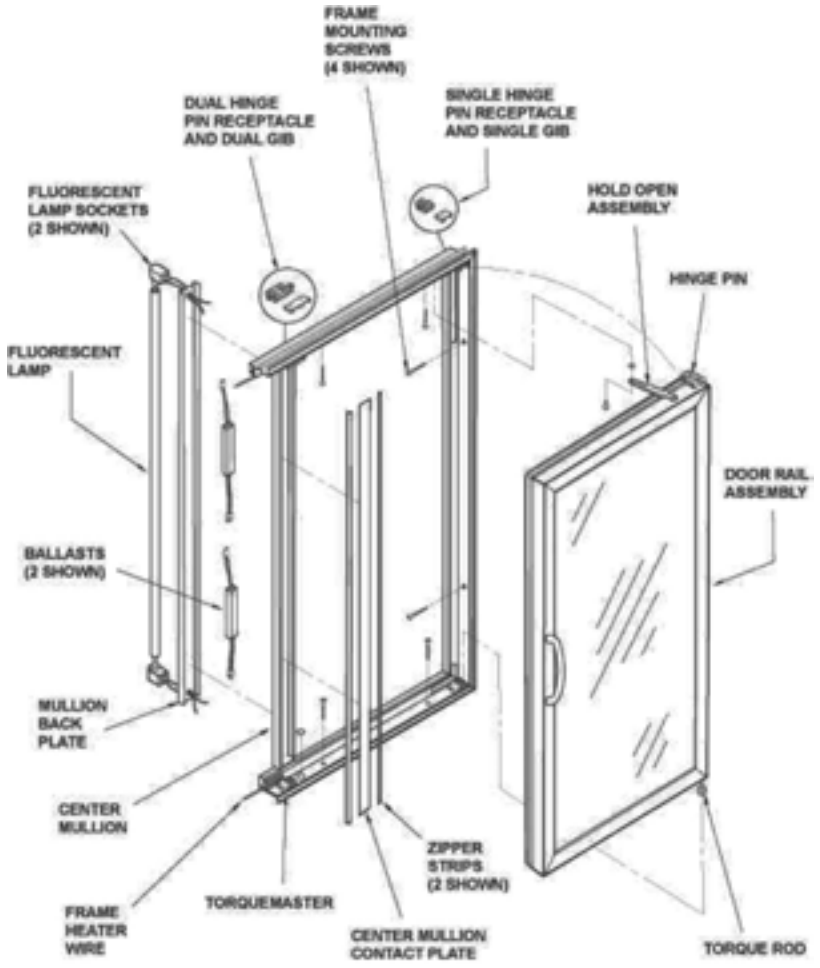
Anthony®

A DOVER COMPANY



401B/1KDB
CoolRite/FreezeRite
Installation Manual

99-16105-I003

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

1. PRELIMINARY CONSIDERATIONS FOR DOOR AND FRAME SERVICING PROCEDURES

1.1. 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 equipment. Use extra caution when working with or around the door glass package.

NOTE: Do Not use power tools for the following procedures.

1.2. 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

1.3. 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.

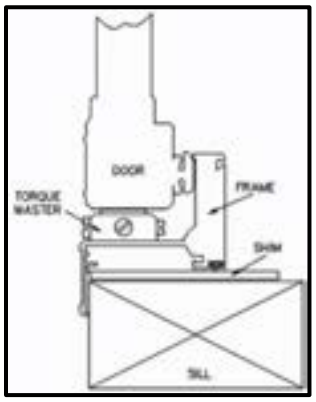
2. FRAME INSTALLATION AND SERVICE MAINTENANCE

1. Read instructions completely before installing the frame.
    - Clearance between the frame sill and the case bottom or floor is mandated by local building codes.
    - Sill net opening must be at minimum of two inches in height
    - Sill must be completely level.
2. Before installing the frame, confirm the size of the net opening accommodates the finish frame. If the tolerances are too high, the net opening will have to be enlarged.
3. Check size of finished frame to net opening.
4. Subtract the frame height measurement, from the net opening's height measurement.
5. Subtract the frame width measurement, from the net opening's width measurement.
6. Divide each number in half. This is the amount of gap that will occur between the frame and the net opening.
7. If the gap between the frame and the net opening is greater than 1/16", shim the gap for a proper fit.

