



**GT400-500-600-8400-8500-8600**  
**Swing Doors C.U. Quick Set-Up and Parts Guide**  
P/N C-00092 Rev 8-10-16

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*Associated Manuals Part Numbers: Conversion Unit Swing Door Systems 400-500-600-8400-8500-8600 (P/N 15-10538)*  
*Magnum IV Control Wiring and Adjustment Manual (P/N C-00084)*  
*Analog Control Wiring and Adjustment Manual (P/N 15-10745)*  
*Swing Door Owner's Manual (P/N C-00110) for Decal Installation*  
*NABCO Price Book P/N 16-9244-30 (for Sensors, Switches, and Accessories)*

**WARNING**

- 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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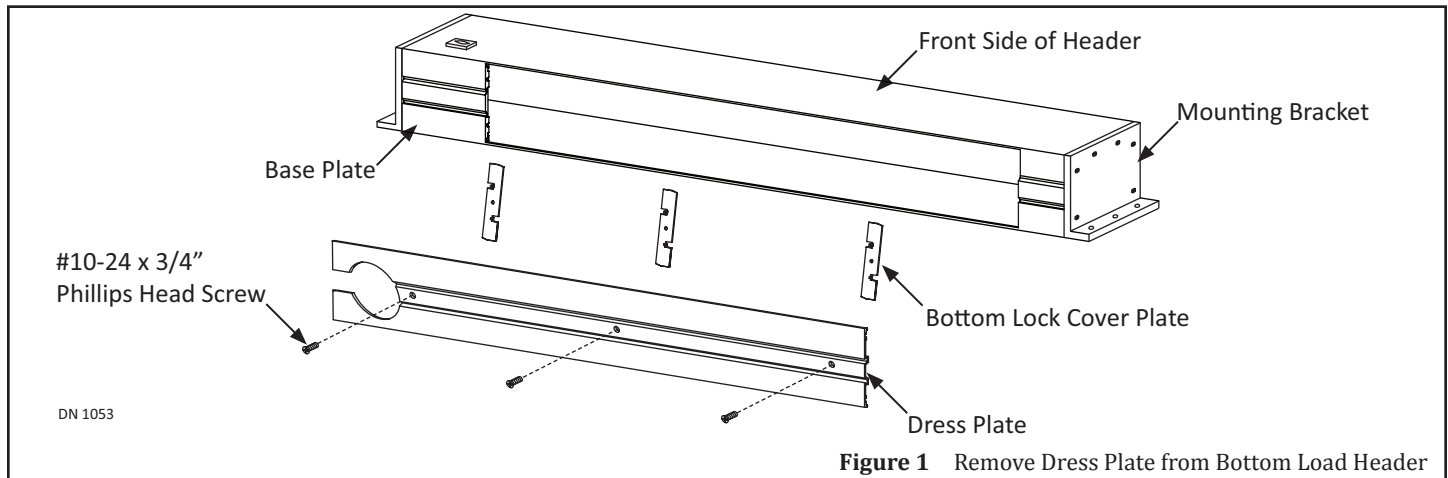
**SERVICE PARTS: C.U. MAGNUM SIDE LOAD HEADER ..... 29**

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**SECTION 1: install the bottom load header****FOR SIDE LOAD UNITS SKIP TO  
SECTION 3****1.1 Prepare the Header**

1. Place Header on flat surface with Bottom facing up. Protect Header from scratches.
2. Remove #10-24 x 3/4 inch screws and Dress Plate. Set aside.
3. Mark the locations of each Lock Cover Plate to ensure it is reinstalled in the correct position.
4. Remove Lock Cover Plates. Set Aside.
5. Remove boxes and/or parts bags from inside Header. Set aside.

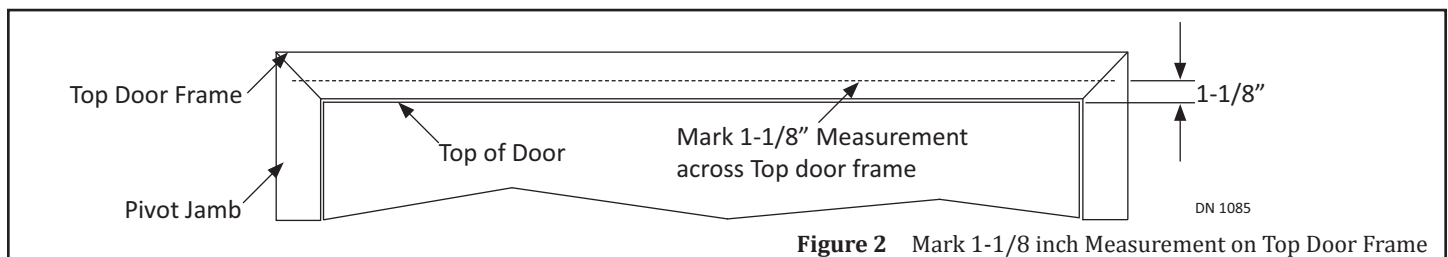
**1.2 Prepare the Door Frame**

*Note: The following instructions are for typical Metal Doors and Frame Profile. It is recommended to use lag bolts.*

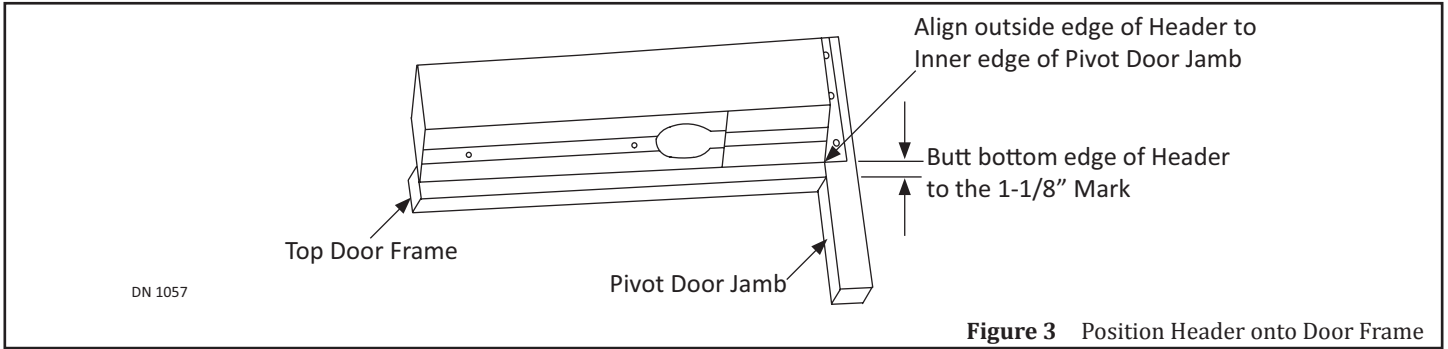
*Note: If the Door Frame is not properly reinforced nor anchored to the building surface, and/or is hollow, reinforce the Door Frame with 1/4-20 blind rivnuts (not provided by NABCO).*

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

1. Go to the Pivot Side of Swing door.
2. Measure up 1-1/8 inch from the Bottom edge of the Top door frame.
3. Mark a Horizontal Line on the face of the Top door frame, at both ends.



4. Lift the Header up against the Top door frame until the bottom edge of Header is butted up against the Horizontal Line, at both ends.
5. To ensure proper operation of the Swing Arm:
  - ▶ For a Door Jamb 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.
  - ▶ For a Door Jamb 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 against the 1-3/4 inch mark.



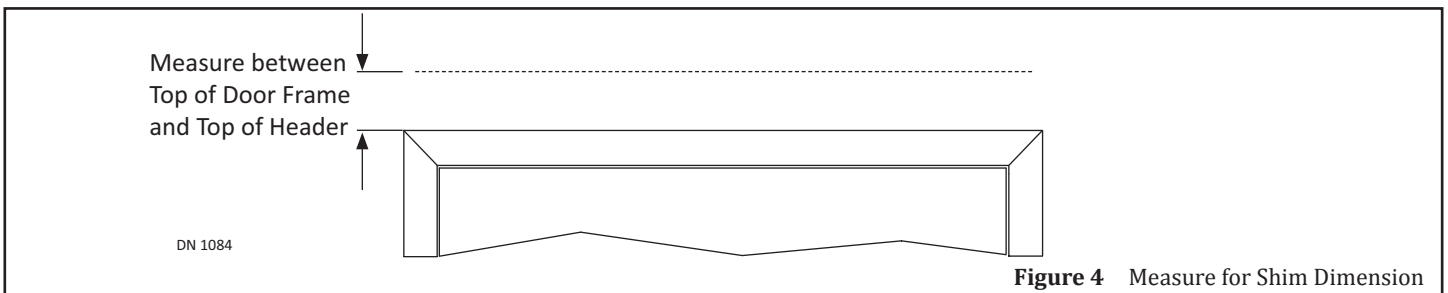
**Figure 3** Position Header onto Door Frame

6. Ensure the Header is square and level.
7. Use the Header as a template to mark screw holes onto the face of the door frame.
8. Remove the Header. Set Aside.

**1.3 Install Shim behind Header (Only if deemed necessary)**

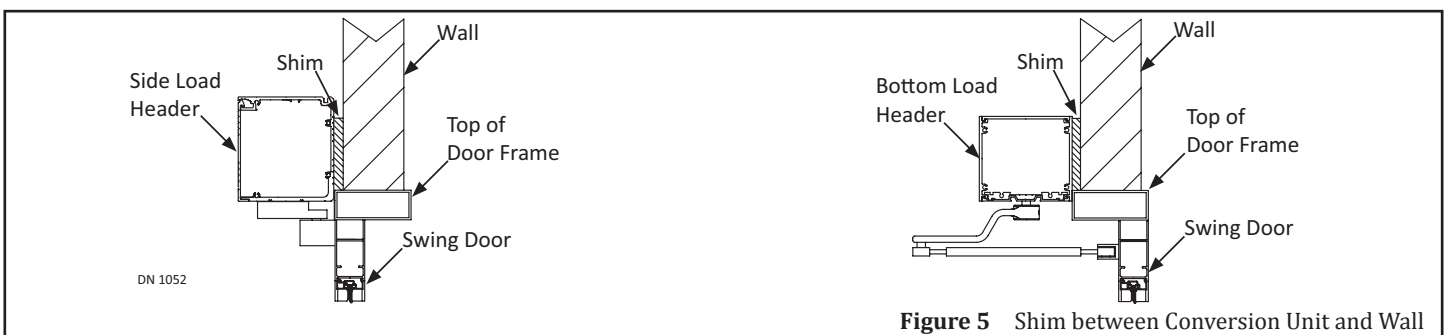
***FOR UNITS NOT INSTALLING A SHIM SKIP TO SUBSECTION 1.4***

1. Butt the Header up against the Horizontal line, line up the screw holes and then ensure the Header is square and level.
2. Go to the top of Header. Mark a horizontal line along the top edge of Header and the wall.
3. Measure the depth between the back side of the Header and wall.
  - a. Write that measurement down and label it #1.
4. Measure the distance between the top of the door frame and the horizontal line that was just drawn at the top of Header.
  - a. Write that measurement down and label it #2.



**Figure 4** Measure for Shim Dimension

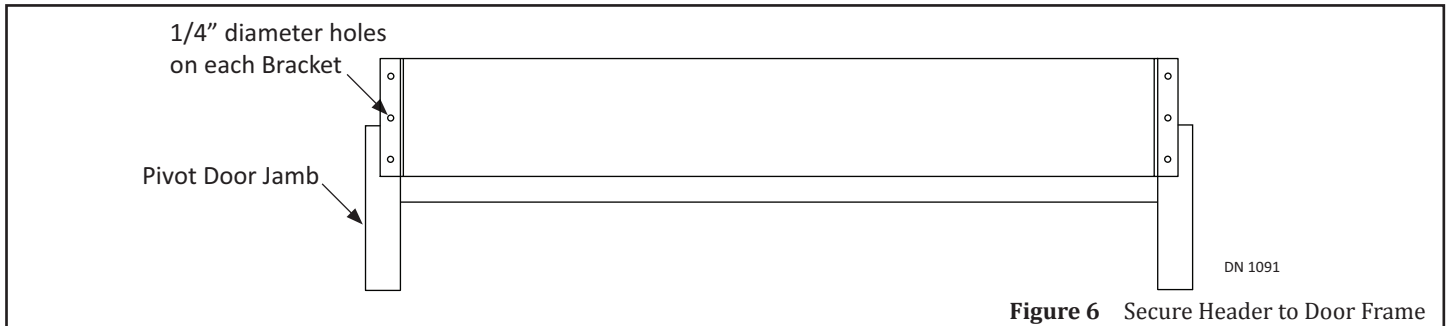
5. Obtain (1) Shim to be the same depth as measurement #1; no higher than measurement #2; and about the same width of Header including Brackets.
  - a. It is recommended to use a Shim made from Fir or Spruce.
  - b. Three Shims can be used as long as each Shim is approximately the same width and height of each Bracket.
6. Secure the Shim to stud(s).
  - a. It is recommended to use Lag Bolts.



**Figure 5** Shim between Conversion Unit and Wall

**1.4 Secure the Header to the Door Frame**

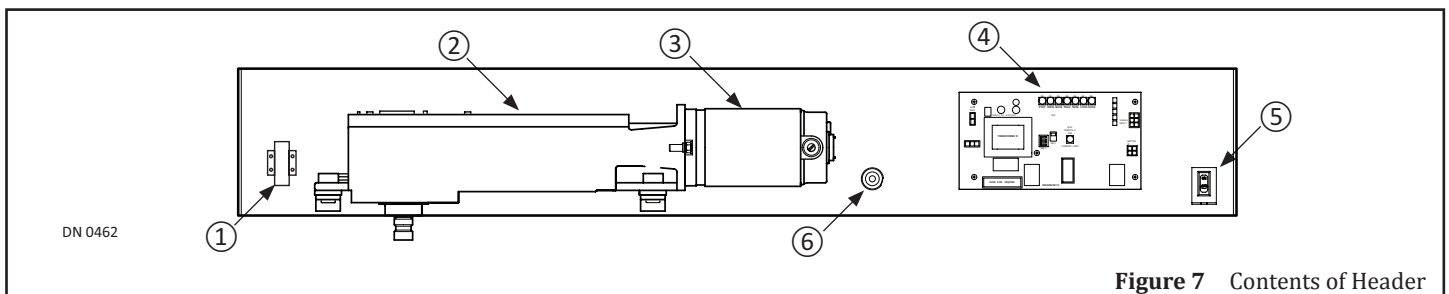
1. Lift up Header to insert Power Wiring through the 7/8 inch hole. It is recommended to use a Conduit.
  - a. It is recommended to insert all other Wiring through a separate hole.
2. Butt the bottom edge of Header against the 1-1/8 inch Horizontal Line.
3. Line up the scew holes. Secure the Header to the Door Frame.
  - a. It is recommended to use Lag Bolts.
  - b. For additional mounting, secure the Header to the Studs located behind the Shim.



## SECTION 2: install bottom load components

### FOR SIDE LOAD UNITS SKIP TO SECTION 3

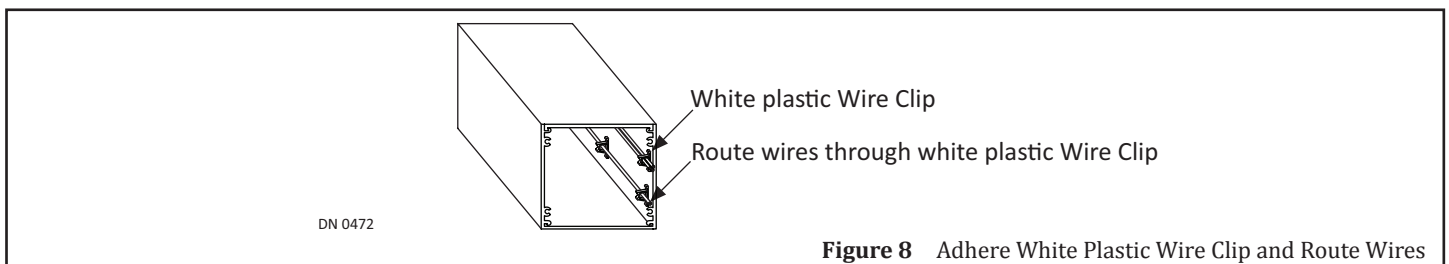
Note: Location of Contents within Header are subject to change according to Swing door specifications.



- |    |                        |    |               |
|----|------------------------|----|---------------|
| 1. | Transformer (Optional) | 4. | Control       |
| 2. | Operator               | 5. | Rocker Switch |
| 3. | Motor                  | 6. | Ground Screw  |

### 2.1 Secure Incoming Wires

1. Obtain (self sticking) white plastic Wire Clips provided by NABCO.
2. Adhere each Wire Clip to sides of Header. Insert wiring (as deemed necessary).
  - a. 120 VAC Power wires must be routed separate from other wiring, adhere those Wire Clips inside the Header, near the top to prevent pinching.



### 2.2 Install the Stop Ring

1. Place the Motor/Operator on a flat surface with the underside facing up.
2. Obtain the Stop Ring Assembly provided by NABCO.

3. Slide the Limit Stop onto the Spindle.
4. Secure (4) Ring Stops onto the Limit Stop with 5/16-18 Socket Head screws. Do not fully tighten at this time.
5. Once the Swing Arm is fully installed and Pre-Load has been tested:
  1. Open the Swing door 90 degrees.
  2. Rotate the Limit Stop Spindle until it hits the Swing Arm.
  3. Tighten down (4) Ring Stops with 5/16-18 Socket Head screws.

