The Genuine. The Original.

Thermacore®
Commercial Steel Door
Series 591/592/596/599

Sectional Door Installation Instructions

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These instructions are for use by trained technicians.

Normal Installation Procedures for track(Installation Instruction P/N 408207-0001) and counterbalance(Installation Instruction P/N 408682-0001) should be followed.

NOTE: If your door is taller than 10’ or heavier than 400 LBS, Chain Hoist or Motor Operator is recommended.

This document also refers to the following other documents, labels, or specifications;

Track Installation Instruction 408207-0001
Counterbalance Installation Instruction 408682-0001
Painting Instruction Label 408616-0003
Warning Label 408616-0004
Warning Label 408416-0002

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SAFETY INFORMATION
OVERVIEW OF POTENTIAL HAZARDS
READ THIS SAFETY INFORMATION

TO PROTECT YOURSELF FROM INJURY YOU MUST CAREFULLY READ THE FOLLOWING SAFETY INFORMATION AND WARNINGS

CONVENTIONS USED IN THESE INSTRUCTIONS

WARNING and Important Safety Instructions appearing in this guide are not meant to cover all possible conditions and situations that may occur. Common sense, **CAUTION**, and care must be exercised when installing, maintaining, or operating the appliance. YOUR SAFETY AND THE SAFETY OF OTHERS ARE VERY IMPORTANT. WE HAVE PROVIDED MANY IMPORTANT SAFETY MESSAGES IN THIS MANUAL AND ON YOUR APPLIANCE. ALWAYS READ AND OBEY ALL SAFETY MESSAGES.
The following safety alert symbol and signal words are used throughout this manual to call attention to and identify different levels of hazard and special instructions.

This is the safety alert symbol.
This symbol alerts you to potential hazards that can kill or hurt you and others.
All safety messages will follow the safety alert symbol and the word "**DANGER**", "**WARNING**", or "**CAUTION**"

DANGER statements identify that an imminently hazardous situation exists that, if not avoided, will result in death or serious injury to personnel.
WARNING statements identify procedures or practices which must be followed to avoid serious personal injury or loss of life.
CAUTION statements identify procedures or practices which must be followed to avoid minor personal injury or damage to this equipment.
NOTE statements contain helpful hints and tips to facilitate the installation or operation.
IMPORTANT statements contain helpful hints and tips to facilitate the installation or operation.

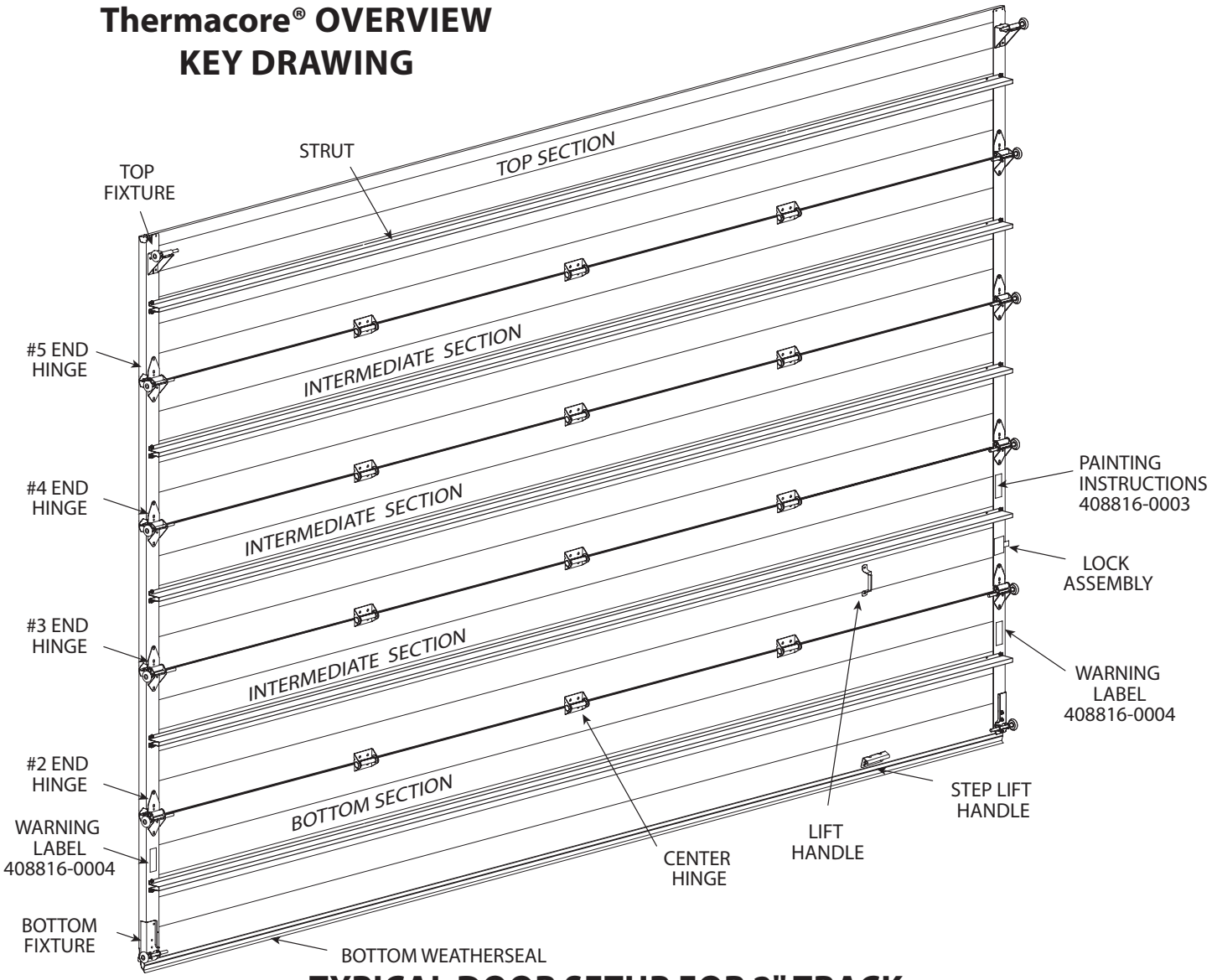
IMPORTANT SAFETY INSTRUCTIONS
READ AND FOLLOW ALL INSTRUCTIONS
SAVE THESE INSTRUCTIONS

