



NABCO SWING INSTALLATION & PROGRAMMING MANUAL

P/N C-00411 Rev 1-17-25

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1. 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 instruction, ask a qualified person. Failure to do so may result in bodily injury or property damage and will nullify all warranties.



For indoor use only.



It is inadmissible to bypass, shunt or disable the safety devices. Any defective safety devices may not be disconnected to continue the operation of the installation.



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.



Wiring must meet all local, state, federal or other governing agency codes and all electrical troubleshooting or service must be performed by qualified electrical technicians and must comply with all applicable governing agency codes.

2. SHUT OFF CIRCUIT BREAKER



Shut the installation site 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 and permanent wiring shall be installed as required by local codes.



Electrical circuit 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.



Ensure that incoming electrical ground is properly secured to the grounding screw or grounding wire, whichever is provided.



Keep all incoming 120 VAC wiring separate from low voltage wiring within Header. Do not route 120 VAC wires near the OPUS Control and/or Motor/Operator.

IMPORTANT

Insert all Incoming 120 VAC Power wires into the pre-drilled Electric Service Access Hole located at the left or right side of Header End Cap. It is recommended to house all wires into an Electrical Conduit.

3. SCOPE

3.1 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 (used to cover Low Energy doors); and ANSI Standard 156.10 (used to cover Full Automatic doors). Other local standards or codes may apply. Use them in addition to the ANSI standard. Swing door Units are listed with the Underwriters Laboratory and are identified as such on the label. If after troubleshooting a problem, a satisfactory solution cannot be achieved, please call NABCO Entrances at 1-877-622-2694 Option #3 between 8 am - 4:30 pm Central time or email techsupport@nabcoentrances.com reference NABCO Swing.

3.2 Objective

The NABCO Swing is designed to be installed onto the face of the door frame. The door function is controlled by the Opus control. The Opus control offers many features to accommodate most installation options. This manual offers step by step instructions.

3.3 Specifications

Specification	Description	
Weight Operator Assembly	23 pounds (10,5 kg)	
Service Needed	110-120 VAC, 50/60 Hz, 5A max per controller	
Motor Type	DC Brush Motor (with Encoder installed)	
Motor Power Consumption	100 W	
Power consumption	Max. 580 W	
Maximum Door Weight	Full Power	200 pounds (90 kg)
	Low Energy	330 pounds (150 kg)
Maximum Door Width	Full Power	32" - 36" (812mm - 915mm)
	Low Energy	32" - 48" (812mm - 1,219mm)
Standard Reveal	Outswing 0-12" or Inswing 0-6"	
Header Dimensions	Depth	4-3/4" (120mm)
	Height	3" (76mm)
Operating Temperature	5 to 122 °F (-15 to +50 °C)	
Protection Type	IP 40 Weather Resistant to Water and Dust	
Door Opening Angle	105°	
Maximum Opening Speed	40° (opening degree per second)	
Maximum Closing Speed	40° (closing degree per second)	
Hold Open Time	0 - 30 seconds	

4. INSTALL THE HEADER

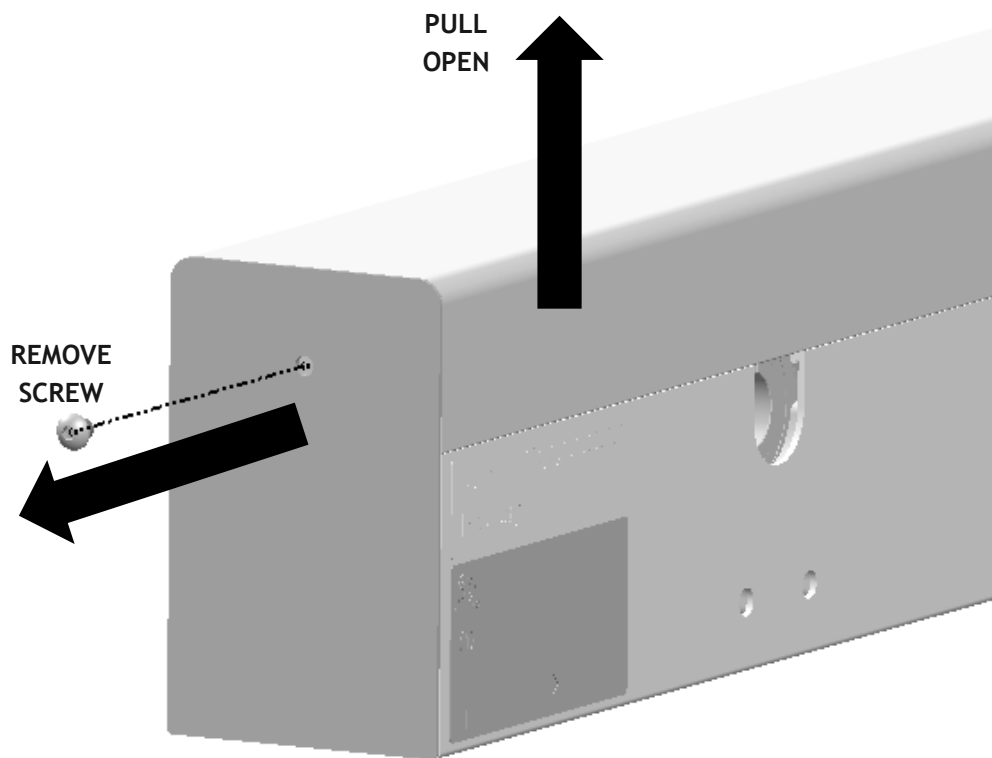


- Turn OFF all power to the Automatic Door if a Safety System is not working.
- Instruct the Owner to keep all power turned OFF until corrective action can be achieved by a NABCO trained technician. Failure to follow these practices may result in serious consequences.
- NEVER leave a Door operating without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

4.1 Remove the Header Cover

ATTENTION: To avoid permanent damage, do not use sharp tools.

1. Locate the protruding screw on side of header and remove screw using 1/8" Allen wrench.
2. Pull the top cover from the bottom main extrusion.
3. If needed obtain a tool that is 3/16" (4.7mm) or less in diameter to pry open.

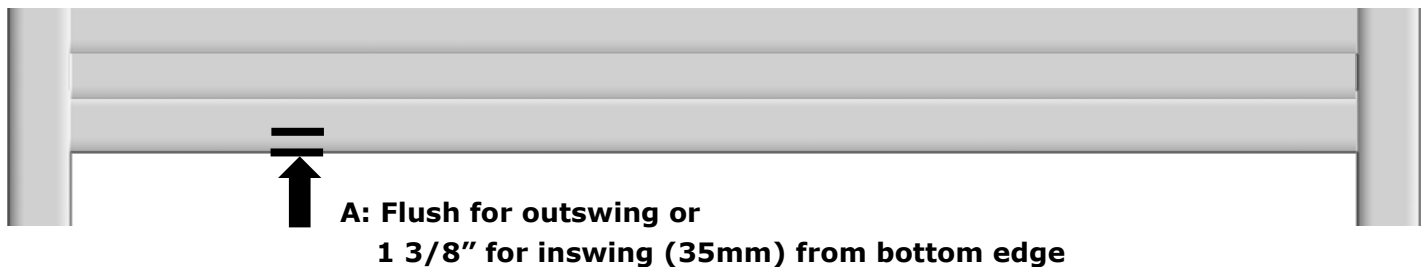


4.2 Prepare the Door frame

1. On the face of the door frame where the operator will be installed, measure “up” from the bottom edge of the header jamb towards the top, make at least two marks.

Measurement A

1. Outswing door: The header can be mounted flush from bottom edge of mounting surface.
2. Inswing door: Measure 1 3/8” (35mm) from top of door, this mark is the bottom of the header.



2. Verify the spindle location.

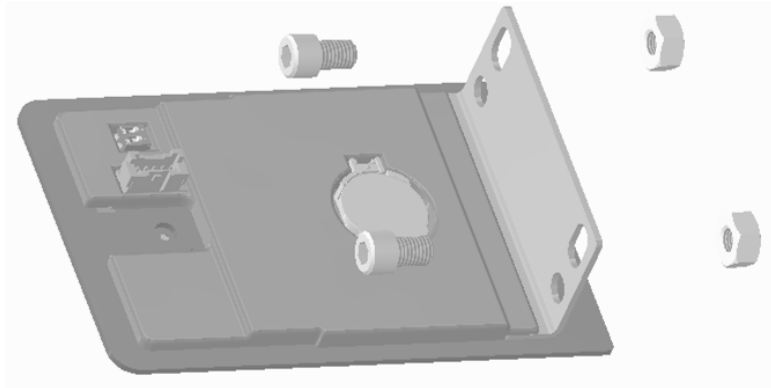
Measurement B

1. Measure 5" (127mm) from the center of the pivot to the center of the spindle.

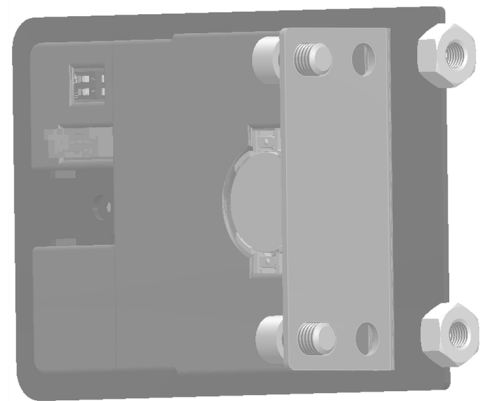
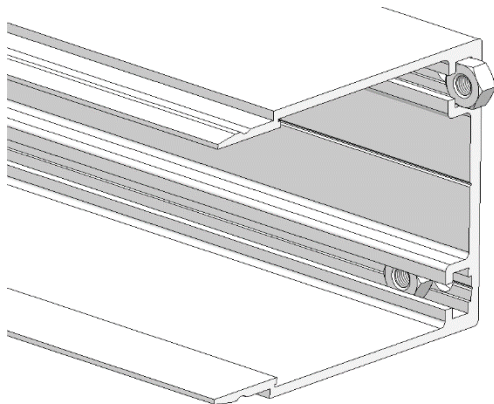


4.3 Install NABCO Connect

1. The NABCO connect is placed in its own box along with 2 x 1/4-20" nuts and 2 x 1/4-20" socket head cap screws.

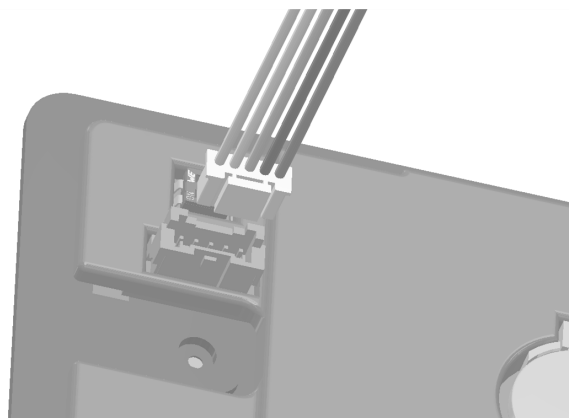


2. Slide the nuts into the nut chases on the open side of the header. Place the socket head cap screws through larger slotted holes on the NABCO connect and tighten with a 3/16" Allen wrench making sure the back side of the NABCO connect is flush with the side of the aluminum extrusion.



3. Locate the harness lying loose within the header, the clip side should be towards the center of the unit. Connect it to the backside of the NABCO connect making sure it is aligned correctly.

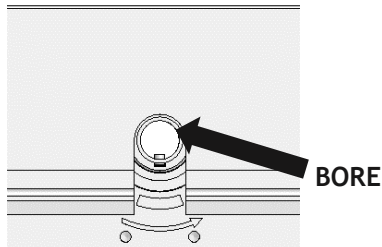
ATTENTION: The connector is keyed and can only be inserted one way, don't force it or you will damage or break the connector.



4.4 Header Orientation & Handing

ATTENTION: This product can be set-up as left hand or right hand and outswing or inswing. You will receive it configured as a left-hand outswing.

1. To change handing place the spindle bore closest to the pivot side of the door.
2. To change from outswing to Inswing loosen the 4 socket head cap screws with a 3/16" Allen wrench and place the spring side of operator closest to you.



OPERATOR FASTENERS



SPRING

4.5 Drill Mounting Hole into Header

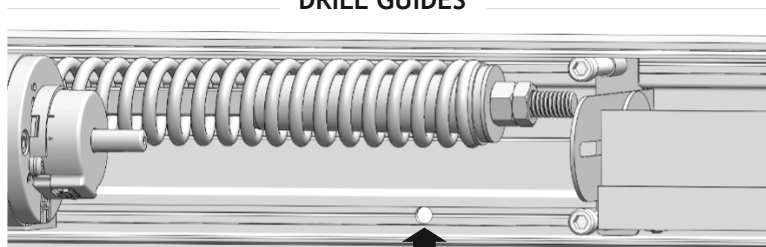
ATTENTION: Remove or cover the Opus controller before drilling the mounting holes and power wiring hole to prevent damage to the controller from metal shavings.

1. Align the header up against the marked lines from 4.2 (Measurement A), while ensuring that it is square and level.
2. Looking at the back wall of the header. Between the (2) drill guide holes located on each side of header, find a stud somewhere in the center.
3. Measure, mark, and drill (4) 1/4" (6mm) screw hole so the header can be secured to a stud.
 - a. If deemed necessary, the Opus control and/or the motor/operator can be temporarily removed using 3/16" Allen wrench on the 4 socket head cap screws on the control or operator.

ATTENTION: Header must be level and securely fastened to the door frame and/or solid wood blocking (shim) above door frame to prevent flexing or movement of header during operation.



