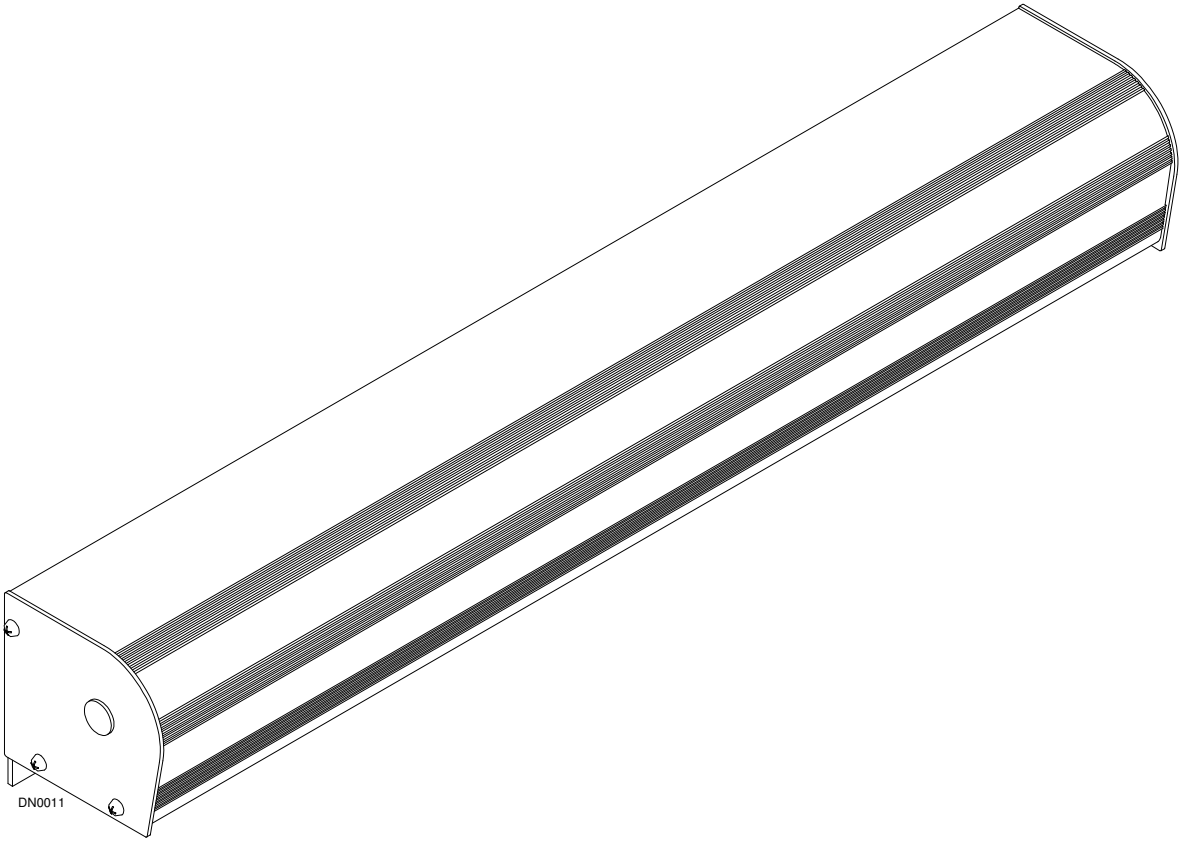
Magnum Board IV.
(New Casting)

Automatic Entrance Systems

NABCO ENTRANCES Inc.
S82 W18717 Gemini Drive
P.O. Box 906
Muskego, WI 53150
Phone: 877-622-2694
Fax: 888-679-3319
Technical Assistance: 866-622-8325
www.nabcoentrances.com
Email: info@nabcoentrances.com

Model 710 Swing Door System
Low Energy Operator



WARNING

Do not install, operate or service this product unless you have read and understand the Safety Practices, Warnings, Installation and Operating Instructions contained in this manual. Failure to do so may result in property damage, or bodily injury.

Part Number 1510683
June 20, 2011 Revision

INSTALLATION MANUAL

CAUTION:

Read these safety practices before installing, operating or servicing the automatic door. Failure to follow these practices may result in serious consequences.

Read, study and understand the operating instructions contained in or referenced in this manual before operating. If you do not understand the instruction, ask the installing qualified technician to teach you how to use the door.

This manual and the owners' manual must be given to and retained by the purchasing facility or end user.

1. **If the door appears broken or does not seem to work correctly, it should be immediately removed from service and a qualified service technician contacted for corrective action.**

2. **Disconnect power at the fused disconnect during all electrical or mechanical service. When uncertain whether power supply is disconnected, always verify using a voltmeter.**

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

4. **It is the responsibility of the installing door technician to install all warning and instructional labels in accordance with ANSI A156.19.**

5. **It is the responsibility of the purchasing facility or end user to keep warning and instructional labels and literature legible, intact and with the door.**

6. **Replacement labels and literature may be obtained from local NABCO Entrances Inc. distributors. If the name of the local distributor is unknown, contact NABCO Entrances Inc. at (877-622-2694) for assistance.**

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

Contents

To The Installer

The purpose of this manual is to familiarize the 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 purchaser'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 usually covers this type of door. Other local standards or codes may apply. Use them in addition to the ANSI Standard. The GT 710 is listed with the Underwriters Laboratory and is identified as such on the label.

Instruct the building owners/operator on the essentials of the operation of the door and this device. The owner should follow these instructions to 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.

Overview

The GT 710 Low Energy Operator is designed to be installed after the door frame is securely in place. Swing door movement is accomplished using the NABCO GT 710, controlled by the NABCO Magnum Controller. This combination offers several control features to accommodate most installation options.

This manual offers step-by-step instructions to install the GT 710, including a troubleshooting section.

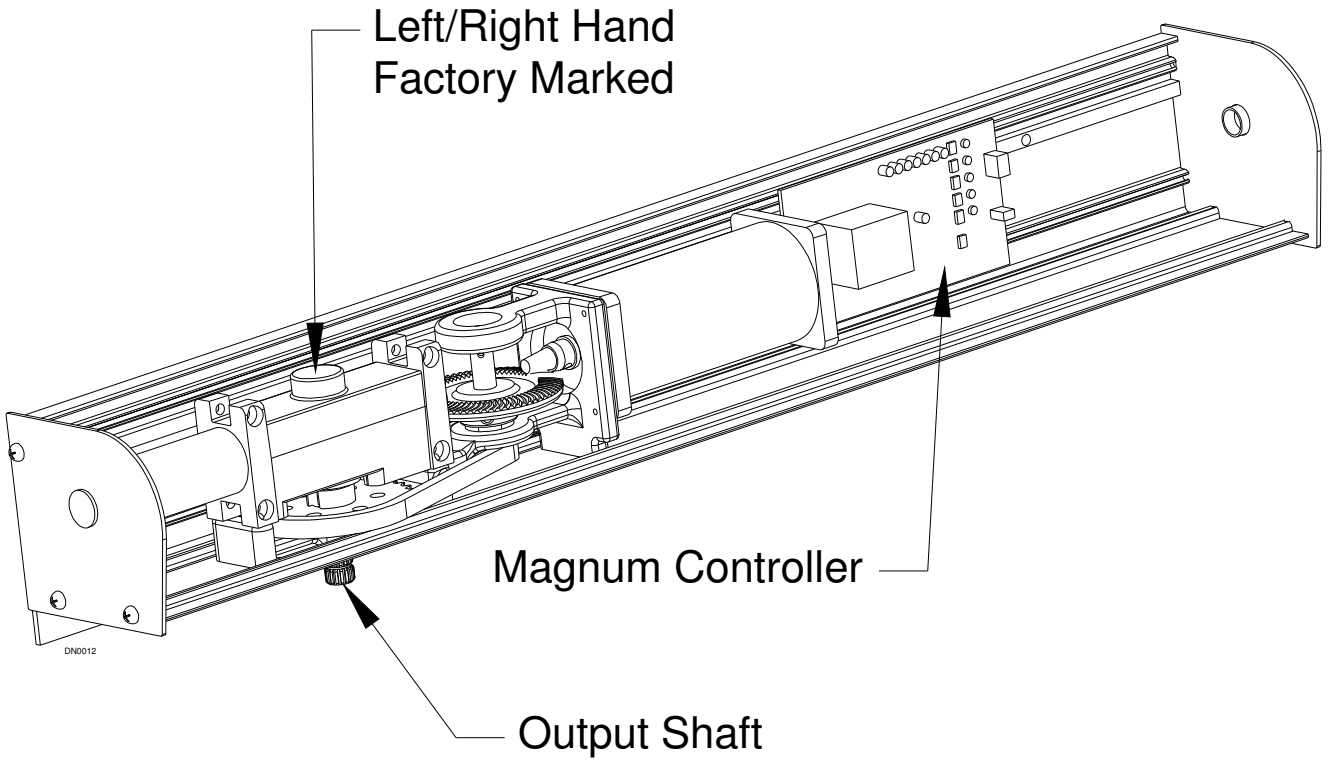


Figure 1 – Overview of GT 710

Specifications

Power Input	120 (±10%) AC 50-60 Hz, 10 Amps
Available current for Accessories	0.5 Amps 24 Volts AC
Available Wire Size for Incoming Power	14 AWG
Minimum Frame Face for Mounting	1 ¾" (44 mm)
Minimum Clearance from Top of Door to Ceiling	7" (178 mm)
Door Hinge Requirements	¾" Butt, Offset Pivot, or Center Pivot
Door Thickness	1 ¾" (44 mm) Minimum
Door Width	Specify When Ordering

- Door stop is included and always required.
- Electrical conduit and switch or sensor wires should be pulled through the frame before mounting the GT 710.
- Remove the "PUSH DOOR TO OPERATE" portion of the handicap label if the "Push-N-Go" feature is not being used. (See **Figure 2**).

Figure 2 – Door Sticker, Modified.

Installation and Adjustments

The label on the GT 710 will help identify the unit. It is located on the underside of the unit near the output shaft. The label provides important information, including manufacturing date which is necessary for warranty claims.

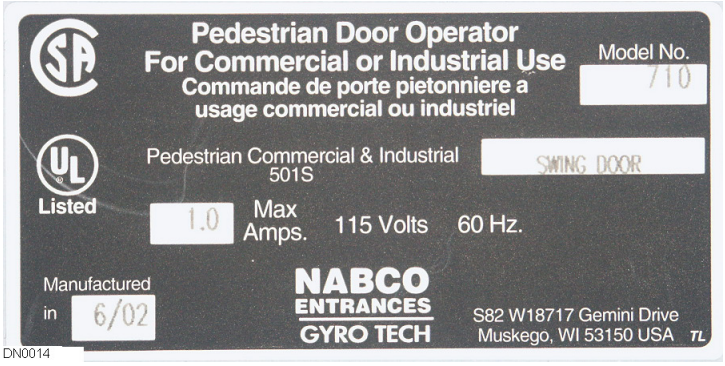


Figure 3 – Product Label

Handing Requirements The type of door will determine whether a left-hand or a right-hand operator is required. **Figure 4** can be used to determine which unit is required.

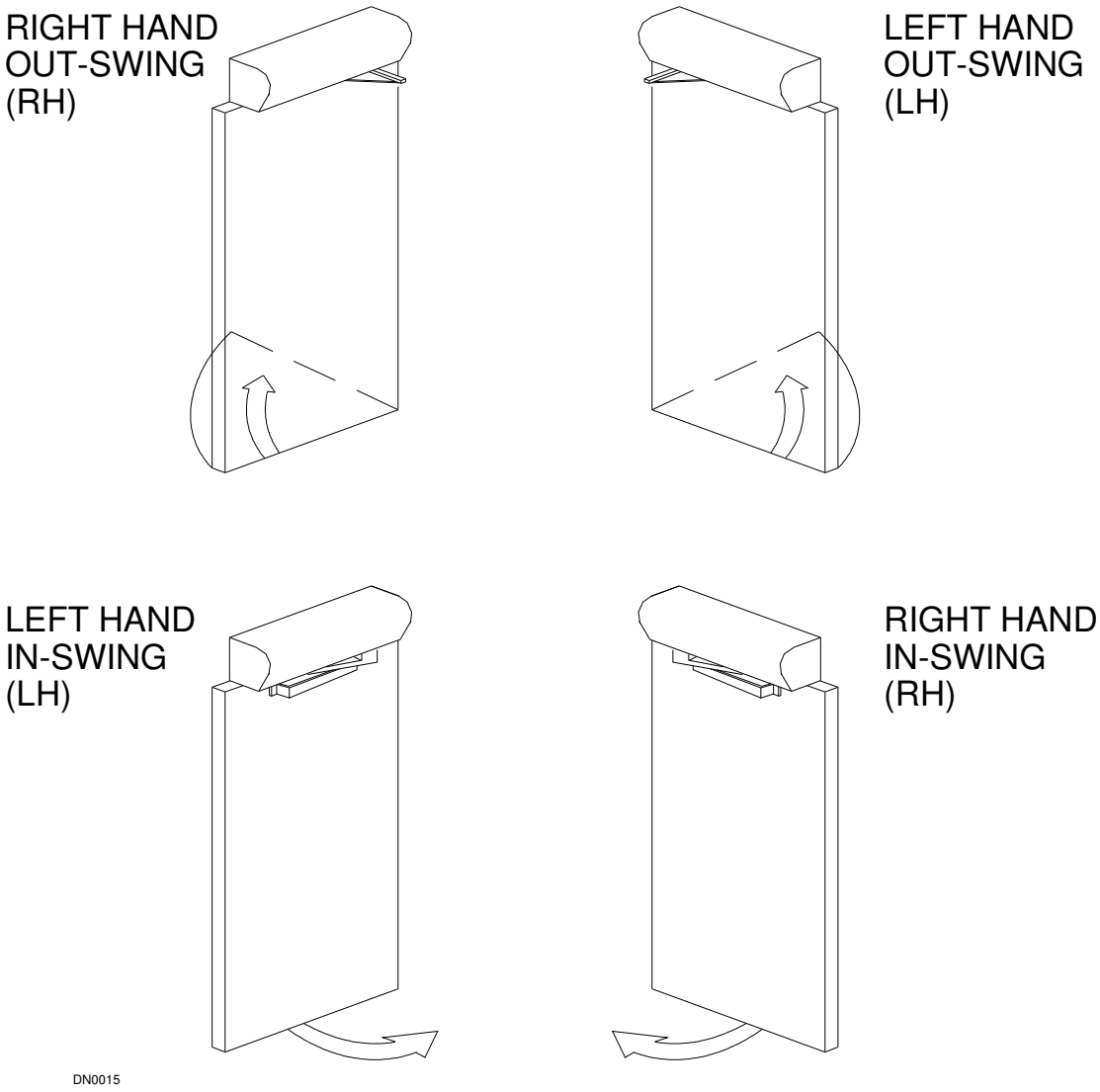


Figure 4 – Determine the Swing (Hand) of the Door.

Note: The hand of the unit and the hand of the door must be the same. The hand of the unit is not reversible and cannot be converted in the field.

To verify that your unit is right or left handed, look for "R" or "L" on the hydraulic closer (**Figure 1**).

Before starting installation, verify that the door swings freely throughout the full opening and closing range of movement. Check for minimum clearance of 7" (177 mm) from the top of the door to the ceiling and minimum of 1 3/4" (44 mm) frame face. The door frame should be properly reinforced and well anchored in the wall. Non-reinforced, hollow metal frames should be fitted with ¼-20 blind rivnuts furnished by installer.

Inswing/Outswing Arms

Figures 5 and 6 show the three swing arm assemblies and inswing track. Use the assembly that suits the installation.

