

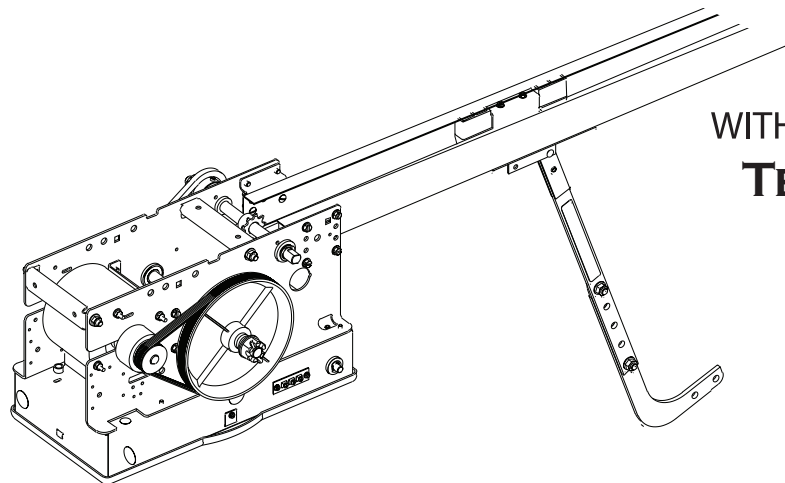


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# **GCL-MT™**

## **Medium Duty Operator**

### **TROLLEY**



WITH EXCLUSIVE FEATURE:  
**TENSIBELT™**



#### **PROPER APPLICATION**

| <b>Door Type</b>                             | <b>Operator Type</b> | <b>HP/Max Door Weight</b>                    |
|----------------------------------------------|----------------------|----------------------------------------------|
| Sectional<br>(Standard Lift<br>Low Headroom) | Trolley              | 1/2HP = 620 lbs<br>(Available in 1/2HP only) |

## **NOT FOR RESIDENTIAL USE**

**This Installation Manual provides the information required to install, troubleshoot and maintain a GCL-MT™ Commercial/Industrial Door Operator.**

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## Section 1: How to use this manual

**The 11 sections of this Installation Manual provide the information required to install, troubleshoot and maintain an GCL-MT™ commercial/industrial door operator.**

### **Section 2**

Provides important defining information related to safety terminology used throughout this manual, as well as safety related instructions which must be followed at all times while doing any steps/tasks/instructions detailed in this manual.

### **Section 3**

Details pre-installation concerns/issues/decisions that are recommended to be considered and/or resolved prior to beginning any commercial door operator installation.



### **WARNING**

**Failure to correctly perform all steps in sections 4-6 can result in serious injury or death.**

### **Sections 4-6**

Provide step by step installation and set-up instructions for the GCL-MT™ commercial door operator. Each section is written such that it must be followed in a step by step order to complete a successful installation.

### **Sections 7-8**

Detail important features and troubleshooting information for typical installation and normal operations that may occur.

### **Sections 9-11**

Provide related information on service and maintenance items, operator drawings for use in troubleshooting and service activities, along with important warranty and returned goods policy information.

**FOR ASSISTANCE CALL 1-800-843-4084**

## Section 2: Safety Information & Instructions

### **WARNING**

Commercial/Industrial Sectional and Rolling Steel Doors are large, heavy objects that move with the help of springs under high tension and electric motors. Since moving objects, springs under tension, and electric motors can cause injuries, your safety and the safety of others depend 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. For the number of your local Genie® Dealer, call 800-OK-GENIE, and for Genie® Factory Technical Advice, call 800-843-4084.

In this Manual, 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.

| POTENTIAL HAZARD                                                                                                | EFFECT                                                                                                                                             | PREVENTION                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br><b>MOVING DOOR</b>         |  <b>WARNING</b><br><b>Could result in Serious Injury or Death</b> | <b>Do Not</b> operate unless the doorway is in sight and free of obstructions. Keep people clear of opening while door is moving.<br><b>Do Not</b> allow children to play with the door operator.<br><b>Do Not</b> change operator control to momentary contact unless an external reversing means is installed.<br><b>Do Not</b> operate a door that jams or one that has a broken spring |
| <br><b>ELECTRICAL SHOCK</b>    |  <b>WARNING</b><br><b>Could result in Serious Injury or Death</b> | Turn off electrical power before removing operator cover.<br>When replacing the cover, make sure wires are not pinched or near moving parts.<br>Operator must be electrically grounded.                                                                                                                                                                                                    |
| <br><b>HIGH SPRING TENSION</b> |  <b>WARNING</b><br><b>Could result in Serious Injury or Death</b> | <b>Do Not</b> try to remove, repair or adjust springs or anything to which door spring parts are fastened, such as, wood block, steel bracket, cable or any other structure or like item.<br>Repairs and adjustments must be made by a trained service representative using proper tools and instructions.                                                                                 |

### **IMPORTANT**

**READ PRIOR TO ANY DOOR OPERATION**

1. Read manual and warnings carefully.
2. Keep the door in good working condition. Periodically lubricate all moving parts of door.
3. If door has a sensing edge, check operations monthly. Make any necessary repairs to keep it functional.
4. AT LEAST twice a year, manually operate door.  
The Door should open and close freely. If it does not, the door must be taken out of service and a trained service representative must correct the condition causing the malfunction.
5. The Operator Motor is protected against overheating by an internal thermal protector. If the operator ceases to function because motor protector has tripped, a trained service technician may need to correct the condition which caused the overheating. When motor has cooled, thermal protector will automatically reset and normal operation can be resumed.
6. In case of power failure, the door can be operated manually by pulling the release cable to disconnect the operator drive system.
7. Keep instructions in a prominent location near the pushbutton.

## Section 3: Critical Installation Information

### Job Site Issues to Consider/Concerns

***The following list of items should be considered prior to selecting an operator for a given job site.***

- 1-Available power supply.
- 2-Type of door.
- 3-Potential operator mounting obstructions. Items to consider include, but are not limited to: side room, room above door shaft, room below door shaft, available mounting surface integrity, power supply location, and convenient chain hoist and release cable positioning.
- 4-Size of door for appropriate operator torque and door travel speed selection.
- 5-Operator mounting environment. Items to consider include operator location and dampness, dustiness and corrosiveness of the location.
- 6-Door activation needs/requirements. Examples include 3 button control stations, 1 button control stations, radio controls, pull cords, loop detectors, photoelectric controls, key switches, etc. See "Entrapment Protection" section below.
- 7-Interlock switches are required under certain conditions for doors with pass doors and door locks. See page 5.5.
- 8-Accessory equipment. Examples are reversing edges and/or photocell beams (required for doors set to operate as momentary contact), auxiliary control relays, warning lights, etc.

#### **ENTRAPMENT PROTECTION**

The installation of a fail safe external reversing device (such as a monitored reversing edge or photocell system, etc.) is required on all momentary contact electronically operated commercial doors. If such a reversing device is not installed, the operator will revert to a constant contact control switch for operation (Closing only).

The Reversing Devices currently UL Approved with are:

- 1) MillerEdge ME, MT and series monitored edge sensors used in combination with Timer-Close Module P/N OPABTCX.S or OPAKMEIGX.S INTERFACE MODULE.
- 2) Residential Safe-T-Beam® Monitored Photocells from The Genie® Company, model OSTB-BX (P/N 38176R).
- 2) Series II Commercial Safe-T-Beam®, Monitored Photocells P/N OPAKPE.S.
- 3) Series II Commercial Safe-T-Beam®, Monitored Photocells P/N OPAKPEN4GX.S.

 **WARNING:** DO NOT apply line voltage until instructed to do so.

#### **CAUTION:**

Check working condition of door before installing the operator. Door must be free from sticking and binding. If equipped, deactivate any door locking device(s). Door repairs and adjustments, including cables and spring assemblies **MUST** be made by a trained service representative using proper tools and instructions.

## Section 3: Critical Installation Information

### ENTRAPMENT PROTECTION

The GCL-MT™ can be used with the following UL Listed entrapment devices in compliance with UL325 requirements active starting August 29, 2010.

UNTIL ONE OF THESE MONITORED EXTERNAL ENTRAPMENT DEVICES IS INSTALLED, THE OPERATOR WILL NOT ALLOW MOMENTARY CONTACT OPERATION IN THE CLOSE DIRECTION.

| LISTED DEVICES                                                                                                                       | ALLOWABLE DOOR WIDTH |
|--------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| MillerEdge ME, MT and CPT series monitored edge sensors used in combination with Timer-Close Module or OPAKMEIGX.S Interface Module. | ANY WIDTH            |
| Residential Safe-T-Beam® Monitored Photocells model OSTB-BX P/N 38176R.                                                              | 30 FEET              |
| Commercial Monitored Photoeye Kit P/N OPAKPE.S                                                                                       | 30 FEET              |
| Commercial NEMA4 Monitored Photocells P/N OPAKPEN4GX.S.                                                                              | 35 FEET              |

| Sectional Door Chart (sq. ft.)                                                                                                                                                                                                                                                            |     |           |                |                        |                                            |                             |                    |                              |                    |                              |                            |                                      |                  |                        |                     |                                        |                                     |                                  |                  |                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|----------------|------------------------|--------------------------------------------|-----------------------------|--------------------|------------------------------|--------------------|------------------------------|----------------------------|--------------------------------------|------------------|------------------------|---------------------|----------------------------------------|-------------------------------------|----------------------------------|------------------|--------------------------|
| Model                                                                                                                                                                                                                                                                                     | HP  | UL Listed |                |                        | Commercial Steel Insulated & Non-Insulated |                             |                    |                              |                    |                              |                            |                                      | Thermospan       |                        |                     | Thermomark                             |                                     | Aluminum                         |                  |                          |
|                                                                                                                                                                                                                                                                                           |     |           | Door Series -> |                        | 216                                        | 216 ins.                    | 220                | 220 ins.                     | 2415               | 2415 ins.                    | 2411                       | 2411 ins.                            | 125              | 150                    | 200                 | 5150                                   | 5200                                | 451                              | 452              |                          |
|                                                                                                                                                                                                                                                                                           |     |           | Mounting Type  | Max. Door Weight (Lbs) | 16GA. Flush Steel                          | 16GA. Flush Steel Insulated | 20GA. Ribbed Steel | 20GA. Ribbed Steel Insulated | 24GA. Ribbed Steel | 24GA. Ribbed Steel Insulated | Nominal 24GA. Ribbed Steel | Nominal 24GA. Ribbed Steel Insulated | PU/FIP Insulated | PU/FIP Insulated 1.38" | PU/FIP Insulated 2" | 200-20 PU/FIP Insulated 20GA. Exterior | PU/FIP Insulated Raised Panel 1.38" | PU/FIP Insulated Raised Panel 2" | 1/8" Glass 1.38" | 1/4" or 1/2" Glass 1.38" |
| GCL-MT                                                                                                                                                                                                                                                                                    | 1/2 | Yes       | TS             | 620                    | 170                                        | 120                         | 230                | 160                          | 270                | 200                          | 300                        | 256                                  | 256              | 256                    | 240                 | 160                                    | 256                                 | 256                              | 210              | 144                      |
| T=Trolley                                                                                                                                                                                                                                                                                 |     |           |                |                        |                                            |                             |                    |                              |                    |                              |                            |                                      |                  |                        |                     |                                        |                                     |                                  |                  |                          |
| Note: Total door weight, and not the square footage, is the critical factor in selecting the proper operator.                                                                                                                                                                             |     |           |                |                        |                                            |                             |                    |                              |                    |                              |                            |                                      |                  |                        |                     |                                        |                                     |                                  |                  |                          |
| Square footage measurements are based on "square doors." (Example=16' x 16')                                                                                                                                                                                                              |     |           |                |                        |                                            |                             |                    |                              |                    |                              |                            |                                      |                  |                        |                     |                                        |                                     |                                  |                  |                          |
| NOTE: Doors that require special windloading and wide doors, normally require increased strutting (reinforcement). Strutting doors can significantly increase door weight beyond weight shown. Consult Customer Service for the impact of wind load and astrutting on square foot limits. |     |           |                |                        |                                            |                             |                    |                              |                    |                              |                            |                                      |                  |                        |                     |                                        |                                     |                                  |                  |                          |
| NOTE: "PU-FIP" stands for "polyurethane, foamed-in-place." If no notation is present, insulation is "polystyrene, layed-in-place."                                                                                                                                                        |     |           |                |                        |                                            |                             |                    |                              |                    |                              |                            |                                      |                  |                        |                     |                                        |                                     |                                  |                  |                          |

## Section 4: Installation

### IMPORTANT INSTALLATION INSTRUCTIONS

**WARNING**-To reduce the risk of severe injury or death:

- 1) READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.
- 2) Install only on a properly operating and balanced door. A door that is operating improperly could cause severe injury. Have qualified service personnel make repairs to cables, spring assemblies and other hardware before installing the operator.
- 3) Remove all pull ropes and remove, or make inoperative, all locks (unless mechanically and/or electronically interlocked to the power unit) that are connected to the door before installing the operator.
- 4) Install the door operator at least 8 feet above the floor if the operator has exposed moving parts.
- 5) Do not connect the door operator to the power source until instructed to do so.
- 6) Locate the control station: (a) within sight of the door, (b) a minimum of 5 feet above the floor so that small children cannot reach it, and (c) away from all moving parts of the door.
- 7) Install the Entrapment Warning Placard next to the control station and in a prominent location.
- 8) For products having a manual release, instruct the end user on the operation of the manual release.

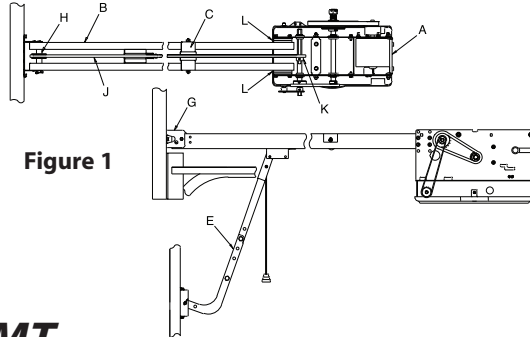


Figure 1

**GCL-MT**  
MEDIUM DUTY OPERATOR

www.geniecompany.com

### Drawbar Assembly

The Model GCL-MT™ Drawbar Operator consists of the Power Unit (A), Drawbar Track (B), Chain Guides (C), Drawbar Arm (E), Front Spreader (G), Front Idler Pulley (H), Drive Chain (J), Drive Sprocket (K) and Drawbar Track Spacer (L). The Drawbar track length, chain length and quantity of chain guides will vary by door heights. **Fig. 1.**

- 1) The Drawbar Track Spacers are attached to the Power Unit at the factory. **Fig. 1.**

– Attach Track to Power Unit at the Spacers using eight (8) 1/4"-20 x 1-1/2" track bolts and 1/4"-20 keps nuts (provided).

**Fig. 2.** The curved part of the Track **MUST** be toward the electrical panel.

**NOTE:** Drawbar tracks must be thirty (30) inches longer than the door's height. Tracks have been pre-punched at the door plant for the chain guide assemblies.