DRILL GUIDES



CENTER MOUNTING HOLE

ATTENTION: If no studs exist behind drill guides, install fasteners in nut chase similar to center hole, DO NOT USE back wall of header because header will flex, and injury may result.

1. Looking at the back wall of the header. Drill a hole for power wiring somewhere in the middle.
2. Line up screw holes. Secure the header to the door frame.
 - a. It is recommended to use a total of 5 or more fasteners.
 - b. Examples: socket head cap screws, lag bolts, wood screws, 1/4" (6mm) screws, or rivnuts.
 - c. The header must be level to frame and securely fastened to the door frame and/or solid wood blocking (shim) above door frame to prevent flexing or movement of header during operation.

5. INSTALL SPINDLE

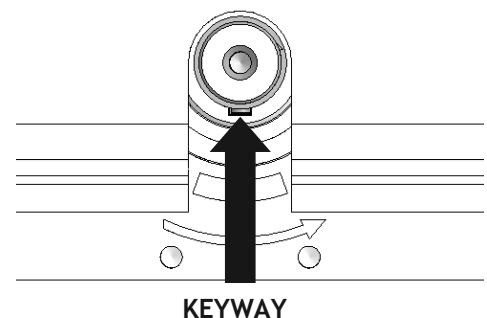
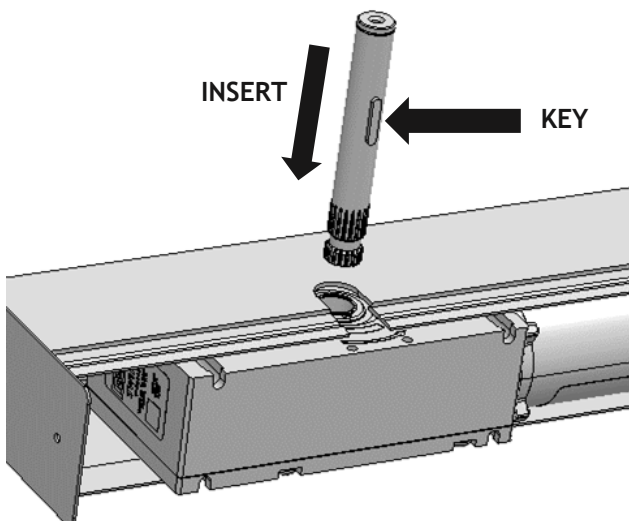
5.1 Spindles

Spindle Kits			
Length	Arm	Standard Use	Part Number
4"	Short	Inswing	A-01540
5"	Medium	Outswing	A-01540-10
6"	Long	Extreme cases	A-01540-20

If needed, a longer spindle can be used to lower the arm. For instance, when the header needs to be mounted higher.

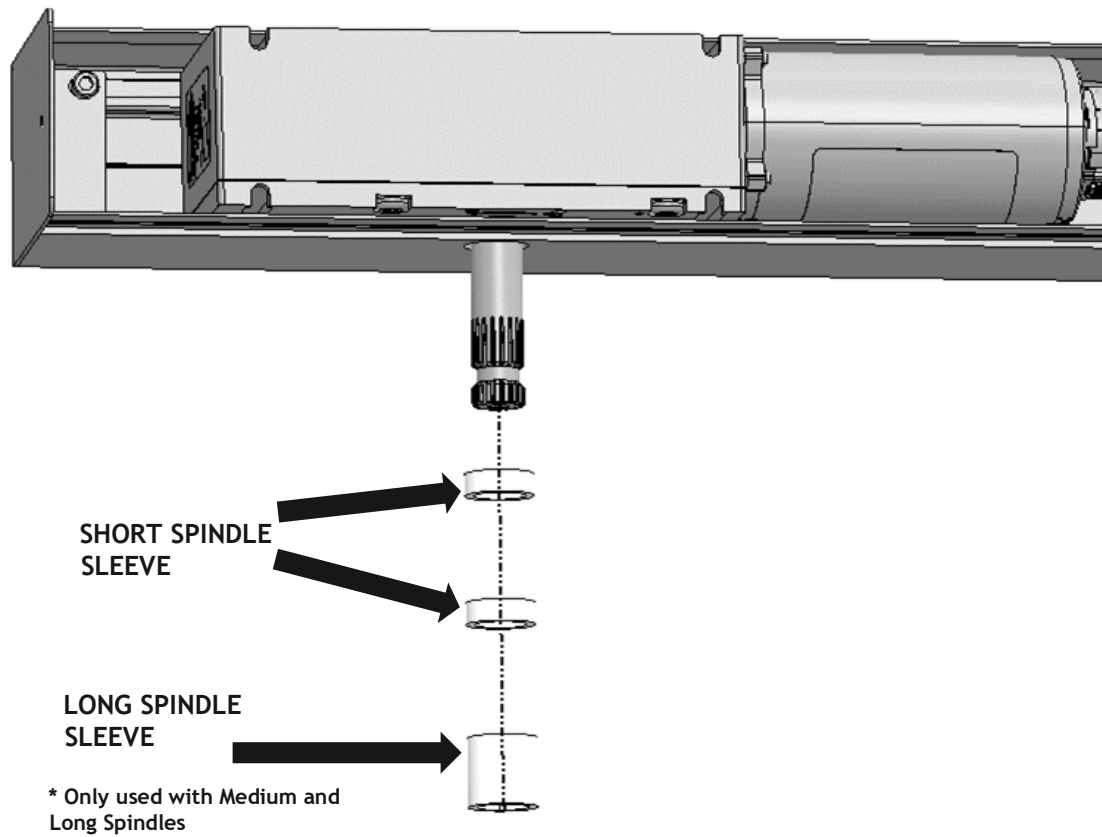
5.2 Spindle Installation

1. Locate machined holes on top of header. Locate the keyway (notch) inside the bore.
2. Obtain the spindle. Locate the spindle keyway (small protrusion).
3. Align the spindle so the spindle key can slide into the keyway. Slide the spindle into the shaft.

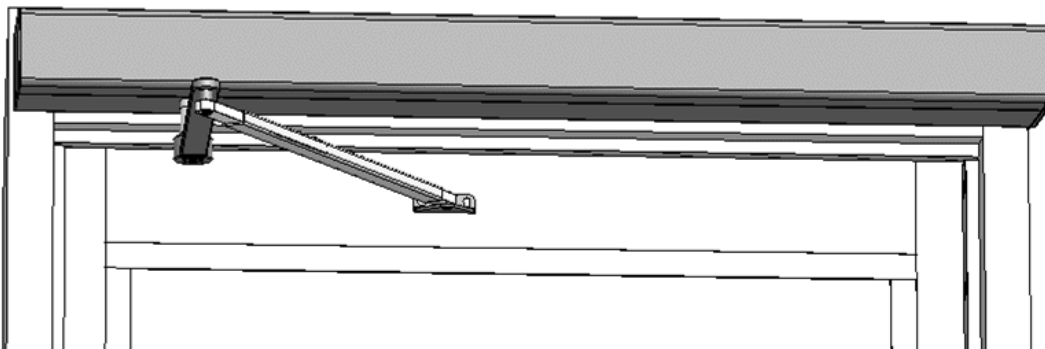


4. From the bottom of the header. Slide the (2) short spindle sleeve onto the shaft, then if needed slide

(1) long spindle sleeve on to the shaft for the medium spindle or (2) long spindle sleeves for the long spindle.



6. INSTALL OUTSWING-ARM ASSEMBLY

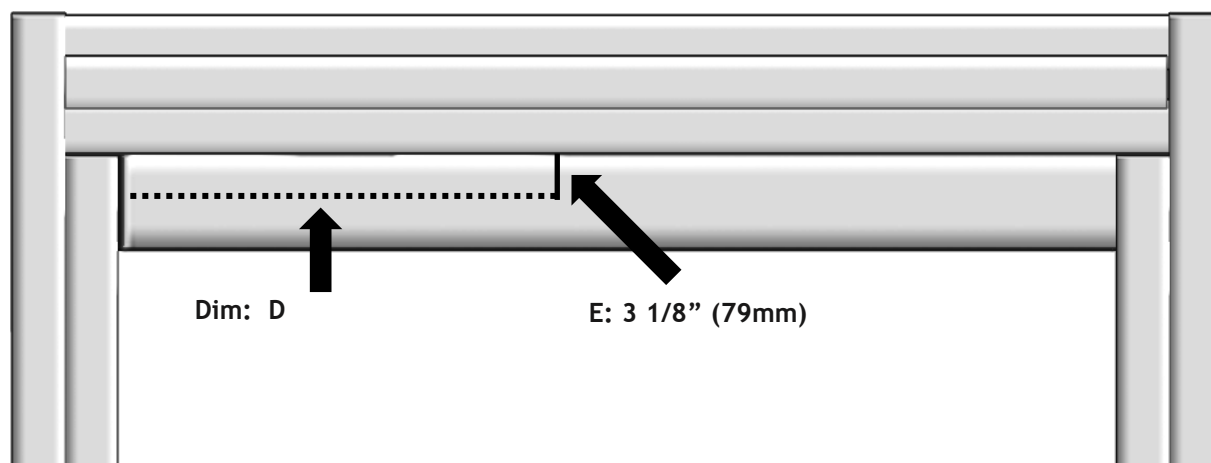


6.1 Install Outswing Arm Shoe

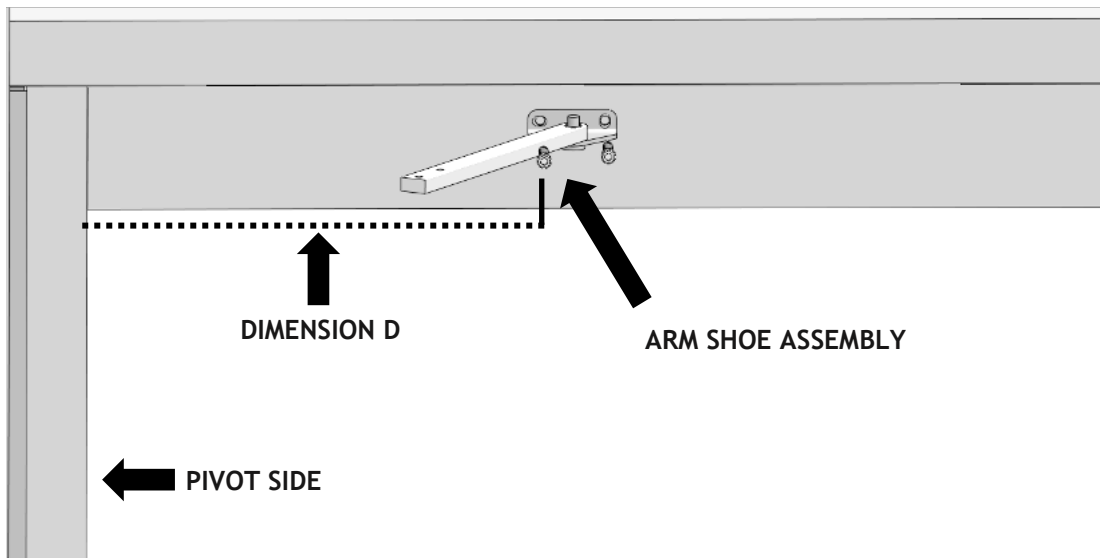
1. With the door fully closed, measure **Measurement D** from the center line of pivot towards center of door panel based on the chart below:

Set-Up	Measurement D
Butt Hinge	14 1/8" (359mm)
Center Pivot Hinge without Finger Guards NOTE: The spindle location will move 2" (50 mm) away from the jamb as well	16 1/8" (410mm)
Center Pivot Hinge with Finger Guards NOTE: The spindle location will move 3" (76mm) away from the jamb as well	17 1/8" (435mm)

2. Mark a vertical line 3 1/8" (79mm) (**Measurement E**) down bottom of header.
3. Position the arm shoe assembly up against the door panel. Center the first screw hole (pivot side of door panel) to the vertical line. Ensure the arm linkage is level.

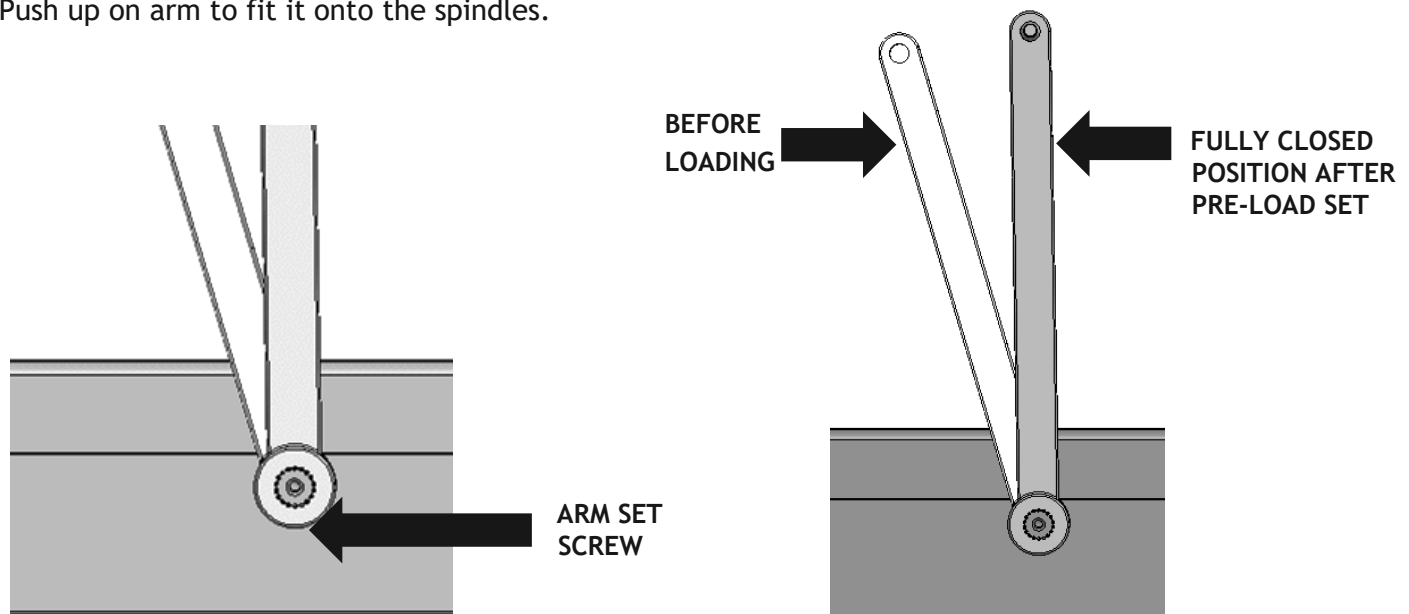


4. Use the arm shoe assembly as a template to mark (2) 1/4" (6mm) screw holes.
 1. If installing (2) sex bolts:
 1. Drill (2) 3/8" (9.5mm) screw holes all the way through the door panel.
 2. Insert (1) sex bolt into each hole from back side of the door until they are flush to the door.
 2. If not installing sex bolts: Prepare appropriate 1/4" hardware for door material.
 3. Secure the arm shoe assembly to the door panel.