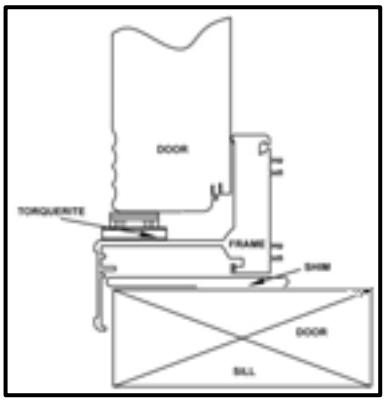
2.1. Shimming

1. Acquire sturdy, penetrable material, such as plywood. The thickness of the material should be wedge shaped or slightly less than the gap to be filled.
2. Measure the gap length (height or width of frame) and cut the shim material to 1/16" less than the measured length.
3. Install the shim using the same type of mounting hardware that will be used to install the frame. Be certain that the shim installation hardware will not interfere with the frame installation hardware
4. If necessary, cut a second shim to the same length and install it in the opposite side of the net opening.

5. If the adjacent sides of the net opening need shimming, repeat the previous steps. Match the shim length to the frame sides of the net opening (less 1/16”).



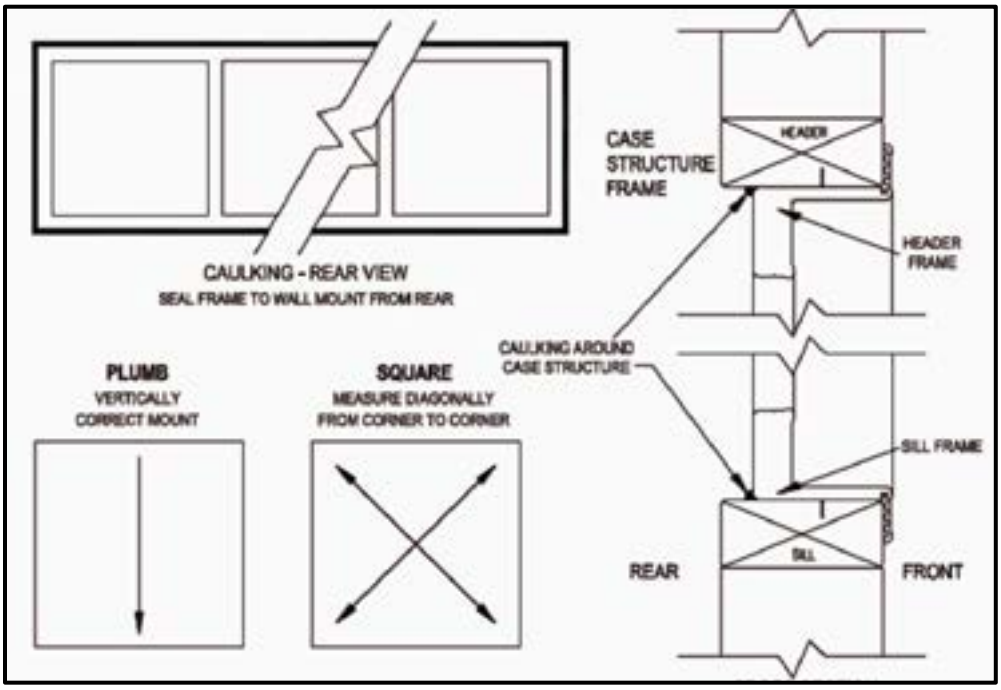
Anthony Door Sill Cross Section with Sill Location



DisplayRite Sill Cross Section with Sill Location

2.2. To Install the Frame

1. Verify openings conform to net openings listed in price book or original order.
2. Insert the finished frame assembly into the net opening. **DO NOT** force the frame if the fit is too tight.
3. Insert a mounting screw into a mounting hole in each corner of the frame and tighten each screw until it is approximately a quarter inch from flush.
4. Check the frame is aligned properly or square.



