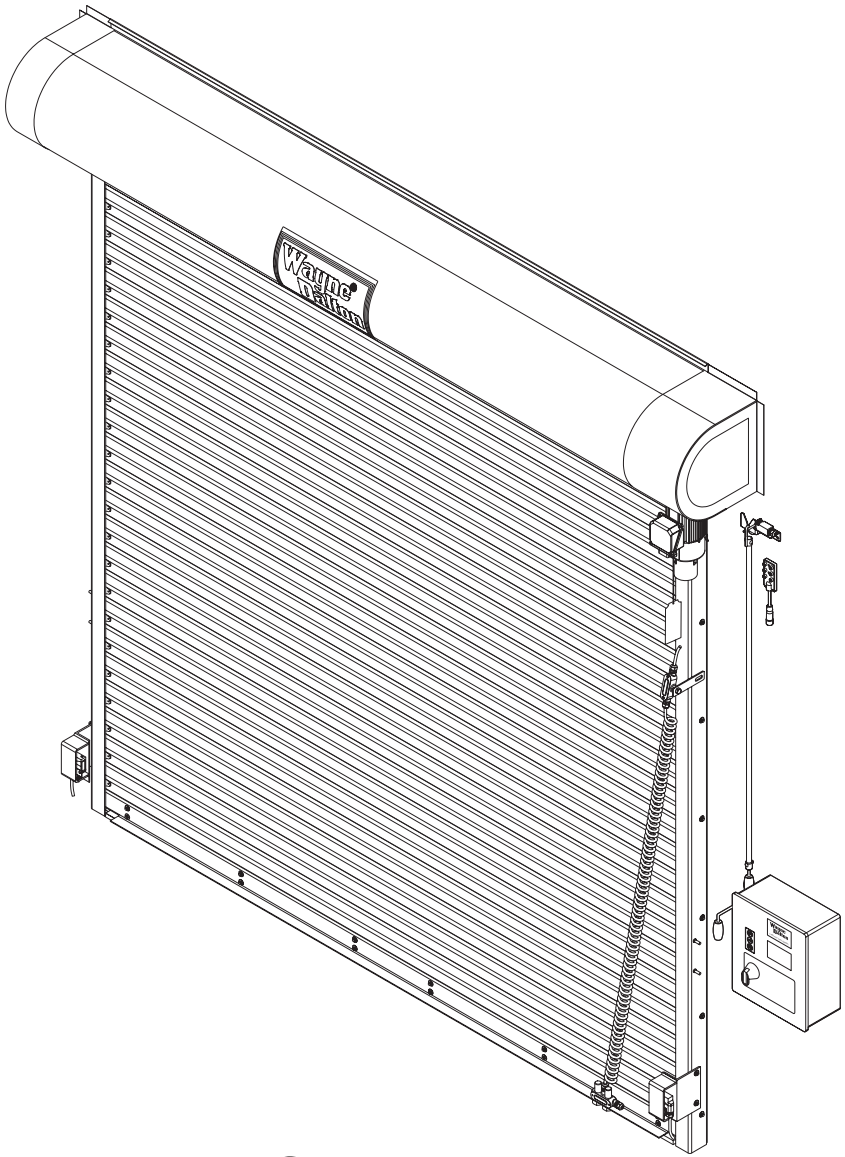


# Available for Models 800 and 800C

Wayne Dalton™
COMMERCIAL DOORS

# Installation Instructions

**This installation manual provides the trained door technician information required to install, troubleshoot and maintain a Wayne Dalton Advanced Performance Option Service Door.**

**READ COMPLETE INSTRUCTIONS BEFORE INSTALLING DOORS.**

**Please call 1-(800) 255-3046 and follow the prompts to contact the appropriate customer service agent. They will be happy to handle any questions that you may have.**

Some installation tasks listed in this document are found in other documents.

Please refer to the appropriate document(s) as directed;

308577 Hilti Kwik Bolt

**Installation, repairs, and adjustments must be made by a trained door system technician using proper tools and instructions.**

**INSTALLER: Leave this manual with the end user!**

# Table of Contents

# Section 1
# *Safety Information*

## ⚠ WARNING

Advanced Performance service doors are large, heavy objects that move with the help of electric motors. Since moving objects and electric motors can cause injuries, your safety and the safety of others depends on you reading the information in this manual. If you have any questions or do NOT understand the information presented, call your nearest service representative.

In this section and those that follow, the words "**DANGER**", "**WARNING**", and "**CAUTION**" are used to stress important safety information. The word:

- ⚠ **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
- ⚠ **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in injury or property damage.

*The word* **NOTE** *is used to indicate important steps to be followed or important considerations.*

1. Read manual and warnings carefully.
2. Keep the door in good working condition.
3. This door is equipped with a sensing edge, check sensing edge operations daily. Make any necessary repairs to keep it functional.
4. All models are equipped with an overcurrent device. This must be manually reset following an overcurrent condition.
5. Keep instructions in a prominent location near the Control Panel.

| POTENTIAL HAZARD | EFFECT | PREVENTION |
|---|---|---|
|  **MOVING DOOR** | **⚠ WARNING** **Can Cause Serious Injury or Death** | **Do NOT** operate unless the doorway is in sight and free of obstructions. Keep people clear of opening while door is moving.<br>**Do NOT** change control to momentary contact unless an external reversing means is installed.<br>**Do NOT** operate a door that jambs. |
|  **ELECTRICAL SHOCK** | **⚠ WARNING** **Can Cause Serious Injury or Death** | Turn **OFF** electrical power before removing Control Panel or motor cover.<br>When replacing Control Panel cover make sure wires are **NOT** pinched or near moving parts.<br>Operator must be electrically grounded. |

# Safety Instructions

## Electrical Power Requirements for all Advanced Performance Service Door Models

All Advanced Performance Service Door models are currently only available in 3-phase voltages, with 208, 240(230) and 480(460) VAC as voltage options. Presently 575 VAC is available only with the use of a three phase, 575 VAC/480 VAC step-down transformer for our Models 800 and 800C, Wayne Dalton Advanced Performance Option ServiceDoor. **YOUR LOCAL CODES MAY REQUIRE THAT THE INCOMING POWER TO YOUR WAYNE DALTON ADVANCED PERFORMANCE OPTION SERVICE DOOR HAVE A LOCK-OUT / TAG-OUT EQUIPPED FUSED DISCONNECT SWITCH (TO BE FURNISHED BY OTHERS) WITHIN EYESIGHT OF THE DOOR'S CONTROL PANEL.** Incoming power wiring must meet all NEC and local building codes, plus be properly sized for the control panel's amperage rating on the nameplate. To reduce the risk of electric shock, the chassis of the control panel must be properly grounded.

**⚠ CAUTION**

Wayne Dalton Advanced Performance Option Service Door Models must be supplied by a grounded Wye voltage supply, e.g. 208 Y/120, 480 Y/277. Ungrounded voltage supply sources must be avoided, e.g. 480 VAC, 240 VAC or 120 VAC Delta systems should **NOT** be used. Voltage unbalance is a common occurrence on Delta supply systems, which power both single phase and three phase loads, which can lead to unequal voltages on each phase leg. Voltage unbalance can cause deterioration of motor performance, such as loss of torque, overheating, decrease the winding insulation life, and can cause motor starter contacts, located in the control panel, to permanently "weld" closed. Voltage unbalance can be caused by inadequate conductor sizing, Delta transformer sizing, excessive single-phase loads, poor grounding, or intermittent high resistance faults (Faults which do NOT generate high – enough fault currents to trip an Over Current Protection device, but will cause the distributed capacitance in an ungrounded three phase system to shift. This shift may cause destructive over-voltages to occur).

***Wayne Dalton's warranty WILL NOT cover damage caused by failure of the motor, control panel or other electrical components due to the use of an inadequately grounded system.***

# Section 2
# *How to Use This Manual*

**The sections of this Installation Manual provide the information required to install, troubleshoot and maintain the *Models 800 and 800C Wayne Dalton Advanced Performance Option Service Door.***

- **Section 1 - Safety Information**
  **Safety Information and Instructions.** Important information related to safety terminology used throughout this manual. Safety related instructions must be followed at all times while performing any steps/tasks/instructions detailed in this manual.
- **Section 2 - How to Use This Manual**
  Provides an overview of component information and how to use this manual.
- **Section 3 - General Information**
  Details pre-installation issues that are recommended to be considered and/or resolved prior to beginning this door system installation.

**⚠ WARNING**

Failure to correctly perform all steps in Sections 4–6 can result in serious injury or death. Each section must be followed in step by step order to complete a successful installation.

- **Section 4 - Installation**
  Provides step by step physical installation instructions for this product.
- **Section 5 - Wiring**
  Provides step by step wiring instructions for this product.
- **Section 6 - Door System Set Up Procedures**
  Provides step by step control set up and programming instructions for this product.
- **Section 7 - Troubleshooting**
  Details important troubleshooting information for typical installation, operator fault codes for troubleshooting and service, and normal operation codes that may occur.
- **Section 8 - Service and Maintenance**
  Provides related information on service and maintenance items.
- **Section 9 - Illustrated Parts Breakdown**
  Provides an illustrated parts breakdown for this product, including parts identification.
- **Section 9 - Return Goods Policy**
  Provides returned goods policy information.

# Component Identification Drawing

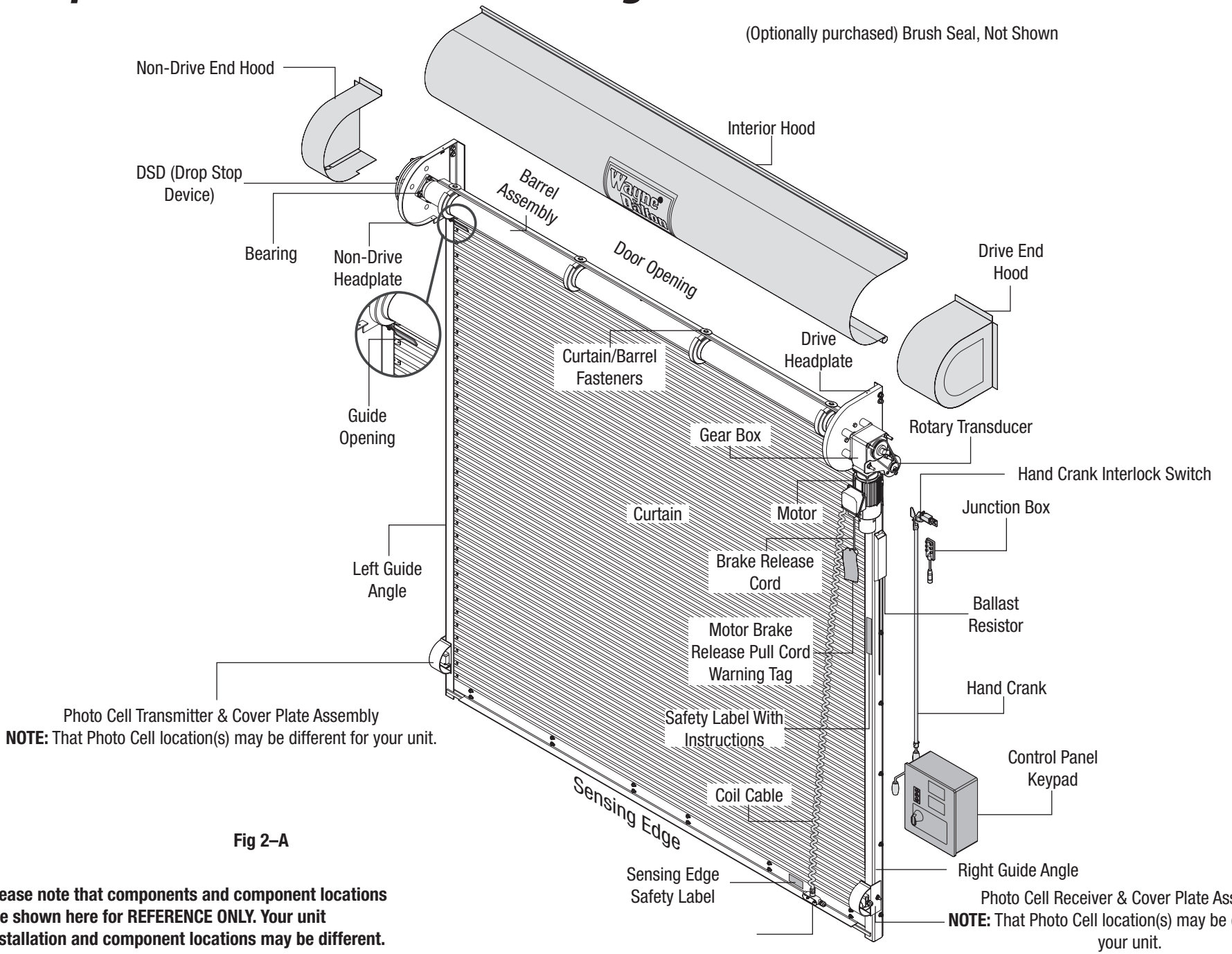



**Fig 2–A**

**Please note that components and component locations are shown here for REFERENCE ONLY. Your unit installation and component locations may be different.**

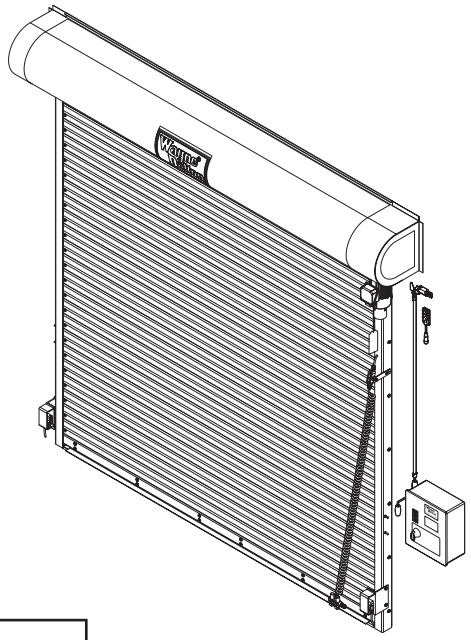
# Section 3
# *General Information*
## *Job Site Issues/Considerations*

The following list of items should be considered prior to installing an Advanced Performance Door.

- Verify the opening measurements, head room, and side room required for this installation.
- Type of door jamb.
- Availability of a power supply, which side of door it is on and what the line voltage is.
- Door system mounting environment. Items to consider include operator location, dampness of location, dustiness of the location and corrosiveness of the location.
- Door activation needs and requirements. Examples include 3 button control stations, 1 button control stations, radio controls, pull cords, loop detectors, photoeyes, key switches, motion detectors, etc.
- Accessory equipment needs and requirements. Examples include sirens, warning lights, etc.

### Entrapment Protection

Photoeyes and sensing edges are required for all electrically operated Advanced Performance Option Service doors. Both photoeyes and sensing edge are standard with these models. Do **NOT** disable them.



## *Door Specifications*

| |
|---|
| DOOR MODEL NUMBER (circle one): 800 / 800C |
| OPENING WIDTH: |
| OPENING HEIGHT: |
| MOTOR MOUNTING: (check one) ☐INTERIOR or ☐EXTERIOR ☐LEFT HAND or ☐RIGHT HAND |
| CURTAIN COLOR: |
| OPERATOR: HP _____ RATIO_____ |
| OPERATOR VOLTAGE: |
| "S" DIMENSION _____ "G" DIMENSION_____ |
| HEADROOM REQUIREMENT: |
| SIDE ROOM: DRIVE_____ NON-DRIVE:_____ |
| GUIDE GAP _____ GUIDE TYPE_____ |
| CURTAIN WEIGHT: _____ |

## *Installation Data*

| |
|---|
| NAME PLATE SERIAL NUMBER: |
| JOB NAME: |
| DISTRIBUTOR: |

**NOTE:** The ID plate is located on the bottom bar.

# Pre-Installation Check List

**1. INSTALLATION DATA SHEET**

**A.** Your "INSTALLATION DATA SHEET" looks like **Fig. 3–A**. It is found **inside** the door hardware box. You will need to refer to the data on this sheet during installation. Record the pertinent data on page 7 of this manual as a backup.

**B.** Verify that the "Factory Order Number" on the door components matches the one shown on the INSTALLATION DATA SHEET.

**2. PRE-INSTALLATION CHECK LIST**

Ensure the door installation can be accomplished before proceeding.

- Check that the wall opening, **Fig. 3–B**, matches the Opening Width and Height shown on the Installation Data Sheet.
- Check that the sill is level and plumb.
- Verify the guides you received are suitable for the jambs. Compare the guide type on the Installation Data Sheet with **Fig. 3–C**.

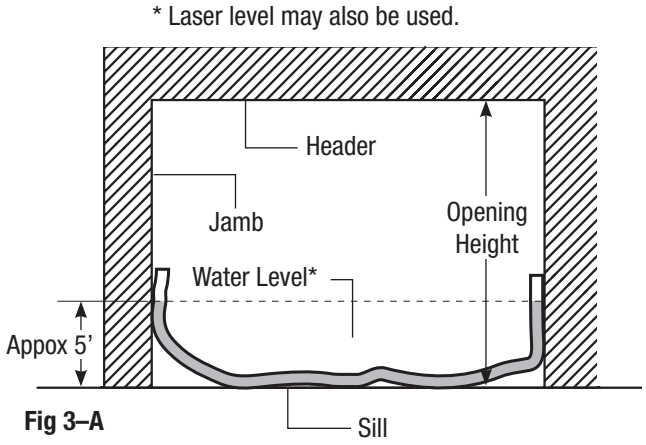
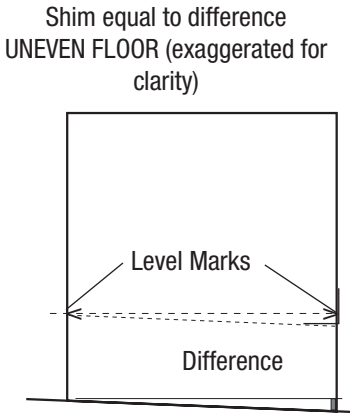



**Fig 3–A**



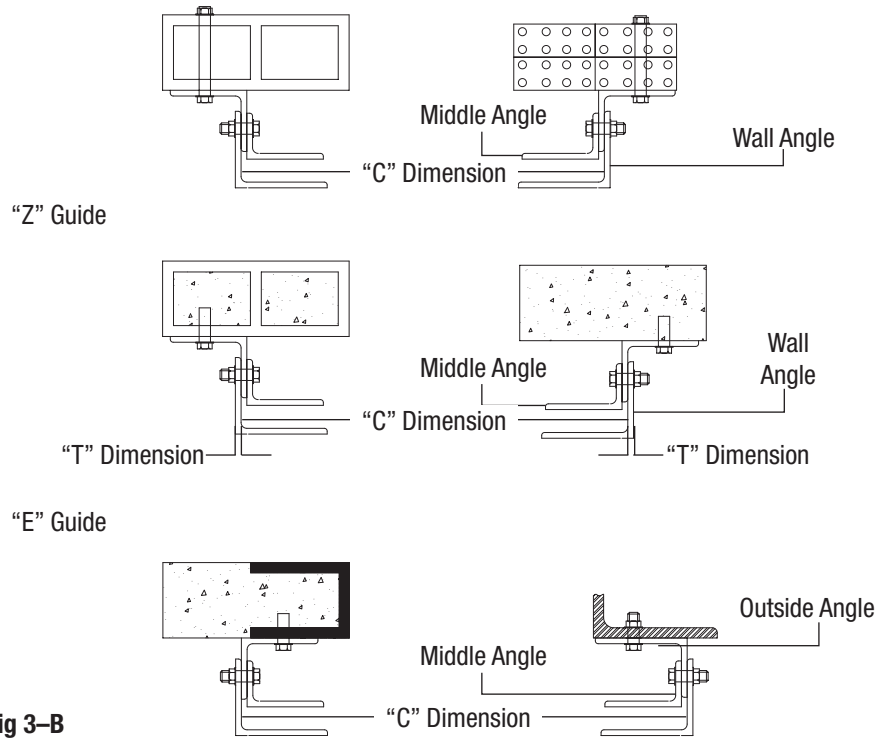




**Fig 3–B**

# Section 4
# *Installation*

### 1. INSTALL GUIDE WALL ANGLES

**NOTE:** It is only necessary to disassemble the guides for screw attachment of "E" type guides. Welded "E" assemblies and all "Z" assemblies may be installed as assembled from the factory.

**A.** Remove the middle angles and outside angles from the guide wall angles. (Perform this for "E" non-welded guides only.)

**B.** Mount guide wall angles to achieve the "S" dimension (on the Installation Data Sheet) plus 1/2" as shown in the illustration on the previous page **Fig. 3–C**. (The extra 1/2" allows for the thickness of the outside angle.)

- The "G" ("S" + 1/2") dimension must be held within 1/8" over the entire height of the wall angle.
- The guides must be on a level plane and plumb.
  - Place shims under the wall angle on the tall side of the opening if necessary to put them on level, **Fig. 3–B**.
  - Check plumb with a level or plumb bob.

### 2. MOUNTING METHODS

The following instructions use the Z-Guide positioning for the wall angles, use the Z-Guide or E-Guide positioning best suited for your site.

**Masonry Jambs**

- Hold Z-Guide wall angle against the wall and drill mounting holes through the slots using drill size shown in **Table 4–A**. Install jamb fasteners (**Table 4–A**) on one wall angle. Install second wall angle at "G" distance, refer to **Fig. 3–C** on the previous page. Check for level and plumb. Use spacers between Guide and wall as needed for plumb.

**Steel Jambs**

Steel jambs (welded or screwed) use "E" guides, all others use "Z".

- SCREW ATTACHMENT OPTION
  - Hold E-Guide wall angle against the jamb and drill holes through the slots using drill size shown in **Table 4–A**. Install all jamb fasteners (**Table 4–A**) on one wall angle, then install second wall angle at "G" ("S" + 1/2") (**Fig. 3–C**) distance. Check for level and plumb.
- WELD ATTACHMENT OPTION
  - Hold E-Guide wall angle against the jamb and tack weld in place. Install second wall angle at "G" ("S" + 1/2") (**Fig. 3–C**) distance. Check for level and plumb. Apply welds as shown in **Fig. 4–B**, using welding electrodes E6010, E6011 or E7014.

| JAMB | FASTENER | DRILL SIZE | JAMB FASTENER SPECIFICATIONS |
|---|---|---|---|
| Steel | 3/8" self-tapping screw | 5/16" diameter | Steel jambs must be minimum 3/8" thick |
| Concrete | 3/8" expansion bolt | 5/16" diameter | Drill hole at least 4" from jamb corner. |
| Filled block | 3/8" expansion bolt | 5/16" diameter | Drill hole at least 4" from jamb corner. |
| Wood | 3/8" lag screw | 5/16" diameter | Drill hole 3" deep |
| Unfilled block | 3/8" thru bolt | 5/16" diameter | Install 3" O.D. steel washer on opposite side of wall. |

**Table 4–A**

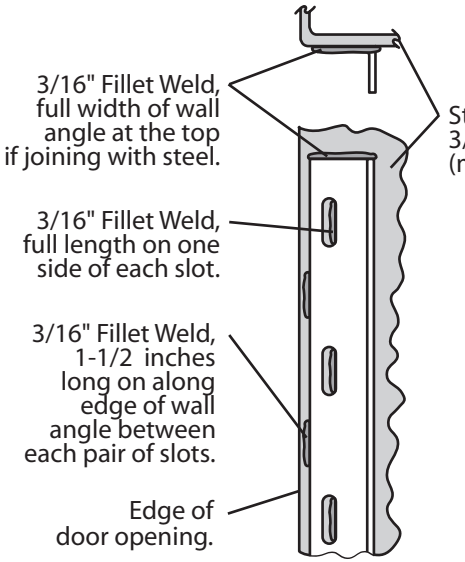



**Fig 4–B**

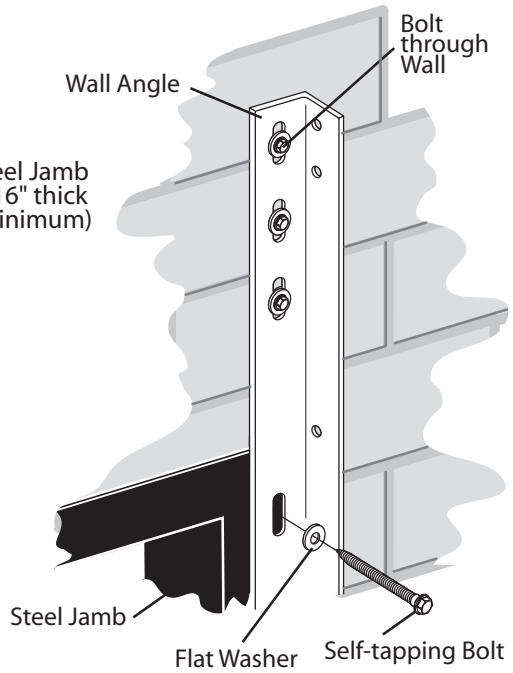



**Fig 4–C**

**NOTE:** When the wall angle extends above the steel of the jamb or header, use washers, spacers or shims to fill the gap between the masonry portion of the wall and the wall angle. Use through bolts to fasten the wall angle in the area above steel, **Fig. 4–C.**

3. **IDENTIFY HEADPLATE BRACKETS, Fig. 4–D(a)**
   *Right hand drive is shown (left hand drive opposite).*

4. **IDENTIFY DRIVE END OF BARREL ASSEMBLY, Fig. 4–E**
   *Right hand drive is shown (left hand drive opposite).* The **drive end** of barrel assembly typically is longer and has a smaller shaft diameter than the non-drive end.

5. **MOUNT MOTOR/GEARMOTOR TO DRIVE END HEADPLATE**
   Attach gearmotor to drive end headplate. Drive end headplate may come with gearmotor and motor already attached.

