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NABCO hours of Operation for Technical Service (Option #3):
Monday to Friday 7:00 a.m.- 5:30 p.m. (Central Time)

Associated Manuals Part Numbers: *Opus Control Wiring and Programming Manual (P/N C-00139)*
(Power input: 100-130VAC, AC 50-60 Hz, minimum 5A service, per Controller, see OPUS manual for more information)
Low Energy Swing Door Owner's Manual (P/N C-00125) for Decal Installation



- **Turn OFF all power to the Automatic Door if a Safety System is not working.**
- **Instruct the Owner to keep all power turned OFF until corrective action can be achieved by a NABCO trained technician. Failure to follow these practices may result in serious consequences.**
- **NEVER leave a Door operating without all Safety detection systems operational.**

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SERVICE PARTS:

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CHAPTER 1: SAFETY FLAGS

SECTION 1.1: Warning Labels

Warning labels are universal and used to alert an individual of potential harm to oneself or to others. The following warning labels are listed in a hierarchy order that defines the most potential danger first, and the least potential danger last. Please refer to this page in the event that a warning label is displayed within this manual and further definition needs to be explained.



Indicates potentially dangerous situations. Danger is used when there is a hazardous situation where there is a *high* probability of severe injury or death. It should not be considered for property damage unless personal injury risk is present.



Indicates a hazardous situation which has *some* probability of severe injury. It should not be considered for property damage unless personal injury risk is present.



Indicates a hazardous situation which *may result in a minor injury*. Caution should not be used when there is a possibility of serious injury. Caution should not be considered for property damage accidents unless a personal injury risk is present.



A situation where material could be damaged or the function impaired.



Indicates a statement of company policy as the message relates to the personal safety or protection of property. Notice should not be used when there is a hazardous situation or personal risk.

NOTE: Indicates important information that provides further instruction.

SECTION 1.2: General Safety Recommendations



Do not install, operate or service this product unless you have read and understand the General Safety Recommendations and Warning Labels contained in this manual. Failure to do so may result in bodily injury or property damage.



Read, study and understand the installation and operating instructions contained in or referenced in this manual before operating. If you do not understand the instructions, ask a qualified technician. Failure to do so may result in bodily injury or property damage and will nullify all warranties.



Disconnect all power to the junction box prior to making any electrical connections. Failure to do so may result in serious personal or fatal injury. When uncertain whether power supply is disconnected, always verify using a voltmeter.



Do not place finger or uninsulated tools inside the electrical controller. Touching wires or other parts inside the enclosure may cause electrical shock, serious injury or death.



The Ground wire from the Opus Control 120 VAC Harness, and the Incoming 120 VAC Ground wire must be connected to the Ground screw located within the Swing door Header.



If the door appears broken or does not seem to work correctly, it should be immediately removed from service until repairs can be carried out or a qualified service technician is contacted for corrective action.



This manual, the owner's manual and all other associated manuals must be given to and retained by the purchasing facility or end user.

SAFETY

Wiring must meet all local, state, federal or other governing agency codes.

SAFETY

All electrical troubleshooting or service must be performed by qualified electrical technicians and must comply with all applicable governing agency codes.

CHAPTER 2: **P**REPARE and **O**RGANIZE

SECTION 2.1: To the Installer

The purpose of this manual is to familiarize the installer and purchaser with the proper installation and operation of this system. It is essential that this equipment be properly installed and operational before the door is used by the public. It is the installer's responsibility to inspect the operation of the entrance system to be sure it complies with any applicable standards. In the United States, ANSI Standard 156.19; ANSI Standard 156.10, and the Low Energy Operator section of ADA Standard covers the GT 710/8710 Swing Door Low Energy System. Also in the United States, all installed glass must meet ANSI Standard Z97.1. Other local standards or codes may apply. Use them in addition to the ANSI standard. Low Energy Swing Door Units are listed with the Underwriters Laboratory and is identified as such on the label.

The owner should determine whether the door is operating properly and should immediately call for service if there is any malfunction. All installation changes and adjustments must be made by qualified NABCO-trained technicians.

If, after troubleshooting a problem, a satisfactory solution cannot be achieved, please call NABCO Entrances Technical Service at 1-877-622-2694, Option 3, between 7 am – 5:30 pm Central Time for additional assistance.



- Turn OFF all power to the Automatic Door if a Safety System is not working.
- Instruct the Owner to keep all power turned OFF until corrective action can be achieved by a NABCO trained technician. Failure to follow these practices may result in serious consequences.
- NEVER leave a Door operating without all Safety detection systems operational.

SECTION 2.2: Objective

The (8) 710 Swing Door system is designed to be surface mounted onto the Door Frame. The door function is controlled by the Opus Control. This control offers many features to accommodate most installation options. This manual offers step-by-step instructions.



A pedestrian Door that does not have its glass sections installed at the Factory shall specify that the glazing material employed is to comply with the requirement in UL 325 par.30.5.1:

“The glazing material in both fixed and sliding panels of all sliding doors and in all unframed swinging doors shall comply with the requirements in the Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings, ANSI Z97 .1. Glazing material for other pedestrian doors shall also comply with ANSI Z97 .1, except that single strength or heavier glass may be used for those portions of doors involving a glazed area of less than 1ft² (0.9 m²) and having no dimension greater than 18 in (457 mm)”.

SECTION 2.3: Gaining Access into the “myNABCO” Portal

2.3.1 Email and Password

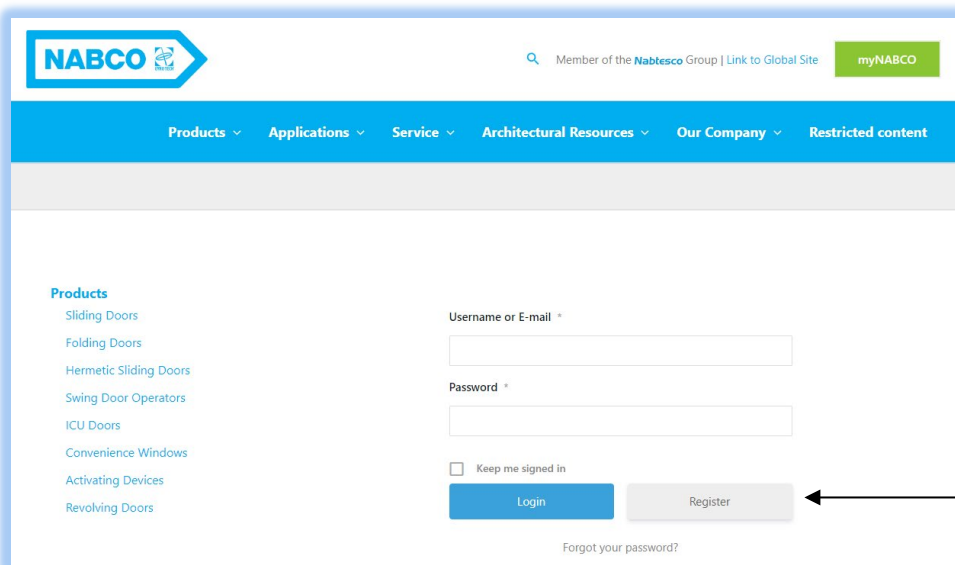
This is for **DISTRIBUTOR ACCESS ONLY**

To gain access into the “myNABCO” portal, the **Distributor** must first have an assigned Email and Password. **To request** an Email and Password, the following must be done:

1. Open the NABCO Website: www.nabcoentrances.com
2. Click on the “myNABCO” button (**Green Button**)



3. Click on the “Register” button (see below)
4. A form appears.



5. Complete the form.
 - a. Enter a username, first name, last name, email address and chosen password/verify it, AND then click on the blue **Register** button.
6. A confirmation will be sent back to the **Distributor** verifying the registration.
7. Use the confirmed username and password to Login.

2.3.2 Accessing Installation, Wiring and Programming Manuals

For User convenience there are now (2) ways to obtain associated Installation, Wiring and Programming Manuals:

- ▶ All Associated Manuals are packed within Decal Packets that are placed inside the Header.
- ▶ For Electronic copies please Login: **www.nabcoentrances.com** → **myNABCO portal** → **LOGIN**.

myNABCO

Products Applications Service Architectural Resources Our Company Restricted content

Products

- Sliding Doors
- Folding Doors
- Hermetic Sliding Doors
- Swing Door Operators
- ICU Doors
- Convenience Windows
- Activating Devices
- Revolving Doors

Username or E-mail

Password

☐ Keep me signed in

Login Register

[Forgot your password?](#)

- ▶ The screen below appears once you are logged in.
- ▶ Navigate to the information needed.

myNABCO

Products Applications Service Architectural Resources Our Company Contact

My Account

Products

- Sliding Doors
- Folding Doors
- Hermetic Sliding Doors
- Swing Door Operators
- ICU Doors
- Convenience Windows
- Activating Devices
- Revolving Doors

myNabco

- Training/Pricing/Substitutions, Quote, Drawing & Order Forms
- Marketing Materials
- NABCO METHIT
- Support
- Contact

2.3.3 Obtaining Associated Manuals, Cut Sheets and Shop Drawings

- ▶ Secure Cut Sheets, Pick Lists and Shop Drawings from your Project Coordinator or General Contractor and review them.

SECTION 2.4: Access to Other Information and Associated Links

2.4.1 Locating Service Part pages

- ▶ Service Parts are located at the end of this manual; this is for your reference ONLY.
- ▶ *Service parts can ONLY be ordered by an **Authorized Distributor** or **Branch**.*
- ▶ *If questions, please call NABCO Entrances Technical Service at 1-877-622-2694, Option 3, between 7 am – 5:30 pm Central Time for additional assistance.*

2.4.2. Links to Service Parts pages in this manual

Click on the link below to be taken to the appropriate Service Parts Page OR see the back of the manual:

[Service Parts: GT710 Low Energy Header](#)

[Service Parts: GT8710 Low Energy Header](#)

[Service Parts: Swing Arm and Track Assemblies](#)

SECTION 2.5: Tool List

- Torpedo Level
- Tape-Measure
- Shim-Stack Shims to keep the header level
- Rubber Mallet
- Complete set of Standard & Metric Allen Wrenches
- 3/16ths, 1/4-inch, and 5/16ths Masonry Drills
- Complete Drill Index
- Side-Cutters
- 12" Aircraft Drills 3/16ths and 1/4-inch
- Hole Saw Kit or a variety of Step-Down Bits (7/8" minimum)
- 6" Clamps or larger
- Drill Gun with Rotary-hammer capability and/or Impact Gun
- 6" Apex Bit(s)
- Wire-Strippers
- Meter, reading Voltage, Resistance and Continuity
- Electrical Tape
- 3/32nd Straight Screwdriver, for OPUS terminations
- #2 and #3 Phillips Screwdrivers
- Sawhorses
- Traffic Cones and/or Caution Tape
- Bin with SPARE Screws (for both Wood and Metal), Washers, Nuts, Lock Nuts, Wire-Nuts, Rowels, 4-Wire, Drill Bits, Self-Drilling/Tapping Screws and Bit Extension Tools (i.e., Counter sinks, 3/8ths Nut Drivers, Spare Screw tips, etc.)
- Broom & Dustpan and/or Vacuum
- Drop Chain or Fish Tape
- Pencil or Marker
- Door Pressure Guage for AAADM Inspection

CHAPTER 3: SHUT OFF CIRCUIT BREAKER



Shut the installation site, branch Circuit Breaker OFF. Failure to do so may result in serious personal or fatal injury. When uncertain whether power supply is disconnected, always verify using a voltmeter.



All high voltage electrical connections must be made by licensed electricians according to National and Local electrical codes/regulations.



Permanent wiring shall be employed as required by local codes.



Keep all Incoming 120 VAC wiring separate from low voltage wiring within Header. 120 VAC Power wires must be routed (separate from other wiring) located near the top of inside Header.



Ensure that the Grounding of the Electric Power Supply is installed/connected in a proper way (especially the PE Cable from the Building Side).



Insert all Incoming 120 VAC Power wires into the predrilled Electric Service Access Hole located at the left or right side of Header End Cap.



Electrical circuits to Nabco operator must not be shared with other equipment such as lighting, cash registers, or any device that might cause electrical interference on the circuit.

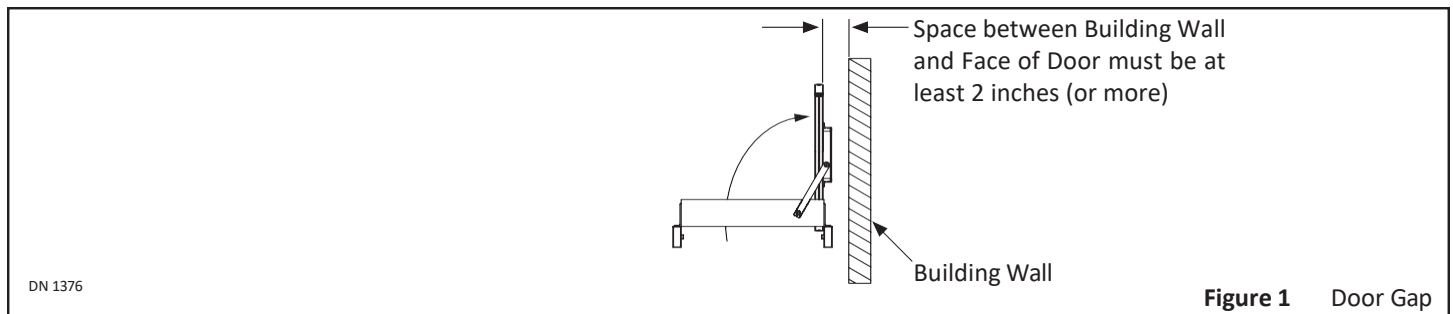


Any non-factory low voltage wiring added inside the Header must be Type CL2 wire or the equivalent in accordance with Article 725 of the NEC.

NOTE: It is recommended for the Installer to house all Incoming 120 VAC wires within an Electrical Conduit.

CHAPTER 4: INITIAL ASSEMBLY (Header)

1. Open the door 90 degrees.
2. Measure between the wall and the outside face of the Swing Door. There must be a 2-inch minimum gap.
 - a. If there is less than a 2-inch gap, NABCO recommends not using this door automatically.



NOTE: It may be necessary to remove the Motor/Operator from the Header to reduce weight, while positioning the Header onto the Door Frame.

3. Remove the Header Cover. Remove boxes and/or parts bags from inside Header. Set aside.

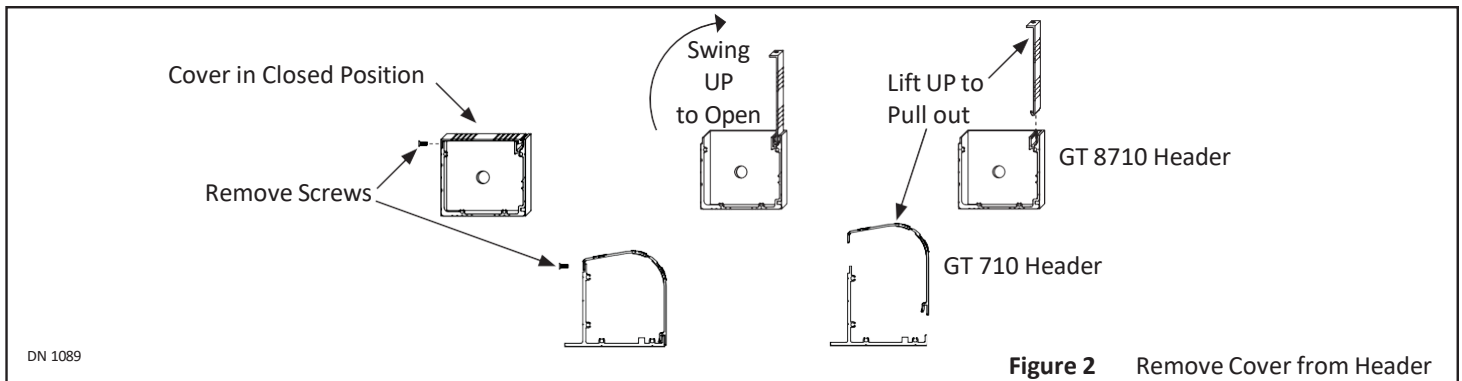


Figure 2 Remove Cover from Header

SECTION 4.1: Drill Holes in Header (GT 710 - 8710)

NOTE: Protect Header Components from metal chips when drilling.

