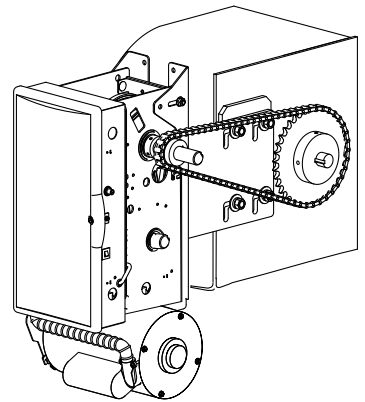
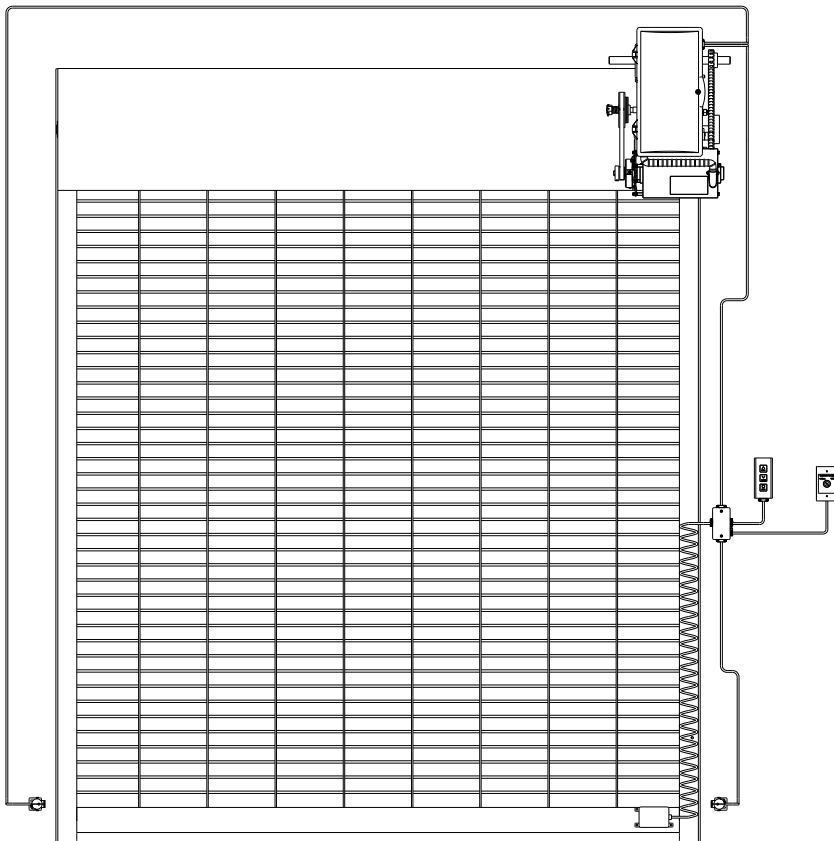


RSX[®]

The Genuine. The Original.



EGRESS OPERATOR



NOT FOR RESIDENTIAL USE
For use on Egress Grilles Only

This installation manual provides the information required to install, troubleshoot and maintain an RSX[®] Egress Operator.

Table of Contents

How to use this manual	1.1	Troubleshooting:	
Safety Information & Instructions	2.1-2.2	Troubleshooting Example	7.1
Critical Installation Information	3.1-3.3	Run Codes	7.2-7.3
		Error Codes	7.4.7.7
Installation:		Service & Maintenance	8.1
Rolling Steel Front/Top of Hood	4.1-4.2	Parts Breakdown.....	9.1-9.5
Wall Mount	4.3	Warranty Information	10.1
Bench Mount	4.4-4.5		
Front of Hood Horizontal Mount	4.6-4.7		
Clutch Adjustment.....	4.8		
Auxiliary Board Installation (optional)	4.8		
Wiring:			
Safety Information	5.1		
External Wire Diagram	5.2		
Line Voltage Wiring.....	5.3		
Low Voltage Control Wiring.....	5.4		
Wall Controls	5.5		
Interlock Switches	5.6		
Monitored Sensing Edge	5.7		
Wireless Sensing Edge.....	5.8		
Photocell.....	5.9		
EEG Board.....	5.10		
Egress Control Station	5.11		
Motor Connection.....	5.11		
Operator Configuration:			
Control Panel Information.....	6.1		
Calibration Mode Information	6.2		
Close Direction	6.3		
Braking Rate	6.4		
Limits	6.5		
Limit Overrun.....	6.6		
Monitored Reversing Devices.....	6.7		
Open & Close Modes.....	6.8		
Transmitter Programming.....	6.9		
Mid Stop	6.10		
Max Run Timer.....	6.11		
Timer Close Delay.....	6.12		
Cycle Count/GDO Firmware	6.13		
GDO Type	6.14		
Egress Test.....	6.14		

Section 1: How to use this manual

The 10 sections of this Installation Manual provide the information required to install, troubleshoot and maintain an SX® Egress Commercial/Industrial grille 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 grille operator installation.



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



AVERTISSEMENT: Ne pas effectuer correctement toutes les étapes dans les sections 4-6 peut entraîner des blessures graves voire la mort.

Sections 4-6

Provides step by step installation and set-up instructions for the Egress commercial grille operator. Each section is written such that it must be followed in a step by step order to complete a successful installation.

Section 7-8

Details troubleshooting and service information for typical installation and normal operations that may occur.

Sections 9-10

Provides 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.




Section 2: Safety Information & Instructions









WARNING

Overhead Grilles 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 injury, 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 Overhead Door Dealer, call 800-929-3667, and for **Overhead Door Factory Technical Advice, call 800-275-6187.**

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

IMPORTANT

READ PRIOR TO ANY GRILLE OPERATION

1. Read manual and warnings carefully.
2. Keep the grille in good working condition. Periodically lubricate per manufacturers recommendations..
3. If grille has a sensing edge, check operations monthly. Make any necessary repairs to keep it functional.
4. AT LEAST twice a year (or at grille manufacturers recommendation), manually operate the grille by activating egress control or disconnect power to operator. The Grille should open on its own and close under tension. If it does not, the grille 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 motor protector is tripped, a trained service technical may be needed to correct the condition which caused the overheating. When the motor has cooled, thermal protector will automatically reset and normal operation can be resumed.
6. In case of power failure, the grille will automatically open.
7. Keep instructions in a prominent location near the pushbutton.