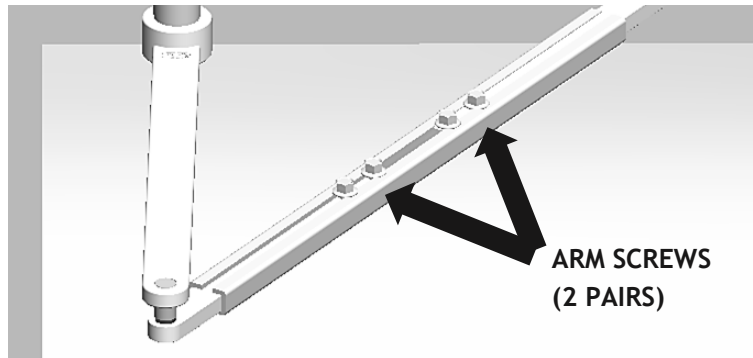


6.2 Install Outswing Arm

1. Place the splined part of the arm under the spindle at 90° pointed directly away from door.
2. Watching the splines on the spindle turn the arm towards the pivot side of door one notch.
3. Push up on arm to fit it onto the splines.

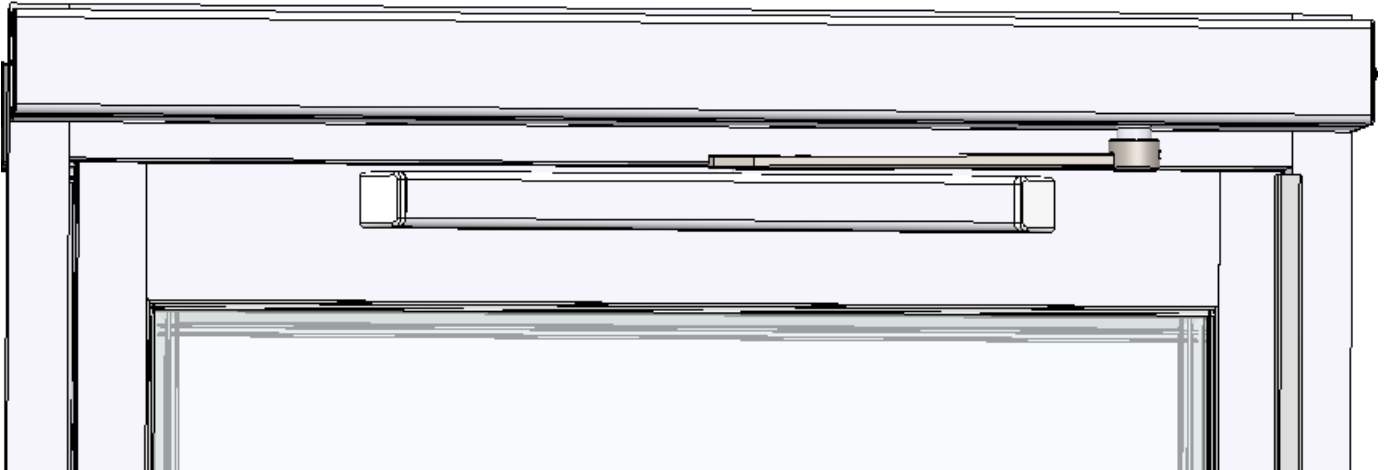


4. Tighten the set screw with a 5/32" Allen wrench on the arm to make sure it is secured.
1. Assemble arm assembly by sliding steel bars into aluminum extrusion.



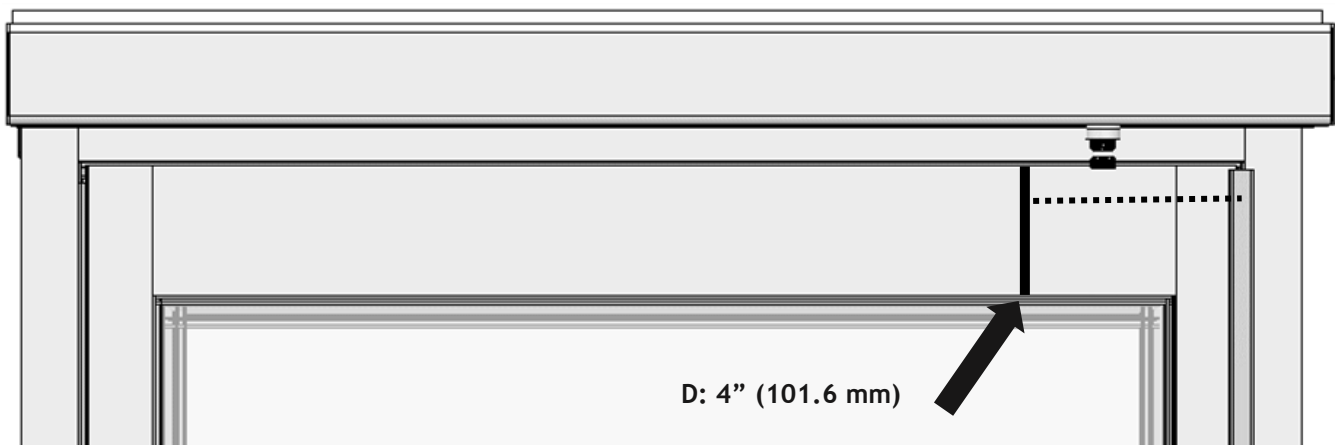
2. Take the arm attached to the operator and bring to 90°, while holding the door.
3. Apply provided Threadlocker on both pairs of hex head screws and tighten to 10 ft-lbs. of torque using 3/8" wrench or socket.
4. Go to section 9 to make adjustments and finish installation.

7. INSTALL INSWING-ARM ASSEMBLY, 0" REVEAL

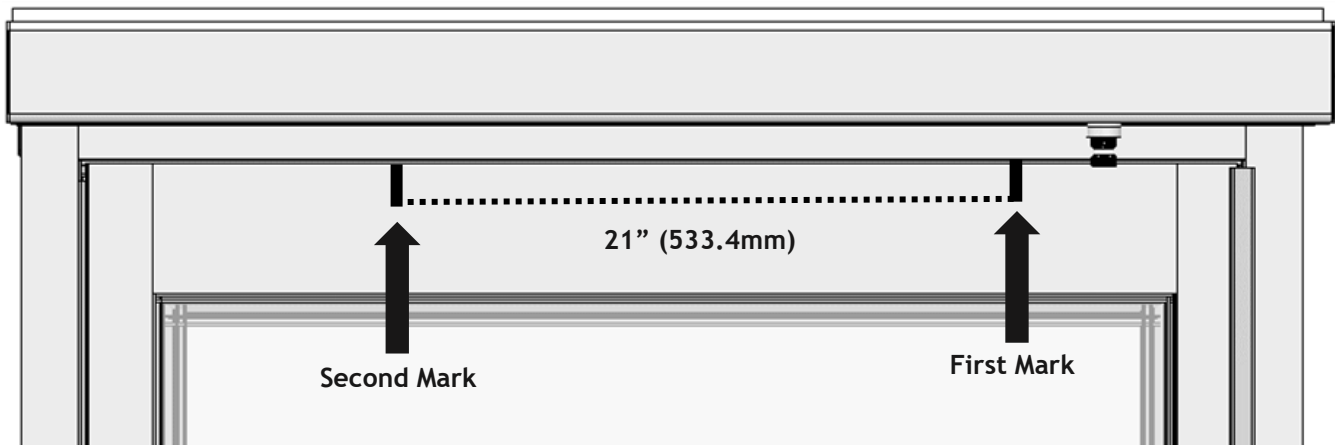


7.1 Prepare for Inswing Track

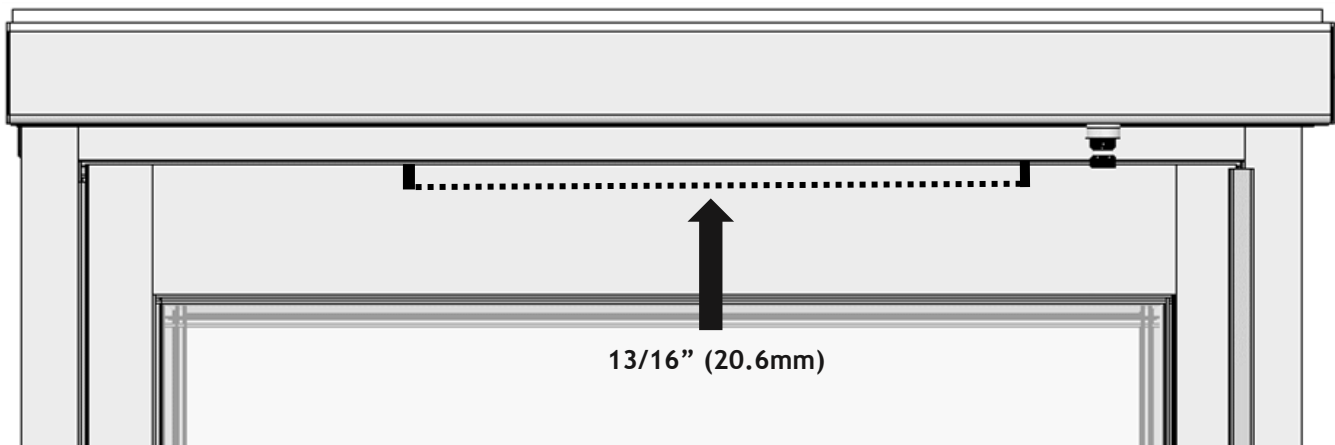
1. With the door fully closed, measure 4" (101.6 mm) from the pivot towards the center of the door and make a mark. This is the location of the first hole for the track.



2. Measure 21" (533.4mm) from the first mark to the left and make a mark.



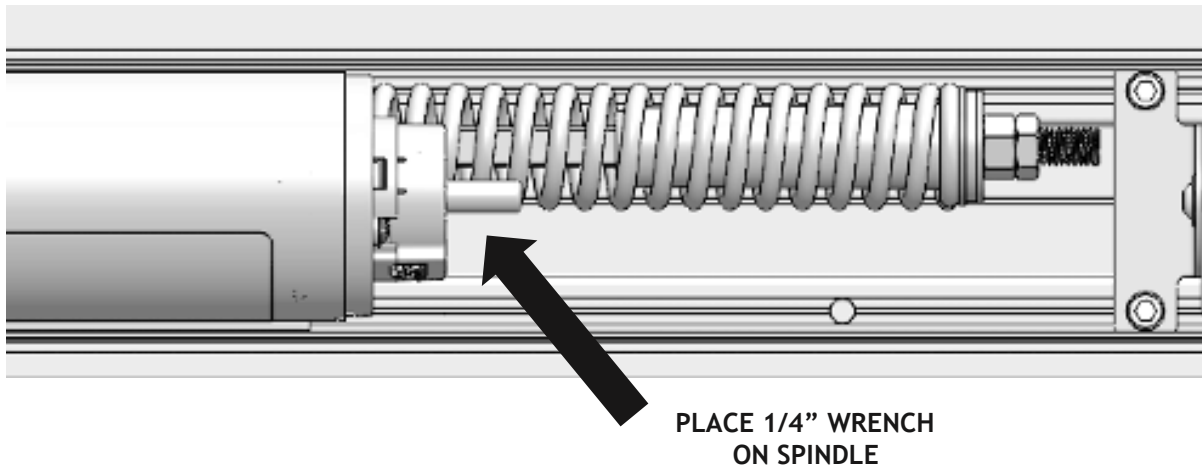
3. Then measure 13/16" (20.6mm) down from top of rail, where the two marks cross will be the screw locations for the track.