1. If the wiring comes into the back of the Header, drill one 7/8-inch hole through the Header to allow 120VAC wiring to be drawn inside, near the Strike Side of the Header. Drill another 7/8" hole if there are additional Low Voltage wires interfacing with the Opus.
 - a. The GT-8710 Header can be ordered with an additional Knockout hole located at either end of the Header. For details, please call Customer Service at: 1-888-622-2694, Option #1.
 - b. If mounting the On/Off/HO Switch on the End Cap or Bottom of the Header, drill and prep appropriate holes and mount it at this time.
2. Inside the Header, measure 1 inch from the End Caps towards the center and mark vertical lines.
3. Measure at least 1/2 inch from the bottom and top of the Header. Mark horizontal lines across the vertical lines. Drill 1/4-inch screw holes where all lines intersect.
4. Add additional holes to intersect with Vertical Studs to add rigidity as needed.

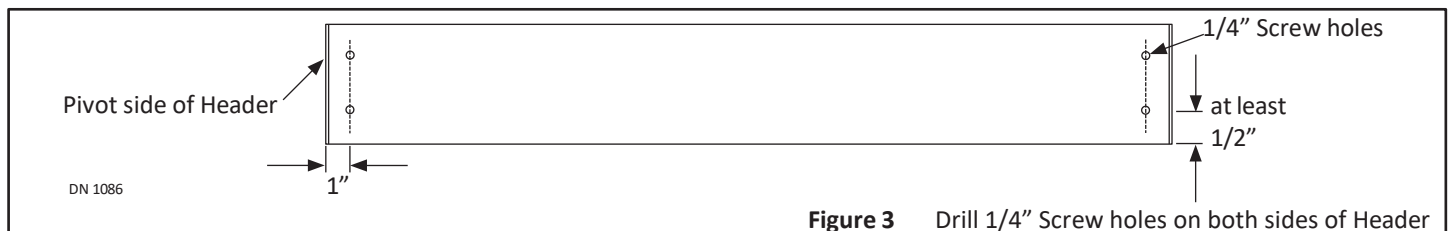


Figure 3 Drill 1/4" Screw holes on both sides of Header

SECTION 4.2: Prepare the Door Frame

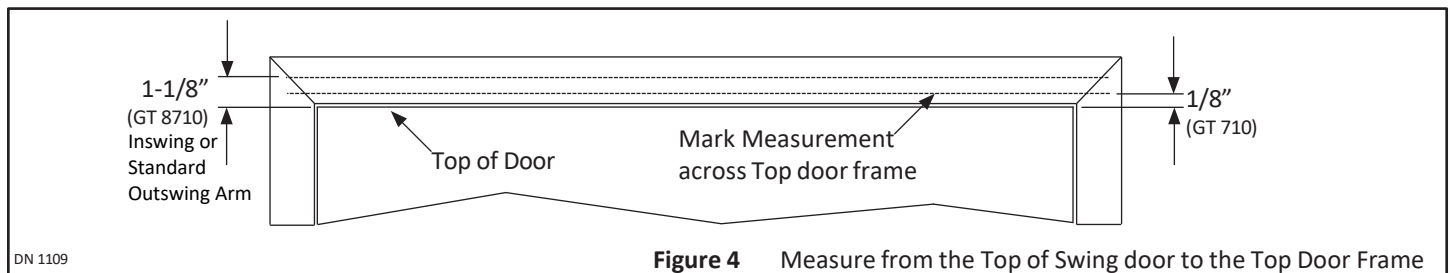
NOTE: The following instructions are for typical Metal Doors and Frame Profile.

NOTE: If the Door Frame is not Metal, ensure the Door Frame being used is of equal strength.

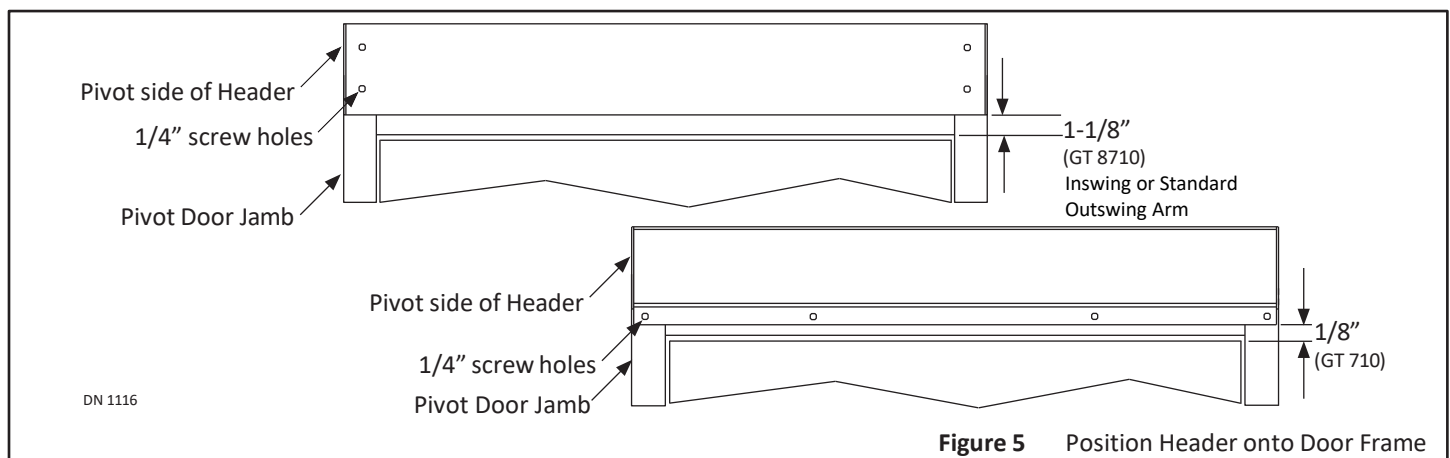
NOTE: Anchor to Vertical Studs to increase rigidity.

NOTE: Spindle location is very important when measuring from the Door Jamb.

1. Measure up from the top of door to the face of Top door frame and mark a horizontal line at both ends as follows:
 - ▶ GT 710: 1/8 inch
 - ▶ GT 8710 1-1/8 inch UNLESS using Flat Outswing Arm Assembly (A-X0770). The Header then MUST be mounted flush to the bottom of the Horizontal Door frame.

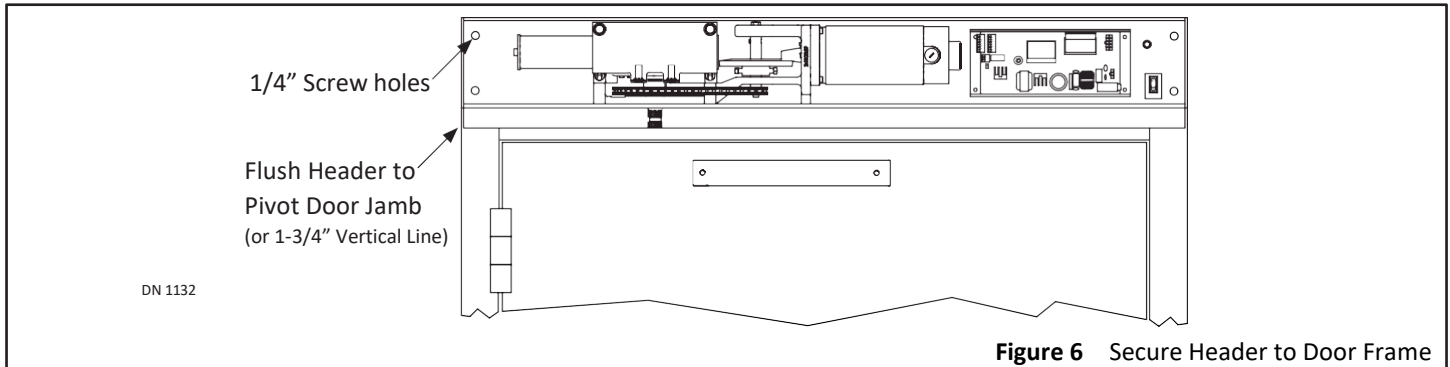


2. Lift the Header up against the Top door frame until the bottom edge of Header is butted flush against the Horizontal Line, at both ends.
3. To ensure proper operation of the Swing Arm:
 - ▶ For a Jamb Tube that is 1-3/4 inches wide, position the Pivot side of Header so it is flush to the outside edge of the Pivot Door Jamb. [See Figure 5](#)
 - ▶ For a Jamb Tube that is wider than 1-3/4 inches, measure from the inner edge of the Pivot Door Jamb to the center. Mark a vertical line at the 1-3/4-inch measurement. The Pivot side of Header must butt flush against the 1-3/4-inch mark. [See Figure 6](#)
 - ▶ Ensure the Header is square and level. Use the Header as a template to mark screw holes onto the face of the door frame.
 - ▶ Remove the Header. Drill screw holes at each mark.



SECTION 4.3: Secure the Header to Bottom of the Door Frame

1. Lift up the Header and Insert Power Wiring (and Low Voltage Wiring if required) through the pre-drilled 7/8-inch hole(s).
2. Flush Header to the Pivot Door Jamb at 1 3/4" and line up the screw holes.
3. Secure the Header to the Bottom of the Door Frame with Screws.



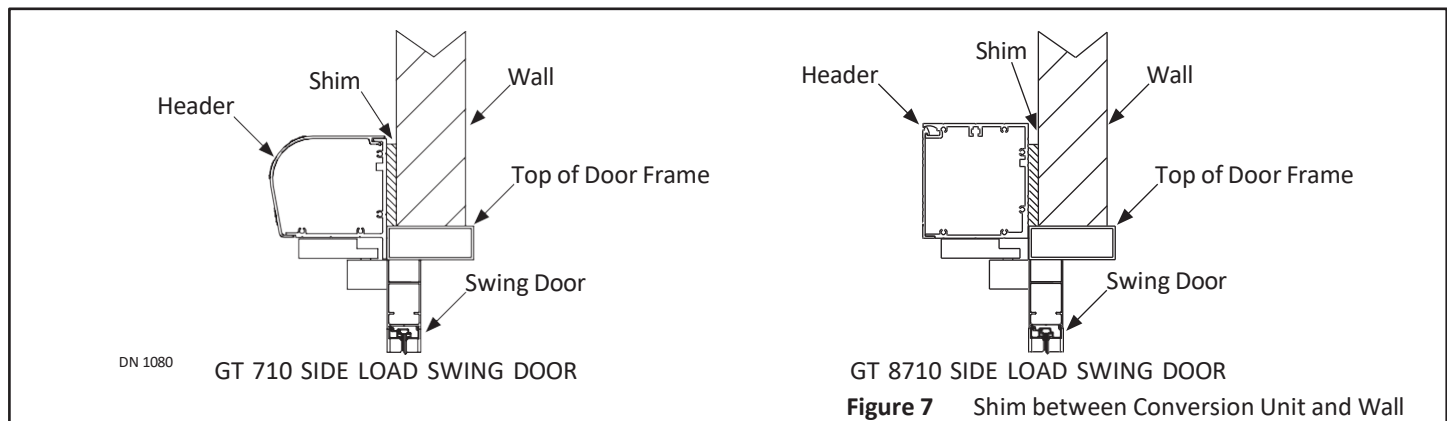
SECTION 4.4: Shim and Complete Header Anchoring

1. Apply stackable shims (if necessary) between the Header and the wall to keep the Header plumb and level.
NOTE: Other rigid and flat materials can be used in lieu of stackable shims.
2. Secure the Top of the Header INTO ADEQUATE BACKING. Find the studs when necessary.



DO NOT anchor into the drywall alone.

3. Test rigidity by pulling down, with some force, on the Header. The Header should not move, twist or bow.
4. Remove any excess Shim Material that is above the top of the Header or visible by any End User.

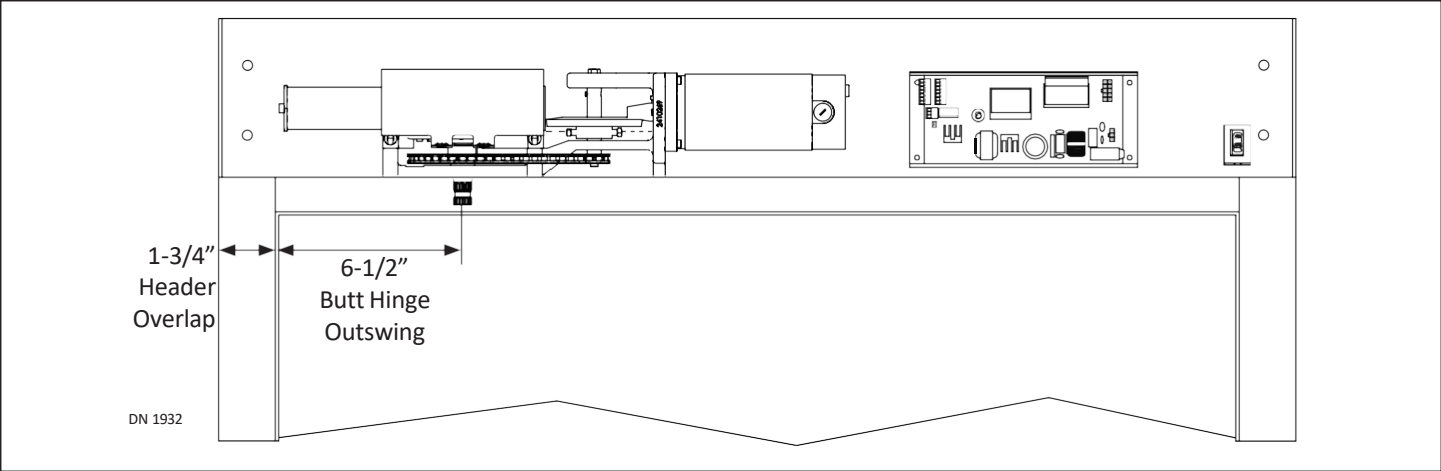


SECTION 4.5: Ensure Proper Spindle Location

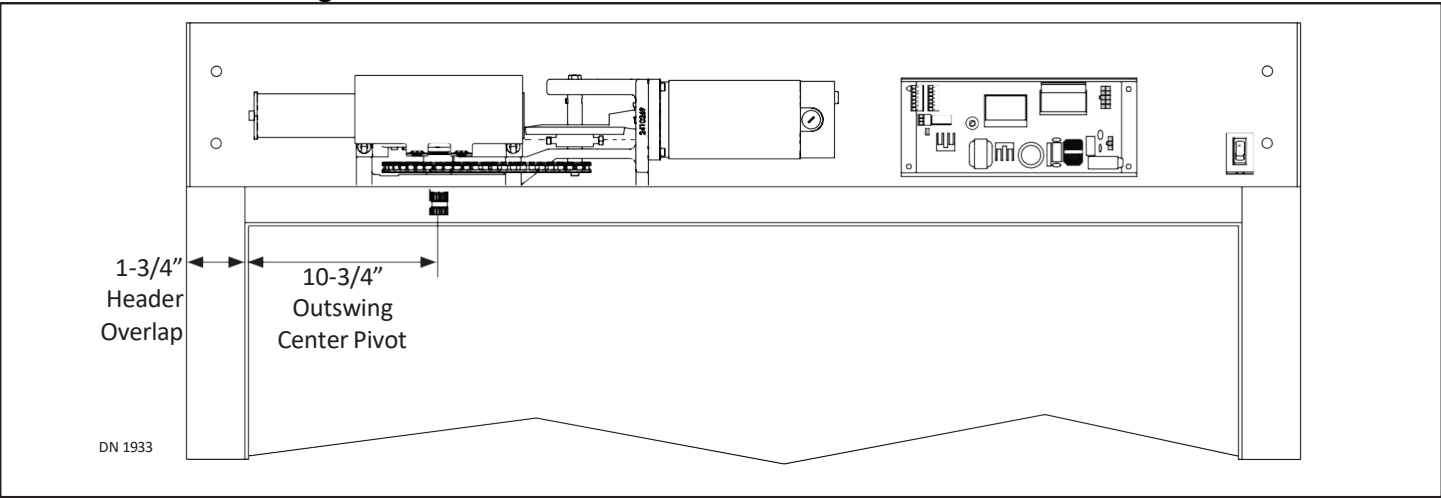
NOTICE

Adjustments to the location of Motor/Operator must be made if the distance between the “center of spindle” and “edge of Jamb Tube” is different from the measurement shown within this section.