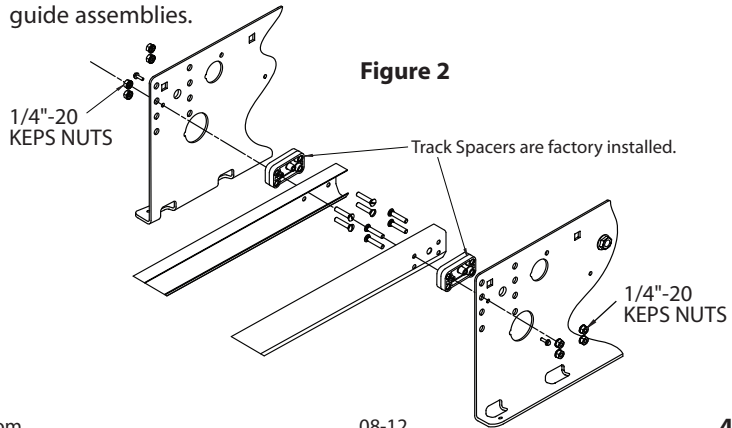


Figure 2

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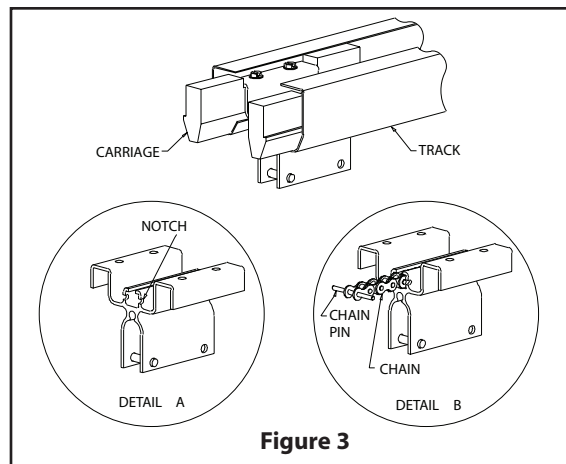
## Drawbar Assembly (cont')

- 3) Insert the carriage into the tracks as shown in **Fig. 3**.

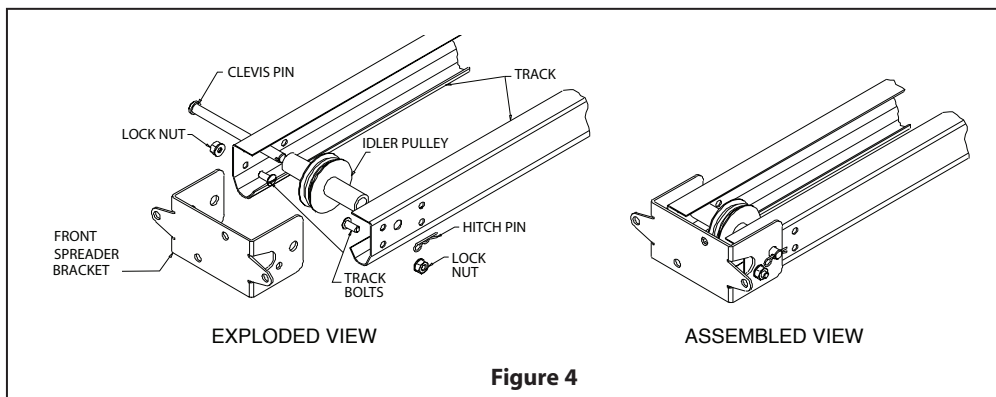
**NOTE:** One end of the carriage has a notch (**Detail A**) which will be used to locate the chain pin (**Detail B**). This end of the carriage faces the front spreader bracket and away from the power unit.

- 4) Attach the front spreader bracket to the front of the operator tracks with two (2) track bolts and two (2) locknuts (check hole alignment before installing).
- 5) Position the idler pulley inside the track and insert the 3/8" x 4-1/2" clevis pin. Secure the clevis pin using the hitch pin. **Fig. 4.**

**NOTE:** Track bolts **MUST** be installed from inside the track.



**Figure 3**



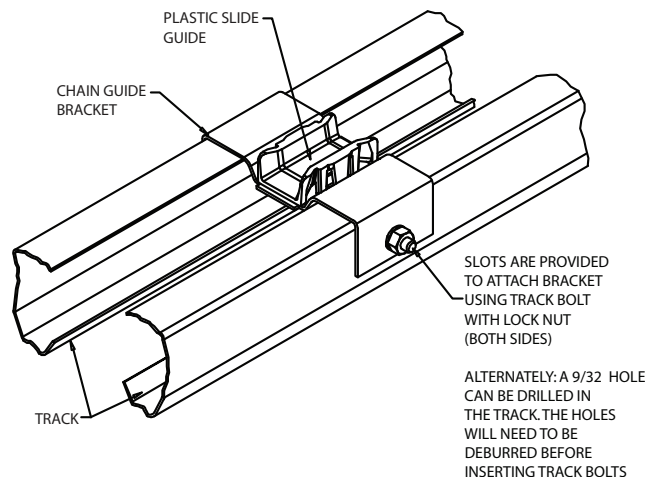
**Figure 4**

## Drawbar Assembly (cont')

- 6) Attach the chain guide assemblies to the drawbar tracks using track bolts and locknuts. **Fig. 5.**

**NOTE:** Space chain guides evenly between operator and header. Doors 12 foot tall and under will use 2 chain guides. Doors over 12 feet will require 3 chain guides.

**NOTE:** Verify that track bolts are properly seated in track. Failure to seat bolts can cause carriage to bind in door track.



**Figure 5**

## Drawbar Assembly (cont')

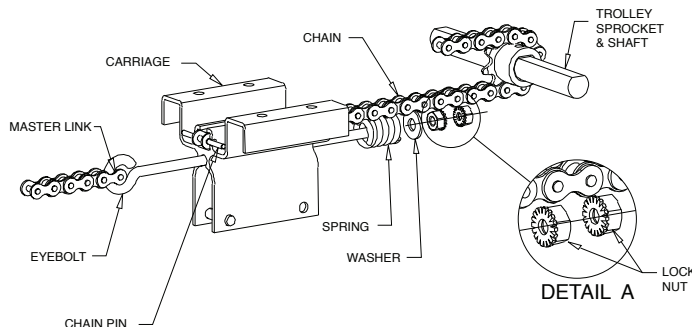
- 7) Uncoil the drawbar chain and install by routing the chain over the chain guides and around the drive sprocket on the output shaft as shown in **Fig. 6**.
- 8) Pass the chain through the rectangular slot in the carriage and insert the chain pin through the end link of the chain.
- 9) Pass the other end of the chain between the front spreader bracket and the idler pulley. Make certain the chain is not twisted.
- 10) Move chain toward the carriage.
- 11) Attach the eye bolt to the chain using the #41 master chain link.
- 12) Attach the chain to the carriage.
- 13) Insert the eye bolt through the hole in the carriage.
- 14) Place the spring and flat washer over the eyebolt.
- 15) Thread a single nut onto the eyebolt as shown in **Detail A, Fig 6**.
- 16) Tighten Chain with no more than 2" of sag and add second locknut. **Detail A, Fig 6**.

Check to ensure the following:

- The chain is properly engaging the output sprocket.
- The chain pin is properly seated in the indentations on the front of the carriage.
- The chain is properly seated on the rib of the idler pulley.
- The chain is not twisted.

### **⚠ WARNING**

- DO NOT apply line voltage until instructed to do so.
- Repairs and adjustments, including particularly to cables and spring assemblies under high tension, must be made by a trained service representative using proper tools and instructions.



**Figure 6**

## Drawbar Installation

### ⚠ CAUTION

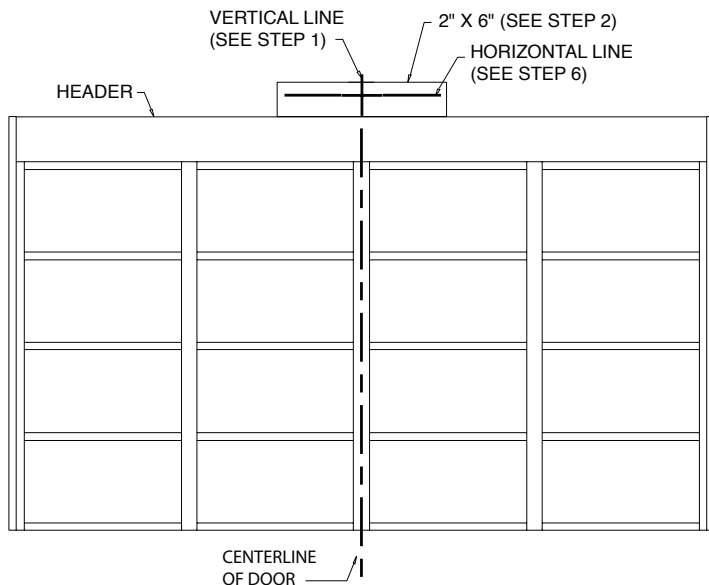
Check the working condition of the door before installing the operator. Door must be free from sticking and binding. If the door is equipped with a latching device, secure the locking bar in the open (unlocked) position. This style operator will act as a latching device when the door is down and therefore the door's lock is no longer needed.

If the door lock is to remain functional, an interlock switch **MUST** be installed which will prevent operation of the door whenever the door lock is engaged. Refer to the Wiring Instructions, section 5.5, of this manual for proper connection of the interlock switch.

- 1) Measure the width of the door to determine the center. Make a vertical line as shown in **Fig. 7**. (If the vertical line is not in line with a door stile, a means of attaching the door bracket to the door must be provided. This can be accomplished by spanning the center of the door's top section (between the top and bottom rail) with a suitable material such as wood or steel.

**NOTE:** On torsion spring doors with an uneven number of panels, the operator may be attached to the stile nearest to the center.

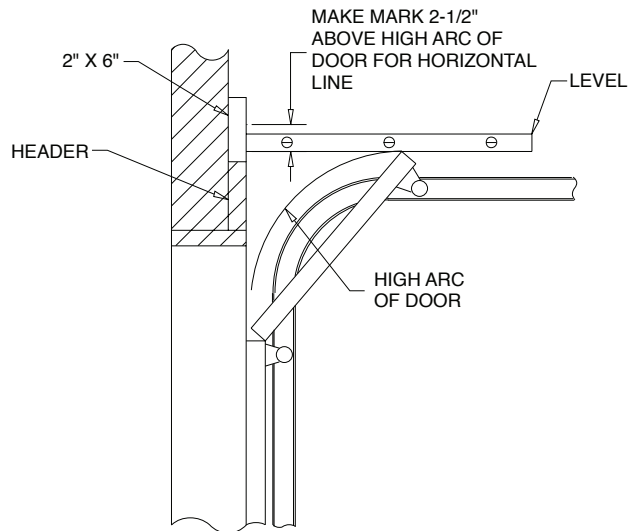
- 2) Prepare for attaching drawbar to header. If suitable woodwork is not already in place, securely affix a 2" x 6" block of wood as shown in **Fig. 7**.
- 3) Center the block on the header.
- 4) Mark the center vertical line on this block.
- 5) Use a level, as shown in **Fig. 8 (pg 4.6)** to find the highest point of travel for the door.
- 6) Mark a horizontal line across the vertical line you made on the header at 2-1/2" above the highest point of door travel.



**Figure 7**

## Drawbar Installation (cont')

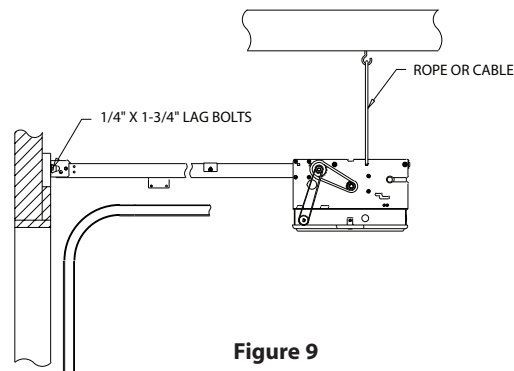
- 1) Raise the operator into a position approximately 4" above the horizontal door tracks.
- 2) Temporarily suspend the operator from the ceiling superstructure with rope or by some other safe and suitable means.
- 3) Position the bottom edge of the front spreader bracket on your horizontal mark on the header. **Fig. 8.**



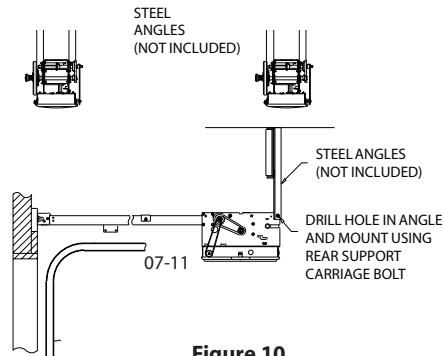
**Figure 8**

## Attach Operator.

- 4) Center spreader bracket on the vertical line. Use two (2) 1/4" x 1-3/4" lag bolts to attach the bracket to the header. **Fig. 9.**
- 5) Raise the door and position the operator so that the drawbar tracks are level and the operator chain is in line with the center of the door (or the stile where the door bracket will be attached). **Fig. 9.**
- 6) Secure the operator in this position by installing steel angles (not furnished) between the ceiling superstructure and the operator power unit. **Fig. 10.**



**Figure 9**



**Figure 10**

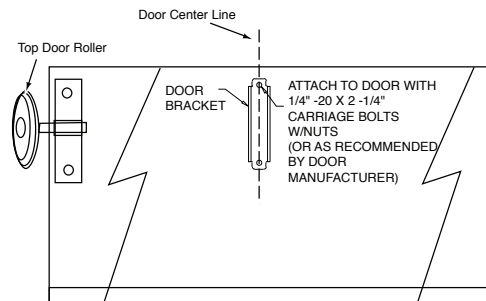
## Connection to the Door

- 1) Pull down on the drawbar arm locking sleeve and attach to carriage.
- 2) Position the door bracket on the door as shown in **Fig. 11**, with mounting holes on the door centerline. (Even with or above top door roller).
- 3) Fasten the door bracket to the door using two 1/4" -20 X 2-1/4" carriage bolts and nuts for wood doors. Use 1/4"- 20 self tapping sheet metal screws for metal doors. Or as recommended by the door manufacturer.
- 4) Use two (2) 3/8" -16 X 7/8" bolts and nuts to attach the door curved door arm to the straight drawbar arm.

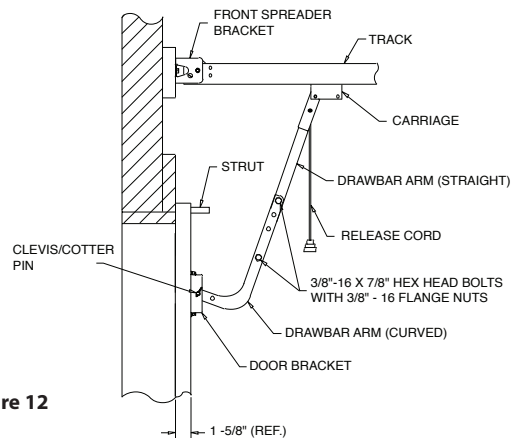
**NOTE:** Use the set of holes that align the drawbar in a near vertical position for operators without a brake. Set arms at a 20-30 degree rearward angle for **operators with a brake**.

For **units without a brake**, set arms as close to 0 degrees as possible.  
**Fig. 12.**

**NOTE:** If the door strut interferes with the mounting of the door bracket, position the door bracket below the strut. **DO NOT**, in any way, cut or modify the strut.



**Figure 11**



**Figure 12**

## Clutch Adjustment

These operators have a friction style clutch that can be adjusted.

**NOTE:** The clutch is intended to provide protection for the door, the operator and associated equipment. It is not intended for entrapment protection. They have a motor reversing feature that is integrated with the clutch assembly. If an obstruction is placed in the pathway of the door during operation the motor will stop and reverse when the clutch begins to slip. Therefore, the adjustment of the clutch should be such that the door and operator function in this manner. The clutch should be such that the door and operator function in this steps for clutch adjustment follow:

### To Adjust the Clutch

- 1) Decrease the tension on the clutch until the operator will not lift the door.
  - Turn the adjusting castle nut counter-clockwise to decrease clutch tension and clockwise to increase clutch tension.
- 2) After completing step 1, begin to increase tension on the clutch until the operator is capable of lifting the door through the complete cycle without clutch slippage.
- 3) Test the reversing feature of the operator by placing an obstruction under the door during a close cycle. The door should reverse on the obstruction and return to the open position. If the door does not close but comes down part way and reverses without any obstructions in its path, then increase the clutch tension until the door will close fully.
- 4) Finally, insert the cotter pin through the castle nut and shaft and bend the outer leg of the cotter pin.

