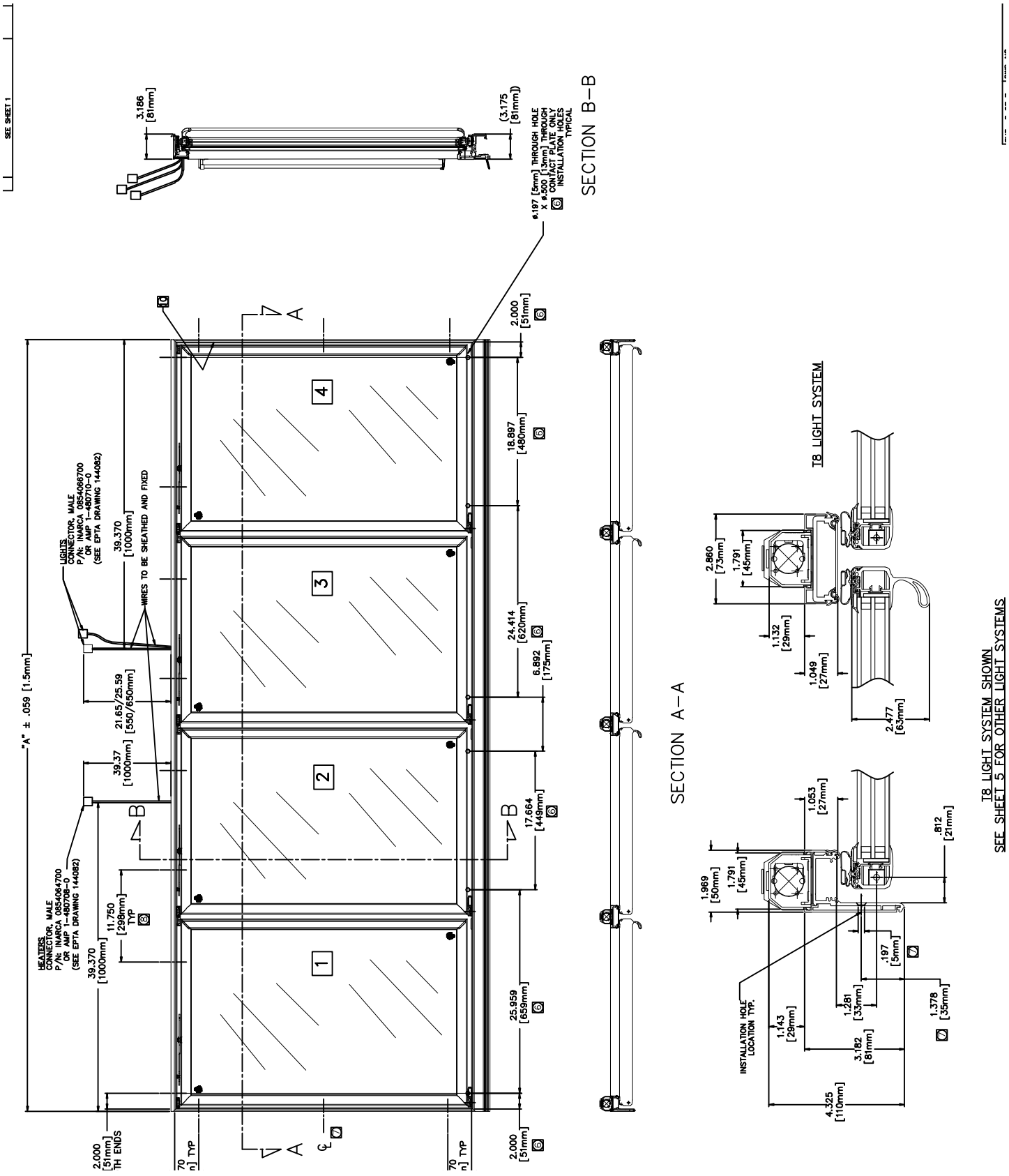


Figure 2 06-16875-0000 (Sheet 2 of 7)