Section 2: Safety Information & Instructions




! AVERTISSEMENT

Les portes basculantes sont de gros objets lourds qui fonctionnent à l'aide de ressorts soumis à une haute tension et de moteurs électriques. Dans la mesure où les objets en mouvement, les ressorts sous tension et les moteurs électriques peuvent entraîner des blessures, votre sécurité et celle des autres exigent que vous preniez connaissance des informations stipulées dans ce manuel. Si vous avez des questions ou si vous ne comprenez pas les informations ci-incluses, veuillez contacter le représentant de service le plus près. Pour obtenir le numéro du revendeur Overhead Door local, appelez le +1 (800) 929-3667, et pour **obtenir des conseils techniques de l'usine Overhead Door, appelez le +1 (800) -275-6187.**

Dans ce manuel, les mots Danger, Avertissement, et Attention sont utilisés pour faire ressortir d'importantes informations relatives à la sécurité. Le mot :

- ! DANGER** signale une situation dangereuse imminente qui si elle n'est pas évitée, risque d'entraîner des blessures graves, voire mortelles.
- ! AVERTISSEMENT** signale une situation potentiellement dangereuse qui, si elle n'est pas évitée, risque d'entraîner la mort ou des blessures graves.
- ! ATTENTION** signale une situation potentiellement dangereuse qui, si elle n'est pas évitée, risque d'entraîner des blessures ou des dommages matériels.

Le terme **REMARQUE** est utilisé pour signaler les étapes importantes à suivre ou d'importants éléments à prendre en considération.


DANGER POTENTIEL	EFFET	PRÉVENTION
PORTE EN MOUVEMENT 	! AVERTISSEMENT Pourrait entraîner des blessures graves voire la mort	Utiliser uniquement si la porte est en vue et libre de tout obstacle. Ne laisser personne se tenir dans l'ouverture de la porte pendant qu'elle est en mouvement. Ne pas permettre aux enfants de jouer avec l'opérateur de la porte. Ne pas modifier la commande de l'opérateur à contact momentané à moins qu'un moyen d'inversion externe soit installé. Ne pas faire fonctionner une porte qui bloque ou dont le ressort est cassé.
CHOC ÉLECTRIQUE 	! AVERTISSEMENT Pourrait entraîner des blessures graves voire la mort	Couper le courant avant d'enlever le couvercle de l'opérateur. Lorsque le couvercle doit être remplacé, s'assurer que les fils ne sont ni coincés ni près des pièces mobiles. L'opérateur doit être correctement mis à la terre.
TENSION ÉLEVÉE RESSORT 	! AVERTISSEMENT Pourrait entraîner des blessures graves voire la mort	Ne pas essayer d'enlever, réparer ni ajuster les ressorts ou toute autre pièce à laquelle le ressort de la porte est attaché, y compris blocs de bois, supports en acier, câbles ou autres articles semblables. Les réparations et les réglages doivent être effectués par technicien qualifié qui se sert d'outils appropriés et qui respecte les instructions.


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 grille.
3. Potential operator mounting obstructions. Items to consider include, but are not limited to: side room, room above grille shaft, room below grille shaft, available mounting surface integrity, power supply location.
4. Size of grille for appropriate operator torque and grille travel speed selection.
5. Operator mounting environment. Items to consider include operator location, dampness of location, dustiness of the location and corrosiveness of the location.
6. Grille 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. Accessory equipment. Examples include reversing edges which are required for grilles set to operate as momentary contact, auxiliary control relays, warning lights, etc. See "Entrapment Protection" section below.

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

 **AVERTISSEMENT:** NE PAS mettre sous tension tant que l'instruction n'est pas donnée de le faire.

ENTRAPMENT PROTECTION:

The installation of a monitored external reversing device (such as a monitored reversing edge or photocell system, etc.) is required on all momentary contact electronically operated commercial doors/grilles. 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 are:

- 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 used in combination with MillerEdge™ Interface Module OPAKMEIX.S. Connected to ODC-STB terminals.
- 3). Residential Safe-T-Beam® Monitored Photocells - P/N 37221R (OSTB-BX) and 38176R.S (includes extension brackets).
- 4). Series II Commercial Safe-T-Beam® Monitored Photocells - P/N OPAKPE.S and OPAKPEN4GX.S (NEMA 4).
- 5). MillerEdge™ Wireless monitored edge sensor OPAKMMWE.S.
- 6). Monitored Retro-Reflective Photoeye - P/N OPRAKRPEN4X.S
- 7). MillerEdge™ Monitored Light Curtain - P/N OPAKMLC3.S & OPAKML6.S

Section 3: Critical Installation Information

Technical Data

The following information will help the installer and electrician fully understand all aspects of this installation.

This unit contains the following parts:

Operator assembly.

Owners manual.

Warning/Caution placards.

Hardware box.

3-button control station.

Egress Pushbutton.

Drive Chain. #50

- Output Shaft Speed: 46 RPM
- Motor is continuous duty type
- Control wiring: Maximum of 1000 feet of 22-24 ga. stranded wire run.

Electrical Load Information:

Amperage draw in Full Load Amps (FLA)

1 Phase 1/2HP Operators:	3 Phase 1/2HP Operators:
115VAC - 60Hz - 10 FLA	208VAC - 60Hz - 3 FLA
208VAC - 60Hz - 5 FLA	230VAC - 60Hz - 3 FLA
230VAC - 60Hz - 5 FLA	460VAC - 60Hz - 3 FLA
	575VAC - 60Hz - 2 FLA
1 Phase 3/4HP Operators:	
115VAC - 60Hz - 11 FLA	3 Phase 3/4HP Operators:
208VAC - 60Hz - 6 FLA	208VAC - 60Hz - 3 FLA
230VAC - 60Hz - 6 FLA	230VAC - 60Hz - 4 FLA
	460VAC - 60Hz - 3 FLA
1 Phase 1HP Operators:	575VAC - 60Hz - 2 FLA
115VAC - 60Hz - 14 FLA	
208VAC - 60Hz - 7 FLA	3 Phase 1HP Operators:
230VAC - 60Hz - 7 FLA	208VAC - 60Hz - 4 FLA
	230VAC - 60Hz - 4 FLA
	460VAC - 60Hz - 3 FLA
	575VAC - 60Hz - 2 FLA

Section 3: Critical Installation Information

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

⚠ ATTENTION: Vérifiez l'état de fonctionnement de la porte avant d'installer l'opérateur. La porte doit pouvoir bouger librement et ne pas coincer. Désactivez tous les dispositifs de verrouillage de la porte (si équipés). Les réparations et les réglages de porte, plus particulièrement pour les câbles et les ressorts **DOIVENT** être effectués par un technicien qualifié qui se sert d'outils appropriés et qui respecte les instructions.