Frame Installation Reference

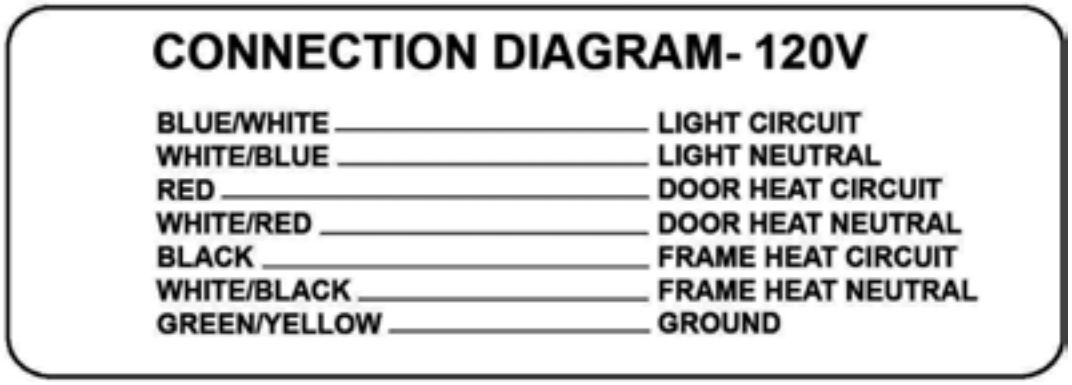
5. Use a measuring tape to measure diagonally one corner to the opposite and note the distance.
6. Measure the distance between the remaining two corners.

7. Both measurements should be the same, within a 1/16” difference.
8. Confirm the frame and frame flanges are vertically aligned to the wall surface around the net opening.
9. Place a level on the top flange of the header frame to check if it is horizontally aligned.
10. If the top of the header frame sags or bows, correct as necessary.
11. When the frame is aligned, tighten all mounting screws securely until each is flush to the frame surface.
12. DO NOT over-tighten the screws, as this can cause the frame to become out of square.
13. Check entire frame to ensure installation is correct.

NOTE: Use caulk and food grade silicone sealant to seal the gap between the frame and the surrounding wall, inside case, cooler or freezer.

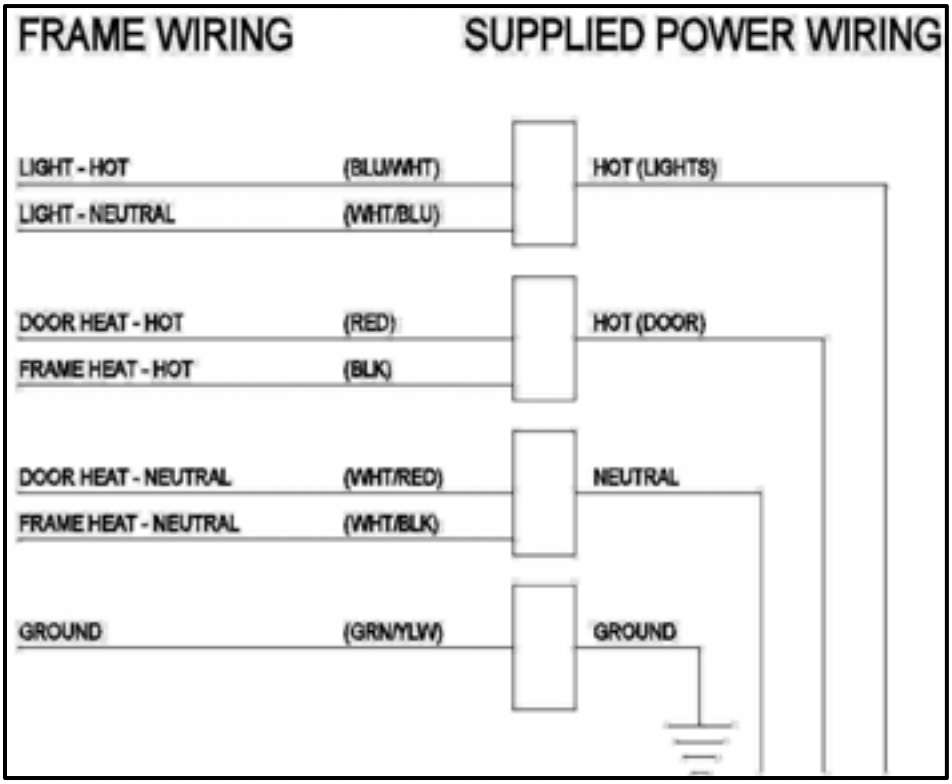
2.3. Frame Electrical Wiring Connections