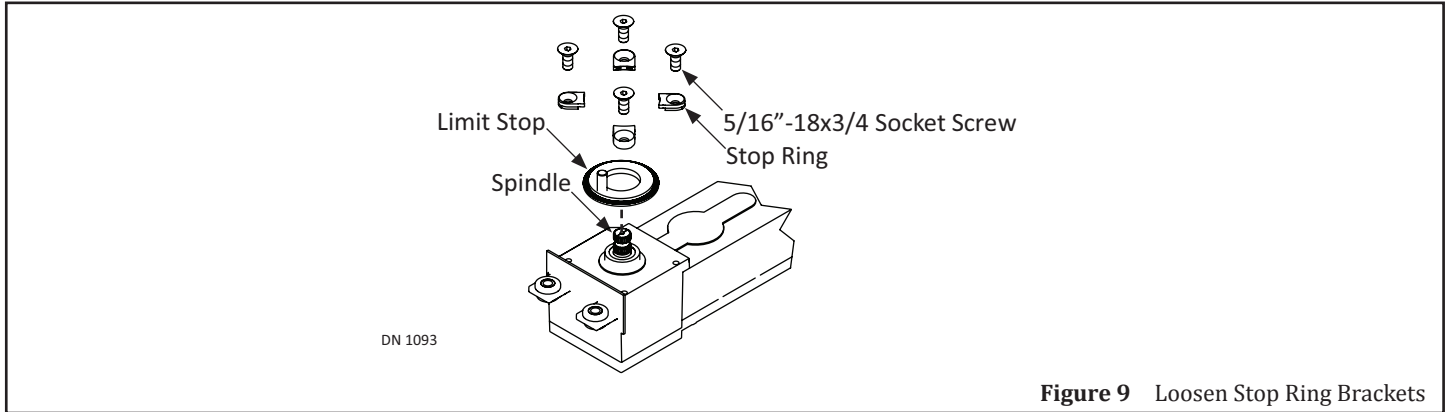


Figure 9 Loosen Stop Ring Brackets

### 2.3 Install the Motor/Operator

Table 1 Dimension "A" Spindle Location

| Bottom Load Units | Pivot Type   | Inswing                       |                           |                             |                           | Outswing                      |                           |                               |                           |
|-------------------|--------------|-------------------------------|---------------------------|-----------------------------|---------------------------|-------------------------------|---------------------------|-------------------------------|---------------------------|
|                   |              | With Fingerguard Spindle Loc. | No Fingerguard Base Plate | No Fingerguard Spindle Loc. | No Fingerguard Base Plate | With Fingerguard Spindle Loc. | No Fingerguard Base Plate | With Fingerguard Spindle Loc. | No Fingerguard Base Plate |
| GT 400            | Butt/Offset  | N/A                           | N/A                       | 5"                          | 2-1/2"                    | N/A                           | N/A                       | 7-1/4"                        | 4-3/4"                    |
|                   | Center Pivot | 6"                            | 3-1/2"                    | 5"                          | 2-1/2"                    | 8-1/4"                        | 5-3/4"                    | 7-1/4"                        | 4-3/4"                    |
| GT 500            | Butt/Offset  | N/A                           | N/A                       | 5"                          | 2-1/2"                    | N/A                           | N/A                       | 5"                            | 2-1/2"                    |
|                   | Center Pivot | 6"                            | 3-1/2"                    | 5"                          | 2-1/2"                    | 6"                            | 3-1/2"                    | 5"                            | 2-1/2"                    |

1. Go to Table 1 to determine the distance from the center of the Operator Spindle to the Center Pivot or the inside edge of the Pivot Door Jamb.

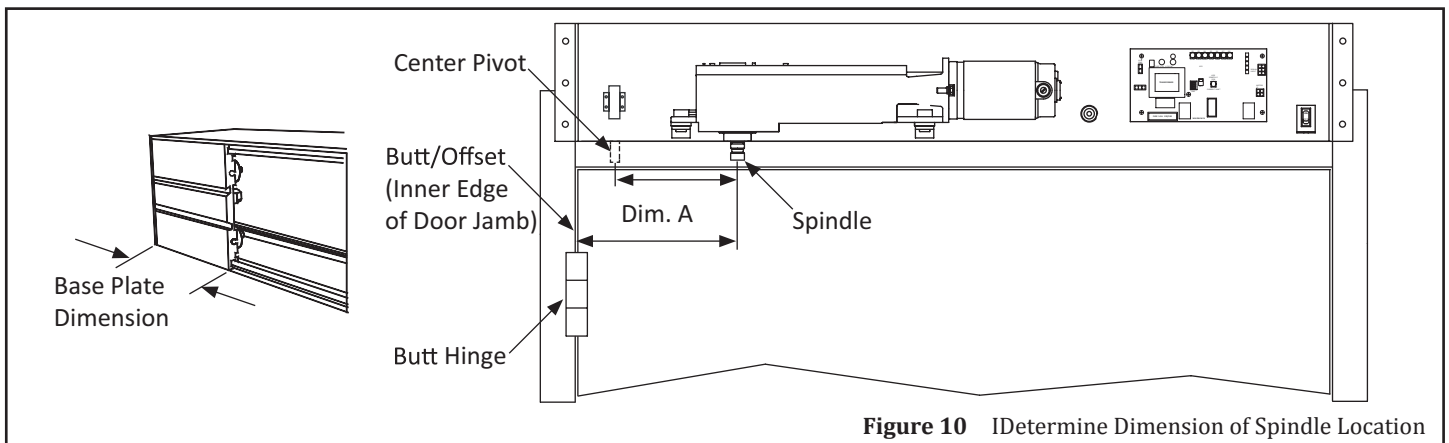
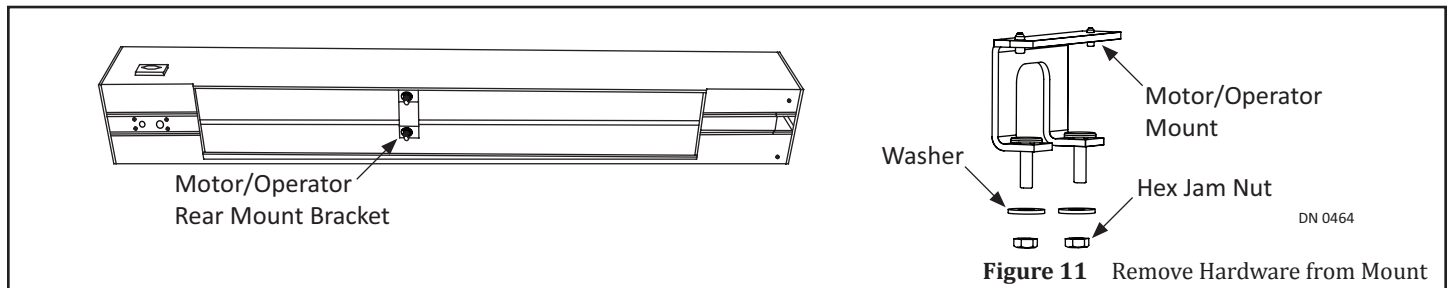


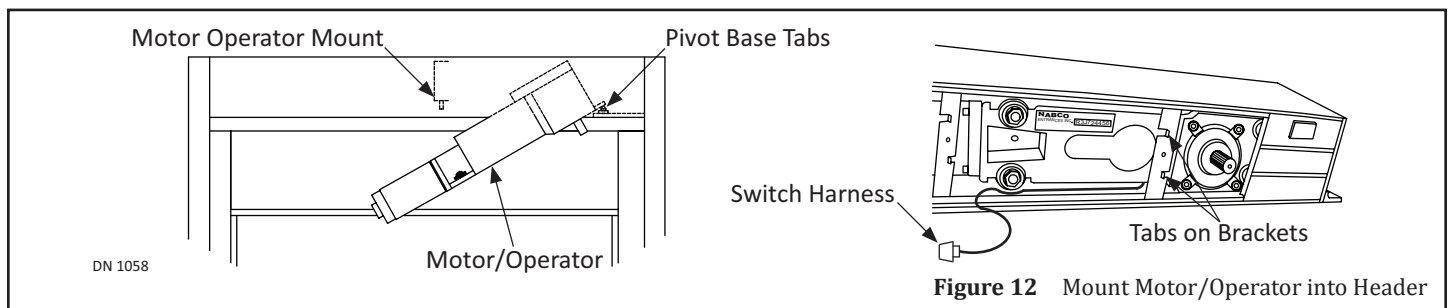
Figure 10 Determine Dimension of Spindle Location

2. Go to (inside) top of Header.
3. Locate the factory installed Rear Mount Bracket at the top of Header.
4. With a 9/16 inch Deep Well Socket and Ratchet, remove (2) 3/8-16 inch Hex Jam Nuts and (2) 7/16 x 1 inch Washers from (2) Studs extending downward. Set aside.
5. Hold the Front end of Motor/Operator at an upward angle to slide Front Mount onto (2) Pivot Base Tabs located inside

the Header.



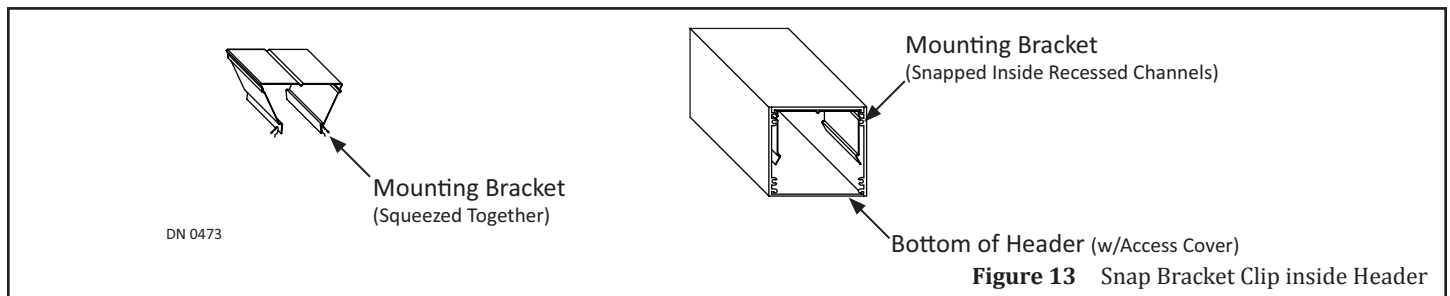
6. Lift the rear of the Motor Operator up onto (2) studs extending downward.
  - a. Ensure the Switch Harness is tucked between the back wall of Header and above the Mounting Bracket.
7. Secure the Motor/Operator with (2) 3/8-16 inch Hex Jam Nuts and (2) 7/16 x 1 inch Washers.
  - a. It is important not to pinch any wiring during the Motor/Operator installation.



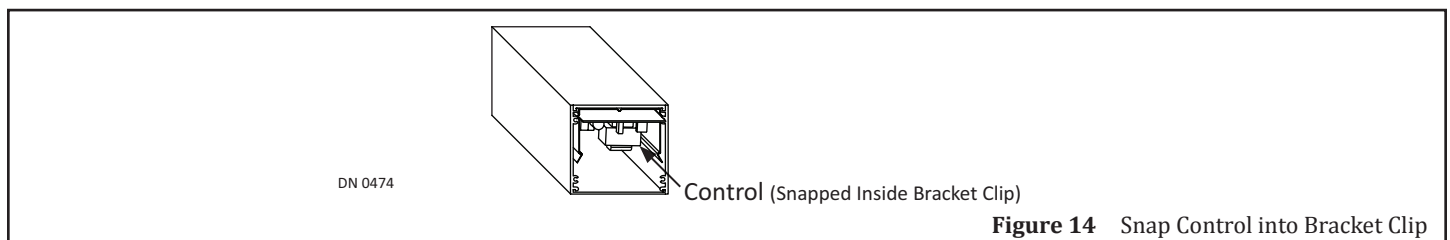
### 2.4 Install the Control

*Note: It may be necessary to mount a Soft Starter Capacitor on the Operator prior to installing the Analog Control. For detailed information, please refer to the "Analog Control Wiring and Adjustment Manual; P/N 15-10745".*

1. Obtain the Bracket Clip.
2. Go approximately 4-5 inches away from where the Motor/Operator will be installed.
3. Squeeze (2) open ends of the Bracket Clip together until both protruding channels are successfully snapped inside each recessed channel.



4. Snap the Control inside the Bracket Clip.
  - a. Face of Control must face down (towards bottom opening of Header).



### 2.5 Install Optional Components

1. Install all other optional components by following installation and wiring instructions provided with each Component.

## SECTION 3: Install the side load Header

**FOR BOTTOM LOAD UNITS SKIP TO  
SECTION 4**

### 3.1 Inswing Doors

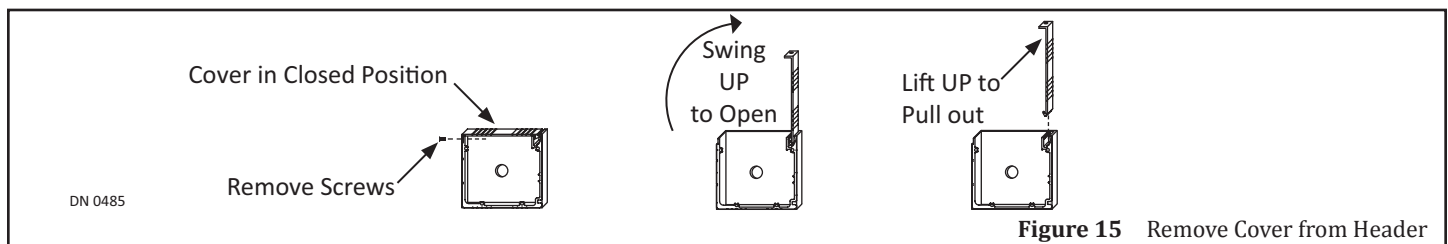
**FOR OUTSWING UNITS SKIP TO  
3.2**

1. Open the Swing door 90 degrees.
2. Measure between the wall and the outside face of the Swing door.
  - a. There must be a 2 inch minimum gap for the Inswing Arm to operate properly.
  - b. If there is less than a 2 inch gap, please call Customer Service at (877) 622-2694.

### 3.2 Prepare the Header

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

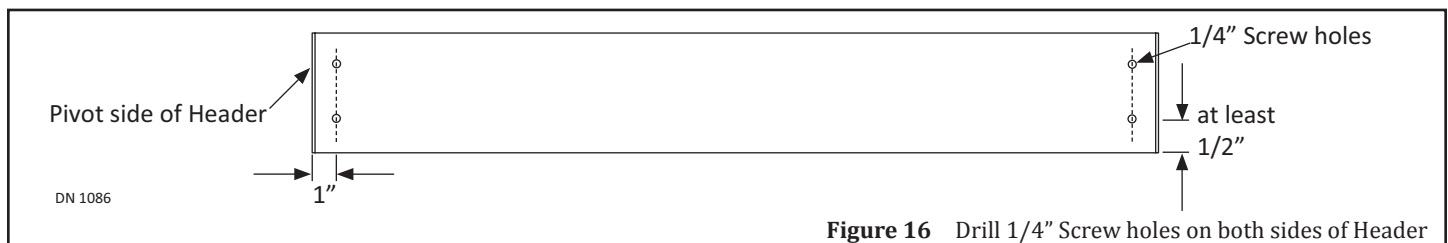
1. Place Header on flat surface with Side facing up.
2. Remove two screws from underneath cover. Set Aside.
3. Remove Cover by lifting it up from Header, and then pulling it out.
4. Remove boxes and/or parts bags from inside Header. Set aside.



**Figure 15** Remove Cover from Header

#### 3.2.1: Drill Holes

1. Go to the Strike side of Header. Drill one 7/8 inch hole through the Header to allow all wiring to be drawn inside.
  - a. The Side Load Header can be ordered with a Knockout hole located at either end of the Header. For details, please call Customer Service at 1-888-679-3319.
2. Go to the back wall inside Header on the Pivot side.
3. Measure 1 inch from the End Cap of Header towards the center. Mark a Vertical Line.
4. Measure at least 1/2 inch from the bottom of Header towards the top. Mark a Horizontal Line across the Vertical line. This is the center of the first screw hole. Drill 1/4 inch screw hole.
5. Mark (1) more Horizontal line across the Vertical line directly above the first screw hole. This is the center of the second screw hole. Drill 1/4 inch screw hole.
  - a. It may be necessary to install a Shim behind the Header if mounting the Header to a wall.
6. Go to the Strike side of Header. Repeat steps 3 thru 5.



**Figure 16** Drill 1/4" Screw holes on both sides of Header

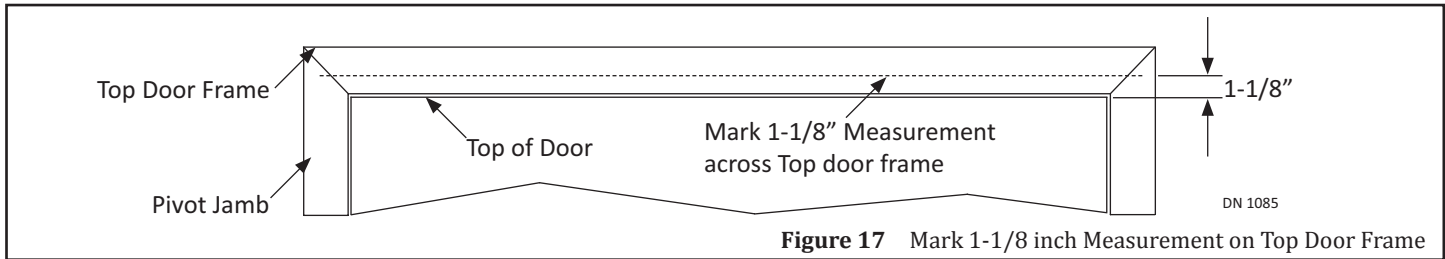
### 3.3 Prepare the Door Frame

*Note: The following instructions are for typical Metal Doors and Frame Profile. It is recommended to use lag bolts.*

*Note: If the Door Frame is not properly reinforced nor anchored to the building surface, and/or is hollow, reinforce the Door Frame with 1/4-20 blind rivnuts (not provided by NABCO).*

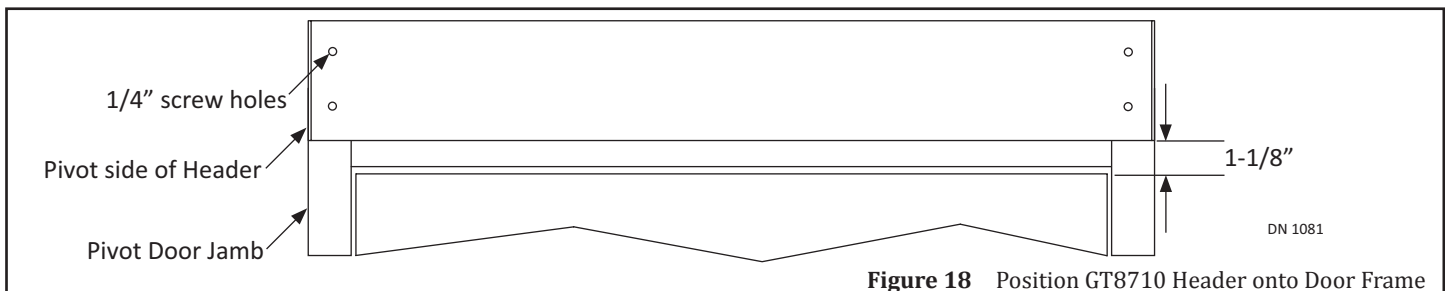
*Note: If the Door Frame is not Metal, ensure the Door Frame being used is of equal strength.*

1. Go to the Pivot Side of Swing door.
2. Measure up 1-1/8 inch from the Bottom edge of the Top door frame.
3. Mark a Horizontal Line on the face of the Top door frame, at both ends.



**Figure 17** Mark 1-1/8 inch Measurement on Top Door Frame

4. Lift the Header up against the Top door frame until the bottom edge of Header is butted up against the Horizontal Line, at both ends.
5. To ensure proper operation of the Swing Arm:
  - ▶ For a Door Jamb 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.
  - ▶ For a Door Jamb 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 against the 1-3/4 inch mark.