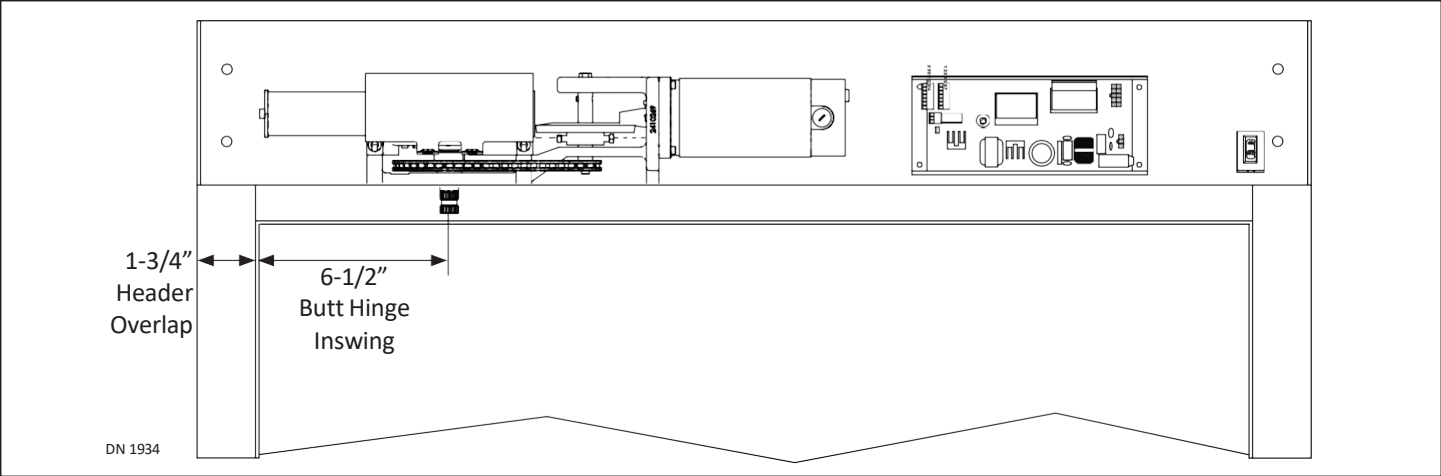
4.5.1 Outswing Butt Hinge



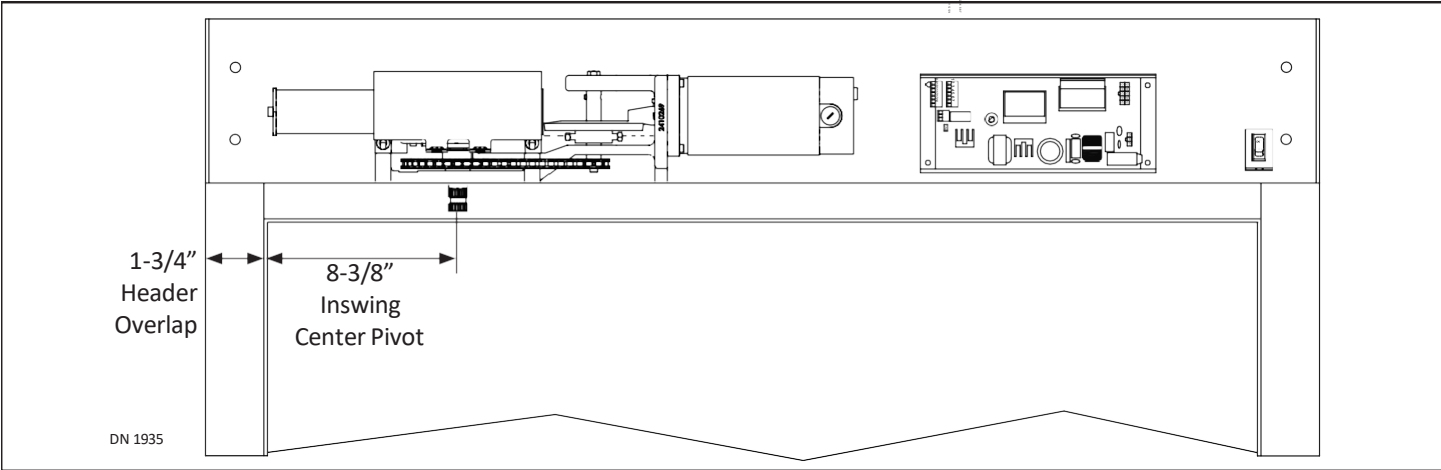
4.5.2 Outswing Center Pivot



4.5.3 Inswing Butt Hinge



4.5.4 Inswing Center Pivot



CHAPTER 5: SECONDARY ASSEMBLY (Install Outswing Arm, Inswing Arm, and Arm Stop)

NOTICE If using an Inswing Arm, proceed to [Section 5.2](#).

SECTION 5.1: Install the Outswing Arm

5.1.1 Mark Location of Arm Shoe on Swing Door

- 1. Use the table below to determine the proper distance between the inside edge of the Pivot Door Jamb to the center of the first Sex Bolt hole (used to attach the Arm Shoe).

Arm Shoe Mounting Locations

Model	Pivot Type	Outswing	
		With Fingerguard	No Fingerguard
GT 710 & 8710	Butt/Offset	N/A	16-15/16"
	Center Pivot	N/A	16-15/16"

- 2. Measure and mark a Vertical line on the face of the Swing door at 16 15/16" away from the Pivot Side.
- 3. At the Vertical line, measure 1-1/2 inches from the top edge of the Swing door downwards.
- 4. Mark a Horizontal line to cross the Vertical line. This is the center of the first Sex Bolt hole.
- 5. Use the Arm Shoe as a template to mark the center of second Sex Bolt hole (approximately 19 3/16" from pivot edge). Ensure Arm Shoe is level and square.
- 6. Drill (2) 3/8" holes for the 1/4-20 Sex Bolt Barrels completely through the door.

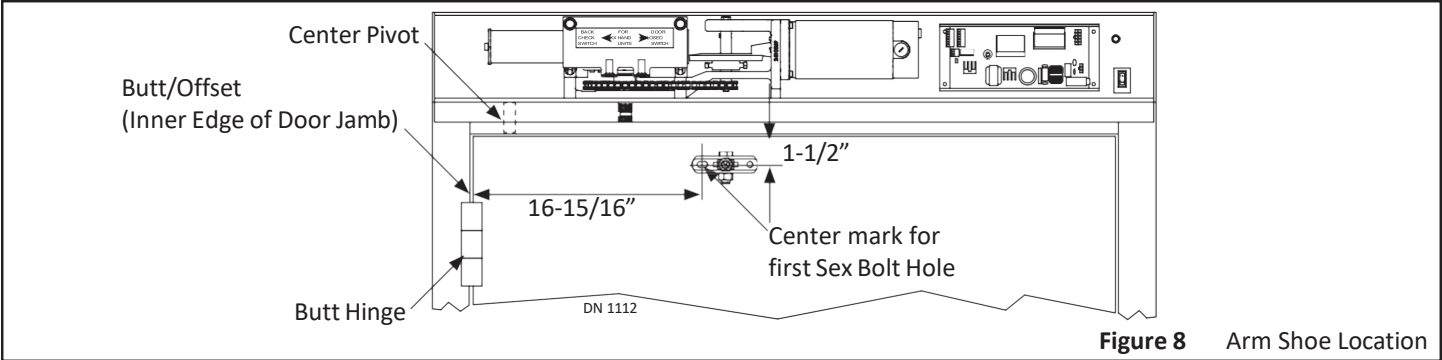
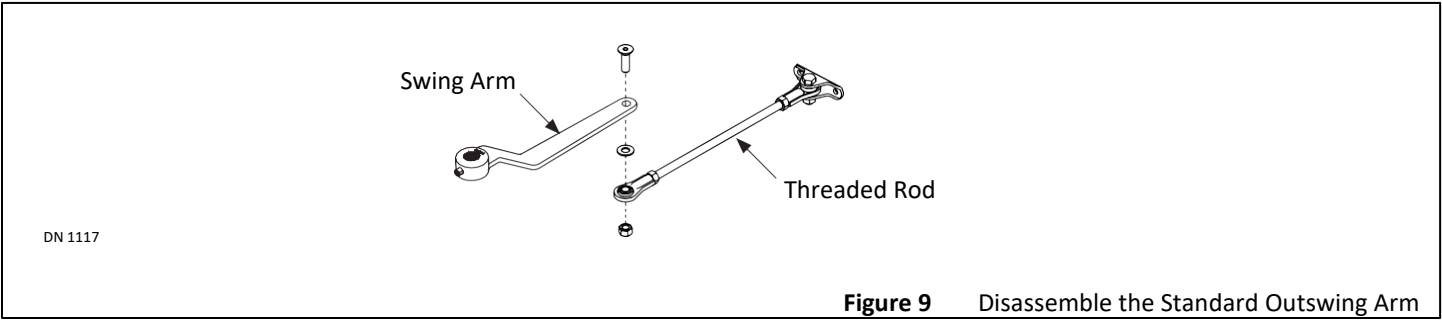
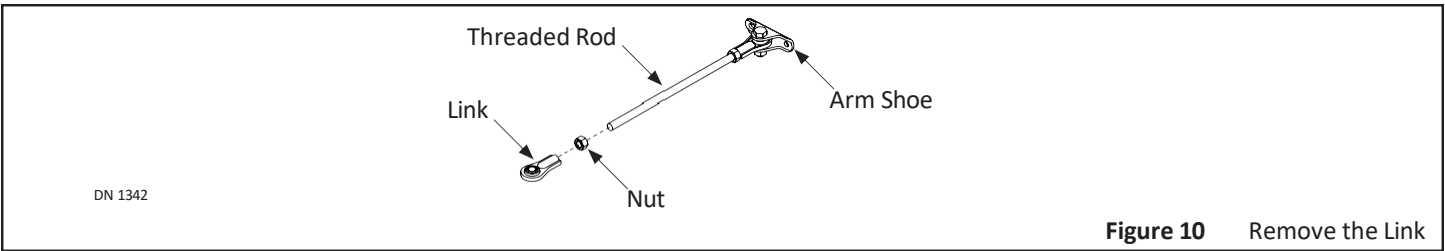


Figure 8 Arm Shoe Location

5.1.2 Cut the Threaded Rod



- 1. Remove the Swing Arm from the Link.
- 2. Remove the Link and Nut from the Threaded Rod (used to secure the Swing Arm).



- 3. Cut the Threaded Rod and Color Coordinated Sleeve using Figures 11 & 12 along with Tables 1, 2, 3, or 4.

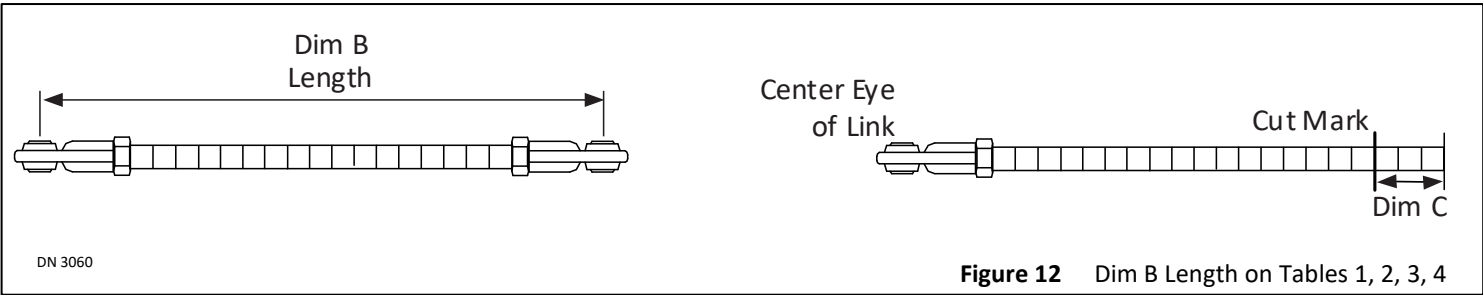
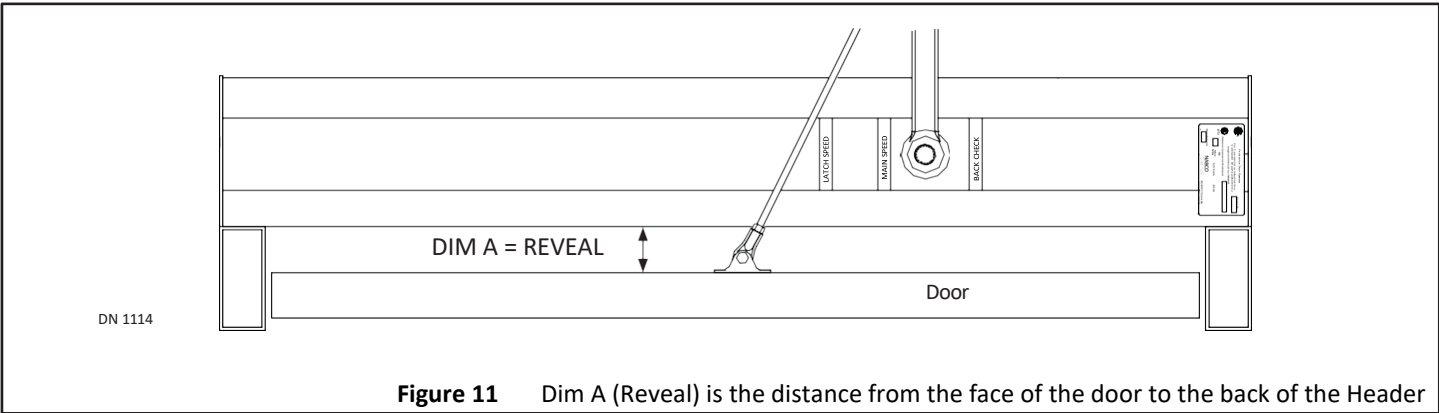


Table 1 Butt Hinge Reveal using Standard 20" Outswing Arm A-(6 or 7)0425

Use Standard 20" Outswing Arm M-60425/70425					
Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve	Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve
0"	16-5/8"	4-3/4"	3-1/4"	19-1/8"	2-5/16"
1/4"	16-13/16"	4-9/16"	3-1/2"	19-5/16"	2-1/8"
1/2"	17"	4-3/8"	3-3/4"	19-1/2"	1-15/16"
3/4"	17-3/16"	4-3/16"	4"	19-11/16"	1-3/4"
1"	17-3/8"	4"	4-1/4"	19-7/8"	1-9/16"
1-1/4"	17-9/16"	3-13/16"	4-1/2"	20-1/8"	1-3/8"
1-1/2"	17-3/4"	3-5/8"	4-3/4"	20-5/16"	1-3/16"
1-3/4"	17-15/16"	3-7/16"	5"	20-1/2"	1"
2"	18-1/8"	3-1/4"	5-1/4"	20-3/4"	13/16"
2-1/4"	18-5/16"	3-1/16"	5-1/2"	20-15/16"	5/8"
2-1/2"	18-1/2"	2-7/8"	5-3/4"	21-1/8"	7/16"
2-3/4"	18-11/16"	2-11/16"	6"	21-3/8"	1/4"
3"	18-7/8"	2-1/2"	6-1/4"	21-9/16"	DO NOT CUT