Overhead doors are large, heavy objects that move with the help of springs under high tension and electric motors. Since moving objects, springs under tension, and electric motors can cause injuries, your safety and the safety of others depend on you reading the information in this manual. If you have questions or do not understand the information presented, call your nearest service representative.

POTENTIAL HAZARD	EFFECT	PREVENTION
 **MOVING DOOR**	**⚠ WARNING** Could Cause Serious Injury or Death	Keep people clear of opening while Door is moving. Do **NOT** allow children to play with the Door operator. Do **NOT** operate a Door that jams or one that has a broken spring.
 **HIGH SPRING TENSION**	**⚠ WARNING** Could Cause Serious Injury or Death	Do **NOT** try to remove, repair or adjust springs or anything to which door spring parts are fastened, such as wood blocks, steel brackets, cables or other like items. Installations, repairs and adjustments **must** be made by a trained door system technician using proper tools and instructions.
 **ELECTRICAL SHOCK**	**⚠ WARNING** Could Cause Serious Injury or Death	Turn **OFF** power before removing operator cover. When replacing cover, make sure wires are not pinching or near moving parts. Operator must be properly grounded.

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Thermacore® OVERVIEW KEY DRAWING



TYPICAL DOOR SETUP FOR 2" TRACK (OPTIONAL STRUTS SHOWN)

PREPARING FOR INSTALLATION

Before beginning installation, make sure of the following:

1. Opening width and height are correct for the product supplied.
2. Jambs are plumb and the floor and header are flat and level.
3. Headroom is adequate.

   NOTE: To determine adequate headroom, measure the distance from the bottom of the vertical angle to the centerline of the headplate bearing. Add the radius of the cable drum. This sum must be less than the ceiling height. Refer to Normal Installation Procedures for track (Installation Instruction P/N 408207-0001).

4. Spring and/or bearing support pads are flush with the jambs.

   NOTE: When installing several doors of the same size and construction, complete one door installation first to assure proper fit and counterbalance.

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BOTTOM SECTION ASSEMBLY

1. Attach cable assemblies to bottom fixtures using clevis pin and cotter pin.
   Align bottom fixtures on bottom section, both ends. Attach with a minimum of three (3) fasteners to each bottom fixture and insert track rollers. See Figure 1.
2. Attach Warning decal above each Bottom Fixture. See Figure 1.
3. Attach end hinges by first inserting the screw next to the barrel of the hinge in the lower half. See Figure 2.

   NOTE: All end hinges are numbered as their placement is important. Starting from the bottom section, attach hinges in numerical order starting with number 2 hinge for 2" track and number 4 hinge for 3" track.
4. Anchor hinge securely with this screw before inserting the screw in the lower tip of the hinge.
5. Insert track rollers. See Figures 1 and 2B.

   NOTE: If double end hinges are supplied, attach first end hinge in normal manner. Insert the long stem roller, and slide second end hinge in place. Attach second end hinge to section with same fasteners and procedure as above. See Figure 3.