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 grille. A grille 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 grille before installing the operator.
4. Install the grille operator at least 8 feet above the floor if the operator has exposed moving parts.
5. Do not connect the grille operator to the power source until instructed to do so.
6. Locate the control station: (a) within sight of the grille, (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 grille.
7. Install the Entrapment Warning Placard next to the control station and in a prominent location.

IMPORTANT INSTRUCTIONS D'INSTALLATION

AVERTISSEMENT

Pour réduire les risques de blessures graves ou de mort :

1. LIRE ET RESPECTER TOUTES LES INSTRUCTIONS D'INSTALLATION.
2. Installez uniquement sur une porte fonctionnant correctement et bien équilibrée. Une porte qui fonctionne mal peut provoquer des blessures graves. Demandez à un technicien qualifié d'effectuer les réparations des câbles, des ressorts et de toute autre quincaillerie avant de procéder à l'installation de l'opérateur.
3. Retirez toutes les cordes de traction ainsi que tous les verrous ou rendez-les inopérants (à moins qu'ils ne soient mécaniquement et/ou électroniquement interverrouillés à l'unité motrices) qui sont connectés à la porte avant de procéder à l'installation de l'opérateur.
4. Installez l'opérateur de la porte à 2,4 m minimum au-dessus du sol lorsque des pièces mobiles de l'opérateur sont exposées.
5. Ne pas raccorder l'opérateur de la porte à la source d'alimentation avant que l'instruction ne soit donnée de le faire.
6. Installez la station de commande : (a) en vue de la porte, (b) à 1,5 m minimum au-dessus du sol pour que les jeunes enfants ne puissent pas l'atteindre, et (c) à l'écart de toutes les pièces mobiles de la porte.
7. Installez le poster d'avertissement de pincement à côté de la station de commande à un endroit bien en vue.

Section 4: Installation

Front and Top of Hood Mount

The Egress Operator can be installed for right-hand or left-hand mounting for Front of Hood & Top of Hood Mount configurations. Right hand mounting shown.

Left hand mounting is a mirror image.

- 1) Weld the Rolling Door weld plate assembly (provided) to the door headplate, A minimum of two 1" weld beads are required on each side of the weld plate for proper attachment. See Fig 1 for proper placement.
- 2) Install mounting pads inboard using existing hardware on operator and kit bag as shown in Fig 2.
- 3) Attach operator to main mounting bracket using the four 5/16"- 18 X 1-1/4" carriage bolts, flange nuts. Fig. 3
- 5) Attach operator assembly to weld plate using hardware provided. Do not tighten. Fig. 4

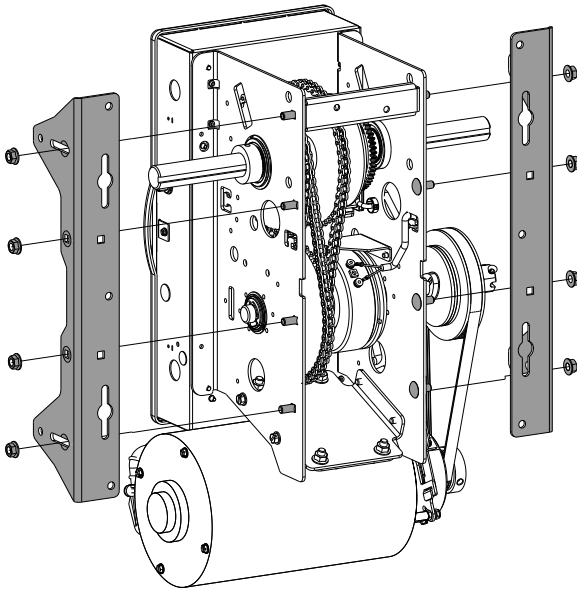
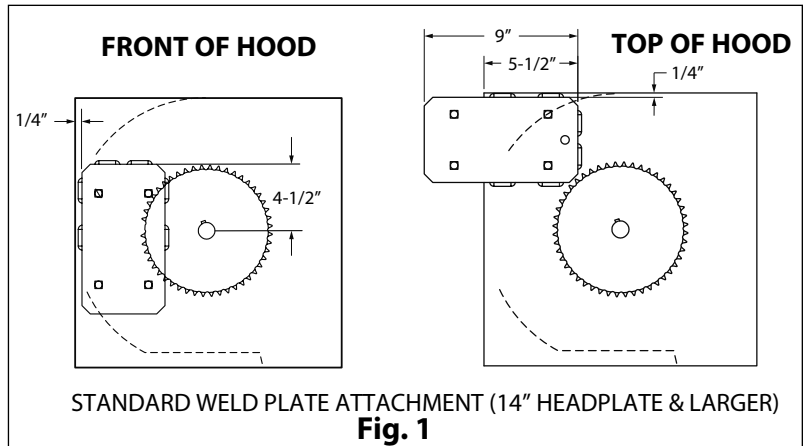


Fig. 2

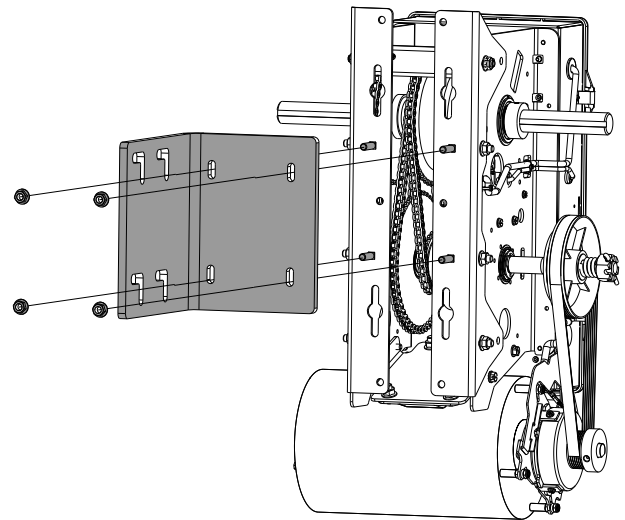
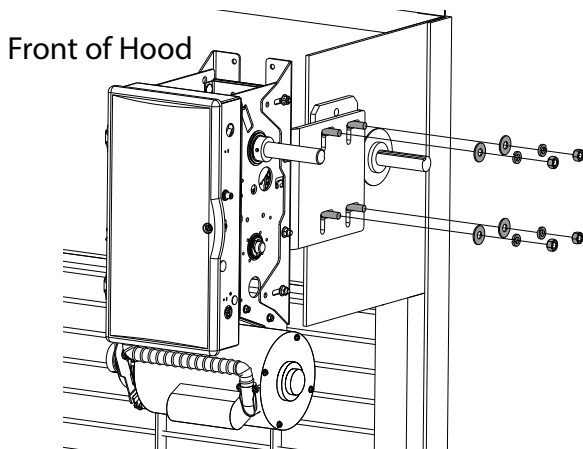