Table 2 Butt Hinge Reveal using Extended 30" Outswing Arm A-(6 or 7)0426

Use Extended 30" Outswing Arm M-60426/70426								
Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve	Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve	Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve
6-1/2"	21-3/4"	9-1/2"	9-3/4"	24-5/8"	6-5/8"	13	27-1/2"	3-5/8"
6-3/4"	22"	9-5/16"	10	24-13/16"	6-7/16"	13-1/4"	27-3/4"	3-3/8"
7"	22-3/16"	9-1/8"	10-1/4"	25"	6-1/4"	13-1/2"	28"	3-1/4"
7-1/4"	22-7/16"	8-15/16"	10-1/2"	25-1/4"	6"	13-3/4"	28-3/16"	3"
7-1/2"	22-5/8"	8-3/4"	10-3/4"	25-1/2"	5-3/4"	14	28-7/16"	2-3/4"
7-3/4"	22-7/8"	8-1/2"	11	25-3/4"	5-1/2"	14-1/4"	28-5/8"	2-9/16"
8"	23"	8-3/8"	11-1/4"	25-15/16"	5-3/16"	14-1/2"	28-7/8"	2-5/16"
8-1/4"	23-1/4"	8-1/8"	11-1/2"	26-3/16"	4-15/16"	14-3/4"	29-1/8"	2-1/4"
8-1/2"	23-1/2"	7-7/8"	11-3/4"	26-3/8"	4-3/4"	15	29-3/8"	2"
8-3/4"	23-3/4"	7-5/8"	12	26-5/8"	4-1/2"	15-1/4"	29-9/16"	1-13/16"
9"	24"	7-3/8"	12-1/4"	26-13/16"	4-5/16"	15-1/2"	29-13/16"	1-9/16"
9-1/4"	24-3/16"	7-1/16"	12-1/2"	27-1/16"	4-1/16"	15-3/4"	30"	1-3/8"
9-1/2"	24-3/8"	6-7/8"	12-3/4"	27-5/16"	3-13/16"	16	30-1/4"	1-1/8"

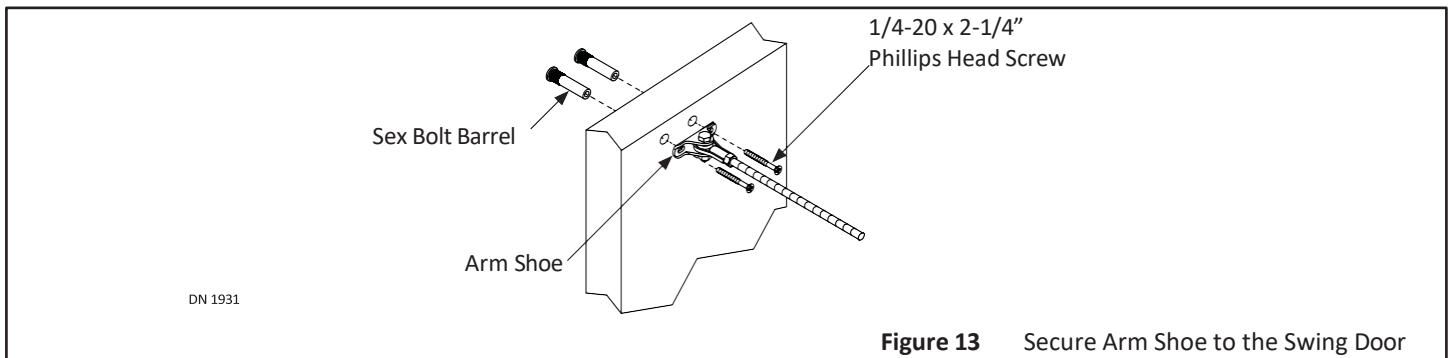
Table 3 Center Pivot Reveal using Standard 20" Outswing Arm A-(6 or 7)0425

Use Standard 20" Outswing Arm M-60425/07425								
Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve	Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve	Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve
0"	14"	7-1/2"	3"	16-11/16"	4-3/4"	6"	19-3/8"	2"
1/4"	14-1/4"	7-1/4"	3-1/4"	16-7/8"	4-9/16"	6-1/4"	19-5/8"	1-11/16"
1/2"	14-7/16"	7-1/8"	3-1/2"	17-1/8"	4-5/16"	6-1/2"	19-7/8"	1-1/2"
3/4"	14-11/16"	6-3/4"	3-3/4"	17-3/8"	4-1/8"	6-3/4"	20-1/8"	1-1/4"
1"	14-7/8"	6-9/16"	4"	17-9/16"	3-3/4"	7"	20-3/8"	1-1/16"
1-1/4"	15-1/8"	6-5/8"	4-1/4"	17-13/16"	3-5/8"	7-1/4"	20-9/16"	7/8"
1-1/2"	15-5/16"	6-1/8"	4-1/2"	18"	3-3/8"	7-1/2"	20-7/8"	7/16"
1-3/4"	15-9/16"	5-7/8"	4-3/4"	18-1/4"	3-1/8"	7-3/4"	21"	3/8"
2"	15-3/4"	5-11/16"	5"	18-1/2"	2-7/8"	8"	21-1/4"	1/8"
2-1/4"	16"	5-3/8"	5-1/4"	18-3/4"	2-5/8"	8-1/4"	21-1/2"	DO NOT CUT
2-1/2"	16-1/4"	5-3/16"	5-1/2"	18-15/16"	2-3/8"			
2-3/4"	16-7/16"	4-15/16"	5-3/4"	19-3/16"	2-3/16"			

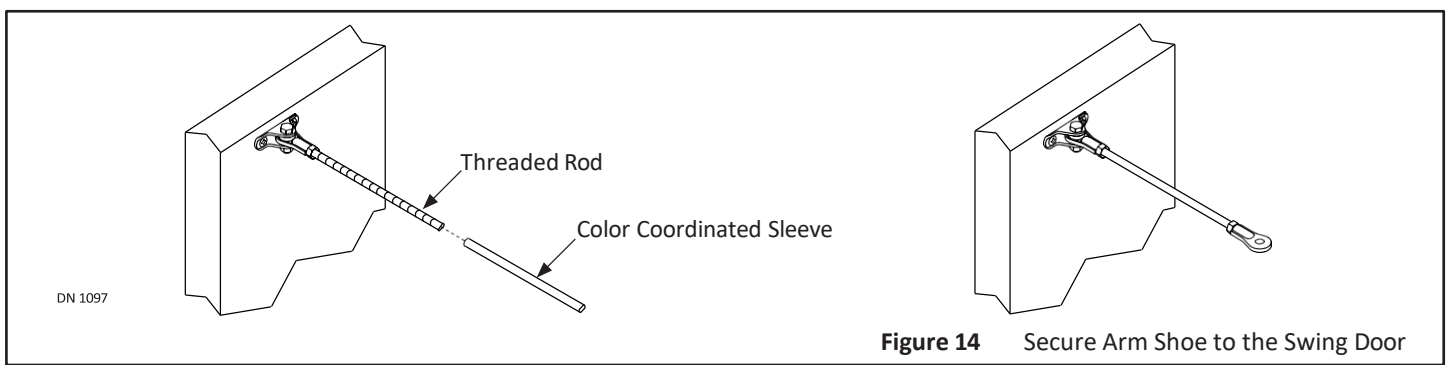
Table 4 Center Pivot Reveal using Extended 30" Outswing Arm A-(6 or 7)0426

Use Extended 30" Outswing Arm M-60426/70426								
Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve	Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve	Dim A Reveal	Dim B Length	Dim C Cut Off Rod/Sleeve
8-1/2"	21-3/4"	9-5/8"	11-1/4"	24-3/8"	7"	14	27"	4-7/16
8-3/4"	22"	9-3/8"	11-1/2"	25-5/8"	6-3/4"	14-1/4"	27-1/4"	4-3/16
9"	22-1/4"	9-3/16"	11-3/4"	25-13/16"	6-5/8"	14-1/2"	27-1/2"	4"
9-1/4"	22-7/16"	9"	12	25-1/16"	6-3/8"	14-3/4"	27-3/4"	3-11/16"
9-1/2"	22-11/16"	8-3/4"	12-1/4"	25-5/16"	6-3/16"	15	28"	3-7/16"
9-3/4"	22-15/16"	8-7/16"	12-1/2"	25-9/16"	5-7/8"	15-1/4"	28-3/16"	3-1/8"
10	23-1/8"	8-1/4"	12-3/4"	25-13/16"	5-5/8"	15-1/2"	28-7/16"	3"
10-1/4"	23-3/8"	8"	13	26"	5-7/16"	15-3/4"	28-11/16"	2-3/4"
10-1/2"	23-5/8"	7-13/16"	13-1/4"	26-1/4"	5-3/16"	16	28-15/16"	2-1/2"
10-3/4"	23-7/8"	7-9/16"	13-1/2"	26-1/2"	5"			
11	24-1/8"	7-5/16"	13-3/4"	26-3/4"	4-3/4"			

5.1.3 Secure the Arm Shoe to the Door



1. Insert (2) Sex Bolt Barrels into the drilled holes on the Swing Side of the door.
2. Secure the Arm Shoe to the Swing Door with (2) 1/4-20 x 2-1/4" Screws at the Approach Side.



3. Slide the cut Color Coordinated Sleeve onto the cut Threaded Rod.
4. Thread the Nut and Link back onto the Rod. Tighten the Nut.

[See Figure 14](#)

5.1.4 Secure the Outswing Arm to the Threaded Rod



WARNING Proper Preload is critical for the Control/Operator to open/close the Swing Door correctly.



CAUTION Power must be OFF during the Swing Arm installation.

1. Locate pre-load numbers 1-4 on the Bottom of the Operator Spindle. Pre-load numbers 1-4 mark the correct installation position for pre-load.

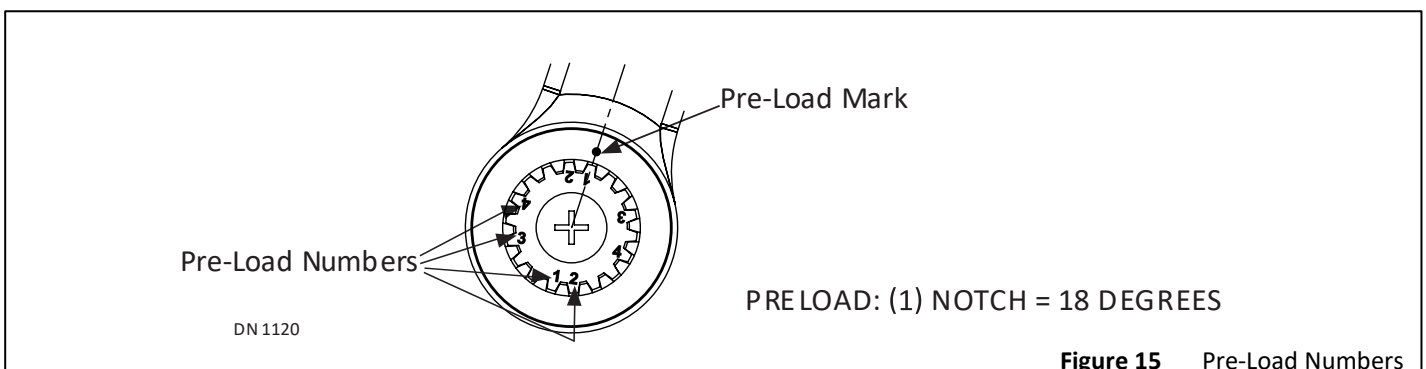
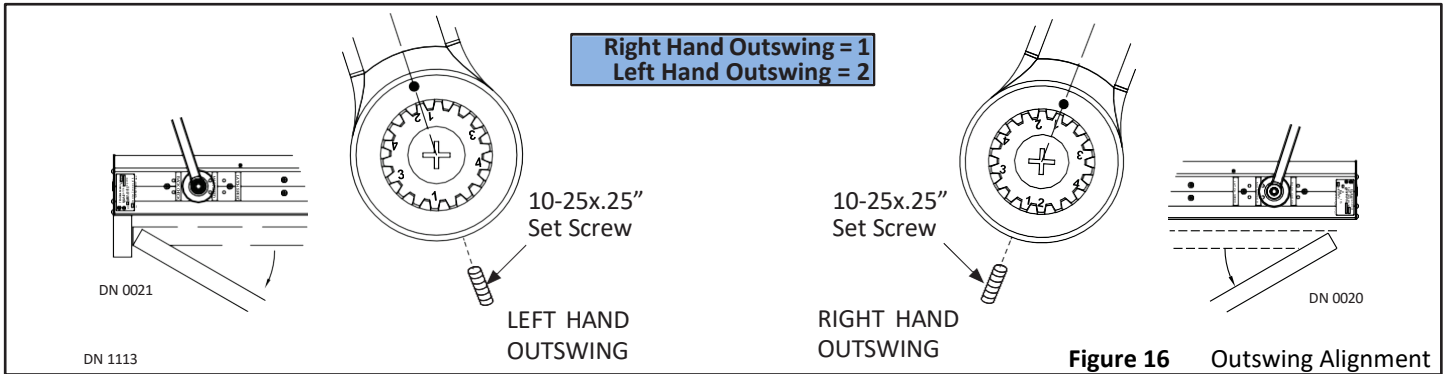
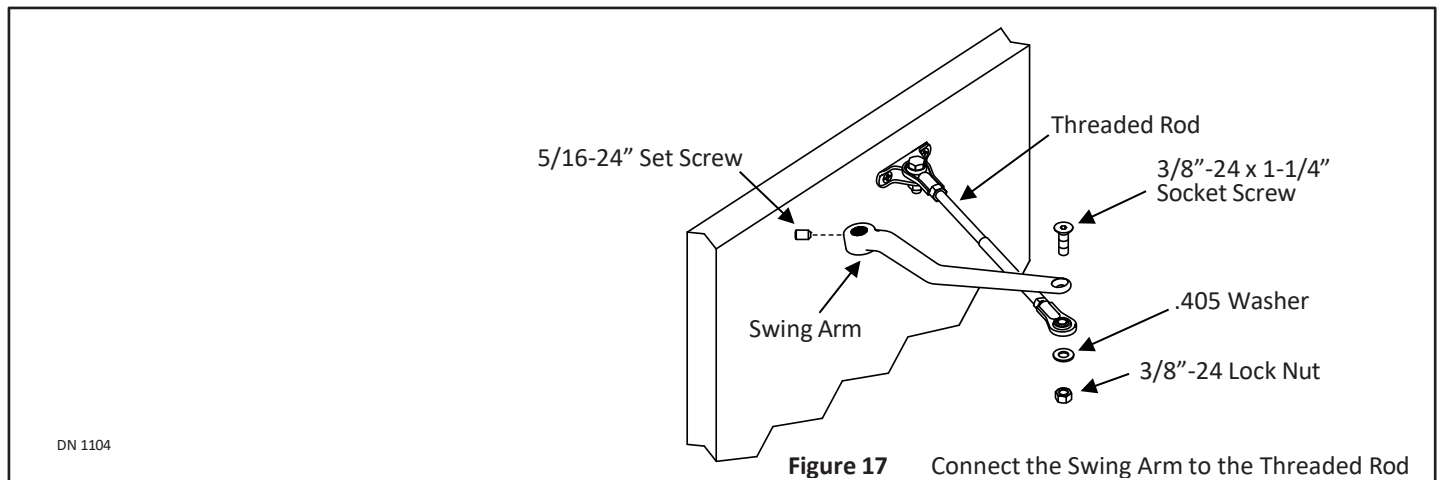


Figure 15 Pre-Load Numbers

2. Slide the Swing Arm onto the Operator Spindle by aligning the appropriate pre-load number to the pre-load mark on the underside of Swing Arm: RH = 1, LH = 2

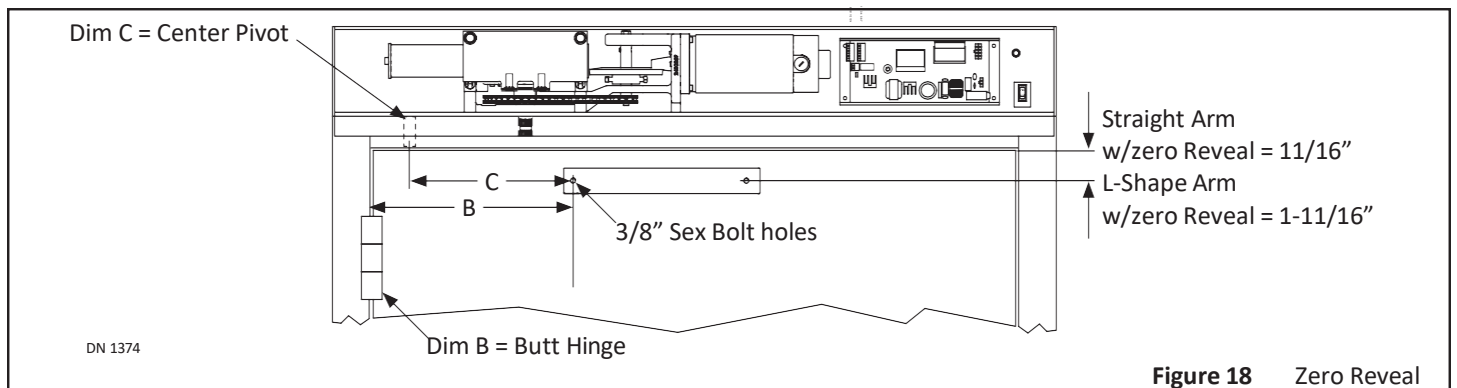


3. Secure the Swing Arm to the Operator Spindle with (1) Set Screw. Tighten but do not overtighten.
 - a. Ensure the Set Screw is seated correctly within the groove on the Operator Spindle.
4. Pull the Outswing Arm towards the Rod.
5. Secure the Outswing Arm to the Rod with (1) 3/8"-24 x 1-1/4" Socket Screw, (1) .405 Washer, and (1) 3/8"-24 Lock Nut, as in Figure 17.
6. Proceed to [Section 5.3](#).