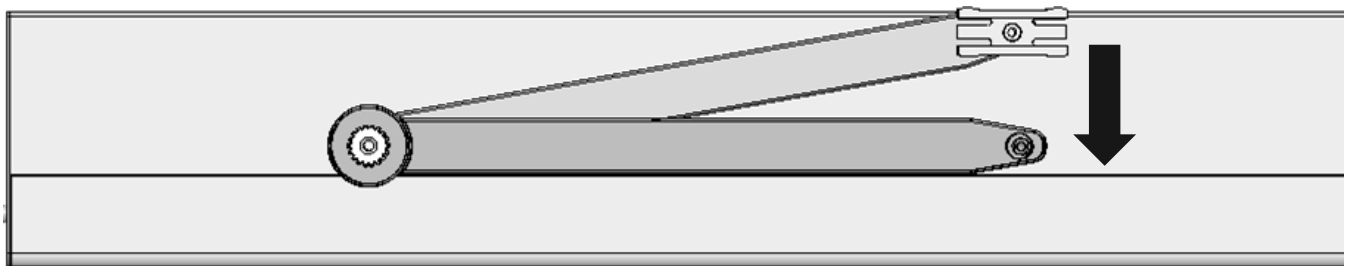
4. Position the inswing track up against the door panel, top of track should be flush with top of door panel and holes in the track should line up with the marks on the panel.
5. If installing (2) sex bolts:
 1. Drill (2) 3/8" (9.5mm) screw holes all the way through the door panel.
 2. Insert (1) sex bolt into each hole from the back side of the door until they are flush to the door.
6. If not installing Sex Bolts: Prepare appropriate 1/4" hardware for door material.

7.2 Install Inswing Arm

1. Place the splined part of the arm under the spindle with glide block as close to panel as possible.
2. Turn splined end of arm slowly away until splines line up.
3. Push up on arm to fit it onto the spindles.
4. Pull arm away from door frame.
5. On the protruding motor shaft there is a notch, place a 1/4" wrench on the notch and slowly release arm until wrench contacts the header extrusion.



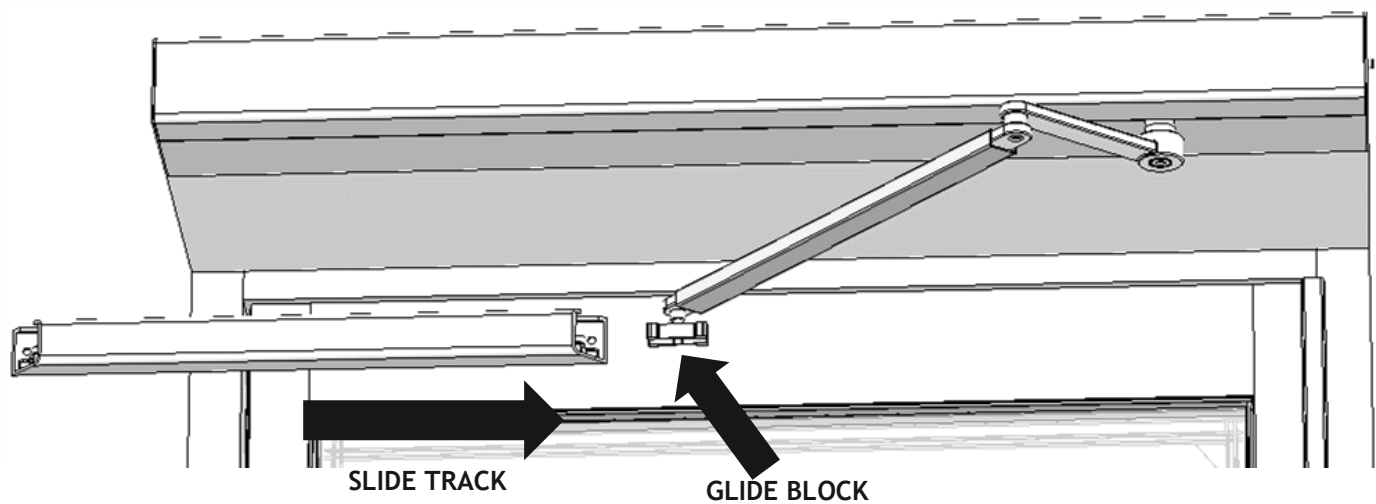
1. Carefully pull the arm down off spindle, rotate the arm one spline towards door, and push back on.



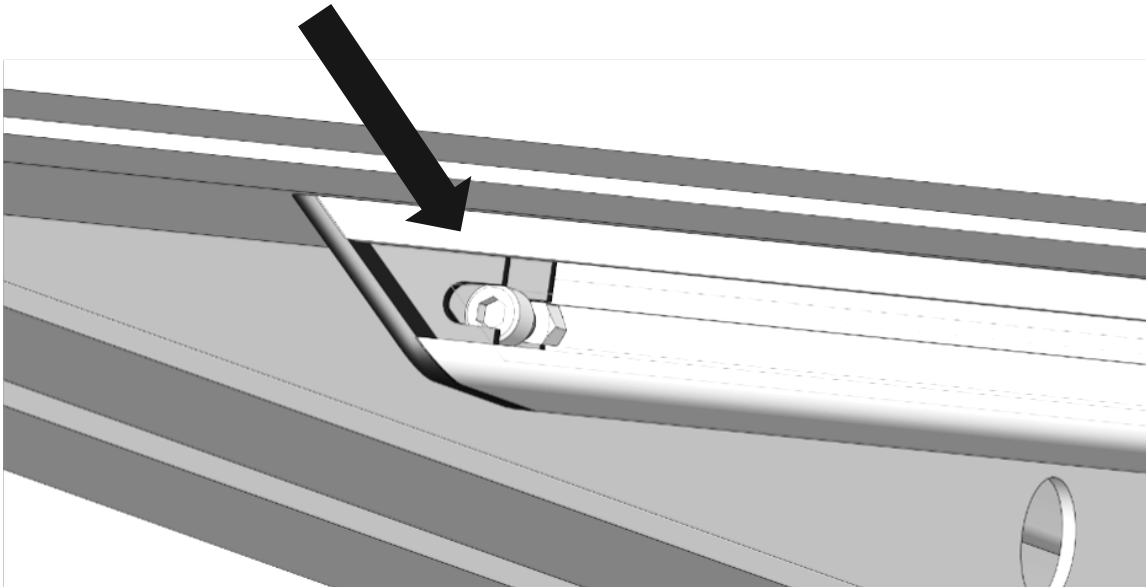
2. Tighten the set screw with a 5/32" allen wrench on the arm to make sure it is secured.

7.3 Install Inswing Track

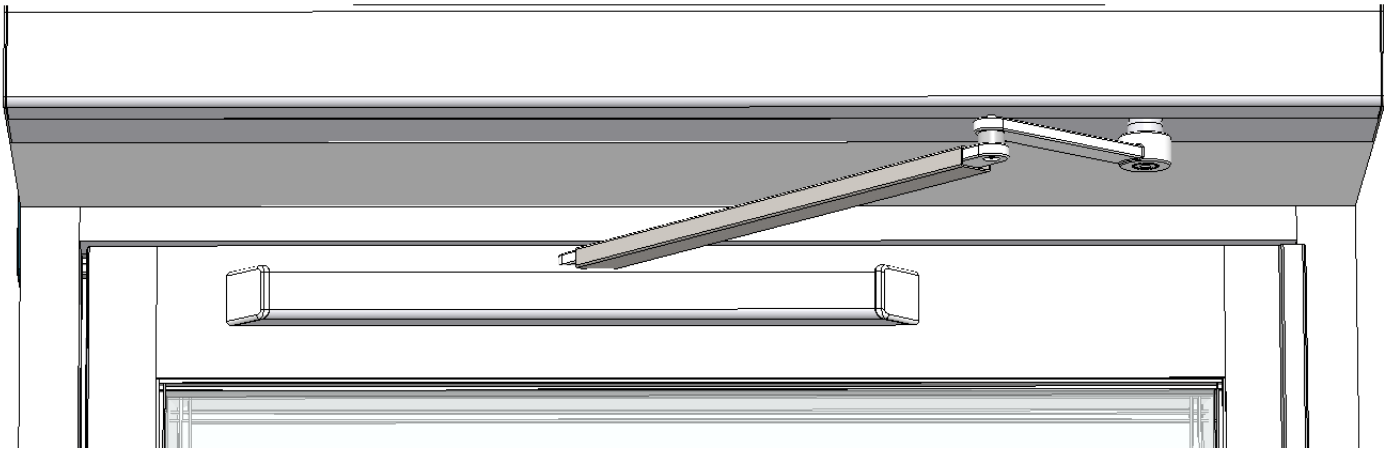
1. Slide track onto the glide block and line up mounting holes.
2. Secure the track to the door panel with (2) 1/4-20 x 7/8" screws or other appropriate 1/4" fastener.
3. Open the door up to the fully open position, move the stop hammer to touch the stop block and tighten socket head cap screw with 9/64" Allen wrench.



4. Place 1/4-20 nut, and 1/4-20 screw on each side of track.
5. Slide track end cap to each side and tighten screws with 3/16" allen wrench.
6. Go to section 9 to make adjustments and finish installation.

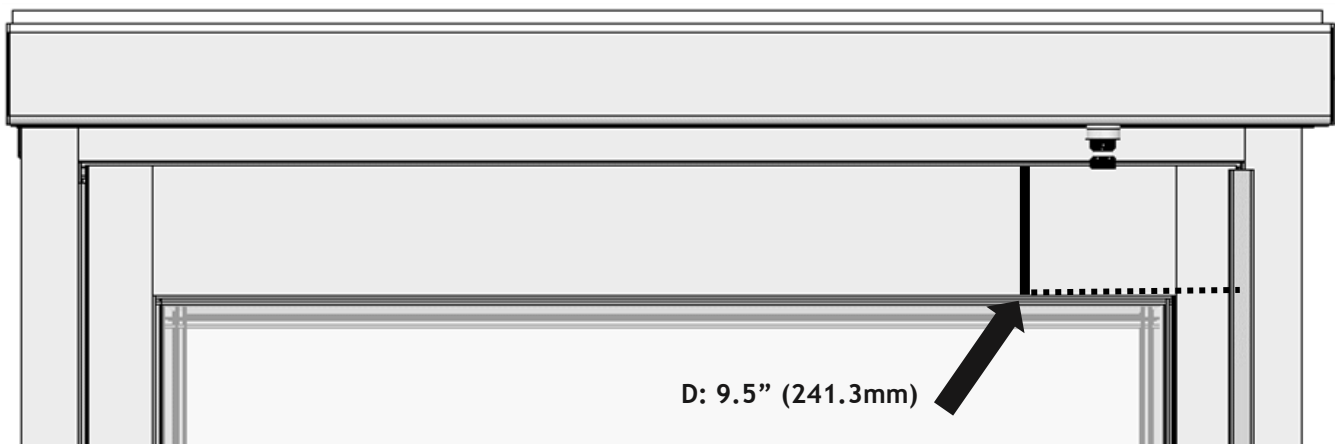


8. INSTALL INSWING-ARM ASSEMBLY, 0-6" REVEAL

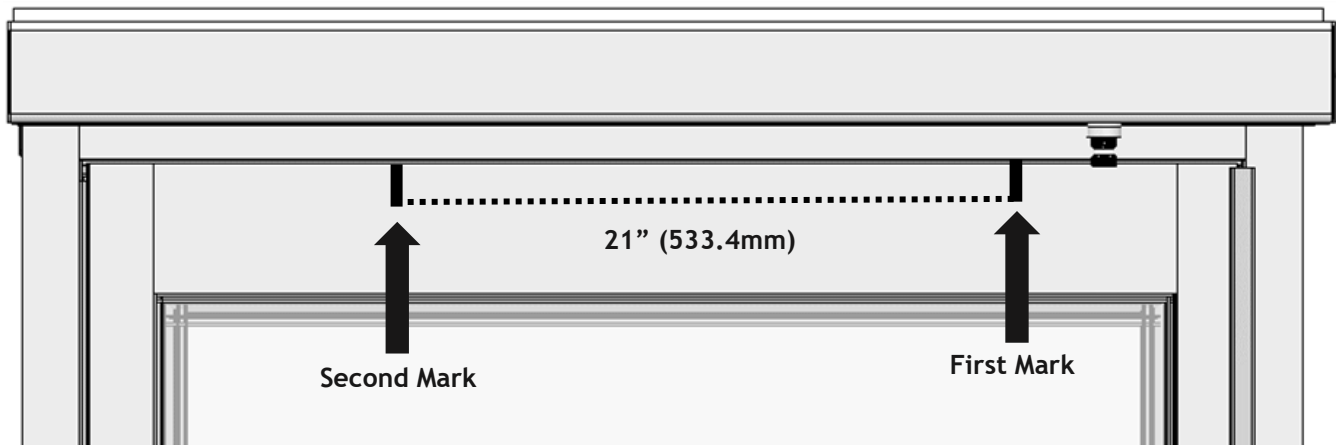


8.1 Prepare for Inswing Track

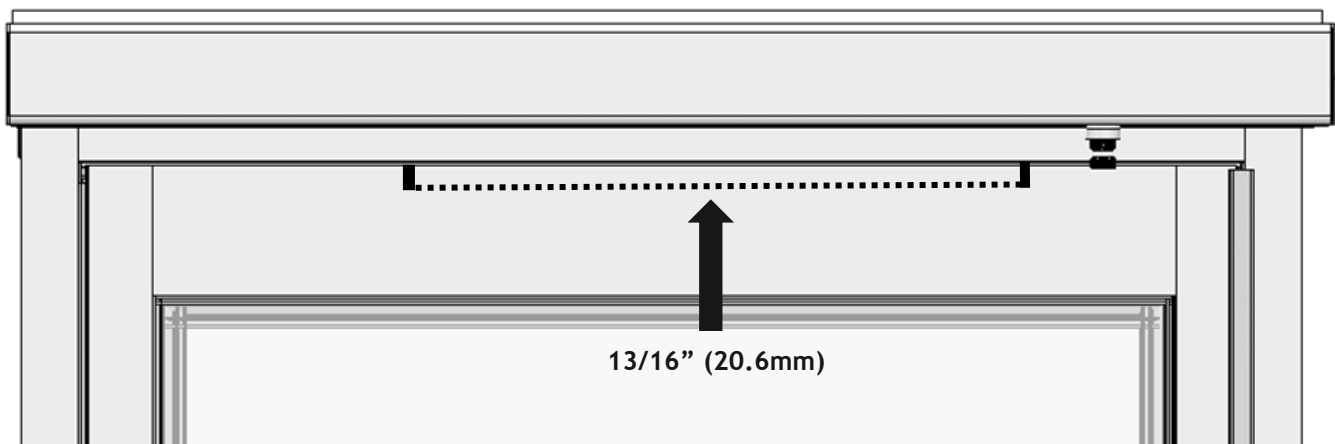
3. With the door fully closed, measure 9.5" (241.3 mm) from the pivot towards the center of the door and make a mark. This is the location of the first hole for the track.