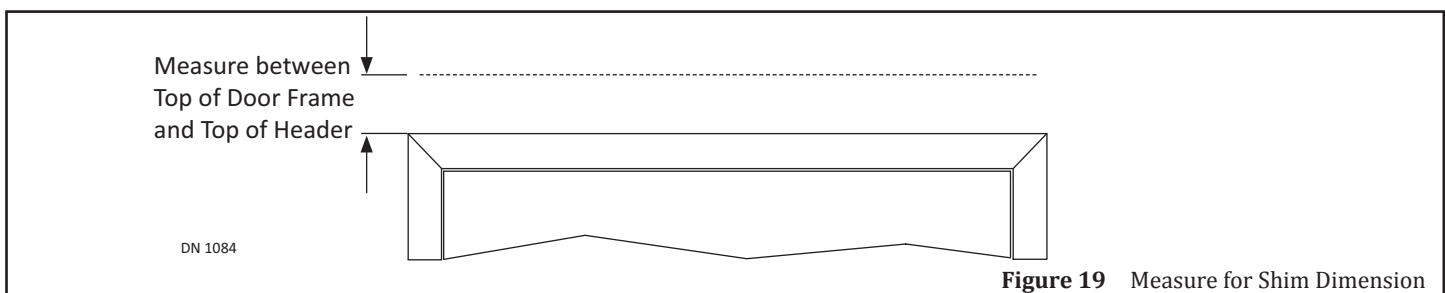
**Figure 18** Position GT8710 Header onto Door Frame

6. Ensure the Header is square and level.
7. Use the Header as a template to mark screw holes onto the face of the door frame.
8. Remove the Header. Set Aside.

### 3.4 Install Shim (Only if deemed necessary)

#### ***FOR UNITS NOT INSTALLING A SHIM SKIP TO SUBSECTION 3.5***

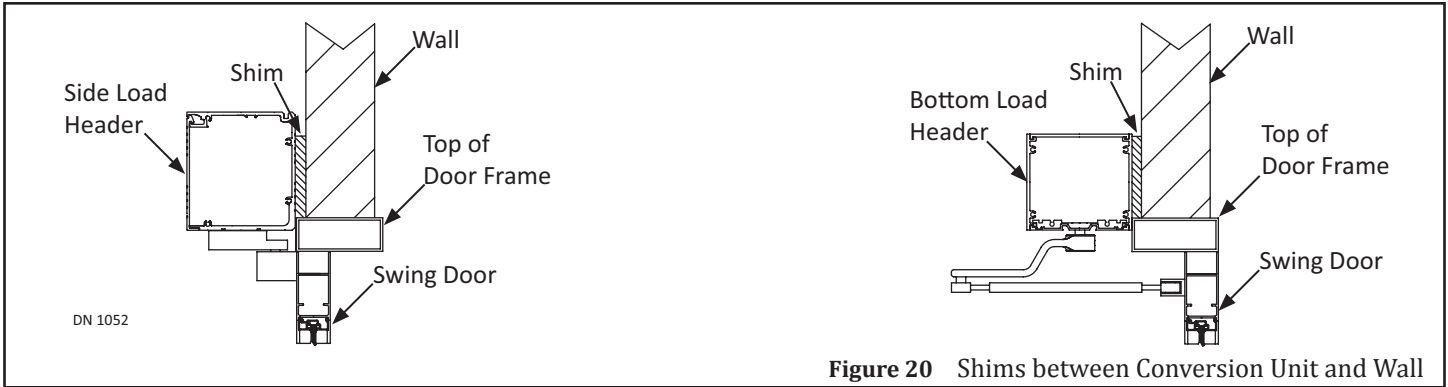
1. Butt the Header up against the Horizontal line, line up the screw holes and then ensure the Header is square and level.
2. Go to the top of Header. Mark a horizontal line along the top edge of Header and the wall.
3. Measure the depth between the back wall of the Header and the wall.
  - a. Write that measurement down and label it #1.
4. Measure the distance between the top of door frame and the horizontal line that was just drawn at the top of Header.
  - a. Write that measurement down and label it #2.



**Figure 19** Measure for Shim Dimension

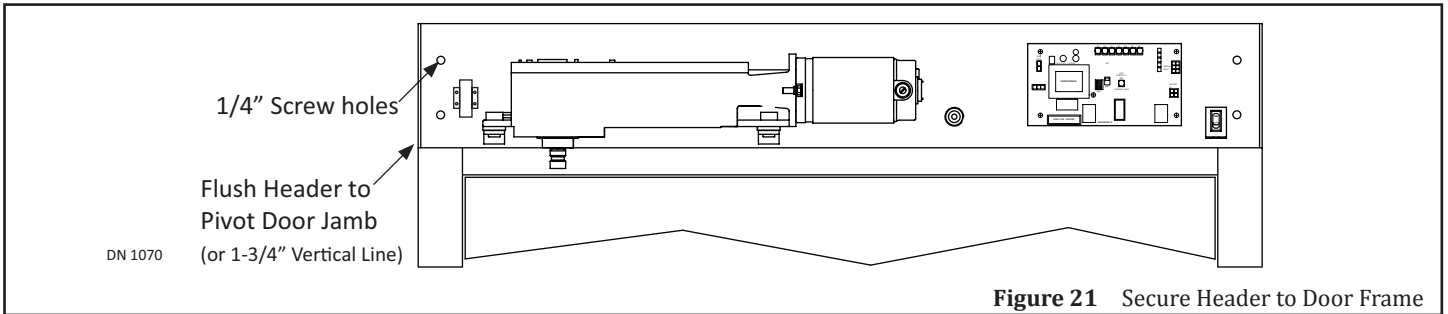
5. Obtain (1) Shim to be the same depth as measurement #1; no higher than measurement #2; and about the same width as the Header. It is recommended to use a Shim made from Fir or Spruce.
6. Secure the Shim to stud(s). It is recommended to use Lag Bolts.





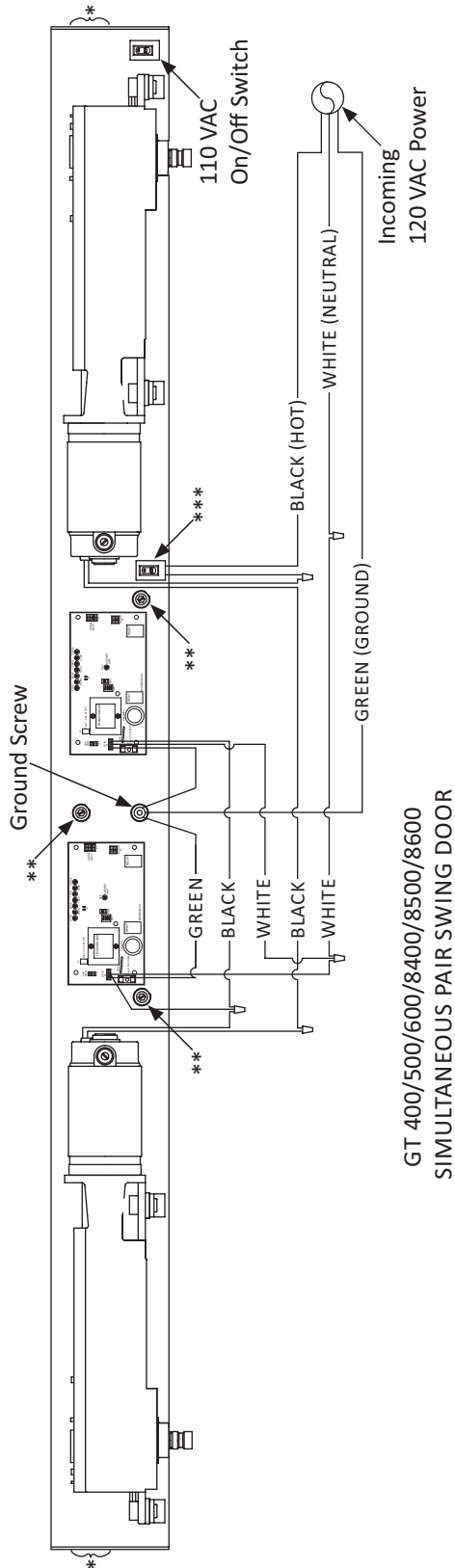
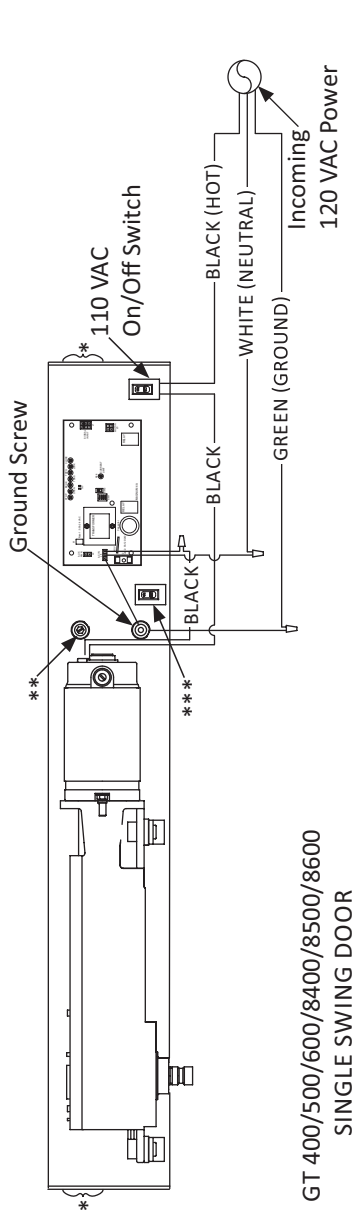
### 3.5 Secure the Header to the Door Frame

1. Lift up the Header to insert Power Wiring through the 7/8 inch hole.
  - a. It is recommended to use a Conduit.
  - b. It is recommended to insert all other Wiring through a separate hole.
2. Line up the screw holes. Secure the Header to the Door Frame. It is recommended to use Lag Bolts.
  - a. For additional mounting, secure the Header to the Studs located behind the Shim. It is recommended to use Lag Bolts.



## SECTION 4: 110 VAC general wiring

- \* Notes
- \*\* Alternate Ground Screw
- \*\*\* Alternate 110 VAC Switch



**NOTES:**

- \* Ensure Power is OFF at Breaker.
- \* Read Safety instructions within the "General Safety Recommendations" section before wiring.
- \* Electrical connections must be made by qualified electrical technician.
- \* Protect components from metal chips when drilling hole for electrical conduit.
- \* The Control ground wire (Magnum 4A or Analog) and Incoming ground wire must be connected to the same Ground screw.
- \* Route Hot (Black) and Neutral (White) wires away from moving parts and other low voltage wiring.

DN 1111

## 5.1 Outswing Arm

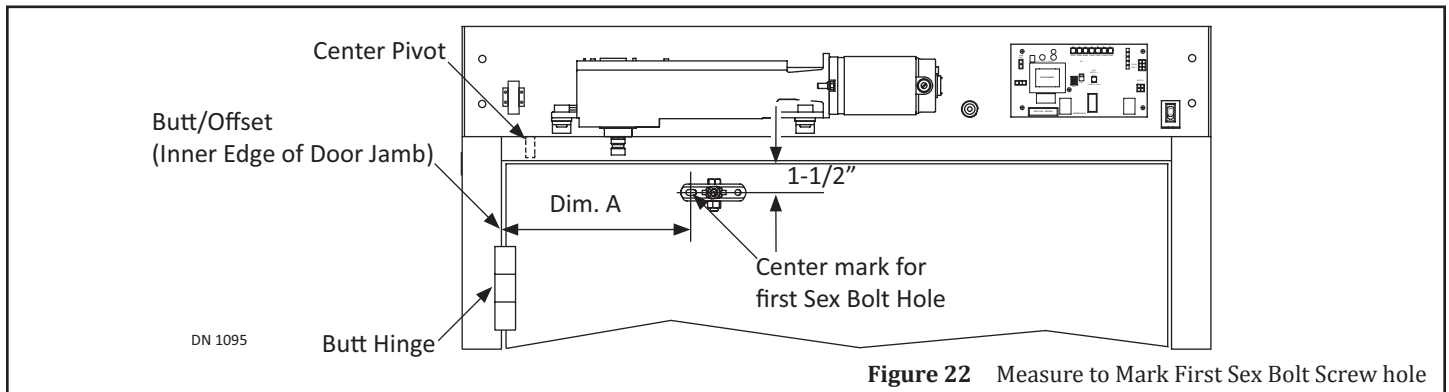
### FOR INSWING ARMS SKIP TO SUBSECTION 5.2

#### 5.1.1 Prep the Swing Door

**Table 2** Dimension "A" Arm Shoe Mounting Locations

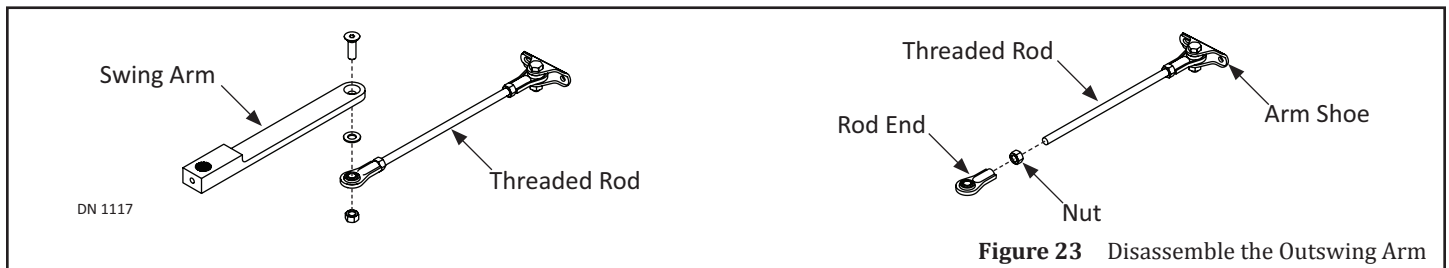
| Model         | Pivot Type   | Outswing         |                |
|---------------|--------------|------------------|----------------|
|               |              | With Fingerguard | No Fingerguard |
| GT 400 & 8400 | Butt/Offset  | N/A              | 12-7/16"       |
|               | Center Pivot | 16"              | 15"            |
| GT 500 & 8500 | Butt/Offset  | N/A              | 10-3/16"       |
|               | Center Pivot | 13-3/4"          | 12-3/4"        |

1. Go to Table 2 to measure the distance from the inside edge of the Pivot Door Jamb, or the Center Pivot to the center of the first Sex Bolt hole (used to attach the Arm Shoe).
2. Mark a Vertical line on the face of the Swing door. At the Vertical line, measure 1-1/2 inches from the top edge of the Swing door down to the center of the Swing Door.
3. Mark a Horizontal line to cross the Vertical line. This is the center of the first Sex Bolt hole.



#### 5.1.2 Prep the Outswing Arm Assembly

1. Remove the Outswing Arm from the Threaded Rod. Set aside.



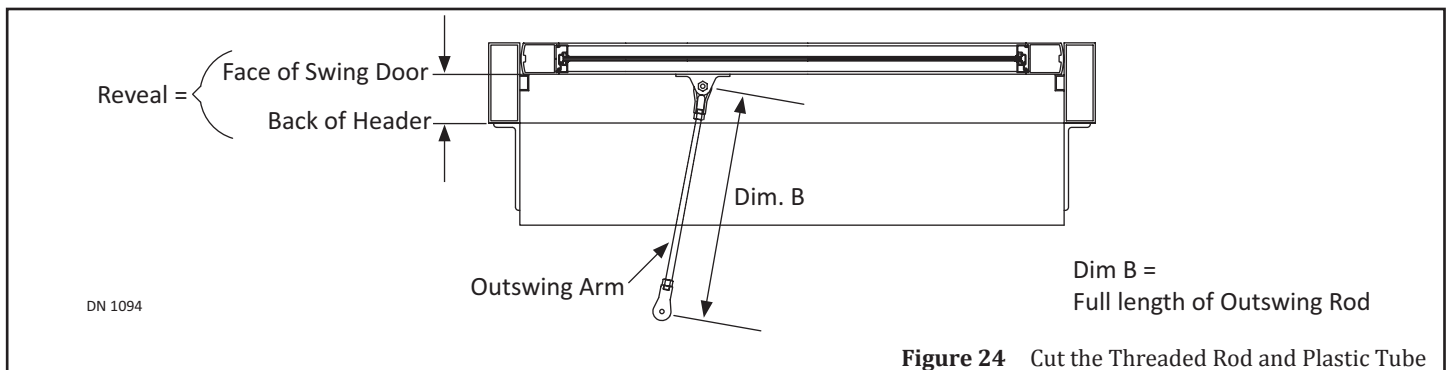
2. Go to Table 3 to locate the appropriate length measurement for the Threaded Arm.

*Note: For Reveals that are (0 inches thru 6-1/2 inches), a 20 inch Threaded Rod must be purchased. For Reveals that are (6-3/4 inches and higher), a 30 inch Threaded Rod must be purchased.*

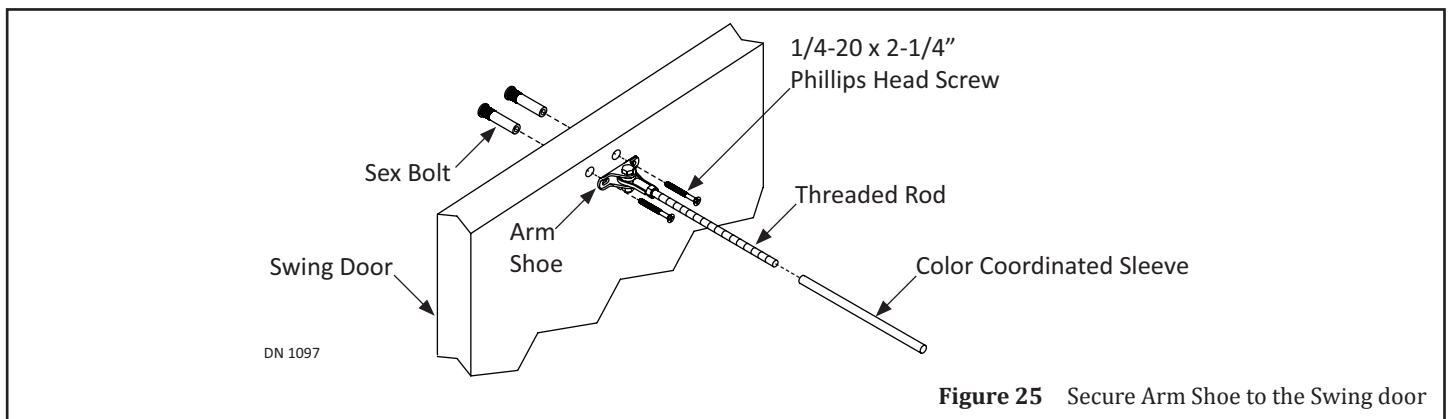
**Table 3** Dimension "B" Rod Length

| Model         | Pivot Type   | Reveal     |            |            |            |            |            |
|---------------|--------------|------------|------------|------------|------------|------------|------------|
|               |              | 1-1/8 inch | 2-1/8 inch | 3-1/8 inch | 4-1/8 inch | 5-1/8 inch | 6-1/8 inch |
| GT 400 & 8400 | Butt/Offset  | 11-7/8"    | 12-7/8"    | 13-7/8"    | 14-7/8"    | 15-7/8"    | 16-7/8"    |
|               | Center Pivot | 12-1/2"    | 13-1/2"    | 14-1/2"    | 15-1/2"    | 16-1/2"    | 17-1/2"    |
| GT 500 & 8500 | Butt/Offset  | 11-7/8"    | 12-7/8"    | 13-7/8"    | 14-7/8"    | 15-7/8"    | 16-7/8"    |
|               | Center Pivot | 11-7/8"    | 12-7/8"    | 13-7/8"    | 14-7/8"    | 15-7/8"    | 16-7/8"    |

- Measure the Threaded Rod between the center of each Eye, located on each Eye, Located at each end of the Rod. Please see Dim B in Figure 24.
- Remove the Link that is not attached to the Arm Shoe, from the Threaded Rod.
- Cut the Threaded Rod according to the measurement that was determined in Step 3.