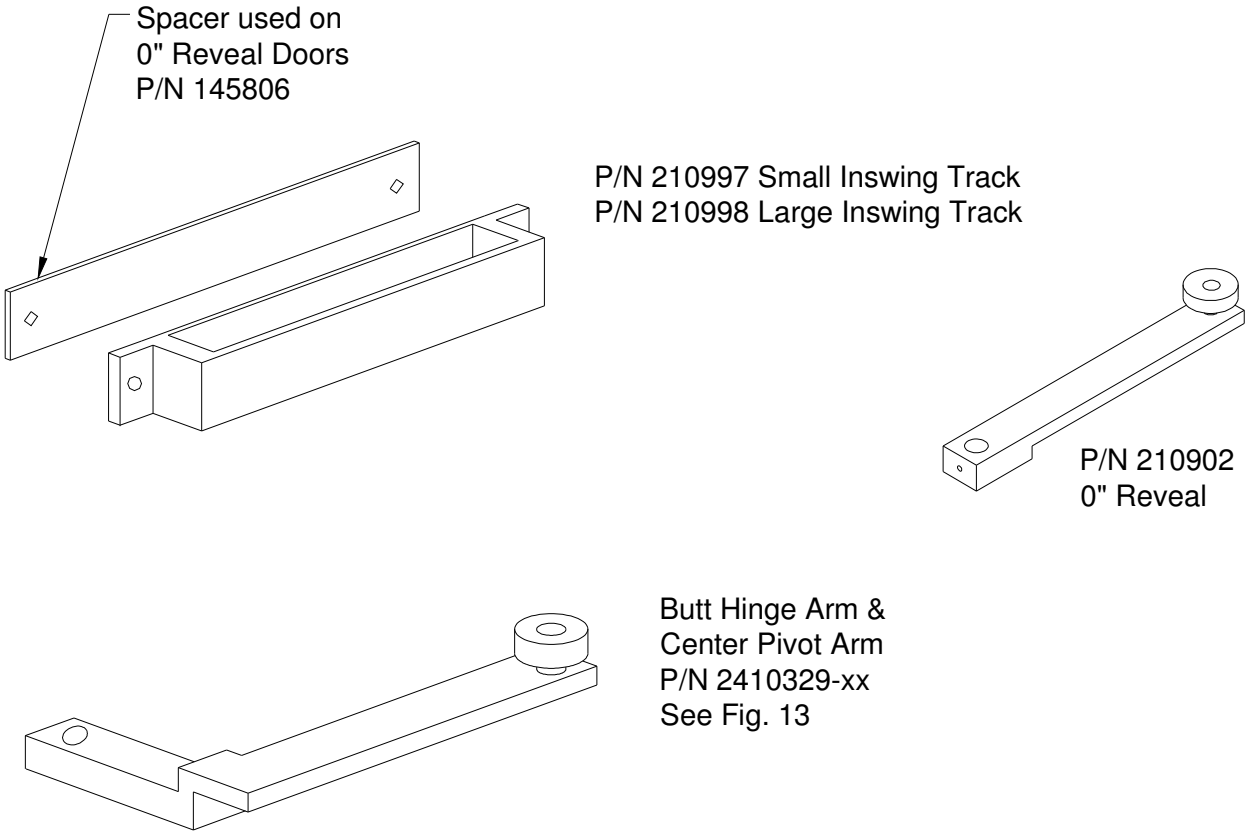


Figure 5 – Inswing Arm and Track Assemblies

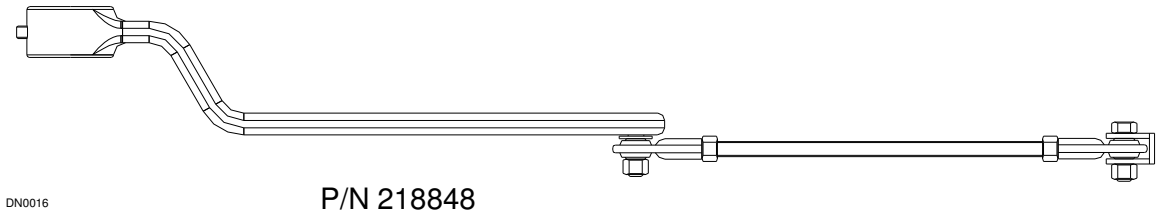


Figure 6 – Outswing Arm Assembly

Hardware Kit

This unit has been shipped with the following installation hardware. Parts Kit – P/N 12-5662 (**figure 7**):

Item	Quantity	Description	Part Number
A	1	3/32” Hex Wrench	146283
B	2	Screws for Door Stop	244941-04
C	2	Screws for Control Switch	240011-104
D	2	Wire Nuts	141218
E	1	Door (Arm) Stop	145892
F	2	Magnets	149943
G	8	Assorted Decals	

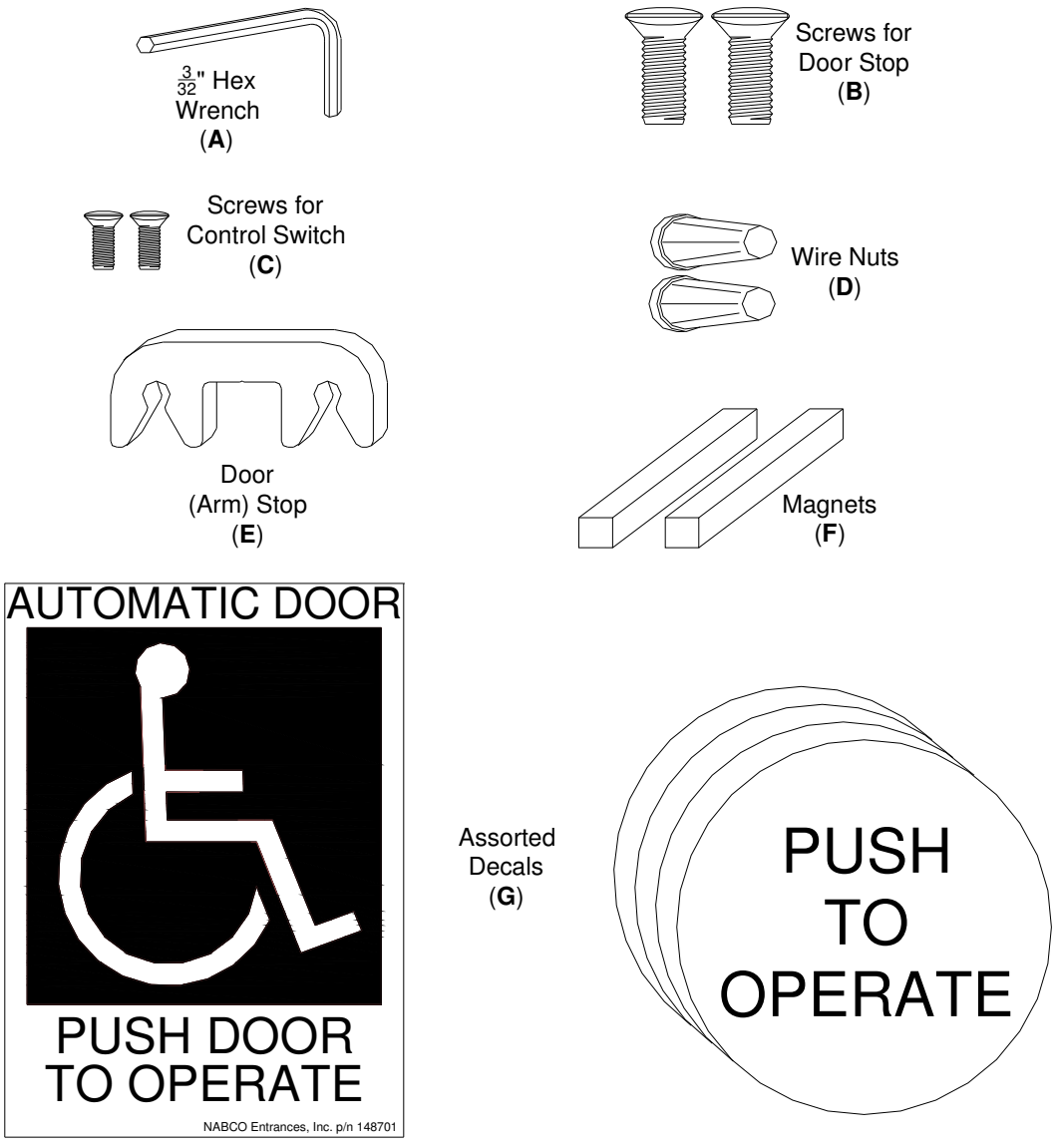
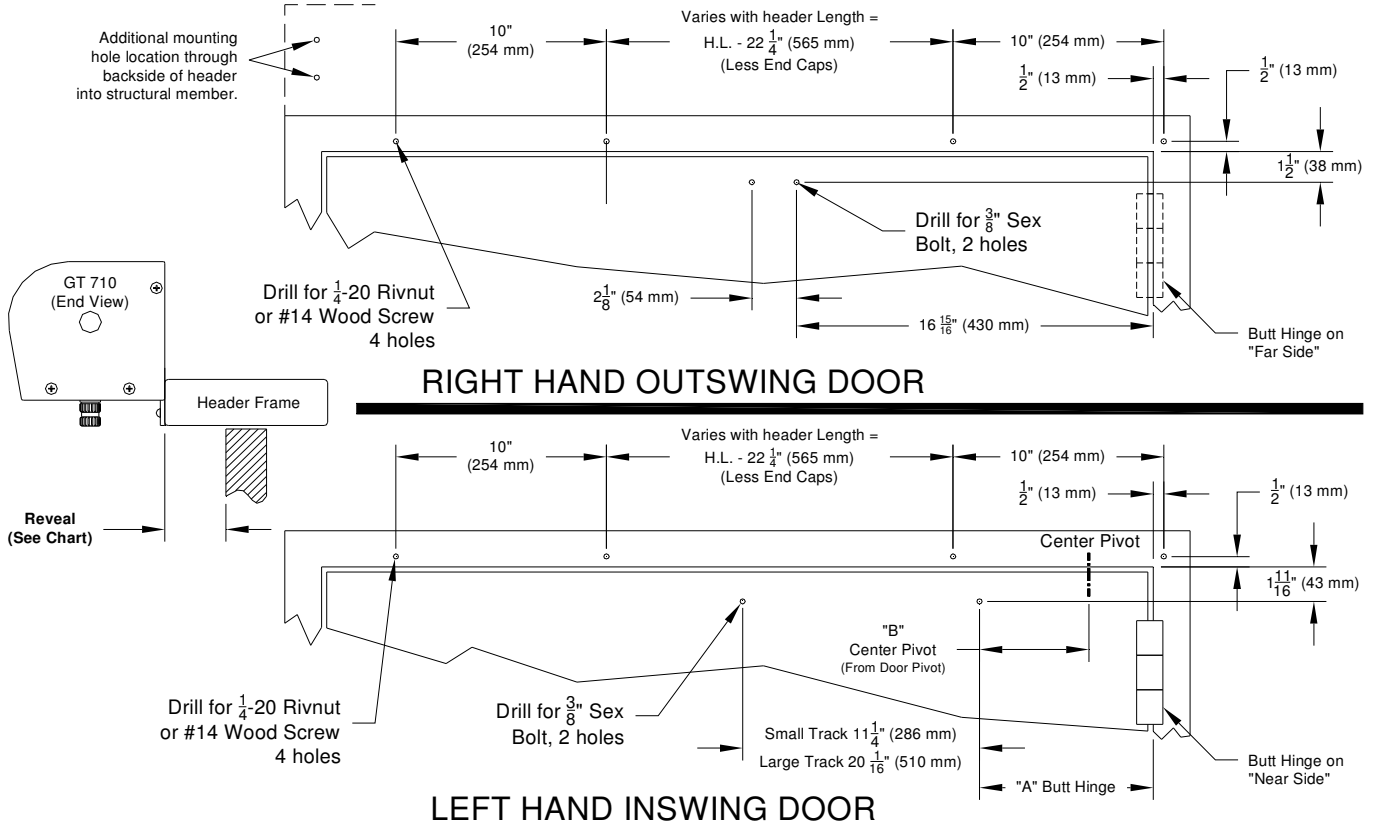


Figure 7 – Installation Hardware

Drilling Frame and Door **Figure 8** shows the dimensions for drilling frame and door.



INSWING CHART			
Reveal	Dim "A" Butt Hinge	Dim "B" Center Pivot	Inswing Track
0"	7 5/8" (194 mm)	7 3/16" (183 mm)	210997 (Small Track)
1/4"	7 3/4" (197 mm)	7 3/8" (187 mm)	
1/2"	7 15/16" (202 mm)	7 9/16" (192 mm)	
3/4"	8 1/8" (206 mm)	7 3/4" (197 mm)	
1"	8 5/16" (211 mm)	7 15/16" (202 mm)	
1 1/4"	8 1/2" (216 mm)	8 1/8" (206 mm)	
1 1/2"	8 11/16" (221 mm)	8 5/16" (211 mm)	
1 3/4"	8 7/8" (225 mm)	8 1/2" (216 mm)	
2"	9 1/16" (205 mm)	8 3/4" (222 mm)	
2 1/4"	9 1/4" (235 mm)	8 15/16" (227 mm)	
2 1/2"	9 1/2" (241 mm)	9 1/8" (232 mm)	
2 3/4"	9 11/16" (246 mm)	9 3/8" (238 mm)	
3"	13 1/8" (333 mm)	9 9/16" (243 mm)	
3 1/4"	13 3/8" (340 mm)	13 1/16" (332 mm)	
3 1/2"	13 9/16" (344 mm)	13 1/4" (337 mm)	
3 3/4"	13 3/4" (349 mm)	13 1/2" (343 mm)	
4"	14" (356 mm)	13 11/16" (348 mm)	
4 1/4"	14 3/16" (360 mm)	13 3/4" (349 mm)	
4 1/2"	14 7/16" (367 mm)	13 3/4" (349 mm)	

INSWING CHART			
Reveal	Dim "A" Butt Hinge	Dim "B" Center Pivot	Inswing Track
4 3/4"	14 1/2" (368 mm)	13 3/4" (349 mm)	210997 (Small Track)
5"		13 3/4" (349 mm)	
5 1/4"		13 13/16" (351 mm)	
5 1/2"			
5 3/4"			
6"			
6 1/4"			
6 1/2"	18 1/2" (470 mm)		
6 3/4"	18 9/16" (471 mm)	17 7/8" (454 mm)	
7"	18 9/16" (471 mm)	17 7/8" (454 mm)	
7 1/4"	18 5/8" (473 mm)	17 15/16" (456 mm)	
7 1/2"	18 5/8" (473 mm)		
7 1/2"		13 1/2" (343 mm)	210998 (Large Track)
7 3/4"	14 1/4" (362 mm)	13 9/16" (344 mm)	
8"		13 9/16" (344 mm)	
8 1/4"		13 5/8" (346 mm)	
8 1/2"		13 5/8" (346 mm)	
8 3/4"		13 5/8" (346 mm)	
9"		13 5/8" (346 mm)	

INSWING CHART			
Reveal	Dim "A" Butt Hinge	Dim "B" Center Pivot	Inswing Track
9 1/4"	14 1/4" (362 mm)	13 5/8" (346 mm)	210998 (Large Track)
9 1/2"		13 5/8" (346 mm)	
9 3/4"		13 5/8" (346 mm)	
10"		13 9/16" (344 mm)	
10 1/4"	14 3/16" (360 mm)	13 9/16" (344 mm)	
10 1/2"	19 1/4" (489 mm)	13 9/16" (344 mm)	
10 3/4"	19 1/4" (489 mm)	18 5/8" (473 mm)	
11"	19 1/4" (489 mm)	18 11/16" (475 mm)	
11 1/4"	19 5/16" (491 mm)		
11 1/2"			
11 3/4"			
12"			
12 1/4"			
12 1/2"			
12 3/4"			
13"			

DN0018

Figure 8 – Frame Drilling Details.