The seven individual wires extending from the flexible conduit atop the frame, provide electrical power to various frame and door functions. Refer to the wiring diagram label, affixed to the frame header.



Wire Diagram Connection Label

Using wire connectors, these wires should be grouped by the Hot wires (Circuit wires), the Neutral wires and the ground wire for connection to either the facility or the case power.



Wiring Diagram

- Blue/White wire connects to the supplied Hot (or Lights Circuit Wire).
- White/Blue wire connects to the supplied Light neutral wire.
- Red and Black wires connect to the supplied Hot (or Door/Frame Heater Circuit Wire).
- White/Red and White/Black wires connect to the supplied neutral wire for Door/Frame Circuit.
- Green/Yellow wire connects to the supplied ground wire.

NOTE: Wiring for lights should have a separate circuit from the door/frame heater wiring circuit.

3. DOOR INSTALLATION & SERVICE MAINTENANCE (MODEL 401 & 1KDB)

3.1. To Install the Door Assembly

1. Hold the door on each side, with the handle facing forward. Lift the door, and align the torque rod to insert into the TorqueMaster™ socket at the base of the frame.

Insert Torque Rod

2. Engage the door with the hinge pin inserted into the Gib (hinge pin plug) receptacle at the top of the frame. Push the door into the frame until the hinge pin snaps into place.

Connect Hinge Pin

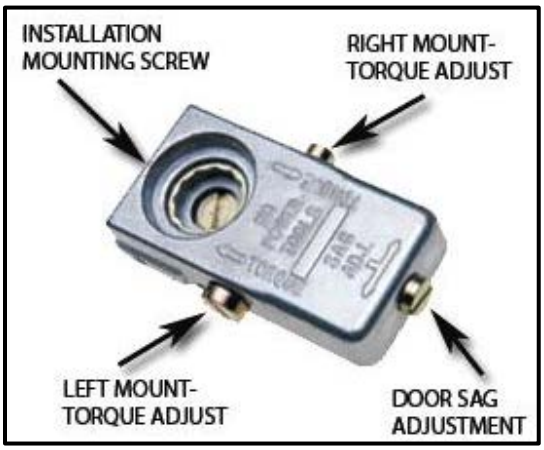
NOTE: Verify that the torque rod and hinge pin are secured before releasing the door.

3. Insert the hold-open bolt through the elongated hold-open slot.

4. Insert the washer and the hold-open bolt into the frame mounting hole and tighten the bolt, use a 7/16” open-ended hand wrench.

Tighten Hold-Open Bolt

5. Set the door tension swing and correct the door alignment by adjusting the TorqueMaster™. (See “TorqueMaster™ and SAG Adjustment (Model 401B and1KDB)”.



Torquemaster Assembly

NOTE: DO NOT use power tools when adjusting the TorqueMaster™.

NOTE: DO NOT over tighten hold-open bolt. Verify hold-open does not bind while sliding along the hold-open bolt. Adjust as necessary.

3.2. Remove the Door Assembly (Model 401 & 1KDB)

1. Release tension on the TorqueMaster™ with a flat-head screwdriver. Turn the TorqueMaster™ front facing screw clockwise, until the door does not automatically close from an open position.