4. Measure 21" (533.4mm) from the first mark to the left and make a mark.



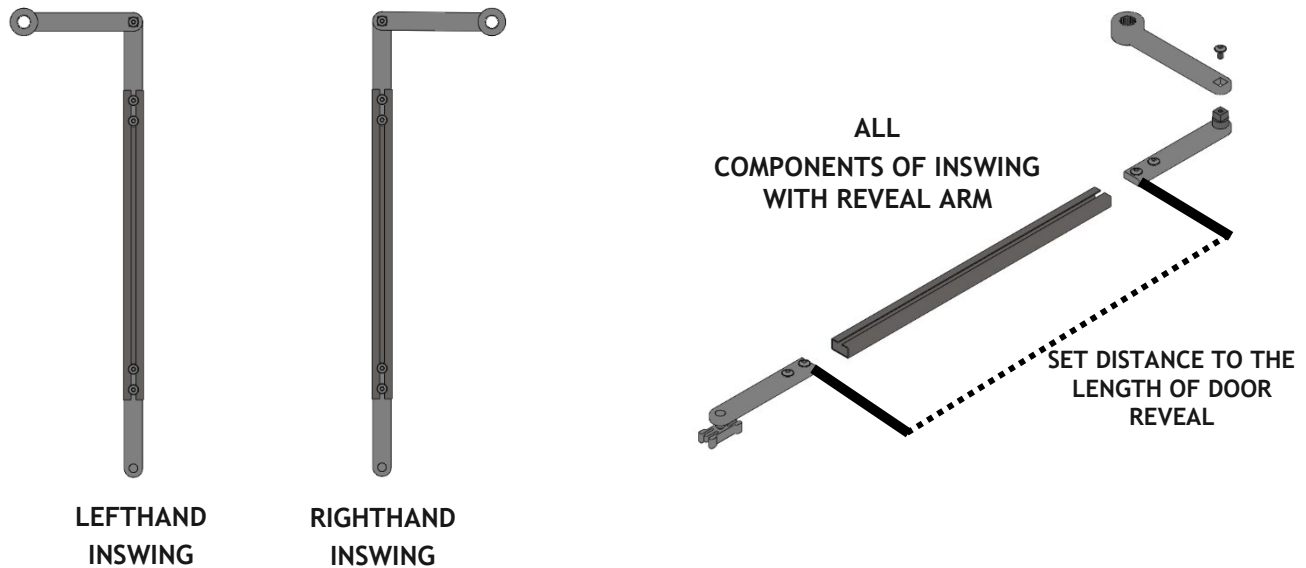
7. Then measure 13/16" (20.6mm) down from top of rail, where the two marks cross will be the screw locations for the track.



8. Position the inswing track up against the door panel, top of track should be flush with top of door panel.
9. If installing (2) sex bolts:
 1. Drill (2) 3/8" (9.5mm) screw holes all the way through the door panel.
 2. Go to the exterior side of door panel.
 3. Insert (1) sex bolt into each screw hole until they are flush to the interior side of door.
10. If not installing sex bolts: Prepare appropriate 1/4" hardware for door material.

8.2 Build Inswing with Reveal Arm

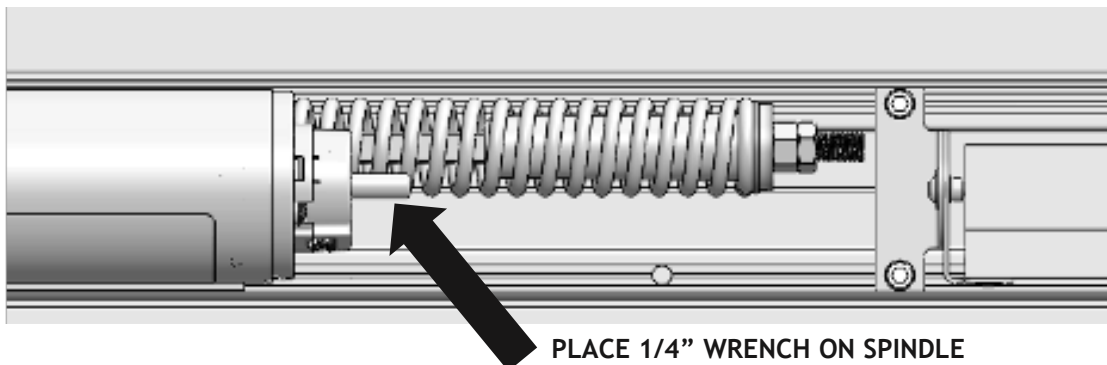
1. Reference images below on how to build it based on the door hand.



2. Push both Slide bars into each side of the aluminum sleeve.
3. Measure the door reveal and set the distance between the slide bars to match the door reveal.
4. Fit the square pocket of arm with splines on slide bar with square pin.
5. Insert hex screw with washer into square pin and tighten to 10 ft-lb. of torque with 3/8" wrench or socket.

8.3 Install Inswing with Reveal Arm

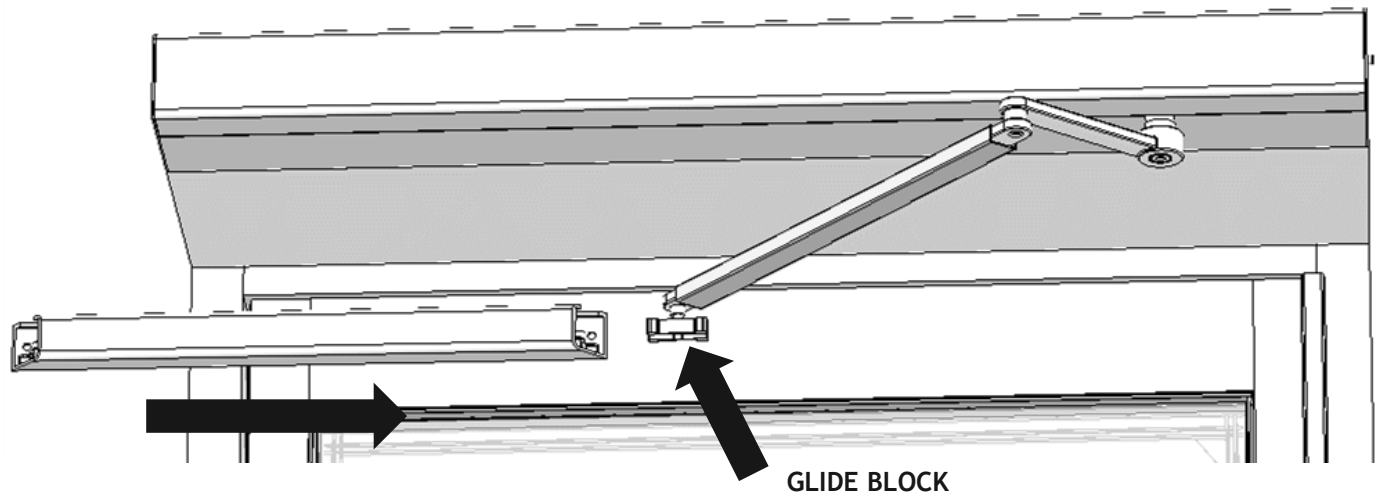
1. Place the splined part of the arm under the spindle with glide block as close to panel as possible.
2. Turn splined end of arm slowly away until splines line up.
3. Push up on arm to fit it onto the splines.
4. Pull arm away from door frame.
5. On the protruding motor spindle there is a notch, place a 1/4" wrench on the notch and slowly release arm until wrench contacts the header extrusion.



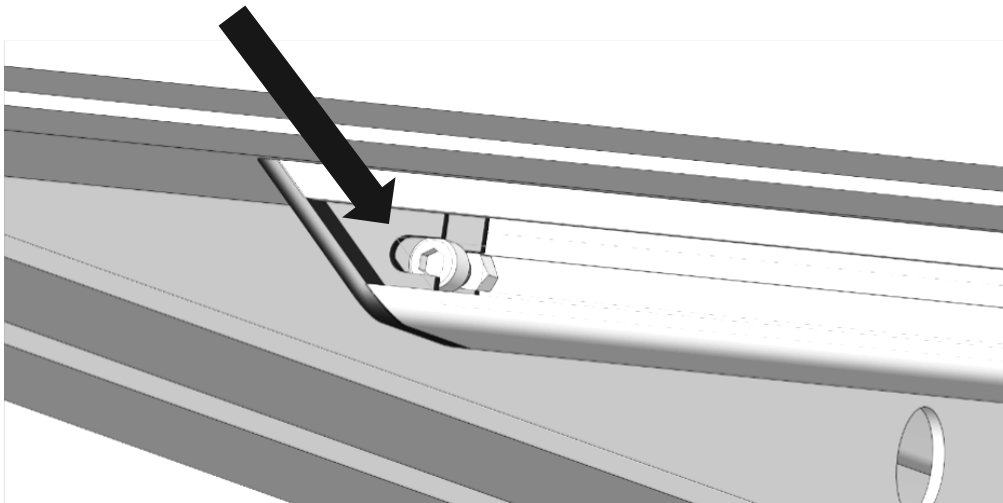
6. Carefully pull arm down off splines, rotate the splined end of arm one spline towards door, and push up again onto splines.
7. Tighten the set screw with a 5/32" allen wrench on the arm to make sure it is secured.

8.4 Install Inswing Track

1. Slide track onto the glide block and line up mounting holes
2. Secure the track to the door panel with (2) 1/4-20 x 7/8" screws or other appropriate 1/4" fastener.



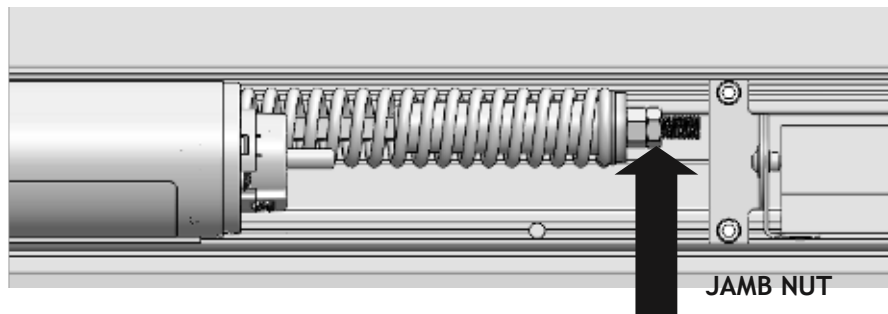
3. Place 1/4-20 nut and 1/4-20 socket head cap screw on each side of track.
4. Slide Track End Cap to each side and tighten socket head cap screws with 3/16" allen wrench.
5. Go to section 9 to make adjustments and finish installation.



9. ADJUSTMENTS AND FINAL INSTALLATION

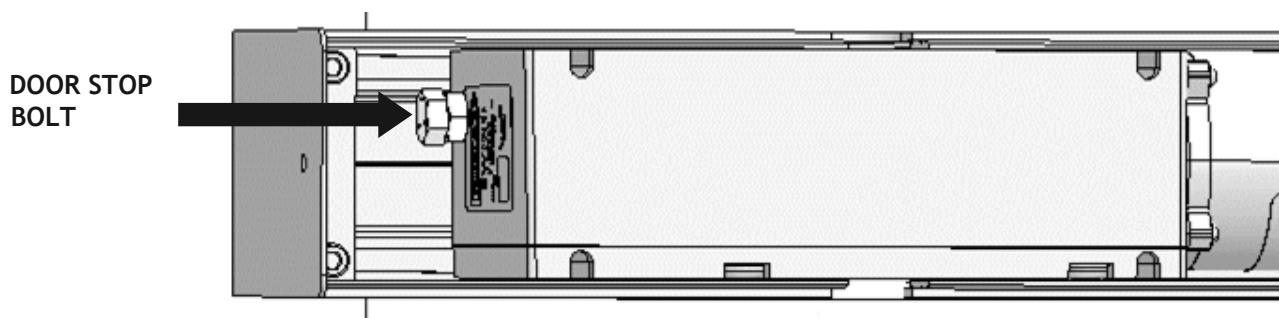
9.1 Increase Spring Tension

1. Open the door fully and let go, checking if the door closes properly.
2. If stack pressure, seals, latches, or anything prevents the door from fully closing, more tension may be needed.
 1. Remove the jamb nut at the end of the operator spring.
 2. Use 9/16" wrench to tighten the inner nut to set a higher preload, after a few turns check if door will close fully.
 3. Continue adjusting until the door fully closes every time, but do not exceed 1" from end of rack to tightened jamb nut. Doing so will decrease the life of the operator.
 4. Re-install the jam nut on the spring and hand tighten.