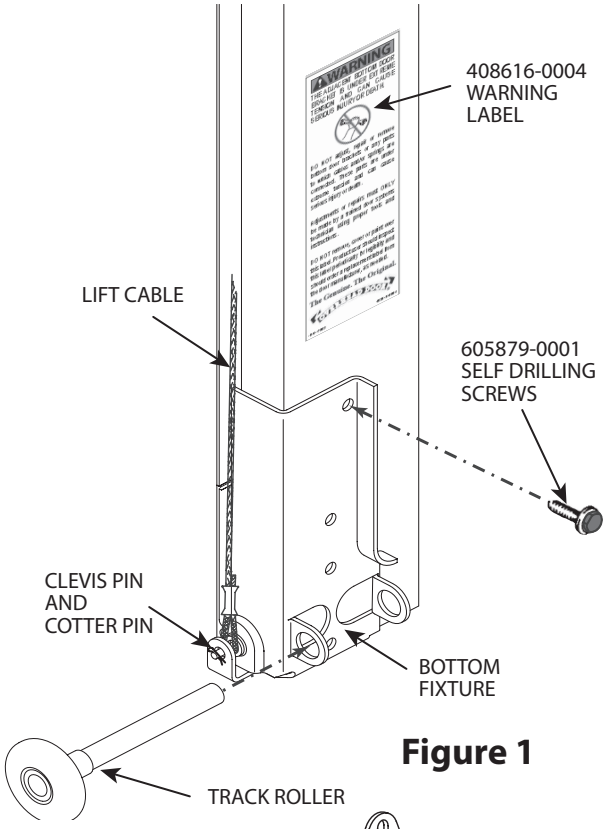


Figure 1

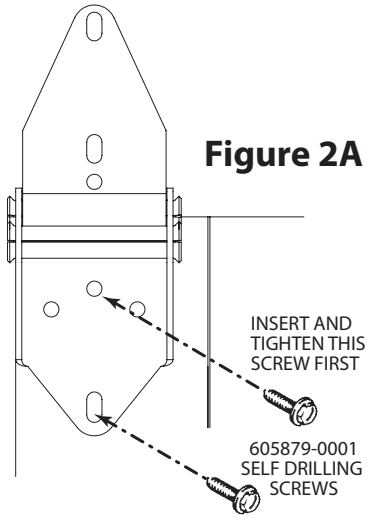


Figure 2A

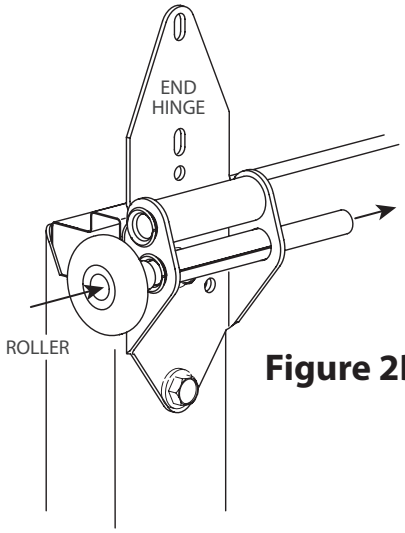


Figure 2B

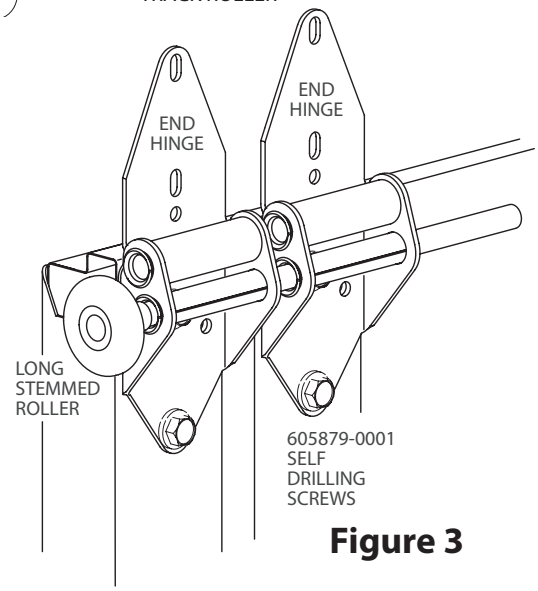


Figure 3

6. Attach lower leaf of center hinge(s) to the top of the section using self drilling screws. Center hinges are spaced 48" on center equally spaced about the center line of door. See Figure 4A.

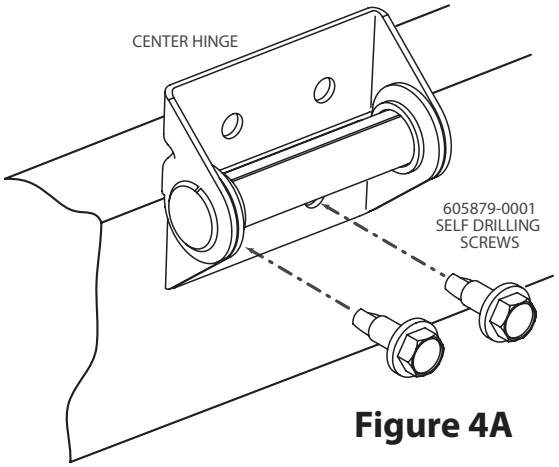


Figure 4A

INTERMEDIATE SECTION ASSEMBLY

1. Install end and center hinges per bottom section assembly per Steps 3-6 above

   NOTE: Install end hinges to one end of a section only. Opposite side will be assembled according to the "INSTALLING DOOR SECTIONS IN TRACK" section on page 7.

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INTERMEDIATE SECTION WITH FULL VIEW SASH SECTION

A shim is required when adding an aluminum sash section to a thermacore door. The panels are not the same thickness and the shim will help create a flat surface for mounting the center hinges. These parts are included in your hardware bags.

Install hinges per step 6 on the previous page with the additon of the shim on doors with a full view sash section. The shim is installed on the Thermacore door section as illustrated in figure 4B below.