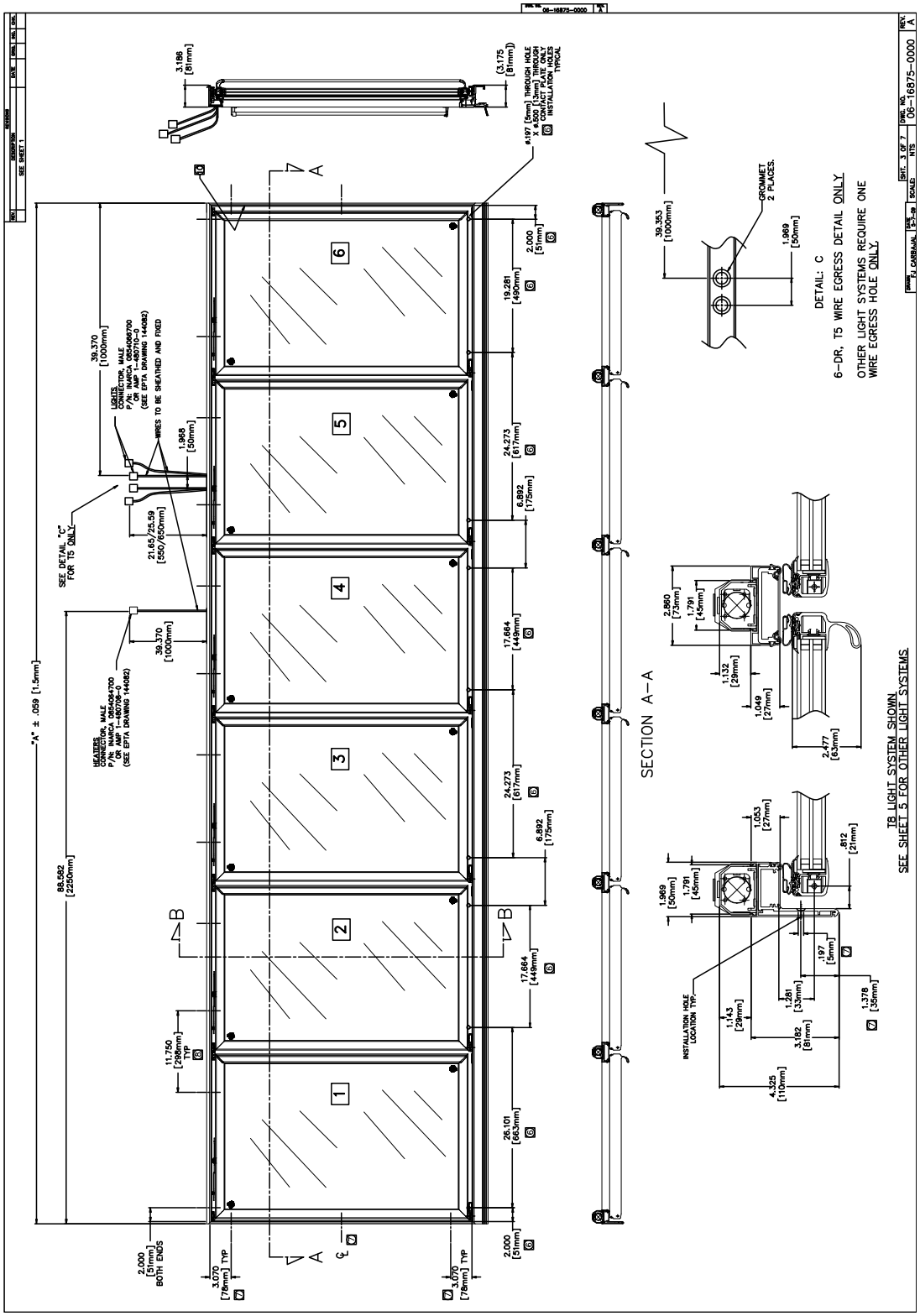


Figure 3 06-16875-0000 (Sheet 3 of 7)