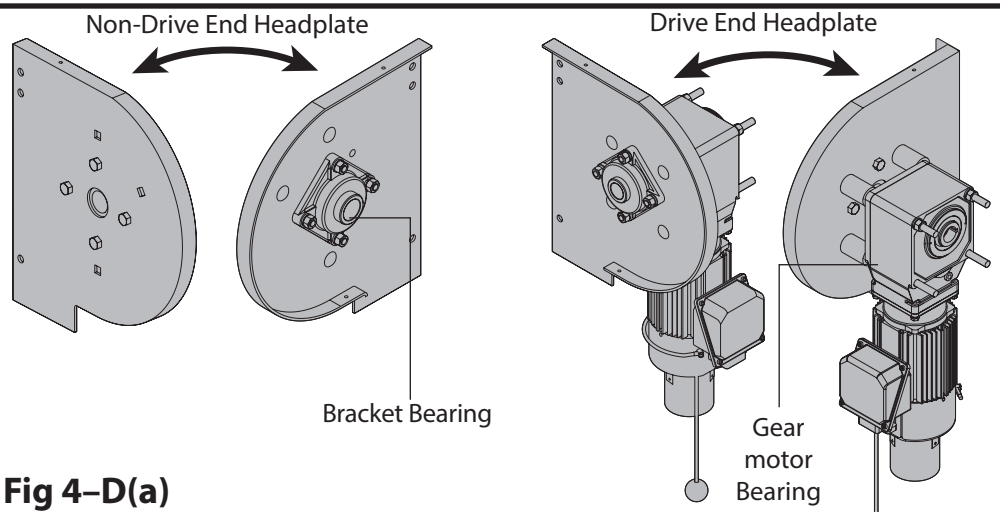



**Fig 4–D(a)**

## ⚠ WARNING

Perform the following installation steps 6A through 6D carefully. The Drop Stop Device MUST BE INSTALLED to protect against rapid closure of the door which could result in death or serious injury.

6. **LOCATE SET COLLARS, SPACER COLLARS, KEYS, AND DROP STOP DEVICE (DSD), Fig. 4-D(b) AND 4–E**
   in hardware box(s). Confirm drop stop device (DSD) matches the barrel's downward rotational direction.
   - **A.** Slide set collar, small ID (with set screw) onto *drive end shaft* of the *barrel assembly,* **Fig. 4–E. DO NOT** tighten set screw at this time.
   - **B.** Slide spacer collar onto the *drive end shaft* of the *barrel assembly*. The spacer collar separates the set collar from the headplate bearing and has **no** set screws.
   - **C.** Slide set collar, 1-1/2" ID with set screw, onto *non-drive end shaft* of the *barrel assembly*. **DO NOT** tighten set screw at this time.
   - **D.** Slide spacer collar onto the *non-drive end shaft* of the barrel assembly. The spacer collar separates the set collar from the headplate bearing and has **no** set screws.

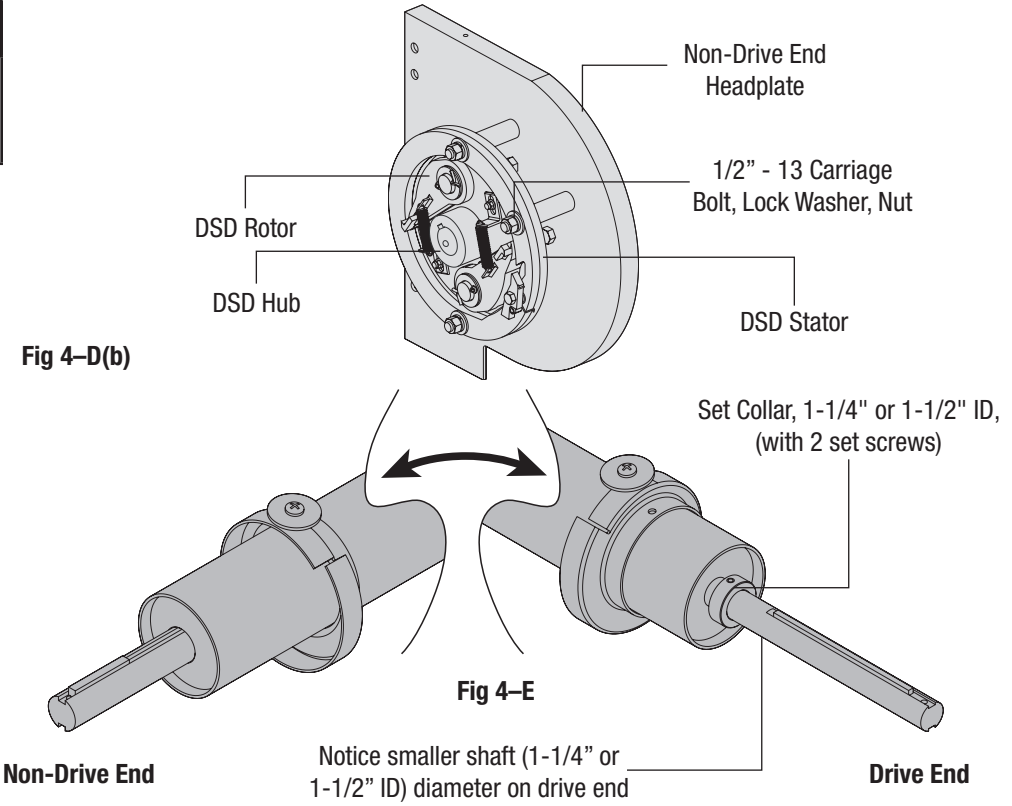



**Fig 4–D(b)**

**Fig 4–E**

**7. ASSEMBLE BARREL AND HEADPLATE BRACKETS, Fig. 4–G**

Apply lubricant (*anti-seize compound (provided)*) to inside of gearmotor bearing.

- **A.** Slide the *drive headplate* bracket bearing and gearmotor/drive bracket onto *drive end of the barrel shaft* (long end).
- **B.** Align keyways and insert supplied key. If possible leave key flush with the shaft end. (It can be used to align drive sprocket.) **Do not trim yet**.
- **C.** Slide the *non-drive headplate* bracket and bearing onto the *non-drive end of the barrel shaft* (short length/large diameter).
- **D.** The Stator assembly is bolted to the bracket assembly with (3) 1/2" screws with hex nuts at the factory.
- **E.** Align DSD (Drop Stop Device) rotor keyway with non-drive shaft end and insert 3/8" X 3/8" X 3" key into slot on non-drive end shaft
- **F.** Lightly tighten the set screws on the hub of the DSD rotor.
- **G.** The distance between the outside of the headplate brackets should be less than the "S" dimension, **Fig. 3–C.**
- **H.** **Do NOT** tighten bearing or set collars set screws at this time.

**NOTE: Do NOT** install Position Sensor assembly and roller chain at this time.

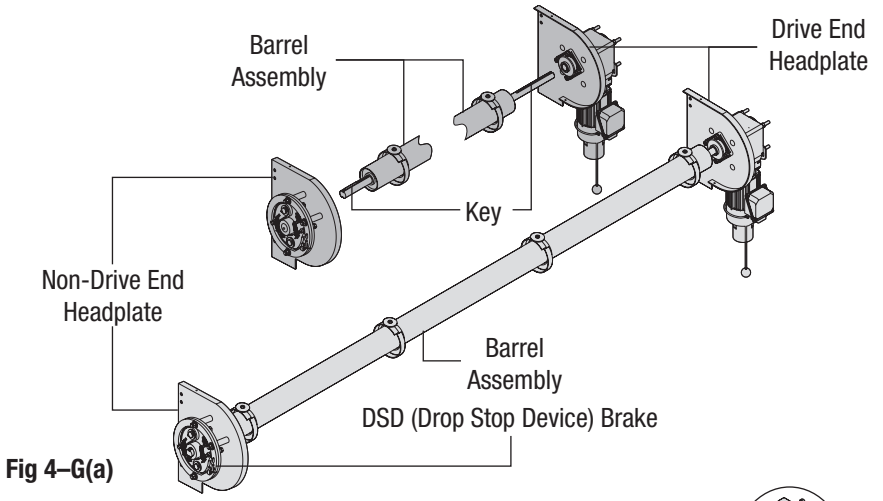



**Fig 4–G(a)**

## ⚠ CAUTION

Use proper lifting equipment and correct lifting procedures to avoid injury.

**8. MOUNT BRACKETS AND BARREL ASSEMBLY, Fig. 4–F**

- **A.** Headplate brackets must be square to the wall and parallel.
- **B.** Use hex bolts, nuts and washers (provided) to fasten headplate brackets to the outside of the wall angles. Use washers under both the bolt head and nut.
- **C.** Bolt heads must be on the inside of the headplate brackets.
- **D.** Use a level to **make sure the barrel is level**.

**NOTE:** A level barrel is crucial to the correct operation of the curtain. If the barrel is NOT level, the curtain will begin to "telescope" towards the low end and may damage the curtain.

- **E.** Position the barrel assembly such that the curtain, mounted on the barrel, will be centered between the headplates, **Fig. 4–H.**
- **F.** Tighten bracket bearing set screws on both headplates to prevent barrel from sliding side to side**.**
- **G.** Slide inner set collars and spacer collars against headplate bearings and tighten set screw on the set collars. (Spacer collar does not have set screw.)
- **I.** Tighten Drop Stop Device hub set screws.

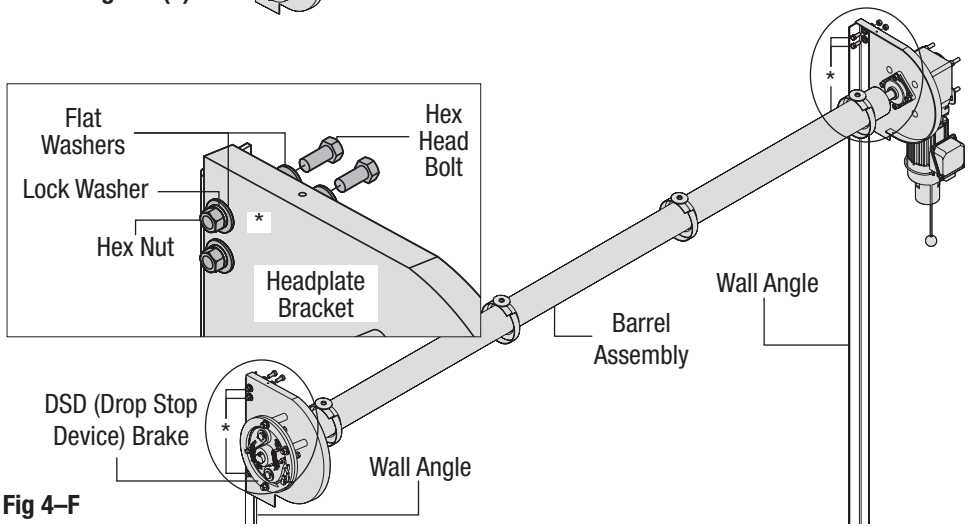



**Fig 4–F**

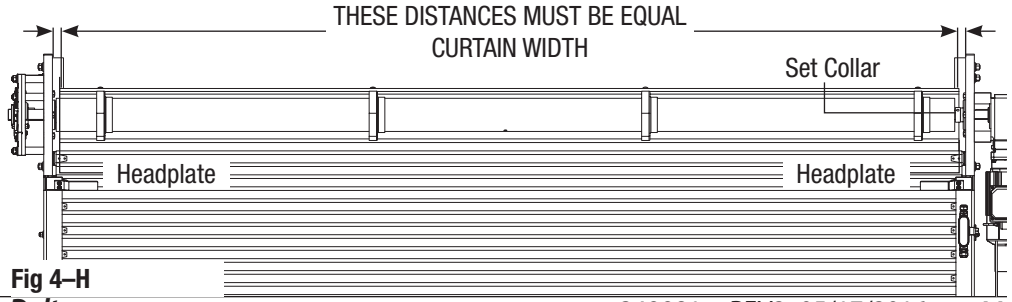



**Fig 4–H**

**9. HAND CRANK OPERATION**

**⚠ WARNING**

**Do NOT** connect power to unit until instructed to do so. The hand crank is for **emergency use only** and should **NOT be used when there is power connected to the door**. Serious injury or death could result if the door motor activates while the crank is installed.

**NOTE:** A factory installed Brake Release Cable Assembly is attached to the motor brake assembly. No installation or adjustment is necessary.

**⚠ WARNING**

**Do NOT** pull Cable unless crank handle is engaged with motor eyelet and secured as instructed on the *Hand Crank Safety Instruction* sticker attached to the door jamb or curtain guide. Safe use requires two (2) people.
**Do NOT** use Motor Brake Release Pull Cord to allow curtain to free fall. Uncontrolled curtain drop using the Motor Brake Release Pull Cord **will activate DROP STOP DEVICE.**

**NOTE: The brake release must remain in the *release* position at ALL TIMES DURING MANUAL OPERATION. If the brake is allowed to re-engage it will become impossible to turn the crank handle.**

**NOTE: A power interlock switch is located on the hand crank interlock support bracket to prevent accidental motor operation, should the power be restored while the Hand Crank is engaged. Do NOT disconnect power interlock switch.**

**TO OPERATE:** This task requires two (2) people to perform. Installation of the Hand Crank and Interlock Switch occurs in Step 13A on page 16.

**A.** **Disconnect ALL** electrical power supply.
**B.** Remove hand crank from the Crank Handle Support Bracket.
– This releases the power interlock switch (a backup protection to ensure there is **no power** to the gearmotor).
**C.** Insert the hook on the crank handle through the eyelet mounted on the bottom (fan end) of the motor, **Fig. 4–I.**
**D.** Once the hook is securely engaged.
– Firmly secure the crank handle with BOTH hands.
– Have an assistant **pull down** and **HOLD** the brake release cable. You will feel an immediate **increase** in the tension on the handle.
**E.** Carefully and deliberately turn the crank handle to operate the door. (During installation you will be turning the barrel assembly.)
**F.** When desired height or position is reached, **stop** and **hold** hand crank while the assistant releases the brake release ball. **Ensure the brake has re-engaged before releasing the Hand Crank.**
**G.** Remove Hand Crank from eyelet and replace into Crank Handle Support Bracket.

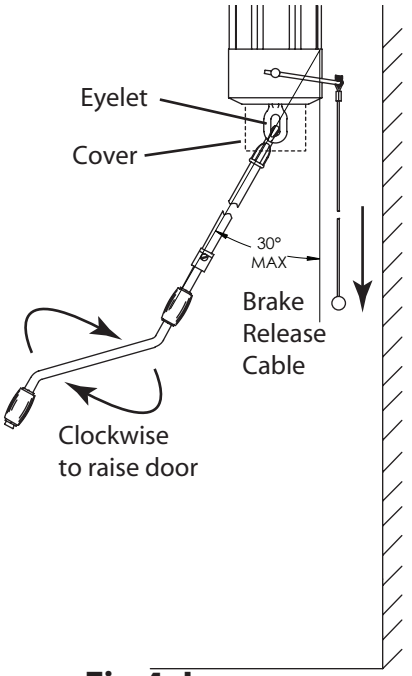



**Fig 4–I**

**⚠ WARNING**

After installation is complete, always **disconnect power before** operating hand crank and ensure that hand crank is **properly disengaged** and returned to its Support Bracket before **re-connecting** power.

**10. INSTALL CURTAIN ONTO BARREL**

**NOTE:** If guide angles are already installed, cover the bell mouth (flared opening) opening of the guide angles to protect the curtain from being scratched or damaged during these steps.

- **A.** Using the hand crank, rotate the barrel assembly so that the bolt holes or studs on the barrel rings are facing up. Different barrel assembly lengths will have more or less rings/studs, **Fig. 4–K(a)** and **Fig. 4–K(b).**
- **B.** Suspend the curtain below the barrel on two or three slings or ropes rated for the weight of the curtain, **Fig. 4–J.** (Refer to your Installation Data Sheet.)
- **C.** Center the curtain between the headplate brackets and pull the top slat up and over the back side of the barrel.
  - On small doors, the curtain can be rotated by hand.
  - On large doors attach the top slat to two slings/ropes and rotate the slings/ropes to bring the top slat into position.

    If the barrel has rings,
    - Pull the curtain up and hold top slat against the rings, **Fig. 4–K(a).**
    - Align the slots in the top slat with the holes in the rings.
    - Fasten the curtain to the rings with 3/8-16 x 5/8" Torx head screw and washers provided.

**NOTE:** TAKE CARE TO PREVENT STRIPPING SCREW THREADS.

If the barrel has studs,
- Pull the curtain up and hook the slots in the top slat over the studs.
- Fasten at each stud with a 1/4-20 x 3/4" round head screw, flat washer, and two clamp washers (provided), **Fig. 4–K(b).**

- **D.** Coil the curtain completely onto the barrel using the hand crank.
- **E.** Remove bottom slat end lock and attach Sensing Edge.
- **F.** Replace bottom slat end lock.

**⚠ WARNING**

**Do NOT remove the slings or ropes at this time.**

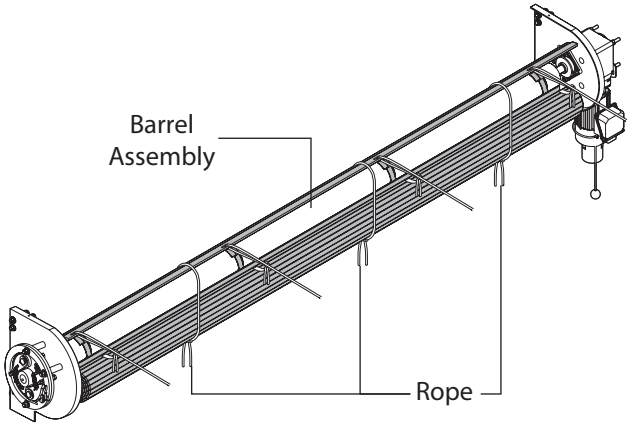



**Fig 4–J**

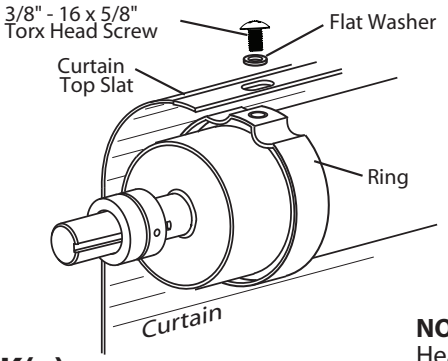



**Fig 4–K(a)**

**NOTE: In figures 4–K(a) & K(b)** Headplate and bearing not shown for clarity.

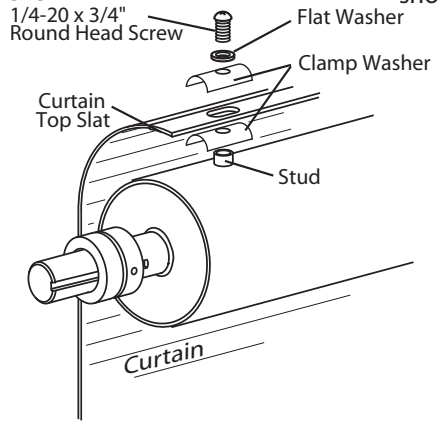



**Fig 4–K(b)**

If you have welded "E" assemblies or "Z" assemblies factory assembled and have already installed them in a previous step, skip Step 10.

**11. INSTALL GUIDE ANGLES**

Bolt the middle angles and outer angles to the wall angles as shown in **Fig. 4–L**. (Wall angles may be mounted inside or outside based on installation requirements, **Fig. 4–M.**)

- The "Guide Gap" **MUST** be set to the value given on the Installation Data Sheet. Refer also to Door Specifications on page 7.

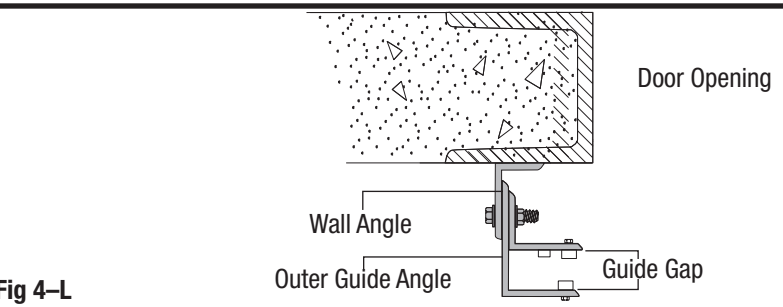
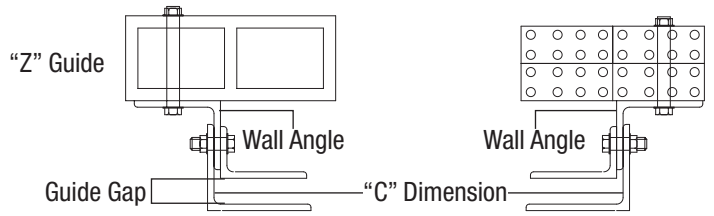



**Fig 4–L**



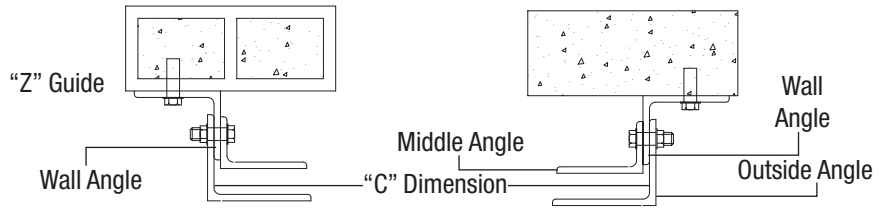




**Fig 4–M**

**⚠ WARNING**

Improper use of Hand Crank can cause severe injury or death. Review and UNDERSTAND the operation of the Hand Crank, (see page 12), prior to performing the following installation steps.

**⚠ WARNING**

In the following step, ensure clamping tools are securely fastened to the guide angles; if clamping tools or locking pliers are NOT secure the curtain may fall to the floor.

**12. OVERTRAVEL PREPARATION**

**A.** Place locking pliers or other secure clamping tool on both guides at 2 to 3 inches below the channels on the guide angles as shown in **Fig. 4–N**. (The guides are made up of the middle and outer angles. The pair are referred to as the "Guide Angles".)

**B.** Create slack in the slings/ropes, then (using the hand crank) slowly lower the curtain and bottom bar in between the Guide Angles and let the bottom bar rest on the locking pliers.

**⚠ WARNING**

Ensure the slings/ropes are securely fastened after adjusting! Refer to Fig. 4-J

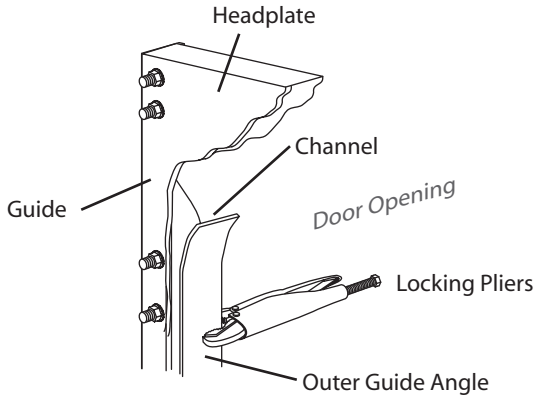



**Fig 4–N**

### ⚠ DANGER

LINE POWER should **NOT** be installed at this time. In the following steps electrical components will be physically mounted. Ensure that all incoming power supplies have been de-energized prior to beginning work on attachment of electrical control systems. Use proper Lock Out/Tag Out procedures.
**Do NOT connect components to electrical supply until directed to do so.**

**13. INSTALL POSITION SENSOR**

The Position Sensor communicates curtain position and travel to the control programming.

**A.** Attach the Position Sensor mounting bracket to the lower motor mounting bolts. Tighten mounting nuts. FIG 4-P

### ⚠ CAUTION

The chain sprockets must be directly in line with each other to prevent sprocket wear and Position Sensor damage.

**B.** Install Gear Motor Drive sprocket onto the door shaft. Ensure the drive sprocket is aligned with the Position Sensor sprocket. Use the supplied 1/4" X 1/4" key to lock it into the motor. FIG 4-Q

**C.** **Do NOT** install Position Sensor chain at this time. Chain will be installed during door set up after the control system is installed and electric power is available.

**D.** Route the cable from the Position Sensor to the future location of the Control Panel. This 5-pin connector cable will be attached to the Control Panel after it is mounted.