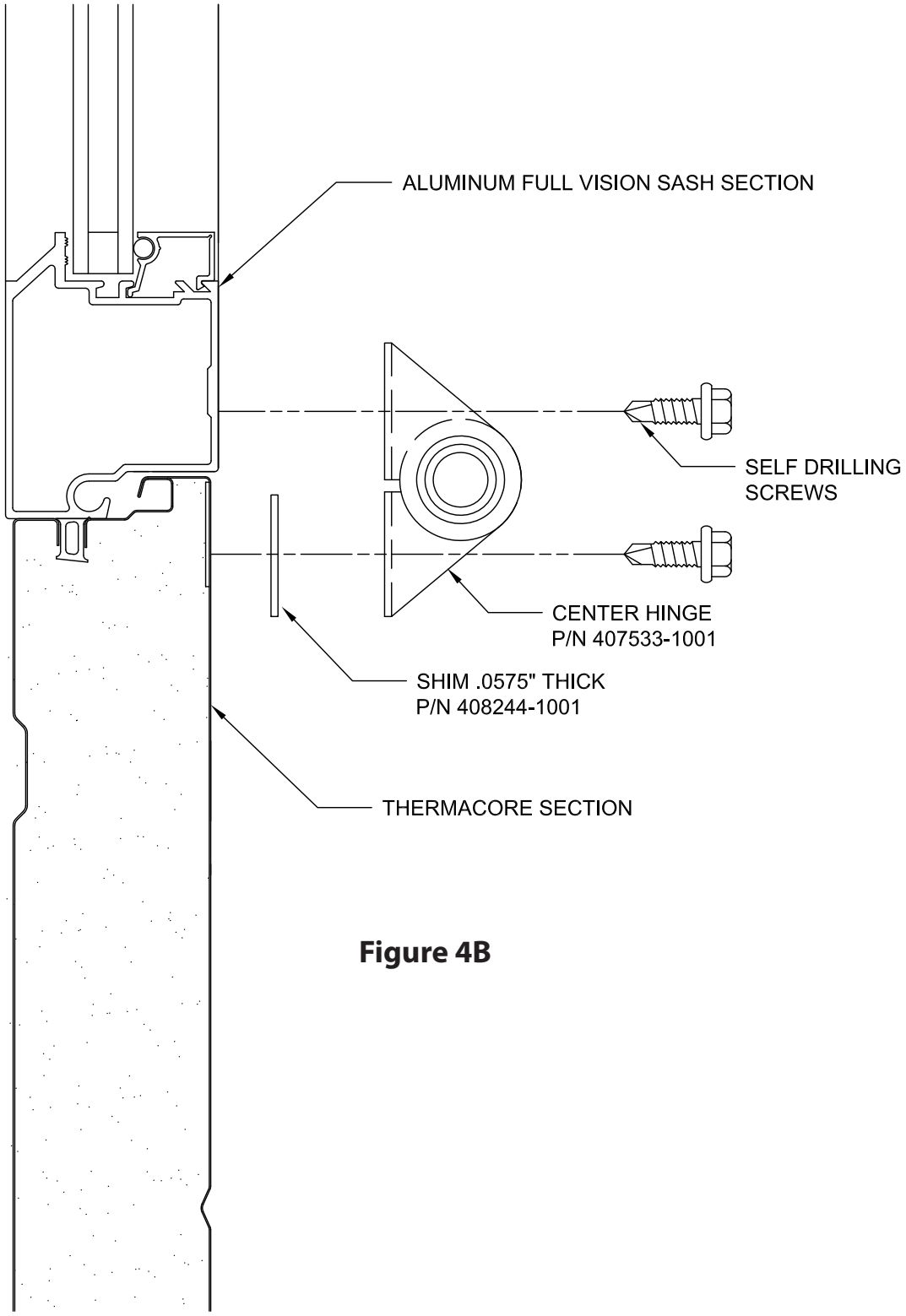


Figure 4B

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STRUT INSTALLATION

When struts are required, they may be shipped from the factory unattached. To attach struts:

⚠ CAUTION

Load bearing capacity of the strut is lost if the hole is stripped out or if the strut is not held tight against each section.

1. Install struts as shown in Figures 5 and 6 using self drilling screws. Use two(2) screws at each single end stile and four(4) screws at each double end stile. Fasten the strut to the section inside panel skin with the self drilling screws 12" apart, alternating from top to bottom of the strut as shown in Figure 5. Press strut firmly against section while driving screws.
2. Sections with windows should have strut(s) mounted above or below the window.
3. Attach strut with self drilling screws, as shown in Figure 6.

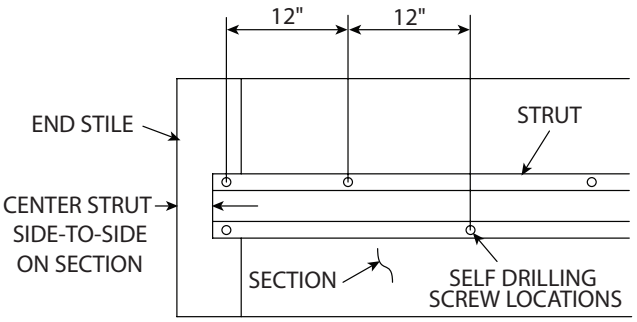


Figure 5

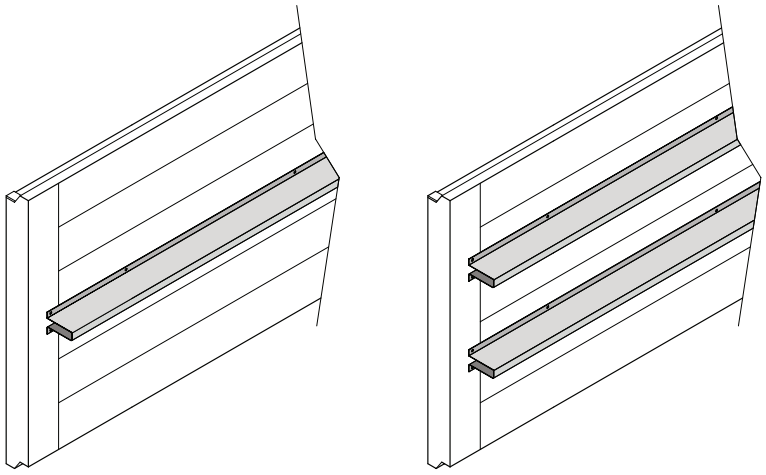


Figure 6

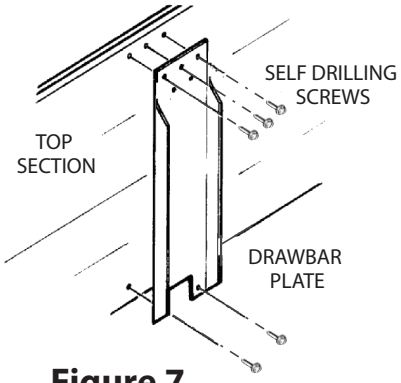


Figure 7

DRAWBAR INSTALLATION (TOP SECTION ONLY)

Doors with a drawbar operator require a drawbar plate be installed prior to top strut mounting. (Drawbar shown in illustration is representative only.)