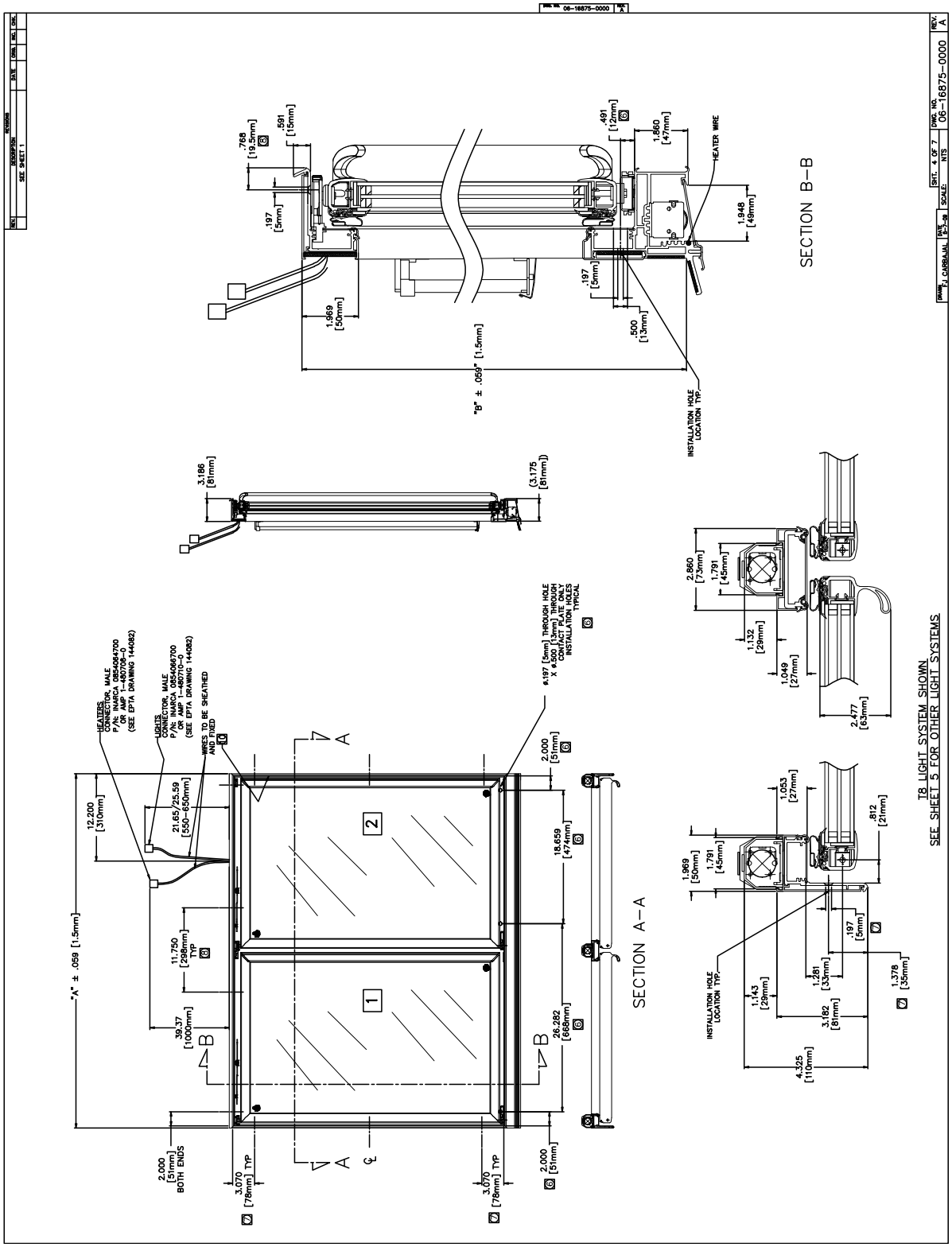


Figure 4 06-16875-0000 (Sheet 4 of 7)