Installation of Arm

Proper installation requires that the hydraulic closer apply a constant pressure to the door, keeping it in a closed position. This is accomplished by mounting the arm to the hydraulic closer in a "pre-loaded" position.

Install the arm before mounting the unit to the frame. The end of the output shaft has been marked with numbers 1 thru 4. These numbers mark the correct installation position to set the preload for the unit. **Figures 10 thru 15** show the proper alignment of the arm to the preset installation marks.

After installing the inswing arm, it will be necessary to rotate the arm in the direction that would **open** the door. Insert an allen wrench or screwdriver between the socket and the chain to prevent return movement as shown in **Figure 9**. Locking the arm in the open position like this is necessary so that the arm will not interfere with installing the unit. For inswing units it may be necessary to add one "tooth" of preload to engage latch check earlier in the closing cycle.

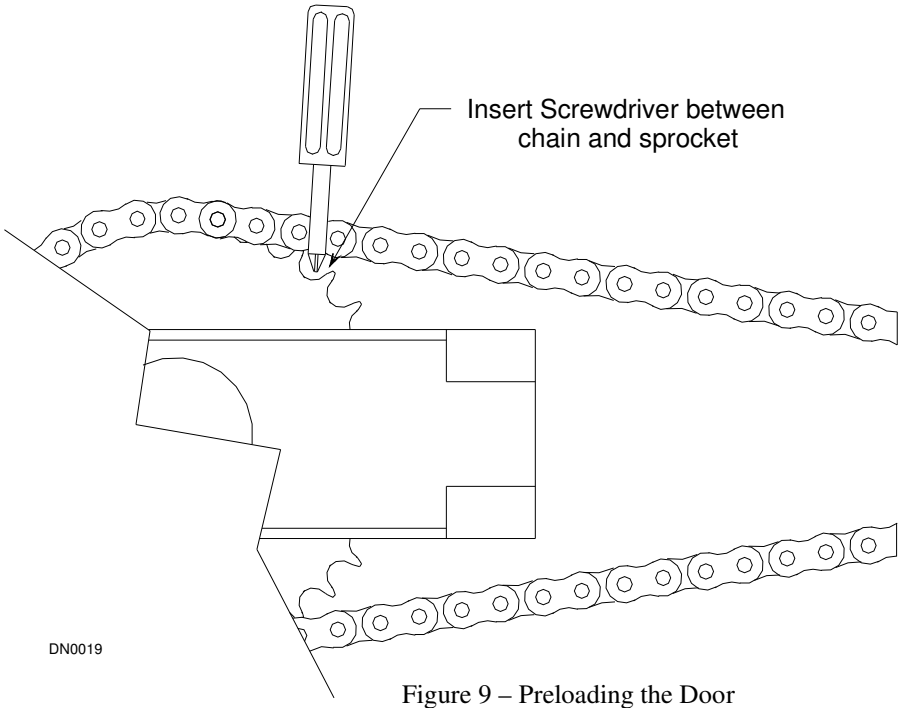
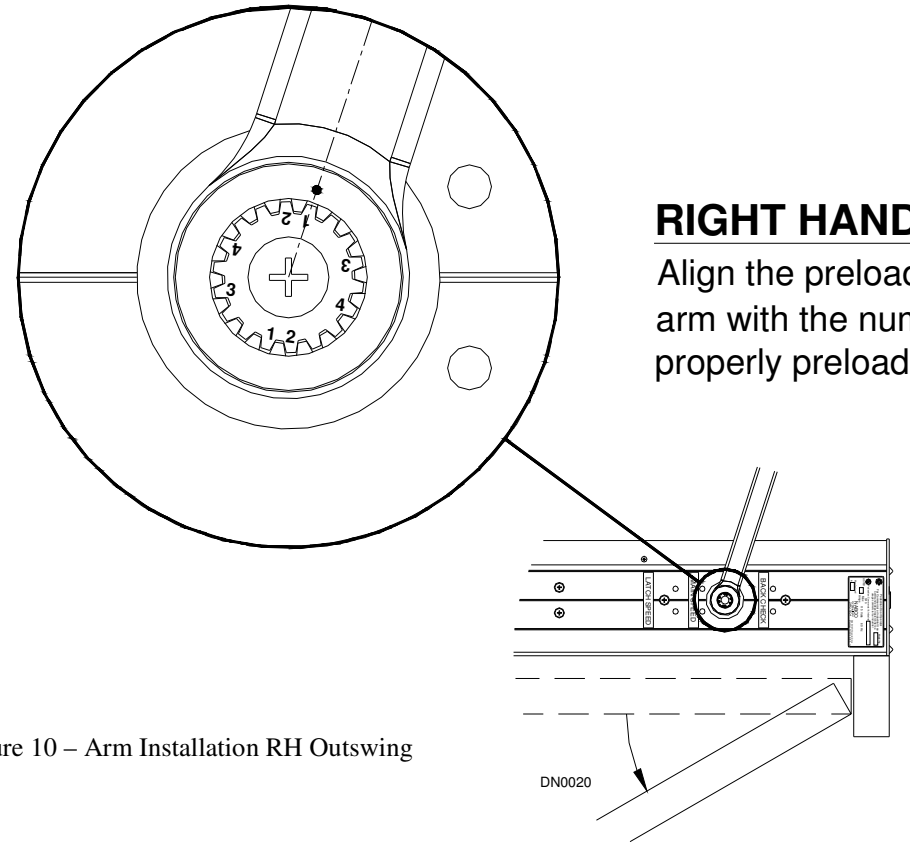


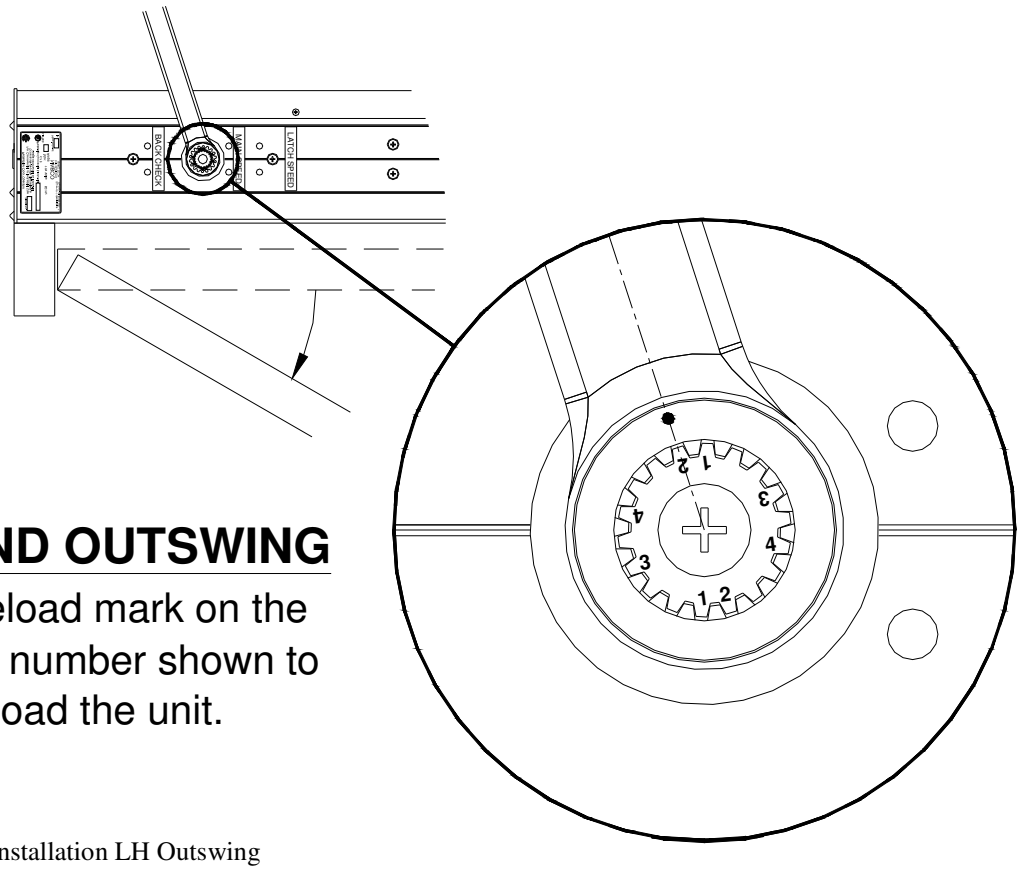
Figure 9 – Preloading the Door



RIGHT HAND OUTSWING

Align the preload mark on the arm with the number shown to properly preload the unit.

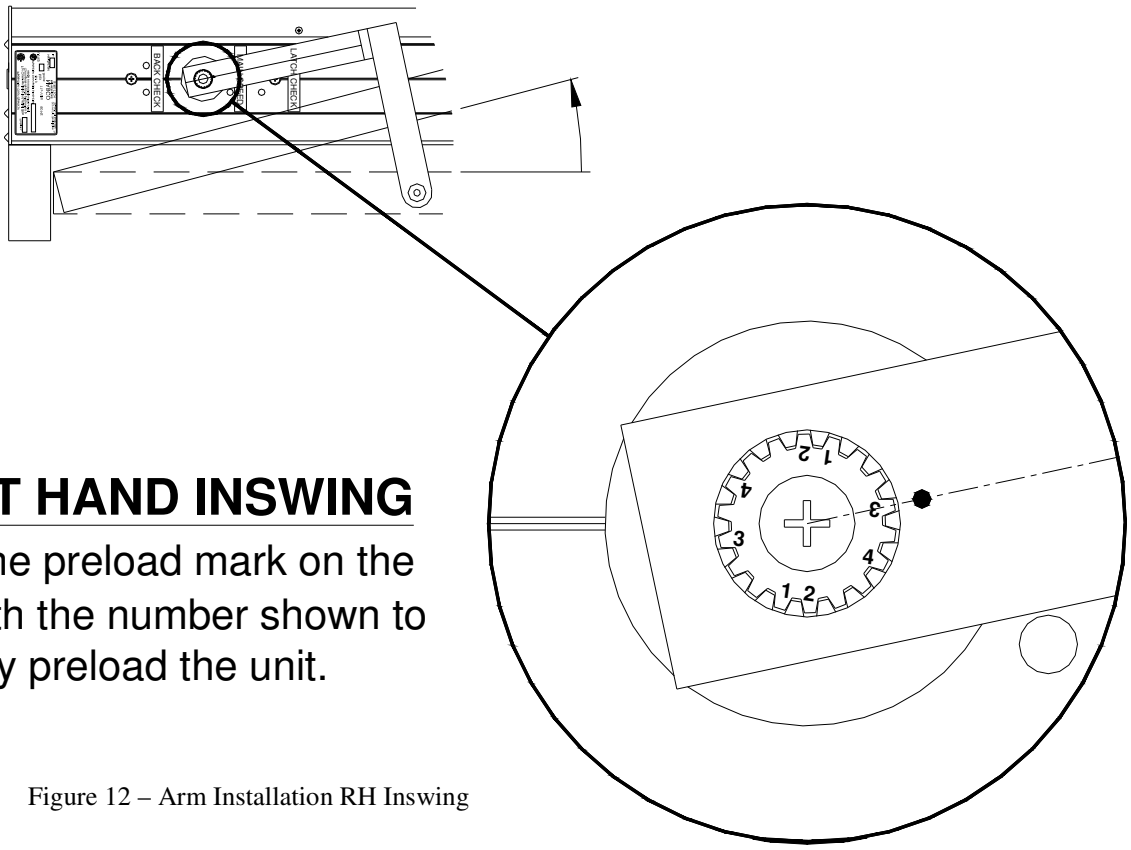
Figure 10 – Arm Installation RH Outswing



LEFT HAND OUTSWING

Align the preload mark on the arm with the number shown to properly preload the unit.

Figure 11 – Arm Installation LH Outswing



RIGHT HAND INSWING

Align the preload mark on the arm with the number shown to properly preload the unit.

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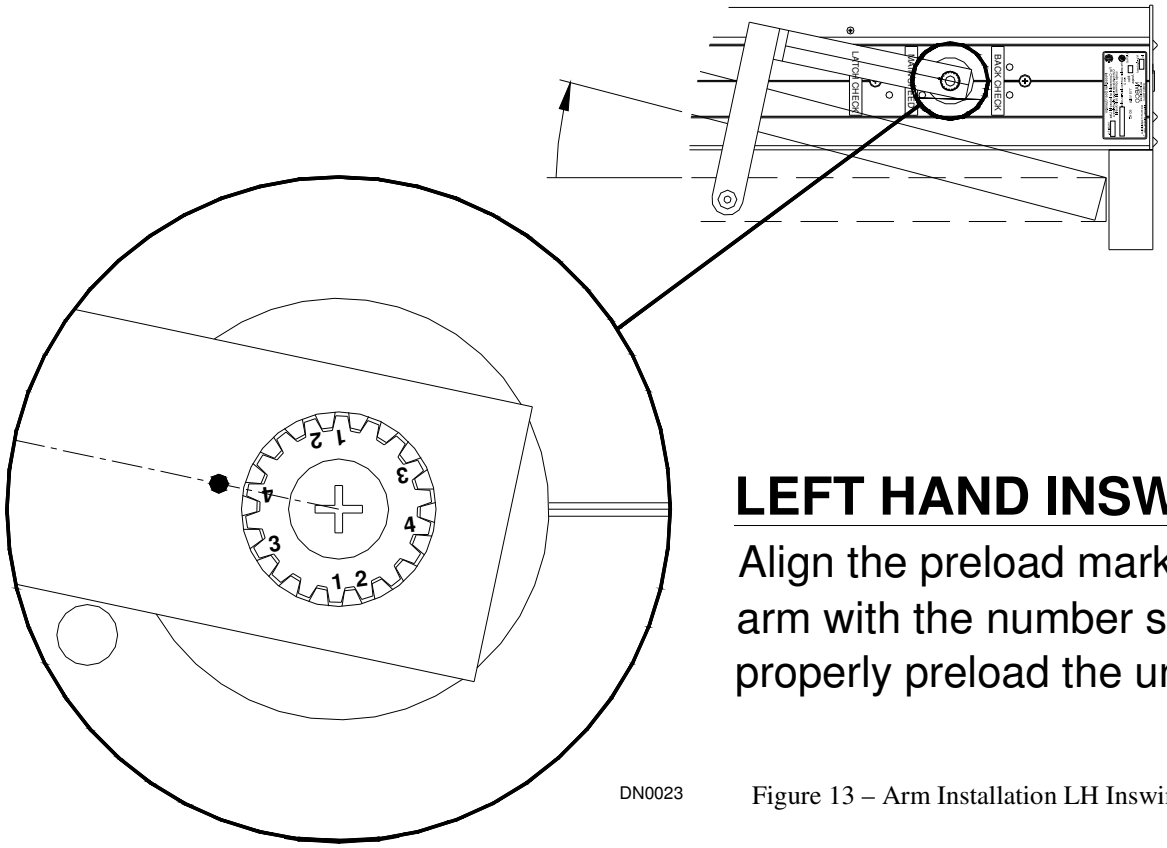
Figure 12 – Arm Installation RH Inswing