- Obtain (1) color coordinated Plastic Tube from the Outswing Rod assembly.
- Cut the Plastic Tube to the same length as the exposed Rod (between the Links and Nuts).
- Slide the Plastic Tube over the Threaded Rod.
- Replace the Rod Link back onto the Threaded Rod.
- Tighten the Nut against the Link to prevent the Rod from screwing In or Out.



### 5.1.3 Secure the Arm Shoe to the Swing Door

- Butt the Arm Shoe against the Swing door. Align the first Sex Bolt hole to the measured Mark.
- Ensure the Arm Shoe is square and level.
- Use the Arm Shoe as a Template to mark the second Sex Bolt hole. Set aside.
- Drill (2) 3/8 inch bolt holes all the way through the Swing door.
- Go to the back of the Swing door. Insert each Sex Bolt into the drilled holes.
- Go to the front of the Swing door. Secure the Arm Shoe to the Swing Door with (2) 1/4-20 x 2-1/4" Screws.

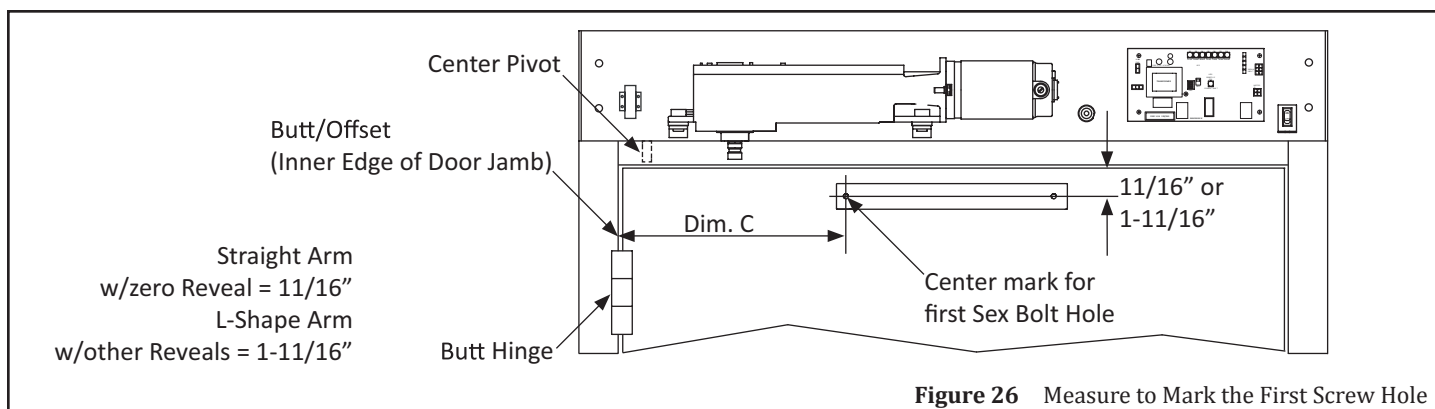
## 5.2 Inswing Arm

*Note: Ensure there is a 2 inch gap between the wall and the outside face of the Swing door in the fully opened position (90 degrees) for the Inswing Arm to operate properly.*

**Table 4** Dimension "C" Track Mounting Locations

| Model         | Pivot Type   | Inswing Standard Track (ST) 12-1/4" |                | Inswing Standard Track (PT) 21" |                |
|---------------|--------------|-------------------------------------|----------------|---------------------------------|----------------|
|               |              | With Fingerguard                    | No Fingerguard | With Fingerguard                | No Fingerguard |
| GT 400 & 8400 | Butt/Offset  | N/A                                 | 8-1/4"         | N/A                             | N/A            |
|               | Center Pivot | 13"                                 | 12"            | 3-3/4"                          | 2-3/4"         |
| GT 500 & 8500 | Butt/Offset  | N/A                                 | 8-1/4"         | N/A                             | N/A            |
|               | Center Pivot | 13-3/4"                             | 12"            | 3-3/4"                          | 2-3/4"         |

- Go to Table 4 to measure distance from the inside edge of the Pivot Door Jamb, or the Center Pivot to the center of the first Sex Bolt hole (used to attach the Track).
- Mark a Vertical line on the face of the Swing door.



**Figure 26** Measure to Mark the First Screw Hole

- Measure:
  - ▶ 0 inch Reveal (Straight Arm):
    - 11/16 inch from the top edge of the Swing Door down to the center of the Swing Door.
  - ▶ Reveals greater than 0 inch (L-Shape Arm):
    - 1-9/16 inch from the top edge of the Swing Door down to the center of the Swing Door.
  - ▶ New dimension not shown (L-Shape Arm):
    - Reveal + 8-7/8 inch = New dimension
- Mark a Horizontal line to cross the Vertical line. This is the center of the first Sex Bolt hole.
- Butt the Track against the Swing door by aligning the first Sex Bolt hole with the measured Mark.
- Ensure the Track is square and level.
- Use the Track as a Template to mark the second Sex Bolt hole. Set aside.
- Drill (2) 3/8 inch bolt holes all the way through the Swing door.
- Go to the back of the Swing door. Insert each Sex Bolt into the drilled holes.
- Go to the front of the Swing door.
- Butt the Track against the Swing door by aligning the Sex Bolt holes.
  - a. Install (1) Spacer behind the Track for Swing doors with "0" Reveal.
- Secure the Track to the Swing Door with (2) 1/4-20 x 2-1/4" Screw.

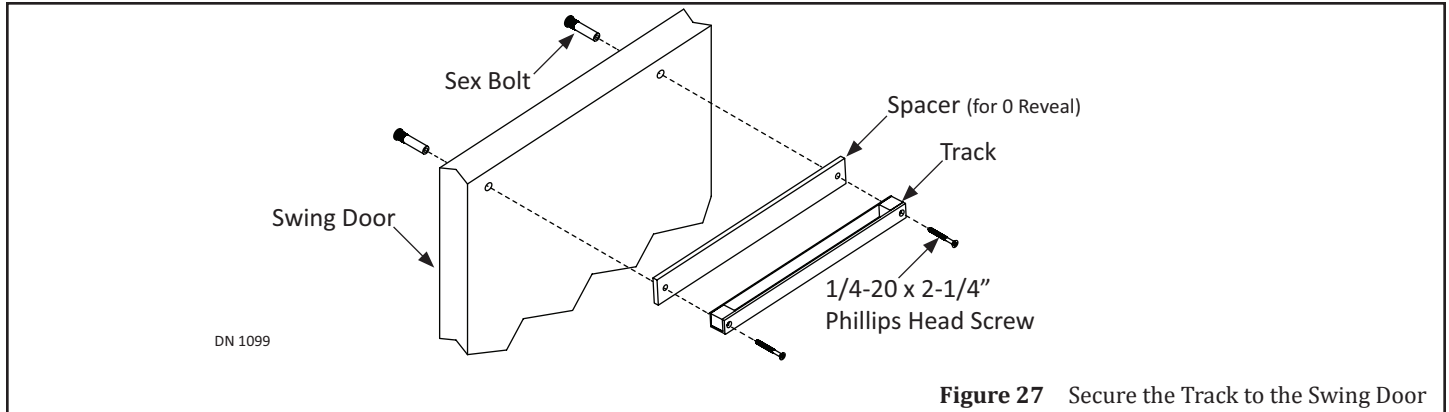


Figure 27 Secure the Track to the Swing Door

**SECTION 6: install the second half of swing arm**

**6.1 Set Pre-Load**

**WARNING**

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

**CAUTION**

Power must be turned OFF during the Swing Arm installation.

**DANGER**

Ensure the Motor/Operator is plugged into the Controller. This needs to be done so the Swing Arm will not swing back as fast, if accidentally let go.

1. Ensure the Spring on the Operator is in the Unwound (0°) position.
  - a. The Motor/Operator is shipped in the Unwound (0°) position.

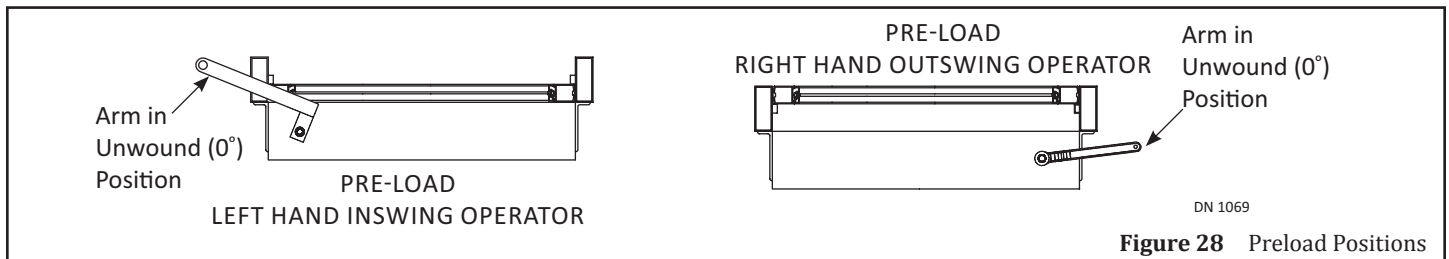


Figure 28 Preload Positions

2. Obtain (1) Pin or 1/8 inch Allen Wrench.
3. Go underneath the Header. Locate the Operator Spindle.
4. At the 0 degree position, slide the Swing Arm onto the Spindle.

**DANGER**

Do not allow the Pin or 1/8 inch Allen Wrench to drop out of the Lovejoy Coupling Access hole at any time during installation. The Swing Arm will spring back to its original location and can result in personal injury or damage.

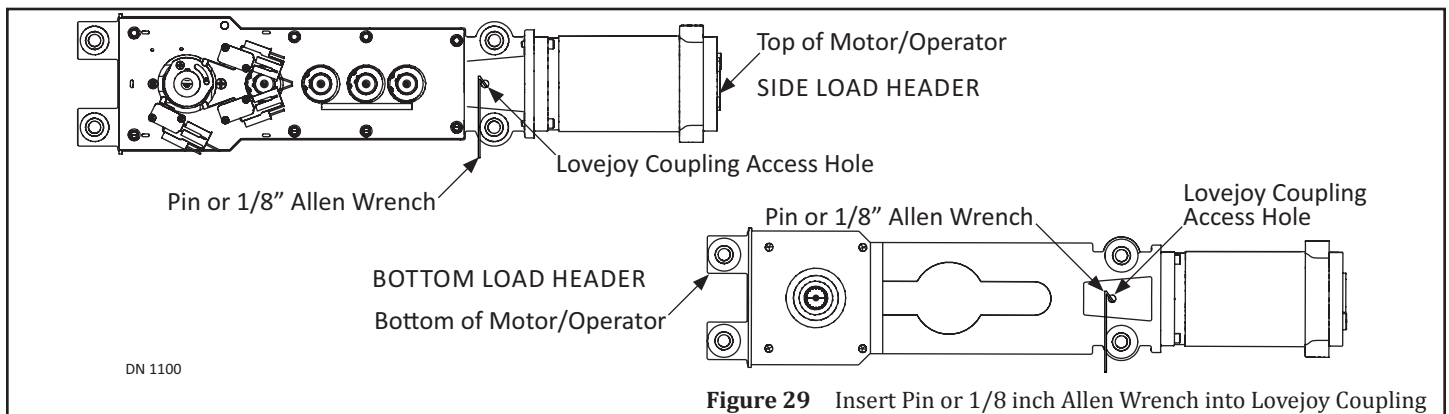
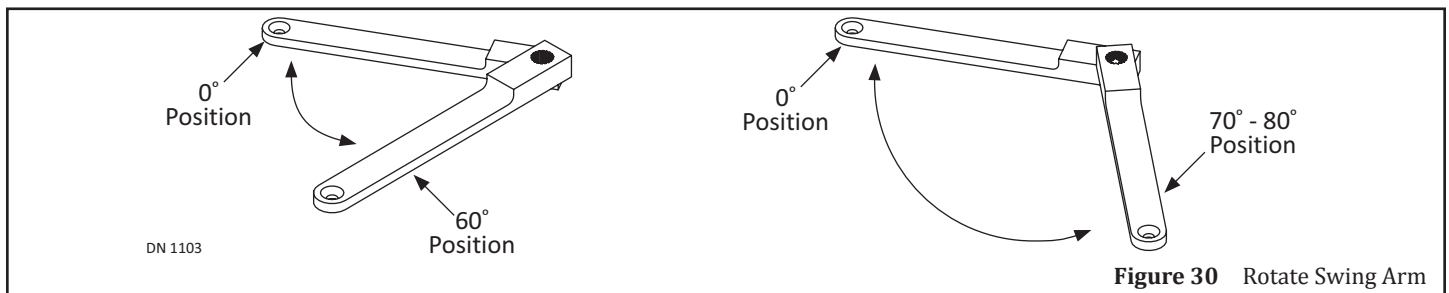


Figure 29 Insert Pin or 1/8 inch Allen Wrench into Lovejoy Coupling

5. In order to achieve correct Back Check and Latch Check positions, the Spring on the Operator must be wound up approximately 130 - 140 degrees. With a firm grip, from the Unwound (0 degree) position, rotate the Swing Arm approximately 60 degrees:

- ▶ Clockwise
  - For Left Handing
- ▶ Counter-Clockwise
  - For Right Handing

6. While holding the Swing Arm in that position, insert (1) Pin or 1/8 inch Allen Wrench into the Lovejoy Coupling Access Hole.
  - a. It may be necessary to ease the Swing Arm back until the Pin or 1/8 inch Allen Wrench engages the Lovejoy Coupling.
7. Remove the Swing Arm from the Operator Spindle.
  - a. The Pin or 1/8 inch Allen Wrench will keep the Spring from unwinding.
8. Go to the 0 degree position again, slide the Swing Arm back onto the Operator Spindle.
9. With a firm grip, slightly remove pressure from the Spring to allow removal of the Allen wrench. Continue to rotate the Swing Arm an additional 70-0 degrees. Re-insert the Allen wrench and then remove the Swing Arm.
  - a. The Spring on the Operator should be wound approximately 130 - 140 degrees.

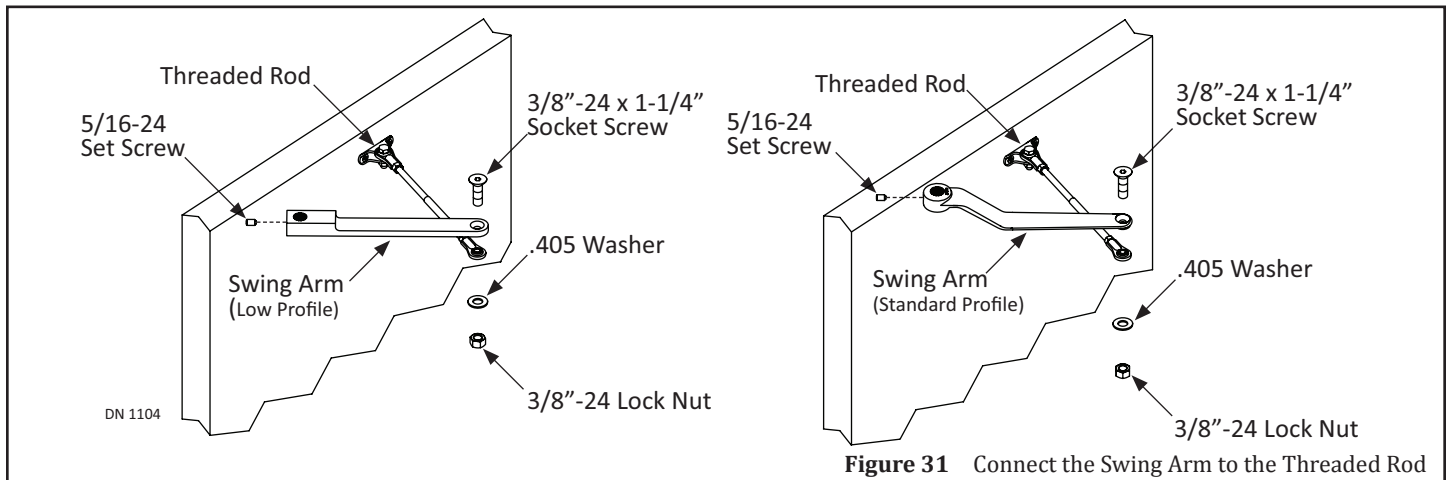


**Figure 30** Rotate Swing Arm

## 6.2 Secure the Swing Arm to the Swing Door

### 6.2.1: Outswing Arm

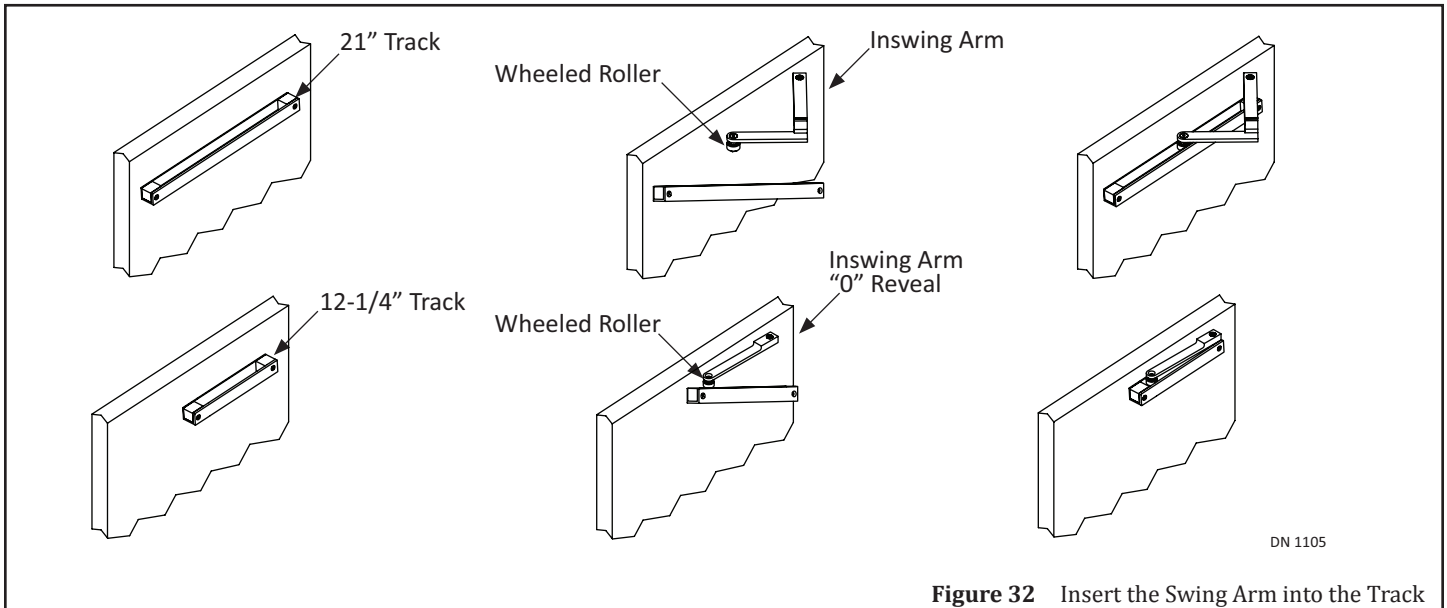
1. Align the Screw hole at the end of Swing Arm to the Screw hole at the end of Threaded Rod.
  - a. It may be necessary to remove and then slide the Swing Arm back onto the Operator Spindle.
2. Secure the Swing Arm to the Threaded Rod with (1) 3/8"-24 x 1-1/4" Socket Screw, (1) .405 Washer, and (1) 3/8"-24 Lock Nut.