Fig. 3



Top of Hood

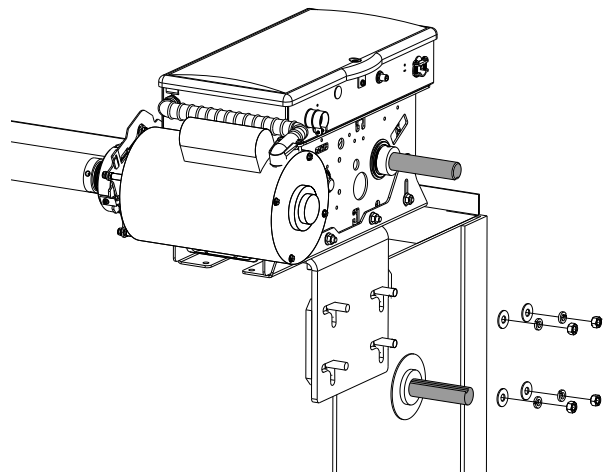


Fig. 4

Section 4: Installation

Front and Top of Hood Mount (continued)

Attach Operator to Door.

- 1) Attach 12 tooth sprocket and key to operator output shaft. Do not tighten. Fig. 5
- 2) Attach door sprocket and key to door shaft. Do not tighten.
- 3) Place assembled chain over door shaft sprocket and around the 12 tooth sprocket.
- 4) Move and align sprockets and chain as close to the operator as possible. Fig. 6
- 5) Raise or lower operator to remove slack from chain. Be certain operator output shaft is parallel with door shaft.
- 6) Tighten operator mounting bracket nuts.
- 7) Apply locking compound to all sprocket set screws and install into door and output sprockets and tighten.

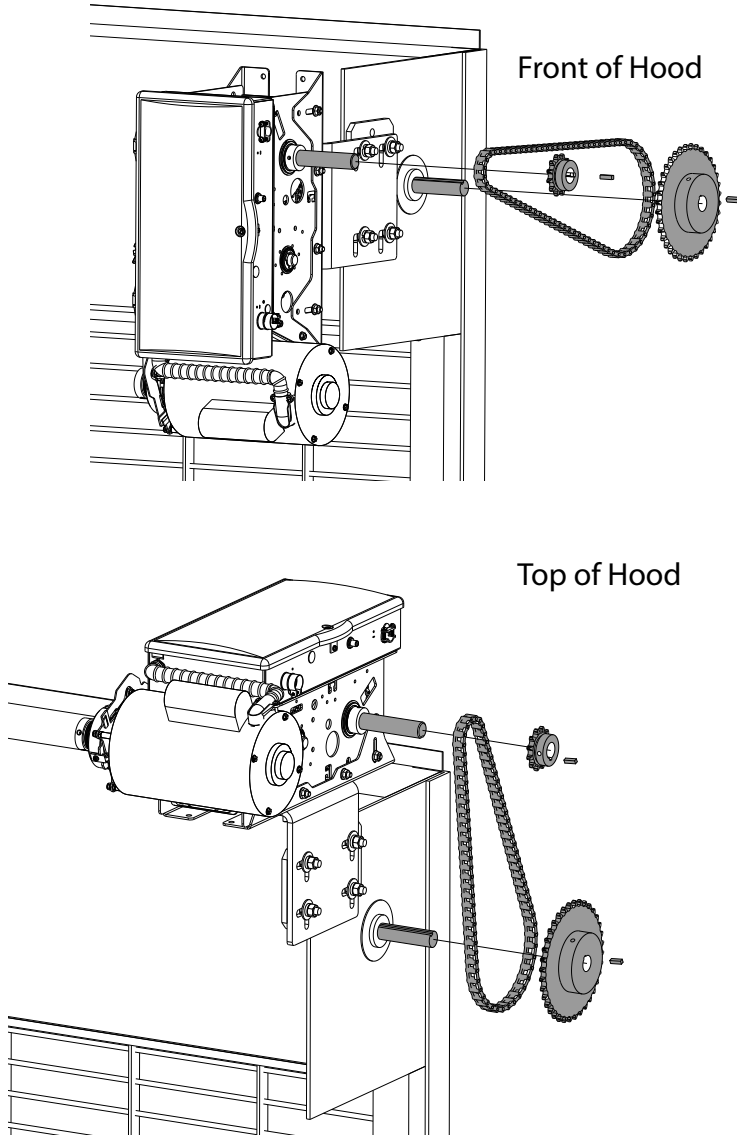


Fig. 5

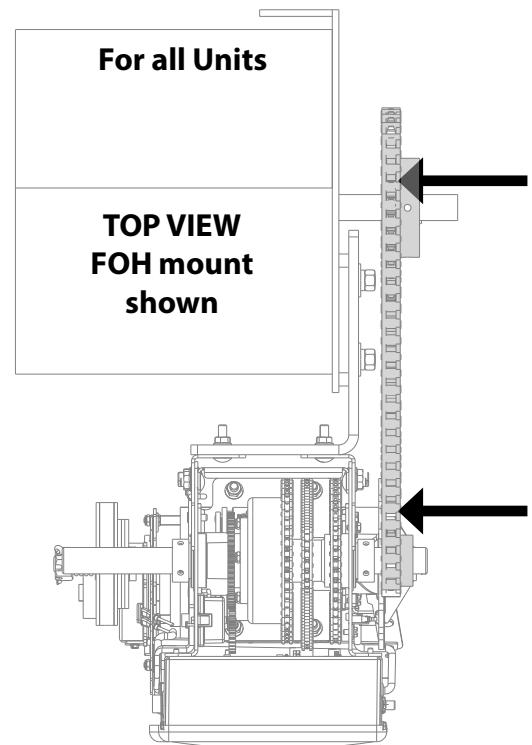


Fig. 6

Section 4: Installation

Wall Mount

The Egress Operator can be installed right-hand or left-hand mounting for Wall Mount configuration. Right hand mounting shown. Left hand mounting is a mirror image.