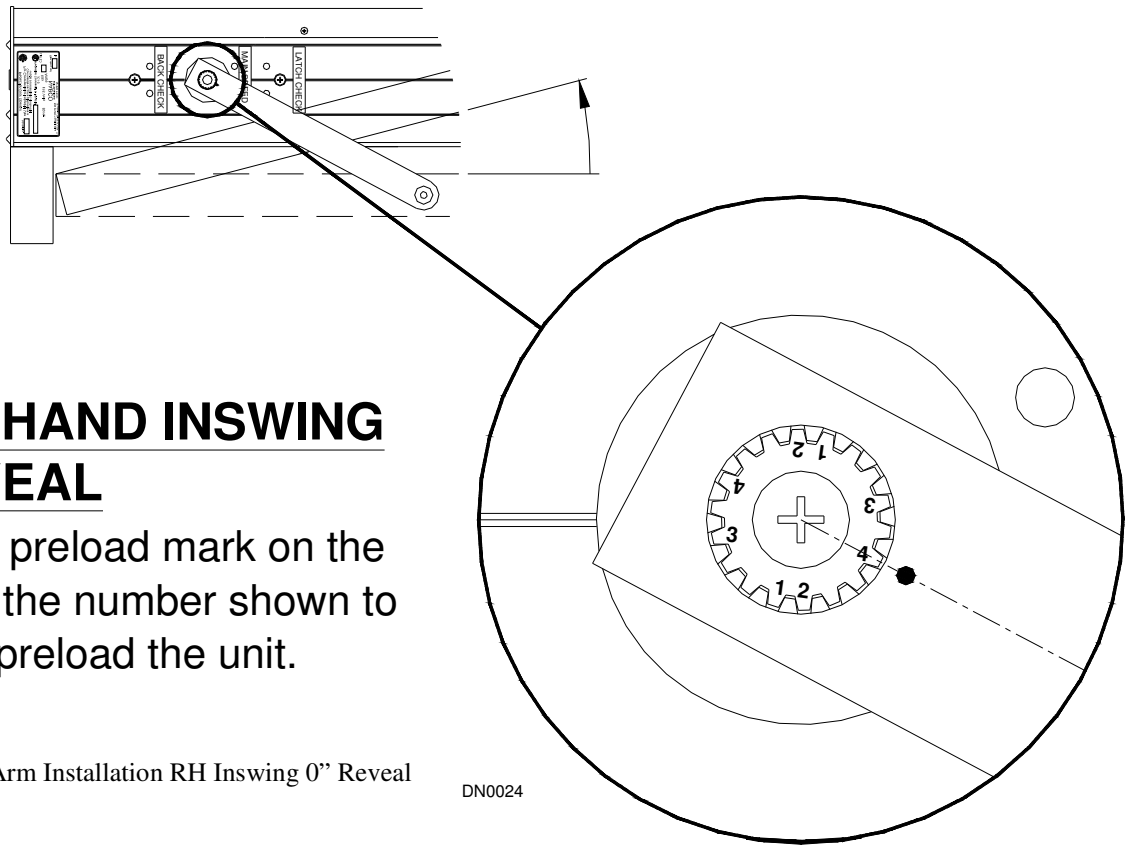


LEFT HAND INSWING

Align the preload mark on the arm with the number shown to properly preload the unit.

DN0023

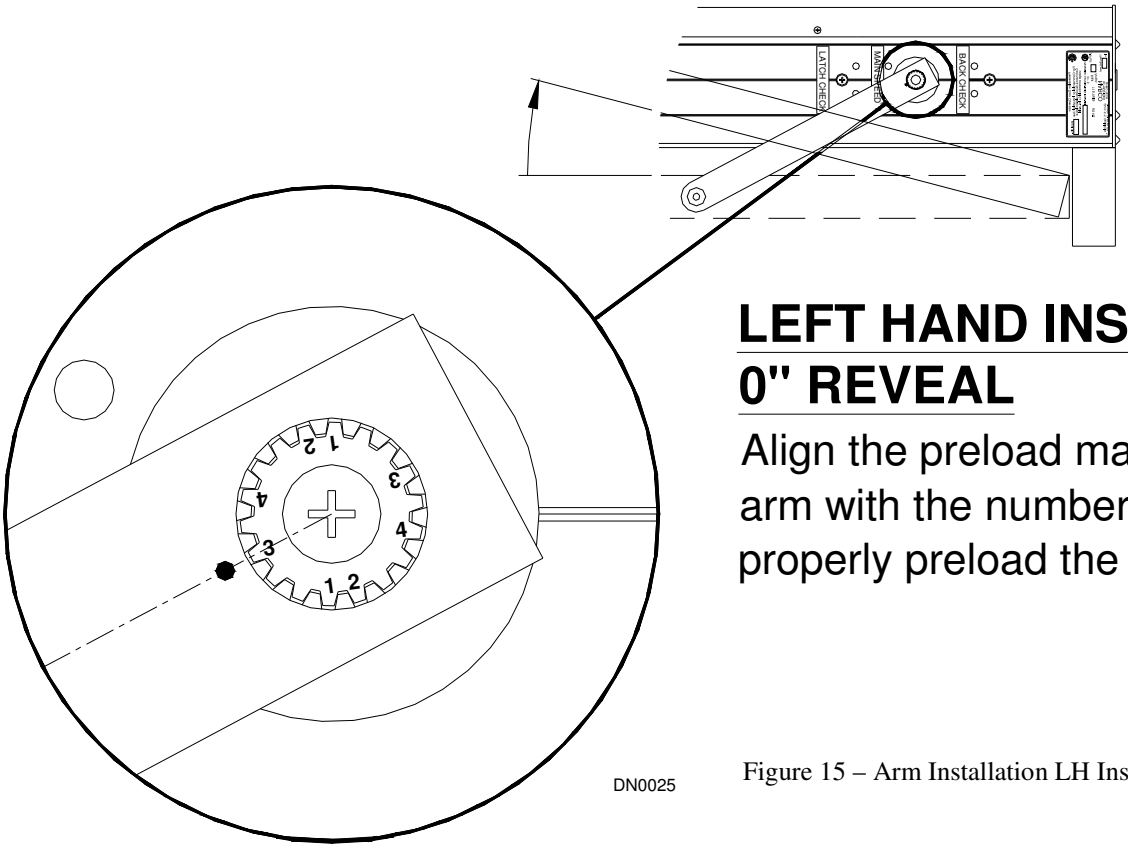
Figure 13 – Arm Installation LH Inswing



RIGHT HAND INSWING 0" REVEAL

Align the preload mark on the arm with the number shown to properly preload the unit.

Figure 14 – Arm Installation RH Inswing 0" Reveal



LEFT HAND INSWING 0" REVEAL

Align the preload mark on the arm with the number shown to properly preload the unit.

Figure 15 – Arm Installation LH Inswing 0" Reveal

Fastening Outswing Shoe & Inswing Track to Door

Secure the track or shoe for the arm to the door in the holes drilled earlier. Use ¼-20 sex bolts through the door (hollow doors) or #14 x 1-1/2" long wood screws (solid doors).

Note: If the configuration of your inswing door requires the straight arm, it may be necessary to install the spacer between the door and track. If the door is not flush with the door frame, the spacer is required to offset the track slightly, the arm will hit the bottom of the header before the door is completely closed and the door will remain slightly ajar.

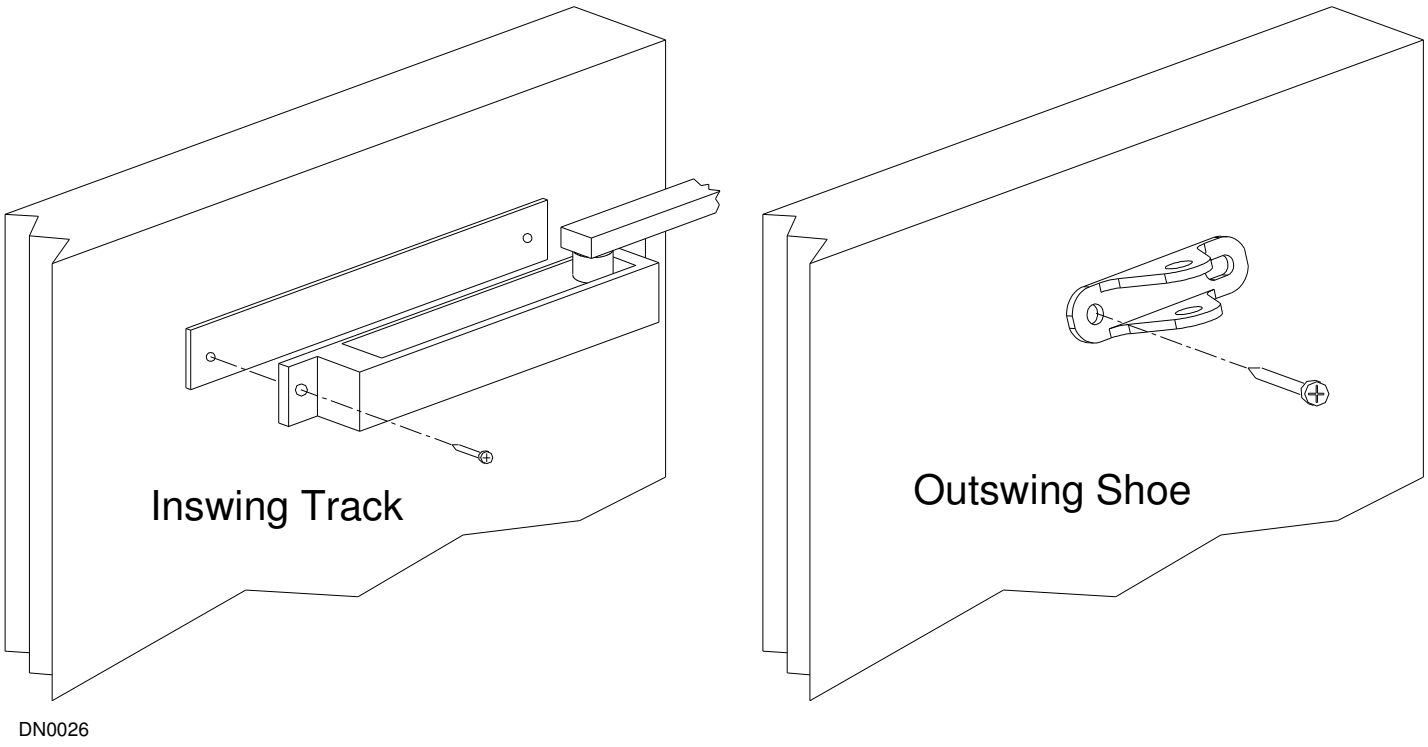
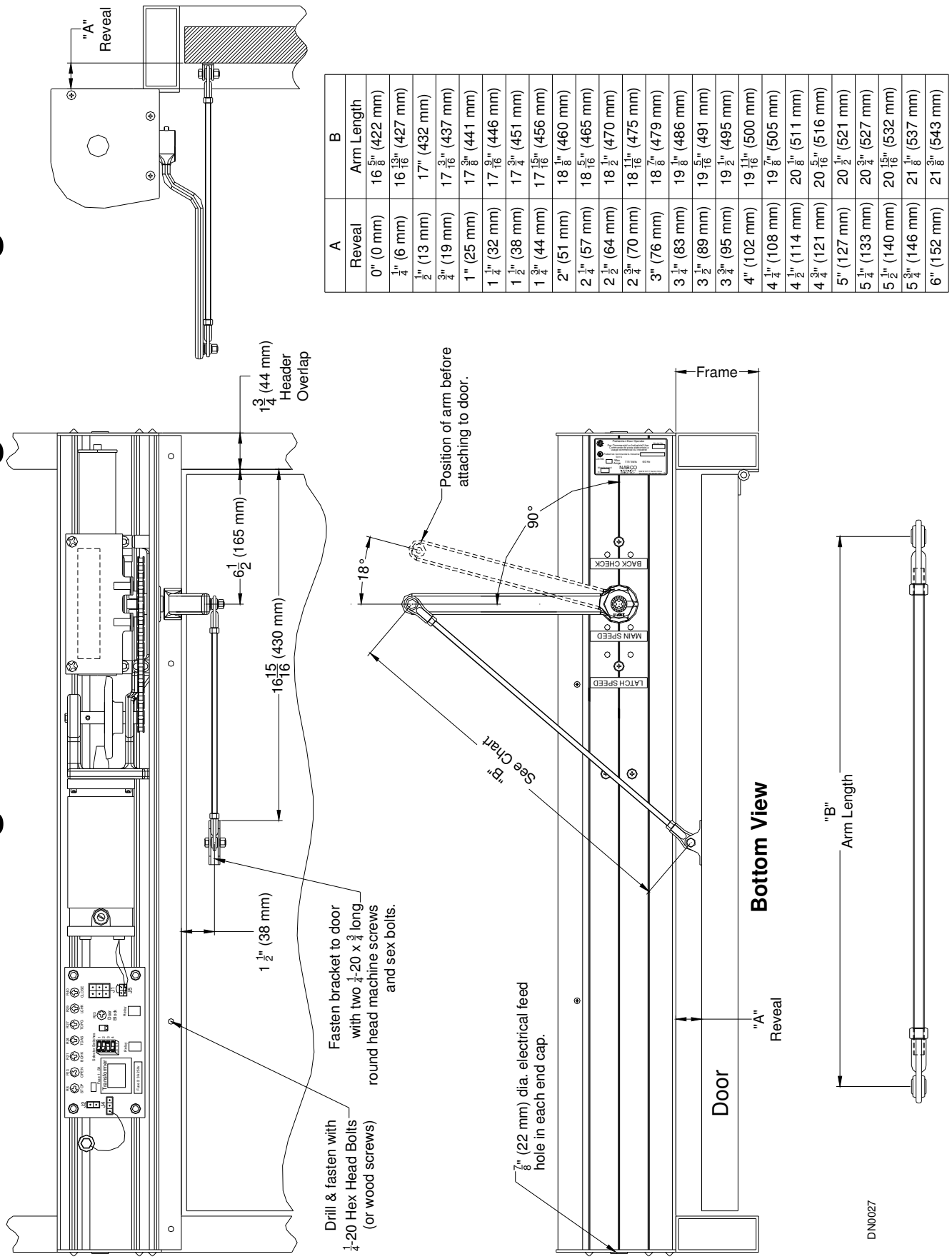


Figure 16 – Installing Track and Spacer to Door.

Mounting of Unit

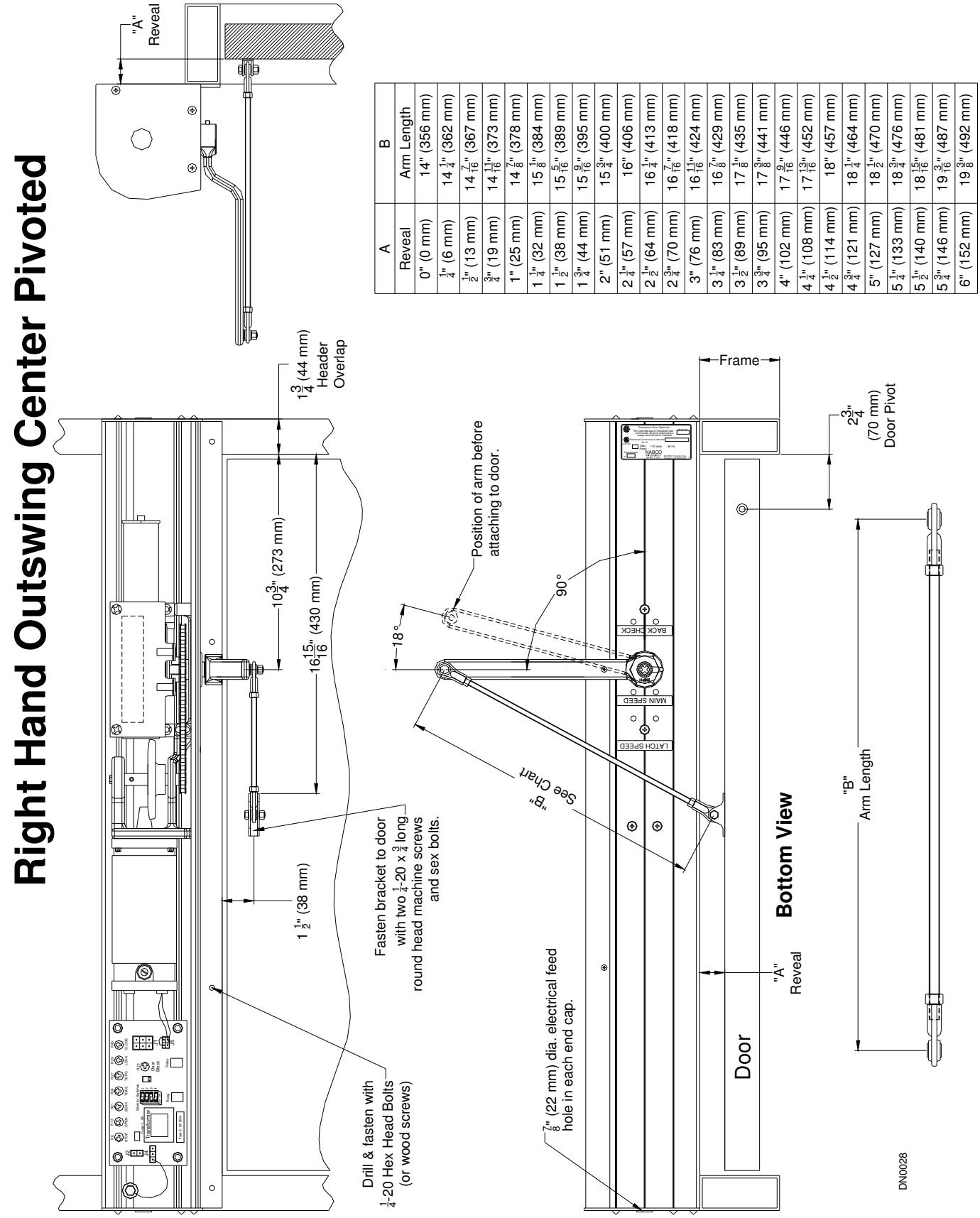
For a secure installation of the operator frame, use ¼-20 machine screws for hollow metal and aluminum door frames or #14-2 ¾" long wood screws for wood frames. Additional fastening into the building may be necessary to prevent the operator from moving during operation.