**Figure 31** Connect the Swing Arm to the Threaded Rod

### 6.2.2: Inswing Arm

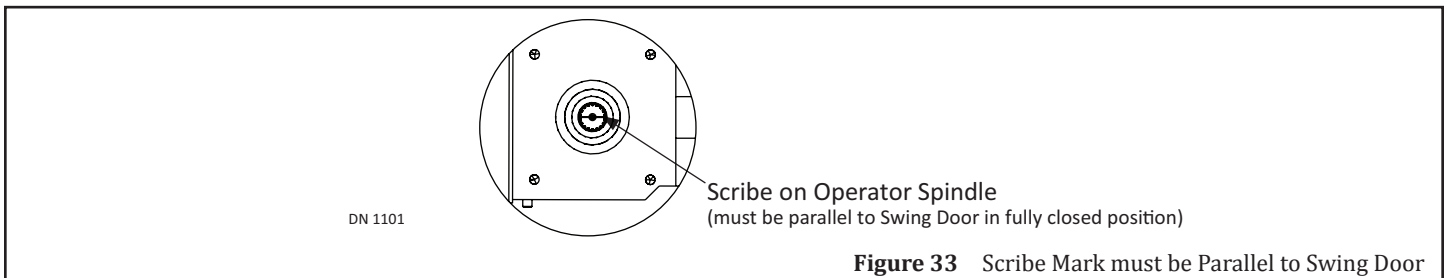
1. Go to the first 1/4-20 x 2-1/4" Screw (closest to the Pivot Door Jamb) that is used to secure the Track to the Swing door.
2. Remove the first 1/4-20 x 2-1/4" Screw so that side of the Track will hang down.
3. Close the Swing door to allow the Wheeled Roller (located at the end of the Swing Arm) to butt against the Swing door.
4. Raise the Track until the screw hole is aligned with the screw hole on the Swing door.
  - a. The Wheeled Roller will insert itself into the Track.
5. Secure the Track to the Swing door with (1) 1/4-20 x 2-1/4" Screw.



**Figure 32** Insert the Swing Arm into the Track

### 6.2.3: Inspect the Scribe Mark

1. Fully close the Swing door.
2. Go to the underside of the Operator Spindle. Locate (1) Scribe Mark.
3. Ensure the Scribe Mark is parallel with the Swing Door.



**Figure 33** Scribe Mark must be Parallel to Swing Door

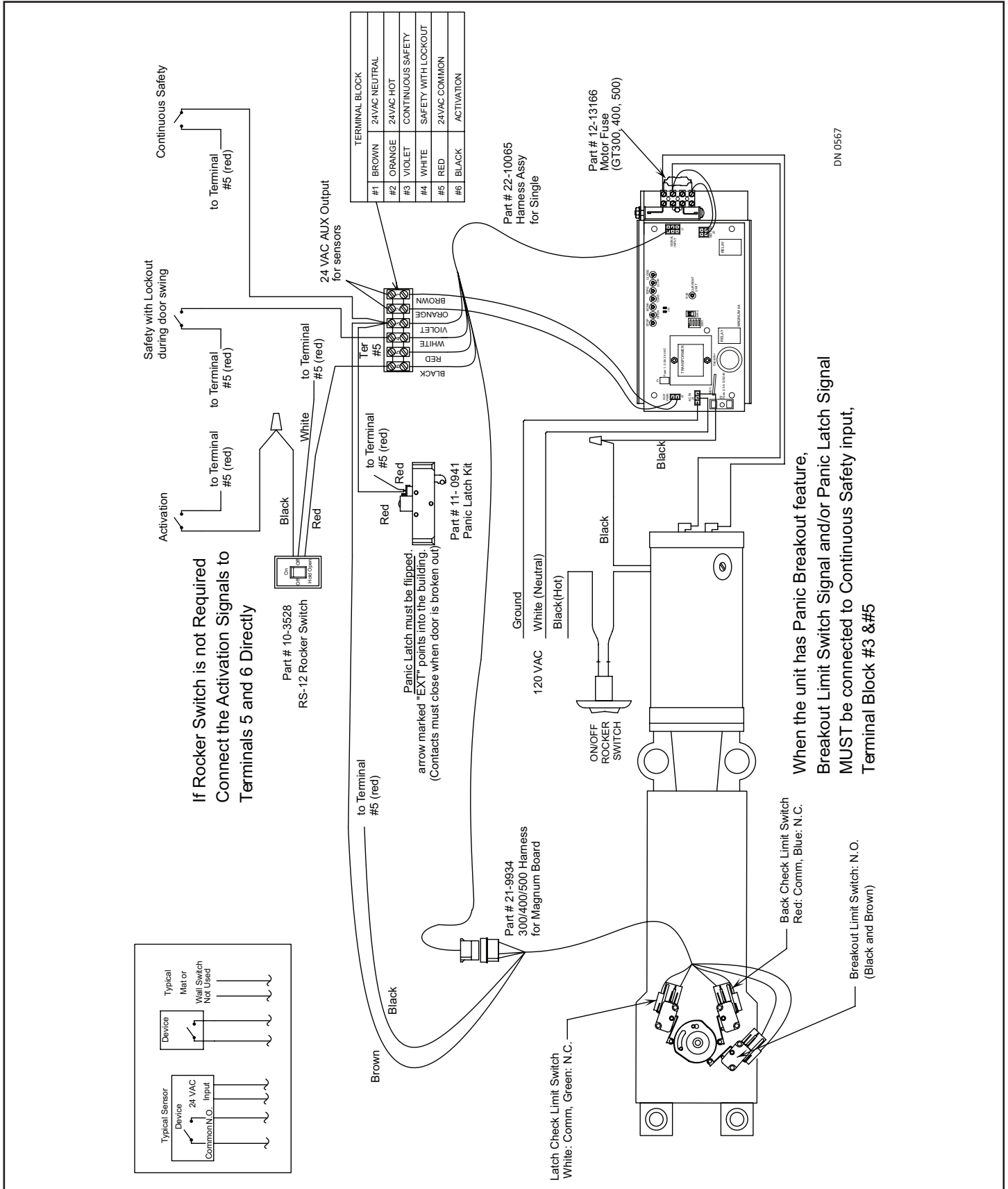
### 6.2.4: Secure the Swing Arm to the Operator Spindle

1. 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.
2. Remove the Allen Wrench.



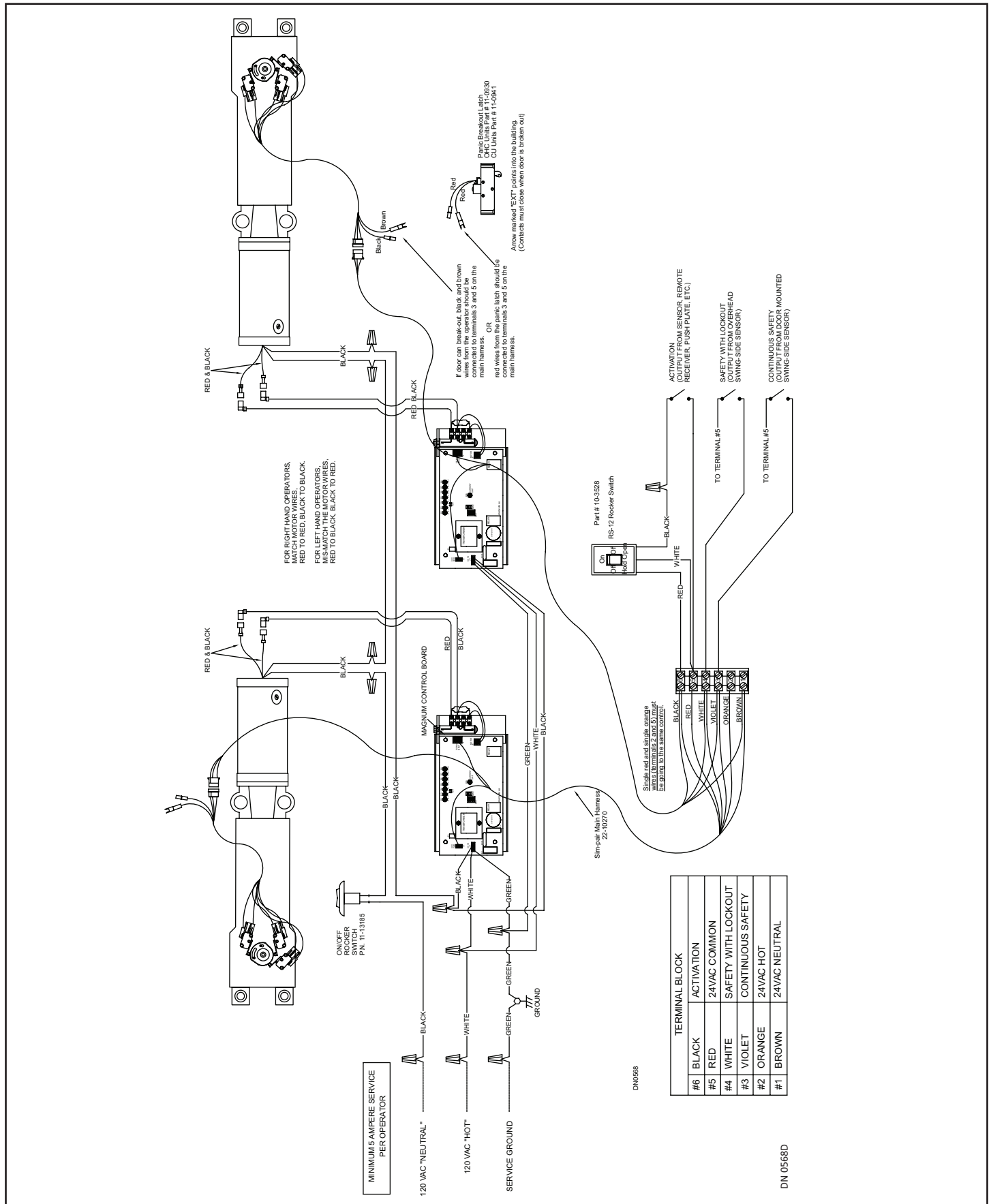
**SECTION 7: magnum General Wiring**

**7.1 GT-400-500-600-8400-8500-8600 Single Swing Door**

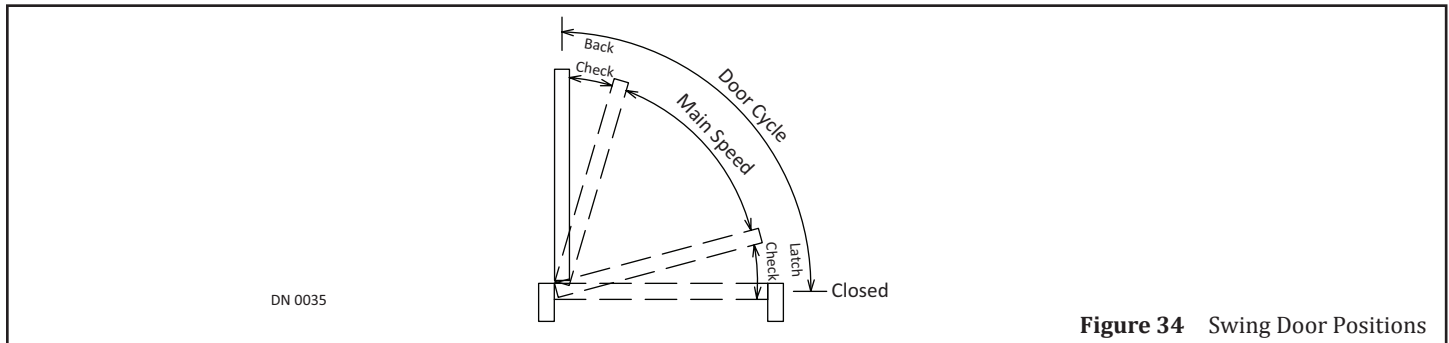


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## 7.2 GT-400-500-6000-8400-8500-8600 Simultaneous Swing Door



**SECTION 8: Test the Pre-Load**



**Figure 34** Swing Door Positions

| Position    | Description                                     |
|-------------|---|
| Opening     | Range from fully closed to 10° from fully open. |
| Back Check  | 10° from fully open to fully open.              |
| Closing     | Range from fully open to 10° from fully closed. |
| Latch Check | 10° from fully closed to fully closed.          |

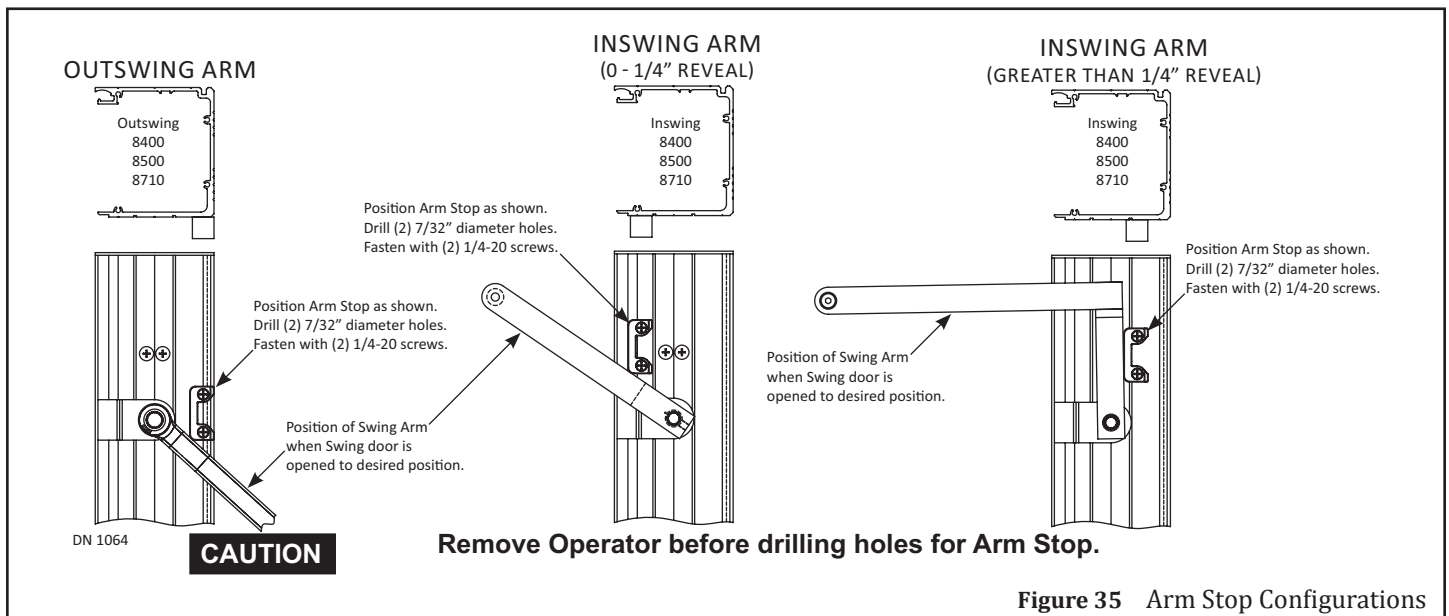
1. Turn Power ON. Open Swing Door.
  - a. Swing door should slow down at 75° - 80° open.
  - b. If Swing door stops at any other degree, Back Check needs to be adjusted.
2. Close Swing Door.
  - a. Swing door should slow down at 75° - 80° close.
  - b. If Swing door slows down at any other degree, Latch Check needs to be adjusted.

**SECTION 9: Install the Arm Stop (Side Load Units)**

**CAUTION**

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

1. Open the Swing Door 90 degrees.
2. Obtain the Parts Bag that includes (1) Arm Stop and (2) 1/4-20 inch Self Tapping screws.
3. Position the Arm Stop at the bottom of Header according to type of Swing Arm and Reveal shown in Figure 35.
4. Use the Arm Stop as a template to mark and drill (2) 7/32 inch diameter screw holes.
5. Secure the Arm Stop with (2) 1/4-20 inch Self Tapping screws.



**Figure 35** Arm Stop Configurations

### 10.1 Pre-Load Adjustments

Note: Adjustments to the Cam Assembly is rarely necessary. It is recommended to adjust the Cams Assembly as a last resort.

Note: It is recommended to obtain one of the following Manuals to use as reference:

- ▶ *Magnum 4A Manual; 15-10682*
- ▶ *Analog Control Manual; 15-10745*

The Cam Assembly is preset at the NABCO factory to activate Back Check/Latch Check at 90 degrees with the Operator Spring set in the UNWOUND position.