SECTION 5.2: Install the Inswing Arm

5.2.1 Determine Track Location according to Reveal



1. Find the appropriate measurements of Track location according to Reveal within Tables 1 or 2.

Table 1 Small Track Mounting Locations (12-1/4 inches)

Small Track Mounting Locations 12-1/4 inches								
Dim A Reveal	Dim B Butt Hinge	Dim C Center Pivot	Dim A Reveal	Dim B Butt Hinge	Dim C Center Pivot	Dim A Reveal	Dim B Butt Hinge	Dim C Center Pivot
0	7-5/8"	7-3/16"	2-3/4"	8-11/16"	9-3/8"	5-1/2"	14-1/2"	13-13/16"
1/4"	7-3/4"	7-3/8"	3"	13-1/8"	9-9/16"	5-3/4"		
1/2"	7-15/16"	7-9/16"	3-1/4"	13-3/8"	13-1/16"	6"		
3/4"	8-1/8"	7-3/4"	3-1/2"	13-9/16"	13-1/4"	6-1/4"		
1"	8-5/16"	7-15/16"	3-3/4"	13-3/4"	13-1/2"	6-1/2"	18-1/2"	17-7/8"
1-1/4"	8-1/2"	8-1/8"	4"	14"	13-11/16"	6-3/4"	18-9/16"	
1-1/2"	8-11/16"	8-5/16"	4-1/4"	14-3/16"	13-3/4"	7"	18-9/16"	17-7/8"
1-3/4"	8-7/8"	8-1/2"	4-1/2"	14-7/16"		7-1/4"	18-5/8"	17-15/16"
2"	8-1/16"	8-3/4"	4-3/4"	14-1/2"		7-1/2"		Long Track only
2-1/4"	8-1/4"	8-15/16"	5"		14-1/2"	13-13/16"		
2-1/2"	8-1/2"	9-1/8"	5-1/4"					

Table 2 Large Track Mounting Locations (21 inches)

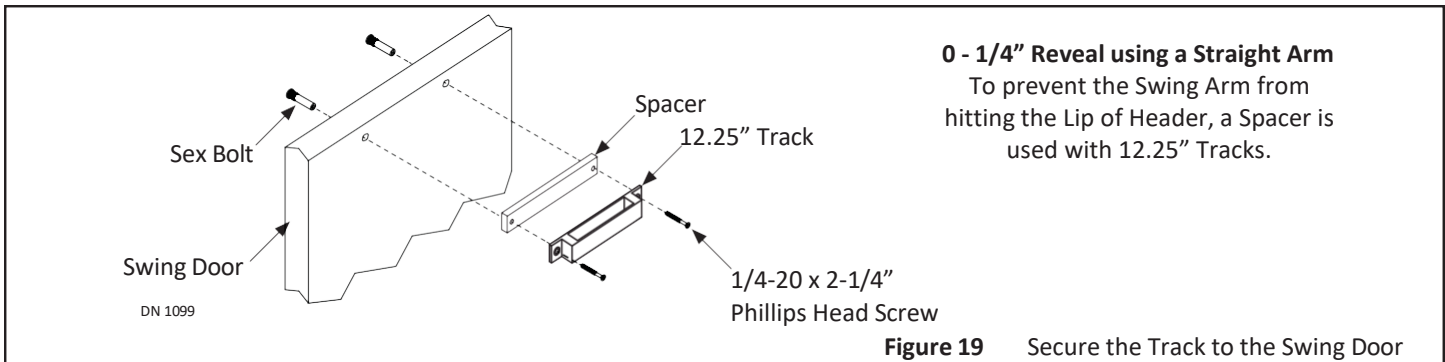
Track Mounting Locations						
21 inches						
Dim A Reveal	Dim B Butt Hinge	Dim C Center Pivot no Finger Guard		Dim A Reveal	Dim B Butt Hinge	Dim C Center Pivot no Finger Guard
7-1/2"	Short Track only	13-1/2"		10-1/2"	19-1/4"	13-9/16"
7-3/4"	14-1/4"	13-9/16"		10-3/4"		18-5/8"
8"				18-11/16"		
8-1/4"		13-5/8"			11-1/4"	19-5/16"
8-1/2"					11-1/2"	
8-3/4"					11-3/4"	
9"					12"	
9-1/4"					12-1/4"	
9-1/2"					12-1/2"	
9-3/4"					12-3/4"	
10"			13"			
10-1/4"	14-3/16"	13-9/16"				

5.2.2 Secure Track to Swing Door for Zero to 1/4" Reveal Swing Arm

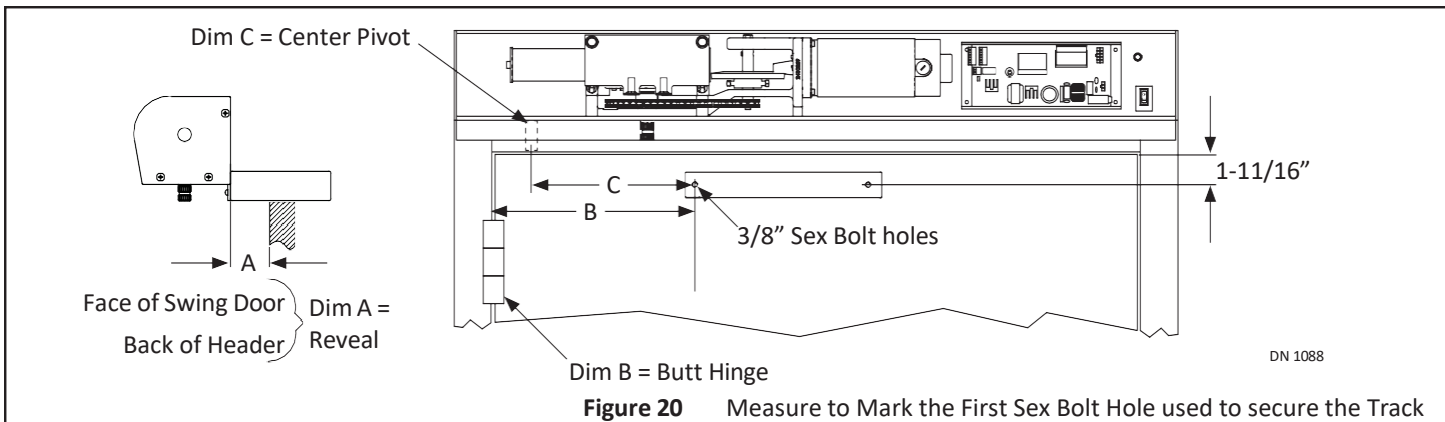
NOTE: For Zero Reveal applications, the Straight Arm can be used to eliminate the L-Shape Arm from protruding into the room.

- Measure from the (Center Hinge or Butt Hinge) to the center Face of Door according to Table 4 and mark a Vertical Line at that location.
- Measure:
 - ▶ Straight Arm: 11/16 inches down to the face of Door. Mark a Horizontal line across the Vertical Line. This is the center of the first Sex Bolt hole.
 - ▶ Low Profile, L-Shape Arm: Go to the bottom of the Door Frame. Measure 1-11/16 inches down to the face of Door. Mark a Horizontal line across the Vertical Line. This is the center of the first Sex Bolt hole.

3. Drill (2) holes for 1/4-20 Sex Bolts, all the way through the Swing door.
4. At the back of the Swing door, insert each Sex Bolt Barrel into the drilled holes.
 - a. If a Straight Arm is being used with 0 - 1/4-inch Reveal, and if the wall/frame is not straight, vertical, plum etc., install (1) Spacer behind the Track.
 - b. A Spacer is used to prevent the Swing Arm from hitting the lip of the GT-710 Header only (the GT-8710 Header does not have a lip).
 - c. If a Spacer cannot be obtained, a couple of washers can be used.
5. Butt the Track against the front of the Swing door by aligning the Sex Bolt holes.
 1. Install (1) Spacer behind the Track for Swing doors with 0 - 1/4-inch Reveal and the wall/frame is not straight, vertical, plum etc.
6. Secure the Track to the Swing Door with (2) 1/4-20 x 2-1/4" Screws.



5.2.3 Secure Track to Swing Door for Reveal Inswing Arms > 1/4"



1. Measure from the (Center Pivot or Butt Hinge) towards the center Face of Door according to Table 1 or Table 2. Mark a Vertical Line at that location.
2. Measure 1-11/16 inches down to the face of the Door and mark a Horizontal line across the Vertical Line.
 - a. This is the center of the first Sex Bolt hole.
3. Butt the Track against the Swing door by aligning the first Sex Bolt hole with the measured mark.
4. Use the Track as a Template to mark the second Sex Bolt hole.
5. Drill (2) 3/8" holes for 1/4-20 Sex Bolts, completely through the Swing door.
6. Insert each Sex Bolt into the drilled holes.
 - a. If a Straight Arm is being used with 0 - 1/4-inch Reveal, and if the wall/frame is not straight, vertical, plum etc., install (1) Spacer behind the Track.
 - b. A Spacer is used to prevent the Swing Arm from hitting the lip of the GT-710 Header only (the GT-8710 Header does not have a lip).
 - c. If a Spacer cannot be obtained, a couple of washers can be used.
7. Secure the Track to the Swing Side of the Swing Door with (2) 1/4-20 x 2-1/4" Screws.
 - a. Do Not snug the Screws until the Inswing Arm is installed.

5.2.4 Secure the Inswing Arm to the Operator Spindle

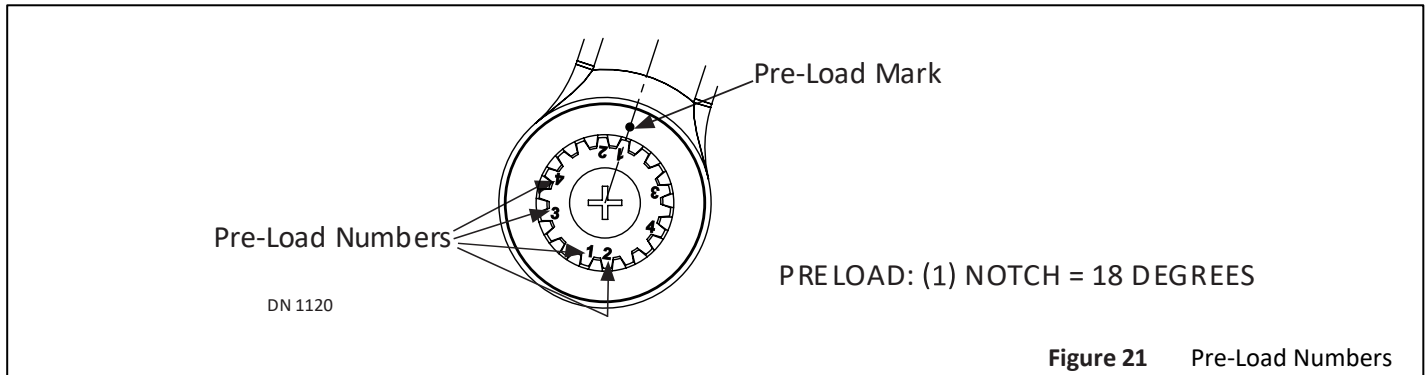


WARNING Proper Preload is critical for the Control/Operator to open/close the Swing Door correctly.



CAUTION Power must be OFF during the Swing Arm installation.

1. Locate pre-load numbers 1-4 on the Bottom of the Operator Spindle. Pre-load numbers 1-4 mark the correct installation position for pre-load.



2. Slide the Swing Arm onto the Operator Spindle by aligning the appropriate pre-load number to the pre-load mark on the underside of Swing Arm:

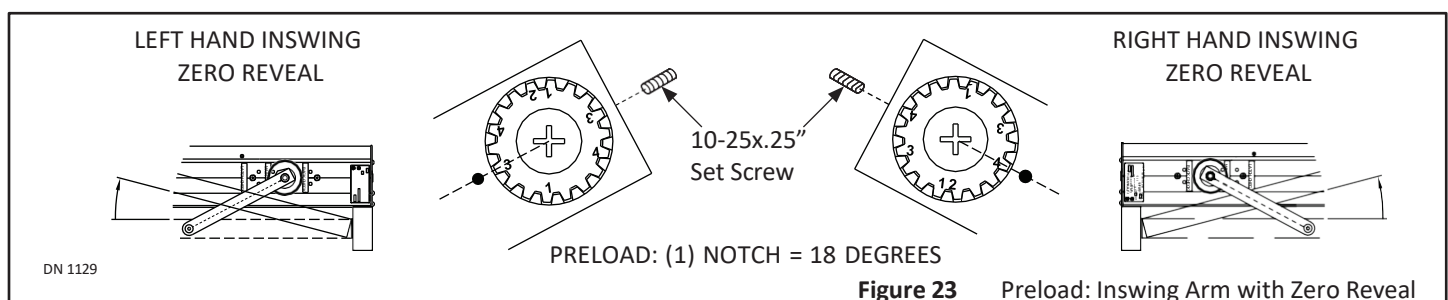
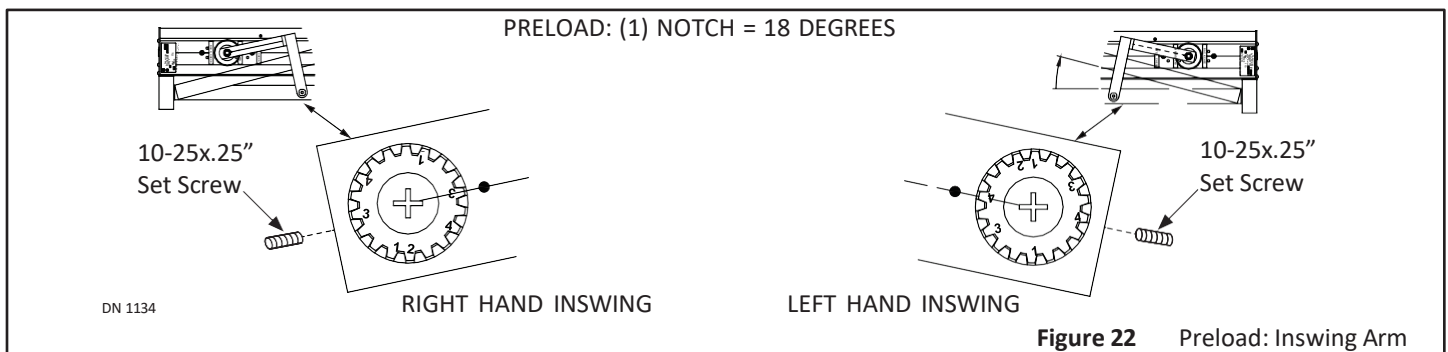
RH Inswing
3