9.2 Adjust Door Stop

1. Using a 9/16" wrench loosen bolt and jam nut on back of operator and unscrew it a few turns.



2. Open the door fully until the operator hits the stop.
3. Continue turning the bolt and checking the door opening until the desired door angle has been reached.
4. Apply provided blue threadlocker onto bolt.
5. Using the 7/16" wrench, tighten the jam to the outside of the operator which will secure the door stop in place.

Attention: If threadlocker was not applied to bolt, over time the nut may come loose causing the door stop to move.

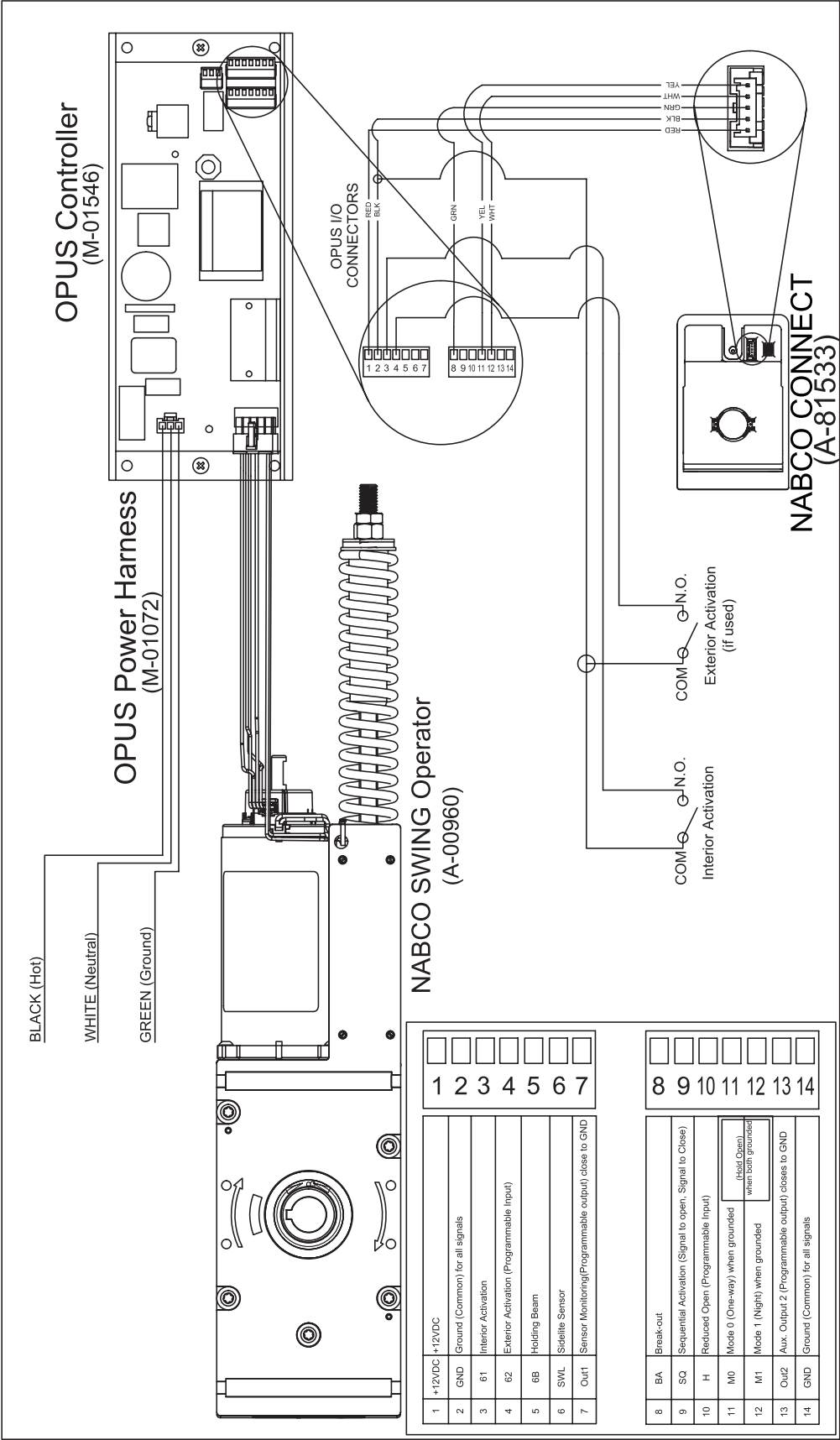
9.3 Finish Installation

1. Using dial on Opus controller, navigate to optional settings and change flip screen so it is readable (if needed).
2. Under “Base settings”, be sure “Operator Type” is set to “Nabco Swing.”
3. Perform a stroke-learn.
4. Make other programming / adjustments as needed. See the C-00139: Opus Swing Wiring and Programming manual for details of the above steps.
5. Look at spring clips on each end of header cover and move if needed to be flush with each end of cover. One spring clip will have a screw installed, move it to the NABCO connect side of header.
6. Place cover onto header base and push to snap in place.
7. Replace (2) 10-24 screws on each end of header with a 1/8” allen wrench and hand tighten.

Attention: If one or more screws cannot be installed on end caps, drill 0.152” (#24) sized hole on top or bottom of cover and secure cover with provided panhead phillips TEKS sheet metal screws.

10. GENERAL WIRING

NABCO SWING General Wiring



11. PROGRAMMING MENUS

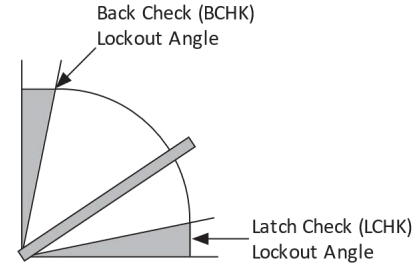
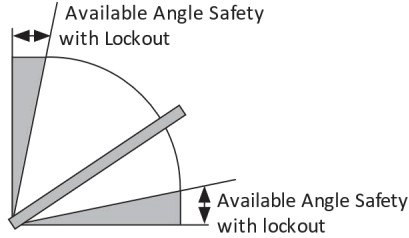
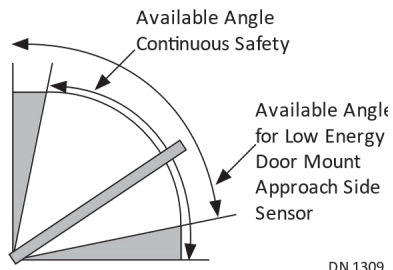
11.1 Base Settings

Base Setting			
Setting Category	Menu Item	Default	Action
Operator Type ^{*1}	► NABCO Swing	GT-710 Swing	► Select Operator Type

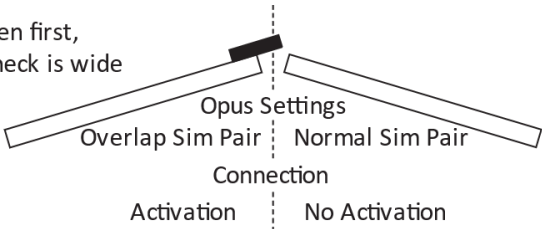
11.2 Movement Settings

Movement Settings			
Parameter	Range	Default	Description
■ Open Speed	0 - 7	3	The higher the number the faster the Door opens
■ Back Check Speed	0 - 7	3	Sets door speed during Back Check
■ Back Check Range	0 - 7	3	Swing Door: 2-1/2° to 35° of Fully Opened
■ Close Speed	0 - 7	3	The higher the number, the faster the Door closes
■ Latch Check Speed	0 - 7	3	Sets door speed during latch check
■ Latch Check Range	0 - 7	3	Swing Door: 10° to 45° of Fully Closed
■ Open Timer	0-10, 12, 15, 20, 25, 30	5	Hold Open time (in seconds) after Door reaches Full Open and activation signal is no longer present.
■ Reaction Power	0 - 7	3	Determines how fast the door reacts to a reactivation when closing.
■ Open Recycle Sens	0 - 7	3	Recycle detection Sensitivity. Determines how much force is exerted during opening or closing cycle. ► "0" = most sensitive ► "7" = least sensitive
■ Close Recycle Sens			
■ After Open Recycle	► Slow Open ► Stop	Stop	Determines what happens after a recycle during Opening cycle. ► Slow Open = Door stops then slowly opens. ► Stop = Door stops then slowly closes.
■ Close Recycle Reopen	► Yes ► No	Yes	Determines what happens after a recycle while closing cycle. ► Yes = Door re-opens ► No = Door stops then slowly closes

11.3 Optional Settings

Optional Settings			
Parameter	Range	Default	Description
► Hold Close Force	0 - 3	0	► 0 = OFF, 3 = Strongest Hold Close Force
► Power Close Range	► No Power Close ► Whole Close Cycle ► Latch Check Only ► Latch and Back	No Power Close	Closing assisted by Motor to fight wind or stack pressure.
■ Manual Open Function	► No Action ► Push and Go ► Stop and Close ► Open Assist	No Action	Does nothing (Power close selection will not work when used manually) Door will Open to Fully Opened Position when door is pushed. Door pauses at opened position then closes Motor power assists in manually opening the door. Assist Power depends on how strongly the door is pushed at first.
► Manual Open Sens	0 - 3	1	Angle to activate Push and Go (1-3 recommended Do Not use 0)
► Manual Open Timer	0-10, 12, 15, 20, 25, 30 Same as Open Timer	3	Hold open time for Manual Open Function.
► BCHK Lockout Angle	0-9, A	0	► Sensor lockout angle at Back Check. ► The range is from 0° to 30° from Fully Opened Position . ► Used to disable the detection of a Door Mounted Sensor for the Pull Side near the fully opened position. ○ "0" = Narrow ○ "A" = Wide
► LCHK Lockout Angle	0-9, A	0	► Sensor lockout angle at Latch Check. ► The range is from 0° to 30° from the Fully Closed Position . ► Used to disable the detection of a Door Mounted Sensor for Approach Side near the fully closed position. ○ "0" = Narrow ○ "A" = Wide
 LOCKOUT PARAMETERS  SAFETY WITH LOCKOUT AREAS  DN 1309			
► Stop Force Adjustment	0-7	3	Used to apply motor voltage during the stoppage of the door. 0 = less voltage, 7= most voltage
► Stop Relief (Only for Nabco Swing)	► Yes ► No	No	To reduce the stress for the doorstop, OPUS-tries to stop the door before the door hits the stop. This feature does NOT guarantee the door will STOP; therefore, it is necessary to install a physical door stop.
► Anti-Slam Open?	► Yes ► No	No	Choose Yes if the door is being thrown open due to wind conditions. It increases brake torque near the fully open position.

Optional Settings, CONTINUED

Parameter	Range	Default	Description
▶ Sim Pair Setting	▶ Single Door	Single Door	-
	▶ Normal Sim Pair		Two Opus operate each door simultaneously. ▶ (for detail, refer to CHAPTER 6)
	▶ Double Egress		▶ The Activation signal (only) is shared between doors. All other signals are independent.
	▶ Overlap Sim Pair		▶ Overlap Sim Pair is for an Astragal Application. ▶ Opus Control connected to door that must open first: • Have activation signals connected to it. • Be set to “Overlap Sim Pair”. ▶ The delayed control will be set to “Normal Sim Pair”. ▶ Latch Check range is wider than normal setting.
Open first, Latch check is wide  Opus Settings Overlap Sim Pair Normal Sim Pair Connection Activation No Activation			
DN 1558			
Oneway Secure	▶ Yes ▶ No	No	Ignore “Interior Activation” when “Exterior Activation” is ON during Oneway mode at Fully Closed Position.
Flip Screen	▶ Yes ▶ No	No	Choose Yes if Opus is installed upside down. LCD will flip upside down.

11.4 Output Settings

Output Settings				
Parameter	Terminal	Default	Range	Description
Output 1	Term 7	Fully Opened Position	► — —	► No Output
Output 2	Term 13	Fully Closed Position	► Fully Closed Position	► Output closes when fully closed
Relay Output 3	Relay Output Terminals	— —	► Closing Status	► Output closes when door is closing
			► Opening Status	► Output closes when door is opening
			► Fully Opened Position	► Output closes when door fully opened.
			► Error State Output	► Output closes when error detected
			► Recycle happened	► Output closes when recycle occurs
			► Electric Strike Lock ^{*1}	► Set for electric strike functionality. Output closes just before door opening.
			► Electric Magnetic Lock ^{*1}	► Set for Mag lock functionality. Output closes except fully closed position.
			► Air lock	► Set for Air lock functionality. Output closes when door is not fully closed.
			► Breakout Pass through	► Output closes when breakout occurs
			► TrmnL H PassThrough	► Output closes when Terminal H was closed.
			► Door Sequencing	► Set for door sequencing. After activation, wait for "Sequence Delay Timer" seconds, then Output close.
			► ■ Monitoring Norm. Open ^{*2}	► Normally open Monitoring circuit (high logic)
			► ■ Monitoring Norm. Close ^{*2}	► Normally closed Monitoring circuit (low logic)
			► Bodyguard Output	► Outputs data for bodyguard sensors and other sensors that use the same data to share the Door State.
			► BAorNot-FC Norm.Open	► Output Close when Breakout or Not in Fully Closed Position (N.O.)
			► BAorNot-FC Norm.Close	► Output Open when Breakout or Not in Fully Closed Position (N.C.)
Open Delay Timer	N/A	0.5	0.5, 1.0, 1.5 sec After Unlock Feed Back	Delay time after activation to allow lock to unlock before the door starts moving. Only functional if Electric Lock is selected or Lock Release Force is not 0.
Lock Release Force	N/A	0	0-3	Can change the force to help unlock the electric lock. Only when the lock is locked, the door is pushed toward the closed side before it is activated to open.
Lock Condition	N/A	Every Fully Closed	► Every Fully Closed ► One-way/Night Only	Determines when the electric lock engages.
Sequence Delay Timer	N/A	0	0-10, 12, 15, 20, 25 Same as Open Timer	Delay Time before seconds Door opens when an output is being used for Door Sequencing.
Only Act. Sequenced	N/A	No	► Yes ► No	Change output timing for Door Sequencing. If you choose Yes, Door Sequencing will be on only when activated. (Not output Beam, LE Approach).