Right Hand Outswing Butt Hinge



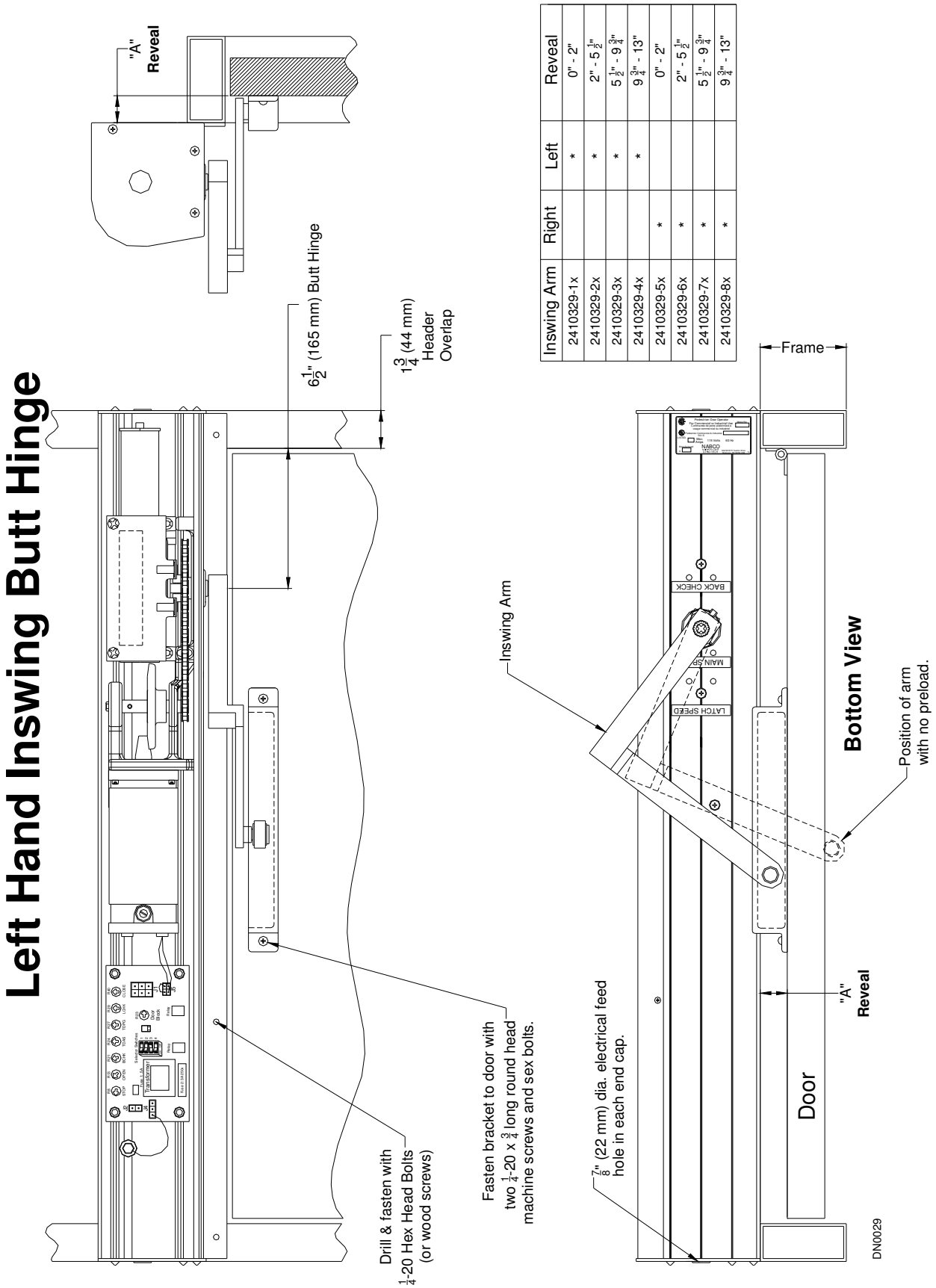
A	B
Reveal	Arm Length
0" (0 mm)	16 5/8" (422 mm)
1/4" (6 mm)	16 13/16" (427 mm)
1/2" (13 mm)	17" (432 mm)
3/4" (19 mm)	17 3/16" (437 mm)
1" (25 mm)	17 3/8" (441 mm)
1 1/4" (32 mm)	17 9/16" (446 mm)
1 1/2" (38 mm)	17 3/4" (451 mm)
1 3/4" (44 mm)	17 15/16" (456 mm)
2" (51 mm)	18 1/8" (460 mm)
2 1/4" (57 mm)	18 5/16" (465 mm)
2 1/2" (64 mm)	18 1/2" (470 mm)
2 3/4" (70 mm)	18 11/16" (475 mm)
3" (76 mm)	18 7/8" (479 mm)
3 1/4" (83 mm)	19 1/8" (486 mm)
3 1/2" (89 mm)	19 5/16" (491 mm)
3 3/4" (95 mm)	19 1/2" (495 mm)
4" (102 mm)	19 11/16" (500 mm)
4 1/4" (108 mm)	19 7/8" (505 mm)
4 1/2" (114 mm)	20 1/8" (511 mm)
4 3/4" (121 mm)	20 5/16" (516 mm)
5" (127 mm)	20 1/2" (521 mm)
5 1/4" (133 mm)	20 3/4" (527 mm)
5 1/2" (140 mm)	20 15/16" (532 mm)
5 3/4" (146 mm)	21 1/8" (537 mm)
6" (152 mm)	21 3/8" (543 mm)

Figure 17 – Installation Details, Right Hand Outswing Butt Hinge.



A	B
Reveal	Arm Length
0" (0 mm)	14" (356 mm)
1/4" (6 mm)	14 1/4" (362 mm)
1/2" (13 mm)	14 7/16" (367 mm)
3/4" (19 mm)	14 11/16" (373 mm)
1" (25 mm)	14 7/8" (378 mm)
1 1/4" (32 mm)	15 1/8" (384 mm)
1 1/2" (38 mm)	15 5/16" (389 mm)
1 3/4" (44 mm)	15 9/16" (395 mm)
2" (51 mm)	15 3/4" (400 mm)
2 1/4" (57 mm)	16" (406 mm)
2 1/2" (64 mm)	16 1/4" (413 mm)
2 3/4" (70 mm)	16 7/16" (418 mm)
3" (76 mm)	16 11/16" (424 mm)
3 1/4" (83 mm)	16 7/8" (429 mm)
3 1/2" (89 mm)	17 1/8" (435 mm)
3 3/4" (95 mm)	17 3/8" (441 mm)
4" (102 mm)	17 9/16" (446 mm)
4 1/4" (108 mm)	17 13/16" (452 mm)
4 1/2" (114 mm)	18" (457 mm)
4 3/4" (121 mm)	18 1/4" (464 mm)
5" (127 mm)	18 1/2" (470 mm)
5 1/4" (133 mm)	18 3/4" (476 mm)
5 1/2" (140 mm)	18 15/16" (481 mm)
5 3/4" (146 mm)	19 3/16" (487 mm)
6" (152 mm)	19 3/8" (492 mm)

Figure 18 – Installation Details, Right Hand Outswing Center Pivoted.



Inswing Arm	Right	Left	Reveal
2410329-1x		*	0" - 2"
2410329-2x		*	2" - 5½"
2410329-3x		*	5½" - 9¾"
2410329-4x		*	9¾" - 13"
2410329-5x	*		0" - 2"
2410329-6x	*		2" - 5½"
2410329-7x	*		5½" - 9¾"
2410329-8x	*		9¾" - 13"

Figure 19 – Installation Details, Left Hand Inswing Butt Hinge

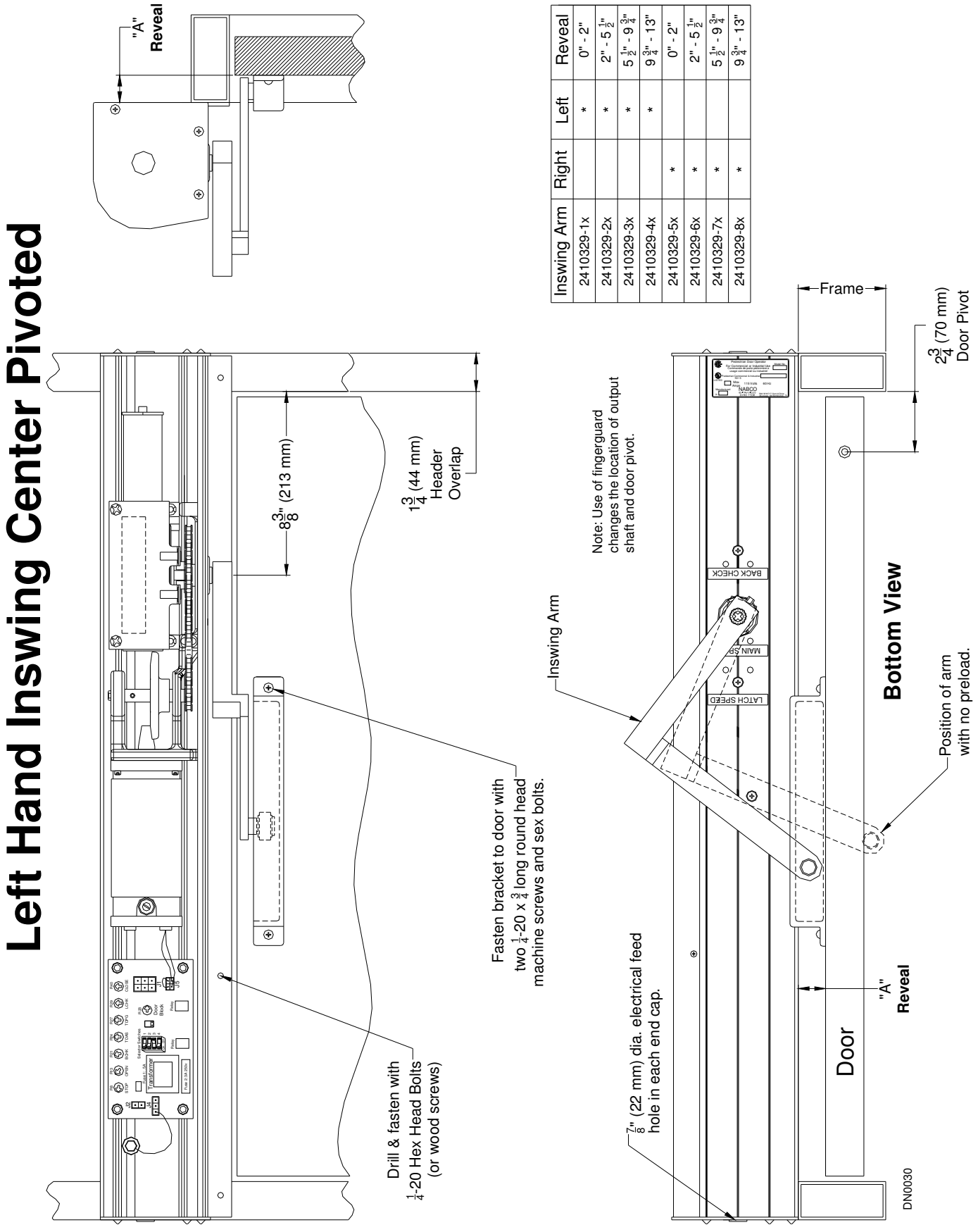


Figure 20 – Installation Details, Left Hand Inswing Center Pivoted

Open door to the desired fully open position. Prop the door open in this position. Locate door stop as shown. Using door stop as template, drill two 7/32" mounting holes into the header. Secure the door stop with two 1/4 -20 x 1" screws provided. Release the door.

Installation of Door Stop

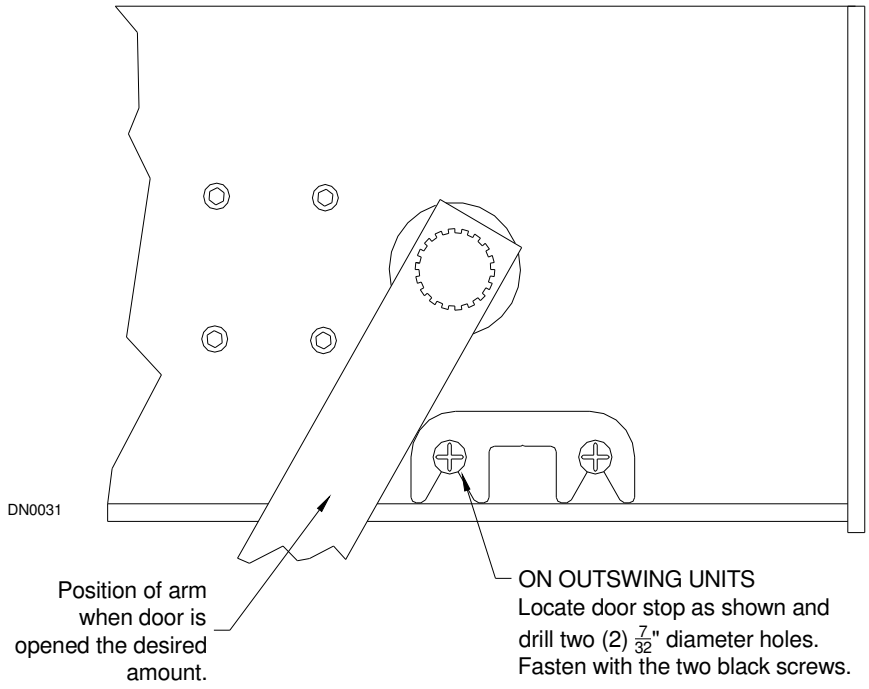


Figure 21 – Door Stop Location

Hydraulic Closer

The door closer has an adjustment for "opening force" when the doors is used in a manual mode that is preset at the factory. The setting is based on a 30-inch exterior door and a 38-inch interior door. Adjustments are made using an Allen wrench as shown in **Figure 22**. Turn the screw clockwise for larger doors and counterclockwise for smaller doors.