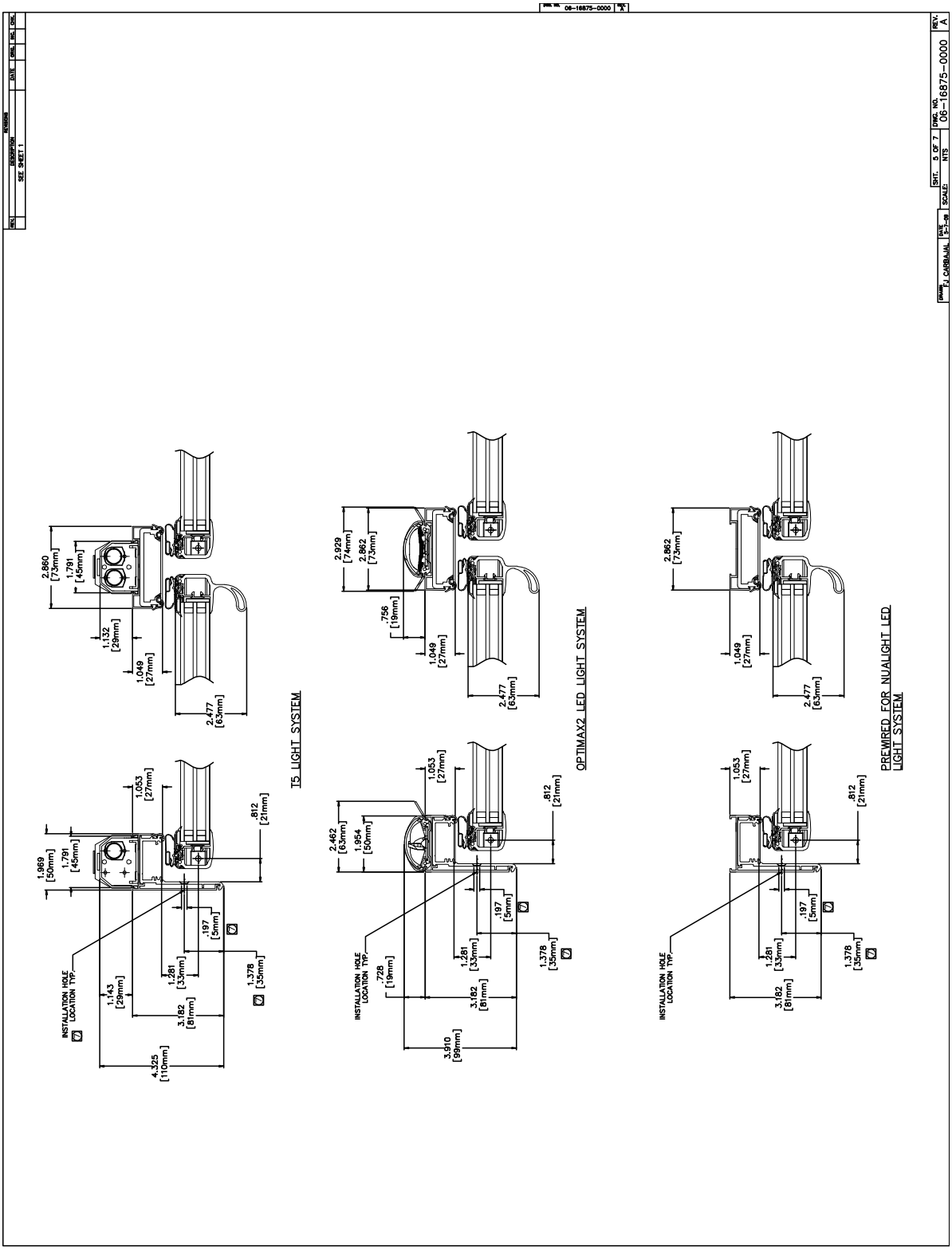


Figure 5 06-16875-0000 (Sheet 5 of 7)