1. Position drawbar plate in center of top section, 1/8" below top of panel.
2. Attach with self drilling screws (not provided with door).

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TRACK SPACER (if required)

1. Attach wood or metal spacer, 1-1/2" thick, to left and right jamb face. Height of spacer should be equal to door opening. **NOTE:** Do NOT install a spacer across the header. This header gap provides the necessary space between header and door face to create clearance for thermal bowing of door.
2. Begin track installation.
3. Attach weatherseal (thermal bowing) to outside top of top door section.

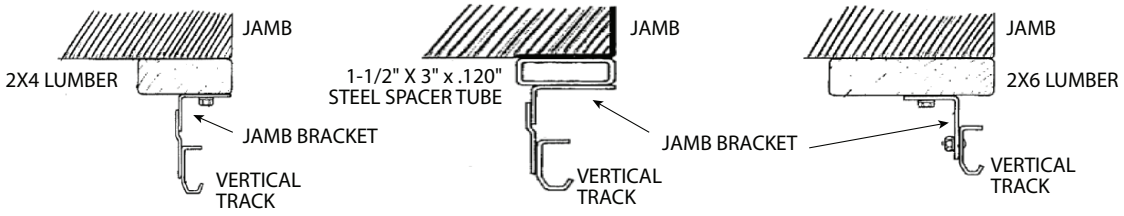


Figure 8

TRACK WEATHERSEAL (optional)

Use track weatherseal (not provided) when jamb weatherseal cannot be used.

1. When vertical weatherseal (P/N 407100-0001) is to be used, affix weatherseal with a one foot long bead of construction adhesive at top and bottom and a 6 foot long bead on center. See Figure 9.

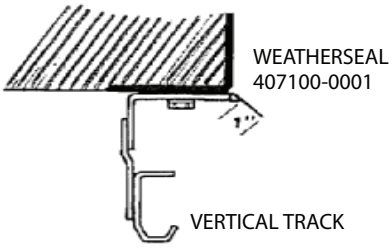


Figure 9

INSTALLING DOOR SECTIONS IN TRACK

1. Position bottom section with hardware and rollers attached.

   NOTE: Do not install top section of door at this time. Top door section should be installed AFTER horizontal track or upper vertical track has been installed.

   Brace door section in opening until end hinges or top fixtures and rollers are installed and secured to door section.

2. Insert roller into end hinge on intermediate section. Hook roller into track and swing section into place. Set section on top of lower section
3. Insert rollers into corresponding loose end hinge. Hook roller into track and swing end hinge onto door section, see Figure 10.
4. Secure end hinges to door section, see page 4, Figure 2A.
5. Attach lower leaf of the center hinge to the top of the section using self drilling screws. Center hinges are spaced 48" on center equally spaced about center line of door, see Figure 4A.
6. Attach upper half of center and end hinges to bottom of next highest section.
7. Refer to Commercial Track Installation Instructions 408207-0001.

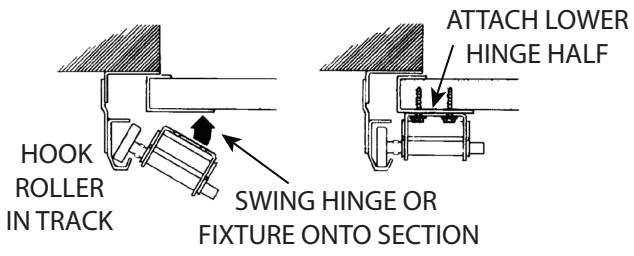


Figure 10

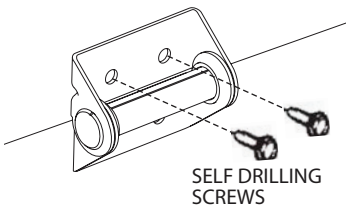


Figure 11

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LIFT HANDLE/STEP PLATE INSTALLATION

LIFT HANDLES/STEP LIFT HANDLES

1. Using a 17/64" dia bit, drill mounting holes through lock and bottom sections at locations shown in Figure 11 and Figure 12. Then drill a 17/64" dia hole at the same locations, but only through the inside door face and foam.

   For Door Model 591: Attach step lift handles to bottom section and lift handles to lock section with 1/4" - 20 x 2-1/4" carriage bolts.

   For Door Models 592/596/599: Attach step lift handles to bottom section and lift handles to lock section with 1/4" - 20 x 2-1/2" carriage bolts.