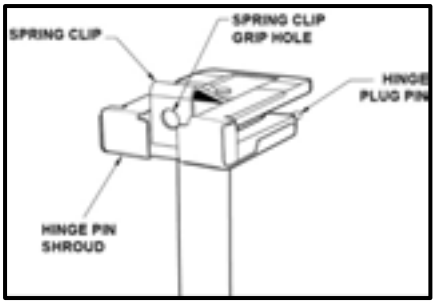
Release Torquemaster Tension

2. Open the door to access the hold open device, then loosen and remove the hold-open detent bolt using a 7/16” hand wrench.

Remove Hold-Open Bolt

3. Retract the door to a near-closed position.

4. Remove the hinge pin plug from the frame by inserting the top-half of needle-nose pliers into the spring clip grip hole and the bottom half beneath the hinge pin shroud.



Hinge Pin Assembly

Disengage Hinge Pin

Compress pliers to clamp down on the hinge pin spring clip, then simultaneously pull the hinge pin away from the frame and pull the door top out.

Withdraw from Hinge Gib

Lift the door out of the TorqueMaster™. Secure or lean the door on its side against a stable surface.

Withdraw from Frame

3.3. To Reverse the Door Swing (Model 1KDB Only)

Model 1KDB doors are reversible. Remove the door from the frame first and then perform the following steps.

3.3.1. Frame

1. To remove the Torquemaster, insert a flat-head screwdriver into the top center cutout in the Torquemaster, and turn the mounting screw counter-clockwise for less than ½ turn. Lift the Torquemaster off the frame.

Remove Torquemaster

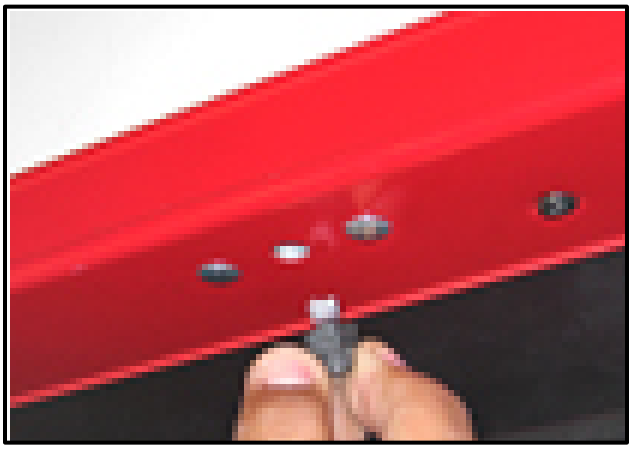
2. Pry off the plug cap (underneath) from the mounting hole, on the opposite side of the doorframe with a flat-head screwdriver.

Remove Plug Cap

3. Set the Torquemaster on the opened mounting hole. Align the flanged corners of the mounting tabs with the SAG ADJUSTMENT screw facing the inside of the frame.

Mount Torquemaster

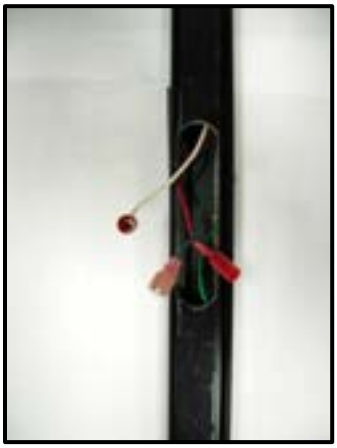
4. Use the flat-head screwdriver and turn the Torquemaster mounting setscrew clockwise for ½ turn, to tighten the mounting flange and lock it in place.
5. Relocate and install the hold-open stand-offs and spacer into the opposite hold-open mount of the same door frame.



Insert Stand-Off

3.3.2. Door

1. Access the hinge pin wire connections in the rail on the hinge side of the door assembly.
2. Disconnect the Hot, Neutral, and Ground wires of the hinge pin.