**NOTE:** Periodically check the system for proper clutch action. If clutch starts to slip after working properly for some time, check manual operation of door BEFORE adjusting clutch. The door may not be operating freely or the counterbalance spring may need adjusting. Repairs and adjustments must be performed by a trained service representative using proper tools and instructions.

### To Adjust the Brake

- 1) Loosen the Adjustment Bracket Lock Nut/Bolt.
- 2) Slide the Adjustment Bracket as needed to reach the desired spring tension.  
When properly adjusted, the pivot arm should move with very little effort.
- 3) Re-tighten the Adjustment Bracket Lock Nut/Bolt.

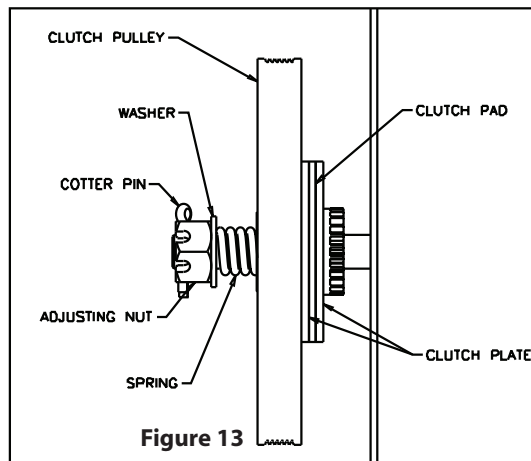


Figure 13

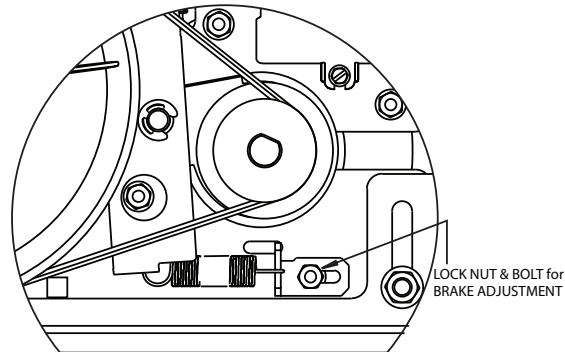


Figure 41



## Section 5: Wiring

### Line Voltage Wiring Fig. 1

#### WARNING

- DO NOT apply power to operator until instructed to do so.
- The Genie® Company recommends that line voltage wiring be performed by a qualified electrician.
- Be sure that electrical power has been disconnected from the input power wires being connected to the operator prior to handling these wires. An appropriate lock-out / tag-out procedure is recommended.
- Line voltage wiring must meet all local building codes.
- Make sure operator voltage, phase and frequency nameplate ratings are identical to the job site line voltage ratings.
- Input power wiring must be properly sized for the operators amperage rating located on the nameplate.
- To reduce the risk of electric shock, make sure the chassis of this unit is properly grounded.

- 1) Remove LINE VOLTAGE INPUT PLUG and install proper fittings and 1/2" conduit.
- 2) Route proper LINE VOLTAGE wires into operator.
- 3) Locate LINE INPUT terminals on circuit board. Using correct connectors, attach wires to LINE INPUTS, and GROUND terminal. **Fig. 2.**
  - Keep low voltage and line voltage wires separate.
  - Route all line voltage wires as shown.
  - Plug all unused conduit holes.

Figure 1

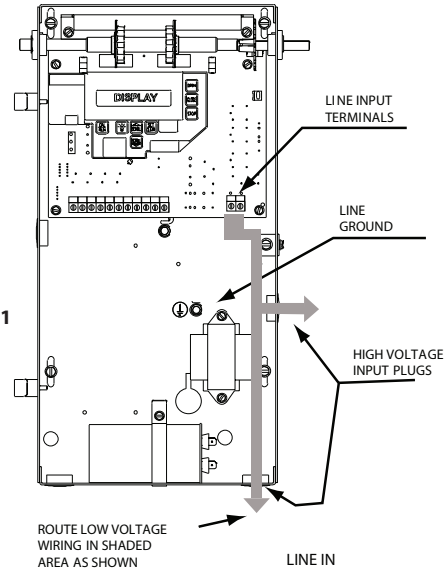
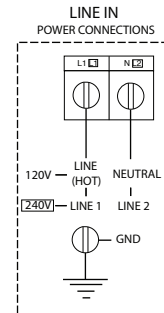


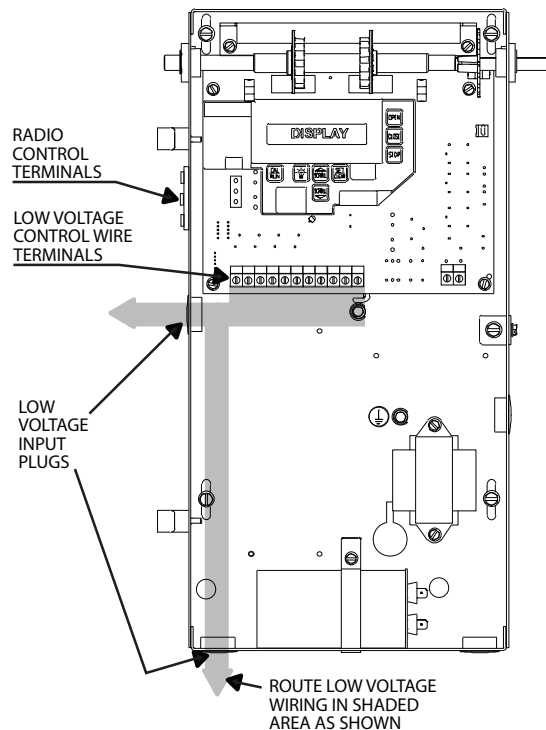
Figure 2



## Low Voltage Control Wiring (general) Fig. 3

- 1) Connect all LOW VOLTAGE control circuit wires to this side of unit using 1/2" conduit or flexible convoluted tubing.
  - Keep low voltage and line voltage wires separate.
  - Route all low voltage control wiring as shown. This includes all control circuit wires such as wall controls, timers and single button input devices as well as radio control and safety circuit wiring. See Figs 4 through 13 in this section.
  - Plug all unused conduit holes.

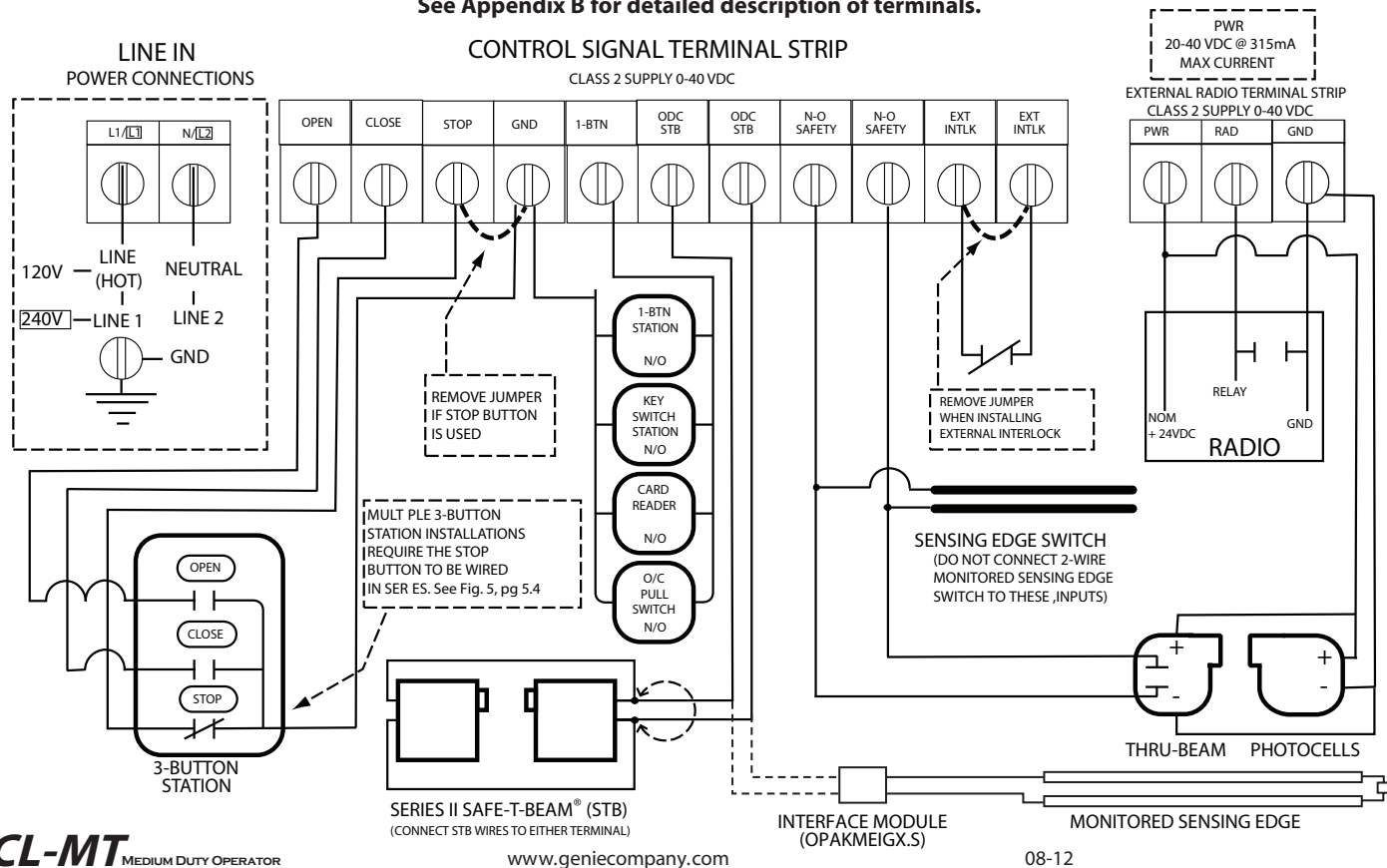
**NOTE:** For a detailed description of control wire terminals see Appendix B.



**Figure 3**

# External Wire Diagram

See Appendix B for detailed description of terminals.



## Wall Control

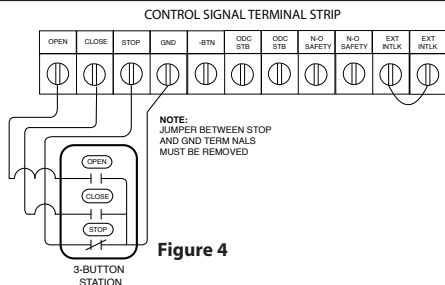
- 1) For a single 3 - button installation, make connections as shown in **Fig. 4**.
- 2) For a multiple 3 - button installations, make connections as shown in **Fig. 5**.
- 3) For single button accessory controls, make connections as shown in **Fig. 6**.

**NOTE:** If an External STOP button is NOT being installed, a jumper wire must be installed between the "STOP" AND "GND" terminals as shown in **Fig. 6**.

**NOTE:** Long Distance Relay Kit wiring is not required for long distance control runs and should not be used

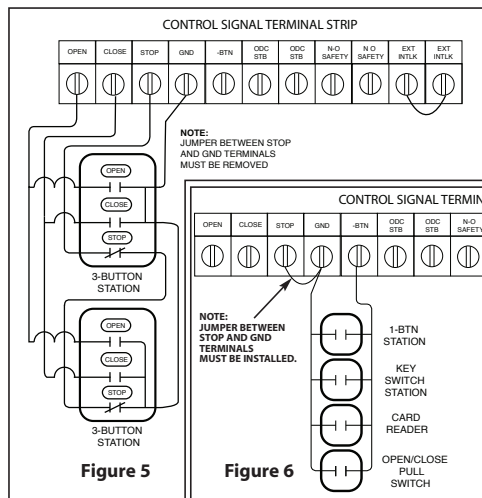
### ⚠ WARNING:

- Wall Control(s) must be located so that the door is within sight of the user and far enough from the door, or positioned, such that the user is prevented from coming in contact with the door while operating the controls.
- Attach the Warning placard adjacent to the Wall Control. **Fig. 4A**.
- Attach the Caution label adjacent to the Wall Control. **Fig. 4B**.

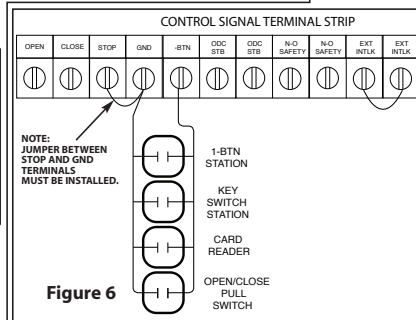


**Figure 4**

**Figure 4A**  
Entrapment  
Warning  
Placard



**Figure 5**



**Figure 6**

**⚠ WARNING:** If momentary contact control is to be used, a monitored external reversing device such as a photocell system or sensing edge switch must be used. See pages 5.6-5.7 for installation of entrapment protection devices.

**Figure 4B**

## CAUTION

This door is operated by a limited-duty operator. To prevent the motor protector from tripping, do not exceed 15 cycles of opening and closing per hour.

**NOT FOR RESIDENTIAL USE**

## Interlock Switches

- 1) Optional external interlock switches are required on some Sectional or Rolling Steel Doors to prevent door from operating under certain conditions including the following:
- If the door is equipped with a functioning door lock, an interlock switch must be installed to prevent electric operation when the lock is engaged.
  - If the door is equipped with a pedestrian pass-through door, an interlock switch must be installed at the pass-through door in order to prevent electrical operation when the pass-through door is open.

| CONTROL SIGNAL TERMINAL STRIP |       |      |     |       |         |         |            |            |            |            |  |
|-------------------------------|-------|------|-----|-------|---------|---------|------------|------------|------------|------------|--|
| OPEN                          | CLOSE | STOP | GND | 1 BTN | ODC 5TB | ODC 5TB | N/O SAFETY | N/O SAFETY | EXT. INTLK | EXT. INTLK |  |
|                               |       |      |     |       |         |         |            |            |            |            |  |

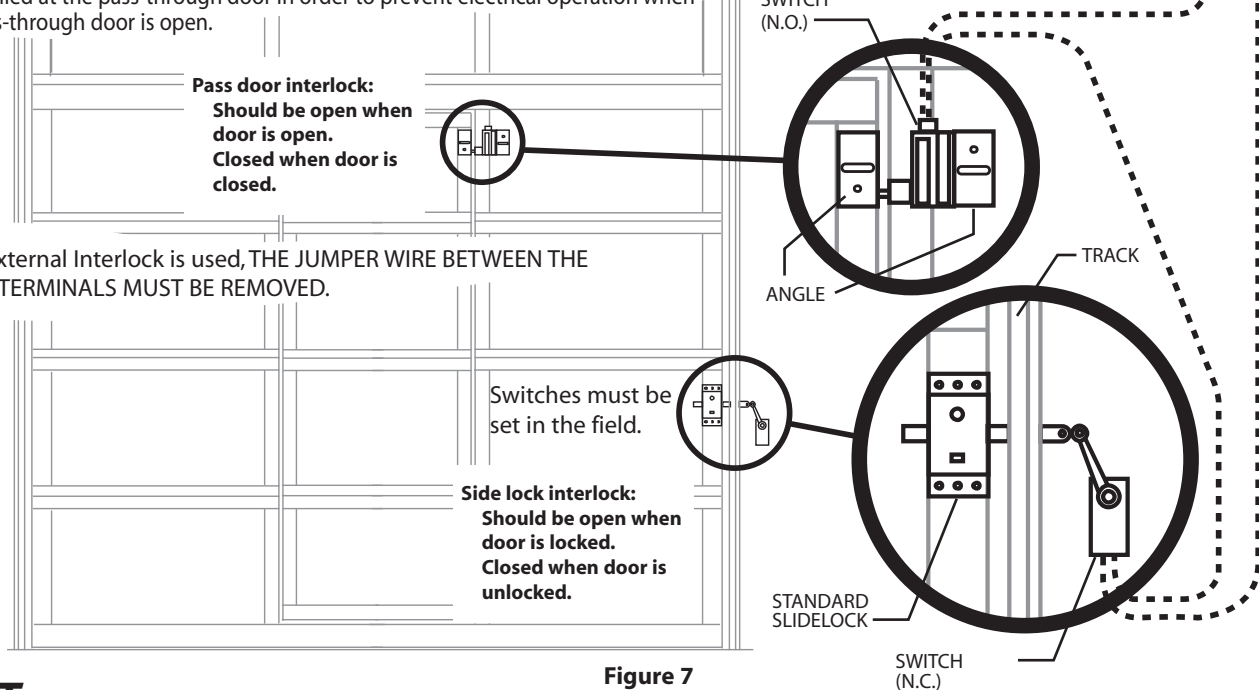


Figure 7

## Radio Control and Photocell Wiring

### Radio Control Installation

- 1) For a 3-wire radio control installation, make connections as shown in **Fig. 8**.