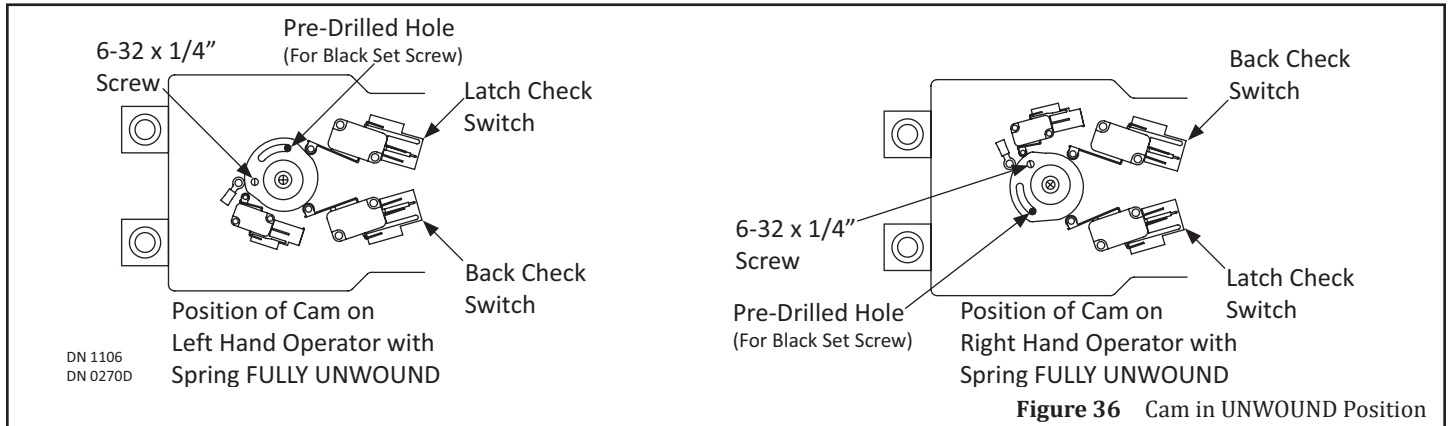


Figure 36 Cam in UNWOUND Position

| LEFT HAND OPERATOR       |                      | RIGHT HAND OPERATOR      |                      |
|--------------------------|----------------------|--------------------------|----------------------|
| MAGNUM CONTROL           |                      | MAGNUM CONTROL           |                      |
| Latch Check Switch Wires | White & Green        | Back Check Switch Wires  | Red & Blue           |
| Back Check Switch Wires  | Red & Blue           | Latch Check Switch Wires | White & Green        |
| ANALOG CONTROL           |                      | ANALOG CONTROL           |                      |
| Latch Check Switch Wires | Orange & Brown       | Back Check Switch Wires  | Yellow, White & Blue |
| Back Check Switch Wires  | Yellow, White & Blue | Latch Check Switch Wires | Orange & Brown       |

#### 10.1.1 Rotate the Cam for Back Check (Bottom Load Units)

- Go to the top of Header. Remove to the Cover used to protect the access hole located directly above the Cam Assembly.
- Go inside the Header. Remove the Cover used to protect the Cam Assembly. Set Aside.
- Remove the 6-32 x 1/4 inch screw.
- Go to the c-shaped slot located to the Left or Right of the 6-32 x 1/4 inch screw. Locate (1) pre-drilled hole.
- Insert the 6-32 x 1/4 inch screw inside the pre-drilled hole.
- Tighten, but only so the 6-32 x 1/4 inch screw does not fall out of the Slot.
- Go to the middle of the Cam. Loosen the 10-24 x 1/2 inch screw.
- Rotate the Cam until the appropriate Back Check position has been achieved.

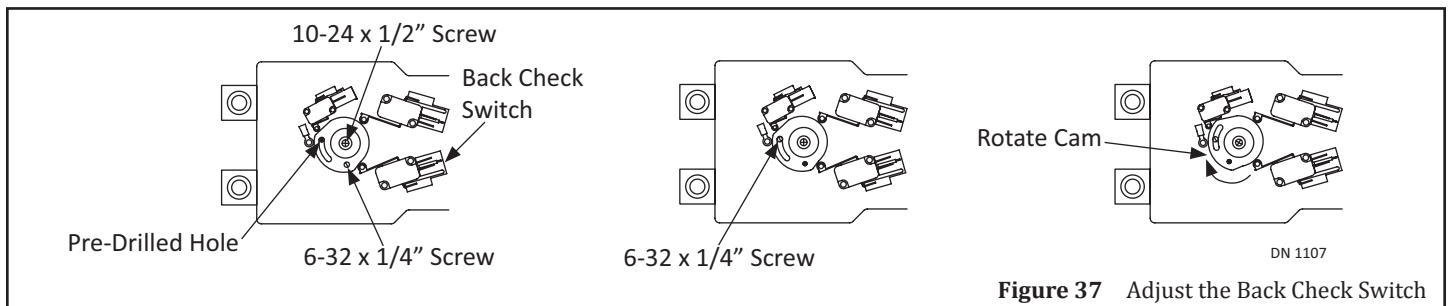


Figure 37 Adjust the Back Check Switch

- Tighten down both the 6-32 x 1/4 inch screw and 10-24 x 1/2 inch screw.
- Replace both Covers.

#### 10.1.2 Rotate the Cam For Back Check (Side Load Units)

- Go inside the Header. The Cam Assembly can be adjusted from the side.
  - A Switch Assembly Cover is not installed on a Side Load Header.

2. Remove the 6-32 x 1/4 inch screw with a 1/4 inch open end wrench.
3. Go to the c-shaped slot located to the Left or Right of the 6-32 x 1/4 inch screw. Locate (1) pre-drilled hole.
4. Insert the 6-32 x 1/4 inch screw inside the pre-drilled hole.
5. Tighten, but only so the 6-32 x 1/4 inch screw does not fall out of the Slot.
6. Go to the middle of the Cam. Loosen the 10-24 x 1/2 inch screw with a 5/16 inch box or open end wrench.
7. Rotate the Cam until the appropriate Back Check position has been achieved.
8. Tighten down both the 6-32 x 1/4 inch screw and 10-24 x 1/2 inch screw.

## 10.2 Adjust the Swing Arm for Latch Check

Latch Check positions can not be adjusted by rotating the Cam. Adjustments must be accomplished by removing, and then sliding the Swing Arm back onto the Operator Spindle to the left or right of the last position.

## 10.3 Magnum Control Adjustments

Before adjusting speeds:

- ▶ Set the Current Limit to maximum
- ▶ Adjust the Open-Close-Check speeds
- ▶ Adjust current limit to the proper level

**Table 5** Dip Switch Information

| Dip Switch | ON Position          | OFF Position           |
|------------|----------------------|------------------------|
| 1          | Not Used             | Not Used               |
| 2          | Normally Open Safely | Normally Closed Safely |
| 3          | Push-N-Go Inactive   | Push-N-Go Active       |
| 4          | Timer Mode           | Sequential Mode        |

**Table 6** Slide Switch

| Position | Function                                |
|----------|---|
| UP       | Low Energy (GT-500)                     |
| DOWN     | High Energy (GT-400); Door opens faster |

**Table 7** Potentiometers and Functions

| Potentiometer | Function   |
|---------------|--|
| STOP          | <ul style="list-style-type: none"> <li>▶ Adjusts how door reacts to continuous safety input (terminal # 3) during Opening. Counterclockwise = door slowly closes, Clockwise = door creeps open</li> <li>▶ For Magnum 4 and 4A only:<br/>After 8 seconds of the door being held open, motor voltage is lowered to reduce stress on motor and control. "stop" will adjust this reduced voltage.</li> </ul> |
| OPEN          | Adjusts opening speed. Clockwise = Faster  |
| BCHK          | Adjusts Back Check speed. Clockwise = Faster   |
| TDAS          | Adjusts how long door remains open after activation signal. Clockwise = Longer   |
| TDPG          | Adjusts how long door remains open after Push-N-Go. Clockwise = Longer   |
| LCHK          | Adjusts Latch Check speed. Clockwise = Faster  |
| CLOSE         | Adjusts closing speed. Clockwise = Faster  |
| Current Limit | Adjusts how hard the door will push against an obstacle (while opening) before recycling.<br>Clockwise = less sensitive  |

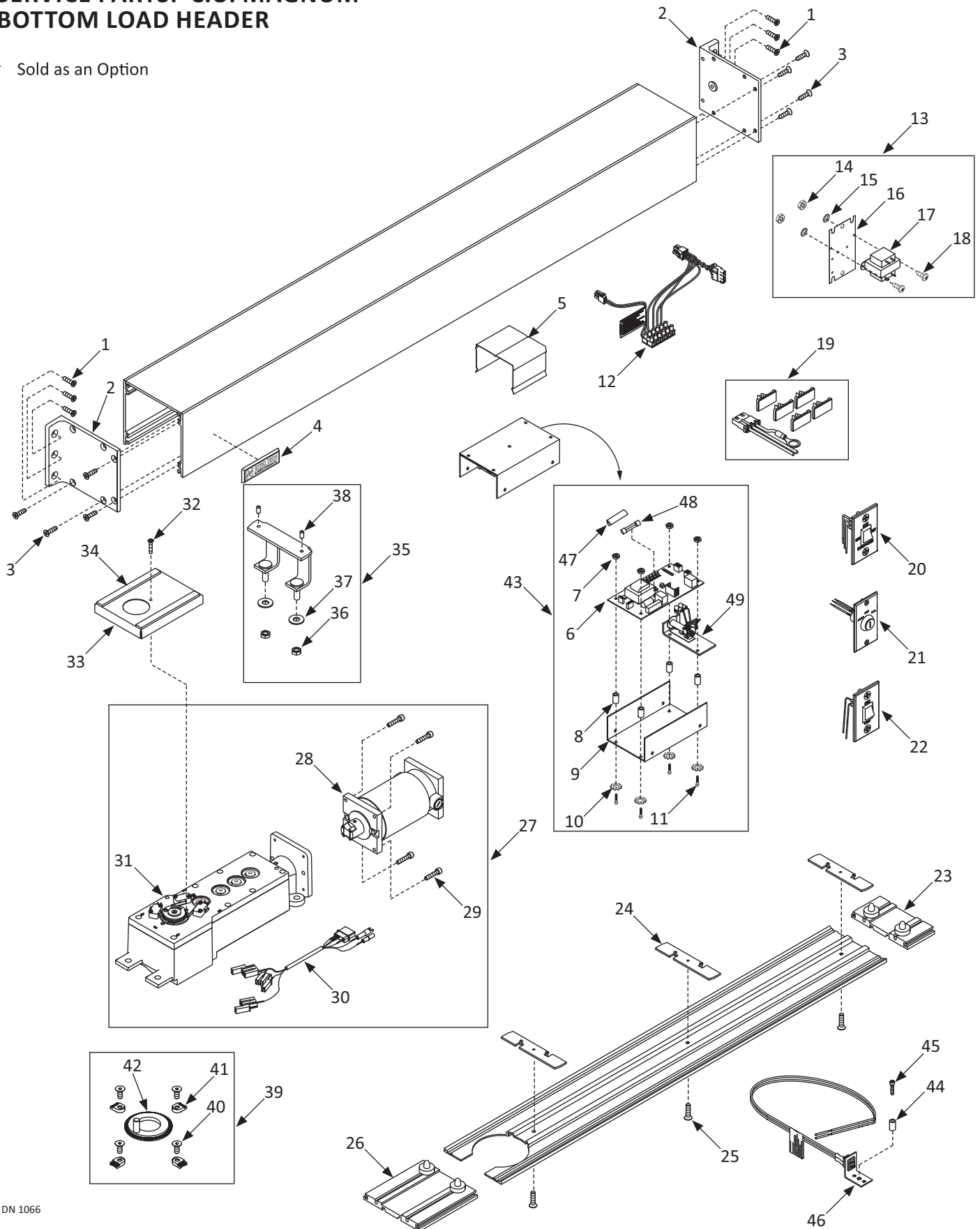
**Table 8** Magnum Control LED Information

| LED Color | LED Status | Door Status |
|-----------|------------|-------------|
|-----------|------------|-------------|

|       |                                      |                                  |
|-------|--------------------------------------|----------------------------------|
| Green | Fast Flashing (2 flashes per second) | Door is opening.                 |
|       | On Steady                            | Door is in Back Check.           |
|       | Slow Flashing (1 flash per second)   | Door is closing.                 |
|       | Off                                  | Door is in Latch Check or Closed |
| Red   | <b>Indicator</b>                     | <b>Action</b>                    |
|       | Slow Flashing (1 flashes per second) | Continuous Safety Activated      |
|       | Fast Flashing (2 flashes per second) | Safety with Lockout Activated    |
|       | On Solid                             | Recycle Activated                |

# SERVICE PARTS: C.U. MAGNUM BOTTOM LOAD HEADER

\* Sold as an Option



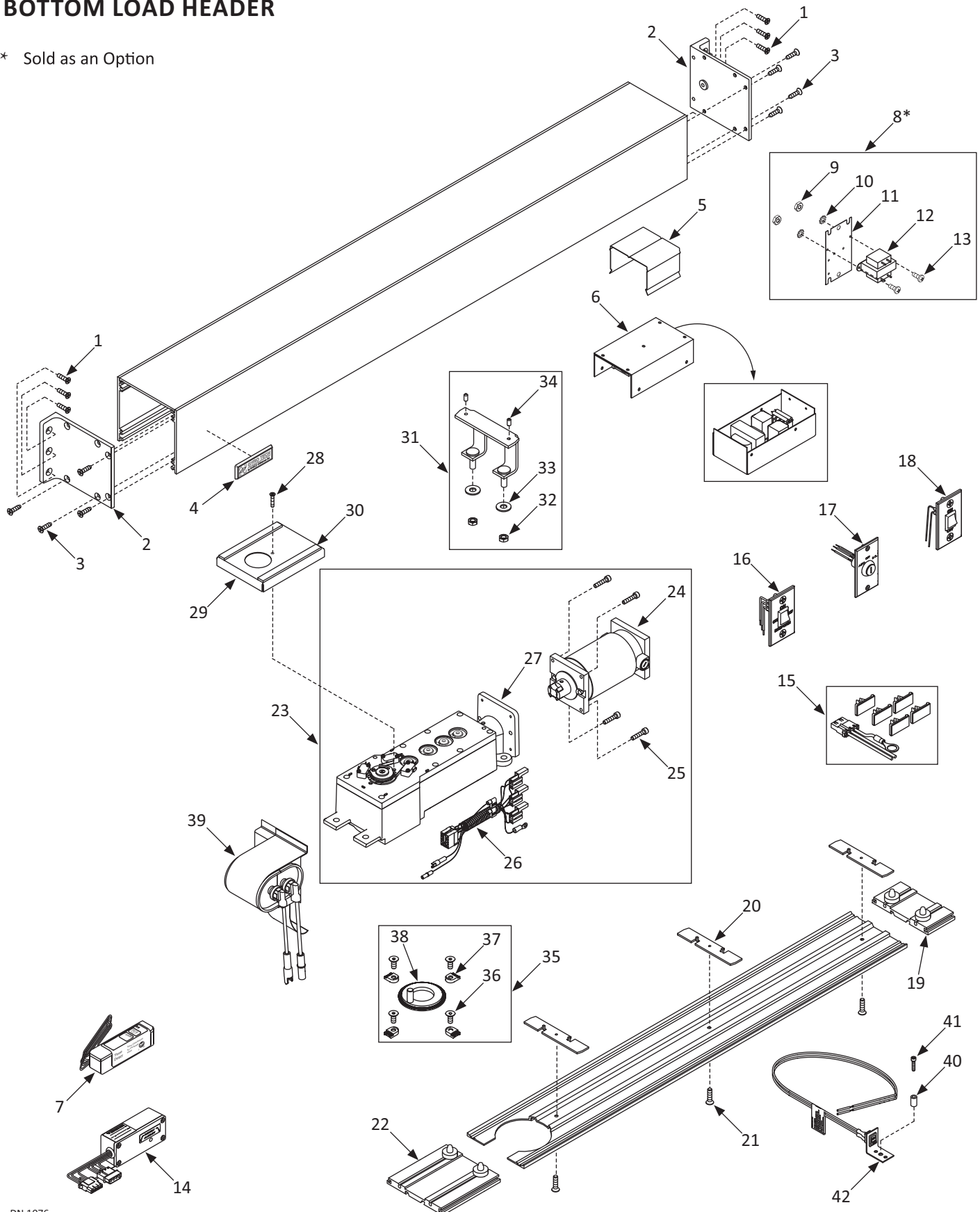
| Magnum Bottom Load Header |             |                                       |  |
|---------------------------|-------------|---------------------------------------|--|
| Item                      | Part        | Finish/Sizes/Notes                    | Description                              |
| 1                         | 24-0011-09  |                                       | FHMS,1/4-20 X 1,PHILLIPS                 |
| 2                         | 24-9907-01  | Silver                                | CU - END BRACKET                         |
|                           | 24-9907-02  | Bronze                                | CU - END BRACKET                         |
| 3                         | 24-4941-02  |                                       | FHMS, 1/4-20 X 1", PHIL, TRILOBE, ZN     |
| 4                         | 14-9199     |                                       | NAMEPLATE, ADHESIVE BACKED               |
| 5                         | 24-0555     |                                       | MOUNT, CONTROL BOX                       |
| 6                         | 24-9800-04  |                                       | MAGNUM CONTROL BOARD-04                  |
| 7                         | 24-0021-04  |                                       | HEX NUT #10-24                           |
| 8                         | 14-8743     |                                       | SPACER - NYLON #10 X 5/8 3/8 OD          |
| 9                         | 24-8686     |                                       | CHASSIS, CONTROL                         |
| 10                        | 24-0019-06  |                                       | WASHER,EXT.#10                           |
| 11                        | 24-0012-13  |                                       | SCREW - PHLLP PAN HD MACH #10-24 X 1 1/4 |
| 12                        | 22-10065    | Single Swing Door                     | HARNES ASSY - MAGNUM, SINGLE             |
|                           | 22-10270    | Simultaneous Pair                     | MAGNUM HARNES ASSY, SIM PAIR             |
| 13                        | 14-2101     | Sold as an Option                     | TRANSFORMER W/BRACKET, 24 VOLT - 40 VA   |
| 14                        | 24-0021-04  |                                       | HEX NUT #10-24                           |
| 15                        | 24-0019-06  |                                       | WASHER,EXT.#10                           |
| 16                        | 24-10679-02 |                                       | PLATE TRANSFORMER & RELAY MTG TELESCOPIC |
| 17                        | 14-2101-01  |                                       | TRANSFORMER ONLY, 24 VOLT - 40 VA        |
| 18                        | 10-0617     |                                       | SCREW - 10-24 X 3/8 PHIL PAN S.S.        |
| 19                        | 21-9933     |                                       | WIRING HARNES MAGNUM BOARD, POWER        |
| 20                        | 10-3528     |                                       | LE RS-12 ON/OFF/HLD OPN RCKR SWITCH ASY  |
| 21                        | 22-1772-03  |                                       | KEY SWITCH KS-14 3 POSITION              |
| 22                        | 10-3527     |                                       | LE RS-11 ON/OFF RCKR SWITCH ASY W/FPLT   |
| 23                        | 24-0154-01  | Clear                                 | CU - SGL STRIKE BASE 3-1/4               |
|                           | 24-0154-02  | Dark Bronze                           | CU - SGL STRIKE BASE 3-1/4               |
| 24                        | 24-1849     |                                       | LOCK COVER PLATE - BOTTOM                |
| 25                        | 24-0011-01  |                                       | FHMS,10-24 X 3/4,PHILLIPS                |
|                           | 24-0011-09  |                                       | FHMS,1/4-20 X 1,PHILLIPS                 |
| 26                        | 22-1476-01  | Clear/Swing Out/Finger Guard          | CU - BASE PIVOT SUB-ASSY, OUT F/G        |
|                           | 22-1476-02  | Dark Bronze/Swing Out/Finger Guard    | CU - BASE PIVOT SUB-ASSY, OUT F/G        |
|                           | 22-1477-01  | Clear/Swing Out/no Finger Guard       | CU - BASE PIVOT SUB-ASSY, OUT NO F/G     |
|                           | 22-1477-02  | Dark Bronze/Swing Out/no Finger Guard | CU - BASE PIVOT SUB-ASSY, OUT NO F/G     |
|                           | 22-1478-01  | Clear/Swing In/Finger Guard           | CU - BASE PIVOT SUB-ASSY, IN F/G         |
|                           | 22-1478-02  | Dark Bronze/Swing In/Finger Guard     | CU - BASE PIVOT SUB-ASSY, IN F/G         |
|                           | 22-1479-01  | Clear/Swing In/no Finger Guard        | CU - BASE PIVOT SUB-ASSY, IN NO F/G      |
|                           | 22-1479-02  | Dark Bronze/Swing In/no Finger Guard  | CU - BASE PIVOT SUB-ASSY, IN NO F/G      |
| 27                        | 41-8987-07  | LH                                    | MAGNUM SWINGER OPERATOR LH               |
|                           | 41-8987-08  | RH                                    | MAGNUM SWINGER OPERATOR RH               |
|                           | 41-8987-09  | LH w/Clutch                           | MAGNUM SWINGER OPERATOR LH W/CLUTCH      |
|                           | 41-8987-10  | RH w/Clutch                           | MAGNUM SWINGER OPERATOR RH W/CLUTCH      |
| 28                        | 22-0575     |                                       | MOTOR & COUPLING SUB-ASSY - SWINGER      |