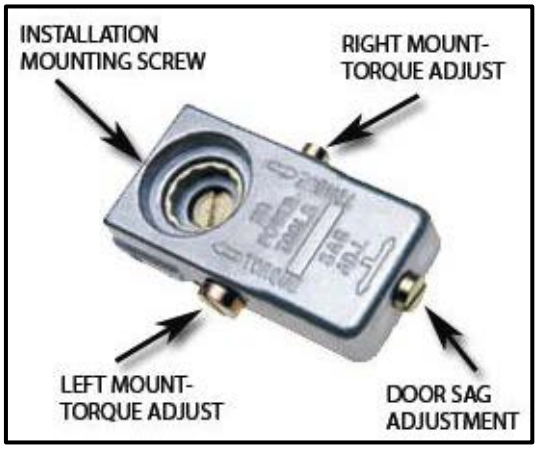
Hinge Pin Wires

3. Loosen and remove the hinge pin assembly from the top door rail.
4. Using a plastic mallet and a flat-head screwdriver, remove the torque rod from the bottom of the door assembly.

Remove Torque Rod

5. Reinstall the hinge pin and the torque rod into the opposite ends of the door assembly.
6. Reconnect the hinge pin wires and confirm all connections.
7. Check and confirm torque rod and hinge pin are correctly installed.
8. Reinstall the door into the frame per the door installation procedures.

3.4. TorqueMaster™ and SAG Adjustment (Model 401B and1KDB)



The TorqueMaster™ regulates the door alignment and the door closing tension.

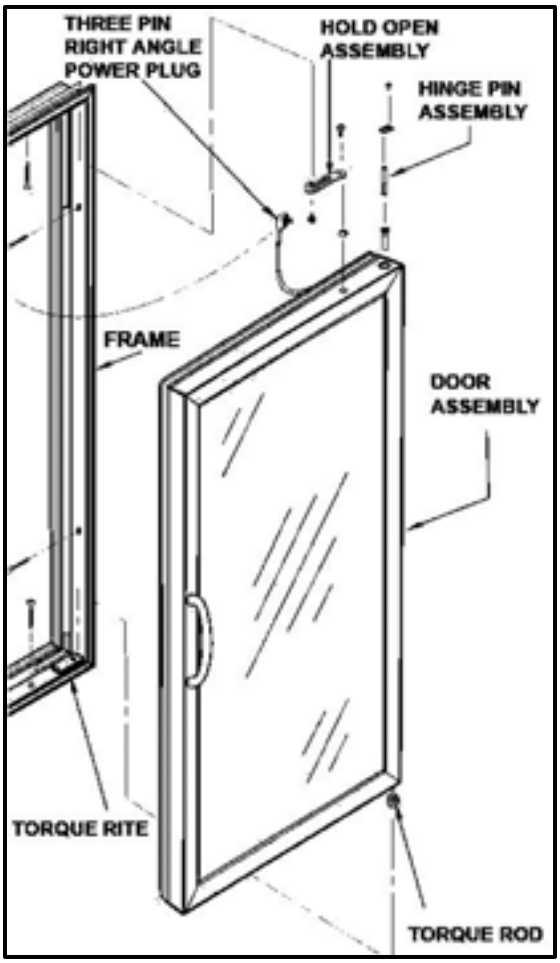
1. Use a flathead screwdriver to adjust the torque rod tension, by turning the outside screw on the TorqueMaster™.
    - Turn counter-clockwise to increase tension.
    - Turn clockwise to decrease the tension.
2. Adjust the door sag to square the door in the frame, by turning the screw that is marked SAG ADJ. (sag adjustment) on the end of the TorqueMaster™, until the door is aligned square in the opening.
    - Turn counter-clockwise to raise handle side of door.
    - Turn clockwise to lower the handle side of door.

NOTE: DO NOT use power tools when adjusting the TorqueMaster™.

4. COOLRITE - FREEZERITE DOOR INSTALLATION

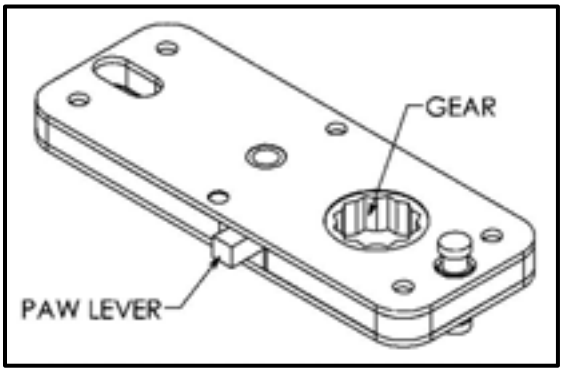
4.1. To Install the Coolrite/Freezerite Door Assembly

1. Hold the door on each side, with the handle facing forward. Lift the door and align it with torque rod to insert it into the Torque Rite socket at the base of the frame.