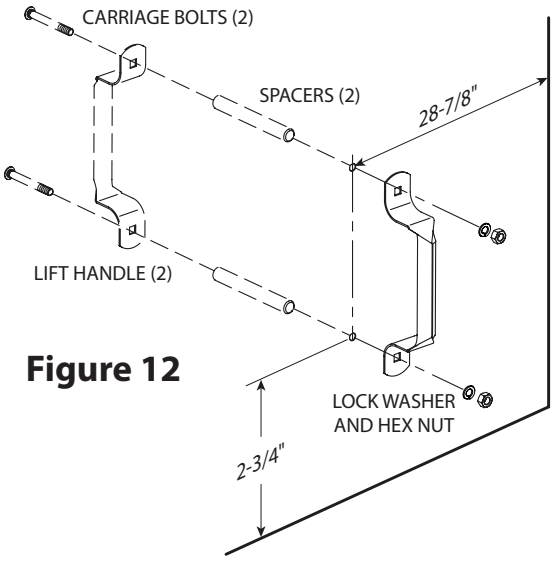


Figure 12

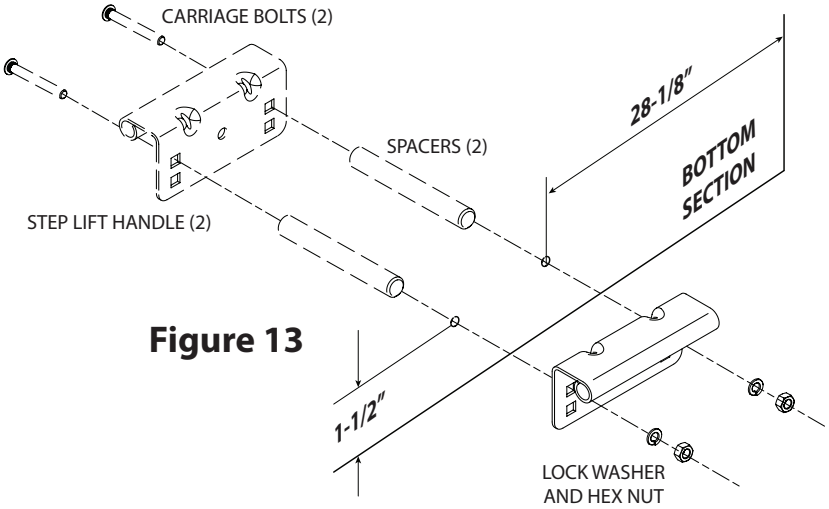


Figure 13

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LOCK INSTALLATION

END STILE LOCK

1. Center lock rod in track cutout. See Figure 14.
2. Retract lock rod and move lock assembly so that the end of the lock rod is flush with edge of door section in unlocked position.
3. Mark four holes. Drill 1/8" holes and attach with self-extruding screws.
4. Attach lock rod keeper.

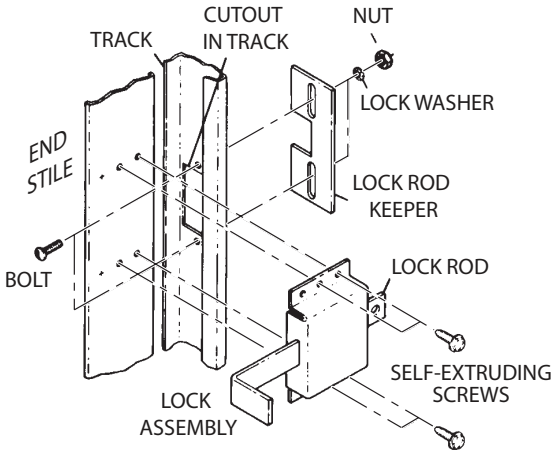


Figure 14

SINGLE OR DOUBLE ROD LOCK

1. Place outside handle assembly on outside of section and insert carriage bolts. See Figure 15.
2. Insert lock case assembly on inside door.
3. Insert lock stem and cylinder tongue in proper place with bolts going through spacers.
4. Secure nuts to through bolts, holding both inner and outer parts.
5. Install 4 self-extruding screws in lock assembly.

NOTE: Lock handle assembly may be mounted in two ways, with handle positioned down (lock case bar will have to be move to right or locked), or with handle held up in the unlocked position (masking tape may help hold handle in place while attaching lock case).

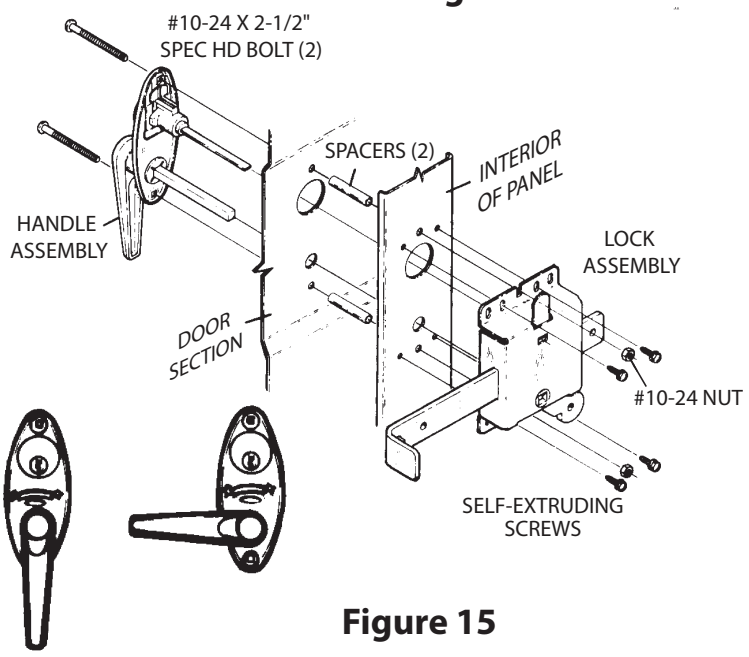
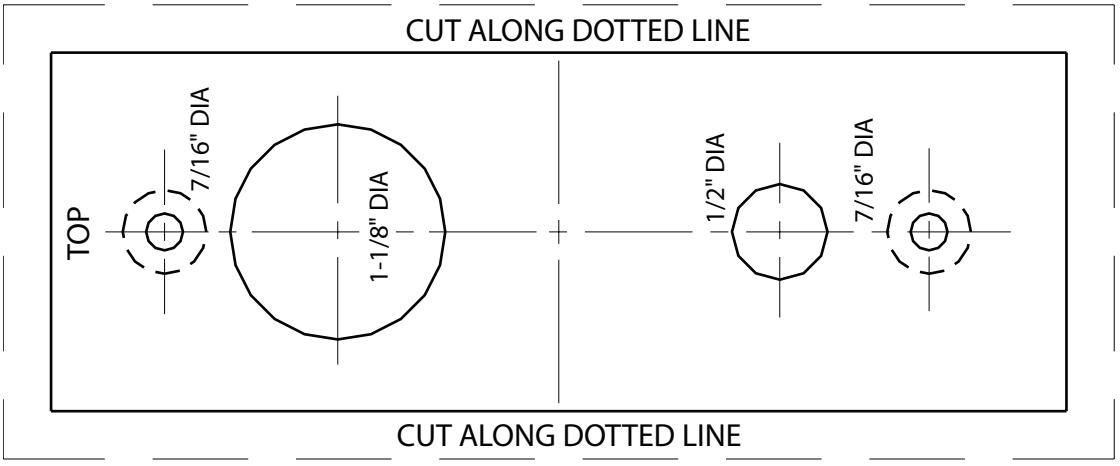