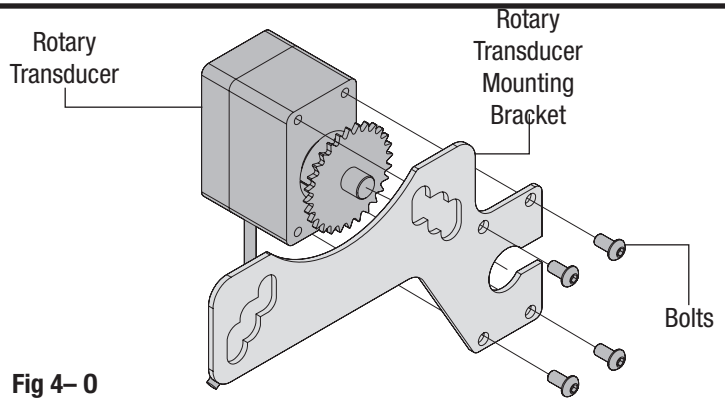



**Fig 4– O**

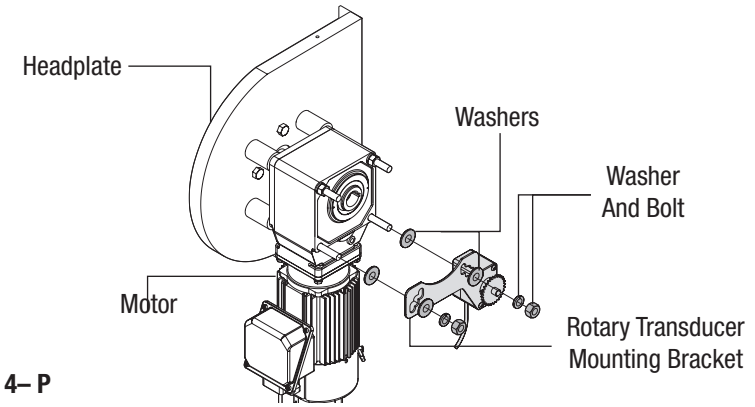



**Fig 4– P**

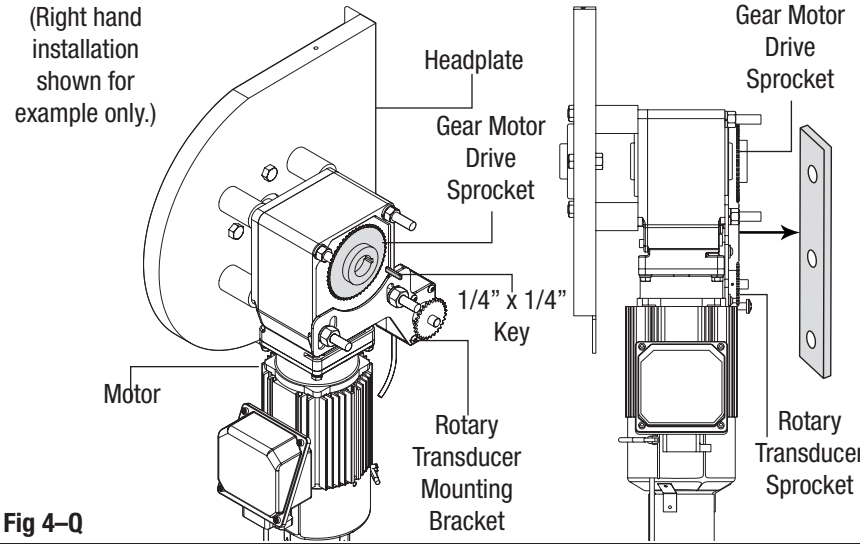



**Fig 4–Q**

## ⚠ DANGER

LINE POWER should **NOT** be installed at this time. In the following steps electrical components will be physically mounted. Ensure that all incoming power supplies have been de-energized prior to beginning work on attachment of electrical control systems. Use proper Lock Out/Tag Out procedures.
**Do NOT connect components to electrical supply until directed to do so.**

### 14. MOUNTING AND CONNECTING/WIRING STANDARD ELECTRICAL COMPONENTS

This step encompasses the installation and wiring of several components;

- Crank Handle Support Bracket and Switch,
- Junction Box,
- Control Panel,
- Photoeye, and
- Sensing Edge.

**A.** Install **Crank Support Bracket** and **Interlock Switch**. The top end of the hand crank will mount onto the Crank Support Bracket and be held vertically in place to the wall using the provided clips and fasteners.

**NOTE: Ensure the finished position of the Hand Crank hangs vertically above the floor and where the crank handle will not interfere with anything.**

1. Find a suitable location for mounting the Crank Support Bracket, Interlock Switch, and Hand Crank components that are near the motor and does **NOT** interfere with the operation or installation of other components, **Fig. 4–R.**
2. Using appropriate fasteners and pre-drilled holes, mount the Crank Support Bracket to the wall.
3. Using appropriate fasteners, mount the Interlock Switch to the Crank Support Bracket.
4. Place the hook end of the Hand Crank onto the Support Bracket and verify hook rests on top of and **engages the Interlock Switch actuator**. Make adjustments as required.

   **NOTE:** Proper engagement of the Interlock Switch actuator is important!
5. Route the Interlock Switch cable from the switch to the future location of the Junction Box.
6. Hang the Hand Crank on the Support Bracket.

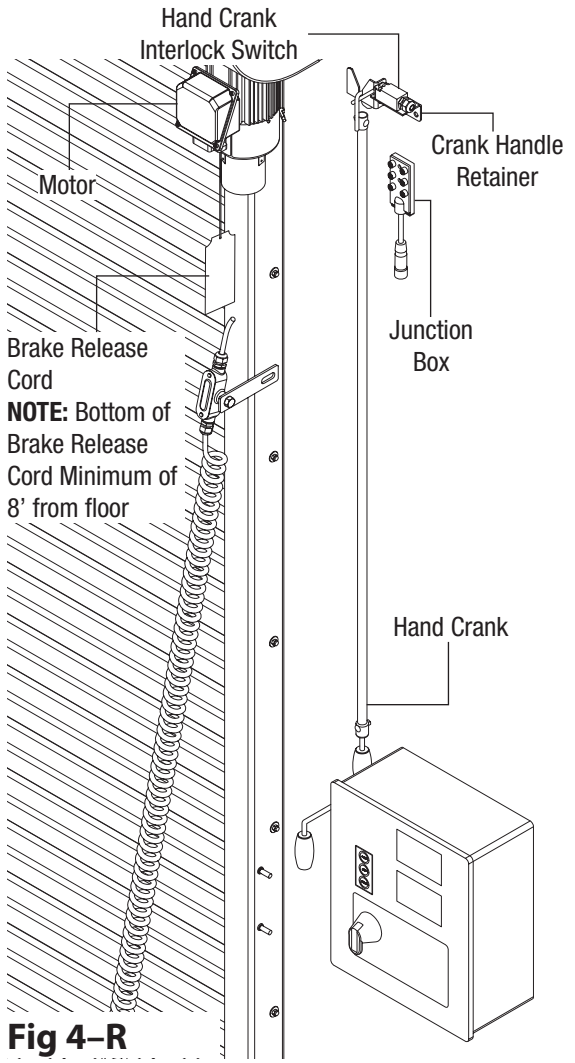



**Fig 4–R**

**14. MOUNTING ...** *(continued)*

**B.** Find a suitable and easily accessible location for the **Junction Box**, **Fig. 4–S(a).**

- Locate Junction Box on the wall near the Position Sensor, Crank Handle Retainer, and Motor, but OUTSIDE the end cover and its full open swing range. Verify component cables will reach before mounting Junction Box and that the end cover full open swing range does not interfere with access to Junction Box.
- Away from heat sources.
- With no interference of moving parts of the door system.
- Where cables can be well secured while preventing unnecessary strain.
- Use the Junction Box exterior mounting fixtures to mount to wall. (Fasteners not provided.)
- Attach the Hand Crank Interlock switch cable to the Junction box connector position 2 labeled "HAND CRANK INTERLOCK" See **Fig. 5–J** on page 28.

**C.** Find a suitable and easily accessible location for the **Control Panel**, **Fig. 4–S(b).**

- Adjacent to the door, on the wall, about 5 feet above the floor at the center of the panel (roughly eye level). It may be mounted higher in commercial applications to reduce tampering.
- Where all moving parts of the door system are visible while at the control panel.
- Away from heat sources.
- With no interference of moving parts of the door system.
- Where cables can be well secured while preventing unnecessary strain.
- Mount the Control Panel to the wall. (Fasteners not provided.) Use supplied mounting tabs as necessary.

**D.** **Photoeye** assemblies are factory mounted to their protective shields. Attach to guides as follows, **Fig. 4–S(c).**

1. Mount the Photoeye Receiver (pre-wired cable) to the lowest guide assembly bolt so that the Photoeye is aimed toward the opposite guide. Route the cable up and plug into the Junction Box connector position 4 labeled "Photoeye RX" see **FIG 5-J** page 28**.**
2. Mount the Photoeye Transmitter (long pre-wired cable) to the lowest guide assembly bolt on the opposite guide, directly across from the receiver. Route the wire up the guide and over the header to the Junction Box to connector position 3 labeled "Photoeye TX" **FIG 5-J**, page 28
3. Photoeyes will be aligned later, when power is applied to the Control Panel. See page 29 Photoeye Adjustment.

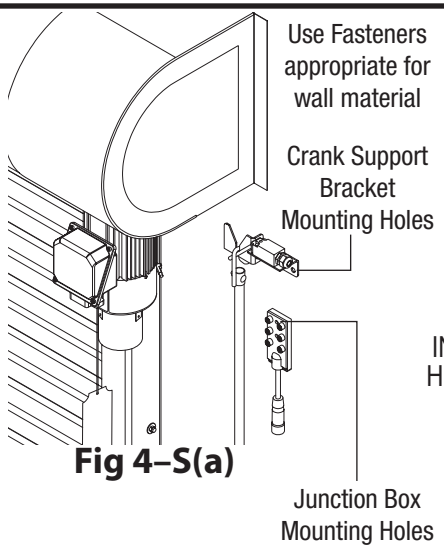



**Fig 4–S(a)**

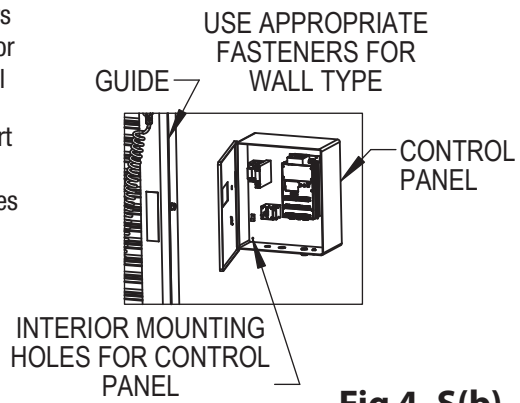
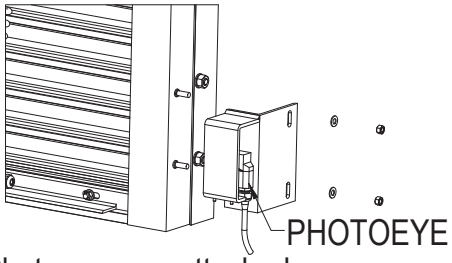
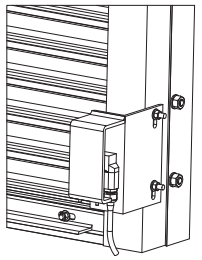



**Fig 4–S(b)**




Photoeyes are attached to their protective shields at the factory and must be mounted to the guides using the hardware provided.



For parking garage applications Photoeyes may be mounted higher to prevent the beam from shooting beneth vehicles.

**Fig 4–S(c)**

**14. MOUNTING ...** *(continued)*

**E. Sensing Edge conduit box mounting**

Sensing Edge was attached to door curtain on page 13, Step 10E.

**1.** If not factory installed, connect the coil cord to the sensing edge inside the sealed bottom bar mounted conduit box.

**2.** Fasten the coil cord conduit box to the **drive-side guide**, using the *supplied bracket* and *accessible* guide assembly bolt at approx. 2/3 of door opening height **Fig. 4–T(b).**

**3.** Route coil cord to conduit box mounted on guide rail. Ensure that **coil cord** remains free from tangling on other components or fixtures.

**4.** Connect the coil cord wire to the supplied 3-wire M12 cable inside the conduit box. Use only the Black and White wires, cut off the Red wire.

**5.** Route the supplied M12 cable from the side mounted conduit box to the junction box connector position 1 labeled "Sensing Edge" **FIG 5-J** page 28.

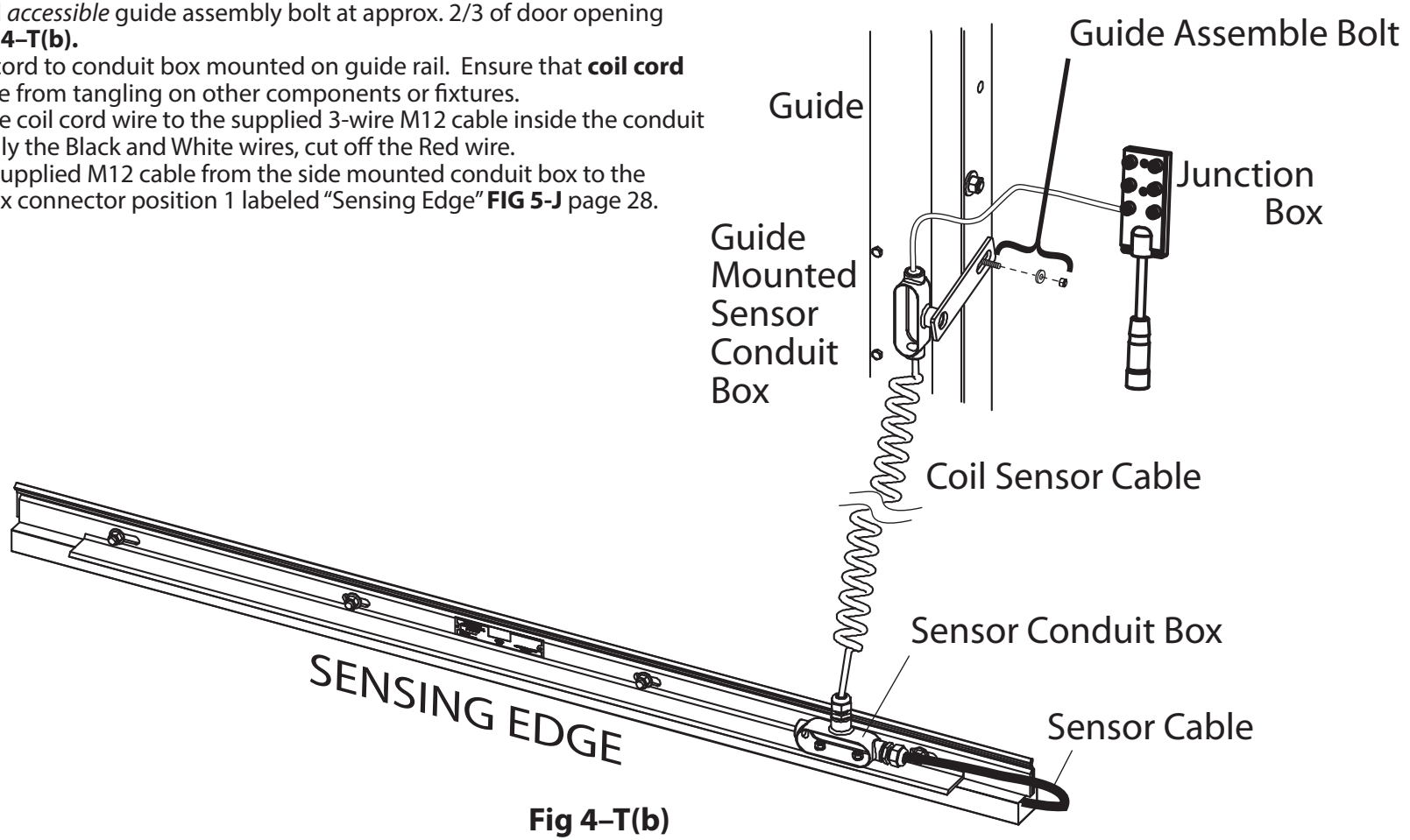



**Fig 4–T(b)**

**15. LOW VOLTAGE WIRING**

**A.** Connections to the door are completed by attaching the two screw-in cables to the control panel's base, **Fig. 5–I page 27.**

1. **5 pin cable connector**
   - Position Sensor
2. **12 pin cable connector**
   - Photoeye Reciever
   - Photoeye Transmitter
   - Sensing Edge
   - Hand Crank Interlock Switch
   - Optional Input 1
   - Optional Input 2
3. **Two options may be connected to the Junction Box by the installer. Additional options must be wired to the spare inputs on the Control panel. Use the corresponding option inputs.**
   - Radio Remote to the Junction Box connector 6 labeled "Option 2".
   - Floor loop to the Junction Box connector 5 labeled "Option 1".
   - Motion Detector to the Junction Box connector 5 labeled "Option 1".
   - Wall mounted push button stations to the main Control Panel **Fig. 8–J** on page 51.

Note: When installing push buttons, use the 24V supplied by the Control Unit as the common.

**16. MOTOR & POWER WIRING (HIGH VOLTAGE) (**These tasks are also diagrammed in **Fig. 5–D, 5–G & 5–H** on pages 24-26.)

**A.** Route **Motor Power Cable** (provided, factory wired to motor) through water-tight fitting in the SECOND hole from left side of Control Panel bottom.

1. Connect the lighter gauge, twisted pair wires to the blue colored **Motor Brake** terminals next to the disconnect switch. Either wire can connect to either terminal. It is labeled "B1" and "B2".
2. Connect the green and yellow ground wire, the braided cable shield and the non-insulated ground wire together to the Green and Yellow terminal.
3. Connect the thicker motor wires to Terminals T1, T2 and T3 on the green screw connectors on the bottom left of the control unit. The order doesn't matter since the motor rotation can be changed using the internal programming during Set-up in **Section 6**.

**⚠ WARNING**

**Before beginning this phase of installation, ensure POWER SUPPLY is disconnected!**

**A licensed electrician must perform the following step.**

**B.** Route **Main Power Cable** (not provided) through a water-tight fitting (not provided) in the FIRST hole from the left side of the Control Panel bottom.

- Connect 3-phase power lines to the disconnect. Connect the ground wire to the Ground Terminal to the left of the disconnect.

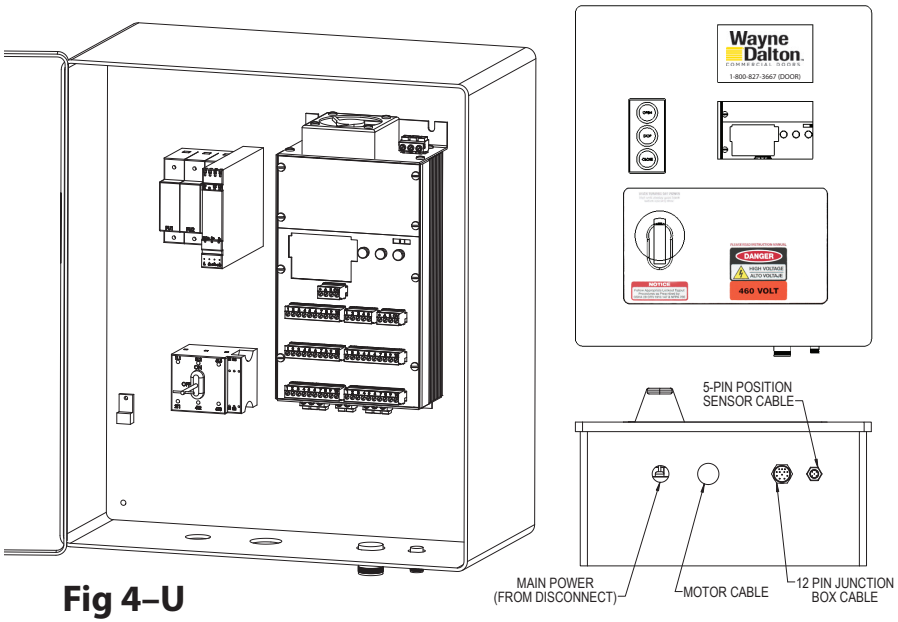



**Fig 4–U**

**17. INSTALL SAFETY LABELS, Fig. 4–V**

Product safety labels must be installed.

- **A.** Find Safety Labels in hardware box.
- **B.** Attach **Motor Brake Release Pull Cord Tag** to the motor pull cord.
- **C.** Attach **Sensing Edge** Safety Label to the bottom bar.
- **D.** Place remaining Safety Label at a readable height on door drive side guide or jamb.

**NOTE:** Product safety labels should be periodically inspected and cleaned by the product user as necessary to maintain good legibility. Order replacement safety labels from the door manufacturer as required to maintain legibility.

**18. PRE-HOOD CHECK LIST**

**⚠ WARNING**

Improper use of Hand Crank can cause severe injury or death. Use extreme care when operating the door manually using the hand crank. Read and follow the **HAND CRANK OPERATION** instructions on page 12 and supplied Safety Labels before attempting to operate the door.

- **A.** Remove locking pliers or other secure clamping device.
- **B.** Remove the ropes/slings holding the curtain.
- **C.** Operate the door manually several times. Make sure the endlocks or windlocks are not rubbing endplates through the entire travel of door.
- **D.** Check that the bottom bar is level at top and bottom and the curtain is not binding against the back of the guides.
  - – If curtain is level at bottom but not at top, place shims between the curtain and barrel on the low side.
- **E.** Verify good mechanical connection and tightness of fasteners, i.e., guides, headplates, set screws.
- **F.** Position the door at the half open position.

**NOTE:** Hood and Brush Seal installation can be delayed until the last step to allow easy access to curtain during wiring set-up and final adjustments.

**19. INSTALL HOOD (interior*)**

- **A.** Pre-drill the hood flange at 18" spacing for wall mounting screws. Hole diameter is dependant on the size of the wall fasteners (not provided) used to attach hood to wall.
- **B.** Place the hood over the hood bands or straps on the headplates (and, if provided, hood supports) and **against** the wall, **Fig. 4–W.**
- **C.** Fasten the hood to the hood bands or straps.
  - – At top, bottom and middle of the bands, drill 3/16" diameter holes through the hood and hood bands or straps on the headplates. Fasten the hood to the hood bands with self-tapping screws (provided).
- **D.** Fasten the hood to the wall.
  - – Place fasteners using the pre-drilled holes (wall fasteners not included).

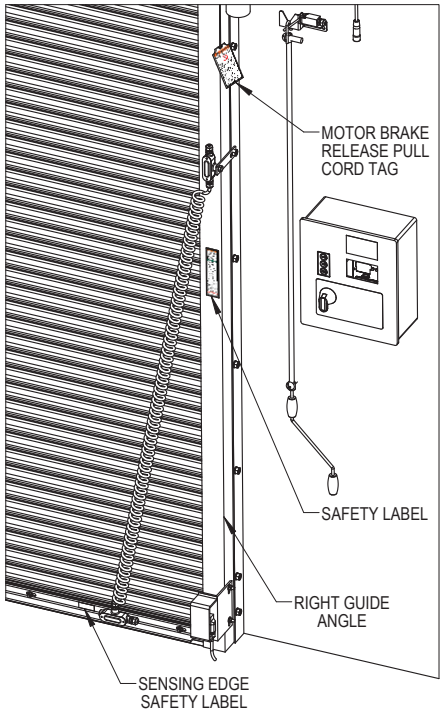



**Fig 4–V**

**HOOD SUPPORTS NOT SHOWN**

**NOTE:** Install hood supports (if provided) at even intervals across header. Number and placement of hood supports will vary with hood type and width.

* For EXTERIOR hood installation see Section 7: Special Door System Features, Exterior Hood Installation on page 43.

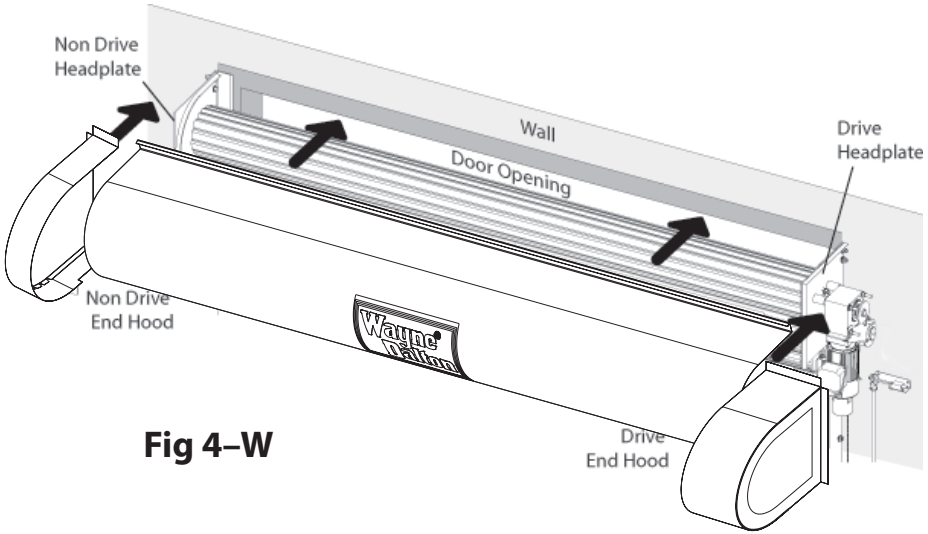



**Fig 4–W**

**20. INSTALL BRUSH SEAL (optionally purchased)**

Brush Seal is an optional component purchased separately and does **not** come with door.

- **A.** Place curtain in fully closed position.
- **B.** Position brush seal against door lintel as shown, **Fig. 4–X.**
- **C.** Using appropriate fasteners (not provided) for your type lintel and with the holes drilled in the extrusion as a guide, fasten brush seal to lintel.

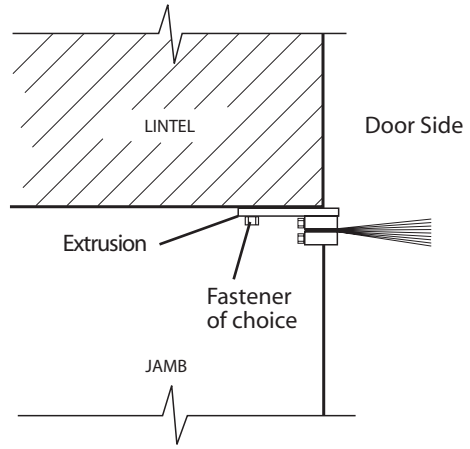



**Fig 4–X**

**21. INSTALL MOTION SENSOR (optionally purchased)**

Motion Sensor is an optional component purchased separately and does **not** come with door.

- **A.** Follow the installation instructions accompanying the Motion Sensor.
- **B.** Install wiring per wiring diagram **FIG 5-OD** page 31.

**22. INSTALL LOOP DETECTOR (optionally purchased)**

Loop Detector is an optional component purchased separately and does **not** come with door.