**NOTE:** PWR terminal supplies 20 – 40VDC. Radios used must be compatible with this voltage range.

**NOTE:** If no voltage is present at PWR terminal, check fuse F1 on control board.

### Series II Safe-T-Beam® Monitored Photocells

- 1) Monitored SERIES II (STB) photocells (P/N OPAKPE.S or OPAKPEN4GX.S) and Safe-T-Beam® Monitored Photocells from Genie® (P/N 38176R). **Fig. 9**. Wiring to these photocells can be connected to either terminal (they are not polarity sensitive). ( **Troubleshooting in Section 8**).

**NOTE:** Monitored Sensing device must be installed or unit will be Constant Contact Close.

**WARNING:** Actuating operator using constant contact on the CLOSE button will override external reversing devices, including photocells.

- 2) **To Mount Photocells:** (Kit includes detailed Instructions). Determine location for mounting. They do not need to be directly adjacent to the door but must be on the wall so there is an unobstructed line between them. **Fig 10**. Screws provided for mounting on soft material (wood, drywall, etc.). They must extend out away from the wall sufficiently that no door hardware breaks the plane of the photo-beam.

**WARNING:** Photocell systems provide entrapment protection when mounted near the doorway in such a way that the lower portion of an individual's leg will break the photocell beam during normal walking conditions.

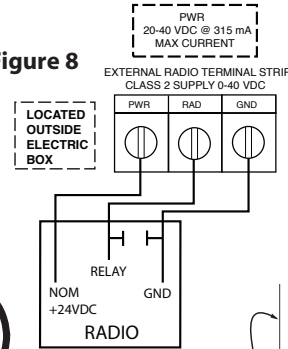
### Commercial Non-Monitored Photocells

- 1) Nominal 24 Volt DC Commercial photocells with normally open contacts can be connected as shown in **Fig. 11**.

**NOTE:** Blue wire supplies 20 – 40VDC. Photocells used must be compatible with this voltage range.

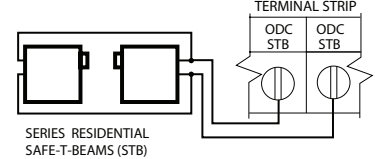
**NOTE:** If no voltage is present at Blue wire, check fuse F-1 on Control board.

**Figure 8**

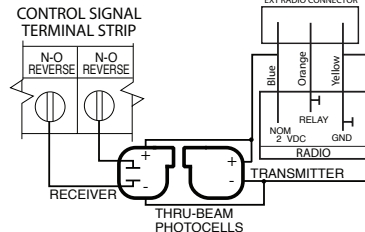
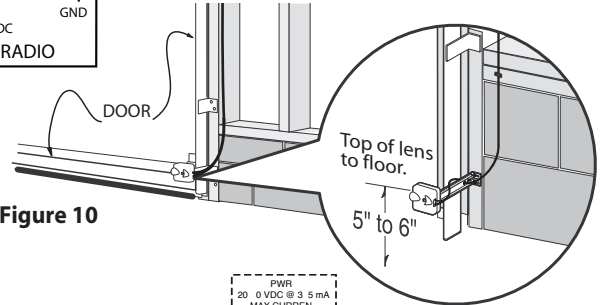


**Figure 9**

CONNECT WIRES TO EITHER TERMINAL.  
(NOT POLARITY SENSITIVE)



**Figure 10**



**Figure 11**

## Sensing Edge Switch Installation

**Figure 12** shows an example of a typical sensing edge installation. Left hand side is shown but right hand is a mirror image of this.

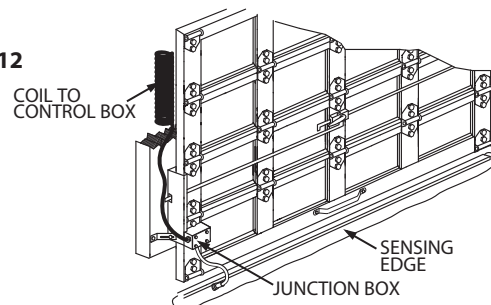
- 1A) If wiring from sensing edge switch to operator is coiled cord or 2 wire jacketed cord:
  - Install junction box 12" above the center of the door opening on same side as sensing switch.
  - Secure one end of cord to junction box using a cable clamp.
- 1B) If connection is to be made through a take up reel cord:
  - Install on same side as sensing edge switch and above door opening and slightly to the side.
  - Install junction box adjacent to take up reel and route the stationary cord from the reel to the box and secure with a cable clamp.

**NOTE: Do not use a take-up-reel on a monitored edge.** They have slip connections in them that momentarily break contact which causes false reversals.

- 2) Secure other end of cord (straight, coiled or reel) to sensing edge switch enclosure using a cable clamp.
- 3) Connect wires of cord to sensing edge switch using wire nuts or other suitable wire connectors.
- 4) Run a straight 2 wire cord from the junction box (Step 1) to the operator electrical box.
  - Secure using cable clamp on each end.
- 5) Join wires in cord from operator to wires in cord from switch using wire nuts or other suitable wire connectors.
- 6A) **Monitored** sensing or reversing edge connects to optional Timer-Close Module terminals shown in **Fig. 13A**.
- 6B) **Monitored** sensing edge connects to main circuit board ODC STB terminals using the optional OPAKMEIGX.S as shown in **Fig. 13B**.
- 7) Operate the door to make certain cord is free to travel and does not become snared during door opening or closing.
  - Check sensing edge switch for proper operation.

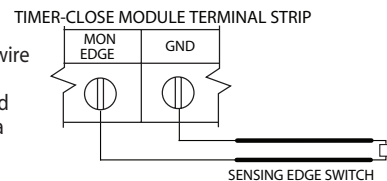
**⚠ WARNING:** Actuating the operator using constant contact on the CLOSE button will override external reversing devices, including sensing edges or reversing edges.

**Figure 12**



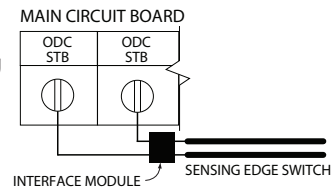
**Figure 13A**

**NOTE** Monitored 2-wire sensing or reversing edge can only be used in combination with a Timer-Close Module.



**Figure 13B**

**NOTE:** Monitored sensing edge connects to main circuit board ODC STB terminals using optional OPAKMEIGX.S INTERFACE MODULE.



## **IMPORTANT SAFETY INSTRUCTIONS**

### **WARNING -**

**To reduce the risk of severe injury or death:**

- 1) READ AND FOLLOW ALL INSTRUCTIONS.
- 2) Never let children operate or play with door controls. Keep the remote control (where provided) away from children.
- 3) Personnel should keep away from a door in motion and keep the moving door in sight until it is completely closed or opened. NO ONE SHOULD CROSS THE PATH OF A MOVING DOOR.
- 4) Test the door's safety features at least once a month. After adjusting either the force or the limit of travel, retest the door operator's safety features.
- 5) For products having a manual release, if possible, use the manual release only when the door is closed. Use caution when operating the release while the door is open. Weak or broken springs may cause the door to fall rapidly, causing severe injury or death.
- 6) KEEP DOOR PROPERLY OPERATING AND BALANCED. See Door Manufacturer's Owner's Manual. An improperly operating or improperly balanced door could cause severe injury or death. Have only trained door systems technicians make repairs to cables, spring assemblies and hardware.
- 7) SAVE THESE INSTRUCTIONS.



## Section 6: Operator Setup Procedure

### Control Panel

The operators include a full function control panel including a liquid crystal display (LCD), calibration keys and Open, Close and Stop keys for on board operator control. See **Fig. 1**. The open, close and stop keys function as a 3-button wall control. The Display will show current operator conditions and calibration information. Due to limited character space, some displays will be abbreviated. See Appendix C (pgs.10.11-10.13) for full display descriptions.

The operators also include a non-volatile memory. The unit will remember all calibration settings plus error code and run code logs, if power is removed from unit.

**NOTE:** During Setup, refer to Caution Label for limited use (see page 5.4).

#### APPLY POWER NOW

- Make sure door is in the mid-travel position.
- Apply primary power.

**⚠ DANGER:** After power is supplied to the operator, **Do Not** make contact with components inside the control panel except for the Keypad Keys. **Fig. 1.**

#### Control Operating Modes

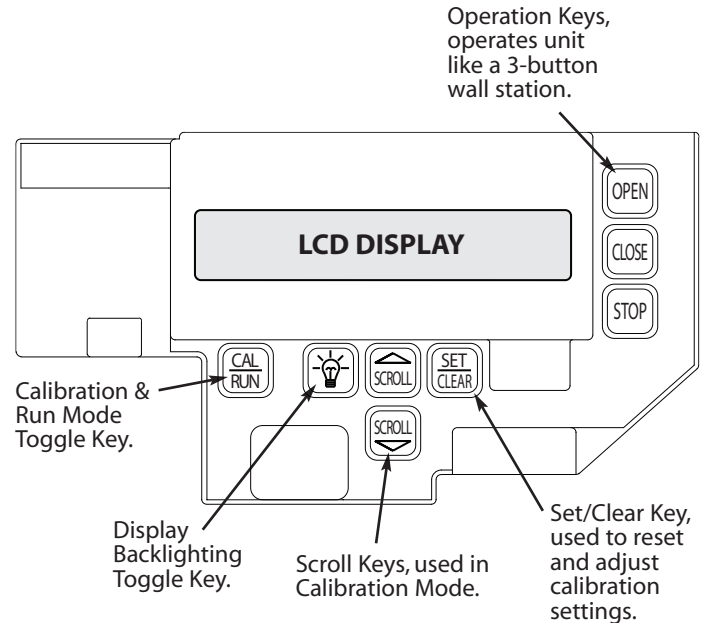
Operator control boards operate in two modes: Run Mode and Calibration Mode. The control board should normally operate in the Run Mode. The operator is calibrated in Calibration Mode.

#### With the operator standing idle

PRESS CAL/RUN TO TOGGLE BETWEEN OPERATING MODES.

- The first display in calibration mode is "open mode>\*\*\*"  
(\*\*\* = current operating mode).
- Display in run mode will be one of the condition codes listed in Appendix C.

**NOTE:** The CAL/RUN key will not toggle between operator modes while the operator is running.



**Figure 1**

## Setting Constant Contact

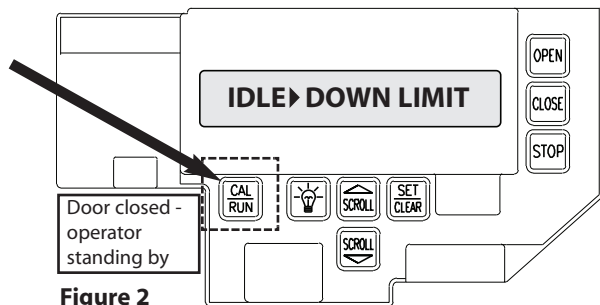
The operators are shipped from the factory with both open and close operating modes set to constant contact – stop (C – STP) If your unit is set to Momentary Contact (MOM) Open and/or CLOSE, reset the operating modes by taking the following steps:

- 1) Press CAL/RUN to enter calibration mode. **Fig. 2.**
- 2) Press SET/CLEAR until display reads “OPEN MODE > C-STP.” **Fig. 3.**
- 3) Press SCROLL (DN) until display reads “CLOSE MODE.” **Fig. 4.**
- 4) Press SET/CLEAR until display reads “CLOSE MODE > C-STP.”

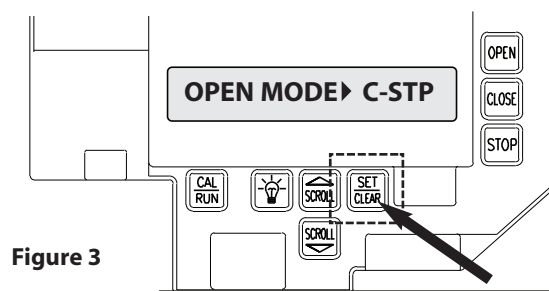
**Fig. 5.**

**⚠WARNING:** If a monitored external reversing device is not used, then the operator will be a Constant Contact Close. Verify close mode is set to “C-STP” and NOT “C-REV”.

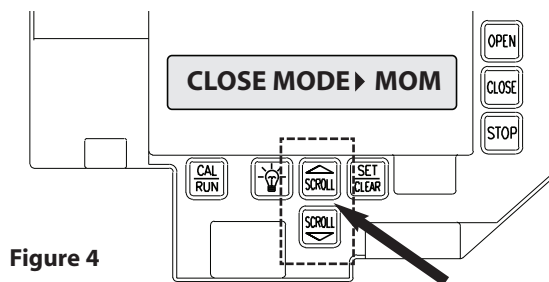
- 5) Press CAL/RUN to return to run mode.



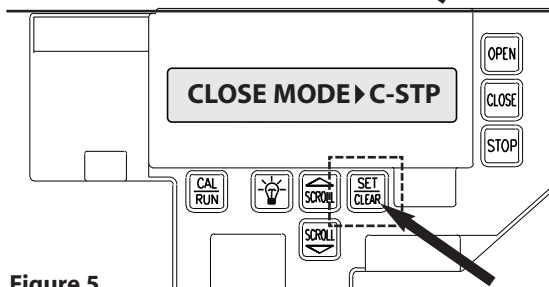
**Figure 2**



**Figure 3**



**Figure 4**



**Figure 5**

## Setting Limit Travel

- 1) Engage door to Operator.

**NOTE:** Verify open and close operating modes are set to constant contact – Stop (C-STP). See page 6.2 for details.

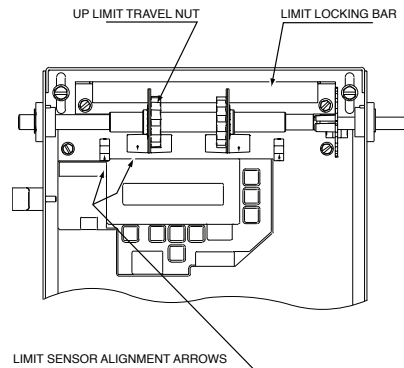
- 2) Press CAL/RUN until operator is in run mode.
- 3) Press and hold OPEN Key on Control Panel. Run door to desired open position, release OPEN Key.
- 4) Push LIMIT LOCKING BAR away from Limit Sensors and turn Open Limit Travel Nut until travel nut arrow and open limit sensor arrow are aligned and the display reads "IDLE>UP LIMIT."
- 5) Release the LIMIT LOCKING BAR and make sure bar seats completely into both Travel Nuts. **Fig. 6.**
- 6) Press and hold CLOSE key on Control Panel. Run door to within 2" above floor, release Close button.

---

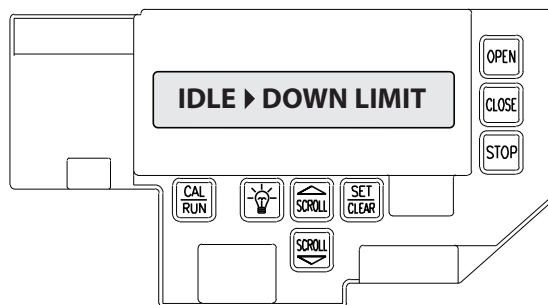
**NOTE:** If the operator stops while trying to set limits and the display reads "GDO shutdown>MRT," see page 6.6 "Resetting Max Run Timers".