^{*1} To make it easier to unlock an electric lock, the Opus applies closing force preceding door opening. When the Output is related to an electric lock, Hold Close will be 0 as the lock is locked (Rev.28 or later).

^{*2} If Monitoring is selected here, then either 61/62/6B/SWL Monitoring must be set to "Active".

11.5 Input Settings

Input Settings				
Parameter	Terminal	Default	Range	Description
Input 62 Setting	Term 4	Ext Activation	▶ — —	▶ No input
Input SWL Setting	Term 6	Safety With Lockout	▶ All Mode Activation	▶ Activates in all modes except OFF (works in one-way and night)
Input SQ Setting (Rev 28 or later)	Term 9	Sequential Input	▶ Interior Activation	▶ Interior Activation (works in both one-way and auto)
			▶ Exterior Activation	▶ Can be shunted in one-way
Input H Setting	Term 10	No Function	▶ Beam Sensor (for Slider)	▶ Threshold sensor. If activated when the door is not fully closed, the door will re-open.
			▶ LE Approach Sensor (for Swinger)	▶ Door mounted Sensor (Approach Side)- If activated then will disable hold close at Fully Closed position, Re-open at Closing ^{*1} .
			▶ Unlock Feed Back	▶ When you choose “Open Delay Timer” and “After Unlock Feed Back”, the door will not open until this input is made.
			▶ Disable Power Close (for Swinger)	▶ Turns off power close and hold close
			▶ Sequential Input	▶ Takes one activation to open door, another to close door
			▶ Open Slow	▶ Causes slow opening of the door
			▶ Safety with Lockout (for Swinger)	▶ Swing side header mounted Sensor- if activated, the door will keep closed at Fully Closed and hold open at Fully Opened
			▶ Continuous Safety (for Swinger)	▶ Door mounted Sensor (Pull Side)- if activated, door will not open at Fully Closed, stop and close (or slow open) at Opening, do nothing or stop at Closing ^{*2} .
			▶ Reduced Opening	▶ Change activation to a set reduced point which is measured by “[Base Settings]-[Reduced Stroke]”.
			▶ Emergency Close and Lock	▶ Forces the door to close ^{*3} and lock (if equipped).
			▶ Hold Open Mode	▶ Holds door in the fully open position
			▶ Reduced Int Act	▶ Reduced Opening & Interior Activation.
			▶ Reduced Ext Act	▶ Reduced Opening & Exterior Activation.
		▶ AsiaSpec_ExtActSwgSd		

*1 Only if the door was Fully Opened automatically (ex. Opened by Activation or Push & Go).

*2 This behavior changes depending on how “6B Stop Closing” and “After 6B Open?” is set.

*3 The door will close slowly if any Activations are present

Input Settings, CONTINUED				
Parameter	Terminal	Default	Range	Description
Input 62 Timer	Term 4	Same as Open Timer	0-10, 12, 15, 20, 25 Same as Open Timer	Hold open time for Input 62
Input SWL Timer	Term 6	Same as Open Timer		Hold open time for Input SWL
Input SQ Timer	Term 9	Same as Open Timer		Hold open time for Input SQ
Input H Timer	Term 10	Same as Open Timer		Hold open time for Input H
Holding Input H Timer	Term 10	0 sec	► 0, 0.5, 1, 3, 5, 10, 15, 30 sec.	Hold ON signal for seconds from OFF trigger.
Input 61 Circuit	Term 3	Normally Open	► Normally Open ► Normally Close	Circuit logic for Input 61
Input 62 Circuit	Term 4	Normally Open		Circuit logic for Input 62
Input 6B Circuit	Term 5	Normally Open		Circuit logic for Input 6B
Input SWL Circuit	Term 6	Normally Open		Circuit logic for Input SWL
Input BA Circuit	Term 8	Normally Close		Circuit logic for Input BA
6B Stop Closing	Term 5	No	► Yes ► No	When 6B is ON at latch check, while closing, the cycle determines the door movement: • Stop or Close
After 6B Open?	Term 5	Yes	► Yes ► No	Determines the door movement (open or close) if 6B is ON.
■ 61 Monitoring	Term 3	Not Active	► Active ► Not Active	CAUTION If monitoring is enabled for any input, a sensor must be connected to the input that is capable of monitoring. That sensor's input must then be connected to an Opus Output programmed for monitoring. If this is not done, errors will occur resulting in the door not operating until the problem is fixed.
■ 62 Monitoring	Term 4	Not Active	► Active ► Not Active	
■ 6B Monitoring	Term 5	Not Active	► Active ► Not Active	
■ SWL Monitoring	Term 6	Not Active	► Active ► Not Active	

11.6 History Setting

History Data	
Parameter	Description
Operation Cnt	► Indicates the number of door open cycles. ► Updated every 100 door cycles.
Open Recycle Cnt	Indicates number of times the Door reversed direction during Opening cycle after sensing: ► A struck object. ► Any amount of friction that surpassed the Open recycle sensitivity setting.
Close Recycle Cnt	Indicates number of times the Door reversed direction during Closing cycle after sensing: ► A struck object. ► Any amount of friction that surpassed the Close Recycle Sensitivity Setting.
Latest Recycle Position	► Indicates the last recycle position during opening and closing. ► For swing doors, it displays the approximate angle from closed at recycle. ► For slide doors it displays the position in inches from closed.

11.7: Test Open / Close Setting

<= Test Open =>
Tests Open/Close door cycle while ignoring Safety Signals.

12. TROUBLESHOOTING

NOTICE: If after troubleshooting a problem, and a satisfactory solution cannot be achieved, please call Nabco Entrances at 1-877-622-2694 Option #3 between 8 am - 4:30pm Central time or email techsupport@nabcoentrances.com reference NABCO Swing.

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 the automatic mode until repairs are affected. **NEVER** leave a door operating without all safety detection systems operational.

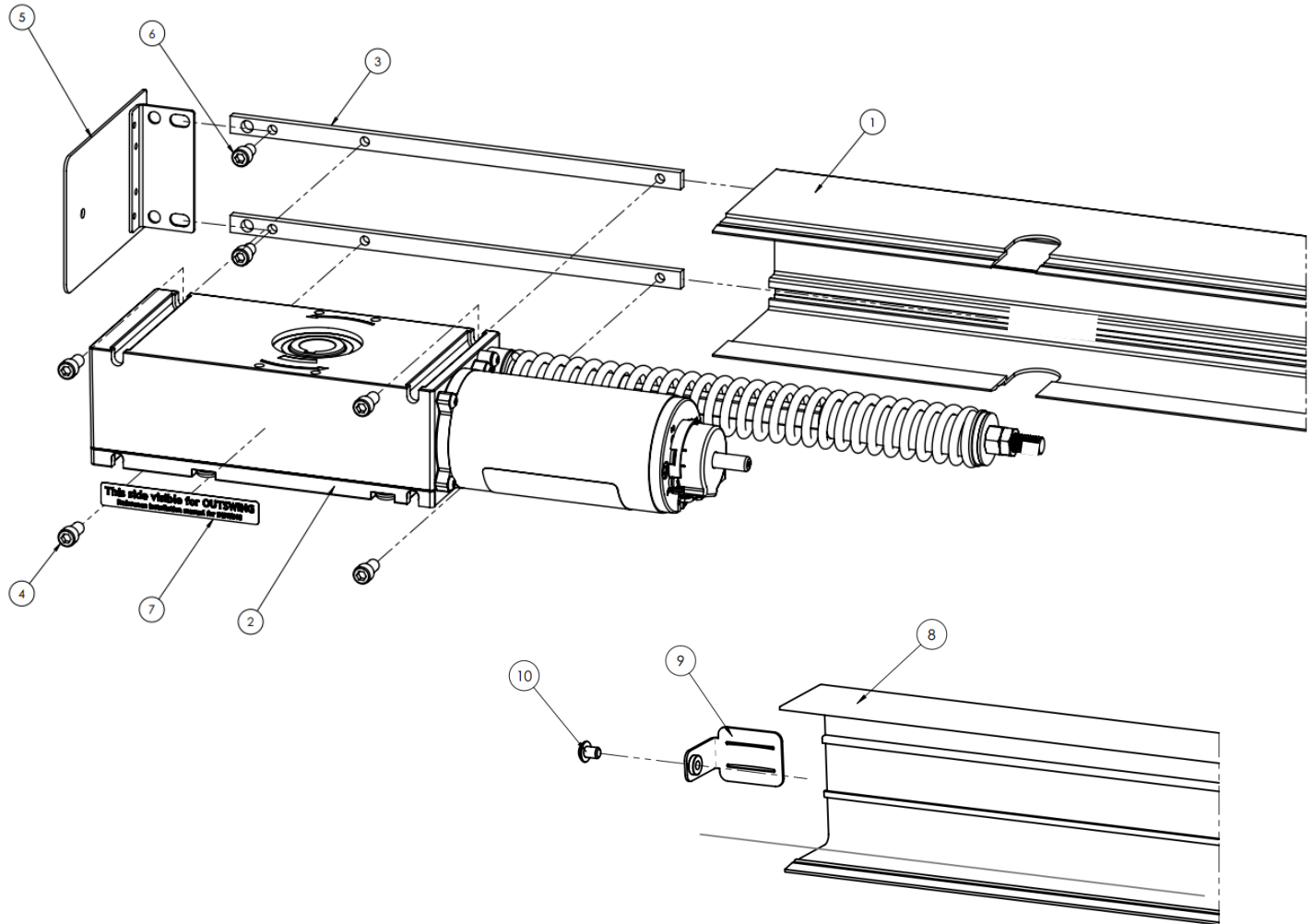
Programming Issues	
Problem	Possible Solution
Control does not react to Activation signal	▶ At the main screen, confirm that “IN” or “EXT” highlights when an activation signal is applied. If not, check the wiring or the activation device.
	▶ At the main screen, determine if “BA” is highlighted. If a 4-wire on/off/hold-open switch is being used, with a blue wire connected to terminal 8, then “Input BA Circuit” (found under “Input Settings”) must be set to “Normally Closed”. If a 3-wire switch is being used, or no switch is being used (nothing connected to terminal 8), then “Input BA Circuit” should be set to “Normally Open”.
	▶ At the main screen, if Status shows “Stopped” while the door is closed, and BA is not highlighted, turn off power for at least 4 seconds then turn on again. With the door still closed, status should now show “Fully Closed”.
	▶ Must navigate back to the main screen (as shown at right) for an activation signal to work.
Hard to manually open door	▶ On outswing only: Check if shoe position and rod length are in accordance with dimensions shown within the manual.

CONTINUED ON THE FOLLOWING PAGE.

Error Messages		
Opus Error Msg	NET-HT Error Msg	Resolution
Drive	Drive-Motor error	▶ Check all connections between the Control and Motor. ▶ Check Motor for open circuit, short circuit, or short to ground.
	Drive-A/D error	▶ It is possible electrical noise may cause a false error. If the error does not occur repeatedly then it's most likely not an issue.
Encoder Error	Encoder Error	▶ Check all connections between the Control and Motor. ▶ It is possible electrical noise may cause a false error. If the error does not occur repeatedly then it's most likely not an issue.
MPU	MPU-RAM error	▶ This could be a random error. • If the error occurs repeatedly, please replace the OPUS Control.
	MPU-ROM error	
	MPU-Clock error	
	MPU-Interrupt error	
	MPU-SW reset error	
	MPU-HW WDT error	
	MPU-EEPROM error	
No Motor	Motor disconnection error	▶ Check all connections between the Control and Motor.
Thrml Warning	Thermal-on warning	▶ Check all connections between the Control and Motor. ▶ Cool down the motor and adjust the recycle sensitivity and Open/Close speed.
No Load	No load error	▶ Check operator (gear cracked, belt skipped).
Electrical Lock	Electrical lock error	▶ Check lock settings and wiring. ▶ Ensure lock delay is long enough, and not set to (After Lock Input). ▶ Ensure no programmable inputs are set to "Unlock Input" assuming there is no lock feedback.
Communication	NET communication error	▶ Check the CAN-bus Cable between the two OPUS Controls.
	NET connection error	
	NET transmission delay error	
	NET receiving buffer error	
61 Sensor	T3:61 sensor error	▶ Check Sensor wiring. ▶ Check Settings on Sensor and/or Control related to Sensor Monitoring. ▶ Try a new Sensor.
62 Sensor	T4:62 sensor error	
6B Sensor	T5:6B sensor error	
SWL Sensor	T6:SWL sensor error	