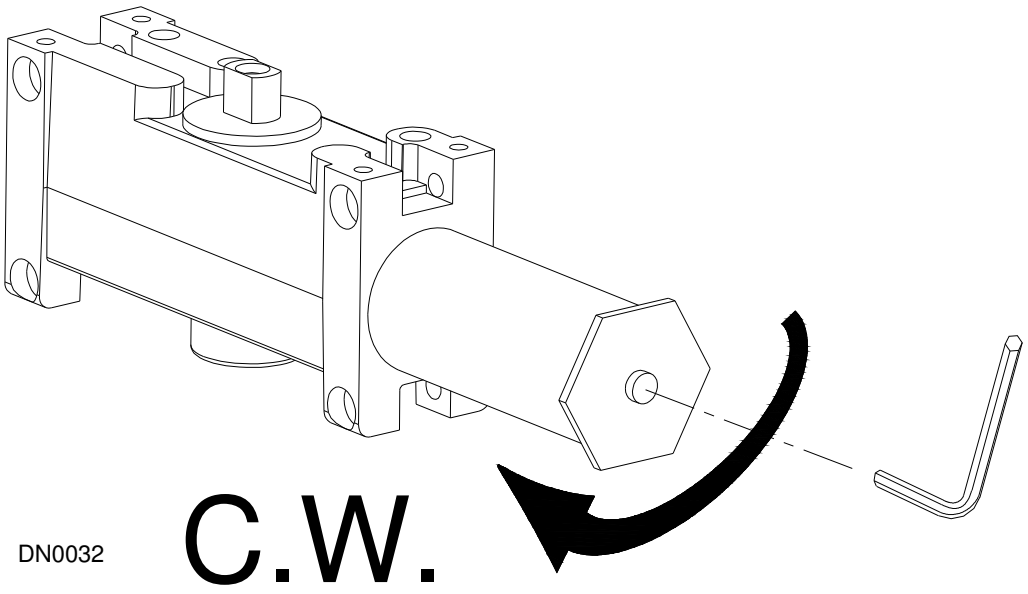


Figure 22 – Hydraulic Closer

Door Closer Adjustment Procedure

The hydraulic closer must be operating properly **BEFORE** the Magnum control is adjusted. See figure 23.

Warning: Improperly installed or adjusted closers may cause property damage or personal injury. Please follow these instructions carefully.

Do not allow the door to slam into the frame. A "normal" closing time from a 90º open position is five to seven seconds, evenly divided between main swing speed and latch swing speed. Use the furnished hex key to adjust speed.

1. Remove one lead from the motor.
2. Adjust the main and latch speeds.

- To slow MAIN CLOSING SPEED of door, turn the main speed screw clockwise. Note: door closing speed is governed solely by the hydraulic closer on the GT-710. The CLOSE adjustment on the Magnum control is not functional on the GT-710.
- To slow LATCH SPEED of door, turn the latch speed screw clockwise.

3. Reconnect motor lead.

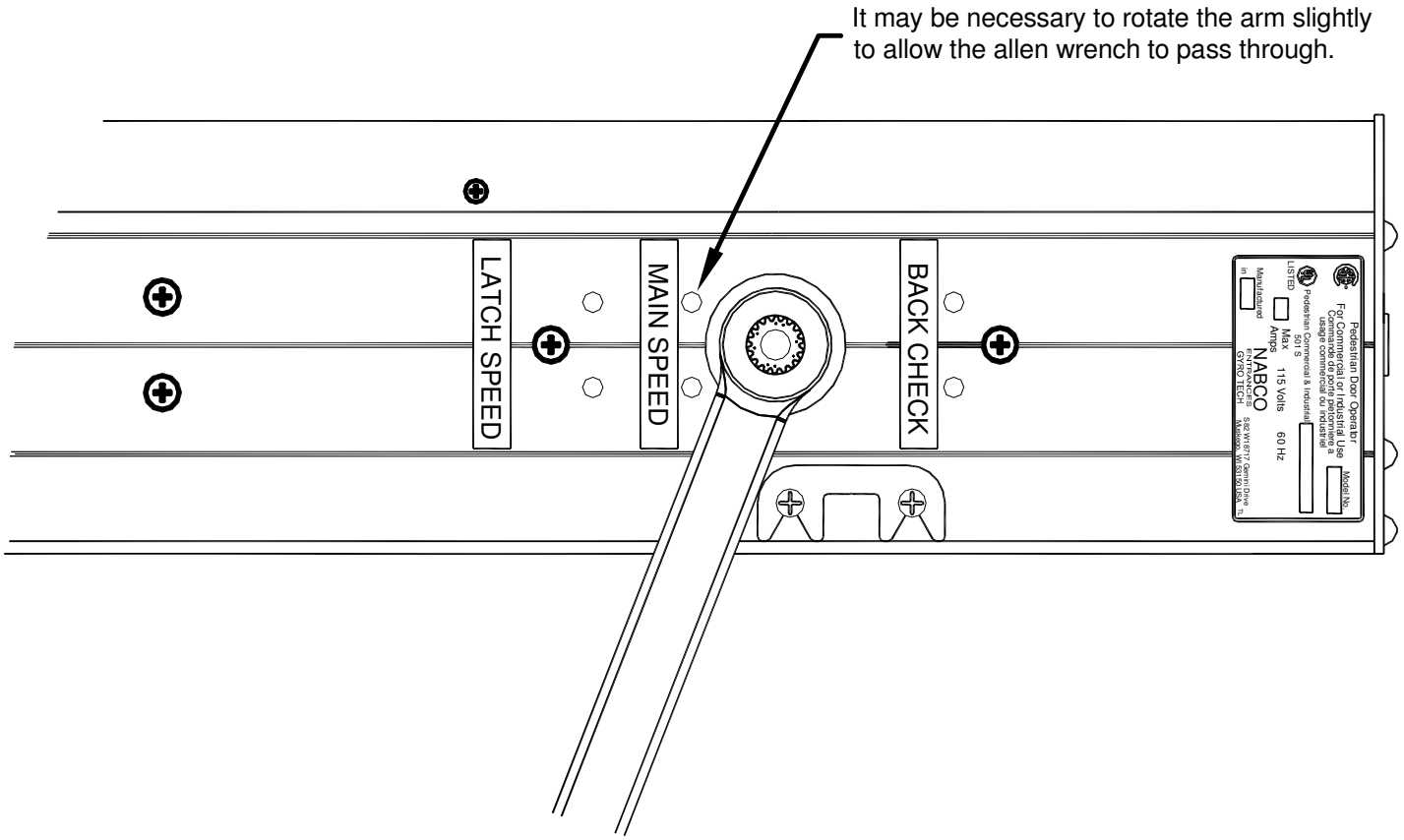


Figure 23 – Hydraulic Adjustment

Setting Back Check and Door Closed Switches

The GT 710 has two magnetic switches that control the back check location and monitors the door closed position. The back check magnet must be installed before the unit is tested. It signals the motor to slow down so the door does not slam open. The door closed magnet is used to signal the control board that the door is closed. It is used in applications where a sensor is on the swing side of the door and wired into the safety with lockout circuit. The switches are closed by magnets installed by the installer onto the main sprocket gear.

The magnets are not inside the header!

Locate the ¼-inch square and 1-inch long magnets in the parts bag. To position the magnets, use the appropriate configuration from **Figures 24 through 31**.

Start with the door in the closed position. Place a magnet under the door closed switch with the white mark facing up. This magnet will deactivate the optional presence detector as the door begins to open.

Position the back check magnet using the appropriate configuration from **Figures 24 through 31**. This magnet will command the control to reduce the door speed to the setting of the back check potentiometer. Improper placement of this magnet can cause the door to slam into the door stop.

After power is applied to the unit and the position of the magnets is "fine tuned" to make the door functional, the magnets should be epoxied in place.

No Electronic Back Check with Hydraulic Back Check

1.) Disconnect power to board. (Unplug J4 connector on board.)
2.) Switch should be set in **Low Energy** position. (Towards top of board.)
3.) Set Current Limit switch to maximum. (Clockwise)
4.) Manually open door to **90°** (full open) and position magnet under back check switch.
5.) Adjust hydraulic closer spring tension closing force to return a door to the fully closed position.
6.) Adjust hydraulic closer latch check to desired pressure.
7.) Adjust hydraulic closer back check to maximum setting. (Clockwise)
8.) Turn power on. (Reconnect J4 plug on board.)
9.) Set operator on hold open.
10.) Reduce hydraulic back check screw (counter clockwise) until door opens to 90°.
11.) Adjust power opening speed as required.
12.) Fine tune any additional adjustments as outlined in the installation manual.

(Note: The magnum back check speed is not necessary to adjust since the magnet is set to 90°.)

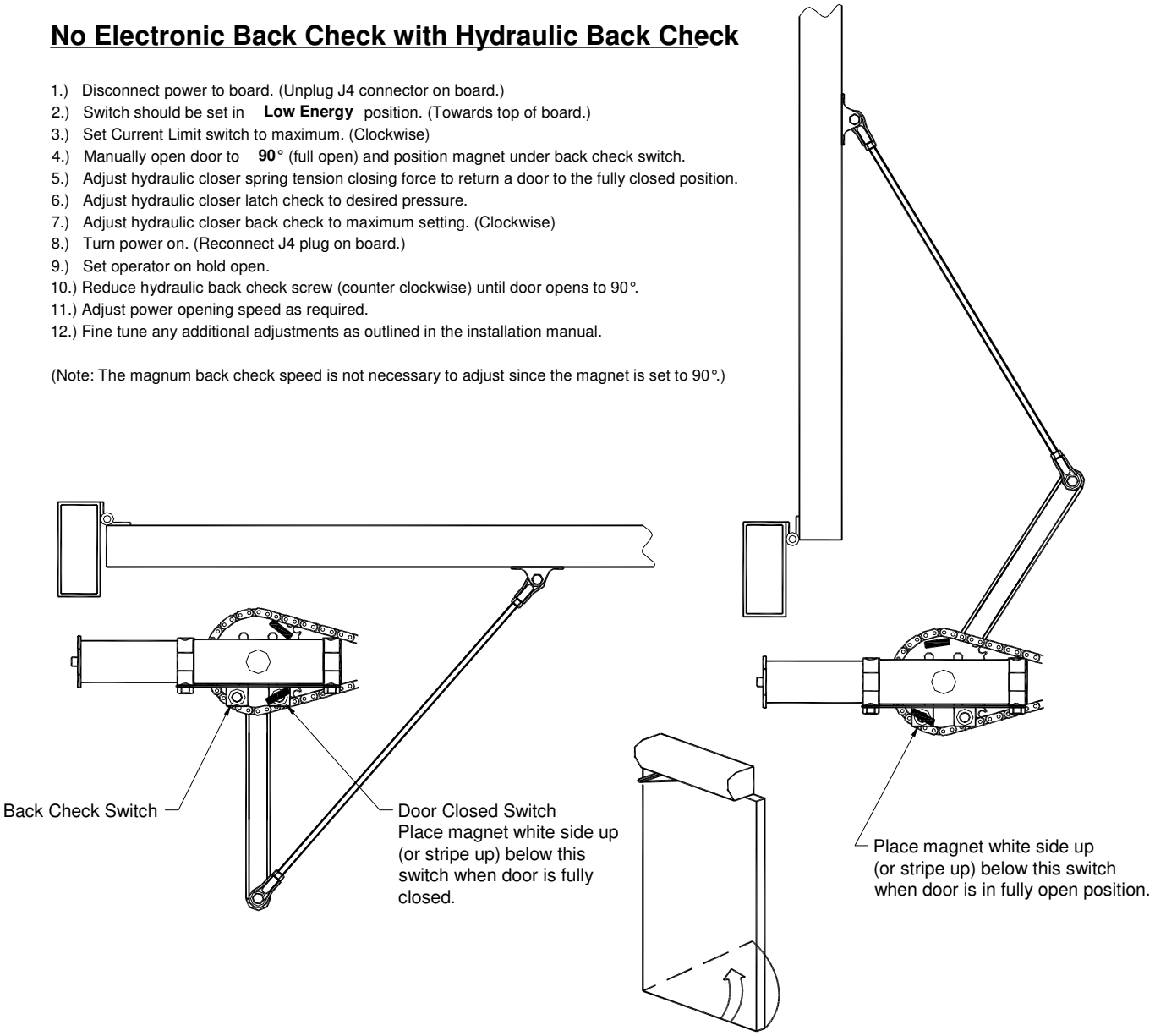


Figure 24 - Left Hand Outswing

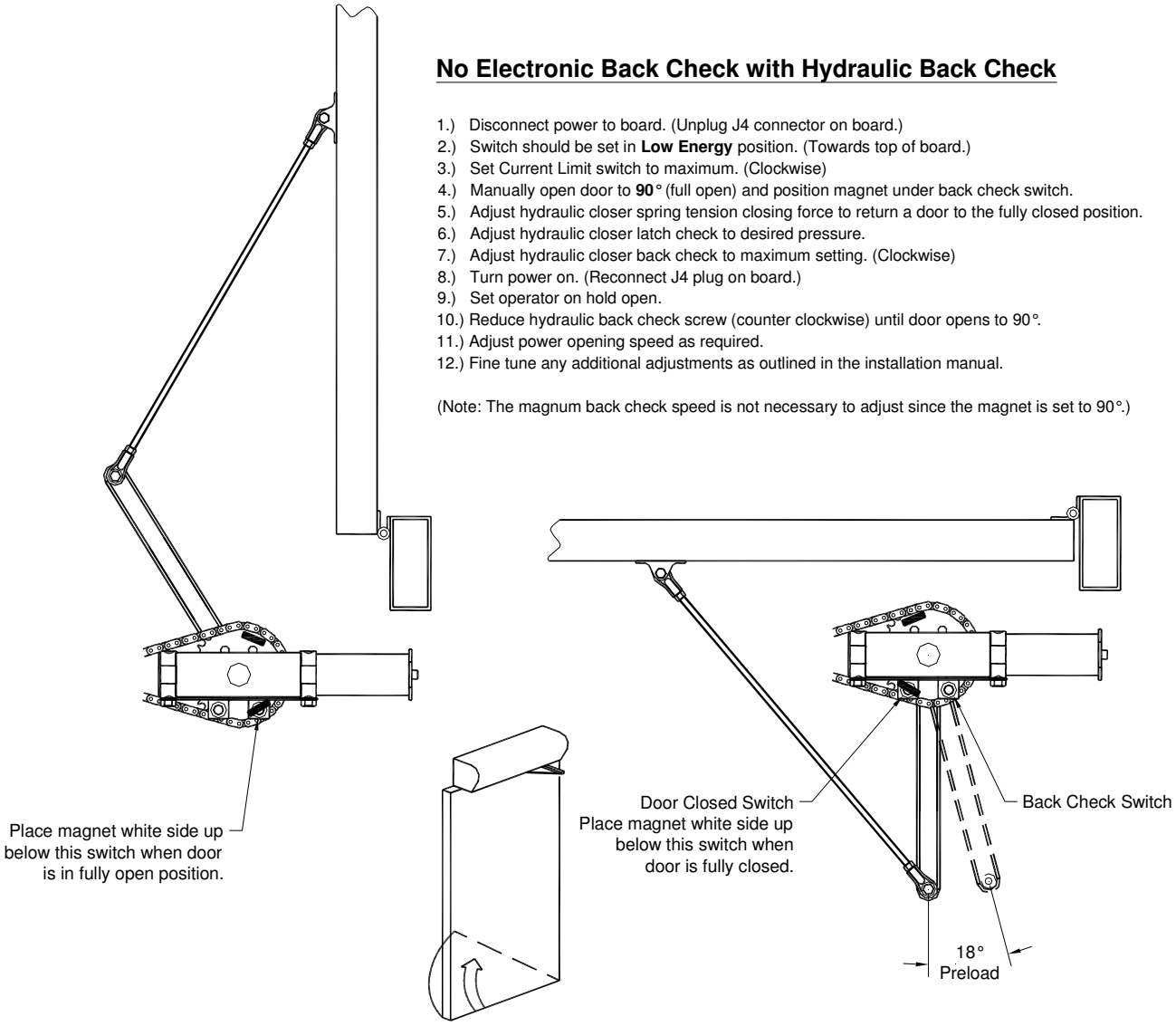
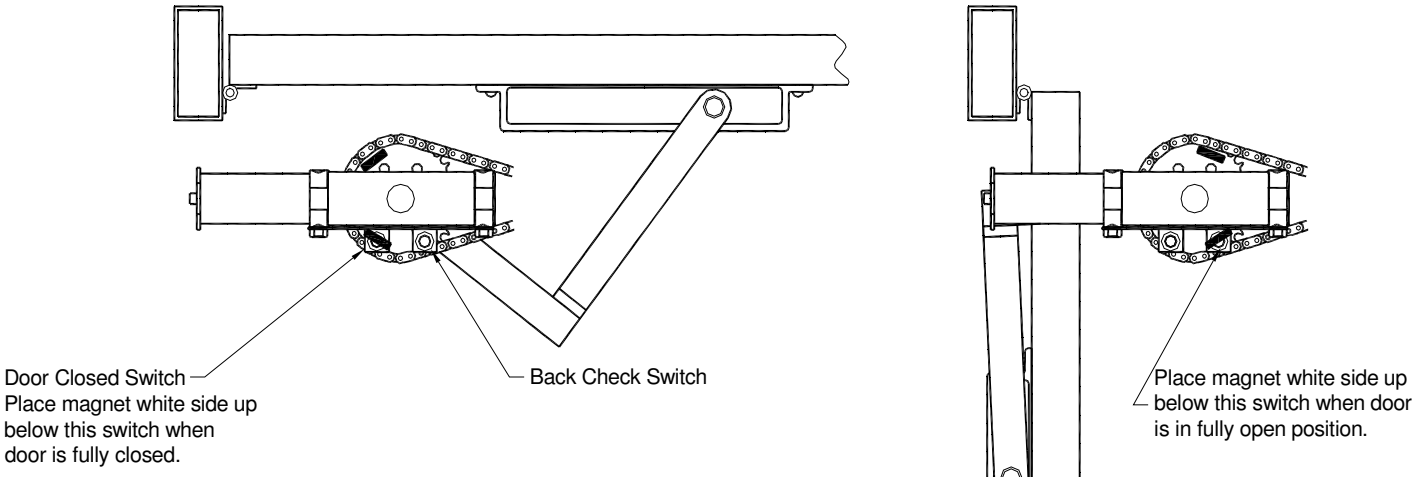