LH Inswing
4

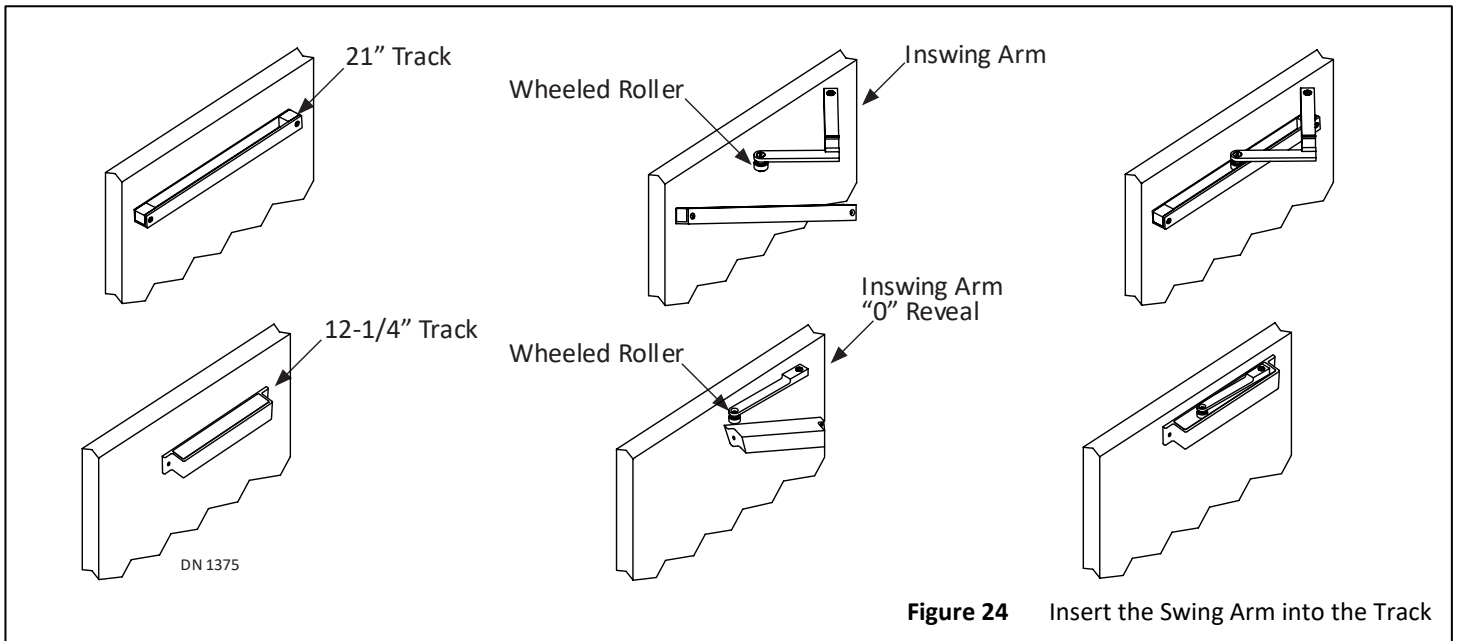
RH Inswing-0 Reveal
4

LH Inswing-0 Reveal
3

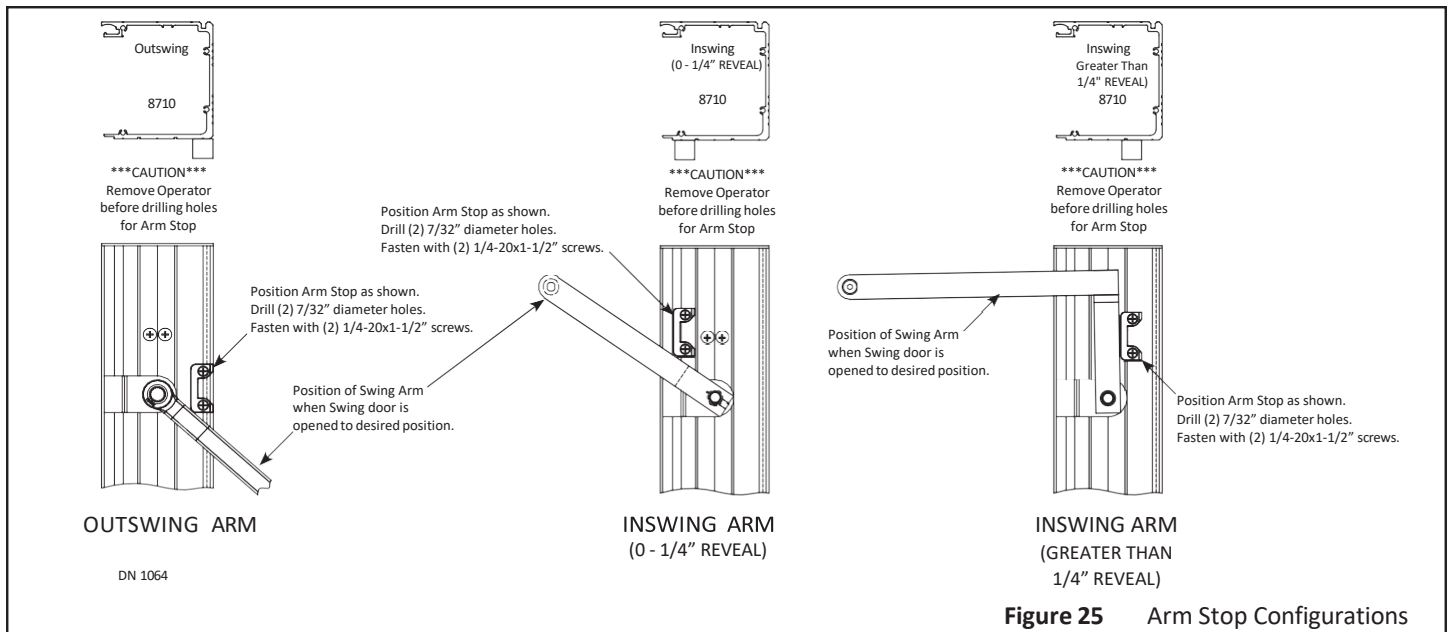
3. Please see Figure 21 or Figure 22.



4. Secure the Swing Arm to the Operator Spindle with (1) Set Screw. Tighten but do not overtighten.
 - a. Ensure the Set Screw is seated correctly within the groove on the Operator Spindle.
5. Remove (1) screw at the Track that is closest to the Pivot Door Jamb. Allow that side of Track to hang down.
6. Close the Swing door to allow the Wheeled Roller (located at the end of the Swing Arm) to butt against the Swing door.
7. Insert the Swing Arm into the Track.
8. Secure the Track to Swing door with (1) 1/4-20 x 2-1/4" Screw. Tighten both Screws.



SECTION 5.3: Install The Arm Stop



Power must be OFF while installing the Arm Stop.



Do Not drill screw holes for the Arm Stop into the Motor/Operator!!!

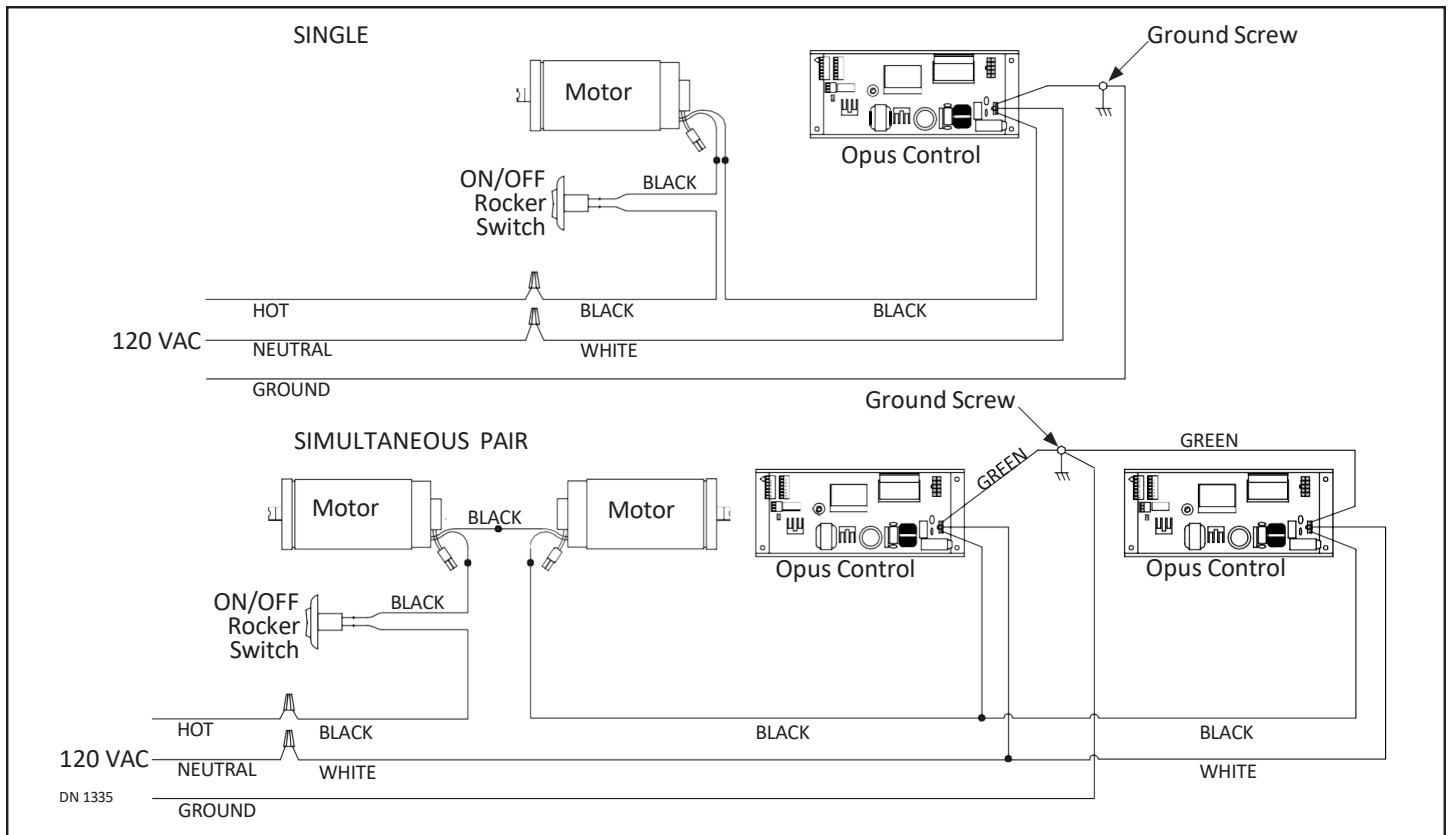
1. Manually open the Swing Door 90 degrees or into the Full Open position.
2. Position the Arm Stop at the bottom of Header according to type of Swing Arm and Reveal.
3. Use the Arm Stop as a template to mark and drill (2) 7/32-inch diameter screw holes.
4. Secure the Arm Stop with (2) 1/4-20 x 1 inch Self Tapping screws.

CHAPTER 6: END PROCESSES (120 VAC General Wiring, Final Adjustments and Finalization)

SECTION 6.1: 120 VAC General Wiring



Shut the installation site branch Circuit Breaker OFF. Failure to do so may result in serious personal or fatal injury. When uncertain whether power supply is disconnected, always verify using a voltmeter.



SECTION 6.2: Final Adjustments

6.2.1 Adjust Opening/Closing Force on Closer Tension Spring

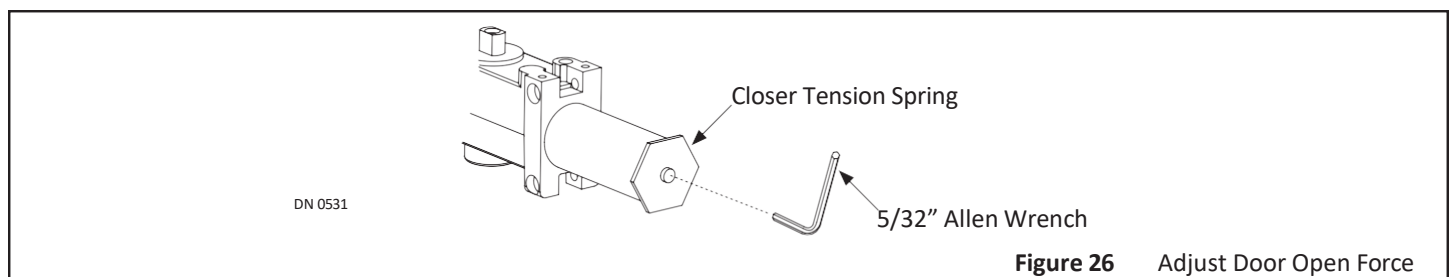


Improperly installed/adjusted Tension Springs may cause property damage or personal injury. Please follow instructions carefully.



Opening Force must be properly adjusted on the Closer Tension Spring - BEFORE – OPUS Control can be adjusted.

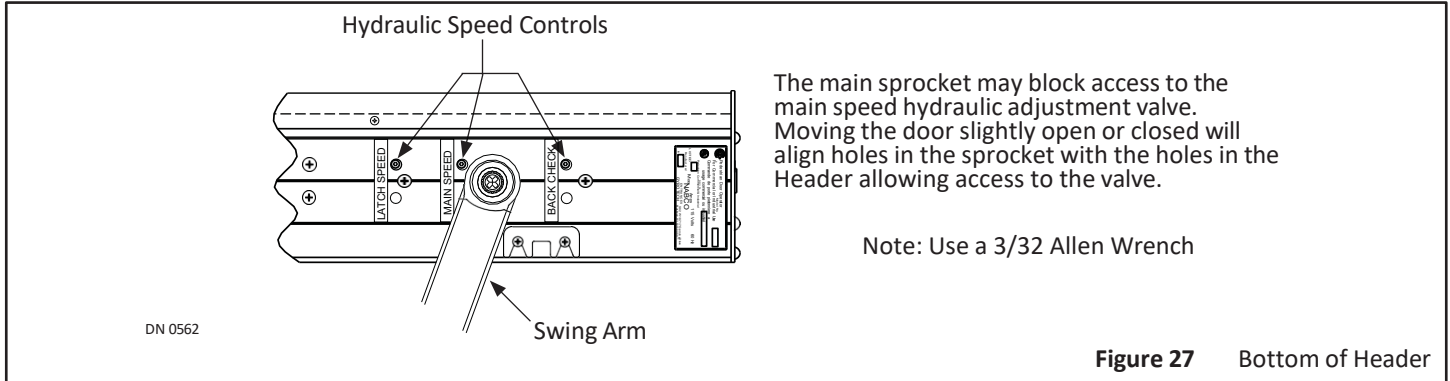
The Closer Tension Spring is used to adjust Opening/Closing Force when the Swing door is used Manually. The Factory preset force is ideal in most cases. Adjustments should be performed in special cases.



1. Turn Power OFF.
2. Insert 5/32 Allen Wrench in the Screw located at the end of the Closer Tension Spring.

- a. Spring should be adjusted so that the Swing door can easily be pushed open but still has enough force to fully close the Swing door.
3. To Increase Closing Force, turn the 5/32 Allen wrench clockwise not more than (9) full turns.
4. To Decrease Closing Force, turn the 5/32 Allen wrench counterclockwise not more than (4) full turns.

6.2.2 Hydraulic Speed Control



6.2.2.1 Adjust Main Speed

1. Turn Power OFF.
2. Insert 3/32 Allen Wrench into the Main Speed adjustment hole.
 - a. If the adjustment hole is blocked by the sprocket, manipulate the Swing door until the adjustment Valve can be accessed.
3. Turn the Allen Wrench clockwise to slow down closing speed.

6.2.2.2 Adjust Latch Speed

1. Turn Power OFF.
2. Insert 3/32 Allen Wrench into the Latch Speed adjustment hole.
3. Turn the Allen Wrench clockwise to slow down Latch Check speed.
4. To test Latch Check speed, manually push the Swing door open, then let it close. Re-adjust if necessary.