- **A.** Follow the installation instructions accompanying the Loop Detector.
- **B.** Install wiring per wiring diagram **FIG 5-OE** page 31.

**22. INSTALL RADIO CONTROLS (optionally purchased)**

Radio Controls are an optional component purchased separately and does **not** come with door.

- **A.** Follow the installation instructions accompanying the Radio Controls.
- **B.** Install wiring per wiring diagram **FIG 5-OC** page 31.

**22. INSTALL WALL MOUNTED PUSH BUTTON (optionally purchased)**

Wall Mounted Push Buttons are an optional component purchased separately and does **not** come with door.

- **A.** Install wiring per wiring diagram **FIG 8-J** page 51.

## ⚠ CAUTION

Making the checks outlined below will help to ensure that the door and operator are installed properly.

**CHECK LIST**

– Is the door level, square and plumb?
– Are all the bolts tightened?
– Are limit switch sprockets properly aligned?
– Is the Drop Stop Device installed with the correct rotation?
– ARE ALL BEARING AND SET COLLARS POSITIONED, ARE SET COLLARS AND BEARING SET SCREWS TIGHTENED?
– Has all the rigging equipment, ropes, straps, locking pliers, etc. been removed?
– Are all safety labels and tags in place?
– Are all cable connections in the proper locations?

# Section 5

## *Wiring*

All Wayne Dalton Advanced Performance Option Service Door Models are currently available only in 3-phase voltages, with 208, 240(230), or 480(460) VAC as voltage options. Presently 575 VAC is available only with the use of a 3-phase, 575V/480V step-down transformer for our Wayne Dalton Advanced Performance Option Service Door 800 and 800C models. **YOUR LOCAL CODES MAY REQUIRE THAT THE INCOMING POWER TO YOUR WAYNE DALTON ADVANCED PERFORMANCE OPTION SERVICE DOOR HAVE A LOCK-OUT / TAG-OUT EQUIPPED FUSED DISCONNECT SWITCH (TO BE FURNISHED BY OTHERS) WITHIN EYESIGHT OF THE DOOR'S CONTROL PANEL.**

Incoming power must meet all NEC and local building codes, plus be properly sized for the control panel's amperage rating on the nameplate. To reduce the risk of electrical shock, the chassis of the control panel must be properly grounded.

### ⚠ CAUTION

Wayne Dalton Advanced Performance Option Service Door models must be supplied by a grounded Wye voltage supply, e.g. 208 Y/120, 480 Y/277. Ungrounded voltage supply sources must be avoided, e.g. 480 VAC, 240 VAC or 120 VAC Delta systems should **NOT** be used. Voltage unbalance is a common occurrence on delta supply systems, which power both single and 3-phase load. This can lead to unequal voltages on each phase leg. Voltage unbalance can cause deterioration of motor performance such as, loss of torque, overheating, decrease the winding insulation life and can cause motor starter contacts, located in the control panel, to permanently "weld" closed. Voltage unbalance can be caused by inadequate conductor sizing, delta transformer sizing, excessive single phase loads, poor grounding or intermittent high resistance faults (faults which do not generate high enough fault currents to trip an over current protection device, but will cause the distributed capacitance in an ungrounded 3-phase system to shift). This shift may cause destructive over-voltages to occur. If a 240 VAC 3-phase delta system must be used, it is strongly recommended that this voltage be transformed to a 208V grounded wye system. Any single phase loads should be evenly distributed as much as possible between the 3 phases. Consult your a licensed electrician if you have any questions.

***Wayne Dalton will not cover damage caused by failure of the motor, control panel or other electrical components due to the use of an inadequately grounded system.***

# 240V Motor Wiring

**FACTORY WIRED, these steps and illustration are for reference only!**

**NOTES:** **1.** Slide the three black motor wires through the LARGE suppression core (800358-0002).

**2.** Slide each black motor wire individually through one SMALL EMI suppression core (800358-0001).

**3.** Make wiring connections as shown.

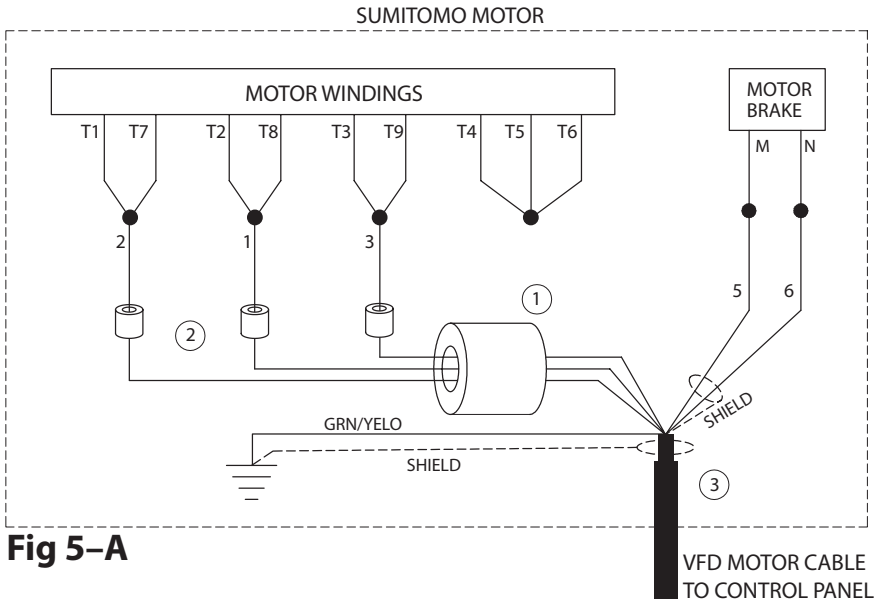



**Fig 5–A**

# 480V Motor Wiring

**FACTORY WIRED, these steps and illustration are for reference only!**

**NOTES:** **1.** Slide the three black motor wires through the LARGE suppression core (800358-0002).

**2.** Slide each black motor wire individually through one SMALL EMI suppression core (800358-0001).

**3.** Make wiring connections as show

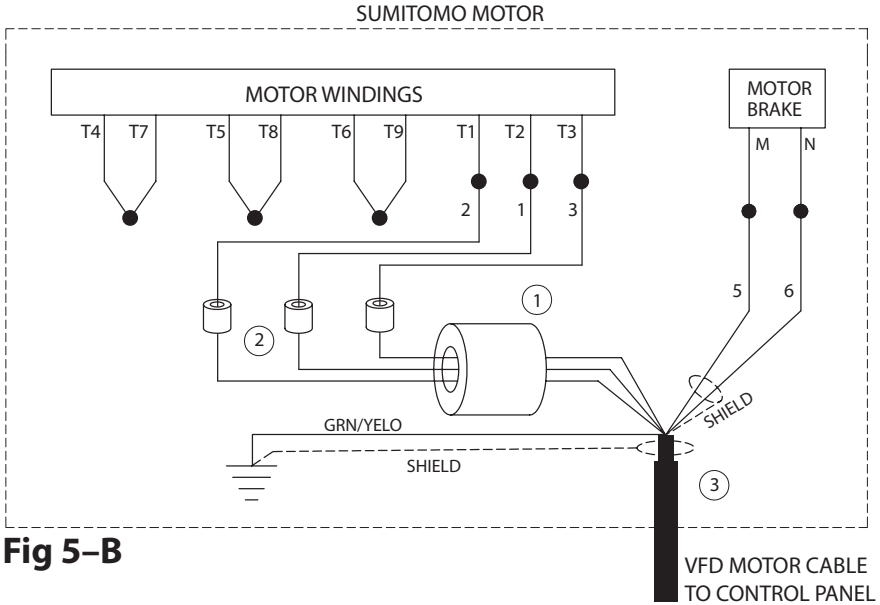



**Fig 5–B**

**1. MAIN COMPONENT OVERVIEW, Fig. 5–C AND 5–D**

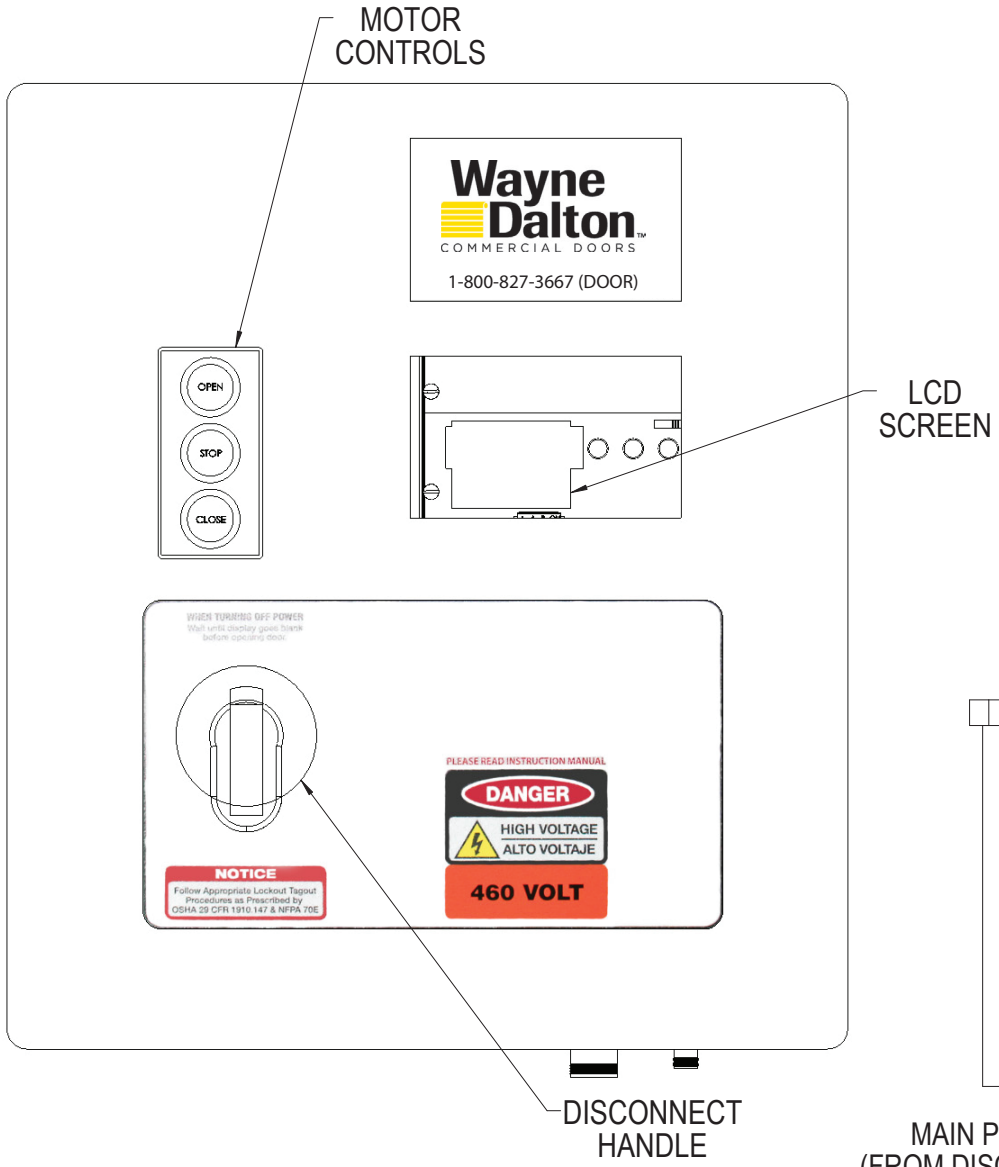



**Fig 5–C** **Control Panel Front Cover**

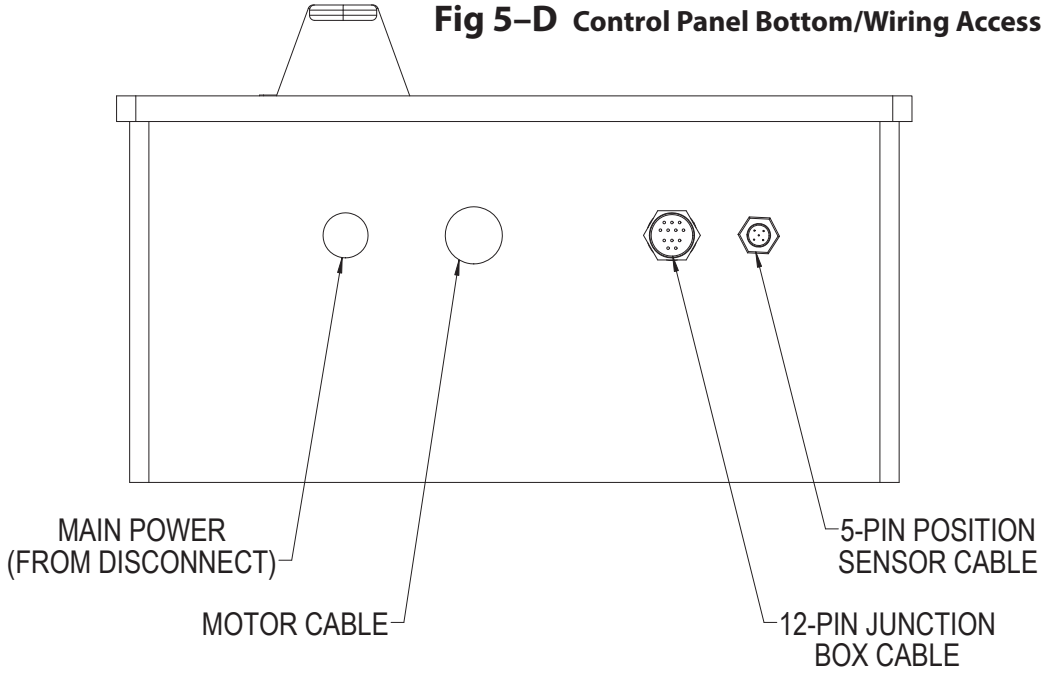



**Fig 5–D** **Control Panel Bottom/Wiring Access**

**Fig 5–G Control Panel Contents (See also FIG 8-H)**

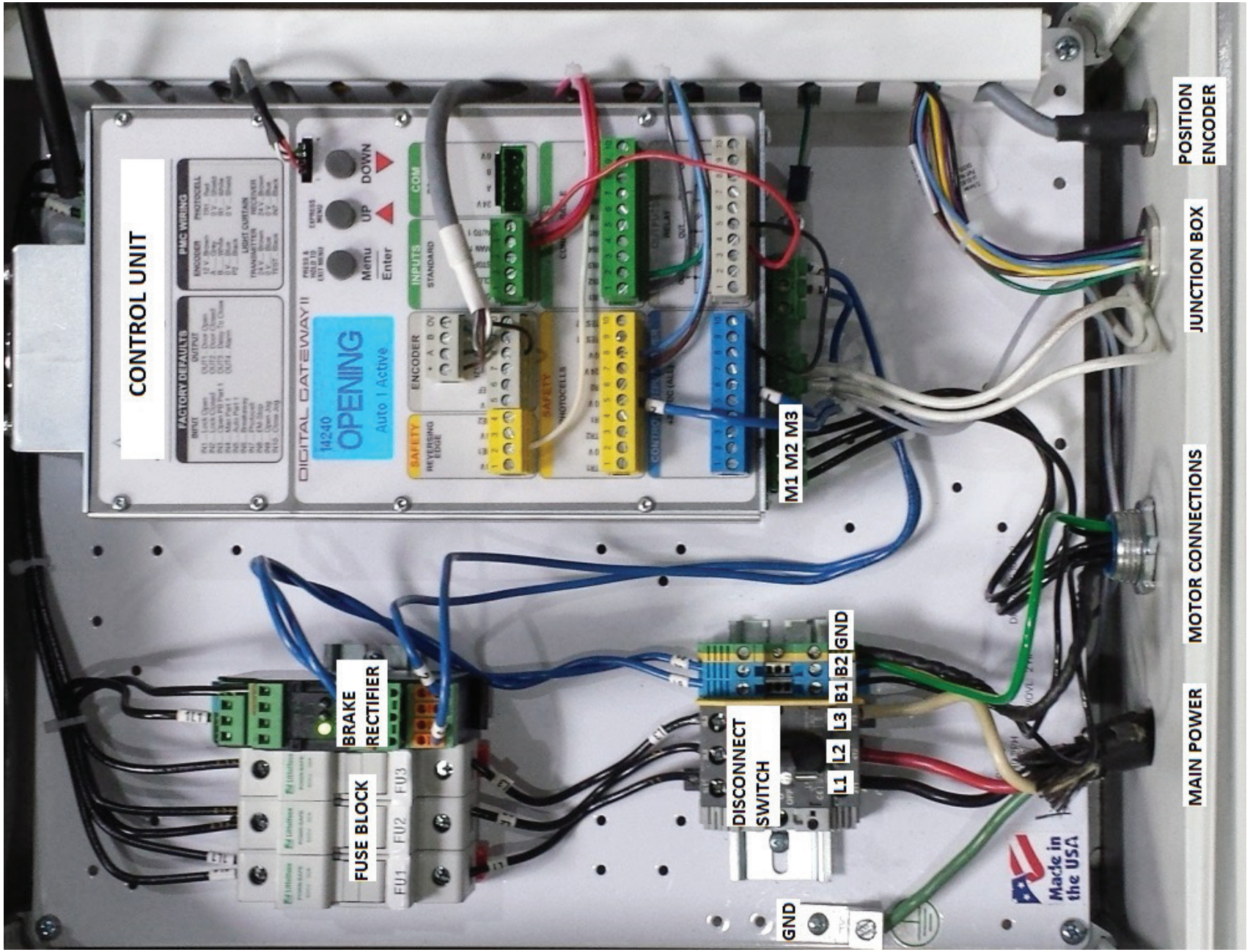


**Fig 5–H Control Panel Wiring Diagram (480V)**

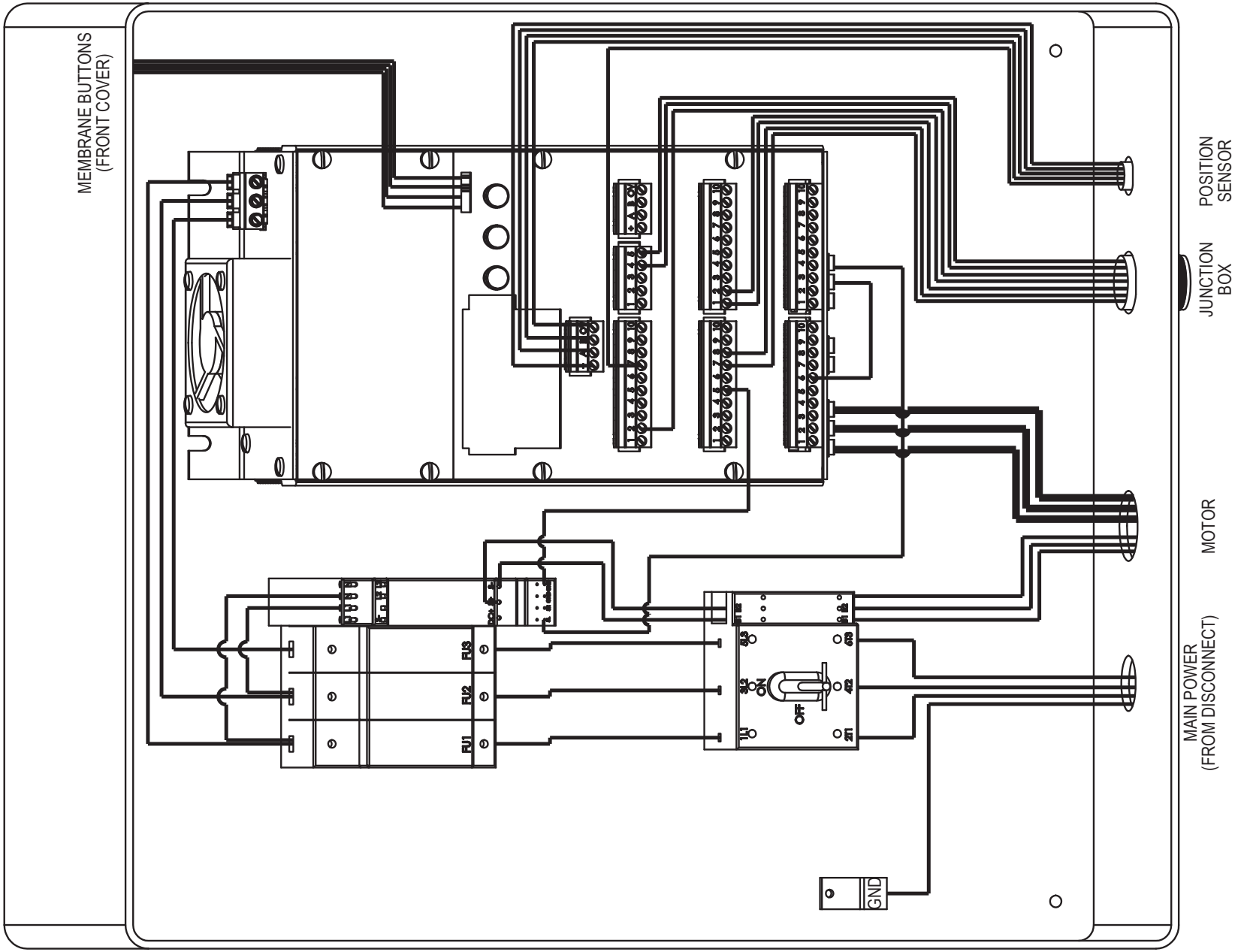
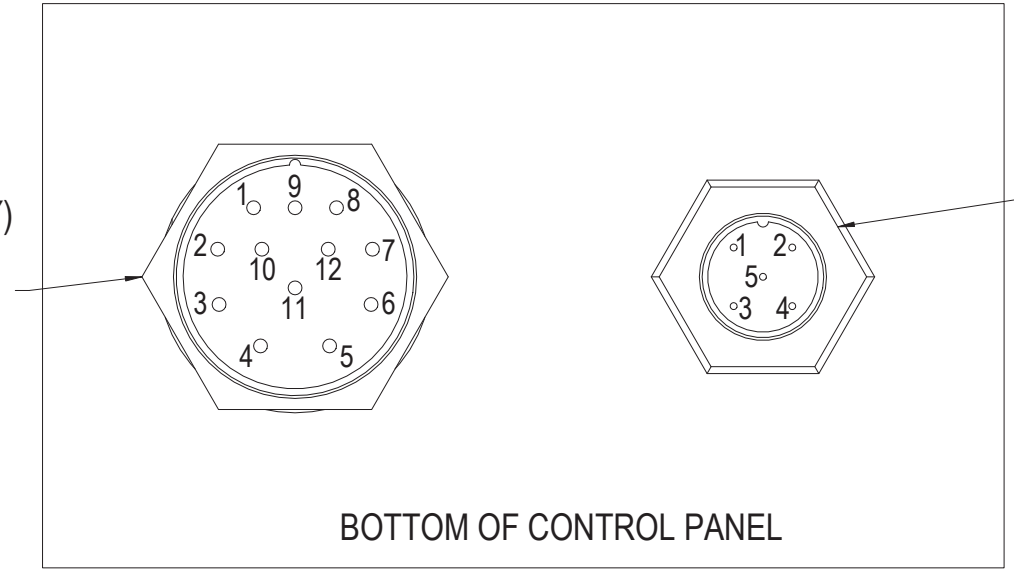
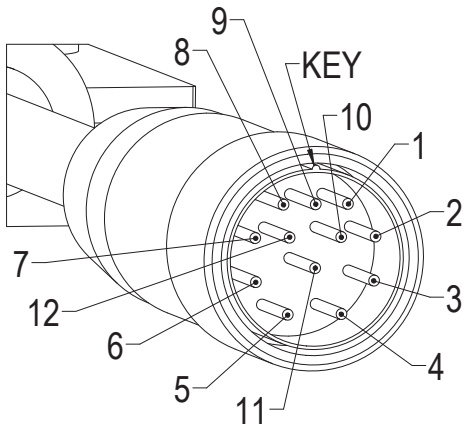


**Fig 5–I Cables to Control Panel**

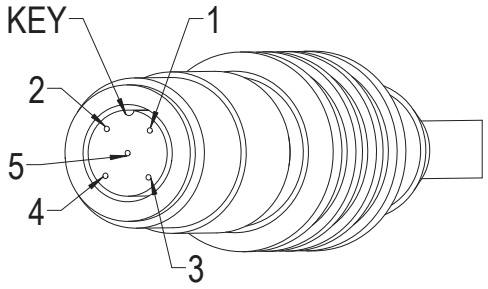
TO JUNCTION BOX
1. SENSING EDGE (WHITE)
2. INTERLOCK (GREEN)
3. NOT USED
4. PHOTOEYE RECEIVER (GRAY)
5. OPTION 1 (PINK)
6. OPTION 2 (RED)
7. NOT USED
8. NOT USED
9. NOT USED
10. COMMON (0V) (BLUE)
11. POWER (24V) (BROWN)
12. GND (GREEN/YELLOW)




TO POSITION SENSOR
1. 12V (BROWN)
2. A SIGNAL (WHITE)
3. B SIGNAL (BLUE)
4. OV (BLACK)
5. PULSE (GRAY)




FROM JUNCTION BOX

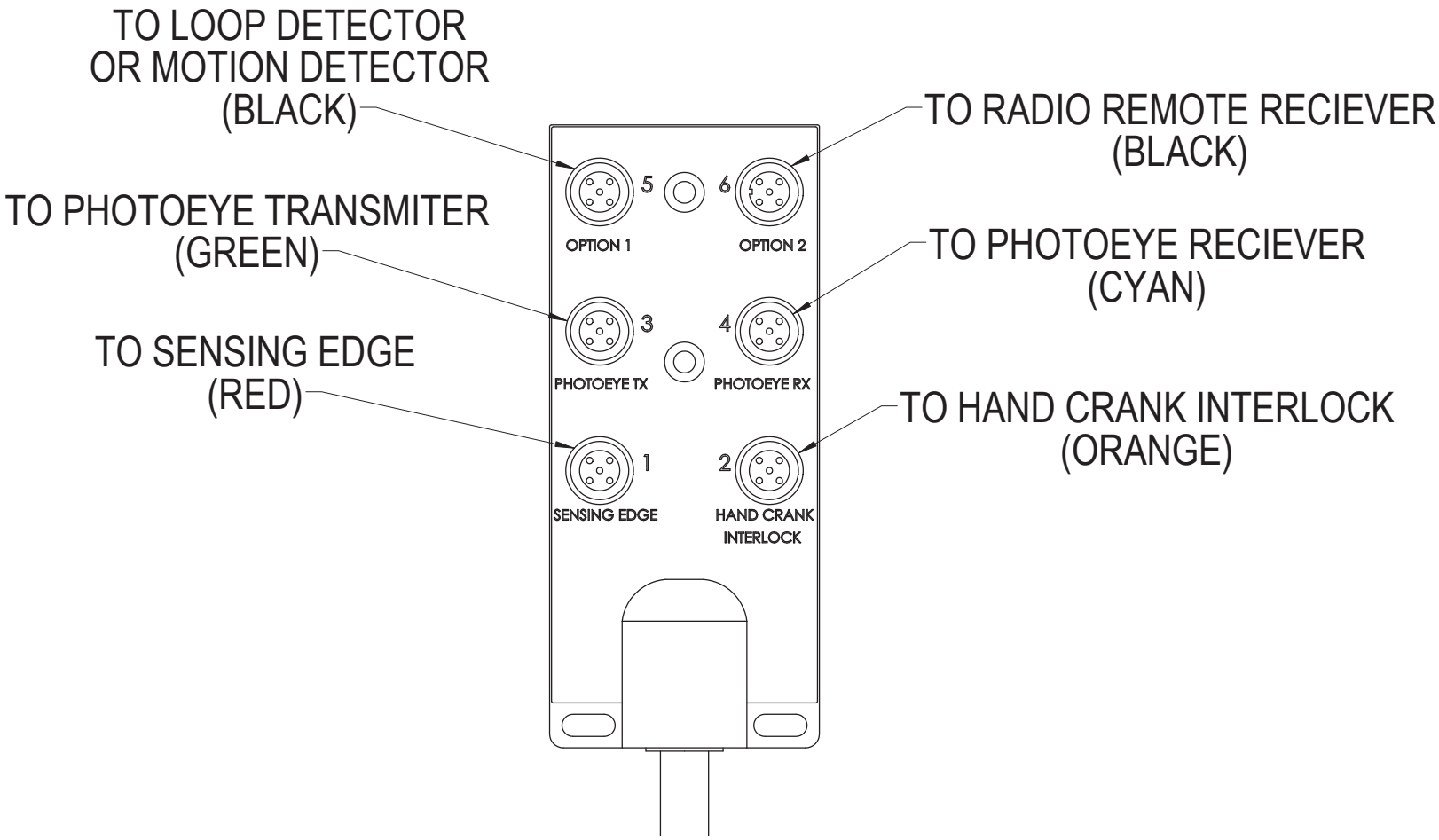



POSITION SENSOR CABLE

**Fig. 5–J JUNCTION BOX WIRING**
**Connections for most factory wired external control functions.**

**⚠ CAUTION**

Ensure all openings into junction box are weather tight to prevent leakage.