Figure 15

LOCK TEMPLATE



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LOCK INSTALLATION (continued)

LOCK ROD INSTALLATION

1. Secure Lock Rod(s) to lock case assembly. See Figure 16.
2. Install guide(s) on Lock Rods.
3. Position guide(s) on end stile(s) 3/4" from edge of section. Align with slots in track.
4. Drill 1/8" mounting holes in end stile(s) and secure guide(s) to end stiles.
5. Drill 1/8" mounting holes and secure guides to center stiles.
6. If required, install Lock Rod keeper(s) on slot in track(s).
7. Install lock spring. Locate on left hand.

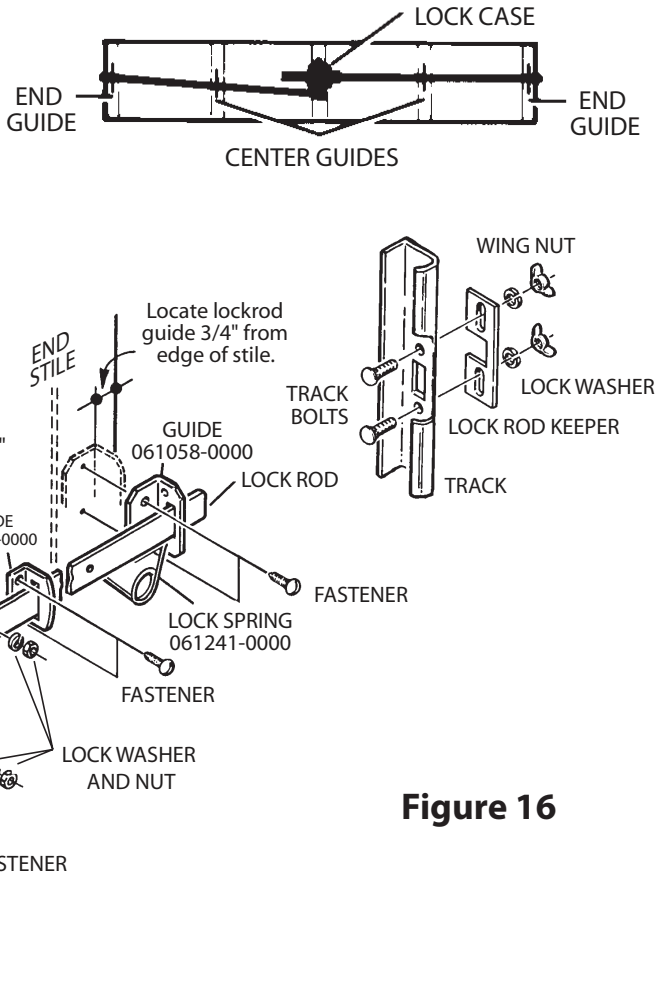


Figure 16

LEFT HAND LOCKS

All locks are shipped "Right Hand" installation (See Figure 17). If "Left Hand" installation is required, use the following procedure

1. Remove set screw, lock catch and lock bar spring.
2. Pivot lock crank to opposite side of lock case.
3. Re-install lock bar in opposite side of case. Align spring bar with slot in case and push lock release out of path of lock bar.
4. Re-install lock catch. Push lock release out of way allowing tab of lock catch to fit between lock bar and lock release.
5. Align hole in lock catch with hole in lock bar and re-install set screw.

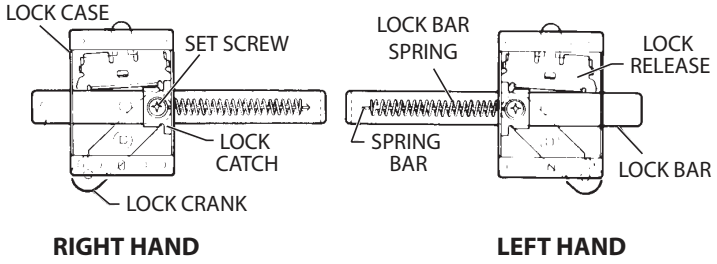


Figure 17

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TOP FIXTURE INSTALLATION

Attach top fixture using four fasteners and insert rollers. See Figure 18.

NOTE: Top fixture may be inverted as required. If double end hinges are supplied, attach first top fixture in normal manner. Insert the long stem roller and slide second top fixture in place. Attach to section with same procedure shown above.