---

- 7) Push LIMIT LOCKING BAR away from Limit Sensors and turn Close Limit Travel Nut until travel nut arrow and close limit sensor arrow are aligned and the display reads "IDLE > DOWN LIMIT." **Fig. 7.**
- 8) Run door fully Open and Closed with Open & Close Keys on control panel and make final adjustments as necessary to make sure that door opens fully and closes no more than 2" above the floor.



**Figure 6**



**Figure 7**

## Setting Limit Overrun

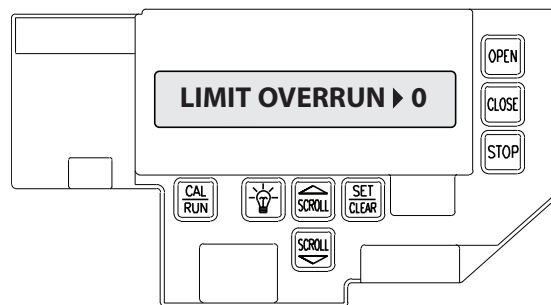
**⚠ WARNING:** The Limit Overrun function will override external reversing devices, including photocells and sensing edges or reversing edges. Therefore, any externally connected devices will be disabled during that portion of the door travel controlled by the Limit Overrun function.  
The Down Limit Overrun function should be used to close the door no more than the final 2".

- A) The Limit Overrun setting is a matter of trial and error. The goal is to adjust the Limit Overrun until an appropriate seal is obtained between the bottom edge of the door and the floor.
- B) The Limit Overrun setting can be varied between 0 and 9. 0 - disables the Limit Overrun so that the door stops at the down limit switch setting. 9 - causes the greatest amount of door travel beyond the limit switch setting. Door should close gently with light tension on door cables, or minimal stacking on rolling steel slats.

- 1) Press CAL-RUN to enter calibration mode
- 2) Press scroll (▼) until the display reads "LIMIT OVERRUN >(0-9)." **Fig. 8.**
- 3) Press SET/CLEAR until the display reads the desired value.
- 4) Press the OPEN key to open the door a few feet, then release
- 5) Press the CLOSE key to close the door and hold until the operator stops.
- 6) Check the door seal and repeat steps 3-5 until the appropriate seal is obtained between the door and the floor.

**⚠ CAUTION:** If proper seal cannot be obtained at a setting of 9, Reset the Limit Overrun back to 0 and reset the Down Limit position as described on pg.6.3. Then adjust the Limit Overrun as instructed above.

- 7) Press CAL-RUN to return to Run mode.



**Figure 8**

## Monitored Reversing Devices

### Safe-T-Beams® (OPTIONAL)

- 1) If operator is in RUN mode, press CAL/RUN  to enter calibration mode.
- 2) Press SCROLL  (up or down) until display reads "ODC STB>ON" or "ODC STB>OFF" **Figure 15**.
- 3) Press SET/CLEAR  key to toggle between ON and OFF.
- 4) Press SCROLL  (up or down) to shift to a new function and lock setting.
- 5) Press CAL/RUN  to return to run mode.

**⚠ WARNING:** Photocell systems provide entrapment protection when mounted near the doorway in such a way that the lower portion of an individual's leg will break the photocell beam during normal walking through the doorway.

### Current UL Approved Monitored Reversing Devices

- 1) MillerEdge ME and MT series monitored edge sensors used in combination with Timer-Close Module P/N OPABTCX.S.
- 2) MillerEdge ME and MT series monitored edge sensors (Direct connect through STB inputs). using OPAKMEIX.S INTERFACE MODULE.
- 3) Residential Safe-T-Beam® Monitored Photocells from The Genie® Company, model OSTB-BX (P/N 38176R).
- 4) Monitored Photocells (P/N OPAKPEN4GX.S.).

**NOTE:** Installation of Series II Monitored Photocells DOES NOT make the unit legal for residential use.

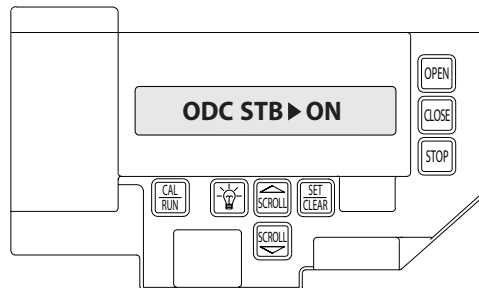


Figure 15

## Max Run Timer

This operator will automatically set its maximum run timers (MRT) when the unit is run two full cycles from limit to limit, without stopping, in the run mode. The Max Run Timer is a feature that prevents the unit from running continuously in the event of a slipping clutch, etc.

**NOTE:** The MRT's are set to the time required to run from one limit to the other, plus 5 seconds (nominal). When the MRT is exceeded, the operator stops and may reverse. The operator will not respond to any command until it is reset by pressing one of the calibration keys or by cycling power to the unit.

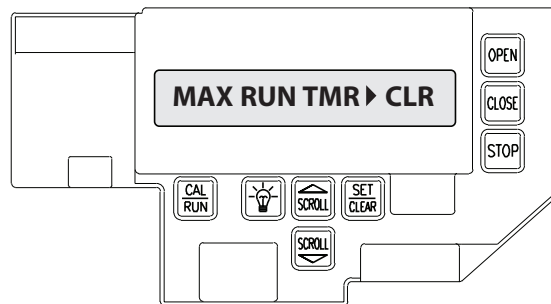
## Resetting the Max Run Timers

The Maximum Run timers can be reset using this procedure:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press Scroll (DN) until display reads "MAX RUN TMR > SET."
- 3) Press SET/CLEAR until display reads "MAX RUN TMR > CLEAR."  
**FIG. 10.**
- 4) Press CAL/RUN to return to run mode.
- 5) Cycle the door fully open and fully closed without stopping.

**NOTE:** The Max Run Timers must be reset each and every time the travel limits are adjusted.

**CAUTION:** The Mid-Stop feature must be turned off to properly set the maximum run timers.



**Figure 10**

## Setting the Mid-Stop

The operator includes a programmable Mid-Stop. This feature allows the operator stop at a user selectable point when opening. It is used when operating very tall doors that only open to their full height occasionally. The Mid-Stop does not effect the operator when closing.

- 1) To operate door to full open position from mid-stop, press open button again.

---

**NOTE:** Setting of the MID-STOP should only be performed AFTER Travel Limit and Max Run Timer settings have been made.

---

### To set the Mid-Stop:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press the CLOSE key to close the door to the down limit.
- 3) Press SCROLL (▼) until the display reads "MID-STOP > CLEAR."

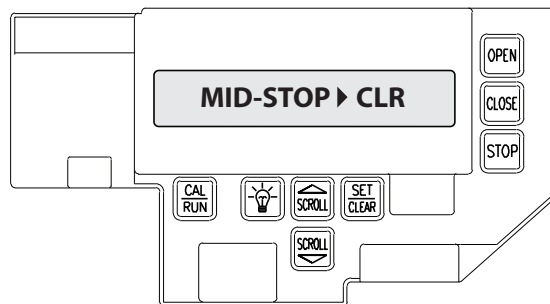
**Fig. 11.**

**NOTE:** If the display reads MID-STOP > SET at this point, first clear the MID-STOP as described below then repeat steps 1-3 and continue.

- 4) Press the OPEN key to open the door and release the key when the door is at the desired Mid-Stop height.
- 5) Press the SET/CLEAR until the display reads "MID-STOP > SET."
- 6) Press CAL/RUN to return to run mode.

### To clear the Mid-Stop:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (▼) until the display reads MID-STOP > SET.
- 3) Press SET/CLEAR until the display reads MID-STOP > CLR
- 4) Press CAL/RUN to return to run mode.



**Figure 11**

## Changing Open and Close Modes

**NOTE:** Once the travel limit and safety modes have been set, the OPEN and CLOSE modes may be set for Momentary Contact if desired.

### **⚠ WARNING**

If momentary contact control is to be used, a monitored external reversing device such as a photocell system or sensing edge switch must be used.

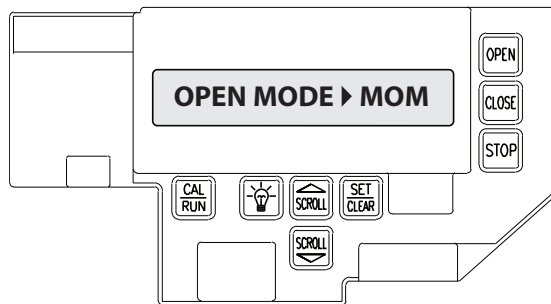
**NOTE:** The radio control input will not operate when the open or close mode is set in the Constant Contact mode. Operating modes affect all control inputs and keys.

#### **To set the OPEN mode: Fig. 12.**

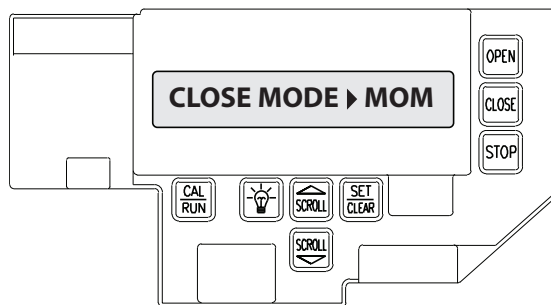
- 1) Press CAL/RUN to enter the calibration mode.
- 2) Press SCROLL (▲) or (▼) until display reads "OPEN MODE > ."
  - This displays current setting.
- 3) Press SET/CLEAR until the display reads the desired operating mode:
  - C-STP = Constant contact is required to open door. Door will stop if button or key is released before operator reaches its limit.
  - MOM = Momentary contact will cause door to open to limit.
- 4) Press CAL/RUN to return to run mode.

#### **To set the CLOSE mode: Fig. 13.**

- 1) Press CAL/RUN to enter the calibration mode.
- 2) Press SCROLL (▲) or (▼) until display reads "CLOSE MODE > ."
  - This displays current setting.
- 3) Press SET/CLEAR until the display reads the desired operating mode:
  - C-STP = Constant contact is required to close door. Door will stop if button or key is released before operator reaches its limit.
  - C-REV = Constant contact is required to close the door. Door will reverse automatically if close button or key is released before door reaches down limit.
  - MOM = Momentary contact will cause door to close to limit.
- 4) Press CAL/RUN to return to run mode.



**Figure 12**



**Figure 13**



## Section 7: Special Operator Features

### Operator Cycle Count Fig. 1

*The operators include a built-in cycle counter that store the count with or without power to the operator.*

#### To view the Cycle Count:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (▲) or (▼) until display reads "CYCLES > ."  
This will display current cycle count.
- 3) Press CAL/RUN to return to run mode.

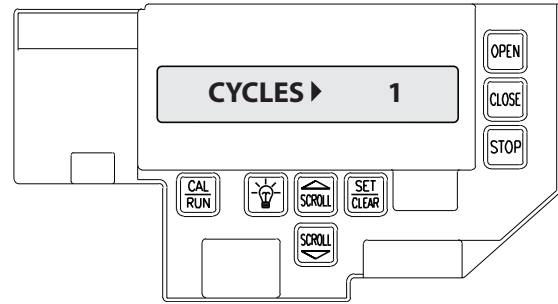


Figure 1

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### Circuit Board Firmware Version Fig. 2

*The operators can display the version number of the firmware used in the on-board micro-controller.*

#### To view this version number:

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (▲) or (▼) until the display reads "FIRMWARE > ."  
This will display the current firmware version number.
- 3) Press CAL/RUN to return to run mode.

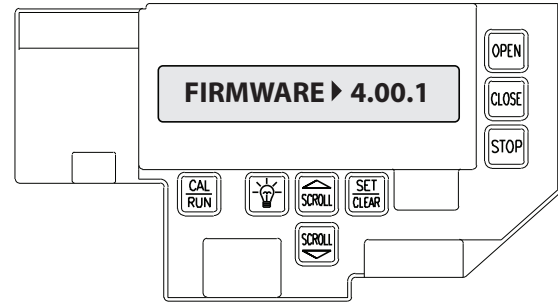


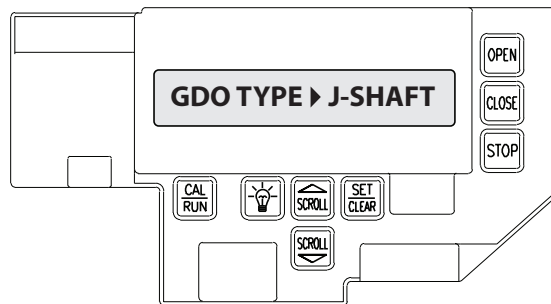
Figure 2

## Operator Type Fig. 3

*These operators are available for use in jackshaft or trolley configurations. The same control board is used for either configuration, however the control board must be set for the appropriate GDO configuration. A board set for trolley mode will not work in a jackshaft operator and vice-versa.*

**NOTE:** The GDO type is factory set. The installer should not have to set this feature. However, if the GDO type is inadvertently changed, or if a board needs to be replaced in the field, follow these instructions to set GDO type.

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (▲) or (▼) until display reads "GDO TYPE >."
- 3) Press SET/CLEAR until display indicates correct GDO type ( J-SHAFT or TROLLEY)
- 4) Press CAL/RUN to return to run mode.



**Figure 3**

## Section 8: Troubleshooting

### Display Operation in Run Mode

The operators display their status on the LCD display. Each time the operator runs, stops, reverses or refuses to run, the display will indicate why the action did, or did not, take place.

Once an error code has been generated, the operator will continue to display the error code while the operator is not running. This error code can be cleared by pressing the STOP button or STOP key on the keypad. The error code will automatically clear when the operator stops at the down limit. Error codes will continue to be stored in the operator's Error Code Memory after they have been cleared from the display in the Run Mode.

### Error Codes

To aid in troubleshooting problems, the operators include an error code memory that stores the last 10 error events. These codes are stored with or without power. The last error code detected is also displayed on the LCD until the stop button or key is pressed or the operator stops at the down limit.

The error code memory stores the last 10 error codes in sequence. Once 10 codes are stored, the oldest code is erased to make room for the newest code. These codes are displayed in calibration mode. The display will flash the number of the error code and the 2-digit error code followed by a description of the error code. **Fig. 1 & 2.**

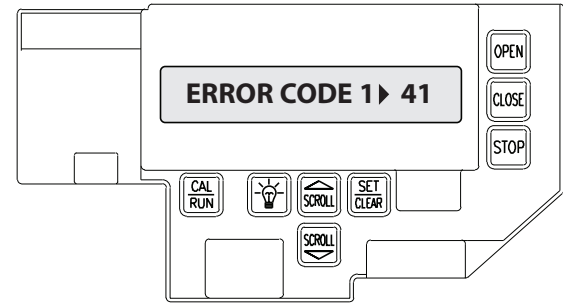


Figure 1

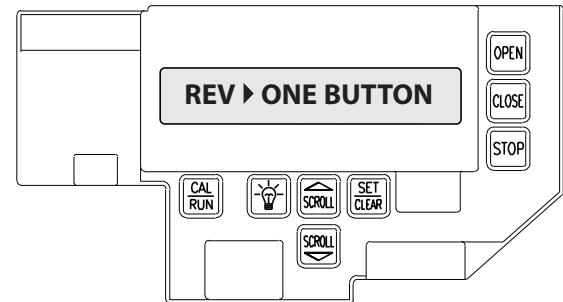


Figure 2

## Error Codes (cont')

### To view the error code memory: (Fig. 1 & 2)

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (▲) or (▼) until display reads "ERROR CODE 1 >."
  - The display will begin flashing the error code number and 2-digit error code followed by its description.
  - Reminder: Error code number 1 is the latest code generated.
- 3) Press SET/CLEAR. The display will now read "ERROR CODE 2 >." (This is the error code which was generated before error code 1.)
- 4) Repeat step 3 until all 10 error codes have been displayed or move on to step 5 when ready.
- 5) Press CAL/RUN to return to run mode.