6.2.2.3 Adjust Back Check Speed

This adjustment should not be confused with the Back Check (BCHK) setting located on the Opus Control. BCHK at the Opus determines the amount of power applied to the motor to push the door open through Back Check.

1. Turn Power OFF.
2. Insert Allen Wrench into the Back Check Speed adjustment hole.
3. Turn Allen Wrench clockwise to increase hydraulic tension at back check.
4. To test Back Check speed, manually push the Swing door open. The Door should slow down and not slam open.
 - a. Re-adjust if necessary.

6.2.2.4 Adjust Power Close

When using GT-170 with Power Close, the closing force must meet the ANSI standard.

1. Turn the Power OFF.
2. Loosen the hydraulic closer and match it to the OPUS board settings.
3. See 6.2.1 and 6.2.2 above for information on how to adjust the hydraulic closer.

NOTE: If the mechanical settings do not match the OPUS board settings, the hydraulic closer may work against the OPUS board settings.

4. Adjust the closer speed to one of the following:
 - a. The closing speed with and without power is EQUAL
 - b. The closing speed, without power close, is FASTER

5. Verify that the force of the closing speed, with power, meets the ANSI standard.

SECTION 6.3: Finalization

Finalizing the GT(8)710 Systems starts with identifying if 120VAC Power is present:

- ▶ Power Switches inside the Header and On/Off/HO switches should both be in the "ON" position
- ▶ Lights should be on at the Activation Sources (unless standard push plates)
- ▶ The Opus Control should be illuminated and ready for Tune-In.

A final discussion with the general contractor, building owner or end user should be had to discuss the functionality of the Auto Door System after a Stroke Learn, Tune-In, and Cycle Test (Speeds, Access Control, Breakout Function if required, AAADM Requirements and Daily Safety Check).

Once tuned in, the System should be decoded properly, the sweeps should be prepped, assembled and installed, and the final paperwork should be completed and signed off by a contractor or end user.

At this time, perform an AAADM Inspection if required to do so by the contractor and/or the end user.

NOTE: *It is recommended that pictures are taken after every Final Assembly/End Process. This signifies that the Installation has been completed, that the Auto Door System meets or exceeds ANSI Requirements (A.156.10, .19, .38) and that the system's warranty starts.*

CHAPTER 7: Quick Installation Procedure GT (8)710 (POISE)

SECTION 7.1: Prepare

1. Read the updated Installation Instructions and corresponding OPUS Wiring and Programming Manual (C-00139)
2. Have pertinent Shop Drawings, Prints and Tools.
3. Make sure that your cell phone has service.
4. Find your Unloading Zone and/or Parking Area for the day/week.
5. Check the material that Nabco has made to the Prints, double check Header Length vs. Frame Length, and where the Spindle Hole will line up.
6. "See" or conceptualize the Installation before you do anything to the opening.... Is this a Tear-Out as well?
7. Meet (face to face if possible) the contractor and other important trades to your Install (i.e., Glasshouse, Electrician, Access Control) to coordinate or schedule other work.
8. Get as many answers as to your Installation before you lift a tool or unpackage a box.

SECTION 7.2: Organize

1. Set up your workspace before you remove any product from your work vehicle.
2. Bring out Tools, Carts and Saw-horses.
3. Plan for adequate pathways, know where the dumpster is, identify problem areas if in a construction site, identify pathways for paying customers if Install is in a working place of business.
4. Use Construction Cones or Caution Tape to herd traffic.
5. Always keep your tools and other assembly parts within reach.
6. Make certain that your work vehicle is nearby for the tools that you will be needing later.
7. Have adequate power to charge batteries or run Corded Power Tools.
8. Take the time to organize and prepare... you will save time in the end.

SECTION 7.3: Initial Assembly (Header)

1. Use the Sawhorses to assemble and screw-prepare as much as you can of your GT 710 or 8710 Header "Can". Reference this Installation Manual and your Prints/Cut-sheets.
2. Remove the Motor/Operator and Opus Control from the Header "Can" to eliminate weight and make clean-up of Metal Shavings easier.
3. Utilize this time to prep holes in the Swing Header "Can" at waist level rather than up in the air. Measure anchorage and reinforcement points. Prepare holes for the incoming 120VAC Power, On/Off, HO Switch, and all Access Control wires. Visualize how the unit is to be hung on the frame, where the studs are, and where the arm will attach to the door panel.
4. **ASK YOURSELF:** Do I need to pull the Power Whip as I'm hanging the Header "Can"? Should I pull my lock wires first? Where do I visualize the unit's final mounting place onto the wall or frame? Ask yourself these mundane questions before lifting the systems in place and you will save yourself time, strength, and energy.
5. Mount the On/Off Hold Open Switch on the End Cap, or wherever the End-User prefers.
6. Measure and mark the Frame and mount the Header "Can" in the proper spot, being mindful of Hanging, Spindle Location and Aesthetics.
7. Reassemble the Opus Control and Motor/Operator into the Header. Take time to land the Black Wires to the Opus Harness and to the Power Switch. Land the On/Off/HO Switch wires as well, and select the "off" position.

Initial Assembly for the GT 710, 8710 is complete when the Swing Header is sturdily anchored, level and fully loaded. The Header Assembly should be ready for "Hot Power", additional Sensors, and a Door Arm at this point.

Often, when the Initial Assembly is complete, the other building trades will come in to do their work (i.e., 120VAC Power, Painting, Caulking, Finish Carpentry).

- ▶ IT IS EXTREMELY IMPORTANT that your wiring and wiring harnesses have ZERO bare ends at the end of Initial Assembly.
- ▶ Power, that is applied to door operators and controls that have open ends, does DAMAGE to Auto Door components that can go unnoticed.
- ▶ Cap all of your loose ends with Wire Nuts and make certain that terminations at the OPUS are secure.

SECTION 7.4: Secondary Assembly (Install Outswing Arm, Inswing Arm, and Arm Stop)

The primary goal of the secondary assembly is to get the GT (8)710 Arm(s) on the door(s) and Doorstop(s) mounted in the correct spot.

Completing the secondary assembly is usually required for a general contractor to lock up a building, provide heating/cooling, and/or allow additional contractors to provide their services.

- ▶ The door should swing open freely and close under control.
 - ▶ Latches and Locks should be working freely as well.
 - ▶ Pivots, Mechanical Hardware, arms/tracks/stops should all be working in coordination to provide a CLOSURE and SECURITY OF THE BUILDING ENVELOPE when the secondary assembly is completed.
1. Determine Hanging and Swing of the door(s)
 2. Install appropriate arm on to the spindle and onto the door with the correct length and amount of preload.
 3. Install Surface mounted Doorstop (Side Load) or Ring Stop (Bottom Load), so that the door opens at minimum of 90°.
 4. Manually push the Door to Open with no more than 15 lbs. at the lead edge of the latch stile. Check for obstructions & physical bind in the floor or frame
 5. Test your mechanical lockset or electric strike for latching. If your unit has a Maglock, be sure there is adequate "slop" in the receiver plate.
 6. If the Door System is to be fully Automatic (per ANSI A156.10), apply the Motion Detector(s), Overhead Presence Detector, and the Door Mounted Presence Detector(s). Pull the appropriate wires and land them to the Opus Control (refer to C-00139).
 7. If the Door System is to be a Low Energy Swing Door (ANSI A156.19), land all Knowing Act Devices and land their wires to the Opus.

Secondary Assembly for any GT (8)710 is complete when:

- ▶ The Door Panel(s) can be closed and locked securely, and the Access Cover(s) is closed.
- ▶ Activation and Safety sources are mounted and landed to the Opus.
- ▶ Generally, after Secondary Assembly is completed, one technician would be able to return to the jobsite at any time to finalize, or commission, the Swing Door System.

SECTION 7.5: **E**nd Processes (120 VAC General Wiring, Final Adjustments and Finalization)

1. Finalizing the GT(8)710 System starts with identifying if 120VAC Power is present.
2. Power Switches inside the Header and On/Off/HO switches should both be in the "ON" position, lights should be on at the Activation Sources (unless standard push plates), and the Opus Control should be illuminated and ready for Tune-In.
3. A final discussion with the general contractor, building owner or end user should be had to discuss the functionality of the GT (8)710 Swing Door System after a Stroke Learn, Tune-In and Cycle Test (Speeds, Access Control, AAADM Requirements, Daily Safety Check).
4. Once tuned in, the System should be decaled properly, and the final paperwork should be completed and signed off by a contractor or end user.
5. At this time, perform an AAADM Inspection when required to do so by the contractor and/or the end user.
6. It is recommended that pictures are taken after every Final Assembly.

NOTE: This signifies that the Installation has been completed, that the GT (8)710 meets or exceeds AAADM Requirements (BHMA/ANSI A.156.10 **OR** A156.19) and that the system's warranty starts.

CHAPTER 8: TROUBLESHOOTING

If the Opus detects an error, the LCD backlight will start flashing and display an Error message within the Error Screen or before the Level Two Screen.

Table 1: Error Message

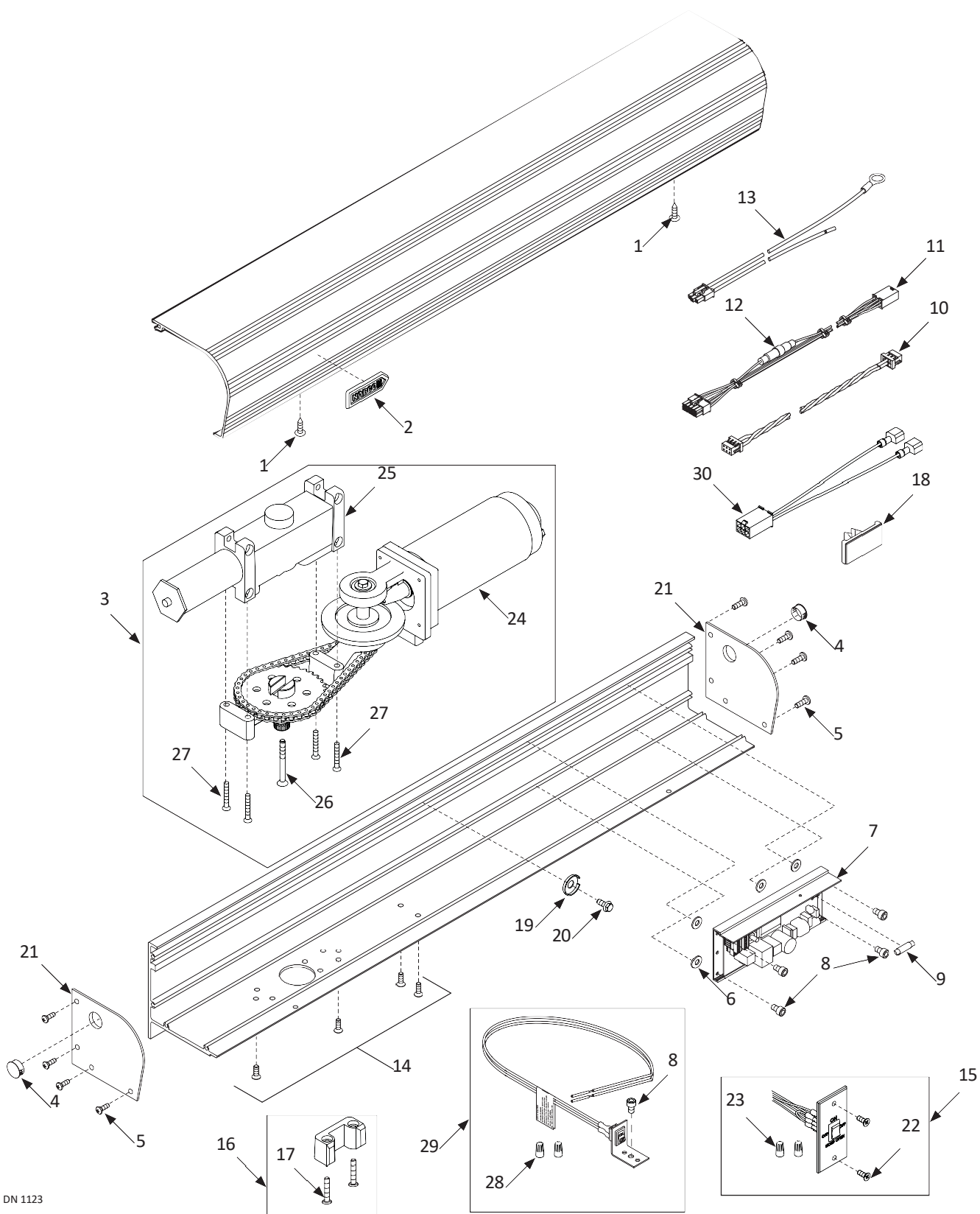
Error Msg	Description	Resolution
Recycle Warning	A Recycle was detected more than (5) times while opening or closing cycle continuously.	▶ Check Doorway and Door resistance. • If both are normal, adjust the opening and closing recycle sensitivity.
MPU Error	Microprocessor detects errors within the Internal or External Circuit.	Please replace the Opus Control if the MPU Error occurs repeatedly.
Drive Circuit Error	If the Drive Circuit detects an unusual state, the Opus will stop door movement. Possible causes are: ▶ Over current at motor ▶ Abnormal voltage at Motor Circuit ▶ Abnormal value from Motor Current detection.	▶ Check the Motor connection. • Opus Control may not be connected to the motor. • Motor wire may be shorted. ▶ If Motor connection is normal, the cause could be electrical noise. ▶ Possible for this Error to occur occasionally without having a problem with the Door.
Communication Error	CAN-bus Communication Error	Please check SimPair Harness.
62 Sensor Error & 6B Sensor Error & SWL Sensor Error	▶ This is the sensor-monitoring functionality. ▶ Handshake for Safety Sensor not working properly.	▶ Check Opus: • Input/Output Settings • Harnesses • Sensor Status. ▶ Sensor could be detecting an Internal Error.

SAFETY

If after troubleshooting a problem, and a satisfactory solution cannot be achieved, please call NABCO Entrances Technical Service at 1-877-622-2694, Option 3, between 7 am – 5:30 pm Central Time for additional assistance.

DO NOT leave any problem unresolved. If the door cannot be repaired immediately, turn off the door and leave it inoperable until repairs can be made. Advise the owner **NOT** to operate the door in 'Automatic Mode' until repairs are made. **NEVER** leave a door operating without all safety detection systems operational.