- 1) Determine location for operator above or below door shaft.
- 2) Install mounting pads outboard using existing hardware on operator and kit bag as shown in Fig 1.
- 3) Mark mounting holes on wall using template as a guide. Fig. 2.
- 4) Install appropriate hardware for the mounting structure to wall.
- 5) Hang operator to wall on adjustable mounting holes/hardware.
- 6) Install door sprocket and key to door shaft. Do not tighten. Fig. 3.
- 7) Install operator sprocket and key to operator output shaft. Do not tighten.
- 8) Align sprockets and install assembled chain.
- 9) Adjust operator and align shafts. Operator and door shafts must be parallel for proper operation.
- 10) Move and align sprockets and chain as close to the operator as possible.
- 11) Adjust operator as needed and tighten mounting hardware.
- 12) Install appropriate bolts/lags into at least 2 lock down holes.
- 13) Apply locking compound to door and operator sprocket set screws and tighten.

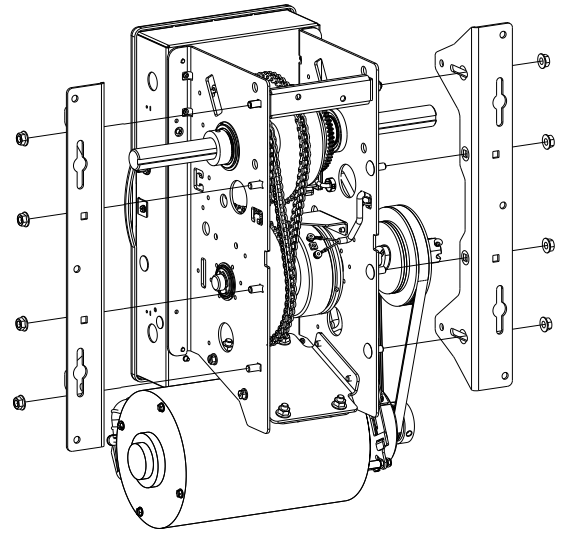


Fig. 1

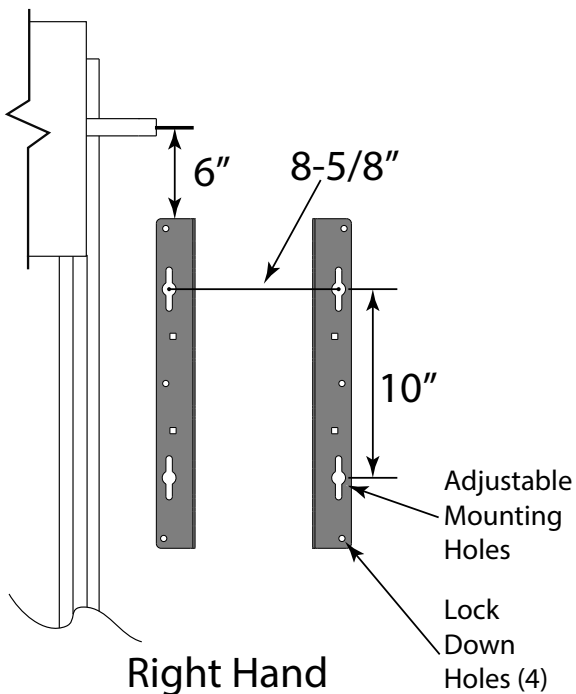


Fig. 2

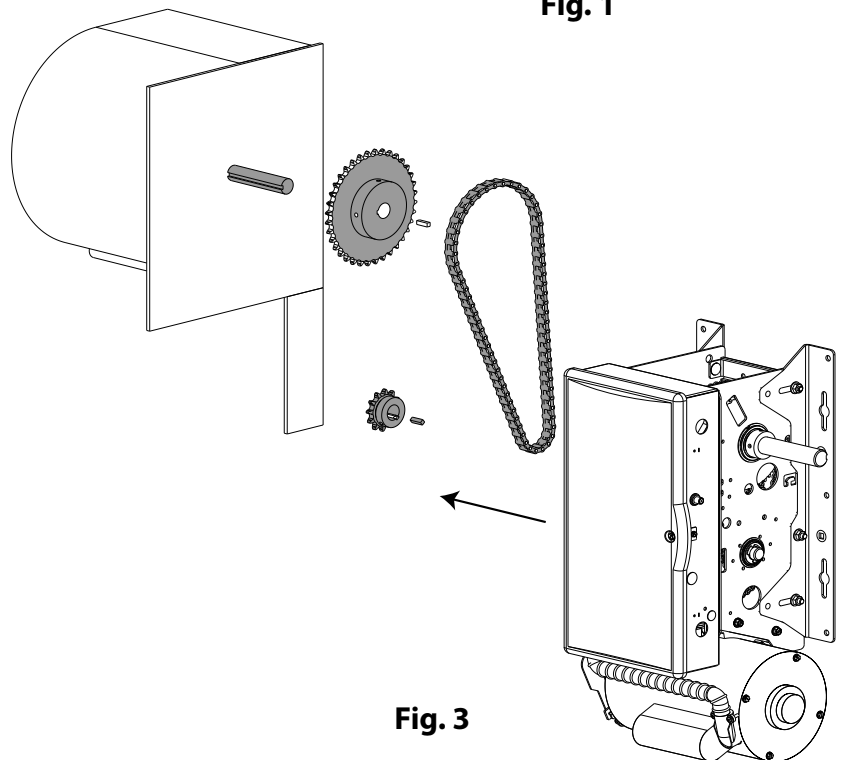


Fig. 3

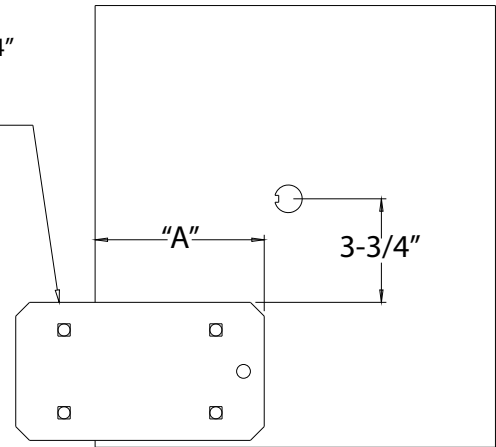
Section 4: Installation

Bench Mount

The Egress Operator can be installed for right-hand or left-hand mounting for Bench Mount configuration. Right hand mounting shown. Left hand mounting is a mirror image.