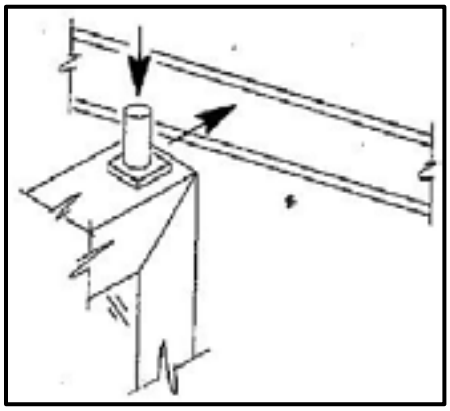
DisplayRite Parts Assemblies

2. Seat the torque-rod wheel into the Torque Rite gear. The door weight will now rest on the frame.



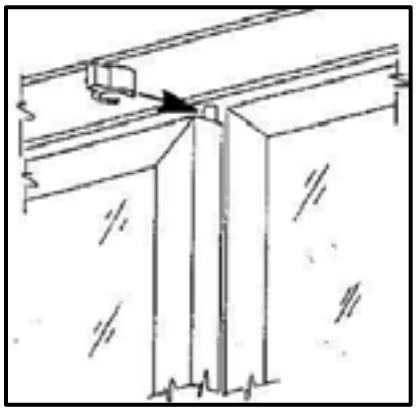
Torque Rite Assembly

3. Align the top spring-loaded hinge pin with the hinge pin opening in the frame.
4. Press down on the spring loaded hinge pin (while moving the door back into the frame opening), until the hinge pin engages into the hinge pin opening.



Engage Hinge Pin

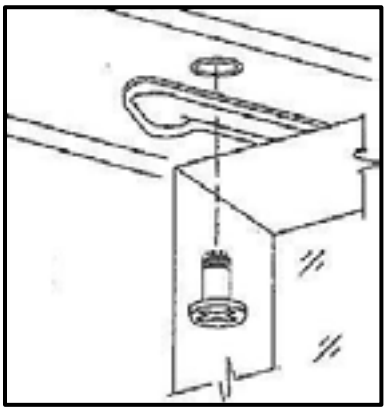
5. Secure the door with the black door retainer clip. Hold the clip by the tab and insert it onto the exposed part of the top hinge pin. The clip will fit tightly.



Insert Retainer Clip

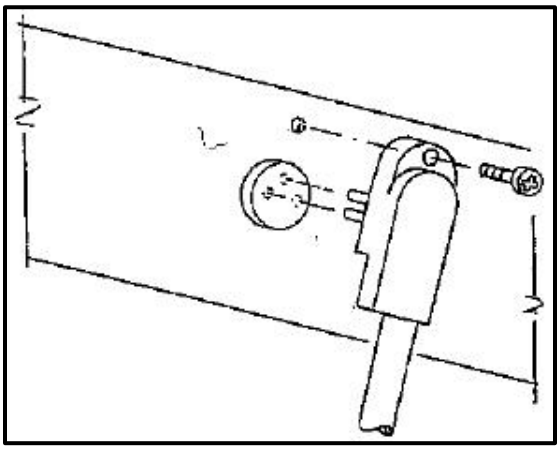
NOTE: The door retainer clip must be in place to ensure the door cannot lift off from the Torque Rite during use.

6. Fasten the hold-open arm to frame top with the hold open bolt provided.



Install Hold-Open Door Arm

7. Plug the door heater cord into the three-pin receptacle on the inside of the frame top. Secure the plug with the attached 5/8” Phillips head screw.