**2. Photoeye ADJUSTMENT**

Photoeye wiring connections were completed in a previous step (Mounting Electrical components on page 17).

- Final adjustment of the Photoeyes will be made **after power is supplied to the door system**.
  - – Verify the Photoeye transmitter LED is on, indicates power is on.
  - - Loosen the mounting screws on both Photoeyes and adjust position until the LED on the reciever is steadily on.
  - – Lock the mounting screws down, being sure not to move the Photoeyes out of alignment.

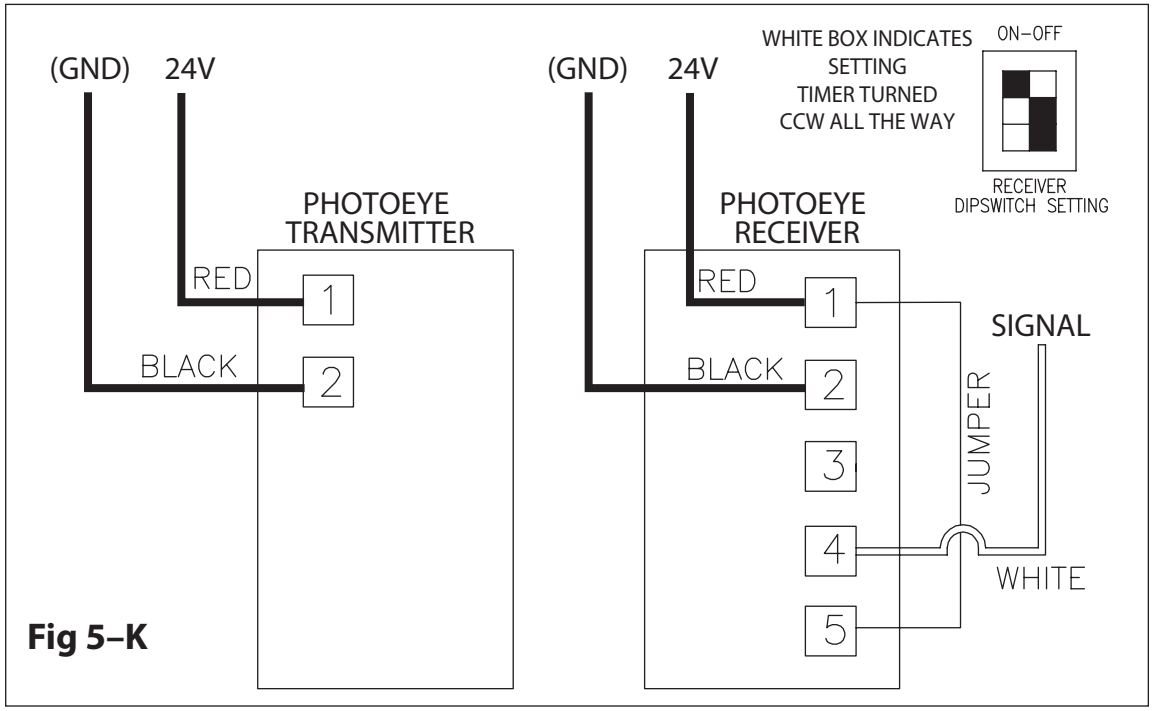



**Fig 5–K**

* Photoeye cables are wired at the factory with a M12 connector. wire colors are for reference. **NO FIELD WIRING REQUIRED.**

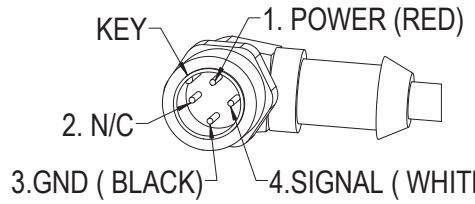



**Fig 5–L**

Photoeye Reciever Cable connects to Junction Box

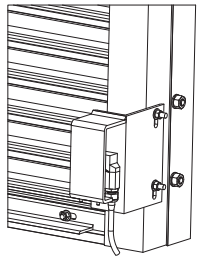


**Fig 5–M**

Photoeyes are attached to their protective shields at the factory and must be mounted to the guides using the hardware provided.

### 4. POSITION SENSOR WIRING CONNECTIONS AND SETTINGS

- The Position Sensor and bracket were mounted to the face of the Motor/Gearbox in **Section 4, Step 13**. (See page 15)

**A)** Attach the chain to the Motor and Position Sensor sprockets. Adjustment of the supplied chain may be necessary. **FIG-5Oa**
**B)** Attach one end of the M12 position sensor cable to the Position Sensor.
**C)** Attach the other end of the M12 position sensor cable to the Control Panel.

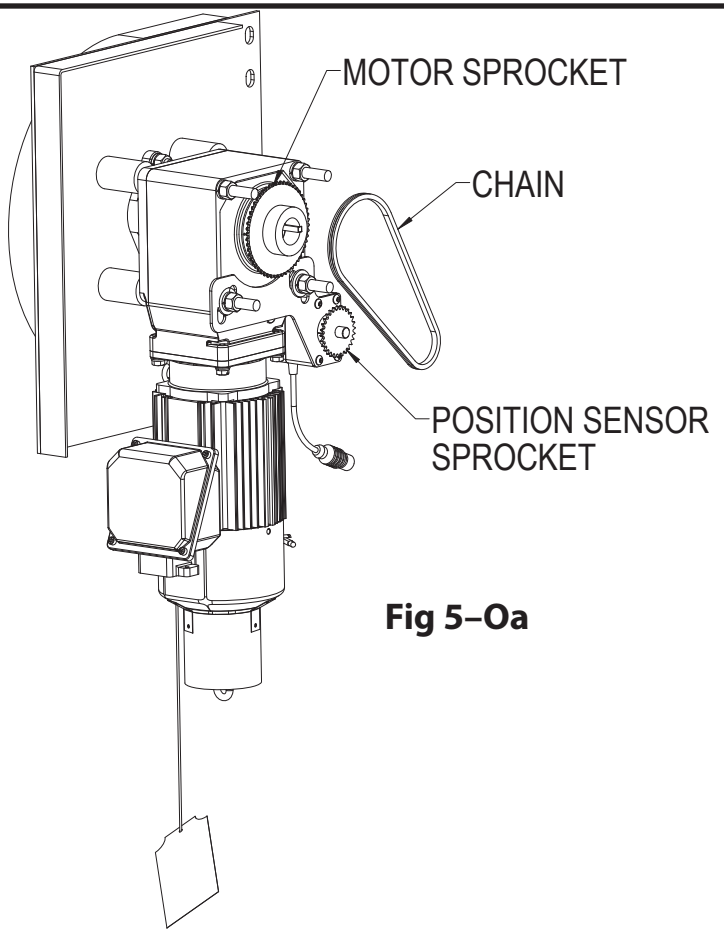



**Fig 5–Oa**

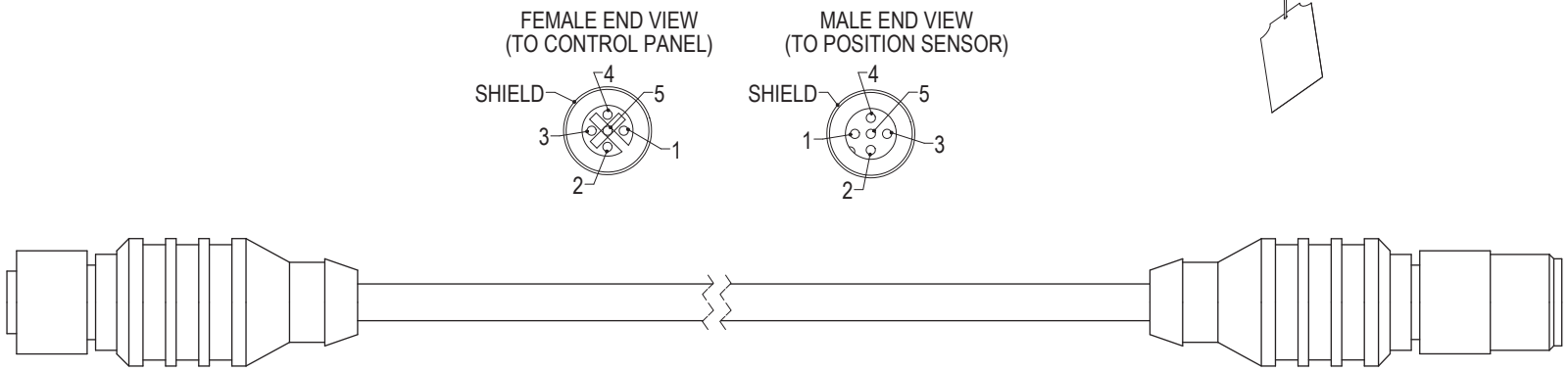



**Fig 5–Ob Position sensor Cable**

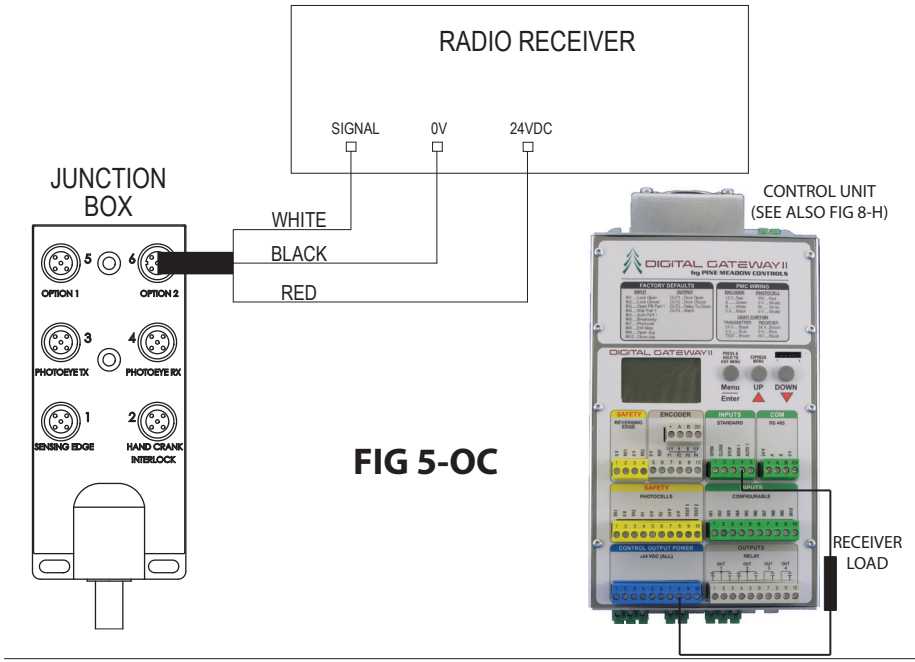



**FIG 5-OC**

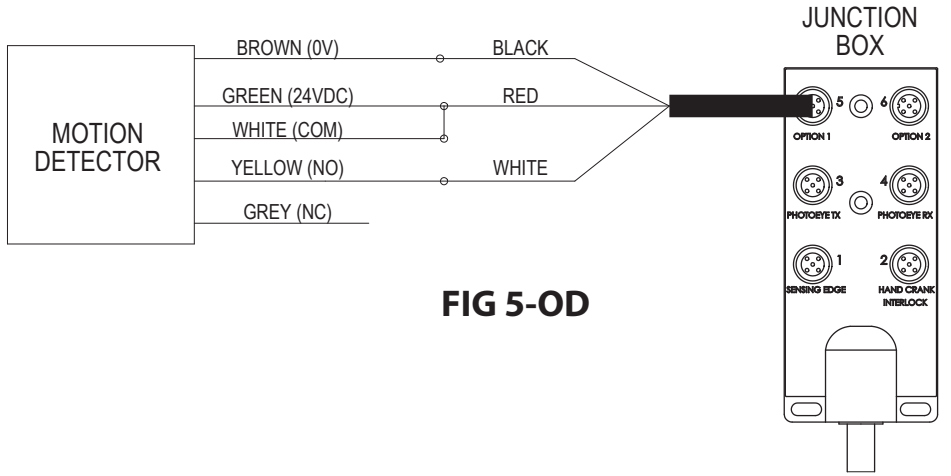



**FIG 5-OD**

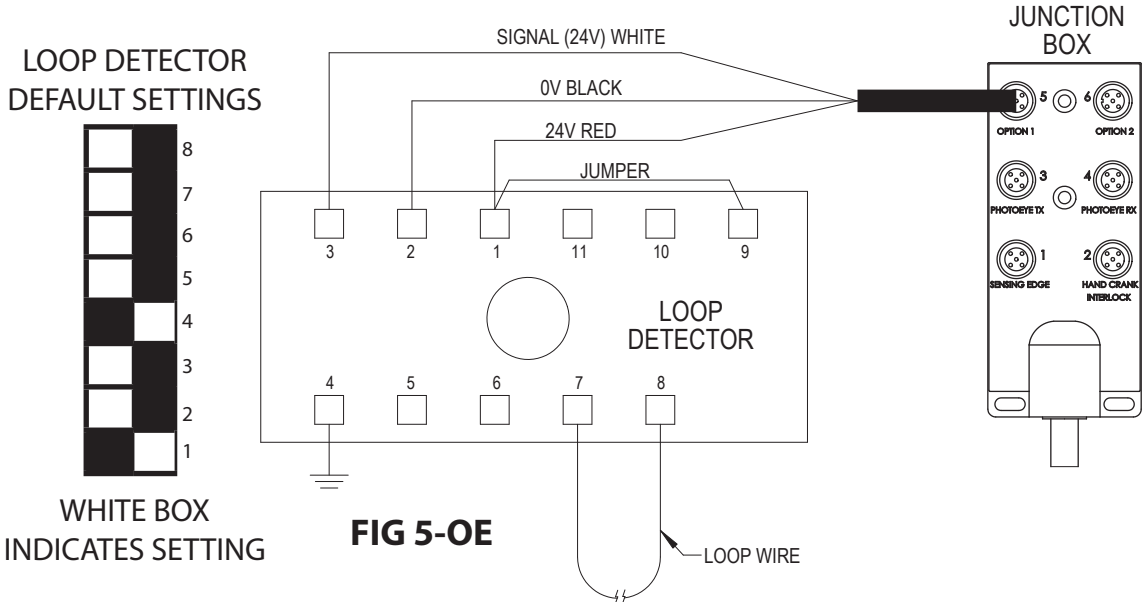



**FIG 5-OE**

**5. Options wiring and settings**

-Wire the supplied cables to the following options as shown in **FIG 5-OC, FIG 5-OD, FIG 5-OE**.

A. For the radio receiver, wire the supplied receiver load into the control unit from MAN1 to 24VDC (blue terminal).

**⚠ CAUTION**

Door will open/close once connected.

1. Access the menu and navigate to system config-> Inputs-> Man1-> Logic.
2. Select NC parameter and exit the menu.

B. The motion detector and loop detector can be operational once wired to the junction box. They are wired for the default configuration.

1. To update the auto close timer, access the express menu->Auto1 Timer.

**REFERENCE: CONVENTIONAL WIRE ROUTING**

**NOTE:** Components/component locations are shown here for reference only. Some parts not shown for clarity.

Your unit installation and wire routing may be different.

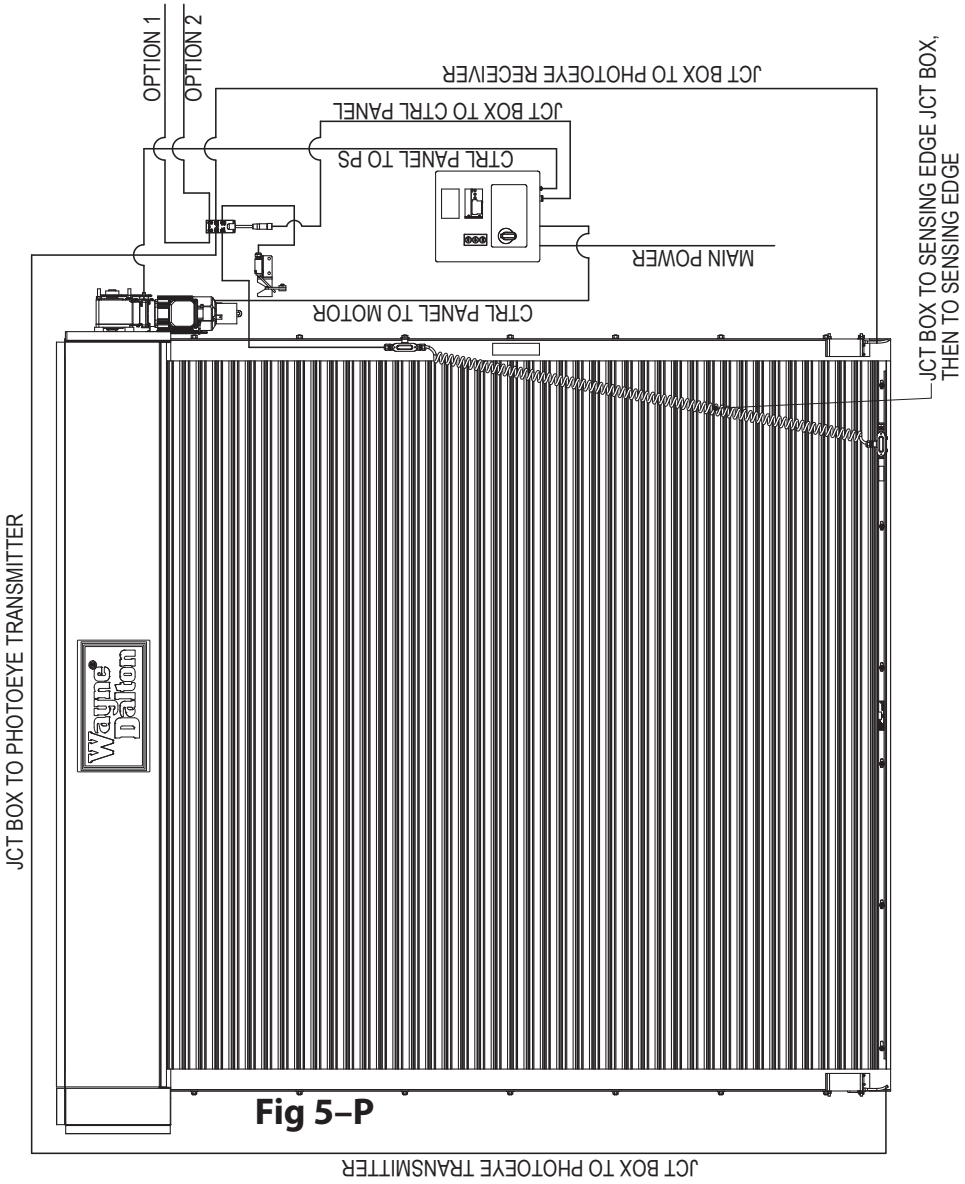



**Fig 5–P**

# *Wiring Check List*

**After completing the instructions contained in this section, check:**

**⚠ WARNING**

Making the checks outlined below will help to ensure that the unit is wired properly.

**CHECK**

– Double check all connections are tight.

– Check all cables are secured (not hanging loose where they might become interference).

– Ensure there are no loose tools or materials inside the Control Panel or Junction Box.

# Section 6

# *Door System*

## *INITIAL STARTUP PROCEDURE*

### 1. APPLY POWER (LINE VOLTAGE)

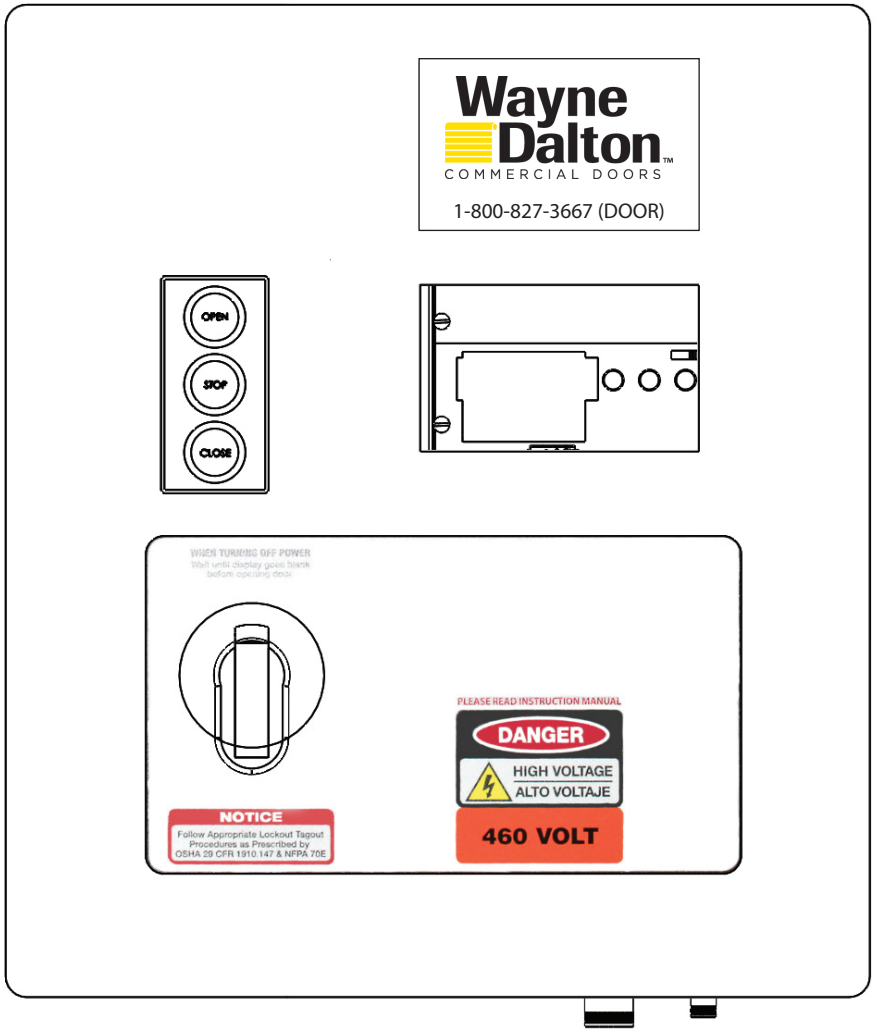
Turn the disconnect handle Clockwise to the ON position in order to apply power to the Control Panel. A blue splash screen will pop up displaying the default profile, and controller data (consists of serial number, output capacity, software version, etc). Verify the system motor rating, and power ratings correspond with each other.