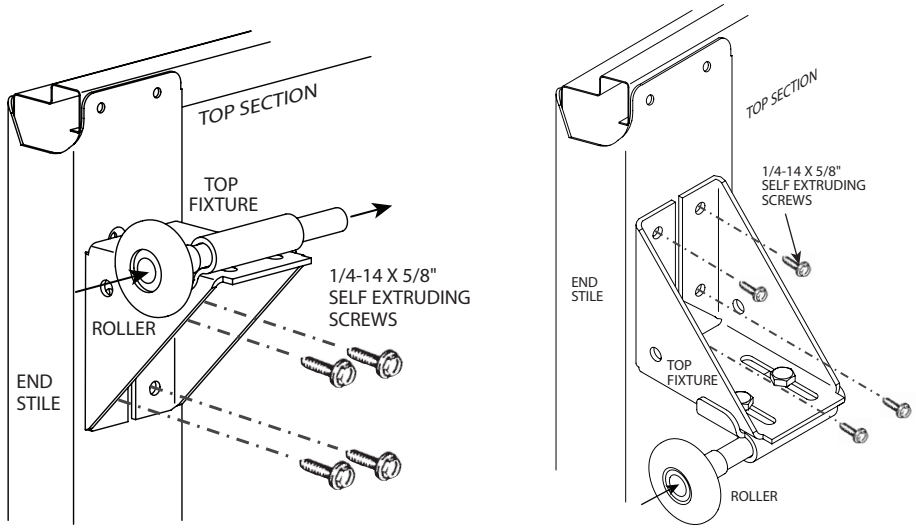


Figure 18

FINAL ADJUSTMENTS

1. On manually operated doors, attach pull down rope to bottom fixture and long track bolts located at a jamb bracket above mid-point of door height using a rope washer. See Figure 19.

   Attach the pull down rope on same side of door as lock assembly.
2. Adjust top fixtures to seat top section against header or header seal.
3. Adjust lock rod keeper on track, if necessary, for secure locking and ease of operation.
4. Lubricate all moving parts (hinge barrels, rollers, lock etc.) with regular grade machine oil.
5. Affix Warning decal 408616-0002 to wall next to hoist hand chain.

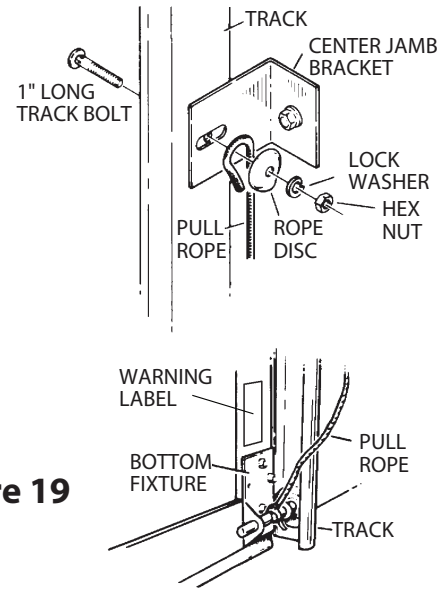


Figure 19

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The Genuine. The Original.

Overhead Door Corporation
Thermacore® Models 591, 592, 593, 594, 596, 598, 599, 850
Commercial/Industrial Doors Limited Warranty

One Year Door Limited Warranty
Ten Year Delamination Limited Warranty

Overhead Door Corporation ("Seller") warrants to the original purchaser of Thermacore Models 591, 592, 593, 594, 596, 598, 599 and 850 Commercial/Industrial Doors ("Product"), subject to all of the terms and conditions hereof, that the Product and all components thereof will be free from defects in materials and workmanship under normal use for the following period(s), measured from the date of installation:

- **Seller warrants the door sections for a period of ten years from date of installation against delamination (separation) of the polyurethane foam from the steel skin of the panels for 591, 592, 593, 594, 596, 599, 850 and for a period of eight years for the 598.**
- **Seller warrants all other components of the door to be free from defects in material and workmanship for a period of one year from the dates of installation.**

Seller's obligation under this warranty is specifically limited to repairing or replacing, at its option, any part which is determined by Seller to be defective during the applicable warranty period. Seller's repair or replacement labor is included for a period of one year from the date of installation. After one year, any labor charges are excluded and will be the responsibility of the purchaser.

This warranty is made to the original purchaser of the Product only, and is not transferable or assignable. This warranty does not apply to any unauthorized alteration or repair of the Product, or to any Product or component which has been damaged or deteriorated due to misuse, neglect, accident, failure to provide necessary maintenance, normal wear and tear, or acts of God or any other cause beyond the reasonable control of Seller. This warranty does not apply to any door or part which has been damaged or deteriorated due to misuse, accident, painting or failure to provide necessary maintenance.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL SELLER BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, even if Seller has been advised of the possibility of such damages. Such excluded damages include, but are not limited to, loss of goodwill, loss of profits, loss of use, cost of any substitute product, interruption of business, or other similar indirect financial loss.

Claims under this warranty must be made promptly after discovery, within the applicable warranty period, and in writing to the Seller or to the authorized distributor or installer whose name and address appear below. The purchaser must allow Seller a reasonable opportunity to inspect any Product claimed to be defective prior to removal or any alteration of its condition. Proof of the purchase and/or installation date, and identification as the original purchaser, may be required.

DOOR TYPE: _____

OPERATOR TYPE: _____

CUSTOMER NAME (ORIGINAL PURCHASER): _____

CUSTOMER INSTALLATION LOCATION: _____

ORDER # _____

DATE OF INSTALLATION: _____

NAME OF DISTRIBUTOR/INSTALLER: _____

SIGNATURE OF DISTRIBUTOR/INSTALLER: _____

C900-677