1. Weld the door plate assembly (provided) to the door headplate, A minimum of two 1" weld beads are required on each side of the weld plate for proper attachment. See Fig 1 for proper placement.
- 2) Install mounting pads inboard using existing hardware on operator and kit bag as shown in Fig 2.
- 3) Attach operator to main mounting bracket using the four 5/16"- 18 X 1-1/4" carriage bolts, flange nuts. Fig. 3

110010.001 Weld plate.
Weld to headplate min. (2) 1.4" X 1" LG weld beads per side.
If weld plate extends beyond headplate, weld back side of weld plate to headplate.



Headplate Size	"A" Dim.
14"	6-1/8"
16"	8-1/8"
18" +	9-1/4"

Fig. 1

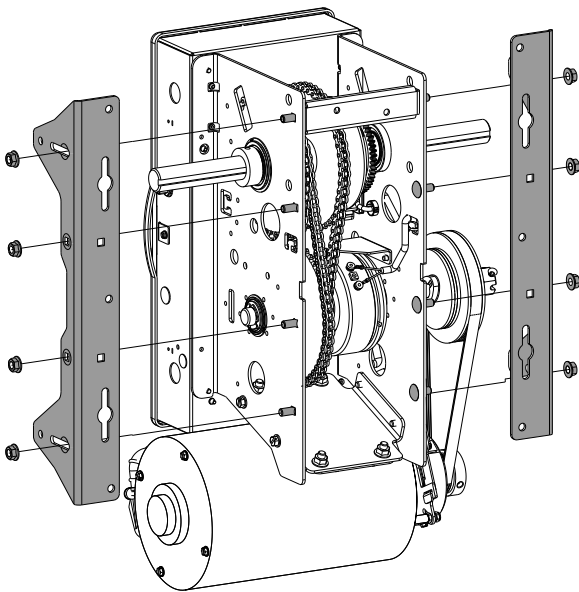
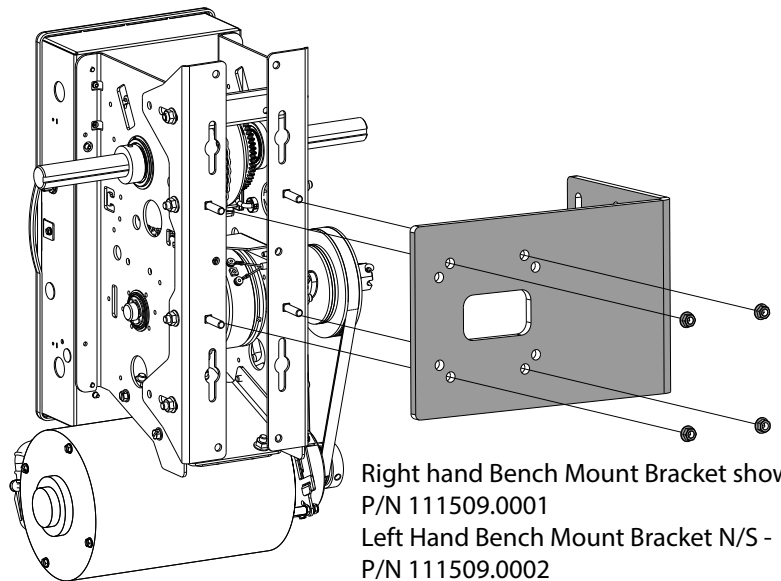


Fig. 2



Right hand Bench Mount Bracket shown - P/N 111509.0001
Left Hand Bench Mount Bracket N/S - P/N 111509.0002

Fig. 3

Section 4: Installation

Bench Mount (continued)

Attach Operator to Door:

- 1) Attach operator assembly to headplate mounting bracket. Do not tighten. Fig. 4
- 2) Attach 12 tooth sprocket and key to operator output shaft. Do not tighten.
- 3) Attach door sprocket and key to door shaft. Do not tighten.
- 4) Place assembled chain over door shaft sprocket and around the 12 tooth sprocket.
- 5) Move and align sprockets and chain as close to the operator as possible.
- 6) Raise or lower operator to remove slack from chain. Be certain operator output shaft is parallel with door shaft.
- 7) Tighten operator mounting bracket nuts.
- 8) Apply locking compound to all sprocket set screws and install into door and output sprockets and tighten.