NOTE* The system information can also be accessed in the SYSTEM STATUS > OVERVIEW menu. (see page 35-37)

### 2. VERIFY PHOTOEYE ALIGNMENT

**A.** Verify the RED LED is steady ON, on the Photoeye Transmitter. If the RED LED is **NOT** ON refer to Troubleshooting, Section 8

**B.** Verify the RED LED is steady ON, on the Photoeye Receiver. If the RED LED is **NOT** ON, loosen the mounting screws and adjust the Photoeye positions until the RED LED is steady ON. Tighten the mounting screws. If the RED LED does **NOT** come ON review the Photoeye installation steps on page 17. Refer also to Troubleshooting, Section 8.




## ⚠ WARNING

All Entrapment Protection Devices are **OFF** in Emergency Jog and the Limits are **NOT SET**. Devices **OFF** while in Emergency Jog include: Edge Contact, Photoeye, Wall push buttons, Radio Control, Limit Sensors, Loop Detector, or any motion sensor used as either an actuator or an Entrapment Protection Device. Only the Interlock remains active.
Emergency Jog is the manual control for momentary operation of door via ARROW buttons on the membrane keypad or on the control unit.
**USE CAUTION! WHILE SETTING UP THE DOOR IN THIS MODE. Do NOT use Emergency Jog for general door operation.**

# *INITIAL STARTUP PROCEDURE*

**3. Initial/Limit Setup** The first time the controller is powered on, you must first set the limits. The LED screen will flash with the error E17, and you must reset the limits. This will also occur whenever the position sensor is disconnected from the controller. The position sensor, photoeyes, sensing edge, and interlock switch must be connected before the limits can be set. If, for any reason, the limits cannot be set, please refer to troubleshooting section 8.

A. To enter the Menu, press and hold the OPEN, STOP, CLOSE membrane buttons for 3 seconds. A count down timer on the top left corner of the LED screen will display the remaining time left to hold. Refer to **Fig 6-A** for the complete menu structure.

B. Holding the Stop button for 1 second will go back up a level in the Menu. Continuing to hold the STOP button will continue to go back up the menu structure until the main screen.

C. Once in the main screen, a 25 second countdown timer will show on the upper left hand corner. This countdown timer displays how long until the OPEN/STOP/CLOSE buttons will no longer give access to the MENU. Once inside the menu, use the **OPEN button to scroll up, STOP button to enter,** and **CLOSE to scroll down.** Pressing OPEN/STOP/CLOSE immediatly exits the counter.

Note: Instead of using the front panel buttons one can access the menu from the control unit using menu/enter, the ▲, and ▼ buttons.

1. Enter the Menus

2. Scroll down until you reach the LIMIT SETUP and hit enter.

3. Scroll down and enter into Quick Setup. A code request screen will appear. Enter the 3 digit passcode to gain access by scrolling up or down. Your passcode is located on a seperate addendum.

NOTE: **Do not** display or freely give out the passcode.

4. Follow the prompts in order to set the open and close limits on the door. During this time, use the OPEN, CLOSE buttons to move the door. Again, the STOP button will be used as the ENTER function. If no error has occurred, it will then display QUICK SETUP DONE, otherwise if failed; QUICK SETUP ABORTED and it must be redone. Refer to Trouble shooting section 8 if required.

NOTE: When setting the position, the position sensor count will be displayed. Verify the encoder count increases when the door is moving in the up direction, and does not roll over to the negative position.

**4. Verification** Test each sensor to make sure the controller recognizes the fault.

A. Photoeyes -Obstruct the beam with a sold object. Photoeye should reverse door direction.

B. Sensing Edge -Place a solid object, taller than 12", on the floor and close the door. Sensing edge should reverse door direction on contact with object.

C. Interlock Switch -This is a constant activation sensor, release the hand crank from the switch, the door should stop and a fault display

NOTE: all faults and sensor activations are logged into the Fault Log. Access this through the menu SYSTEM STATUS > FAULT LOG in the Controller Menu. To clear faults hold the STOP button for 1 second once the fault has been fixed.

# *MENUS*

**1. Express Menu** The Express Menu is accessed by scrolling up, when at the idle screen or after exiting the menus. The express menu contains display options, timers, settings reset, and the emergency JOG. The timer functions in the Express Menu are shortcuts to timers in the system configuration menu without the need of a passcode.

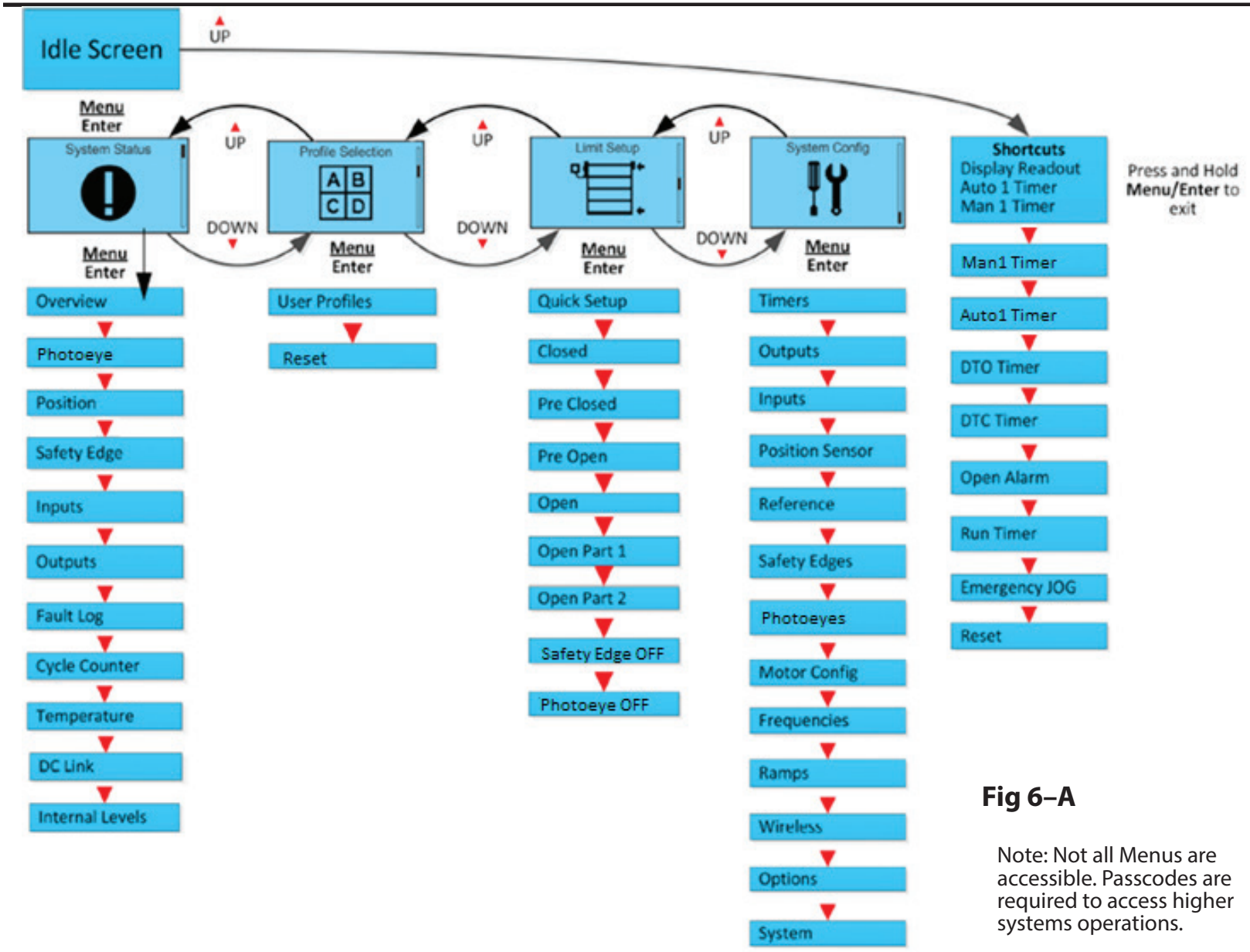


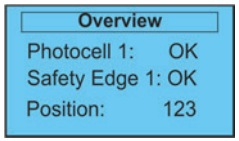

**Fig 6–A**

Note: Not all Menus are accessible. Passcodes are required to access higher systems operations.

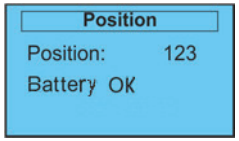
## 2. System Status Menu

The System Status menu is read-only and provides parameter status displays for use in setup and troubleshooting. The options of the System Status menu are shown and described below. The controler is fully operational within this menu, allowing real-time parameter updates. To use the System Status menu:

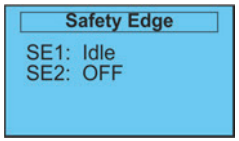
A. Enter the System Status menu
B. Scroll down and highlight a menu option.
C. Enter to view the highlighted option.
D. Press and hold STOP or ENTER when finished to return to the System Status menu.
E. Repeat to view other parameters if desired.



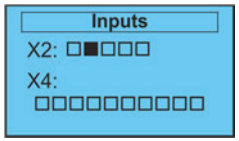

Overview displays status and current position of Photocell and Safety Edge (reversing edge)
1. To view status and current position of photocell
2. Safety Edge 2, scroll up.



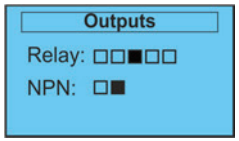

Position shows the internal door position count. The battery level and status are shown




Safety edge shows the status of the safety edges (SE).

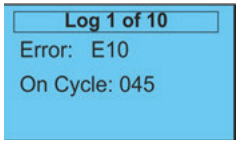



Inputs provides an overview of the controller inputs. Box is marked if the corresponding controller input is active.



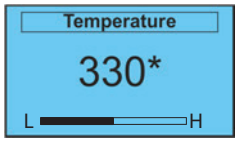

Outputs provides an overview of the controller outputs. Box is marked if the corresponding controller output is active.

# MENUS *(continued)*

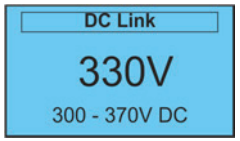



Fault log displays error code and door operation cycle for the last 10 faults. Scroll up or down to navigate through the fault log.

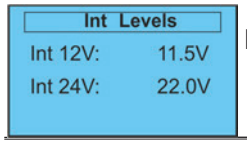

Cycle counter shows the number of operating cycles the door has completed (open/close = 1 cycle). Note: This is already shown by default at the top left corner in the main screen.




Temperature shows the internal temperature of the DGII Controller. This is a raw analog value and does not represent degrees centigrade or Fahrenheit. A display on the bottom graphically approximates either a Low or High temperature




DC Link shows the internal DC Link voltage along with the acceptable range.




INT Levels shows the control's actual internal supply voltages.

### 3. Profile Selection Menu

The profile selection is done at the factory by default. Profiles can be selected based on the door the controller is operating. The profile is protected by a passcode, and can only be changed by Overhead service representative. All settings are lost and reverted back to defaults when the profile is changed. Profiles can be accessed through the main menu under Profile Selection.

### 4. Limit Setup Menu

Individual limits can be updated manually, however; the best option is to use the quick setup process as discussed earlier. The door will not be operational when settings limits. Limit settings are as described:

**⚠ WARNING**

All Entrapment Protection Devices are **OFF** when setting limits. Devices **OFF** while setting Limits include: Edge Contact, Photoeye, Wall push buttons, Radio Control, Limit Sensors, Loop Detector, or any motion sensor used as either an actuator or an Entrapment Protection Device. Only the Interlock remains active.**USE CAUTION! Do NOT use for general door operation when setting limits.**

To configure the Limit Settings manually after using Quick Setup, select each individual position listed below from the Limit Setup menu, then move the door to the desired position. Store the position by pressing STOP or ENTER when finished. The display shows Stored and returns to the previous menu.

- Closed: Door fully closed.
- Pre Closed: Position where door changes to pre-closing speed during close.
- Pre Open: Position where door changes to pre-open speed during open.
- Open: Door fully closed.
- Open Part 1: Partially open position 1. Door opens to this position when a part 1 open input is active. (default: 75% of door open limit)
- Open Part 2: Partially open position 2. Door opens to this position when a part 2 open input is active. (default: 50% of door open limit)
- Rev. Edge OFF: Sets door position where safety edge check is turned off: the limit where the reversing safety edge should be ignored.
- Photocell Off: Sets door position where photocell should be ignored.

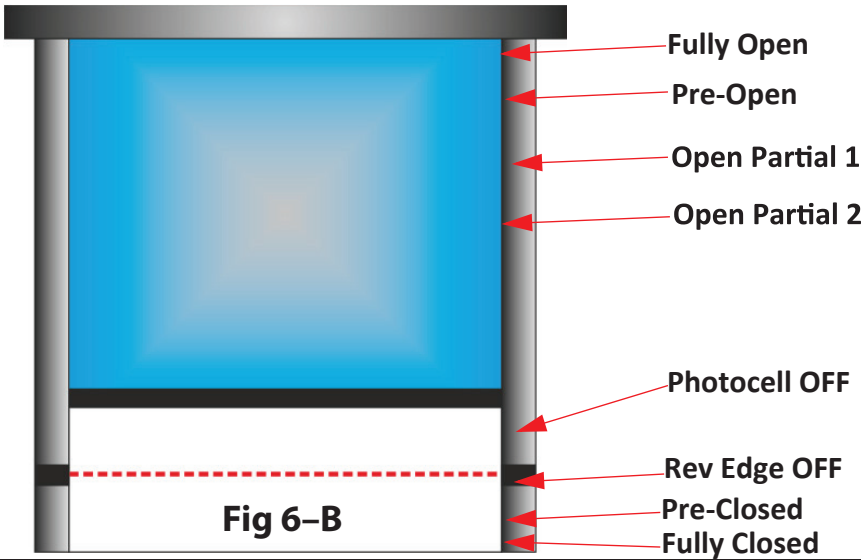



Fig 6–B

## 5. System Configuration Menu

This menu contains all editable parameters on the door system. A passcode is required in order to change the settings. The door will not operate when inside the menu.

A. Timers
   1. Contains all the same timers in the Express Menu.
   2. Setting the timer to 0 disables the timer.

B. Outputs - Configurable relay activation based on custom door status/events. Table on page 40 lists all available status/events.

C. Inputs - Inputs with configurable actuator functions. Table on page 39 lists all functions available with each input.

D. Position sensor -Do not update/menu is not used

E. Reference -Do not update/menu is not used.

F. Safety Edges -1 or 2 safety edge select as well as safety edge Type.

G. Photoeyes -Do not update/menu is not used

H. Motor Configuration - Do not update / Engineering use only.

I. Frequencies - Do not update / Tech Services use only.

J. Ramps - Do not update / Tech Services use only.

K. DG-XNET -Do not update / Menu not used.

L. Options -Do not update / Menu not used.

M. System -Do not update / Engineering use only.

## 6. Configuration -Inputs/Outputs

A. Inputs. There are 3 parameters that can be set. Refer to **FIG 6-C** (close up view of Input relays)
   1. Function -A list of functions can be selected to determine how the input should operate the door.
   2. Name -a name can be applied to the specific function
   3. Logic -The logic for activation of the door can be chosen. Either Normally Open (0VDC ->24VDC) or Normally Closed (24VDC ->0VDC).

B. Outputs. Refer to **FIG 6-D** (close up view of Output relays)
   1 Function -list of functions can be selected to activate the output relay
   2. The output is dependent on the input wired into the relay pins 2, 5, 7, 9.
   3. Output relays 1 & 2 consist of two relay outputs, a NO and NC. Output Relays 3 &4 contain only NO relay activation.

| INPUT SIGNAL | ACTIVATION DESCRIPTION` |
|---|---|
| Manual | Momentary activation opens door unless the door is already at an open position. In this case, the door will close.<br>1) If the Manual timer is set to a value greater than zero, the controller delays closing of the door until the timer expires. |
| Open | Opens the door to fully open position when activated. |
| Auto 1 | Momentary activation opens door to the fully open position limit. Upon deactivation the controller delays the door for the duration of the Auto timer. If reacivated during this time delay, the timer will be reset and will begin to decrement when the input is again deactivated. Upon expiration of the timer, the controller closes the door to fully closed position. If timer is not used, the door will stay in the open position when activated. |
| Stop | Momentary activation stops the motion of the door.This input uses the Stop Deceleration Ramp set under the System Config menu. **This input is also used to clear certain error conditions.** |
| Close | Closes the door to fully open position when activated |
| Emergency Stop | Activation immediately halts the door in motion. **This input uses the Emergency Deceleration Ramp set under the System Config menu.** |
| Safety Edge | Activation during a closing cycle stops the door and then reverses the door motion back to the fully open position limit. An "E10 Safety Edge Activated" error occurs. |
| Photoeye | Activation during a closing cycle stops the door and then reverses the door motion back to the fully open position limit. |
| Lock Open | Activation causes the controller to hold the door at the fully open position limit. The input must be continously activated to maintain the locked open state. Deactivating this input unlocks the door and allows normal operation. |
| Lock Close | Activation causes the controller to hold the door at the fully closed position limit. The input must be continously activated to maintain the locked open state. Deactivating this input unlocks the door and allows normal operation. |
| Open Jog | Activation of this input moves the door in the direction of the fully open limit at Jog speed. Deactivating this input stops the door in motion. Activation during closing does not open or stop the door. |
| Close Jog | Activation of this input moves the door in the direction of the fully closed limit at Jog speed. Deactivating this input stops the door in motion. Activation during opening does not close or stop the door. |
| Breakaway | Activation halts door motion. |
| Open Position 1 | Activation opens the door to the partial open 1 position limit. If activated during closing, door will reverse to 1 position limit. |
| Open Position 2 | Activation opens the door to the partial open 2 position limit. If activated during closing, door will reverse to 2 position limit. |
| Open Part 1 Auto | Activation opens the door to partial open 1 position limit. The controller then delays the door for the duration of the Auto Timer. Upon expiration of the timer, the door closes fully. |
| Open Part 2 Auto | Activation opens the door to partial open 2 position limit. The controller then delays the door for the duration of the Auto Timer. Upon expiration of the timer, the door closes fully. |
| Flip Flop | Activation reverses the door operation. If door is closed, activation opens the door and vise versa. When door is closing and activated, the door reverses and begins opening and vise versa. |
| Man Part 1 | Activation opens the door to the partial open 1 position limit, if not already at this position. If the door is already at this position, the door closes. |
| Man Part 2 | Activation opens the door to the partial open 2 position limit, if not already at this position. If the door is already at this position, the door closes. |

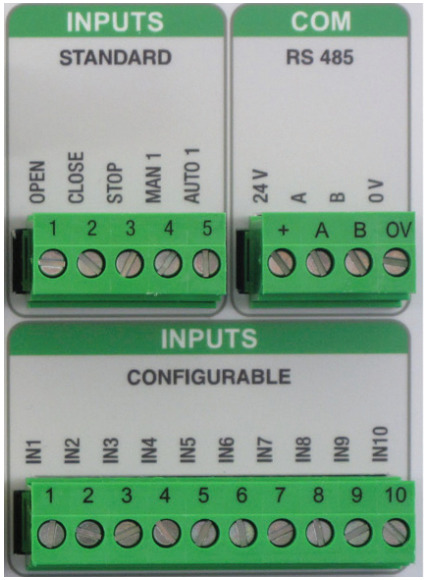



**Fig 6–C**

| INPUT SIGNAL | ACTIVATION DESCRIPTION` |
|---|---|
| Door Moving | Output is active when the door is in motion. |
| Door Not Moving | Output is active when the door is not in motion. |
| Door Open | Output is active when the door is at the fully open position. |
| Door Closed | Output is active when the door is at the fully closed position. |
| Door Not Closed | Output is active when the door is above the fully closed position. |
| Door Open Partial | Output is active when the door is at open part 1 position. |
| Door Opening | Output is active when the door is moving in the open direction. |
| Door Closing | Output is active when the door is moving in the close direction. |
| Delay to Close | Output is active when the Delay To Close timer is greater than zero and the door is commanded to close.The output remains active for the duration of the Delay To Close timer. |
| Delay to Open | Output is active when the Delay To Open timer is greater than zero and the door is commanded to open. The Open button must remain active until the Delay To Open timer has expired, the output will be active during this time. Upon expiration of the timer, the door opens and the output is deactivated. |
| Auto Close Active | Output is active for the duration of the Auto or Man timer during an auto close sequence. |
| System Error | Output is active when DGII is in any error condition. |
| Pre Warning Active | Output is active for the duration of the Auto Timer **and** during any close sequence. |
| Open Alarm Active | Output is active when Open Alarm Timer is greater then zero. |

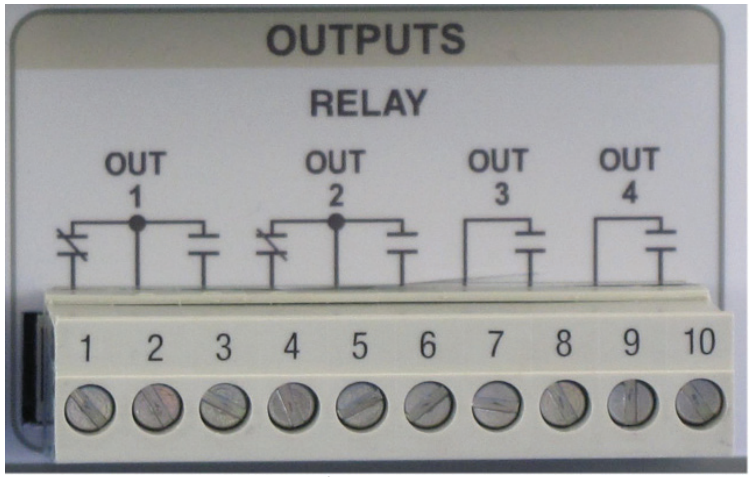



**Fig 6–D**

# INFORMATION MENU

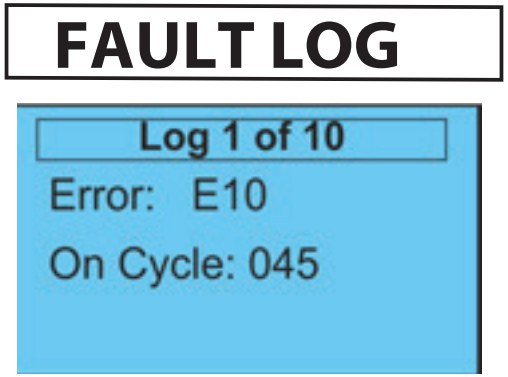
**1.** How to use the keypad to retrieve operation events, fault/shutdown messages, and system status

**(Also see Section 7—Troubleshooting)**

- **With the unit idle**
  - Enter the System Status menu.
  - Scroll through the list of choices until you reach the Fault Log menu and enter.
  - Scroll through the list until you reach the information you're looking for.
  - When finished exit the menus and return to the main screen.

**NOTE:** The items in the Fault Log are listed in reverse chronological order with number 1 being the most recent and the highest number being the oldest.

- If NO keys are pressed for 120 seconds, display will exit back to the main menu.
- Motion can occur and panel responds normally to inputs while in the System Status Menus.




# *Set Up Check List*

**⚠ CAUTION**

Check ALL items below to ensure that the Control Panel is installed and operating properly.

**CHECK**

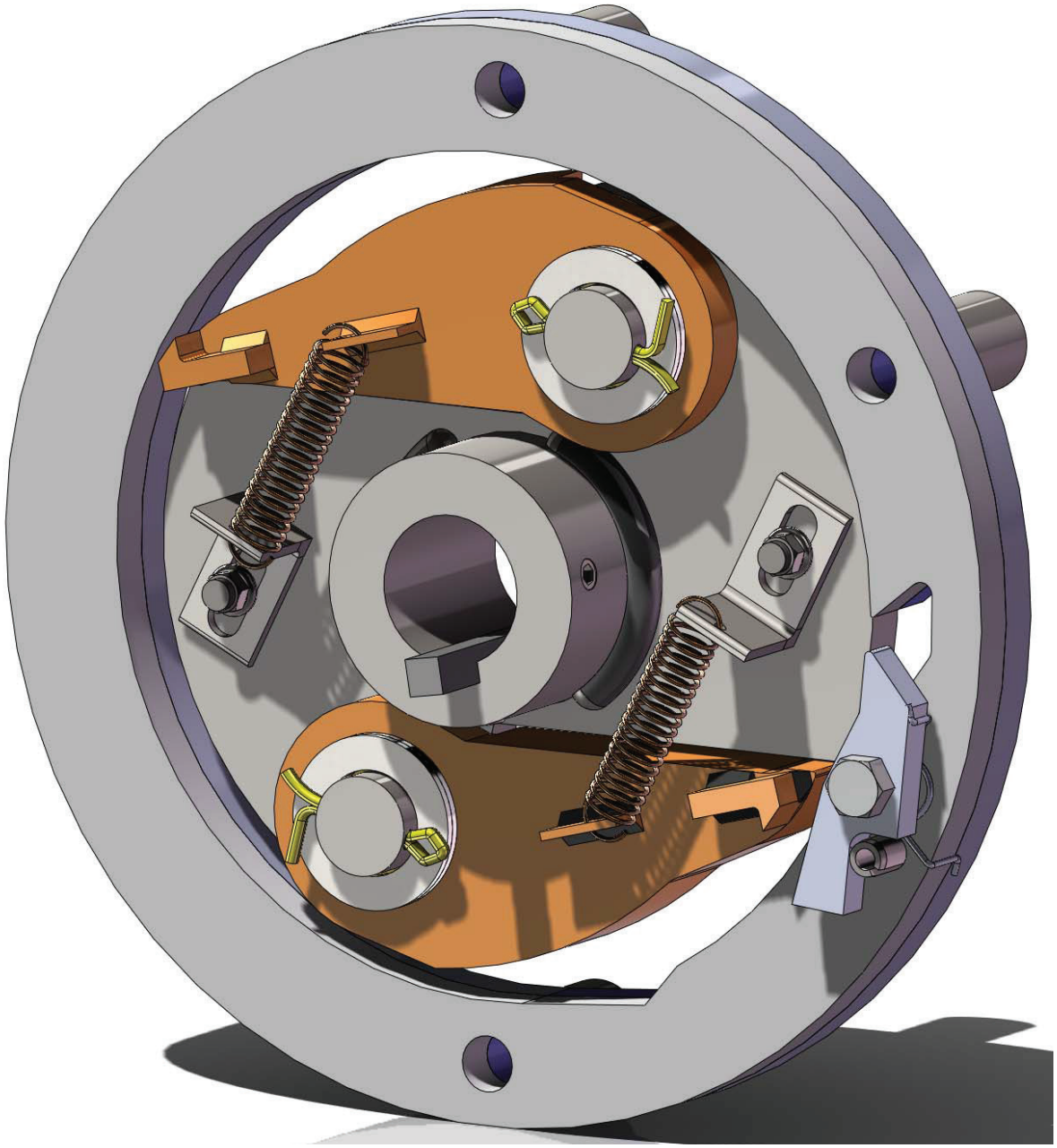
- The door operates using all installed control devices.
- The door runs to its full open and full closed positions.
- The Entrapment Protection Device(s) will reverse a closing door when actuated.
- The proper Actuator selections are made to activate timers.
- The Hand Crank interlock switch prevents motor/door movement when the hand crank is lifted OFF its support bracket.