**NOTE:** For all error codes see Appendix C, Sections 10.7 - 10.8.

## Run Codes

*The operators also include a run code memory that stores the last 10 run events. These codes are stored with or without power. Each time the operator runs or stops, it generates a code that it stores in this memory (Why the operator ran or stopped). Used together with the error code memory, it becomes a powerful troubleshooting aid.*

*The run code memory stores the last 10 error codes in sequence. Once 10 codes are stored, the oldest code is erased to make room for the newest code. These codes are displayed in calibration mode. The display will flash the number of the run code and the 2-digit run code followed by a description of the run code. **Fig. 3 & 4.***

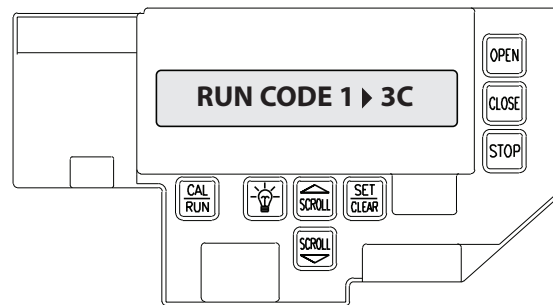


Figure 3

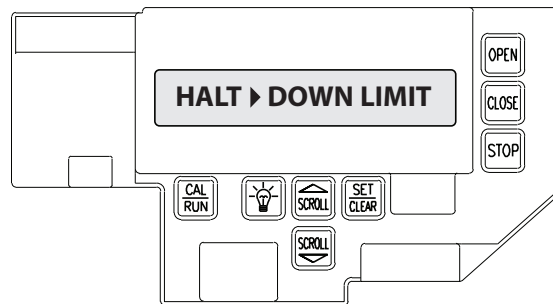


Figure 4

## Run Codes (cont')

### To view the run code memory: (Fig. 3 & 4)

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (▲) or (▼) until display reads "RUN CODE 1 > ."  
 • The display will begin flashing the run code number and code followed by its description.  
 • Remember: run code number 1 is the latest code generated.
- 3) Press SET/CLEAR. The display will now read "RUN CODE 2 > ."  
 (This is the run code which was generated before run code 1)
- 4) Repeat step 3 until all 10 run codes have been displayed or move on to step 5 when ready.
- 5) Press CAL/RUN to return to run mode.

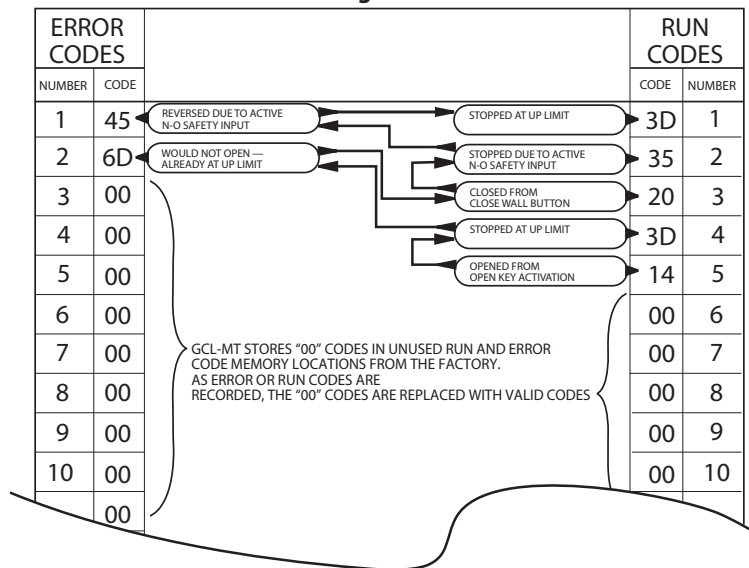
**NOTE:** For all run codes see Appendix C, Section 10.6.

### TROUBLESHOOTING EXAMPLE USING RUN AND ERROR CODE MEMORIES. Fig. 5.

1. In Calibration Mode, display and write down each Run Code and Error Code stored in memory.
2. List as shown below.
3. Refer to Appendix C to interpret the codes.

In this example, the operator was opened using the OPEN key on the keypad and stopped at the up limit. The OPEN wall button was then activated, causing the "6D" code to be generated since the operator could not open when it is already at the up limit. The CLOSE wall button was then activated, causing the operator to close. While closing, the Normally-Open (N-O) Safety Input was activated, causing the operator to stop and then reverse, stopping at the up limit.

Figure 5



# LED Indicators Fig. 6

These operators include a self-diagnostic circuit board using troubleshooting LED indicators to signal the technician of a problem.

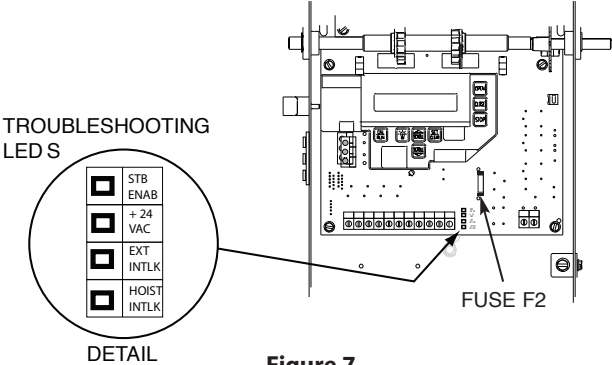


Figure 7

| TROUBLESHOOTING LED's |                    |               |            |                                                                                                                                                |
|-----------------------|--------------------|---------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| HOIST INTERLOCK       | EXTERNAL INTERLOCK | + 24 VOLTS DC | STB ENABLE | INDICATION                                                                                                                                     |
|                       |                    |               | OFF        | STB DISABLED                                                                                                                                   |
|                       |                    |               | ON         | STB ENABLED                                                                                                                                    |
| ON                    | ON                 | ON            |            | NORMAL OPERATING CONDITION                                                                                                                     |
| OFF                   | ON                 | ON            |            | HOIST INTERLOCK SWITCH OPEN:<br>1) HOIST RELEASE NEEDS RESET.<br>2) HOIST INTERLOCK CONNECTOR NOT PLUGGED IN.<br>3) HOIST INTERLOCK DEFECTIVE. |
| OFF                   | OFF                | ON            |            | EXTERNAL INTERLOCK OPEN                                                                                                                        |
| OFF                   | OFF                | OFF           |            | POWER SUPPLY PROBLEM:<br>1) CHECK AC POWER SUPPLY.<br>2) CHECK MAIN POWER FUSE.<br>3) CHECK SECONDARY FUSE (2A).                               |

## Safe-T-Beam® Monitored Photocell Self-diagnostic Troubleshooting Chart

| SOURCE (RED LED)         | SENSOR (GREEN LED) | INDICATED CONDITION                                                 | REQUIRED ACTION                                                            |
|--------------------------|--------------------|---------------------------------------------------------------------|----------------------------------------------------------------------------|
| ● ON                     | ● ON               | NORMAL OPERATION                                                    | NONE REQUIRED                                                              |
| ○ OFF                    | ○ OFF              | 1. POWER HEAD NOT POWERED<br>2. WIRING FROM POWER HEAD BAD          | 1. CHECK BREAKERS, FUSES, PLUGS<br>2. CHECK WIRING FOR OBVIOUS SHORTS      |
| ○ OFF                    | ● ON               | 1. WIRING TO SOURCE MISSING OR BAD<br>2. POWER HAS BEEN INTERRUPTED | 1. CHECK WIRING<br>2. REMOVE POWER AND REAPPLY                             |
| 2 BLINKS, PAUSE (REPEAT) | ● ON               | 1. BEAM NOT ALIGNED<br>2. BEAM OBSTRUCTED<br>3. SENSOR DEFECTIVE    | 1. CHECK ALIGNMENT<br>2. CHECK FOR OBSTRUCTION<br>3. CALL CUSTOMER SERVICE |
| 2 BLINKS, PAUSE (REPEAT) | ○ OFF              | 1. WIRE TO SENSOR MISSING OR BAD<br>2. SENSOR DEFECTIVE             | 1. CHECK WIRING<br>2. CALL CUSTOMER SERVICE                                |
| 3 BLINKS, PAUSE (REPEAT) | ● ON               | 1. SENSOR RECEIVING INTERFERENCE                                    | 1. ATTEMPT TO DETERMINE SOURCE OF INTERFERENCE<br>2. CALL CUSTOMER SERVICE |
| 4 BLINKS, PAUSE (REPEAT) | ● ON               | 1. SOURCE NOT SENDING PULSES<br>2. SOURCE DEFECTIVE                 | 1. CALL CUSTOMER SERVICE<br>2. CALL CUSTOMER SERVICE                       |



### WARNING:

ACTUATING THE OPERATOR BY USING CONSTANT CONTACT ON THE CLOSE BUTTON WILL OVERRIDE ALL EXTERNAL REVERSING DEVICES.

## Section 9: Service and Maintenance

### Maintenance Schedule

The following table provides a schedule of recommended Service and Maintenance items to be completed by a trained service representative.

#### **CAUTION**

Failure to perform the recommended Service & Maintenance may result in premature failure of the operator.

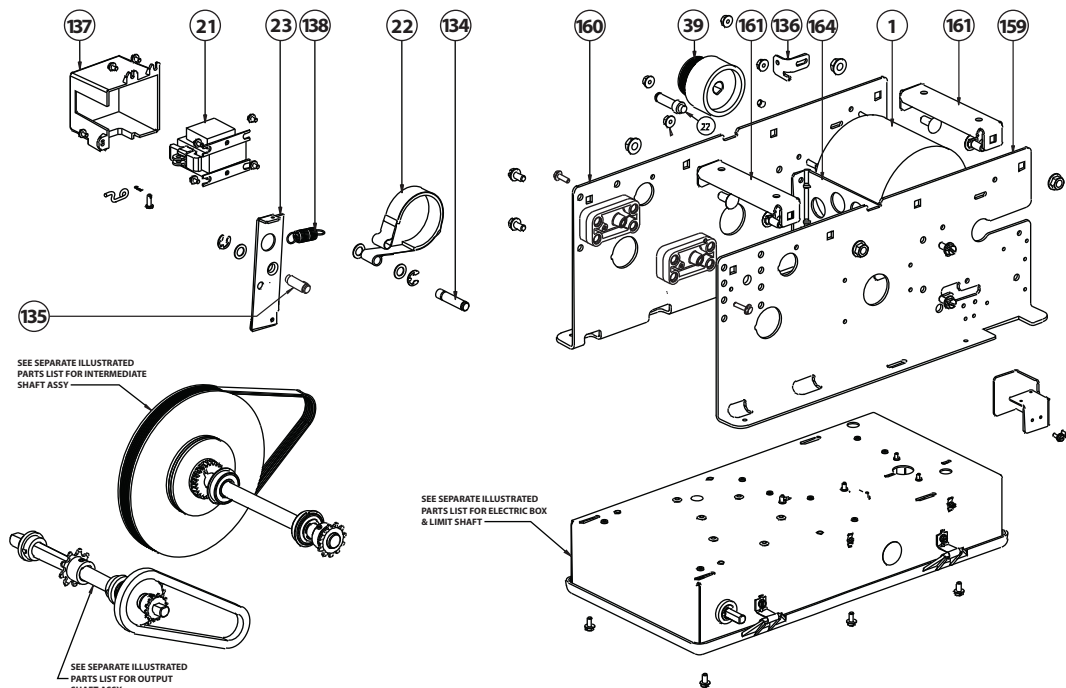
| SERVICE ITEM                         | SERVICE INTERVAL (FREQUENCY)      |                                     |                                     |
|--------------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
|                                      | EVERY 6 MO.<br>OR<br>5,000 CYCLES | EVERY 12 MO.<br>OR<br>10,000 CYCLES | EVERY 36 MO.<br>OR<br>30,000 CYCLES |
| MANUAL OPERATION OF DOOR             | ●                                 |                                     |                                     |
| DRIVE CHAIN TENSION                  | ●                                 |                                     |                                     |
| * PHOTOCCELL/ SENSING EDGE OPERATION | ●                                 |                                     |                                     |
| CLUTCH ADJUSTMENT                    |                                   | ●                                   |                                     |
| BRAKE ADJUSTMENT                     |                                   | ●                                   |                                     |
| CHECK FOR LOSE OR MISSING HARDWARE   |                                   | ●                                   |                                     |
| CHECK LIMIT POSITION                 |                                   |                                     | ●                                   |
| GEAR TRAIN WEAR                      |                                   |                                     | ●                                   |

\* ALL EXTERNAL REVERSING DEVICES SHOULD BE CHECKED MONTHLY.



## Section 10: Appendix A

### Basic Operator Parts

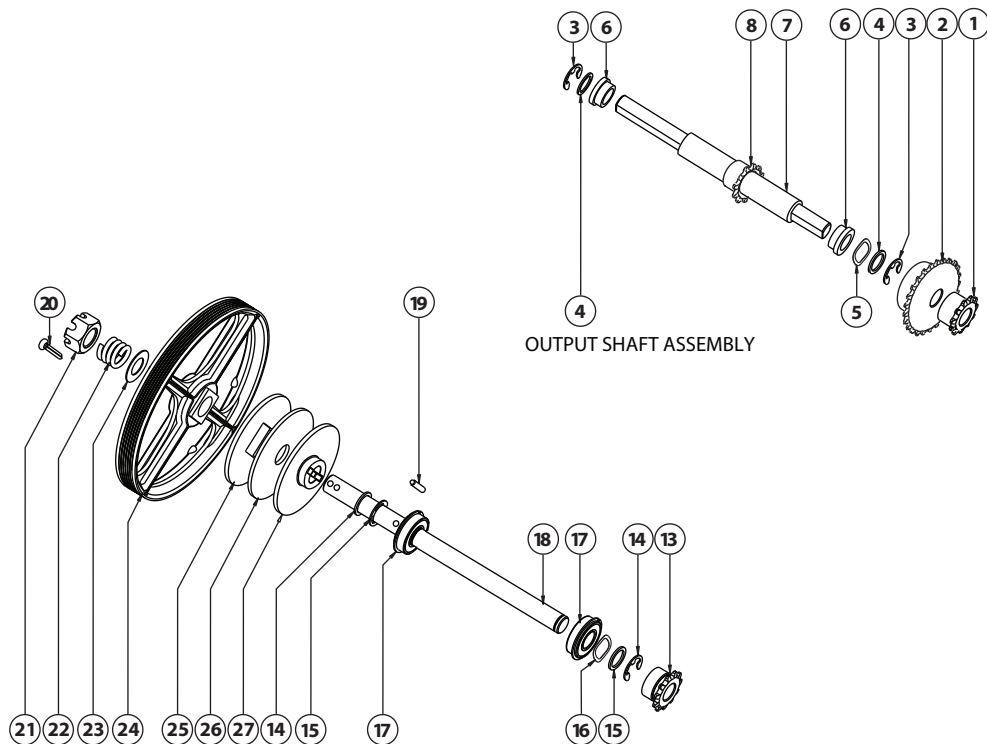


| PARTS LIST |               |                        |
|------------|---------------|------------------------|
| ITEM NO.   | PART NUMBER   | DESCRIPTION            |
| 1          | 110380**      | ELECTRIC MOTOR         |
| 21         | 110847**      | BRAKE SOLENOID         |
| 22         | 110450.0001   | BRAKE BAND             |
| 23         | 110449.0001   | BRAKE RELEASE LEVER    |
| 39         | 110443**      | BAND BRAKE PULLEY      |
| 134        | 110522.0001   | BRAKE POST—FLOATING    |
| 135        | 110521.0001   | BRAKE POST—FIXED       |
| 136        | 110808.0001.S | BRAKE ADJUSTMENT PLATE |
| 137        | 110549.0001   | BRAKE SOLENOID COVER   |
| 138        | 110824.0001.S | BRAKE RELEASE SPRING   |
| 159        | 111051.0002   | OPERATOR CHASSIS RIGHT |
| 160        | 111051.0001   | OPERATOR CHASSIS LEFT  |
| 161        | 110803.0001.S | SUPPORT BRACE          |
| 164        | 111804.0001.S | SUPPORT BRACKET        |

\*\* CONTACT DEALER FOR PROPER PART  
BASED ON YOUR SPECIFIC MODEL.