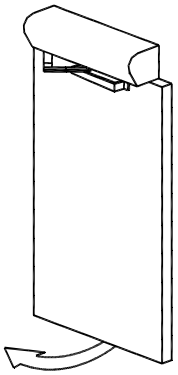
Figure 25 - Right Hand Outswing



No Electronic Back Check with Hydraulic Back Check

1.) Disconnect power to board. (Unplug J4 connector on board.)
2.) Switch should be set in **Low Energy** position. (Towards top of board.)
3.) Set Current Limit switch to maximum. (Clockwise)
4.) Manually open door to **90°** (full open) and position magnet under back check switch.
5.) Adjust hydraulic closer spring tension closing force to return a door to the fully closed position.
6.) Adjust hydraulic closer latch check to desired pressure.
7.) Adjust hydraulic closer back check to maximum setting. (Clockwise)
8.) Turn power on. (Reconnect J4 plug on board.)
9.) Set operator on hold open.
10.) Reduce hydraulic back check screw (counter clockwise) until door opens to 90°.
11.) Adjust power opening speed as required.
12.) Fine tune any additional adjustments as outlined in the installation manual.

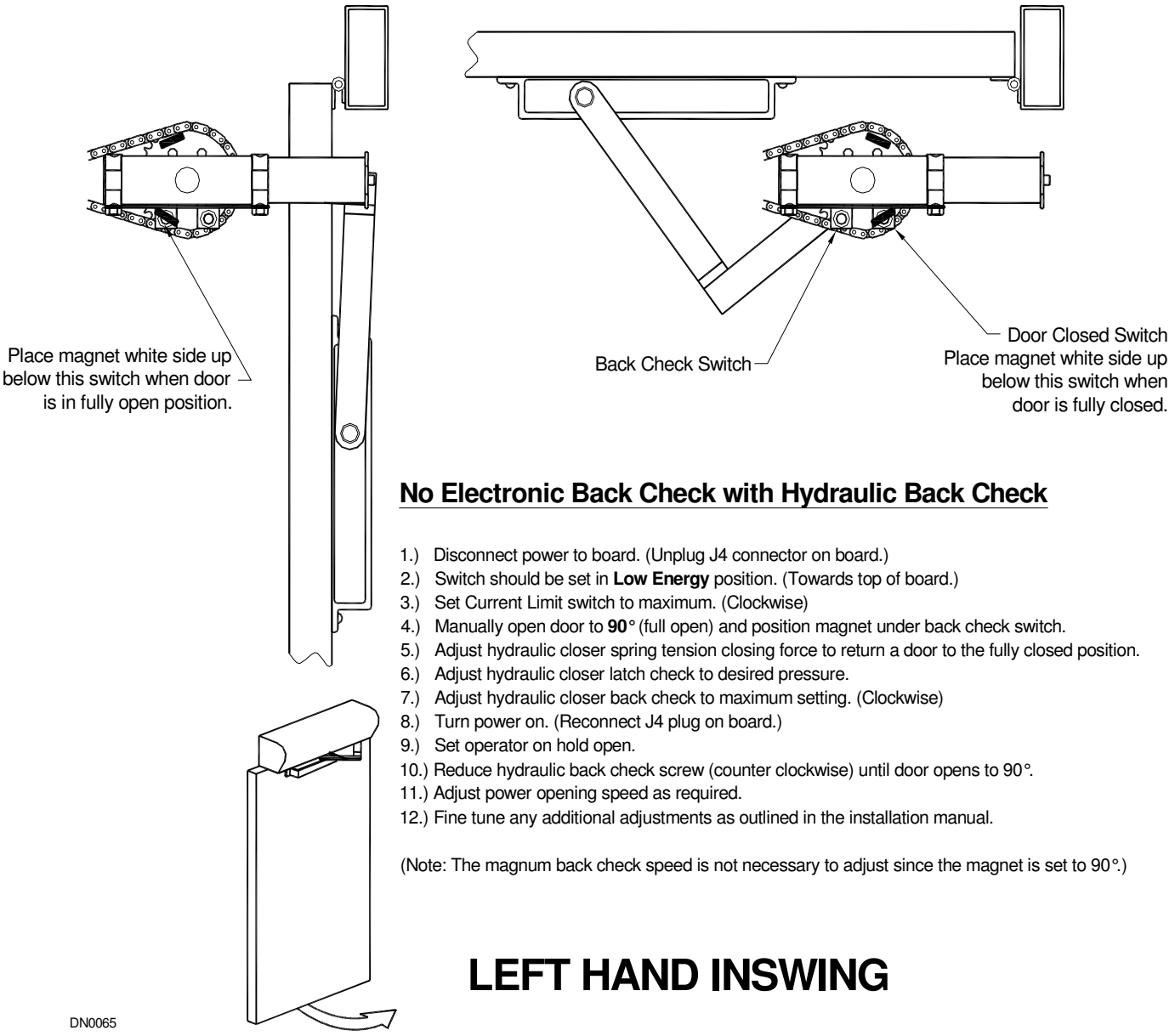
(Note: The magnum back check speed is not necessary to adjust since the magnet is set to 90°.)



DN0064

RIGHT HAND INSWING

Figure 26 - Right Hand Inswing



No Electronic Back Check with Hydraulic Back Check

1.) Disconnect power to board. (Unplug J4 connector on board.)
2.) Switch should be set in **Low Energy** position. (Towards top of board.)
3.) Set Current Limit switch to maximum. (Clockwise)
4.) Manually open door to **90°** (full open) and position magnet under back check switch.
5.) Adjust hydraulic closer spring tension closing force to return a door to the fully closed position.
6.) Adjust hydraulic closer latch check to desired pressure.
7.) Adjust hydraulic closer back check to maximum setting. (Clockwise)
8.) Turn power on. (Reconnect J4 plug on board.)
9.) Set operator on hold open.
10.) Reduce hydraulic back check screw (counter clockwise) until door opens to 90°.
11.) Adjust power opening speed as required.
12.) Fine tune any additional adjustments as outlined in the installation manual.

(Note: The magnum back check speed is not necessary to adjust since the magnet is set to 90°.)

LEFT HAND INSWING

Figure 27 - Left Hand Inswing

Electronic Back Check & Hydraulic Back Check

1.) Disconnect power to board. (Unplug J4 connector on board.)
2.) Switch should be set in **Standard** position. (Towards bottom of board.)
3.) Set **Current Limit** switch to 2 o'clock.
4.) Set **Back Check Speed** switch to maximum. (Clockwise)
5.) Manually open door **80°** and position magnet under back check switch.
6.) Adjust hydraulic closer spring tension closing force to return a door to the fully closed position.
7.) Adjust hydraulic closer latch check to desired pressure.
8.) Adjust hydraulic closer back check to minimum setting. (Counter Clockwise)
9.) Turn power on. (Reconnect J4 plug on board.)
10.) Set **Open Speed** switch to comply with ANSI A156.19 based on size and weight of door.
11.) Adjust hydraulic closer back check to maximum setting. (Clockwise)
12.) Set on hold open.
13.) Reduce hydraulic back check screw (counter clockwise) until the door opens to 90°.
14.) Fine tune and additional adjustments as outlined in the installation manual.