If the panel is in a location where public access is possible, install a means to limit access to the inside of the panel.

# Section 7

## *Troubleshooting*

### *DROP STOP DEVICE*



# *DROP STOP DEVICE ACTIVATION INDICATIONS*

The Drop Stop Device is intended for emergency use ONLY and the operational life on this unit has a limited number of activations.

## ⚠ WARNING

The Drop Stop Device is limited to three (3) activations before requiring replacement. Record **ANY** Drop Stop Device activation.
Drop Stop Device **MUST** be reset/replaced by a trained door technician using proper tools and instructions when an activation has occurred. Contact a service representative.

| TROUBLE | POTENTIAL CAUSE | NOTES / CORRECTIVE ACTION |
|---|---|---|
| STOP key has NOT been pressed and door is stopped inside open limits.<br>AND<br>Error messages appear on Control Panel display OR Control Panel display is blank. | Drop Stop Device activation | Test door to confirm Drop Stop Device activation.<br><br>Test 1<br>A. Note and clear error messages from Control Panel. (Do NOT press OPEN key.)<br>B. Press CLOSE key.<br>If door does NOT close, Drop Stop Device has been activated. Contact service representative.<br>If door closes, Drop Stop Device has NOT been activated. Refer to error messages originally displayed. Contact a service representative to take corrective action.<br>C. Press OPEN key.<br>Test 2<br>A. Note and clear error messages from Control Panel. (Do NOT press OPEN key.)<br>B. Disconnect ALL power to Control Panel.<br>C. Use Hand Crank Operation instructions, page 12, to LOWER door. (Do NOT attempt to RAISE or OPEN door.)<br>If door does NOT lower, Drop Stop Device has been activated. Contact service representative.<br>If door closes, Drop Stop Device has NOT been activated. Refer to error messages originally displayed. Contact a service representative to take corrective action.<br>D. Press OPEN key. |

## DROP STOP DEVICE ACTIVATION LIST

| DATE ACTIVATED | ACTIVATION CAUSE | CORRECTIVE ACTION | SERVICE PERFORMED |
|---|---|---|---|
| | | | ☐ YES<br>☐ NO |
| | | | ☐ YES<br>☐ NO |
| | | | ☐ YES<br>☐ NO |
| | | | ☐ YES<br>☐ NO |
| | | | ☐ YES<br>☐ NO |

# *DSD (Drop Stop Device) Function*

## ⚠ WARNING

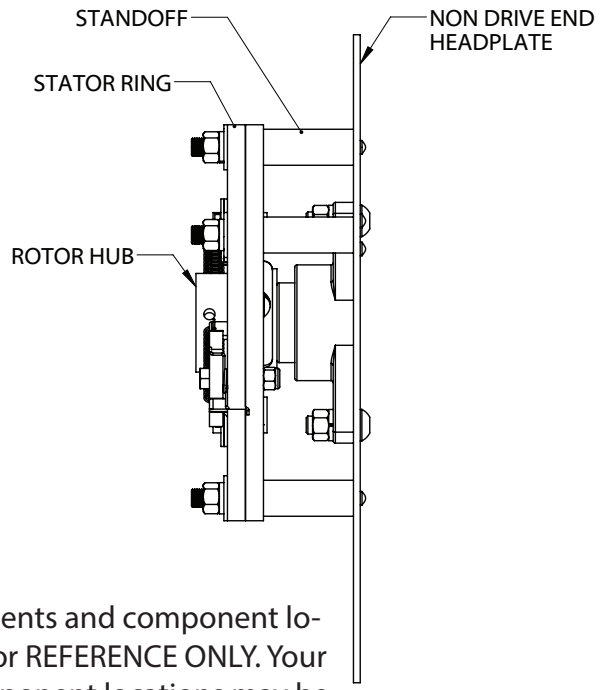
The Drop Stop Device (DSD) must be adjusted when making motor operator connections. Failure to adjust properly may result in serious injury or death. The door installer must be present with the Drop Stop Device (DSD) Installation Manual in possession when the door is first operated electrically. Carefully perform all tests set forth below and make any adjustments..

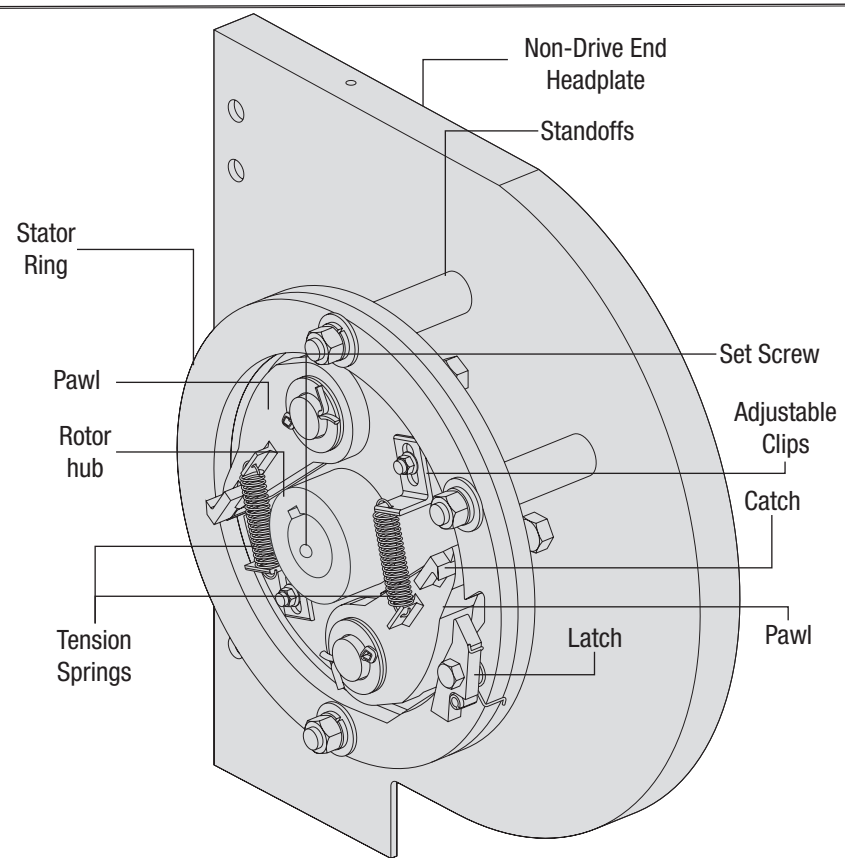
**Drop Stop Device (DSD) Function**

The function of the Drop Stop Device (DSD) is to minimize the risk of the door closing without control of the motor. The correct spring tension of the pawl of the Drop Stop Device (DSD) is critical to the functionality of the Drop Stop Device (DSD) and is adjustable. The spring tension must be adjusted tight enough such that normal operation of the door (with or without a motor operator) will not engage the pawl into the stator ring, yet loose enough so that rapid rotation **will** engage the pawl.

## Component Identification

DSD (DROP STOP DEVICE) FRONT VIEW




Please note that components and component locations are shown here for REFERENCE ONLY. Your unit installation and component locations may be different.

## *DSD (DROP STOP DEVICE) FUNCTION CONTINUED...*

- After completing electrical connections with the operator, the door-closing test must be conducted with special care.

**⚠ CAUTION**

The pawl may engage the stator during door operation if Drop Stop Device (DSD) is improperly adjusted in the factory. When testing, keep your finger ready to push the STOP button instantly in the event that the pawl engages the stator. If pawl engages, push the STOP button immediatley! If the Drop Stop Device (DSD) engages and the motor is not stopped immediatly, severe damage may occur to the door, the Drop Stop Device (DSD), or the motor operator.

To disengage the Pawl from the Stator ring, refer to reset procedure below.

**⚠ WARNING**

If the door has incurred damage, you must secure the door before disengaging the Drop Stop Device (DSD). Otherwise serious injury or death may occur.

**⚠ CAUTION**

The door installer should be present when the door is first run electrically. Keep your finger ready to push the STOP button in the event that the Pawl engages the stator.

**Pawl reset Procedures**

**NOTE:** The latch will prevent the pawl from back rolling if the door bounces when engaging, as shown in **Fig. 7-B**.

To disengage the Pawl, the operation will need two (2) persons, one to unlock the latch and another to press "OPEN" button on the control panel to disengage the Pawl.

- To unlock the Latch, press the bottom of the Latch with the forefinger, and the elbow of the Latch is resting on the stopper pin as shown. Finger must **NOT** touch the pawl or enter the stator ring, as shown in **Fig. 7-C**.
- Hold still while the second person presses the "OPEN" button to open the door.
- When opening the door to disengage the Pawl, continue pressing the bottom of Latch to ensure the Latch is out of the way of the catch.
- Release finger only after the Pawl is completely out of the notch of the Stator.

If the Catch gets locked by the Latch when disengaging the Pawl, press "CLOSE" button to unlock latch, and then press "STOP" immediately.

Repeat the steps described above until the Pawl is disengaged, as shown in **Fig. 7-D**.

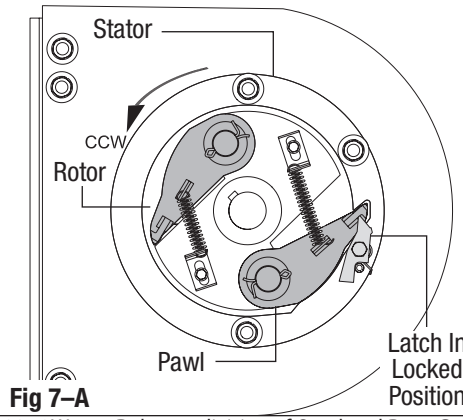


Fig 7–A

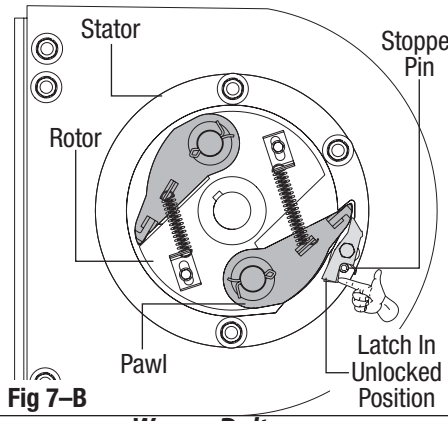


Fig 7–B

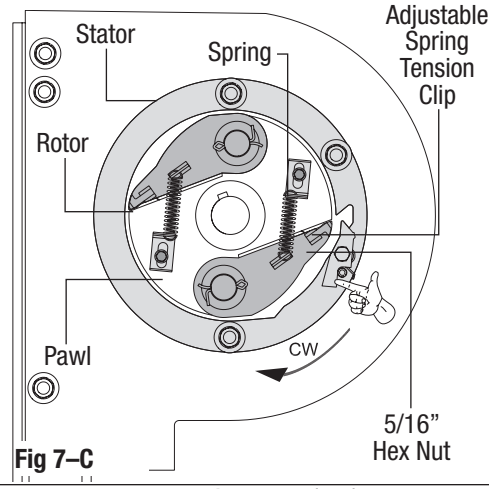


Fig 7–C

# *DSD (Drop Stop Device) Spring Tension Adjustments*

1. Adjust the Drop Stop Device (DSD) spring tension as follows:
   - Is spring tension sufficient?

**Test engaging of pawl / stator**

A. Carefully rotate the rotor until pawl is at the bottom of the stator with the tip of the pawl directly above and behind the front lower notch in the stator, as shown in **Fig 7-E.**

B. Push downward on the tip of the pawl with your fingertip until the body of the pawl contacts the stator.

C. Release the pawl. The pawl should rotate upward and contact the flat surface of the rotor.

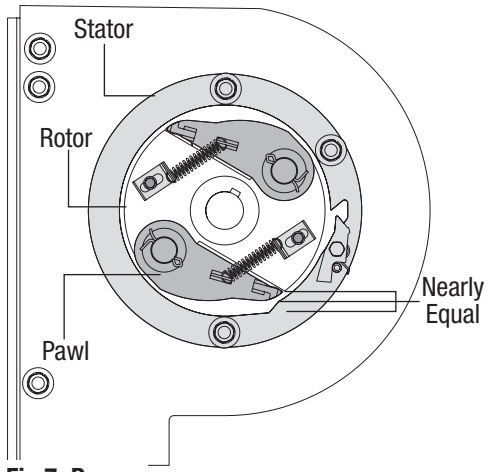


Fig 7–D

**Adjust**

If it does not rotate up far enough to make contact with the rotor, spring tension is too low. Loosen the 5/16" hex nut and slide the slotted adjustable spring tension clip forward and upward until the pawl will rotate upward and contact the rotor when released as described in test above.

   -Is spring tension excessive?

**Test for half-swing with dead weight**

D. With the rotor and pawl remaining in the position shown in **Fig 7-E.** Six standard steel 3/4" bolt washers (13/16" ID X 2" OD X .145" thick) will make about 10 ounces.

E. The 10 ounce weight should rotate the pawl to the position shown in **Fig 7-F.**

**Adjust**

If the pawl is higher than this position, spring tension is too high. Move the spring clip to loosen the spring until the pawl does lower to align, as shown in **Fig 7-F.** If, however, the pawl bottoms on the stator, spring tension is too loose. Move the clip to stretch the spring until the pawl raises up to align as shown in **Fig 7-F.**

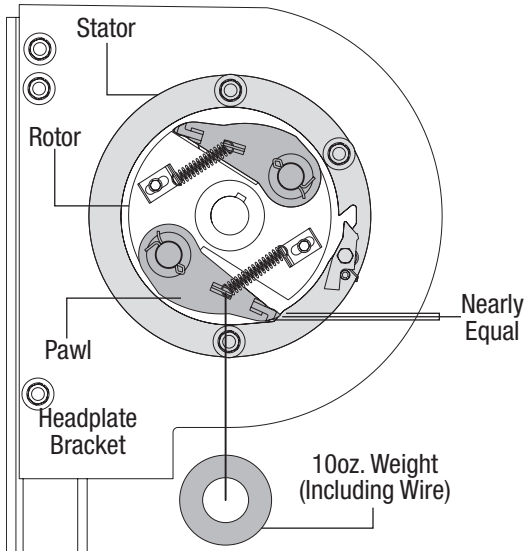


Fig 7–E

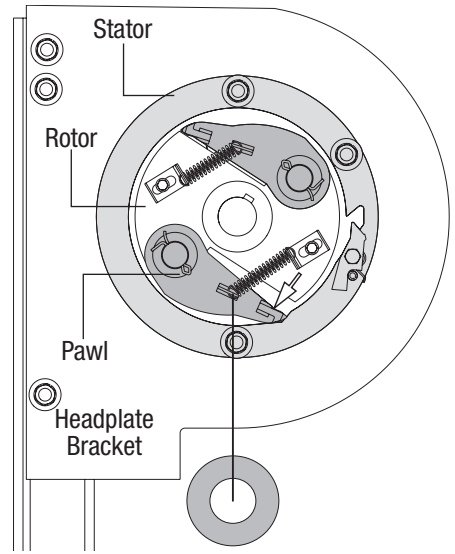


Fig 7–F

**Test for full-swing with dead weight**

F. With the rotor and pawl remaining in the position shown in **Fig 7-F** press down on the pawl until it contacts the stator, as shown in **Fig 7-G**

G. Release the pawl. The pawl should not return when released but rather, due to weight of the washers, remain in the stator contact position.

**NOTE:** If however the pawl moves up when released, spring tension is too high. Reduce spring tension as mentioned in prior test. Repeat test.

When all tests can be conducted with success, that is, without any adjustments required, the DSD is ready for service.

# Troubleshooting
## CONTROLLER

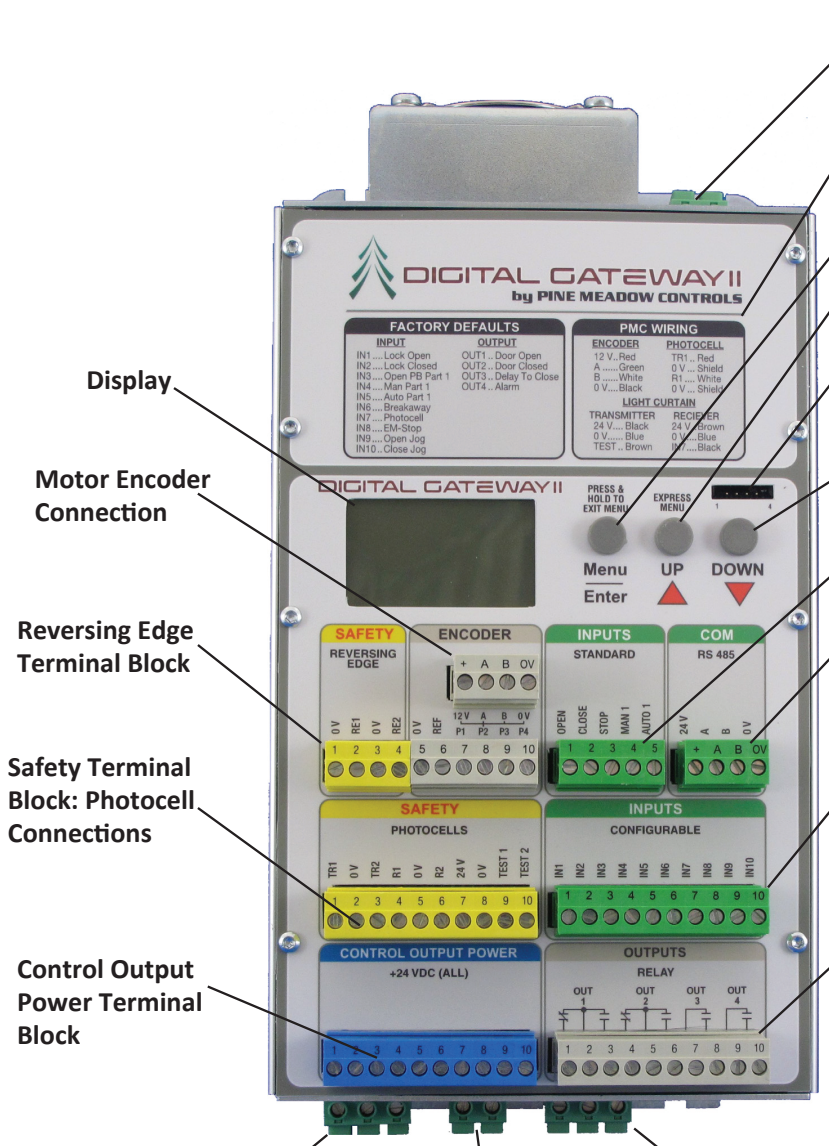



**Fig 7–H**

# *CONTROL PANEL TROUBLESHOOTING*

## GENERAL

| TROUBLE | POTENTIAL CAUSE | NOTES / CORRECTIVE ACTION |
|---|---|---|
| Door will not move | Door may be in Shut Down mode. Fix issue. | Press stop key to clear fault. |
| | No power | Check motor wiring, power line, system rating. |
| Timed Close not functioning | Timer is set to 0. | Verify or update specific timer in express menu.. |
| | Timer condidtion not met. | Verify door is at open close limits, or condition is met. |
| Auto 1/ Manual 1 Function not working | Wiring or connection loose, signal not reaching controller. | Verify connections. |
| | Auto 1/Man 1 not selected as function. | Verify chosen input function. |
| On key release, door stops or reverses | One of the sensor inputs activated. | Verify sensor inputs. |
| Timed Close quits after a few reverses | After a factory set number of failed attempts, usually three, the door will stop attempting to Time Close after a reversal. This is normal door function. | Door will reverse a Timed Closed door without counting the first reversal as a failed attempt. NOTE: If Entrapment Prevention Inputs cause reversals in the meantime, the reversals will continue to count as failed attempts and stop the close timer after three tries. |
| Wall push button not responding. | Wiring and firmware setting incorrect. | Common should be set to 24V<br>Stop is set to NC in firmware (System config > Inputs)<br>Open is set to NO.<br>Close is set to NO.<br>Refer to **Fig 7-J** page 50 |
| General service Due: XXXXX | Routine service interval has elapsed. | Contact distributor for required maintenance. |
| Major service Req'd XXXXX | Required maintenance interval has elapsed. | Contact distributor for required maintenance. |
| Door stops for no reason, or acts differently than before - No errors displayed, only shows IDLE at status | A brownout or short has affected the controller | Use the disconnect switch to turn off the power, wait until the unit shuts off, then turn it back on (hard reset).<br>-Contact customer service if it is still an issue. |
| | Possible overheat | Check fault log |
| One of the options to the Junction Box does not operate as expected | Connection to the Junction Box is incorrect | Ensure the Junction Box connections are correct (Via Manual)<br>1. Radio Remote Receiver is wired to OPTION 2 (or to Manual1 input)<br>-A 10 kohm load is also needed to be wired from the Manual1 input to a 24VDC connection (part of the kit when delivered).<br>2. Loop Detector or Motion Detector is wired to Option 1 (or to an Auto1 input)<br>NOTE* Both can be wired, but one needs to be wired directly to the Control Unit (regular wire can be used) |
| Quick setup aborted | Fault occured when setting limits | 1. Fix faults in system.<br>2. Make sure Position Sensor does not roll over from +32,000 to -32,000 when setting limits.<br>3. Make sure Position count increases when setting door to open limit (door direction incorrect).<br>4. Restart Quick Setup. |

# CONTROL PANEL TROUBLESHOOTING (CONTINUED)

| TROUBLE | POTENTIAL CAUSE | NOTES / CORRECTIVE ACTION |
|---|---|---|
| Door limits have shifted | Position Sensor fault/failure | 1. Verify Position Sensor connections.<br>2. Verify magnet in position sensor has not moved and has not rubbed against the encoder.<br>3. Reset limits. |

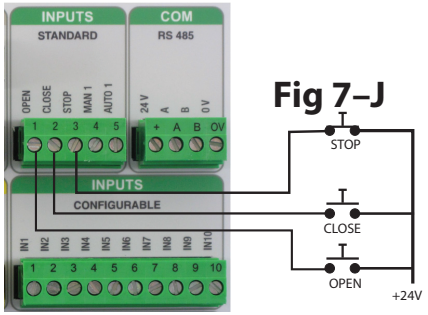



**Fig 7–J**

# CONTROL PANEL STATUS MESSAGES

| MESSAGE DISPLAYED | CAUSE | NOTES / CORRECTIVE ACTION |
|---|---|---|
| - - - - - - - - - - - - | Displayed if no message code is present in the Event or Error Log. | Contact service representative. |
| **STATUS** | | |
| Idle | Door at rest, not at open, close, mid limits. | Displayed when door is motionless in Idle and not at open, close, open P1 limits. Door stopped using the STOP key. |
| **STATUS** | | |
| Count down | Door at rest and counting down to timed close or open. | Time remaining in seconds is displayed. |
| **STATUS -OPENING** | | |
| Opening | Door opening. | Displayed while door is opening from activation. |
| **STATUS - CLOSING** | | |
| Closing | Door closing. | Displayed while door is closing from activation. |
| **STATUS -STOP** | | |
| Stop | Door stopping. | Displayed while door is stopping from activation. |
| **STATUS** | | |
| Locked | Incorrect pass code input. | Displayed when the wrong pass code is entered |
| Closed | Position at close limit. | |
| Open | Position at open limit. | |
| Open P1 | Position at 75% of open limit. | |
| Open P2 | Position at mid limit. | |