| Magnum Bottom Load Header |             |                    |                                       |
|---------------------------|-------------|--------------------|---------------------------------------|
| Item                      | Part        | Finish/Sizes/Notes | Description                           |
| 29                        | 24-0010-46  |                    | SCREW, SOCKET HEAD CAP #10-24 X 7/8"  |
| 30                        | 21-9934     |                    | MICROSWITCH WIRING HARNESS, MAGNUM    |
| 31                        | 24-10920-07 | LH wo/Clutch       | MAGNUM SW GB W/WELDED CLUTCH LH APPL  |
|                           | 24-10920-08 | RH wo/Clutch       | MAGNUM SW GB W/WELDED CLUTCH RH APPL  |
|                           | 24-10920-09 | LH w/Clutch        | MAGNUM SW GB W/CLUTCH LH APPL         |
|                           | 24-10920-10 | RH/w Clutch        | MAGNUM SW GB W/CLUTCH RH APPL         |
| 32                        | 24-0011-02  |                    | FHMS,10-24 X 1,PHILLIPS               |
| 33                        | 22-4498     |                    | SWITCH, ASSY COVER - SWINGER          |
| 34                        | 14-3444-02  |                    | PROTECTIVE STRIP, BUMP ON 5-3/8" LONG |
| 35                        | 21-0709     |                    | OPERATOR MOUNT FRAME ASSY             |
| 36                        | 24-0021-15  |                    | HEX JAM NUT 3/8"-16                   |
| 37                        | 24-0017-02  |                    | WASHER, 7/16 ID X 1 OD X .083 THK     |
| 38                        | 24-0016-04  |                    | SCREW, SET 1/4-20 X 1/2, KNURL POINT  |
| 39                        | 11-1532     |                    | STOP ASSY RING                        |
| 40                        | 24-0011-23  |                    | FHMS,5/16"-18 X 3/4, SKT,ZINC         |
| 41                        | 24-2303     |                    | STOP RING HOLD DOWN                   |
| 42                        | 21-0700     |                    | CU - LIMIT STOP                       |
| 43                        | 12-10292-04 |                    | MAGNUM BOARD IV & CHASIS ASSY         |
| 44                        | 14-8743     |                    | SPACER - NYLON #10 X 5/8 3/8 OD       |
| 45                        | 24-0010-01  |                    | SHCS,10-24 X 7/8CAD-UL PART           |
| 46                        | 11-13185    |                    | POWER SWITCH ASSY, SWINGERS / 710     |
| 47                        | 14-10015    | Magnum 1-4 only    | FUSE COVER                            |
| 48                        | 14-9470     | Magnum 4A only     | FUSE, MC                              |
|                           | 14-11862    | Magnum 1-4 only    | FUSE 5 AMP                            |

# SERVICE PARTS: C.U. ANALOG BOTTOM LOAD HEADER

\* Sold as an Option



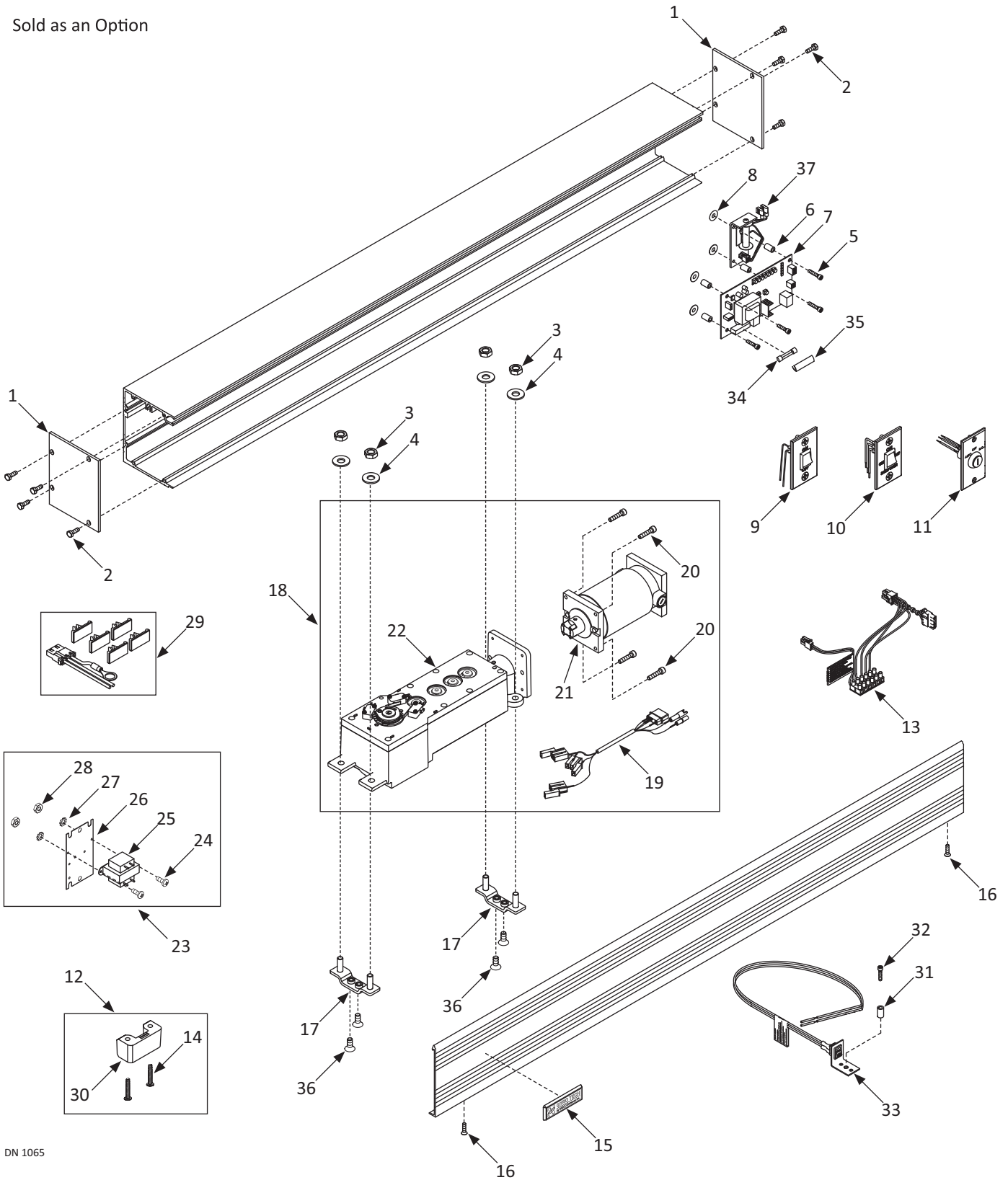
DN 1076

| Analog Bottom Load Header |             |                                       |  |
|---------------------------|-------------|---------------------------------------|--|
| Item                      | Part        | Finish/Sizes/Notes                    | Description                              |
| 1                         | 24-0011-09  |                                       | FHMS,1/4-20 X 1,PHILLIPS                 |
| 2                         | 24-9907-01  | Silver                                | CU - END BRACKET                         |
|                           | 24-9907-02  | Bronze                                | CU - END BRACKET                         |
| 3                         | 24-4941-02  |                                       | FHMS, 1/4-20 X 1", PHIL, TRILOBE, ZN     |
| 4                         | 14-9199     |                                       | NAMEPLATE, ADHESIVE BACKED               |
| 5                         | 24-0555     |                                       | MOUNT, CONTROL BOX                       |
| 6                         | 41-1512     | Assembly including Chasis             | CONTROL BOX - SC                         |
|                           | 41-2208     | 500/8500 Units Only                   | CONTROL BOX FOR SLOW MODE OPER           |
| 7                         | 14-11807    |                                       | PC-6 LOCK OUT RELAY ASSY LE OPR          |
| 8                         | 14-2101     | Sold as an Option                     | TRANSFORMER W/BRACKET, 24 VOLT - 40 VA   |
| 9                         | 24-0021-04  |                                       | HEX NUT #10-24                           |
| 10                        | 24-0019-06  |                                       | WASHER,EXT.#10                           |
| 11                        | 24-10679-02 |                                       | PLATE TRANSFORMER & RELAY MTG TELESCOPIC |
| 12                        | 14-2101-01  |                                       | TRANSFORMER ONLY, 24 VOLT - 40 VA        |
| 13                        | 10-0617     |                                       | SCREW - 10-24 X 3/8 PHIL PAN S.S.        |
| 14                        | 24-3425-01  |                                       | TIME DELAY MODULE W/CLIP                 |
| 15                        | 22-0779     |                                       | POWER HARNESS ASSY - SWINGER             |
| 16                        | 10-3528     |                                       | LE RS-12 ON/OFF/HLD OPN RCKR SWITCH ASY  |
| 17                        | 22-1772-03  |                                       | KEY SWITCH KS-14 3 POSITION              |
| 18                        | 10-3527     |                                       | LE RS-11 ON/OFF RCKR SWITCH ASY W/FPLT   |
| 19                        | 24-0154-01  | Clear                                 | CU - SGL STRIKE BASE 3-1/4               |
|                           | 24-0154-02  | Dark Bronze                           | CU - SGL STRIKE BASE 3-1/4               |
| 20                        | 24-1849     |                                       | LOCK COVER PLATE - BOTTOM                |
| 21                        | 24-0011-01  |                                       | FHMS,10-24 X 3/4,PHILLIPS                |
|                           | 24-0011-09  |                                       | FHMS,1/4-20 X 1,PHILLIPS                 |
| 22                        | 22-1476-01  | Clear/Swing Out/Finger Guard          | CU - BASE PIVOT SUB-ASSY, OUT F/G        |
|                           | 22-1476-02  | Dark Bronze/Swing Out/Finger Guard    | CU - BASE PIVOT SUB-ASSY, OUT F/G        |
|                           | 22-1477-01  | Clear/Swing Out/no Finger Guard       | CU - BASE PIVOT SUB-ASSY, OUT NO F/G     |
|                           | 22-1477-02  | Dark Bronze/Swing Out/no Finger Guard | CU - BASE PIVOT SUB-ASSY, OUT NO F/G     |
|                           | 22-1478-01  | Clear/Swing In/Finger Guard           | CU - BASE PIVOT SUB-ASSY, IN F/G         |
|                           | 22-1478-02  | Dark Bronze/Swing In/Finger Guard     | CU - BASE PIVOT SUB-ASSY, IN F/G         |
|                           | 22-1479-01  | Clear/Swing In/no Finger Guard        | CU - BASE PIVOT SUB-ASSY, IN NO F/G      |
|                           | 22-1479-02  | Dark Bronze/Swing In/no Finger Guard  | CU - BASE PIVOT SUB-ASSY, IN NO F/G      |
| 23                        | 11-1391     | LH                                    | SWING OPERATOR ASSY - LH                 |
|                           | 11-1390     | RH                                    | SWING OPERATOR ASSY - RH                 |
| 24                        | 22-0575     |                                       | MOTOR & COUPLING SUB-ASSY - SWINGER      |
| 25                        | 24-0010-46  |                                       | SCREW, SOCKET HEAD CAP #10-24 X 7/8"     |
| 26                        | 22-0570     |                                       | OPERATOR SWITCH HARNESS SWGR-UL PRT      |
| 27                        | 42-0385     |                                       | OPERATOR SUB-ASSY SWINGER                |
| 28                        | 24-0011-02  |                                       | FHMS,10-24 X 1,PHILLIPS                  |
| 29                        | 22-4498     |                                       | SWITCH, ASSY COVER - SWINGER             |
| 30                        | 14-3444-02  |                                       | PROTECTIVE STRIP, BUMP ON 5-3/8" LONG    |

| Analog Bottom Load Header |            |                    |                                      |
|---------------------------|------------|--------------------|--------------------------------------|
| Item                      | Part       | Finish/Sizes/Notes | Description                          |
| 31                        | 21-0709    |                    | OPERATOR MOUNT FRAME ASSY            |
| 32                        | 24-0021-15 |                    | HEX JAM NUT 3/8"-16                  |
| 33                        | 24-0017-02 |                    | WASHER, 7/16 ID X 1 OD X .083 THK    |
| 34                        | 24-0016-04 |                    | SCREW, SET 1/4-20 X 1/2, KNURL POINT |
| 35                        | 11-1532    |                    | STOP ASSY RING                       |
| 36                        | 24-0011-23 |                    | FHMS,5/16"-18 X 3/4, SKT,ZINC        |
| 37                        | 24-2303    |                    | STOP RING HOLD DOWN                  |
| 38                        | 21-0700    |                    | CU - LIMIT STOP                      |
| 39                        | 11-2067    |                    | SOFT START KIT, 30 MF                |
|                           | 11-3536    |                    | SUPER SOFT START KIT, 15 MF          |
| 40                        | 14-8743    |                    | SPACER - NYLON #10 X 5/8 3/8 OD      |
| 41                        | 24-0010-01 |                    | SHCS,10-24 X 7/8CAD-UL PART          |
| 42                        | 11-13185   |                    | POWER SWITCH ASSY, SWINGERS / 710    |