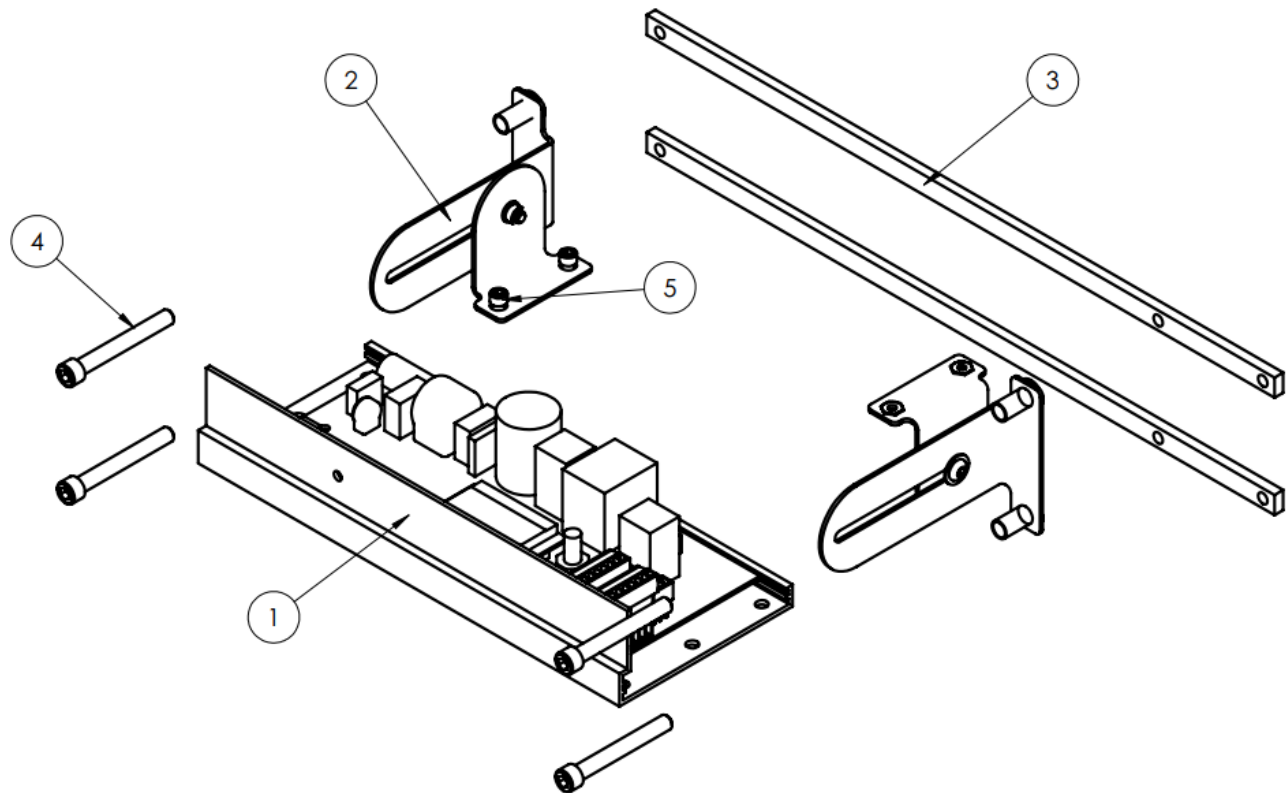
13. STANDARD PARTS AND COMPONENTS

13.1 Operator Assembly (A-01490)



ITEM	QTY	PART NUMBER	PART NAME
1	1	M-02205	HEADER,MACHINED,SWINGER.NH
2	1	V-00960	OPERATOR,SWING,NH
3	2	M-02190	BAR,NUT,SWINGER,NH,OPERATOR
4	4	T-00053	SHCS,1/4-20x0.500L,ZINC
5	1	A-81486	END CAP,HEADER,SWING,NH
5A	1	A-81533	NABCO CONNECT (Not Shown)
6	2	T-00559	SHCS,1/4-20x0.375L,ZINC
7	1	M-02199	LABEL,SWING,NH,OUTSWING ORIENTATION
8	1	M-02204	COVER,MACHINED,SWINGER,NH
9	2	M-02194	CLIP,SPRING,COVER
10	1	T-00563	BHCS, 10-24X.250L, ZINC

13.2 OPUS Assembly (A-01534)



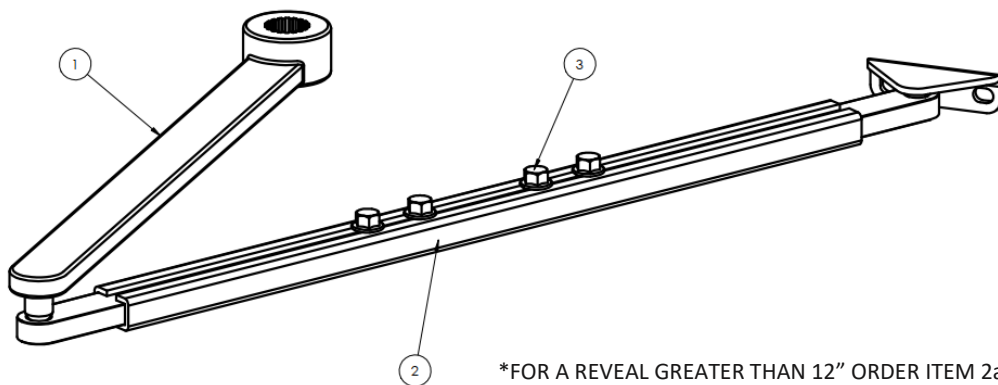
ITEM	QTY	PART NUMBER	PART NAME
1	1	M-01546	CONTROLLER, OPUS
2	2	A-01484	BRACKET, MTG, SLIDE, SWING, NH, OPUS
3	2	M-02191	BAR, NUT, SWINGER, NH, OPUS
4	4	T-00552	SHCS, 1/4-20x 2.00L, ZINC
5	4	T-00560	SHCS, 8-32x 0.188L, ZINC

13.3 Spindle Kits

LENGTH	STANDARD USE	OPTIONAL USE	PART NUMBER	PART NAME
4"	INSWING	-1IN OUTSWING	A-01540	KIT, SPINDLE, SWING, NH, SHORT
5"	OUTSWING	ADD +1IN TO INSWING	A-01540-10	KIT, SPINDLE, SWING, NH, MEDIUM
6"	EXTREME CASE	ADD +2IN TO INSWING OR +1IN TO OUTSWING	A-01540-20	KIT, SPINDLE, SWING, NH, LONG

13.4 Outswing Arm Kit, 0-12" Reveal

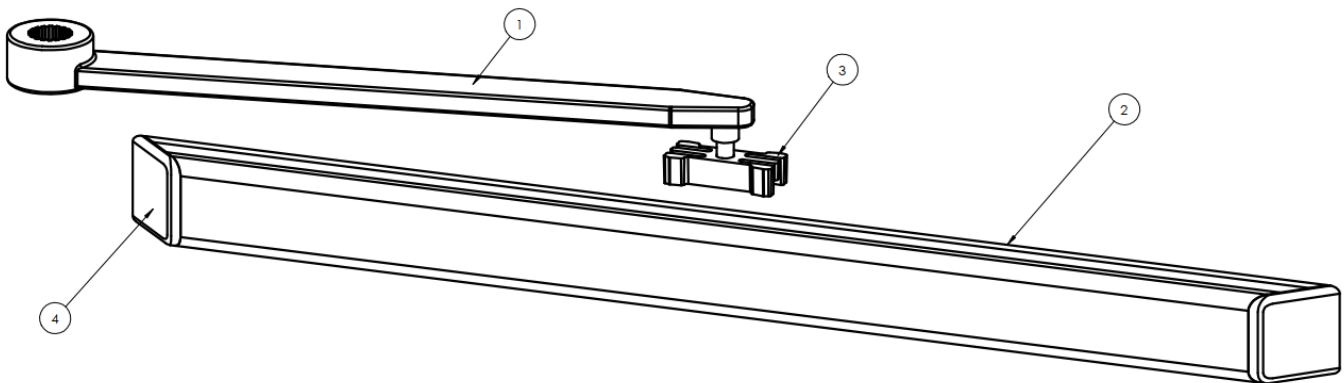
PART NUMBER	PART NAME
A-61480	204 CLEAR/SILVER
A-71480	313 DARK BRONZE
A-81480	BLACK



ITEM	QTY	PART NUMBER	PART NAME
1	1	A-61483	ARM,ASM,SWING,NH,OUTSWING,0-12 REV,204
		A-81483	ARM,ASM,SWING,NH,OUTSWING,0-12 REV,BLK/313
2	1	M-62299-10	ARM,SLEEVE,SWING,NH,OUTSWING,0-12,204
		M-72299-10	ARM,SLEEVE,SWING,NH,OUTSWING, 0-12,313
		M-82299-10	ARM,SLEEVE,SWING,NH,OUTSWING, 0-12,BLK
2a	1	M-62299-11	ARM,SLEEVE,SWING,NH,OUTSWING,12-18,204
		M-72299-11	ARM,SLEEVE,SWING,NH,OUTSWING,12-18,313
		M-82299-11	ARM,SLEEVE,SWING,NH,OUTSWING,12-18,BLK
3	4	T-00561	1/4-20 X 3/8 HEX FLANGE BOLT GRADE 5

13.5 Inswing Arm Kit, 0" Reveal

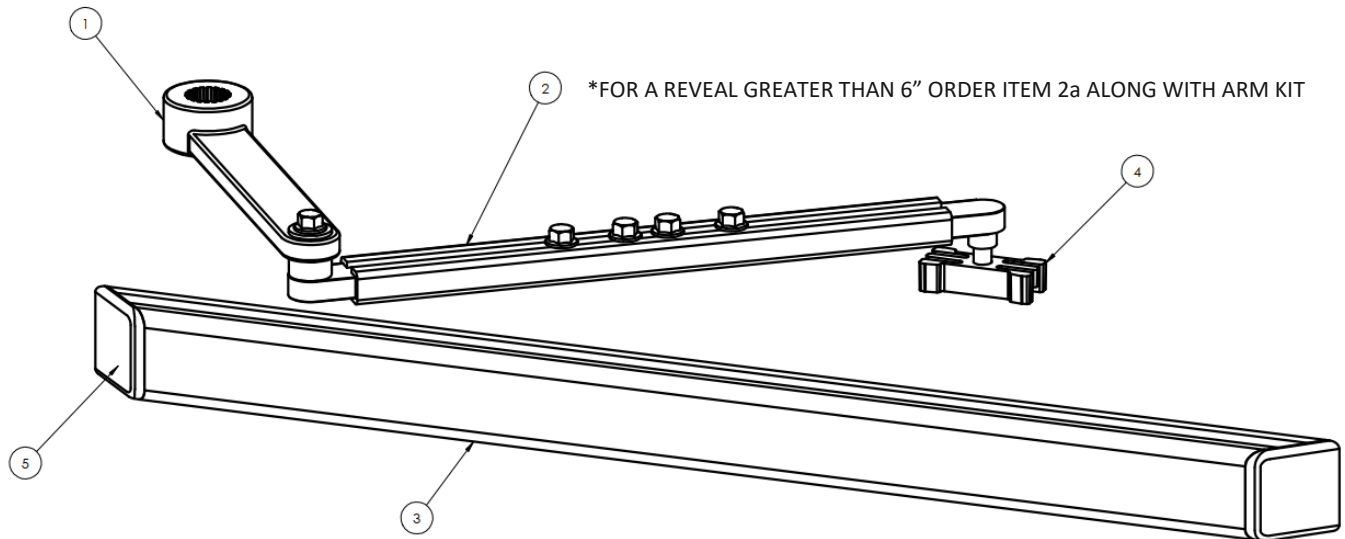
PART NUMBER	PART NAME
A-61481	204 CLEAR/SILVER
A-71481	313 DARK BRONZE
A-81481	BLACK



INSWING ARM SERVICE PARTS			
ITEM	QTY	PART NUMBER	PART NAME
1	1	A-61478	ARM,ASM,SWING,NH,INSWING,0 REVEAL,204
		A-81478	ARM,ASM,SWING,NH,INSWING,0 REVEAL,BLK/313
2	1	M-62203	TRACK,MACHINED,SWING,NH,204
		M-72203	TRACK,MACHINED,SWING,NH,313
		M-82203	TRACK,MACHINED,SWING,NH,BLK
3	1	M-02192	GUIDE BLOCK,ARM,SWING,NH,INSWING
4	1	A-01513	END CAP,TRACK,SWING,NH,INSWING (2 PIECE)

13.6 Inswing Arm Kit, 0-6" Reveal

PART NUMBER	PART NAME
A-61482	204 CLEAR/SILVER
A-71482	313 DARK BRONZE
A-81482	BLACK



INSWING ARM WITH REVEAL SERVICE PARTS			
ITEM	QTY	PART NUMBER	PART NAME
1	1	A-61479	ARM,ASM,SWING,NH,INSWING,0-6 REVEAL,204
		A-81479	ARM,ASM,SWING,NH,INSWING,0-6 REVEAL,BLK/313
2	1	M-62299-20	ARM,SLEEVE,SWING,NH,INSWING 0-6,204
		M-72299-20	ARM,SLEEVE,SWING,NH,INSWING 0-6,313
		M-82299-20	ARM,SLEEVE,SWING,NH,INSWING 0-6,BLK
2a	1	M-62299-21	ARM,SLEEVE,SWING,NH,INSWING 6-12,204
		M-72299-21	ARM,SLEEVE,SWING,NH,INSWING 6-12,313
		M-82299-21	ARM,SLEEVE,SWING,NH,INSWING 6-12,BLK
3	1	M-62203	TRACK,MACHINED,SWING,NH,204
		M-72203	TRACK,MACHINED,SWING,NH,313
		M-82203	TRACK,MACHINED,SWING,NH,BLK
4	1	M-02192	GUIDE BLOCK,ARM,SWING,NH,INSWING
5	1	A-01513	END CAP,TRACK,SWING,NH,INSWING (2 PIECE)