# *CONTROL PANEL ERROR MESSAGES - INVERTER ERROR CODES*

| CODE | DESCRIPTION | PROBLEM | POSSIBLE SOLUTION |
|---|---|---|---|
| INV_ERROR_UU | DC Link low<br>(Top Priority) | The incoming mains voltage is too low | View System Status - DC Link to check that the voltage is within the range shown. |
| INV_ERROR_OU | DC Link high<br>(Medium Priority) | Either the incoming mains voltage is too high or the deceleration rate is to short | View System Status - DC Link to check that the voltage is within the range shown. Decrease the deceleration ramps. |
| INV_ERROR_OC1 | Overcurrent 210%<br>(Low Priority) | The motor current exceeds the inverter rating by 210% | View the Motor Current display to check the current delivered to the motor. Check the motor nameplate data to confirm that the correct controller model is being used. Check for mechanical obstruction or damage. |
| INV_ERROR_OC2 | Overcurrent 150%/30 sec<br>(Low Priority) | The motor current exceeds the inverter rating by 150% for more than 30 seconds | View the Motor Current display to see the current delivered to the motor. Check the motor nameplate data to confirm that the correct controller is being used. Check for mechanical obstruction or damage. |
| INV_ERROR_OC3 | Overcurrent during acceleration | Overcurrent while accelerating | View the Motor Current display to see the current delivered to the motor. Decrease the acceleration ramps |
| INV_ERROR_OC4 | Overcurrent DC/Brake<br>(Medium Priority) | Overcurrent while DC braking | View the Motor Current display to see the current delivered to the motor. Decrease the DC Brake level. |
| INV_ERROR_OC5 | Peak overcurrent<br>(High Priority) | Severe overload | Check for:<br>a short in the motor cable<br>stalled motor<br>mechanically or electrically damaged motor.<br>If equipped with a parking brake, ensure that it is being released. Decrease the Boost parameters. |
| INV_ERROR_OH | Controller overheat<br>(High Priority) | The inverter is overheated | View System Status - Temperature to check that the reported temperature is within range. Check ventilation and ensure fan, if present, is operating. Reset the controller and confirm that the fan operates for 1 second during the power-up routine. Reduce the duty cycle of the door. |
| INV_ERROR_12V | Low internal 12v<br>(Top Priority) | The internal 12V DC power supply voltage is too low | View the System Status - Int Levels to check that the voltage is within range. Check I/O wiring for shorts. |
| INV_ERROR_24V | Low internal 24v<br>(Top Priority) | The internal 24V DC power supply voltage is too low | View the System Status - Int Levels to check that the voltage is within range. Check I/O wiring for shorts. |

# CONTROL PANEL ERROR MESSAGES - DOOR CONTROL ERROR CODES

| CODE | DESCRIPTION | PROBLEM | POSSIBLE SOLUTION |
|---|---|---|---|
| E01 | Slip error (Low Priority) | Mechanical overload (Slip Monitoring) or missing signal from encoder. | Check door for obstruction. Ensure the pulse output from the encoder is connected to terminal P2 on the controller. Verify that the encoder pulse output is set correctly. |
| E02 | Direction Error - occurs during setup only (Low Priority) | The direction of the motor is incorrect. The encoder count must increment positively while the door is moving in the open direction. | Use the Motor Direction parameter to set the correct direction for the motor and encoder. |
| E03 | No Signal From Pulse Generator - occurs during setup only. (Low Priority) | No pulse input detected from the encoder. | Check door for obstruction. Ensure the pulse output from the encoder is connected to terminal P2 on the Controller. Verify that the encoder pulse output is set correctly. |
| E04 | Speed Error | Door moves faster/slower then Expected | Check door for obstruction. |
| E05 | N/A | | |
| E06 | N/A | | |
| E07 | Run Timer Exceeded (Low Priority) | The Run Timer has expired. | Check the Run Timer parameter to ensure a correct value. |
| E08 | Safety Edge Test Fail (Medium Priority) | The Reversing Edge test has failed | Check the connections from the reversing edge to the controller. If using the Seywave wireless system, check operation of connected host and remote door sensor. |
| E09 | Safety Edge Connection (Medium Priority) | The Reversing Edge connection cannot be verified. | Check the connections from the reversing edge to the controller. If using the Seywave wireless system, check operation of connected host and remote door sensor. Verify Safety edge is not activated. |
| E10 | Safety Edge 1 Activated (Low Priority) | The Reversing Edge has been activated | Check for obstruction in door's path. |
| E11 | Safety Edge 2 Activated (Low Priority) | The Reversing Edge has been activated | Check for obstruction in door's path. |
| E12 | Lifting Force Exceeded (Low Priority) | The torque limit has been exceeded | If the torque limiting feature is being used, adjust the Torque Limit parameter to suit the application. |
| E13 | No Encoder movement | Encoder did not move when expected | Check for obstruction. Check connection from Position Sensor to Motor. |
| E14 | Absolute Encoder Comm Loss (Top Priority) | Communication with the absolute encoder has been lost. | Check the connections between the encoder and the controller. |
| E15 | Installation Fault (Low Priority) | An error occurred during Quick Setup | Re-perform Quick Setup |
| E16 | Encoder fault | Encoder communication is not correct | Check Position Sensor. Verify connections. |

# CONTROL PANEL ERROR MESSAGES - DOOR CONTROL ERROR CODES

| CODE | DESCRIPTION | PROBLEM | POSSIBLE SOLUTION |
|---|---|---|---|
| E17 | Reset Limits (HIGH PRIORITY) | The position limits cannot be verified | Perform a Quick Setup |
| E18 | Wireless Airlock Failed to Authorize Opening (Low Priority) | The controller failed to receive an Airlock request acknowledgement. | Check opposite controller to ensure that it is operational. Check that both controllers have been wirelessly connected together and that each controller has Wireless and Airlock enabled. Disconnect controllers and run a discovery to reconnect controllers. |
| E19 | Wireless No Response | There was no response from the onboard wireless | Ensure that the Wireless is Enabled then power cycle the controller. |
| E20 | Backroll error | Door movement when at idle state | Verify there are no obstructions, verify motor gear box is functional. |
| E21 | Option - Seywave OCS Remote Timeout | A paired Seywave wireless O/C/S remote has timed out. | Check the remote for operation. Refer to supplied Seywave Wireless manual for troubleshooting. |
| E22 | Option - Seywave DS Remote Timeout | A paired Seywave wireless Door Sensor remote has timed out. | Check the remote for operation. Refer to supplied Seywave Wireless manual for troubleshooting. |
| E23 | Option - Seywave DS Connection Fault | A paired Seywave wireless Door Sensor remote has reported a connection fault. | Check the connection and remote for operation. Refer to supplied Seywave Wireless manual for troubleshooting. |
| E24 | N/A | | |
| E25 | Manual Crank input active (Medium Priority) | Manual Crank is off the Support Bracket | Put Hand Crank back on the Support Bracket. |
| E26 | Overtravel error (HIGH PRIORITY) | Door moves beyond limits. | Reset limits |
| E27 | Photoeye connection test fail (Medium Priority) | Monitored Photoeye connection test failed. | Check photoeye connections |
| E28 | Photoeye 1 activation (Low Priority) | Photoeye 1 has detected an obstruction. | Check for obstructions in photoeye path |
| E29 | Photoeye 2 activation (Low Priority) | Photoeye 2 has detected an obstruction | Check for obstructions in photoeye path |
| E30 | Input Timer Exceeded | Input activation lasting longer than 2 minutes. | Verify wall buttons are not stuck. Check connections for a short. |

# CONTROL PANEL ERROR MESSAGES - ERROR CODE PRIORITY LEVELS

| Priority Level | Reset Condition | Comment |
|---|---|---|
| Low | Activation input | Can also be reset by higher priority reset conditions |
| Medium | Stop, E-Stop or Menu/Enter button pressed | Can also be reset by higher priority reset conditions |
| High | Menu/Enter button pressed and held for 2 seconds. | Screen Flashes |
| Priority Reset Limits | Successful Quick Setup | Auto-clears when limits are set |
| Priority Encoder Connection | Communication restored between encoder and controller | Auto-clears when fault no longer exists |
| Priority INV_ERROR_UU | Incoming main voltage is within range | Auto-clears when fault no longer exists |
| Priority INV_ERROR_12VInternal 12V | Internal 12V DC level is within range | Auto-clears when fault no longer exists |
| Priority INV_ERROR_24V | Internal 24V DC level is within range | Auto-clears when fault no longer exists |

# Section 8
# *Service and Maintenance*

INSTALLATION DATE:_____INSTALLER INITIAL:_____

| SERVICE ITEM | SERVICE INTERVAL (frequency) | | |
|---|---|---|---|
| | EVERY DAY | EVERY 6 MOS. or 50,000 CYCLES | EVERY 12 MOS. or 100,000 CYCLES |
| General Inspection | | • | |
| Limit Switch Chain Tension and Alignment | | • | |
| Manual Operation of Door | | • | |
| Sensing Edge & Photo Eye systems | • | | |
| Mounting Bolt Tightness | | | • |
| Motor Brake Gap and Motor | | | • |
| Check Limit Position | | • | |
| Check Emergency Brake Activation List | | • | |

**Table 8–A**

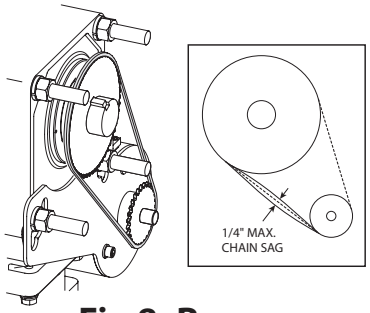



**Fig 8–B**

**Table 8–A provides a schedule of Service and Maintenance items.**
Below is a list of service and maintenance highlights.

**⚠ CAUTION**

Failure to perform specified service and maintenance may result in an unsafe condition, will void limited warranty, and may result in premature failure of the unit. Service and Maintenance are necessary to ensure safe operation of the door.

### Service Interval Message
- When cycles indicate service is required, the panel will display which service interval has been reached.
- Once service is completed, clear the service message by going into System Configuration ->System -> Clear counter.

### Maintenance Interval Message
- Upon reaching 280,000 door cycles (580,000 & 880,000, etc.), the panel will display which maintenance interval has been reached.
- Contact your trained door system technician to have required maintenance performed.
- Once service is completed, clear the service message by going into System Configuration ->System -> Clear counter.

### General Inspection
- Visually inspect wiring conduit and cables.
- Inspect fixtures such as: Bearings, conduit boxes, hood, gear box (for oil leakage), motor.
- Inspect safety labels, placement and condition.
- Lubricate guides with paste wax or silicone spray.

### Position Sensor Chain Tension and Alignment
- Check sprocket alignment.
- Check chain tension, max sag is 1/2", **Fig. 8–B.**
- Lubricate chain.

### Manual Operation of Door
- Inspect door alignment and level.
- Inspect slats and endlocks for damage.
- Inspect guides, sensing edge and hood for damage.

### Mounting Bolt Tightness
- Check fasteners anchoring headplates and door guides to wall.

### Sensing Edge & Photoeye systems
- Test sensing edge activation daily.
  - Place a solid object, higher than 12", on floor and close door. Sensing edge should reverse door direction on contact with object.
- Test Photoeye activation daily.
  - Obstruct the Photoeye beam with a solid object. Photoeye should reverse door direction.

### Motor Brake Gap and Motor
- Observe and listen to motor and gearbox in operation.
- Check fasteners anchoring motor bearing, motor, gearbox for tightness.
- See Brake Gap Inspection and Adjustment on next page.

### Check Limit Position
- Verify the door stops at correct open position.
- Verify that door closes fully without excessive "stacking" of curtain in guides.
- Verify approach speeds provide for smooth starts and stops.

### Check Drop Stop Device
- If the Drop Stop Device has been activated replace the Drop Stop Device.

**Keep records of all service and maintenance.**

# *Brake Gap Inspection and Adjustment*

1. Fully **close door**, **remove power**.
   - Use proper lock out/tag out procedures.
2. Remove Winding Eye cover, **Fig. 8–C.**
   - **A.** Remove E-clip from the mechanical brake release handle.
   - **B.** Remove mechanical brake release handle.
   - **C.** Pull the mechanical release lever out of the brake assembly.
   - **D.** Remove three screws from the Winding Eye Cover and slide the Cover off.
3. Pull the rubber band seal down and insert a gap gage between the Stationary Core and Armature plate to measure the gap, **Fig. 8–D.**
   - Adjustment is needed if the gap is close to the allowable limit shown on the Gap Chart below.
     - Gap measurements should be taken at 3 points, 120° apart.

Gap Chart

| Motor HP | Gap Value | |
|---|---|---|
| | Specification | Allowable Limit |
| 1/2 HP | 0.006 - 0.010 | 0.020 |
| 1 HP | 0.008 - 0.012 | 0.020 |
| 1 HP | 0.008 - 0.012 | 0.020 |

     - If the measured gap is within specifications, replace the Winding Eye cover, hex head screws, mechanical brake release handle and E-clips.
4. When the measured gap is out of specification:
   - **A.** Remove screw and nut from Winding Eye and remove Winding Eye" **Fig. 8–E.**
   - **B.** Remove Allen screws and mechanical release supports.
   - **C.** Remove three Phillips head screws and dust cover including the rubber shaft seal, **Fig. 8–F.**
   - **D.** Remove the rubber band seal.
     **FOR 1/2 HP MOTOR ONLY;** Loosen restraining bolt, rotate brake shoe one complete turn counterclockwise and retighten restraining bolt.
     Re-measure gap.
   - **E.** Slowly loosen the Allen retaining screws on the brake shoe. Alternate between screws so that spring pressure is released evenly.
     - When spring pressure is released, carefully remove the retaining screws, making sure to keep the spacers and gap adjusting sleeves, **Fig. 8–G.**
   - **F.** Remove spacers from the retaining screws and remove gap adjusting shims necessary to achieve proper gap, **Fig. 8–H.**
5. Reassembly is the reverse of disassembly.

**NOTE:** When replacing the rubber band seal, be careful to line up the holes in the seal with the holes in the mechanical release supports. Alignment must be "dead on" or the mechanical release levers will not properly reinstall, **Fig. 8–I.**

**NOTE:** When replacing the manual operation yoke, line up the pin with the hole through the motor shaft and press into place.

**NOTE:** When finished with reassembly double check to ensure the mechanical release handle is resting on the bottom of the stopper. **Fig. 8-J**

Fig 8–C


Fig 8–D

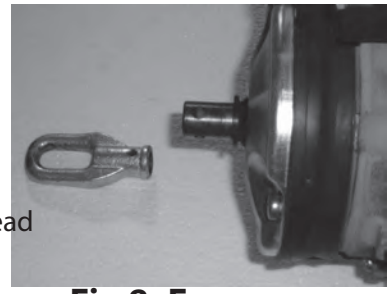


Fig 8–E

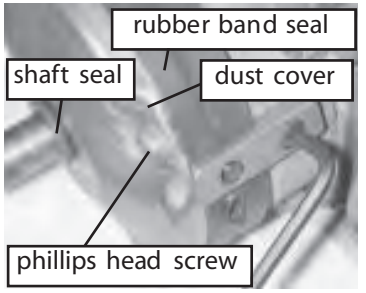


Fig 8–F

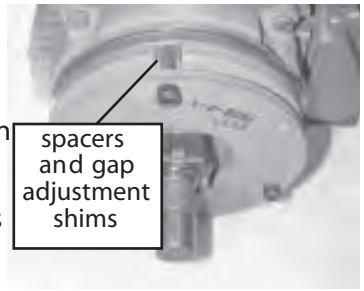


Fig 8–G

Fig 8–H


Fig 8–I

Fig 8–J

# Section 9

## *Illustrated Parts Breakdown*

### *Parts Drawing*

**NOTE:** Fasteners and some parts not shown for clarity.

**NOTE:** Components and component locations are shown here for reference only. Your unit installation and component locations may be different.

***PARTS LIST on next page***

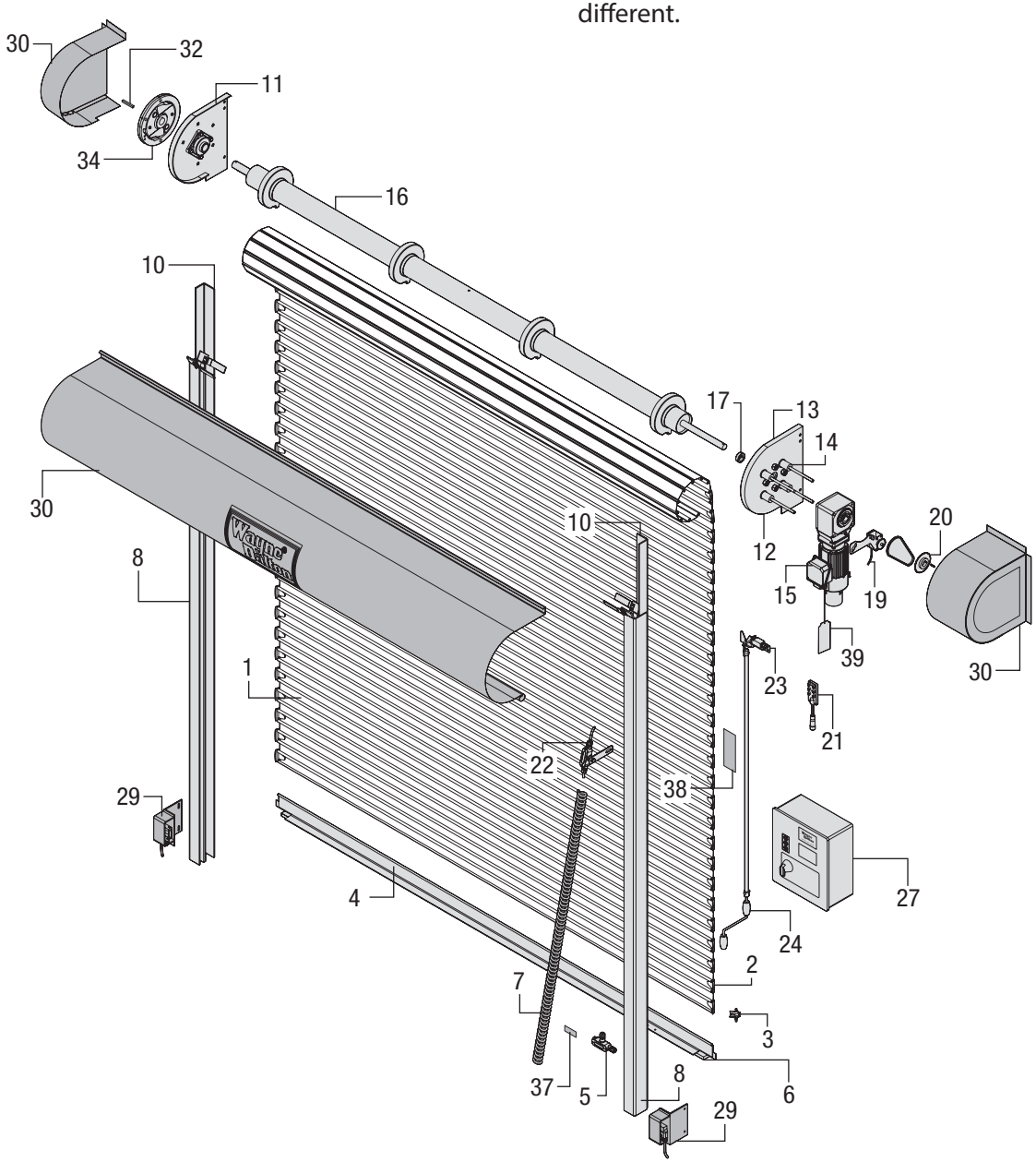



**Fig 9–A**

## *Table of Part Numbers*

BEFORE ORDERING PARTS
LOCATE YOUR ORIGINAL DOOR NUMBER
Found on the Nameplate Attached to your Bottom Bar

| Item | Description | Reference Part Number | Built to Order? |
|---|---|---|---|
| 1 | Curtain Assembly, Complete | Inquire | Yes |
| 2 | Slat | | Yes |
| 3 | Endlock / Windlock | | |
| 4 | Complete Bottom Bar Assembly | 705-0250 | Yes |
| 5 | Junction Box Assembly, Bottom Bar, with fittings | | Yes |
| 6 | Sensing Edge, 2-Wire Failsafe Type | 086896 | Yes |
| 7 | Coil Cord, Spring Assist, RapidSlat | 810210 | |
| 8 | Guide Assembly, 800 Series | 709-1483/706-1542/706-1535 | Yes |
| 9 | Not Used | | |
| 10 | (non-standard) Hi-Use Option Wear Strip, Polyurethane | 347781 | |
| | Guide Weatherstrip, (not shown) | 086695 | |
| | | | |
| 11 | Headplate Assembly, Non-Drive | 008-4167 | Yes |
| 12 | Headplate Assembly, Drive | 008-4166 | |
| 13 | Bearing, Flange | 349538 | Yes |
| 14 | Spacer, Motor | 810158 | |
| 15 | Gearmotor, Hyponic Drive | 810173 | |
| | | | |
| | Winding Eye, Handcrank (not shown) | 308479 | |
| 16 | Barrel Assembly, 800 Series | 707-0539 | Yes |
| 17 | Set Collar, Locking - small ID | 272322/272328 | |
| 18 | Keystock, 1/4" x 1/4" x 9" Long | 275445 | |
| 19 | Limit Assembly, Absolute Encoder | 308700 | |
| | Absolute Encoder | 810235 | |
| | Chain, Limit Drive, #25 | 086565 | |
| | Link, Connecting, #25 Chain (not shown) | 080884 | |
| | Cable Assembly, Absolute Encoder | 308696 | |
| 20 | Limit Drive Sprocket | 810182 | |
| 21 | Junction Box (cables not shown) | 308694 | |
| 22 | Coil Cord Junction Box, Guide Mounted | 810186 | |
| 23 | Crank Interlock Assembly, with cable | 810191 | |
| 24 | Hand Crank Assembly | 308703 | Yes |
| | | | |
| | | | |
| | | | |

| Item | Description | Reference Part Number | Built to Order? |
|---|---|---|---|
| 26 | Not used | | |
| 27 | Control Panel | 308695 | Yes |
| 28 | Not Used | | |
| 29 | Photoeye Assembly, pair | 810187 | |
| | Transmitter | 107322-0005 | |
| | Receiver | 107322-0005 | |
| | Photoeye Cable to Junction Box | 308697 | |
| 30 | Hood Assembly, Service Door | Inquire | Yes |
| | Hood Logo, Service Doors (not shown) | | |
| 31 | | | |
| | | | |
| 32 | Keystock, 3/8" x 3/8" x 2-1/2" Long | 273447 | |
| 33 | Brake Bearing | 271824 | |
| 34 | Drop Stop Device | 800383 | |
| 35 | Set Collar, Locking - 1-1/2" ID | 272322 | |
| 36 | Not Used | | |
| 37 | Sensing Edge Safety Label | Inquire | |
| 38 | Safety Label | 349668 | |
| 39 | Motor Brake Release Tag | 810220 | |
| | | | |
| | | | |
| | **OPTIONAL ACCESSORIES** | | |
| | Loop Module, 24VDC | Inquire | |
| | Motion Detector, BEA Falcon | Inquire | |
| | Remote Control, BEA Sensors | Inquire | |
| | Pushbutton Station, NEMA4, O.C.S. | Inquire | |
| | Radio Controls | Inquire | |
| | Secondary Photo-eyes | Inquire | |
| | Signaling Equipment | Inquire | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**Table 9–B**

"Built to Order" parts are specific to each door manufactured, and may be subject to manufacturer's standard lead-times.

# Rolling Steel Service Door Models 800, 800C ADV
# Advanced Door System Option
## Limited Warranty

Wayne Dalton, a division of Overhead Door Corporation, ("Seller") warrants to the original purchaser of the rolling steel service door models 800 and 800C with Advanced Door System Option ("Product"), subject to all of the terms and conditions hereof, that the Product thereof will be free from defects in materials and workmanship under normal use for the following periods, measured from the date of installation:

- **Seller warrants all mechanical door system components and the control panel hardware for a period of 60 MONTHS**
- **Seller warrants premium powder coat with hardening additive finish for a period of 60 months against blistering, flaking or peeling of the finish**

Seller's obligation under this warranty is specifically limited to repairing or replacing, at its option, any part which is determined by Seller to be defective during the applicable warranty period. Repair or replacement labor for any defective Product component is excluded and will be the responsibility of the purchaser.

This warranty is made to the original purchaser of the Product only, and is not transferable or assignable. This warranty does not apply to any unauthorized alteration or repair of the Product, or to any Product or component which has been damaged or deteriorated due to misuse, neglect, accident, failure to provide necessary maintenance, normal wear and tear, or acts of God or any other cause beyond the reasonable control of Seller. This warranty does not apply to any damage or deterioration caused by door slats rubbing together as the door rolls up upon itself or caused by exposure to salt water, chemical fumes or other corrosive or aggressive environments, whether naturally occurring or man-made, including, but not limited to, environments with a high degree of humidity, sand, dirt or grease. This warranty on finish does not apply if the Product is installed within 2000 meters of any ocean or other body of saltwater. This warranty specifically excludes any damage resulting from scratching, abrasion or impact by any hard object, and any fading or color change which may not be uniform due to unequal exposure of the curtains to sunlight or other elements. Wearing away of the painted surfaces of the Product is a common occurrence resulting from the curtain repeatedly coiling upon itself and uncoiling during normal usage (See DASMA #274), and is specifically excluded from this warranty. Seller does not warrant that the Product software will provide error-free operation or be free from defects.

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

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

Claims under this warranty must be made promptly after discovery, within the applicable warranty period, and in writing to the Seller or to the authorized distributor or installer whose name and address appear below. The purchaser must allow Seller a reasonable opportunity to inspect any Product claimed to be defective prior to removal or any alteration of its condition. Proof of the purchase and/or installation date, and identification as the original purchaser, may be required. This Warranty is not valid unless the fields below are completed by the installer at the time of installation.

Door Type: _____

Customer Name (Original Purchaser): _____

Customer Installation Location: _____

Order # _____ Date of Installation: _____

Name of Dealer/Installer: _____

Signature of Dealer/Installer: _____

9/12/2014

**Thank you for your purchase.**
**PLEASE DO NOT RETURN THIS PRODUCT TO THE STORE.**
**AFTER INSTALLATION IS COMPLETE, FASTEN THIS MANUAL NEAR GARAGE DOOR FOR EASY REFERENCE.**

**Please call 1-(800) 255-3046 and follow the prompts to contact the appropriate customer service agent. They will be happy to handle any questions that you may have.**