SERVICE PARTS: GT710 LOW ENERGY HEADER

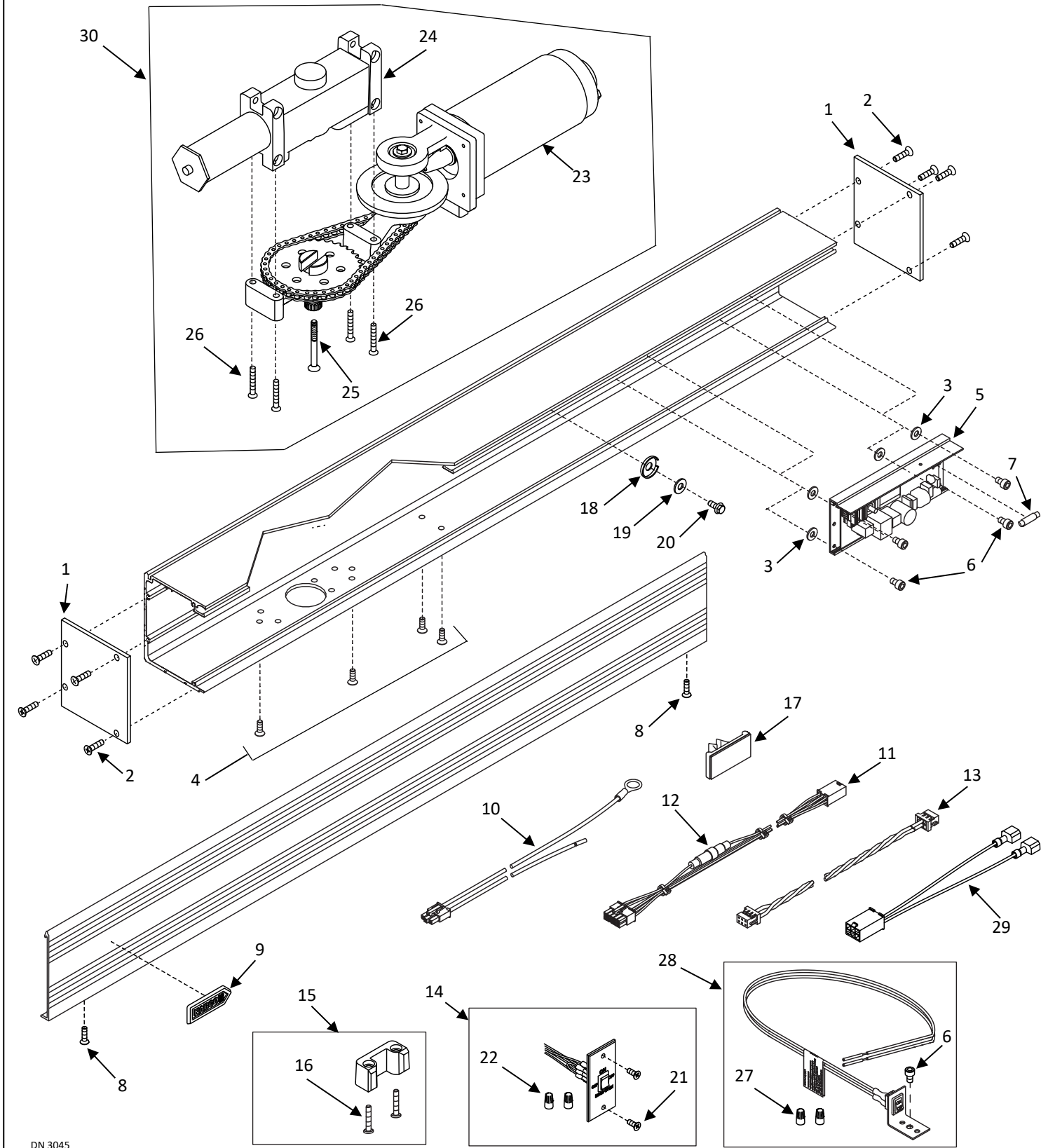


DN 1123

Energy Header

Item	Part	Finish/Sizes/Notes	Description
1	T-00337		PHSMS:#8x0.625L.:PHIL
2	C-00067		"NAMEPLATE, ADHESIVE BACKED"
3	A-00883	RH	"OPERATOR, GT710 - OPUS,RH"
	A-00884	LH	"OPERATOR, GT710 - OPUS,LH"
4	V-00109		DOME PLUG, 7/8" HOLE
5	T-00326	Zinc	RHMS,1/4-20x0.750L.,PHIL,ZINC SELF TAPNG
	T-00393	Dark Bronze	RHMS,1/4-20x0.750L.,PHIL,F-POINT,BK OX
6	T-00365		WASHER:5/32IDx3/4ODx.020THK:POLYETHYLE
7	M-01546		"CONTROLLER,OPUS"
8	T-00335		SHCS:10-24x0.313L.
9	V-00552	Used on Opus Control	FUSE;5A;GMA;5X20mm
10	M-01680	Simultaneous Pair only	"HARNESS,OPUS CONTROL,SIM PAIR"
11	A-01249		HARNESS,MOTOR,OPUS,710
12	V-00713	Used on A-01249	FUSE,2 AMP,5X20MM,250V,FAST ACTING
13	M-01072		HARNESS,POWER,MAGNUM BOARD
14	T-00015	Zinc	FHMS,1/4-20x0.750L.,PHIL,ZINC
	T-00017	Dark Bronze	FHMS,1/4-20x0.750L.,PHIL,BLK ZN
15	A-00805		SWITCH,ROCKER,SWINGER,ON/OFF/HOLD OPEN
16	A-00454		ARM STOP,SWINGER
17	T-00325		PHMS, 1/4-20X1.500L, PHIL, TYPE F
18	V-00100		CLAMP, CABLE
19	V-00104		WASHER, CUP.312 ID X .88 OD X .040 THICK
20	A-00468		HHCS,5/16-18X.500,WASH.HD. TYP. F, GREEN
21	M-61055		"END CAP,710,BLANK,204"
	M-71055		END CAP,710,BLANK,313
22	T-00031		FHMS,10-32x0.500L.,PHIL,UCUT,T-LOBE,BKZN
23	T-00197		NUT,WIRE,RANGE 22-14AWG,GREY
24	M-01687		OPERATOR;GT710;W- ENCODER;NO CLOSER
25	V-00105	RH	HYDRAULIC CLOSER, LCN, RH, GT710
	V-00101	LH	HYDRAULIC CLOSER, LCN, LH, GT710
	V-00194	Heavy Duty/RH	HYDRAULIC CLOSER,LCN,SIZE 6,RH
	V-00195	Heavy Duty/LH	HYDRAULIC CLOSER,LCN, SIZE 6, LH
26	T-00350		FHMS:1/4-20x2.500L.:SOKT:BK.ZC.GR5
27	T-00351		FHMS:12-24x1.500L.:PHIL
28	T-00047		NUT,WIRE,72B,2-18AWG-3-16AWG
29	A-00409		PARTS BAG,ON/OFF,SWINGER,SWITCH
30	A-00804		HARNESS,MAGNUM TO ENCODER MOTOR

SERVICE PARTS: GT8710 LOW ENERGY HEADER



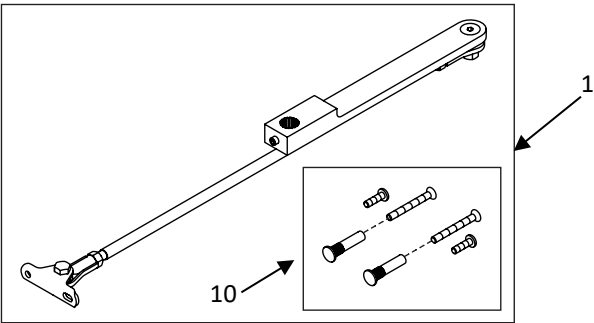
DN 3045

GT 8710 Low Energy Header

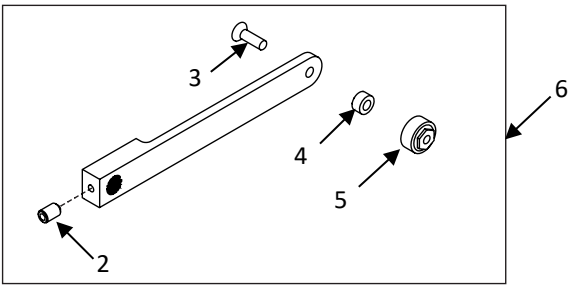
Item	Part	Notes	Description
1	M-01051	Clear	END CAP, SIDELOAD, NO ACCESS HOLE, 204
	M-71051	Dark Bronze	END CAP, SIDELOAD, NO ACCESS HOLE, 313
2	T-00016	Zinc	FHMS,1/4-20x0.438L.,PHIL,UNDERCUT,ZINC
	T-00108	Dark Bronze	FHMS,1/4-20x0.438L.,PHIL,UNDERCUT,BLK ZN
3	T-00365		WASHER:5/32IDx3/4ODx.020THK:POLYETHYLE
4	T-00015		FHMS,1/4-20x0.750L.,PHIL,ZINC
5	M-01546		"CONTROLLER,OPUS"
6	T-00335		SHCS:10-24x0.313L.
7	V-00552	Used on Opus Control	FUSE;5A;GMA;5X20mm
8	T-00337		PHSMS:#8x0.625L.:PHIL
9	C-00067		"NAMEPLATE, ADHESIVE BACKED"
10	M-01072		HARNESS,POWER,MAGNUM BOARD
11	A-01249	For GT710/8710 only	HARNESS,MOTOR,OPUS,710
12	V-00713	Used on A-01249	FUSE,2 AMP,5X20MM,250V,FAST ACTING
13	M-01680	Simultaneous Pair only	"HARNESS,OPUS CONTROL,SIM PAIR"
14	A-00805		SWITCH,ROCKER,SWINGER,ON/OFF/HOLD OPEN
15	A-00454		ARM STOP,SWINGER
16	T-00325		PHMS, 1/4-20X1.500L, PHIL, TYPE F
17	V-00100		CLAMP, CABLE
18	V-00104		WASHER, CUP.312 ID X .88 OD X .040 THICK
19	T-00029		WASHER,.250 ID,.563 OD,.049 THK,ZINC
20	T-00347		HHCS:10-32x0.375L:GREEN:WASH HD:SLOT
21	T-00031		FHMS,10-32x0.500L.,PHIL,UCUT,T-LOBE,BKZN
22	T-00197		NUT,WIRE,RANGE 22-14AWG,GREY
23	M-01687		OPERATOR;GT710;W- ENCODER;NO CLOSER
24	V-00105	RH	HYDRAULIC CLOSER, LCN, RH, GT710
	V-00101	LH	HYDRAULIC CLOSER, LCN, LH, GT710
	V-00194	Heavy Duty/RH	HYDRAULIC CLOSER,LCN,SIZE 6,RH
	V-00195	Heavy Duty/LH	HYDRAULIC CLOSER,LCN, SIZE 6, LH
25	T-00350		FHMS:1/4-20x2.500L.:SOKT:BK.ZC.GR5
26	T-00351		FHMS:12-24x1.500L.:PHIL
27	T-00047		NUT,WIRE,72B,2-18AWG-3-16AWG
28	A-00409		PARTS BAG,ON/OFF,SWINGER,SWITCH
29	A-00804		HARNESS,MAGNUM TO ENCODER MOTOR
30	A-00883	RH	"OPERATOR, GT710 - OPUS,RH"
	A-00884	LH	"OPERATOR, GT710 - OPUS,LH"

SERVICE PARTS: SWING ARM AND TRACK ASSEMBLIES

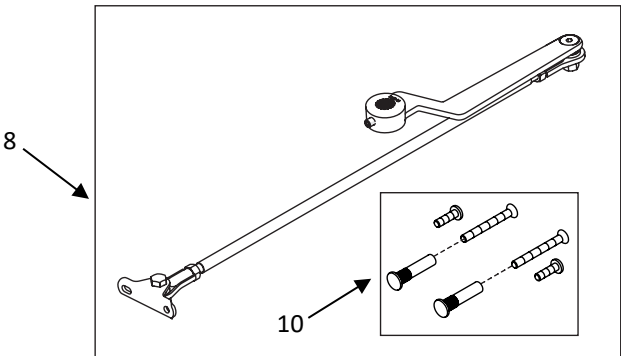
Low Profile Outswing Arm Assembly



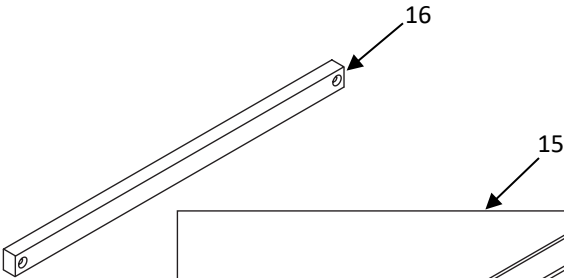
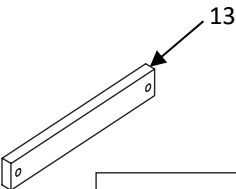
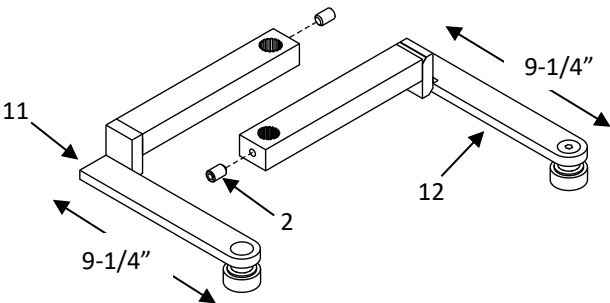
Inswing Arm
Reveal **Equal** to 0 degrees



Outswing Arm Assembly



(CU) Inswing Arm Assembly
Reveal Greater than 0 inches



Swing Arm Assemblies

Item	Part	Finish/Sizes/Notes	Description
1	A-60770	No Reveal/Low Profile/Clear	ARM,OUTSWING,CU,20in:204
	A-70770	No Reveal/Low Profile/Dark Bronze	ARM,OUTSWING,CU.20in:313
2	T-00261		SHSS,5/16-24x0.500L.,CUP PT.
3	T-00223		FHCS,3/8-24x1.250L.,ZINC
4	M-01045		WASHER,STEEL,.375IDx.750Dx.375THK.
5	A-00752		ROLLER,REPLACEMENT
6	A-60545	0 Reveal/Clear	ARM,INSWING,CU,NON PANIC,NH,204
	A-70545	0 Reveal/Dark Bronze	ARM,INSWING CU,NO PANIC,NH 313
8	A-60425	20"/Clear	ARM,OUTSWING,STD ASM,20in,204
	A-70425	20"/Dark Bronze	ARM:OUTSWING:STD ASM:20in:313
	A-60426	30"/Clear	ARM,OUTSWING,STD ASM,30in,204
	A-70426	30"/Dark Bronze	ARM:OUTSWING:STD ASM:30in:313
10	A-00389	Clear	PARTS BAG,TRACK AND ARM CU GUIDE,204
	A-00388	Dark Bronze	PARTS BAG,TRACK AND ARM CU GUIDE,313
11	A-60658	0 - 2" Reveal/RH/Clear	INSWING ARM,0 TO 2 REV,RH,204
	A-70658	0 - 2" Reveal/RH/Dark Bronze	INSWING ARM, 0 TO 2 REV,RH:313
	A-60671	2-5-1/2" Reveal/RH/Clear	INSWING ARM,2 TO 5-1/2 REV,RH,204
	A-70671	2-5-1/2" Reveal/RH/Dark Bronze	INSWING ARM,2 TO 5-1/2 REV:RH:313
	A-60672	5-1/2 - 9-3/4" Reveal/RH/Clear	INSWING ARM,5-1/2 TO 9-3/4 REV,RH,204
	A-70672	5-1/2 - 9-3/4" Reveal/RH/Dark Bronze	INSWING ARM,5-1/2 TO 9-3/4 REV:RH:313
	A-60673	9-3/4 - 13" Reveal/RH/Clear	INSWING ARM,9-3/4 TO 13 REV,RH,204
	A-70673	9-3/4 - 13" Reveal/RH/Dark Bronze	INSWING ARM,9-3/4 TO 13 REV:RH:313
12	A-60675	0 - 2" Reveal/LH/Clear	INSWING ARM,0 TO 2 REV,LH,204
	A-70675	0 - 2" Reveal/LH/Dark Bronze	INSWING ARM, 0 TO 2 REV,LH:313
	A-60676	2-5-1/2" Reveal/LH/Clear	INSWING ARM,2 TO 5-1/2 REV,LH,204
	A-70676	2-5-1/2" Reveal/LH/Dark Bronze	INSWING ARM,2 TO 5-1/2 REV:LH:313
	A-60677	5-1/2 - 9-3/4" Reveal/LH/Clear	INSWING ARM,5-1/2 TO 9-3/4,LH,204
	A-70677	5-1/2 - 9-3/4" Reveal/LH/Dark Bronze	INSWING ARM,5-1/2 TO 9-3/4 REV:LH:313
	A-60678	9-3/4 - 13" Reveal/LH/Clear	INSWING ARM,9-3/4 TO 13 REV,LH,204
	A-70678	9-3/4 - 13" Reveal/LH/Dark Bronze	INSWING ARM,9-3/4 TO 13:LH:313
13	A-00952	12.25" Long	SPACER,INSWING TRACK
14	A-60639	Clear/12.25" Long	ASM,TRACK,CU,SHORT,204
	A-70639	Dark Bronze/12.25" Long	ASM,TRACK,CU,SHORT,313
15	A-00481	Clear/21" Long	ASM,TRACK,CU,LONG,204
	A-70481	Dark Bronze/21" Long	ASM,TRACK,CU,LONG,313
16	M-02045	21" Long	SPACER,INSWING TRACK,LONG,710

NOTES