## Appendix A (cont')

### Basic Shaft Assembly Parts

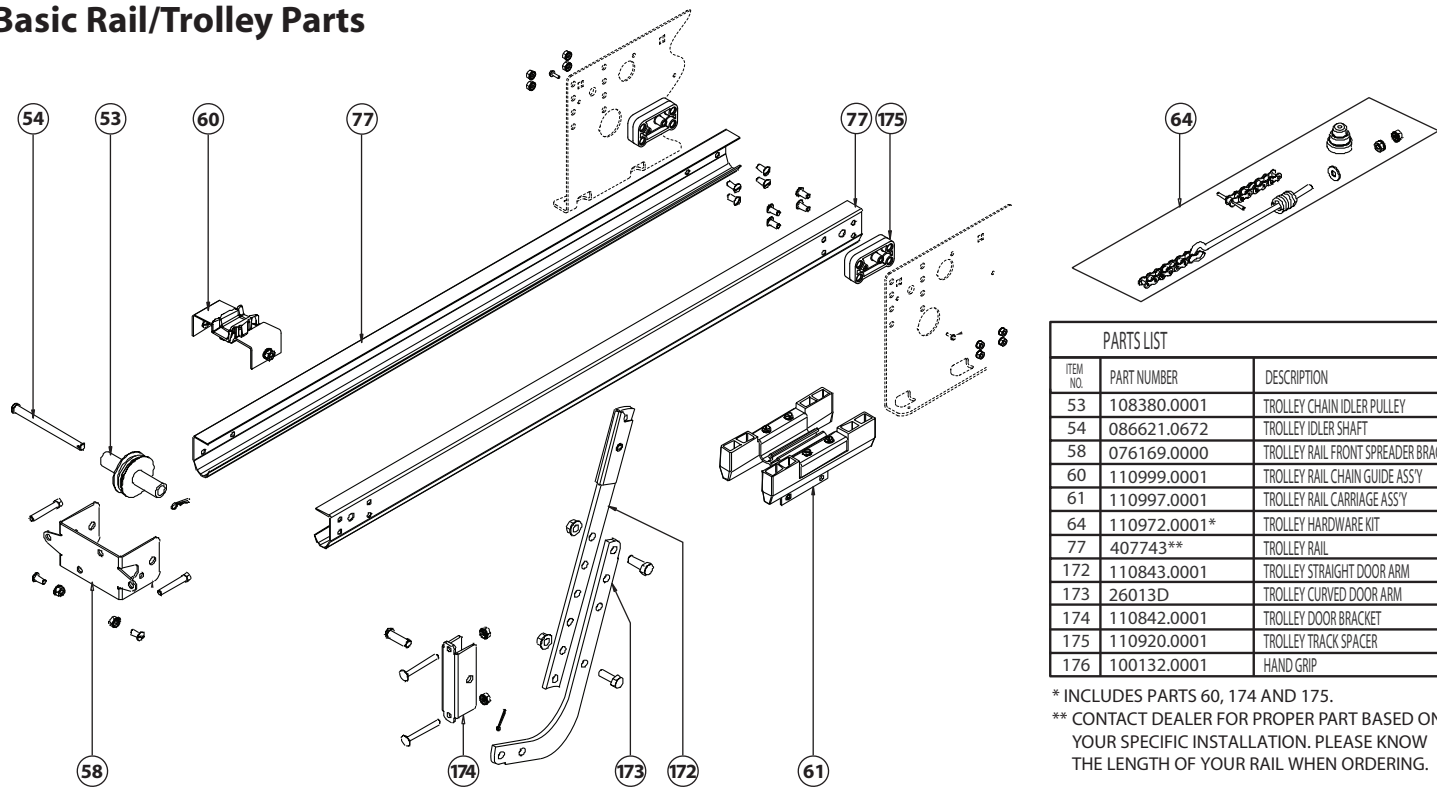


| PARTS LIST |             |                            |
|------------|-------------|----------------------------|
| ITEM NO.   | PART NUMBER | DESCRIPTION                |
| 1          | 086563.0001 | SPRKT, 14T, 1/4P, 1/2B     |
| 2          | 110526.0001 | SPRKT, 19T, #35CH, 3/8P    |
| 3          | 080415.0021 | E-RING                     |
| 4          | 110819.0001 | PLAIN WASHER               |
| 5          | 110818.0001 | WAVE WASHER                |
| 6          | 106062.0003 | BUSHING, 5/8               |
| 7          | 110520.0001 | TROLLEY OUTPUT SHAFT       |
| 8          | 107894.0001 | SPRKT, 9T, 1/2P DB         |
| 13         | 110465.0001 | SPRKT, 11T, #35CH, 3/8P    |
| 14         | 080415.0021 | E-RING                     |
| 15         | 110819.0001 | PLAIN WASHER               |
| 16         | 110818.0001 | WAVE WASHER                |
| 17         | 110813.0001 | BEARING, .625 ID           |
| 18         | 110464.0001 | INTERMEDIATE TROLLEY SHAFT |
| 19         | 110881.0001 | DOWEL PIN                  |
| 20         | 080401.0624 | COTTER PIN                 |
| 21         | 110472.0001 | SLOTTED NUT                |
| 22         | 075197.0000 | CLUTCH SPRING              |
| 23         | 086649.0029 | THRUST WASHER              |
| 24         | 111125.0001 | CLUTCH PULLEY              |
| 25         | 108015.0001 | MOVABLE CLUTCH DISC        |
| 26         | 075193.0000 | CLUTCH LINING              |
| 27         | 111037.0001 | CLUTCH DISC                |

## Appendix A (cont')

\*\* CONTACT DEALER FOR PROPER PART

### Basic Rail/Trolley Parts



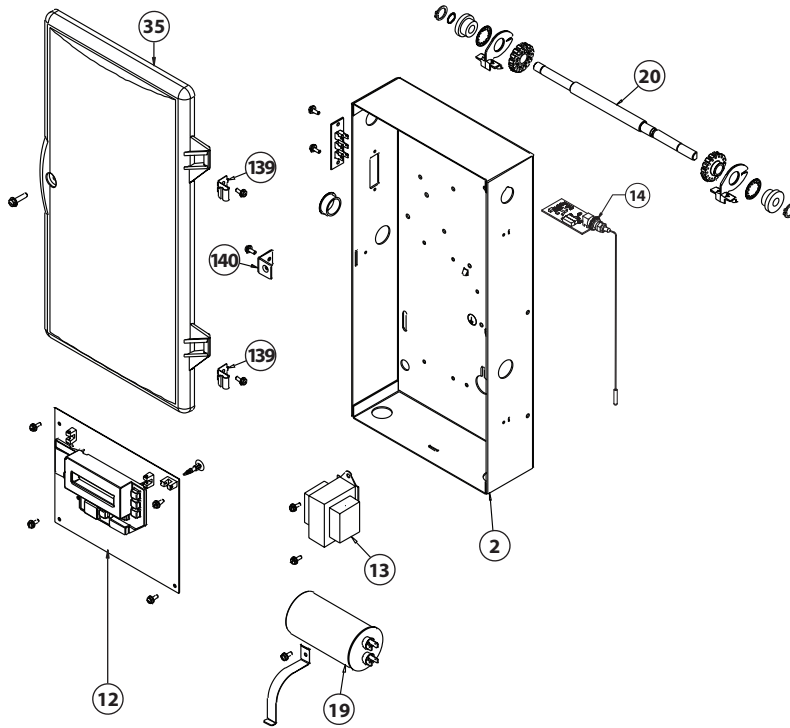
| PARTS LIST |              |                                     |
|------------|--------------|-------------------------------------|
| ITEM NO.   | PART NUMBER  | DESCRIPTION                         |
| 53         | 108380.0001  | TROLLEY CHAIN IDLER PULLEY          |
| 54         | 086621.0672  | TROLLEY IDLER SHAFT                 |
| 58         | 076169.0000  | TROLLEY RAIL FRONT SPREADER BRACKET |
| 60         | 110999.0001  | TROLLEY RAIL CHAIN GUIDE ASS'Y      |
| 61         | 110997.0001  | TROLLEY RAIL CARRIAGE ASS'Y         |
| 64         | 110972.0001* | TROLLEY HARDWARE KIT                |
| 77         | 407743**     | TROLLEY RAIL                        |
| 172        | 110843.0001  | TROLLEY STRAIGHT DOOR ARM           |
| 173        | 26013D       | TROLLEY CURVED DOOR ARM             |
| 174        | 110842.0001  | TROLLEY DOOR BRACKET                |
| 175        | 110920.0001  | TROLLEY TRACK SPACER                |
| 176        | 100132.0001  | HAND GRIP                           |

\* INCLUDES PARTS 60, 174 AND 175.

\*\* CONTACT DEALER FOR PROPER PART BASED ON YOUR SPECIFIC INSTALLATION. PLEASE KNOW THE LENGTH OF YOUR RAIL WHEN ORDERING.

## Appendix A (cont')

### Basic Electric Box Parts



| PARTS LIST |               |                          |
|------------|---------------|--------------------------|
| ITEM NO.   | PART NUMBER   | DESCRIPTION              |
| 2          | 110405.0001.S | ELECTRICAL BOX, 115V     |
|            | 110405.0002.S | ELECTRICAL BOX, 230V     |
| 12         | 112365.0001.S | KIT, PCB                 |
| 13         | 110846.0001   | TRANSFORMER, 120V        |
|            | 110846.0002   | TRANSFORMER, 240V        |
| 14         | 36424R        | RADIO RECEIVER ASSEMBLY  |
| NS         | 110957.0001.S | FUSE KIT                 |
| 20         | 110966.0001.S | LIMITSHAFT KIT           |
| 19         | 110830.0001   | CAPACITOR, 79μF          |
|            | 110830.0002   | CAPACITOR, 19μF          |
| 35         | 110851.0001   | COVER ASSY. ELEC BOX     |
| 139        | 110423.0001   | ELECTRIC BOX COVER HINGE |
| 140        | 110870.0001   | ELECTRIC BOX LATCH       |
| 141        | 37417A        | MAIN CIRCUIT BOARD       |

NS=NOT SHOWN

\*\* CONTACT DEALER FOR PROPER PART  
BASED ON YOUR SPECIFIC MODEL.

## Section 10: Appendix B

### Screw Terminal Assignments

| INPUT                                                         |             | FUNCTION                                                                                                                                                                                 | CONNECTION TYPE                                                                          |
|---------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>11-POSITION<br/>TERMINAL BLOCK<br/>INSIDE ELECTRIC BOX</b> | OPEN        | Causes door to open if not at Up Limit. Causes a closing door to reverse.                                                                                                                | Normally-Open Dry Contact to GND.                                                        |
|                                                               | CLOSE       | Causes door to close if not at Down Limit.                                                                                                                                               | Normally-Open Dry Contact to GND.                                                        |
|                                                               | STOP        | Causes a moving door to stop. Prevents the operator from running.                                                                                                                        | Normally-Closed Dry Contact to GND.                                                      |
|                                                               | GND         | Common ground connection for Open, Close, Stop & 1-Btn Inputs.                                                                                                                           |                                                                                          |
|                                                               | 1-BTN       | Causes door to open if not at Up Limit or Mid-Stop Limit.<br>Causes door to close if at Up Limit or Mid-Stop Limit.<br>Causes door to stop if opening. Causes a closing door to reverse. | Normally-Open Dry Contact to GND.                                                        |
|                                                               | ODC STB     | Reverses a closing door if photocell beam is blocked.<br>NOTE: STB's must be enabled in Calibration Mode.                                                                                | ODC Series II Safe-T-Beams® ONLY to these inputs. (not polarity sensitive)               |
|                                                               | ODC STB     | Reverses a closing door if photocell beam is blocked.<br>NOTE: STB's must be enabled in Calibration Mode.                                                                                | ODC Series II Safe-T-Beams® ONLY to these inputs. (not polarity sensitive)               |
|                                                               | N-O REVERSE | Causes a closing door to reverse. NOTE: Will not open a stopped door.                                                                                                                    | Normally-Open 2-Wire Non-Monitored Edge Sensor. (not polarity sensitive)                 |
|                                                               | N-O REVERSE | Causes a closing door to reverse. NOTE: Will not open a stopped door.                                                                                                                    | Normally-Open 2-Wire Non-Monitored Edge Sensor. (not polarity sensitive)                 |
|                                                               | EXT INTLK   | Causes a moving door to stop.<br>Prevents the operator from running when contact is open.<br>Operates even if microcontroller is non-functional.                                         | Normally-Closed dry contacts.<br>(board will energize these contacts at nominal +24VDC). |
|                                                               | EXT INTLK   | Causes a moving door to stop.<br>Prevents the operator from running when contact is open.<br>Operates even if microcontroller is non-functional.                                         | Normally-Closed dry contacts.<br>(board will energize these contacts at nominal +24VDC). |
| <b>2-POSITION TERMINAL<br/>BLOCK (INSIDE ELECTRIC BOX)</b>    | L1 / L1     | Power to operator.                                                                                                                                                                       | 120VAC: Connect to Line (Hot) / 240VAC: Connect to Line 1.                               |
|                                                               | N / L2      | Power to operator.                                                                                                                                                                       | 120VAC: Connect to Neutral / 240VAC: Connect to Line 2.                                  |

### Other Connections

|                                                 |                              |                                                                                                                                                          |                                                        |
|-------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| <b>RADIO AND<br/>ACCESSORIES<br/>PIGTAIL</b>    | PWR                          | Power for radio & other accessories. +20 to +40VDC, fused at 250mA (F1).                                                                                 | Connect to radio or other accessory's power input.     |
|                                                 | RAD<br>(Radio Input Control) | Causes door to open if not at Up Limit or Mid-Stop Limit.<br>Causes door to close if at Up Limit or Mid-Stop Limit.<br>Causes a closing door to reverse. | Connect to radio or other accessory's signal (output). |
|                                                 | GND                          | Common ground connection for PWR and RAD terminals.                                                                                                      | Connect to radio or other accessory's ground input.    |
| <b>PLUG CONNECTIONS<br/>INSIDE ELECTRIC BOX</b> | EXPANSION PORT               | Connects accessory modules to operator.                                                                                                                  | Accessory Module Ribbon Cable.                         |
|                                                 | TRANSFORMER                  | Connects main transformer to control board.                                                                                                              | Transformer Plug.                                      |
|                                                 | BRAKE                        | Connects brake solenoid to control board.                                                                                                                | Brake Solenoid Plug.                                   |
|                                                 | MOTOR                        | Connects motor and capacitor to control board.                                                                                                           | Motor Plug.                                            |
|                                                 | HOIST INTLK                  | Causes moving door to stop. Prevents the operator from running.<br>Operates even if microcontroller is non-functional.                                   | Hoist Interlock Plug or Jumper.                        |
|                                                 | LIMIT SENSOR                 | Causes door to stop at top and bottom of normal travel.                                                                                                  | Limit Sensor Plug.                                     |