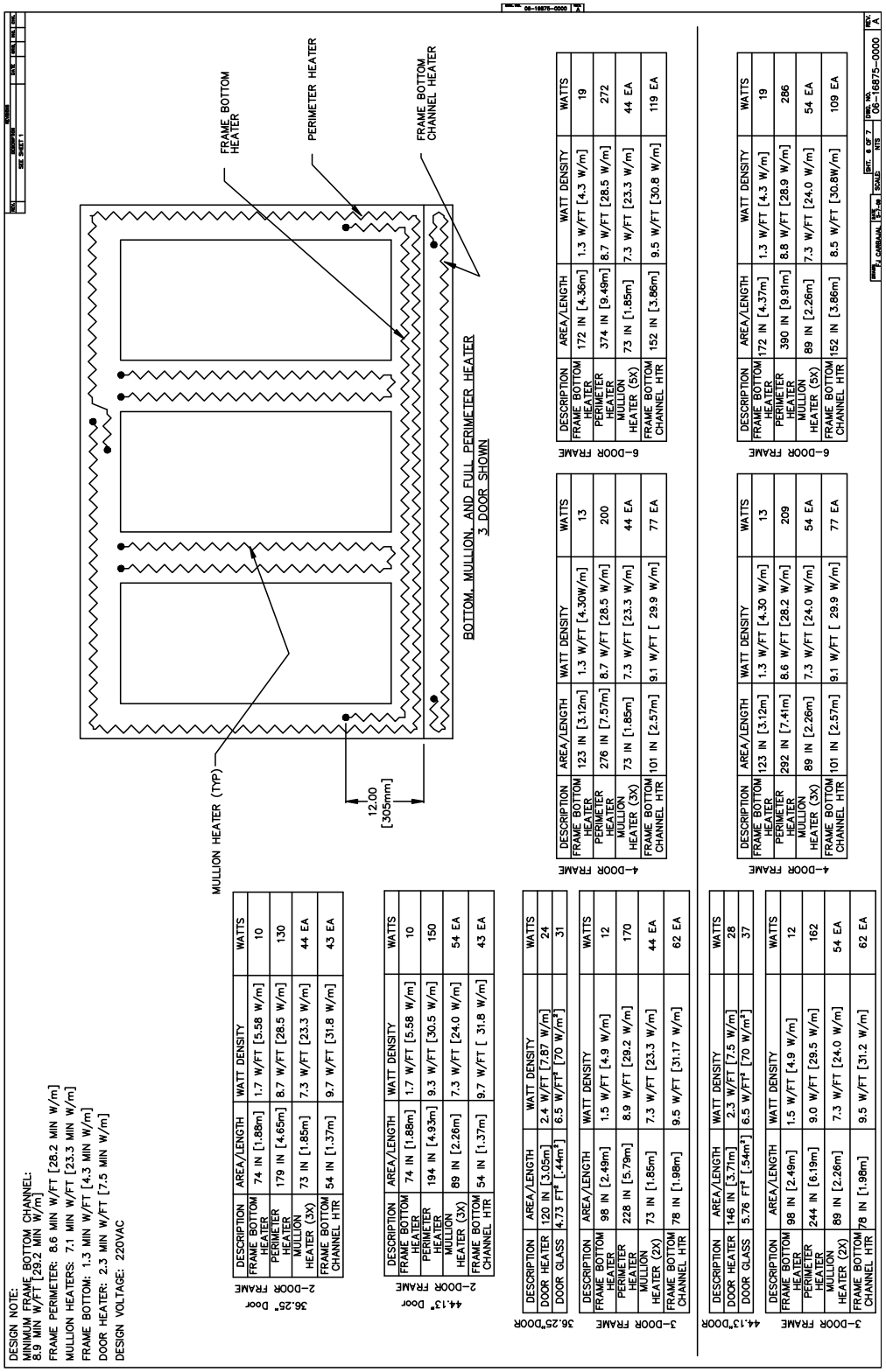


Figure 6 06-16875-0000 (Sheet 6 of 7)