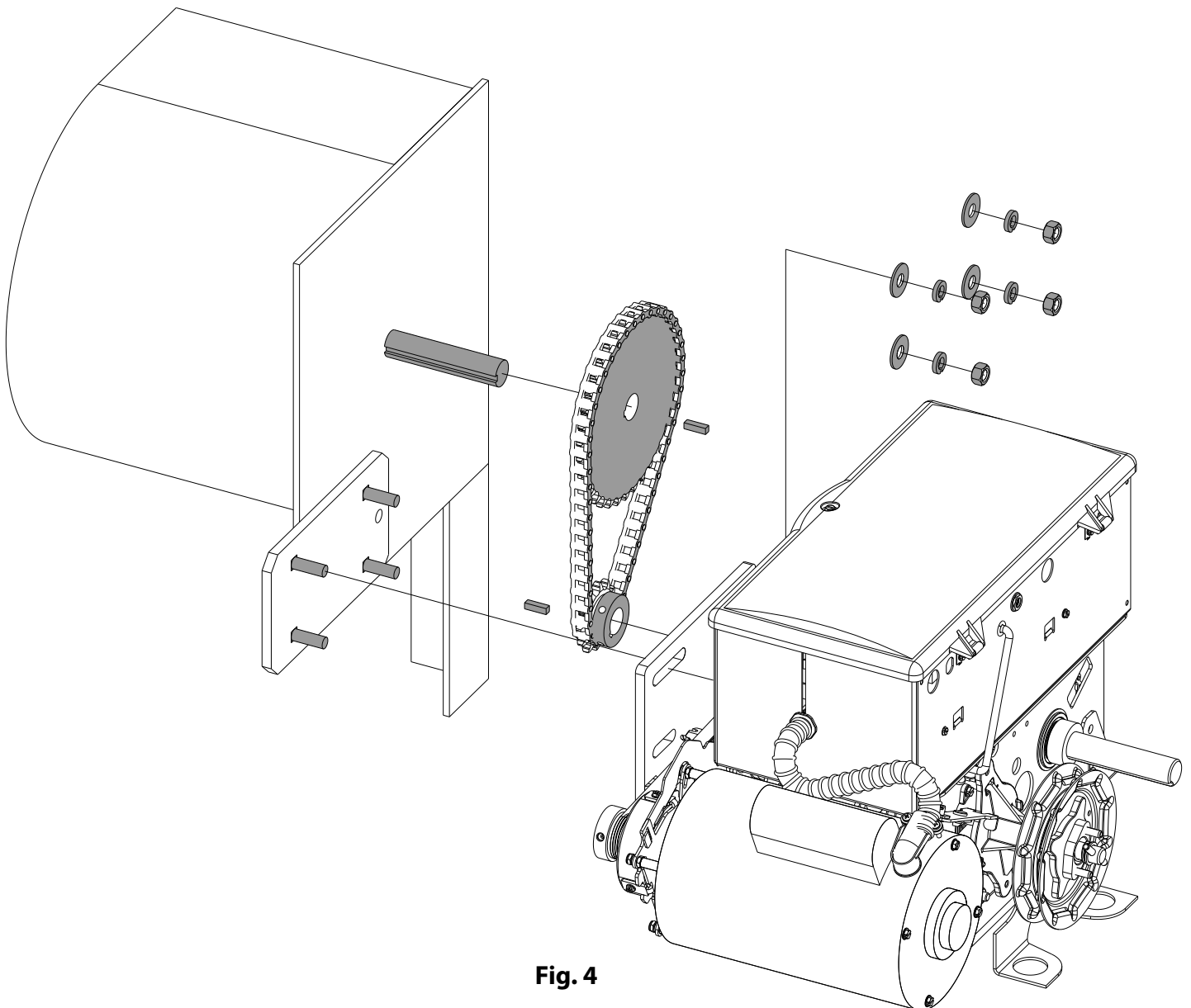


Fig. 4

Section 4: Installation

Front of Hood Horizontal Mount

The Egress Operator can be purchased for right-hand or left-hand mounting for Horizontal Front of Hood mounting. Right hand mounting shown. Left hand mounting is a mirror image.

1. Weld the door plate assembly (provided) to the door headplate, A minimum of two 1" weld beads are required on each side of the weld plate for proper attachment. See Fig 1 for proper placement.
- 2) Install mounting pads inboard using existing hardware on operator and kit bag as shown in Fig 2.
- 3) Attach operator mounting bracket to bench mount bracket using provided hardware. Fig. 3
- 4) Attach operator to main mounting bracket using the four 5/16"- 18 X 1-1/4" carriage bolts, flange nuts. Fig. 3

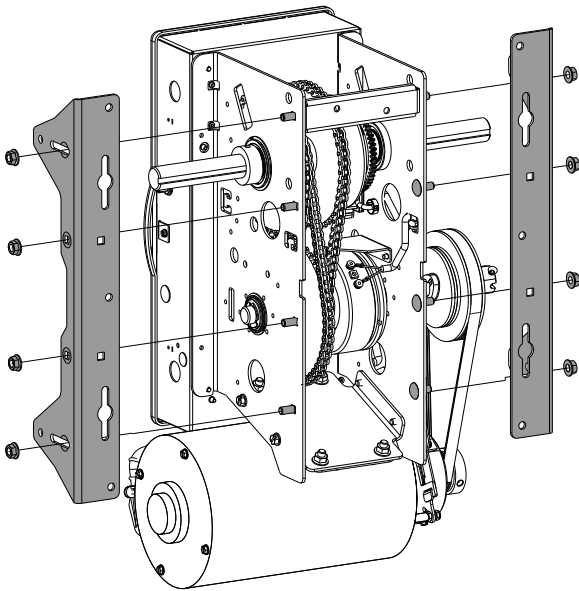


Fig. 2

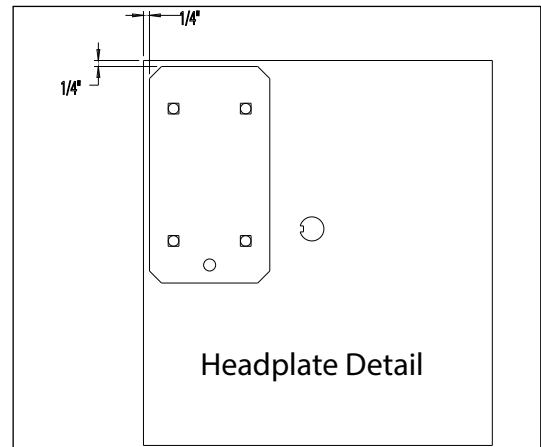


Fig. 1

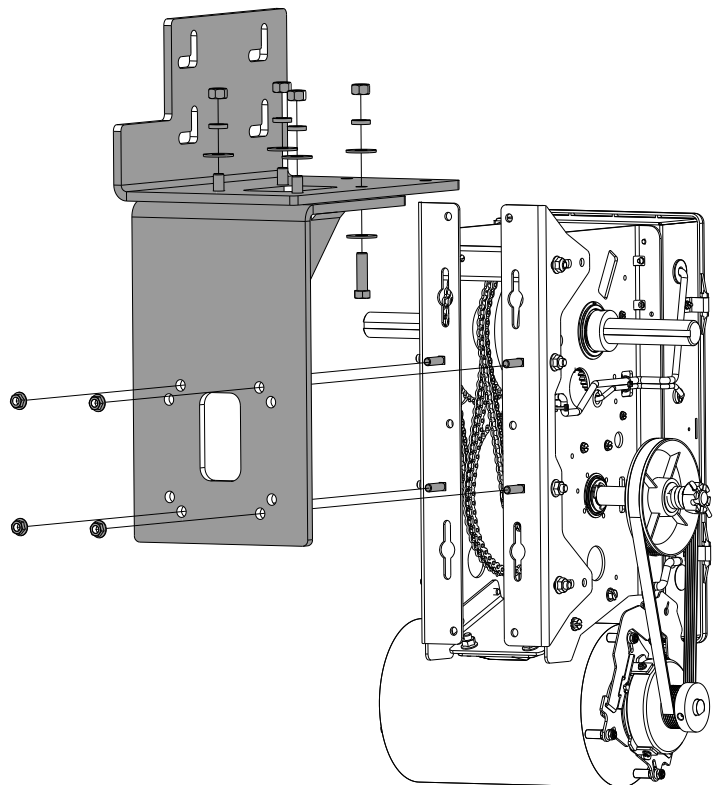


Fig. 3

Section 4: Installation

Front of Hood Horizontal Mount (continued)

Attach Operator to Door:

- 1) Attach operator assembly to headplate mounting bracket. Do not tighten. Fig. 4
- 2) Attach 12 tooth sprocket and key to operator output shaft. Do not tighten.
- 3) Attach door sprocket and key to door shaft. Do not tighten.
- 4) Place assembled chain over door shaft sprocket and around the 12 tooth sprocket.
- 5) Move and align sprockets and chain as close to the operator as possible.
- 6) Raise or lower operator to remove slack from chain. Be certain operator output shaft is parallel with door shaft.
- 7) Tighten operator mounting bracket nuts.
- 8) Apply locking compound to all sprocket set screws and install into door and output sprockets and tighten.