Connect Electrical Plug

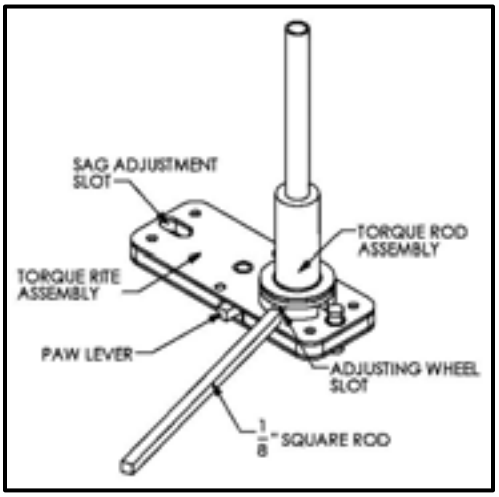
8. Set the door tension by adjusting the Torque Rite. (See Torque Rite Adjustment).

4.2. To Remove the Door Assembly

1. Release tension on Torque Rite prior to removing the door from the frame. Two 1/8” square wire-rods are necessary. Insert one wire-rod in the Paw Lever opening and one wire-rod in the torque rod adjusting wheel slot.
2. Turn the torque rod adjusting wheel slightly toward the handle to free the Paw Lever, push the second rod inward, and release wheel in opposite direction.
3. On the door heater cord, unscrew the attached 5/8” Phillips head screw from the frame receptacle and unplug the cord.
4. Uninstall the bolt securing the hold-open arm from the top frame receptacle.
5. Remove the hinge pin retainer door clip.
6. Push down on the hinge pin and lean door out of the frame opening.
7. Lift door out of Torque Rite. Secure or lean door on its side against a stable surface.

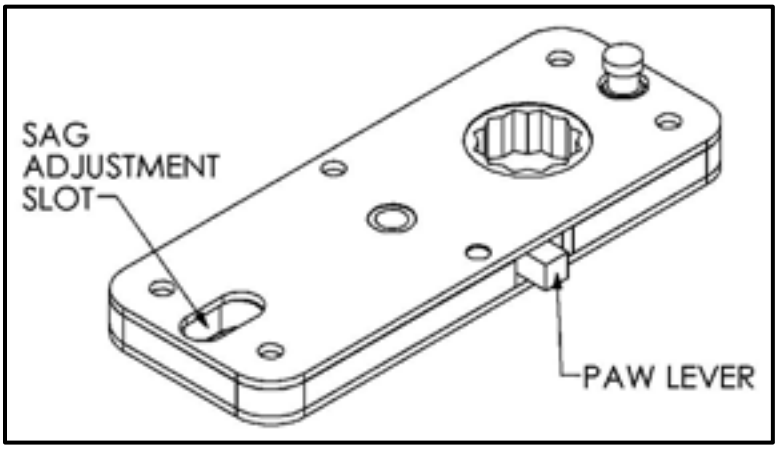
4.3. Torque Rite Adjustment

1. Use a 1/8” square wire-rod to adjust door-closing tension. Insert one square wire-rod into adjusting slot and turn torque rod wheel in the direction of the handle, until the door shuts by itself. 4 to 6 clicks maximum.



Torque Rite Identification

2. To release torque tension, insert two 1/8” square wire-rods: one into the Paw Lever opening and one in the torque rod adjusting wheel slot. With the first rod, turn the adjusting wheel toward Paw Lever and push second rod inward and release wheel in the opposite direction.



3. When the door is out of alignment, adjust the Torque Rite sag adjustment screw to the appropriate setting.

NOTE: Torque Rite Paw Lever should always face outward. It is used to release tension on the door by inserting a second 1/8” square rod.

5. REVISION HISTORY PAGE

REV	ORIGINATOR	DESCRIPTION OF CHANGE	EFFECTIVE DATE
A	SWatstein	Prelim Release Only	November 2008
B	SWatstein	Log and font update	05/13/2010
C	SWatstein	Format Change	05/27/2010
D	S. Fisher	Reformat from PDF to Word	03/21/2013