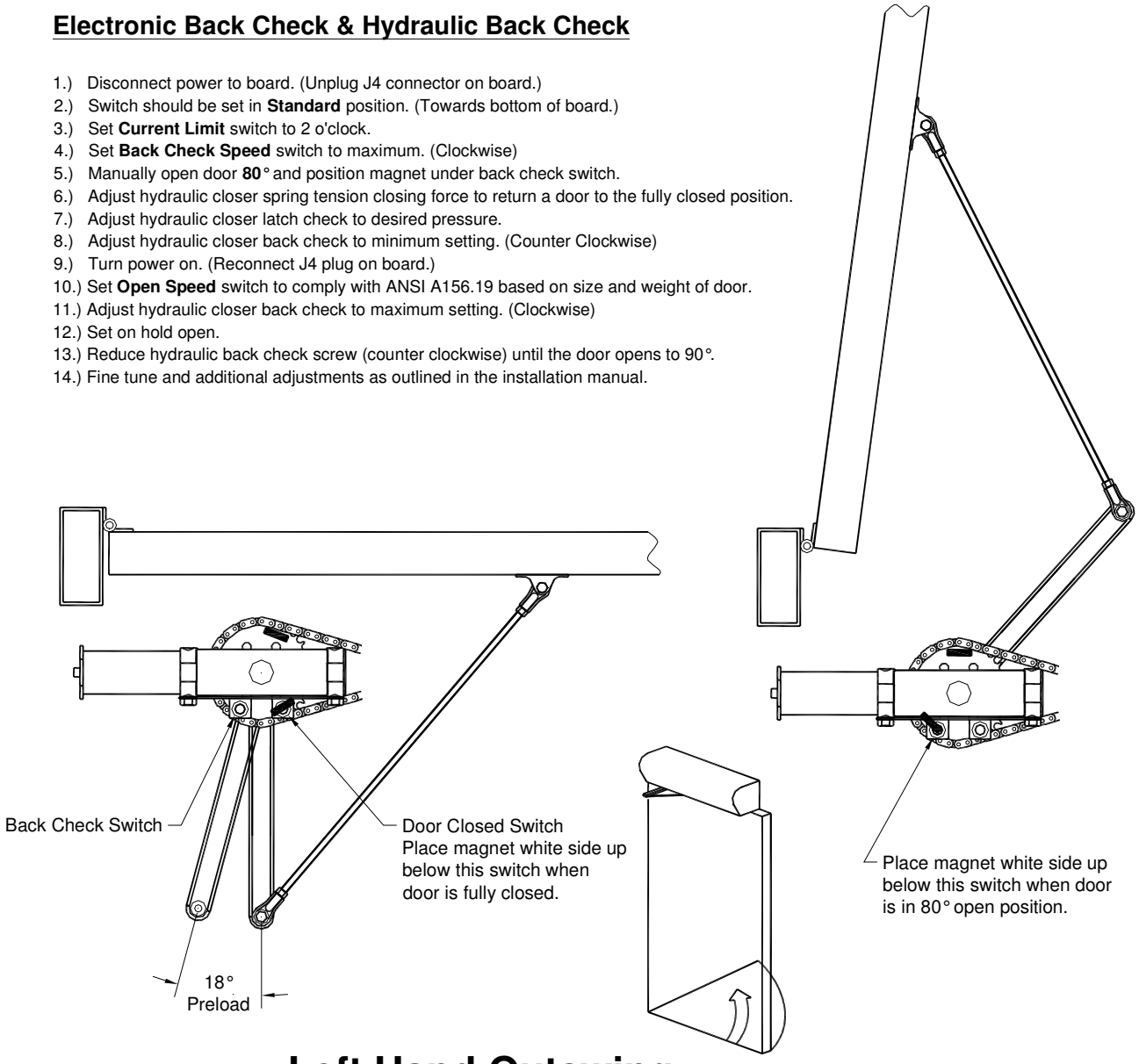


Figure 28 - Left Hand Outswing

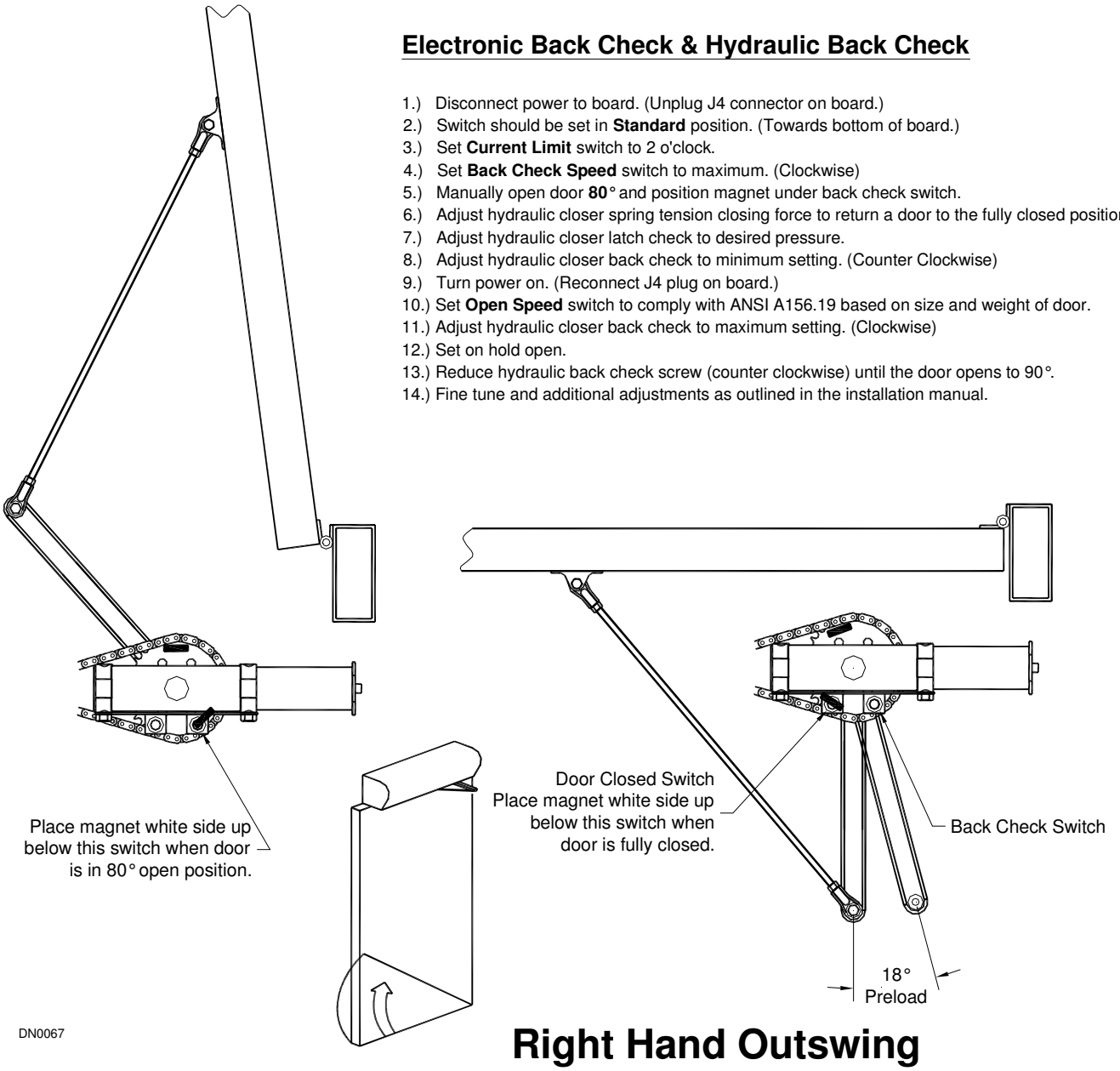
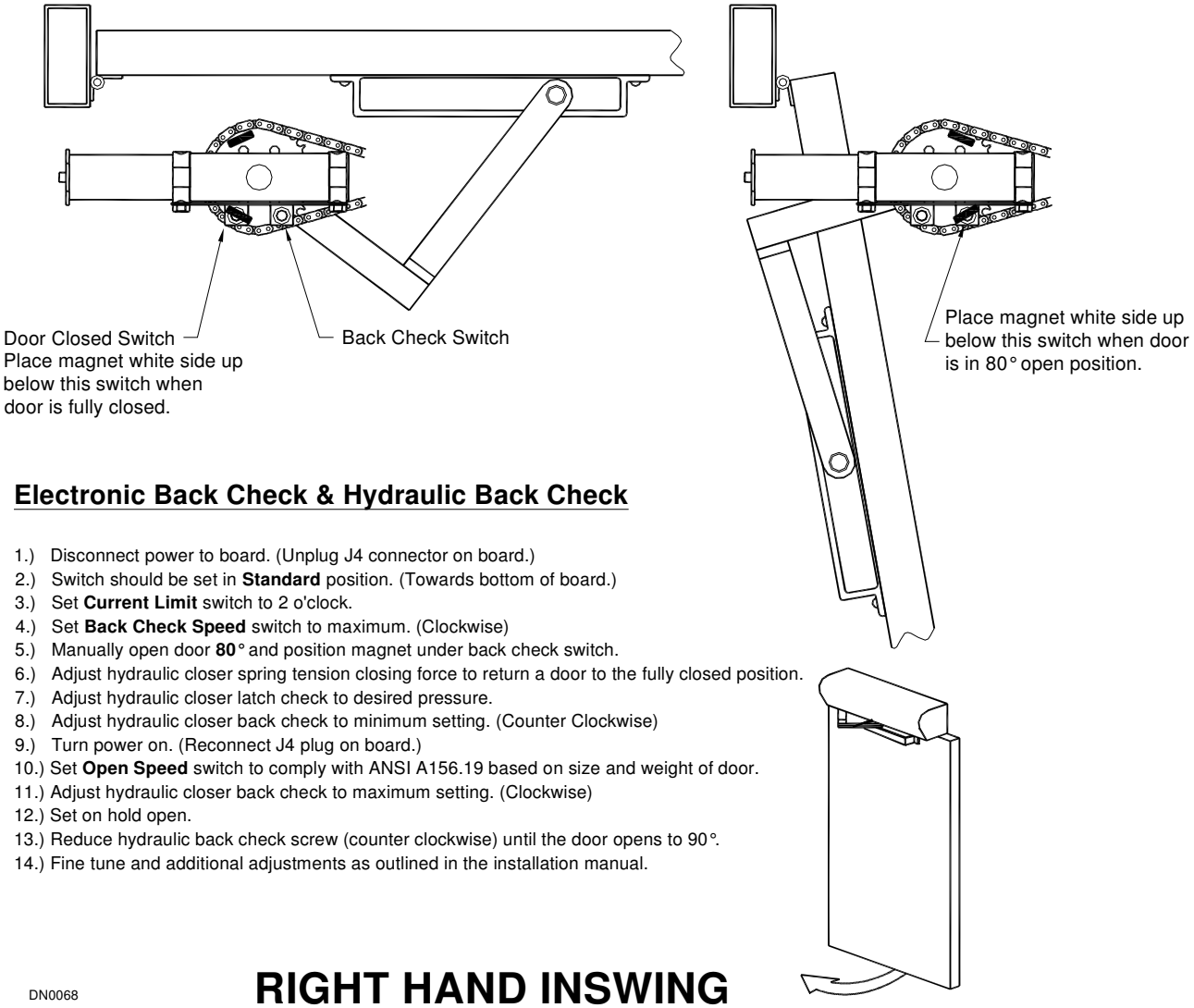


Figure 29 - Right Hand Outswing



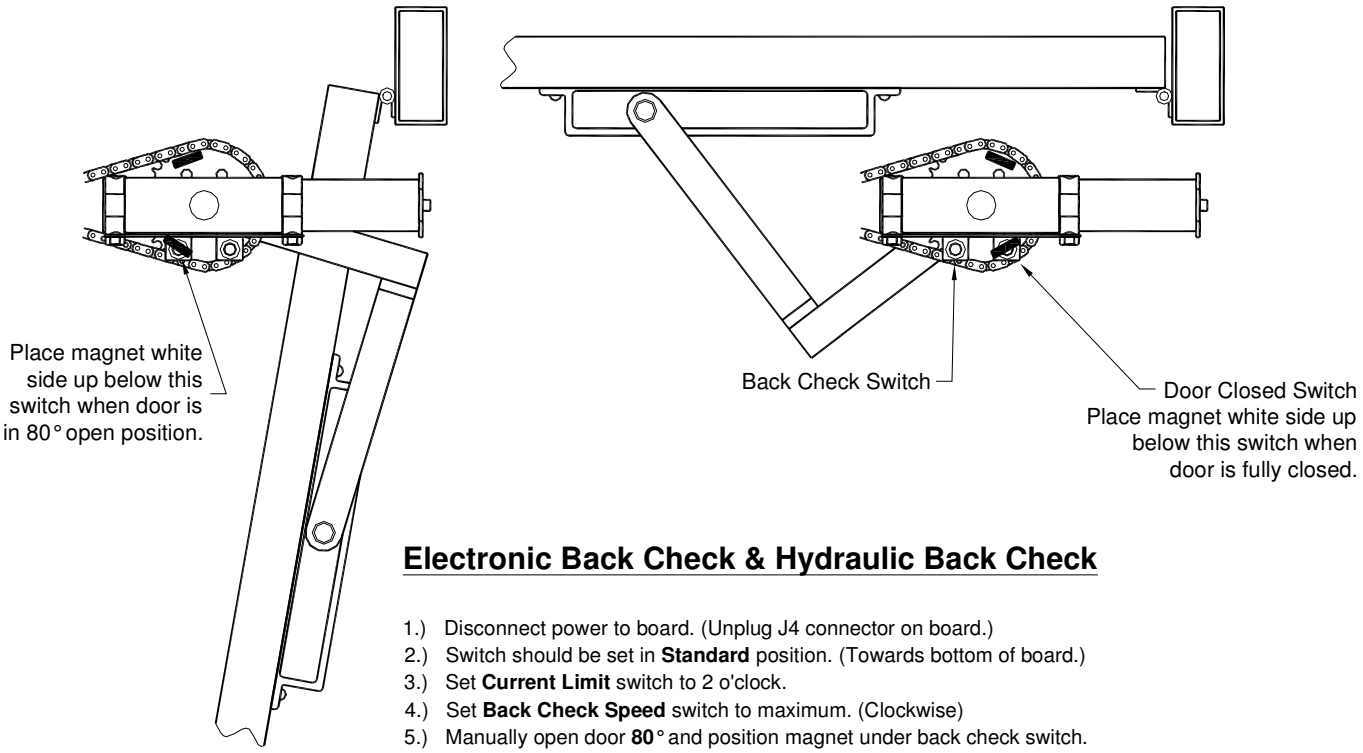
Electronic Back Check & Hydraulic Back Check

1.) Disconnect power to board. (Unplug J4 connector on board.)
2.) Switch should be set in **Standard** position. (Towards bottom of board.)
3.) Set **Current Limit** switch to 2 o'clock.
4.) Set **Back Check Speed** switch to maximum. (Clockwise)
5.) Manually open door **80°** and position magnet under back check switch.
6.) Adjust hydraulic closer spring tension closing force to return a door to the fully closed position.
7.) Adjust hydraulic closer latch check to desired pressure.
8.) Adjust hydraulic closer back check to minimum setting. (Counter Clockwise)
9.) Turn power on. (Reconnect J4 plug on board.)
10.) Set **Open Speed** switch to comply with ANSI A156.19 based on size and weight of door.
11.) Adjust hydraulic closer back check to maximum setting. (Clockwise)
12.) Set on hold open.
13.) Reduce hydraulic back check screw (counter clockwise) until the door opens to 90°.
14.) Fine tune and additional adjustments as outlined in the installation manual.

DN0068

RIGHT HAND INSWING

Figure 30 - Right Hand Inswing



Electronic Back Check & Hydraulic Back Check

1.) Disconnect power to board. (Unplug J4 connector on board.)
2.) Switch should be set in **Standard** position. (Towards bottom of board.)
3.) Set **Current Limit** switch to 2 o'clock.
4.) Set **Back Check Speed** switch to maximum. (Clockwise)
5.) Manually open door **80°** and position magnet under back check switch.
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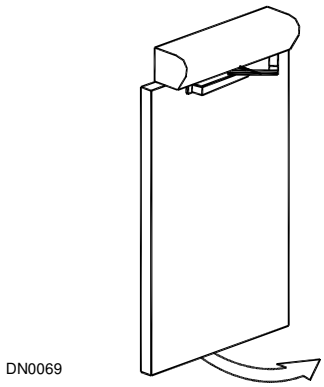
7.) Adjust hydraulic closer latch check to desired pressure.
8.) Adjust hydraulic closer back check to minimum setting. (Counter Clockwise)
9.) Turn power on. (Reconnect J4 plug on board.)
10.) Set **Open Speed** switch to comply with ANSI A156.19 based on size and weight of door.
11.) Adjust hydraulic closer back check to maximum setting. (Clockwise)
12.) Set on hold open.
13.) Reduce hydraulic back check screw (counter clockwise) until the door opens to 90°.
14.) Fine tune and additional adjustments as outlined in the installation manual.



LEFT HAND INSWING

Figure 31 - Left Hand Inswing

Simultaneous Pair Installations

Note: Simultaneous pair doors require two operators, two motors, two control boards, and a simultaneous pair harness. All drilling and mounting dimensions for simultaneous pair doors should use both the left and right hand patterns for the specific swing direction and hinge configuration. The installer first has to configure each control independently of the other control. Once controls are tuned individually, connect the simultaneous pair harness to both controls and fine tune simultaneous pair operation.

Electrical Power

There is a 7/8" diameter hole for electrical conduit at each end of the header. Remove the decorative plug from the header closest to the power source and run the power wires into the header. It is also acceptable to drill a sufficient sized hole in the back of the header and bring power in from the attaching wall or frame. Ensure that all national electrical and local building codes are followed. It is essential that the ground wire is attached to the green ground screw found on the end of the header, opposite the pivot. The ground (green) wire from the control board must also be secured under this ground screw.

It is recommended that the power be run through a 120 VAC 5 amp (or higher) rated switch or circuit breaker so that power can be easily removed for maintenance. In any case, the power must be off for these connections. Connect the hot and neutral wires to the black and white wires from the control board.

Control Switches

An ON-OFF-HOLD OPEN switch assembly has been provided in the harness. It can be mounted inside the header or where it is easily accessible to the customer. Drill a 7/8" diameter hole in the center of the location to install the switch. Use the switch as a template to drill (2) 11/64" diameter mounting holes. Use the two screws provided to mount the switch. It the switch assembly is not desired, replace it with jumper from the parts bag.

Signage

After the door has been adjusted properly and tested, decals should be applied to the door such that they are visible from either side of the door. Depending on the type of the door activation, certain decals must be displayed. Refer to Section 6 of ANSI A156.19 Standard for Power Assist and Lower Energy Power Operated Doors. Decals have been provided with the GT 710 to comply with all the installation applications described in ANSI A156.19.

Troubleshooting

Symptom	Action/Cause	Solution
Operator does not function.	1. Check Fuse 2 (F2). 2. Check for 120 VAC at connector J5. 3. Check power to activation device at connector J2. 4. Check Fuse 1 (F1).	1. Replace fuse. 2. Check incoming power. If power is good, check connection to motor. Replace motor if necessary. 3. If current exceeds 0.5 amps at 24 VAC, replace with lower draw sensor. 4. If blown, replace fuse. If F1 is OK, check power to activating devices at J2. Voltage is too low, reduce accessory load.
Adjustment of Hydraulic Closer has no effect.	Check 4 pin motor connector on the board.	Pin #2 and #4 must be jumped by a wire.
Door slams closed.	Main speed on hydraulic closer not adjusted properly.	Turn main speed in direction of turtle.
Door slams open.	Back check speed not adjusted or magnet not in proper location.	Adjust back check potentiometer or relocate magnet.
Fuse 1 (F1) blows when door open is triggered.	Check door activation device power consumption.	If current draw exceeds 0.5 amps at 24 VAC, replace with lower draw sensor.
Door moves in wrong direction.	Check polarity of motor input wires at connector on motor.	Reverse motor leads.
Back check adjustment on Magnum board has no effect.	The fully open door position is greater than 90º and the back check adjustment on the hydraulic closer is overriding the controls of the Magnum board.	Adjust the back check screw on the bottom of the header out one turn.
Unit leaks oil.	Adjusting screws on hydraulic closer have been removed.	Replace hydraulic closer.
No back check or motor continues to drive after door is closed.	Magnets on main sprocket not in correct position.	Follow instructions on Page 14 to properly align magnets.
Door does not stay tightly closed.	1. Preload on swing arm is not correct. 2. Building stack pressure is excessive.	1. Position arm 45º as shown on Figures 11 through 14. 2. Upgrade operator unit to GT 500.
Safety or Presence Sensor does not function.	No power to sensor or defective sensor.	Check harness wiring to wire diagram on Page 21.
Safety or Presence Sensor is activated by closing door.	Connection of sensor to wiring harness was to “Safety” not “Safety w/Lockout”.	Rewire Safety Sensor to “Safety w/Lockout” connector.
Floor mat, holding beams or other accessories do not function while door is moving.	Connection of accessories was made to “Safety w/Lockout” not “Safety”.	Rewire accessory to “Safety” connection.
Sensor shows activation signal sent, but door does not open.	Sensor not connected properly to activation connector.	Check harness wiring to wiring diagram on Page 21.
One sensor does not activate both doors on a simultaneous pair.	Sensor is not connected to both control boards.	Install simultaneous pair harness (P/N 2210270).