# SERVICE PARTS: C.U. MAGNUM SIDE LOAD HEADER

\* Sold as an Option

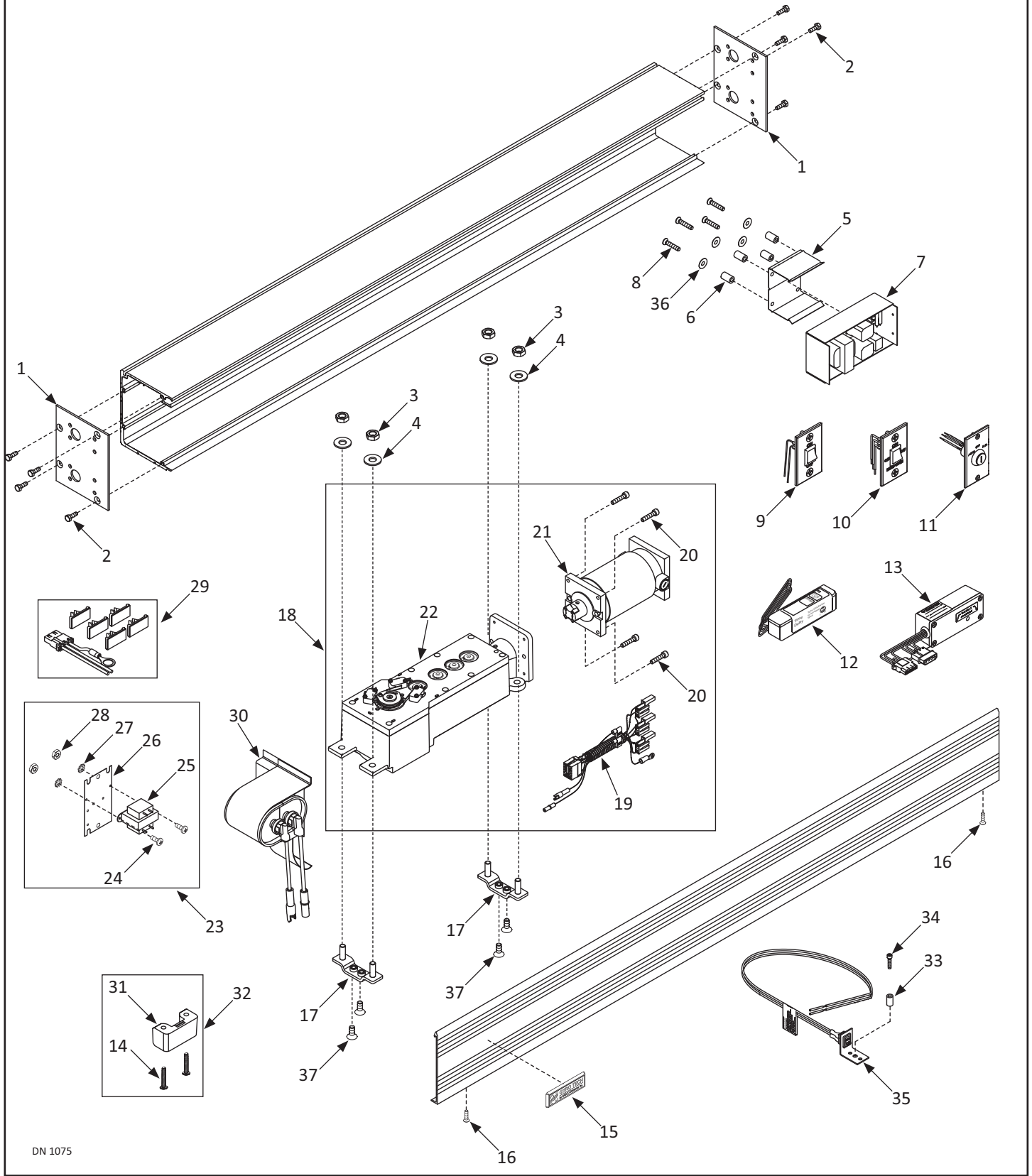


DN 1065

| Magnum Side Load Header |             |                    |  |
|-------------------------|-------------|--------------------|--|
| Item                    | Part        | Finish/Sizes/Notes | Description                              |
| 1                       | 14-12022-01 | Clear              | ENDCAP - SIDELOAD HDR 204 84-8500 4 HOLE |
|                         | 14-12022-02 | Dark Bronze        | ENDCAP - SIDELOAD HDR 313 84-8500 4 HOLE |
| 2                       | 24-0011-70  | Zinc               | FHMS, 1/4-20 X 7/16", PHIL, UND, ZN      |
|                         | 24-0011-73  | Black Onix         | FHMS,1/4-20 X 7/16", PHIL, UND, BLK OX   |
| 3                       | 24-0021-15  |                    | HEX JAM NUT 3/8"-16                      |
| 4                       | 24-0017-02  |                    | WASHER, 7/16 ID X 1 OD X .083 THK        |
| 5                       | 24-0010-03  |                    | SHCS, 10-24 X 1                          |
| 6                       | 14-8743     |                    | SPACER - NYLON #10 X 5/8 3/8 OD          |
| 7                       | 24-9800     |                    | MAGNUM CONTROL BOARD                     |
| 8                       | 24-0017-47  |                    | WASHER, 156 ID X .750 OD X .020 THK      |
| 9                       | 10-3527     |                    | LE RS-11 ON/OFF RCKR SWITCH ASY W/FPLT   |
| 10                      | 10-3528     |                    | LE RS-12 ON/OFF/HLD OPN RCKR SWITCH ASY  |
| 11                      | 22-1772-03  |                    | KEY SWITCH KS-14 3 POSITION              |
| 12                      | 14-12073    |                    | ARM STOP ASSEMBLY FOR SIDELOAD           |
| 13                      | 22-10065    | Single Swing Door  | HARNESS ASSY - MAGNUM, SINGLE            |
|                         | 22-10270    | Simultaneous Pair  | MAGNUM HARNESS ASSY, SIM PAIR            |
| 14                      | 24-4941-21  |                    | PHMS,PHIL,1/4-20 X1 1/2" TYPE F          |
| 15                      | 14-9199     |                    | NAMEPLATE, ADHESIVE BACKED               |
| 16                      | 24-0094-04  |                    | SCREW, PHLLPS PAN HD MACH #8 X 5/8" AB   |
| 17                      | 22-11938    |                    | BRACKET, OPERATOR, SIDELOAD HEADER       |
| 18                      | 41-8987-07  | RH                 | MAGNUM SWINGER OPERATOR LH               |
|                         | 41-8987-08  | LH                 | MAGNUM SWINGER OPERATOR RH               |
| 19                      | 21-9934     |                    | MICROSWITCH WIRING HARNESS, MAGNUM       |
| 20                      | 24-0010-46  |                    | SCREW, SOCKET HEAD CAP #10-24 X 7/8"     |
| 21                      | 22-0575     |                    | MOTOR & COUPLING SUB-ASSY - SWINGER      |
| 22                      | 24-10920-07 | LH wo/Clutch       | MAGNUM SW GB W/WELDED CLUTCH LH APPL     |
|                         | 24-10920-08 | RH wo/Clutch       | MAGNUM SW GB W/WELDED CLUTCH RH APPL     |
|                         | 24-10920-09 | LH w/Clutch        | MAGNUM SW GB W/CLUTCH LH APPL            |
|                         | 24-10920-10 | RH/w Clutch        | MAGNUM SW GB W/CLUTCH RH APPL            |
| 23                      | 14-2101     | Sold as an Option  | TRANSFORMER W/BRACKET, 24 VOLT - 40 VA   |
| 24                      | 10-0617     |                    | SCREW - 10-24 X 3/8 PHIL PAN S.S.        |
| 25                      | 14-2101-01  |                    | TRANSFORMER ONLY, 24 VOLT - 40 VA        |
| 26                      | 24-10679-02 |                    | PLATE TRANSFORMER & RELAY MTG TELESCOPIC |
| 27                      | 24-0019-06  |                    | WASHER,EXT.#10                           |
| 28                      | 24-0021-04  |                    | HEX NUT #10-24                           |
| 29                      | 22-0779     |                    | POWER HARNESS ASSY - SWINGER             |
| 30                      | 14-11586    |                    | ARM STOP 710                             |
| 31                      | 14-8743     |                    | SPACER - NYLON #10 X 5/8 3/8 OD          |
| 32                      | 24-0010-01  |                    | SHCS,10-24 X 7/8CAD-UL PART              |
| 33                      | 11-13185    |                    | POWER SWITCH ASSY, SWINGERS / 710        |
| 34                      | 14-10015    | Magnum 1-4 only    | FUSE COVER                               |
| 35                      | 14-9470     | Magnum 4A only     | FUSE, MC                                 |
|                         | 14-11862    | Magnum 1-4 only    | FUSE 5 AMP                               |

# SERVICE PARTS: C.U. ANALOG SIDE LOAD HEADER

\* Sold as an Option

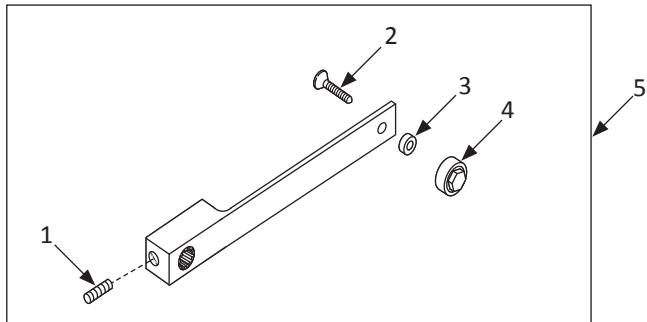


| Analog Side Load Header |             |                     |  |
|-------------------------|-------------|---------------------|--|
| Item                    | Part        | Finish/Sizes/Notes  | Description                              |
| 1                       | 14-12022-01 | Clear               | ENDCAP - SIDELOAD HDR 204 84-8500 4 HOLE |
|                         | 14-12022-02 | Dark Bronze         | ENDCAP - SIDELOAD HDR 313 84-8500 4 HOLE |
| 2                       | 24-0011-70  | Zinc                | FHMS, 1/4-20 X 7/16", PHIL, UND, ZN      |
|                         | 24-0011-73  | Black Onix          | FHMS,1/4-20 X 7/16", PHIL, UND, BLK OX   |
| 3                       | 24-0021-15  |                     | HEX JAM NUT 3/8"-16                      |
| 4                       | 24-0017-02  |                     | WASHER, 7/16 ID X 1 OD X .083 THK        |
| 5                       | 24-12060    |                     | MOUNTING BRACKET ANALOG CONTROL          |
| 6                       | 14-8743     |                     | SPACER - NYLON #10 X 5/8 3/8 OD          |
| 7                       | 41-1512     |                     | CONTROL BOX - SC                         |
|                         | 41-2208     | 500/8500 Units Only | CONTROL BOX FOR SLOW MODE OPER           |
| 8                       | 24-0011-02  |                     | FHMS,10-24 X 1,PHILLIPS                  |
| 9                       | 10-3527     |                     | LE RS-11 ON/OFF RCKR SWITCH ASY W/FPLT   |
| 10                      | 10-3528     |                     | LE RS-12 ON/OFF/HLD OPN RCKR SWITCH ASY  |
| 11                      | 22-1772-03  |                     | KEY SWITCH KS-14 3 POSITION              |
| 12                      | 14-11807    |                     | PC-6 LOCK OUT RELAY ASSY LE OPR          |
| 13                      | 22-0575     |                     | MOTOR & COUPLING SUB-ASSY - SWINGER      |
| 14                      | 24-4941-21  |                     | PHMS,PHIL,1/4-20 X1 1/2" TYPE F          |
| 15                      | 14-9199     |                     | NAMEPLATE, ADHESIVE BACKED               |
| 16                      | 24-0094-04  |                     | SCREW, PHLLPS PAN HD MACH #8 X 5/8" AB   |
| 17                      | 22-11938    |                     | BRACKET, OPERATOR, SIDELOAD HEADER       |
| 18                      | 11-1390     | RH                  | SWING OPERATOR ASSY - RH                 |
|                         | 11-1391     | LH                  | SWING OPERATOR ASSY - LH                 |
| 19                      | 22-0570     |                     | OPERATOR SWITCH HARNESS SWGR-UL PRT      |
| 20                      | 24-0010-46  |                     | SCREW, SOCKET HEAD CAP #10-24 X 7/8"     |
| 21                      | 22-0575     |                     | MOTOR & COUPLING SUB-ASSY - SWINGER      |
| 22                      | 42-0385     |                     | OPERATOR SUB-ASSY SWINGER                |
| 23                      | 14-2101     | Sold as an Option   | TRANSFORMER W/BRACKET, 24 VOLT - 40 VA   |
| 24                      | 10-0617     |                     | SCREW - 10-24 X 3/8 PHIL PAN S.S.        |
| 25                      | 14-2101-01  |                     | TRANSFORMER ONLY, 24 VOLT - 40 VA        |
| 26                      | 24-10679-02 |                     | PLATE TRANSFORMER & RELAY MTG TELESCOPIC |
| 27                      | 24-0019-06  |                     | WASHER,EXT.#10                           |
| 28                      | 24-0021-04  |                     | HEX NUT #10-24                           |
| 29                      | 22-0779     |                     | POWER HARNESS ASSY - SWINGER             |
| 30                      | 11-2067     |                     | SOFT START KIT, 30 MF                    |
|                         | 11-3536     |                     | SUPER SOFT START KIT, 15 MF              |
| 31                      | 14-11586    |                     | ARM STOP 710                             |
| 32                      | 14-12073    |                     | ARM STOP ASSEMBLY FOR SIDELOAD           |
| 33                      | 14-8743     |                     | SPACER - NYLON #10 X 5/8 3/8 OD          |
| 34                      | 24-0010-01  |                     | SHCS,10-24 X 7/8CAD-UL PART              |
| 35                      | 11-13185    |                     | POWER SWITCH ASSY, SWINGERS / 710        |
| 36                      | 24-0017-47  |                     | WASHER, 156 ID X .750 OD X .020 THK      |

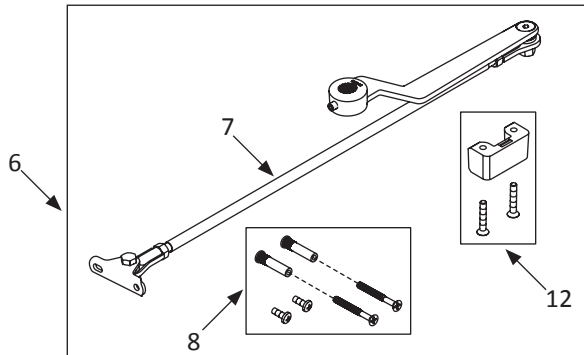


### SERVICE PARTS: C.U. SWING ARM ASSEMBLIES

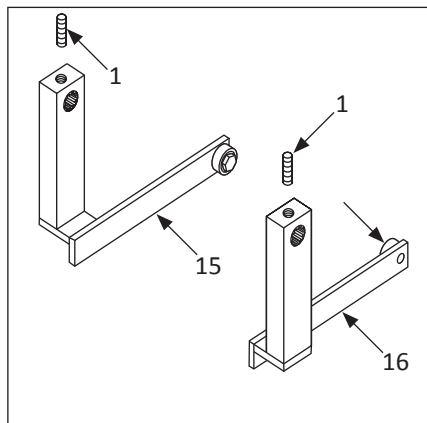
Inswing Arm  
Reveal **Equal** to 0 degrees



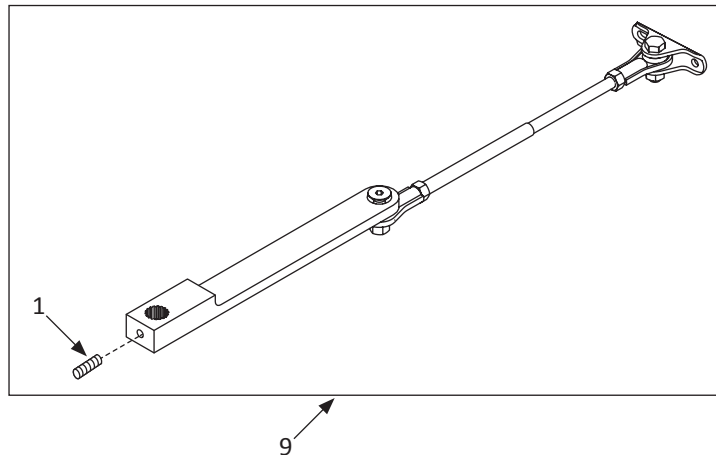
Outswing Arm Assembly



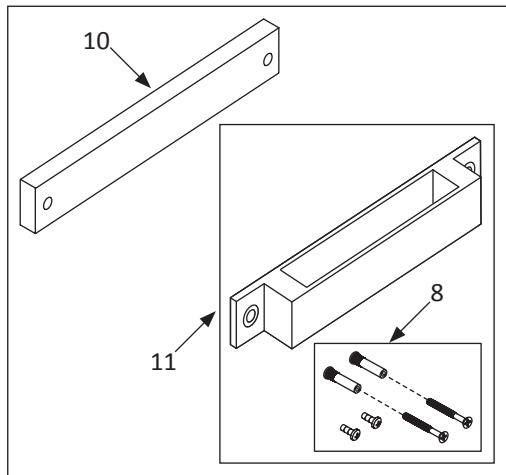
(CU) Inswing Arm Assembly  
Reveal Greater than 0 inches



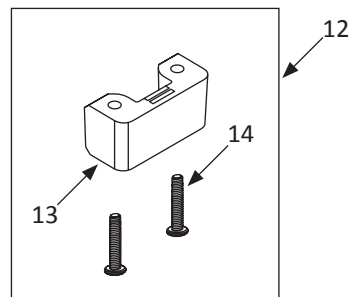
Low Profile  
Outswing Arm Assembly



Inswing Track Assembly



Arm Stop Assembly



DN 1073

| Conversion Unit Swing Arm Assemblies |             |                    |  |
|--------------------------------------|-------------|--------------------|--|
| Item                                 | Part        | Finish/Sizes/Notes | Description                              |
| 1                                    | 24-0016-33  |                    | SCREW, SET 5/16-24 X 1/2, CUP POINT      |
| 2                                    | 24-0011-15  |                    | SCREW, 3/8"-24 X 1.25 LG, FHCS, ZINC     |
| 3                                    | 24-0017-07  |                    | WASHER, 3/8 ID X 3/4 OD X.375 THK ZINC   |
| 4                                    | 11-1935     |                    | REPLACEMENT ROLLER ASSY                  |
| 5                                    | 21-0902-01  | Clear              | CU - INSWING ARM, NON PANIC NH 204       |
|                                      | 21-0902-02  | Dark Bronze        | CU - INSWING ARM, NON PANIC NH 313       |
| 6                                    | 22-13992-41 | Clear              | KIT,SWINGER ARM 20 IN.204                |
|                                      | 22-13992-42 | Dark Bronze        | KIT,SWINGER ARM 20 IN.313                |
|                                      | 22-13992-51 | Clear              | KIT,SWINGER ARM 30 IN.204                |
|                                      | 22-13992-52 | Dark Bronze        | KIT,SWINGER ARM 30 IN.313                |
| 7                                    | 21-8848-41  | Clear              | OUTSWING ARM ASSY, 20" ROD, 204          |
|                                      | 21-8848-42  | Dark Bronze        | OUTSWING ARM ASSY, 20" ROD, 313          |
|                                      | 21-8848-51  | Clear              | OUTSWING ARM ASSY, 30" ROD, 204          |
|                                      | 21-8848-52  | Dark Bronze        | OUTSWING ARM ASSY, 30" ROD, 313          |
| 8                                    | 12-1355     | Clear              | PARTS BAG, TRACK & ARM CU GUIDE CLEAR    |
|                                      | 12-1355-02  | Dark Bronze        | PARTS BAG, TRACK & ARM CU GUIDE BRONZE   |
| 9                                    | 21-10546-41 | Clear              | C.U. OUTSWING ARM ASSY, 20" THREADED ROD |
|                                      | 21-10546-42 | Dark Bronze        | C.U. OUTSWING ARM ASSY, 20" THREADED ROD |
|                                      | 21-10546-51 | Clear              | C.U. OUTSWING ARM ASSY, 30" THREADED ROD |
|                                      | 21-10546-52 | Dark Bronze        | C.U. OUTSWING ARM ASSY, 30" THREADED ROD |
| 10                                   | 14-5806     |                    | SPACER, TRACK - 1/4" X 12-1/4" BLK       |
| 11                                   | 21-0997-01  | Clear              | CU - GUIDE TRACK ASSY 12.25" 204         |
|                                      | 21-0997-02  | Dark Bronze        | CU - GUIDE TRACK ASSY 12.25" 313         |
|                                      | 21-0998-01  | Long/Clear         | CU - GUIDE TRACK ASSY 21" 204            |
|                                      | 21-0998-02  | Long/Dark Bronze   | CU - GUIDE TRACK ASSY 21" 313            |
| 12                                   | 14-12073    |                    | ARM STOP ASSEMBLY FOR SIDELOAD           |
| 13                                   | 14-11586    |                    | ARM STOP 710                             |
| 14                                   | 24-4941-21  |                    | PHMS,PHIL,1/4-20 X1 1/2" TYPE F          |
| 15                                   | 21-10329-11 | LH/Clear           | ARM, INSWING LH 204 REVEAL 0-2           |
|                                      | 21-10329-12 | LH/Dark Bronze     | ARM, INSWING LH 313 REVEAL 0-2           |
|                                      | 21-10329-21 | LH/Clear           | ARM, INSWING LH 204 REVEAL 2-5 1/2       |
|                                      | 21-10329-22 | LH/Dark Bronze     | ARM, INSWING LH 313 REVEAL 2-5 1/2       |
|                                      | 21-10329-31 | LH/Clear           | ARM, INSWING LH 204 REVEAL 5 1/2-9 3/4   |
|                                      | 21-10329-32 | LH/Dark Bronze     | ARM, INSWING LH 313 REVEAL 5 1/2-9 3/4   |
|                                      | 21-10329-41 | LH/Clear           | ARM, INSWING LH 204 REVEAL 9 3/4-13      |
|                                      | 21-10329-42 | LH/Dark Bronze     | ARM, INSWING LH 313 REVEAL 9 3/4-13      |
| 16                                   | 21-10329-51 | LH/Clear           | ARM, INSWING RH 204 REVEAL 0 - 2         |
|                                      | 21-10329-52 | LH/Dark Bronze     | ARM, INSWING RH 313 REVEAL 0 - 2         |
|                                      | 21-10329-61 | LH/Clear           | ARM, INSWING RH 204 REVEAL 2 - 5 1/2     |
|                                      | 21-10329-62 | LH/Dark Bronze     | ARM, INSWING RH 313 REVEAL 2 - 5 1/2     |
|                                      | 21-10329-71 | LH/Clear           | ARM INSWING RH 204 REVEAL 5 1/2- 9 3/4   |
|                                      | 21-10329-72 | LH/Dark Bronze     | ARM INSWING RH 313 REVEAL 5 1/2- 9 3/4   |
|                                      | 21-10329-81 | LH/Clear           | ARM INSWING RH 204 REVEAL 9 3/4 - 13     |
|                                      | 21-10329-82 | LH/Dark Bronze     | ARM INSWING RH 313 REVEAL 9 3/4 - 13     |