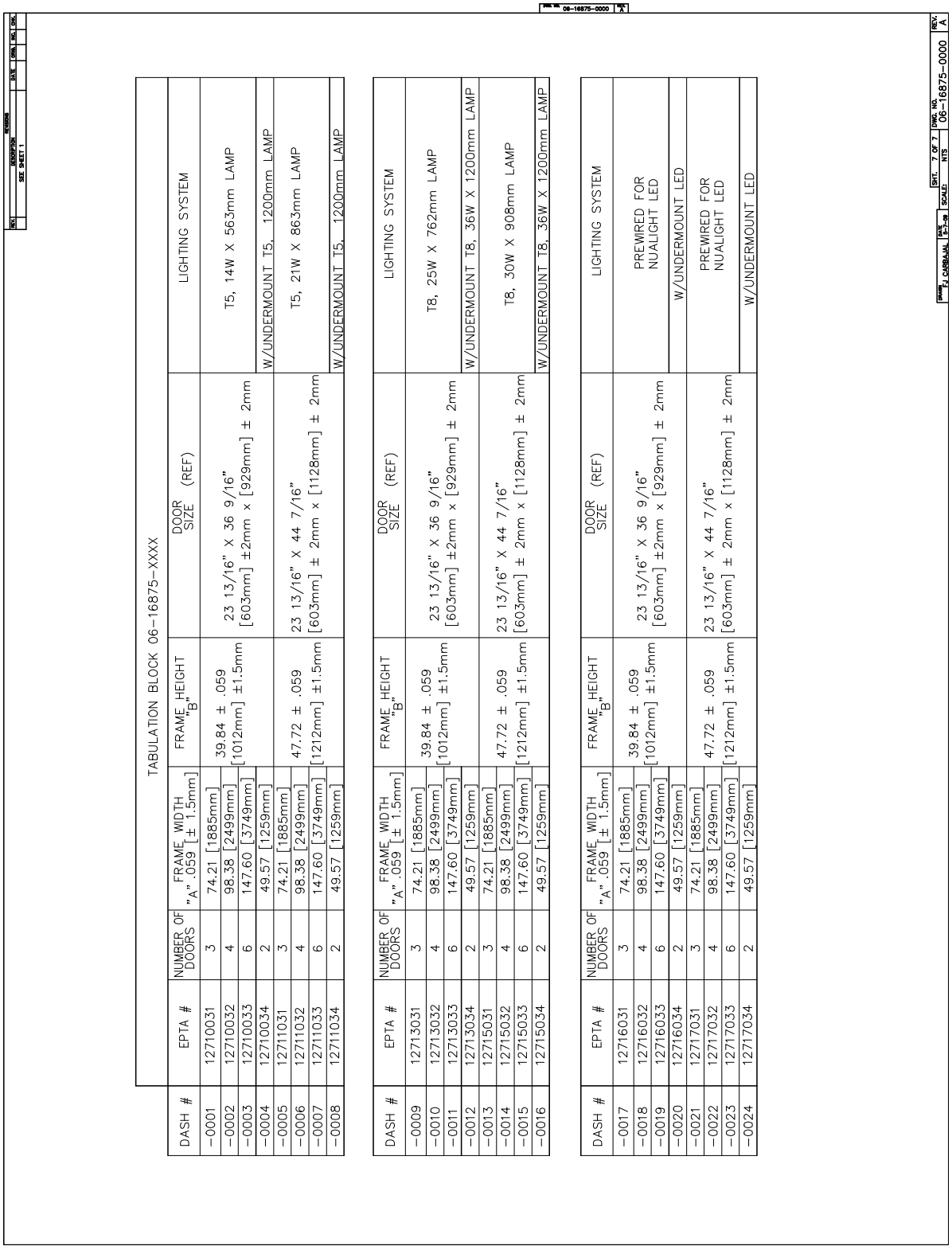


Figure 7 06-16875-0000 (Sheet 7 of 7)

Anthony®

12391 Montero Street, Sylmar, CA 91342
800.772.0900 www.anthonintl.com

99-18085-I001_B

Document Revision History

Revision History

A	January 8, 2010	SWatstein	Release
B	27 May 2010	SWatstein	Logo and font update

Contributors

Sherman Watstein			

Anthony Inc.
12391 Montero Street, Sylmar, CA 91342
800.772.0900 www.anthonyintl.com
99-19085-I001_B