## Display Run Codes

## Section 10: Appendix C

| Condition Code | DISPLAY            | Condition Code Description                                                                                            |
|----------------|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| 0C             | IDLE > DOWN LIMIT  | STANDING BY AT DOWN LIMIT (NOTE: THIS MESSAGE IS DISPLAYED IF BOTH LIMITS ARE ACTIVE)                                 |
| 0D             | IDLE > UP LIMIT    | STANDING BY AT UP LIMIT                                                                                               |
| 0E             | IDLE > MID STOP    | STANDING BY AT MID-STOP LIMIT                                                                                         |
| 0F             | IDLE > NO LIMIT    | STANDING BY BETWEEN LIMITS                                                                                            |
| 10             | OPENING > OPEN BTN | OPENING FROM OPEN BUTTON                                                                                              |
| 11             | OPENING > ONE BTN  | OPENING FROM 1 BUTTON                                                                                                 |
| 12             | OPENING > RADIO    | OPENING FROM RADIO                                                                                                    |
| 13             | OPENING > AUX OPEN | OPENING FROM AUXILIARY OPEN INPUT                                                                                     |
| 14             | OPENING > OPEN KEY | OPENING FROM KEYPAD OPEN KEY                                                                                          |
| 20             | CLOSING > CLOSE PB | CLOSING FROM CLOSE BUTTON                                                                                             |
| 21             | CLOSING > ONE BTN  | CLOSING FROM 1 BUTTON                                                                                                 |
| 22             | CLOSING > RADIO    | CLOSING FROM RADIO                                                                                                    |
| 24             | CLOSING > CLOSE KP | CLOSING FROM KEYPAD CLOSE KEY                                                                                         |
| 2A             | CLOSING > TCM CLS  | CLOSING FROM TIMER CLOSE MODULE                                                                                       |
| 30             | HALT > WALL BUTTON | GDO STOPPED BECAUSE STOP OR OPEN BUTTON WAS ACTIVATED, POSSIBLY STARTING A REVERSAL                                   |
| 31             | HALT > ONE BUTTON  | GDO STOPPED BECAUSE 1 BUTTON WAS ACTIVATED, POSSIBLY STARTING A REVERSAL                                              |
| 32             | HALT > RADIO       | GDO STOPPED BECAUSE RADIO INPUT WAS ACTIVATED, STARTING A REVERSAL                                                    |
| 33             | HALT > AUX. OPEN   | GDO STOPPED BECAUSE AUXILIARY OPEN INPUT WAS ACTIVATED, STARTING A REVERSAL                                           |
| 34             | HALT > KEYPAD KEY  | GDO STOPPED BECAUSE KEYPAD STOP OR OPEN KEY WAS ACTIVATED, POSSIBLY STARTING A REVERSAL                               |
| 35             | HALT > N-O SAFETY  | GDO STOPPED BECAUSE N-O REVERSING INPUT WAS ACTIVATED, STARTING A REVERSAL                                            |
| 36             | HALT > ODC STB     | GDO STOPPED BECAUSE ODC STB WAS BLOCKED, STARTING A REVERSAL                                                          |
| 37             | HALT > N-C SAFETY  | GDO STOPPED BECAUSE N-C REVERSING INPUT WAS ACTIVATED, STARTING A REVERSAL                                            |
| 38             | HALT > MON. EDGE   | GDO STOPPED BECAUSE MONITORED EDGE SENSOR INPUT WAS ACTIVATED, STARTING A REVERSAL                                    |
| 39             | HALT > DOOR FORCE  | GDO STOPPED BECAUSE THE FORCE REQUIRED TO OPERATE THE DOOR WAS TOO HIGH, POSSIBLY STARTING A REVERSAL                 |
| 3A             | HALT > LOSS OF C/C | GDO STOPPED BECAUSE CONSTANT CONTACT ON THE CONTROL WAS REMOVED BEFORE REACHING A LIMIT, POSSIBLY STARTING A REVERSAL |
| 3B             | HALT > SHUTDOWN    | GDO STOPPED BECAUSE THE GDO DETECTED A FAULT SUCH AS AN OPEN INTERLOCK, OVERHEATED MOTOR, ETC.                        |
| 3C             | HALT > DOWN LIMIT  | GDO STOPPED BECAUSE IT REACHED THE DOWN LIMIT                                                                         |
| 3D             | HALT > UP LIMIT    | GDO STOPPED BECAUSE IT REACHED THE UP LIMIT                                                                           |
| 3E             | HALT > MID STOP    | GDO STOPPED BECAUSE IT REACHED THE MID-STOP LIMIT                                                                     |
| 3F             | HALT > MODULE FAIL | GDO STOPPED BECAUSE AN EXPANSION MODULE WAS NOT WORKING PROPERLY                                                      |

## Display Error Codes

## Section 10: Appendix C

| Condition Code | DISPLAY             | Condition Code Description                                                                                                |
|----------------|---------------------|---------------------------------------------------------------------------------------------------------------------------|
| 40             | REV > OPEN BUTTON   | GDO REVERSED BECAUSE THE OPEN BUTTON WAS ACTIVATED                                                                        |
| 41             | REV > ONE BUTTON    | GDO REVERSED BECAUSE THE 1 BUTTON WAS ACTIVATED                                                                           |
| 42             | REV > RADIO         | GDO REVERSED BECAUSE THE RADIO INPUT WAS ACTIVATED                                                                        |
| 43             | REV > AUX OPEN      | GDO REVERSED BECAUSE THE AUXILIARY OPEN INPUT WAS ACTIVATED                                                               |
| 44             | REV > OPEN KEY      | GDO REVERSED BECAUSE THE KEYPAD OPEN KEY WAS ACTIVATED                                                                    |
| 45             | REV > N-O SAFETY    | GDO REVERSED BECAUSE THE N-O REVERSING INPUT WAS ACTIVATED                                                                |
| 46             | REV > ODC STB       | GDO REVERSED BECAUSE THE ODC STB WAS BLOCKED                                                                              |
| 47             | REV > N-C SAFETY    | GDO REVERSED BECAUSE THE N-C REVERSING INPUT WAS ACTIVATED                                                                |
| 48             | REV > MON. EDGE     | GDO REVERSED BECAUSE THE MONITORED EDGE SENSOR WAS ACTIVATED                                                              |
| 49             | REV > DOOR FORCE    | GDO REVERSED BECAUSE THE FORCE REQUIRED TO CLOSE THE DOOR WAS TOO HIGH                                                    |
| 4A             | REV > LOSS OF C/C   | GDO REVERSED BECAUSE CONSTANT CONTACT ON THE CONTROL WAS REMOVED BEFORE REACHING THE DOWN LIMIT                           |
| 4B             | REV > MAX RUN TMR   | GDO REVERSED BECAUSE THE CLUTCH SLIPPED OR SOME OTHER FAULT OCCURRED THAT ALLOWED THE GDO TO RUN TOO LONG                 |
| 4F             | REV > EXP MOD FAIL  | GDO REVERSED BECAUSE AN EXPANSION MODULE WAS NOT WORKING PROPERLY                                                         |
| 50             | STOP > HOT MOTOR    | GDO STOPPED BECAUSE THE MOTOR WAS OVERHEATED                                                                              |
| 51             | STOP > OPEN MRT     | GDO STOPPED BECAUSE THE CLUTCH SLIPPED OR SOME OTHER FAULT OCCURRED THAT ALLOWED THE GDO TO RUN OPEN TOO LONG             |
| 52             | STOP > CLOSE MRT    | GDO STOPPED BECAUSE THE CLUTCH SLIPPED OR SOME OTHER FAULT OCCURRED THAT ALLOWED THE GDO TO RUN DOWN TOO LONG             |
| 57             | STOP > OPEN INTLK   | GDO STOPPED BECAUSE THE HOIST INTERLOCK OR EXTERNAL INTERLOCK IS OPEN                                                     |
| 58             | STOP > WRONG GDO    | GDO STOPPED BECAUSE THE BOARD IS SET FOR JACKSHAFT MODE, BUT INSTALLED IN A TROLLEY OPERATOR                              |
| 59             | STOP > DOOR FORCE   | GDO STOPPED BECAUSE THE FORCE REQUIRED TO OPEN THE DOOR WAS TOO HIGH                                                      |
| 5A             | STOP > WRONG LIMIT  | GDO STOPPED BECAUSE THE UP LIMIT ACTIVATED WHEN CLOSING OR THE DOWN LIMIT ACTIVATED WHEN OPENING                          |
| 5C             | STALL > DOWN LIMIT  | GDO STOPPED BECAUSE IT COULDN'T LEAVE THE DOWN LIMIT DUE TO A SLIPPING CLUTCH OR OTHER PROBLEM                            |
| 5D             | STALL > UP LIMIT    | GDO STOPPED BECAUSE IT COULDN'T LEAVE THE UP LIMIT DUE TO A SLIPPING CLUTCH OR OTHER PROBLEM                              |
| 60             | CHECK STOP BTN      | GDO WON'T RUN BECAUSE THE STOP BUTTON IS ACTIVE                                                                           |
| 61             | TCM DISABLED        | TIMER CLOSE WON'T WORK BECAUSE NO SAFETIES ARE ENABLED                                                                    |
| 62             | NO RADIO >> C/C     | RADIO INPUT WON'T WORK WITH OPEN OR CLOSE FUNCTION IN CONSTANT CONTACT MODE                                               |
| 63             | CHECK AUX OPEN      | GDO WON'T CLOSE BECAUSE AUXILIARY OPEN INPUT IS ACTIVE                                                                    |
| 64             | CHECK STOP KEY      | GDO WON'T RUN BECAUSE THE KEYPAD STOP KEY IS ACTIVE                                                                       |
| 65             | CHECK N-O SAFETY    | GDO WON'T CLOSE BECAUSE THE N-O REVERSING IS ACTIVE                                                                       |
| 66             | CHECK ODC STB       | GDO WON'T CLOSE BECAUSE THE ODC STB IS BLOCKED                                                                            |
| 67             | CHECK N-C SAFETY    | GDO WON'T CLOSE BECAUSE THE N-C REVERSING INPUT IS ACTIVE                                                                 |
| 68             | CHECK MON. EDGE     | GDO WON'T CLOSE BECAUSE THE MONITORED EDGE SENSOR IS ACTIVE                                                               |
| 69             | OVERHEATED MOTOR    | GDO WON'T RUN BECAUSE THE MOTOR IS OVERHEATED                                                                             |
| 6C             | NO RUN > DOWN LIMIT | GDO WON'T CLOSE BECAUSE ITS ALREADY AT THE DOWN LIMIT                                                                     |
| 6D             | NO RUN > UP LIMIT   | GDO WON'T OPEN BECAUSE ITS ALREADY AT THE UP LIMIT                                                                        |
| 6E             | NO RUN > MID STOP   | GDO WON'T RUN BECAUSE ITS AT OR ABOVE THE MID-STOP LIMIT & CAN'T RUN UP & A REVERSING INPUT IS PREVENTING IT FROM CLOSING |
| 6F             | EXP MODULE FAIL     | GDO WON'T RUN BECAUSE AN EXPANSION MODULE FAILURE IS PREVENTING IT                                                        |

## Section 10: Appendix C

### Display Error Codes (cont')

| Condition Code | DISPLAY            | Condition Code Description                                                                                        |
|----------------|--------------------|-------------------------------------------------------------------------------------------------------------------|
| 70             | BOARD FAILURE 70   | CONTROL BOARD FAILURE 70, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 71             | BOARD FAILURE 71   | CONTROL BOARD FAILURE 71, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 74             | BOARD FAILURE 74   | CONTROL BOARD FAILURE 74, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 75             | BOARD FAILURE 75   | CONTROL BOARD FAILURE 75, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 76             | BOARD FAILURE 76   | CONTROL BOARD FAILURE 76, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 77             | BOARD FAILURE 77   | CONTROL BOARD FAILURE 77, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 80             | BOARD FAILURE 80   | CONTROL BOARD FAILURE 80, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 81             | BOARD FAILURE 81   | CONTROL BOARD FAILURE 81, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 82             | BOARD FAILURE 82   | CONTROL BOARD FAILURE 82, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 83             | BOARD FAILURE 83   | CONTROL BOARD FAILURE 83, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 84             | BOARD FAILURE 84   | CONTROL BOARD FAILURE 84, CONTACT FACTORY TECHNICAL SERVICE DEPT.                                                 |
| 85             | EXP PORT PROBLEM   | EXPANSION PORT IS SHORT CIRCUITED, TRY DISCONNECTING EXPANSION MODULES OR CONTACT FACTORY TECHNICAL SERVICE DEPT. |
| 86             | BOARD FAILURE 86   | CONTROL BOARD FAILURE 86, DISCONNECT EXPANSION MODULES. IF NO CHANGE, CONTACT FACTORY TECHNICAL SERVICE DEPT.     |
| 88             | TCM FAILURE        | TIMER CLOSE MODULE (TCM) HAS FAILED                                                                               |
| 8A             | AOM FAILURE        | AUXILIARY OUTPUT MODULE (AOM) HAS FAILED                                                                          |
| 8E             | REV INTERRUPTED    | GDO LOST POWER OR ENCOUNTERED ANOTHER PROBLEM DURING THE REVERSAL PROCESS, REVERSAL IS COMPLETING NOW             |
| 8F             | LIMIT MOD. FAIL    | GDO WON'T RUN, LIMIT MODULE HAS FAILED                                                                            |
| 90             | DIAGNOSTIC MODE    | GDO IS IN DIAGNOSTIC MODE, NORMAL FUNCTIONS ARE NOT ALLOWED                                                       |
| A0             | OPEN BTN BAD > PU  | OPEN & CLOSE BUTTONS WON'T WORK, THE OPEN BUTTON WAS ACTIVE WHEN THE GDO WAS POWERED-UP                           |
| A1             | CLOSE BTN BAD > PU | OPEN & CLOSE BUTTONS WON'T WORK, THE CLOSE BUTTON WAS ACTIVE WHEN THE GDO WAS POWERED-UP                          |
| A2             | ONE BTN BAD > PU   | 1 BUTTON WON'T WORK, THE 1 BUTTON WAS ACTIVE WHEN THE GDO WAS POWERED-UP                                          |
| A3             | RADIO BAD > PWR UP | RADIO INPUT WON'T WORK, THE RADIO INPUT WAS ACTIVE WHEN THE GDO WAS POWERED-UP                                    |
| A4             | AUX OPEN BAD > PU  | AUXILIARY OPEN INPUT WON'T WORK, THE AUXILIARY OPEN INPUT WAS ACTIVE WHEN THE GDO WAS POWERED-UP                  |
| A5             | OPEN KEY BAD > PU  | KEYPAD OPEN & CLOSE KEYS WON'T WORK, THE OPEN KEY WAS ACTIVE WHEN THE GDO WAS POWERED-UP                          |
| A6             | CLOSE KEY BAD > PU | KEYPAD OPEN & CLOSE KEYS WON'T WORK, THE CLOSE KEY WAS ACTIVE WHEN THE GDO WAS POWERED-UP                         |
| A7             | MULT KEYS BAD > PU | 1 OR MORE KEYPAD CALIBRATION KEYS WON'T WORK, 1 OR MORE WERE ACTIVE WHEN THE GDO WAS POWERED-UP                   |
| AA             | TCM BAD > POWER UP | TIMER CLOSE MODULE WON'T CLOSE DOOR, IT WAS ACTIVE WHEN THE GDO WAS POWERED-UP                                    |





### Commercial Operator Limited Warranty

The Genie Company ("Seller") warrants to the original purchaser of this commercial door operator ("Product") subject to all of the terms and conditions hereof that the Product and all components thereof will be free from defects in materials and workmanship under normal use for the following period(s) measured from the date of installation

- Two (2) years or When the Operator exceeds 20 000 cycles of operation as measured by the integrated cycle counter contained in the Operator.

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. Any labor charges are 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 IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES EITHER EXPRESSED 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.

ORIGINAL PURCHASER \_\_\_\_\_

INSTALLATION ADDRESS \_\_\_\_\_

SELLER: \_\_\_\_\_

SELLER'S ADDRESS: \_\_\_\_\_

FACILITY ORDER #: \_\_\_\_\_

DATE OF INSTALLATION: \_\_\_\_\_

SIGNATURE OF SELLER: \_\_\_\_\_

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**COMMERCIAL LINE**

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One Door Dr.  
Mt. Hope, OH 44660