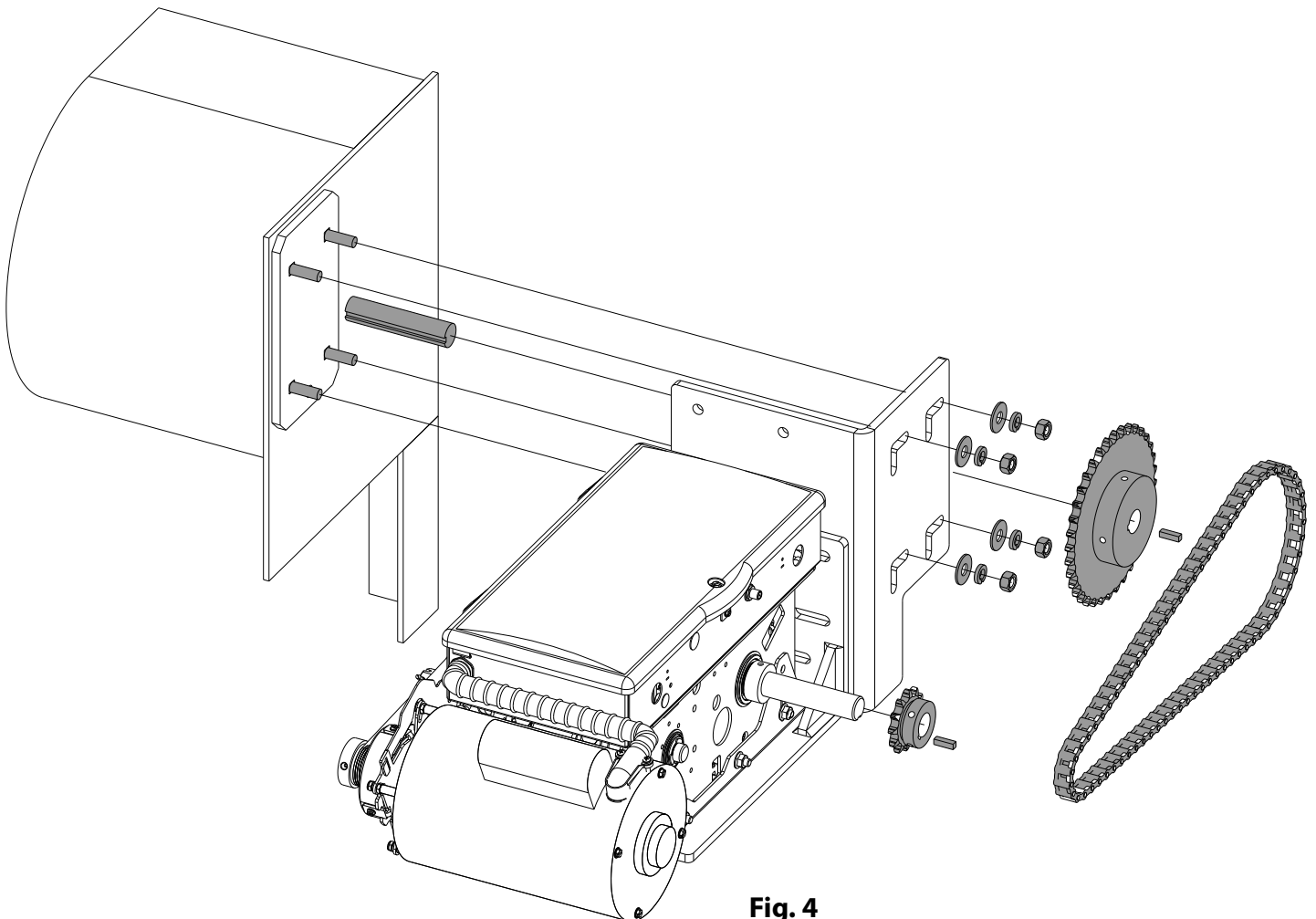


Fig. 4

Section 4: Installation

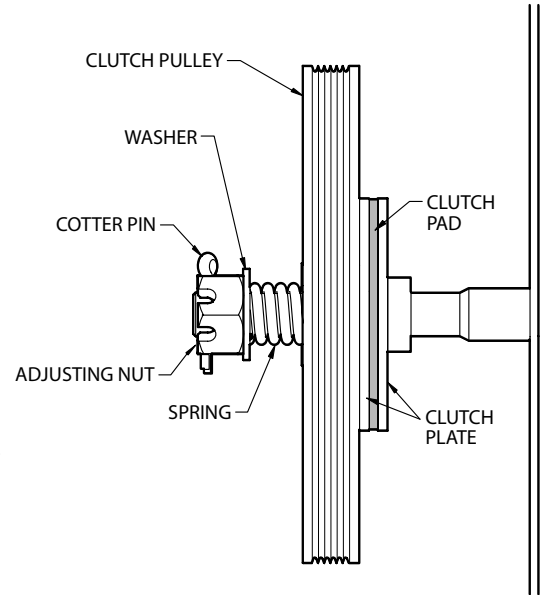
Clutch Adjustment

NOTE: The clutch is intended to provide protection for the grille, the operator and associated equipment. It is not intended for entrapment protection.

To Adjust the Clutch

- 1) Decrease the compression on the clutch until the operator will not lift the grille.
 - Turning the adjustment castle nut counter-clockwise will decrease compression and clockwise will increase compression.
- 2) Gradually increase compression until the operator will perform a complete open and close cycle without clutch slippage.
- 3) Insert a cotter pin through the adjustment castle nut and bend a leg of the cotter pin to hold it in place.

NOTE: Periodically check the system for proper clutch action. If clutch starts to slip after working properly for some time, check manual operation of grille **BEFORE** adjusting clutch. The grille 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.



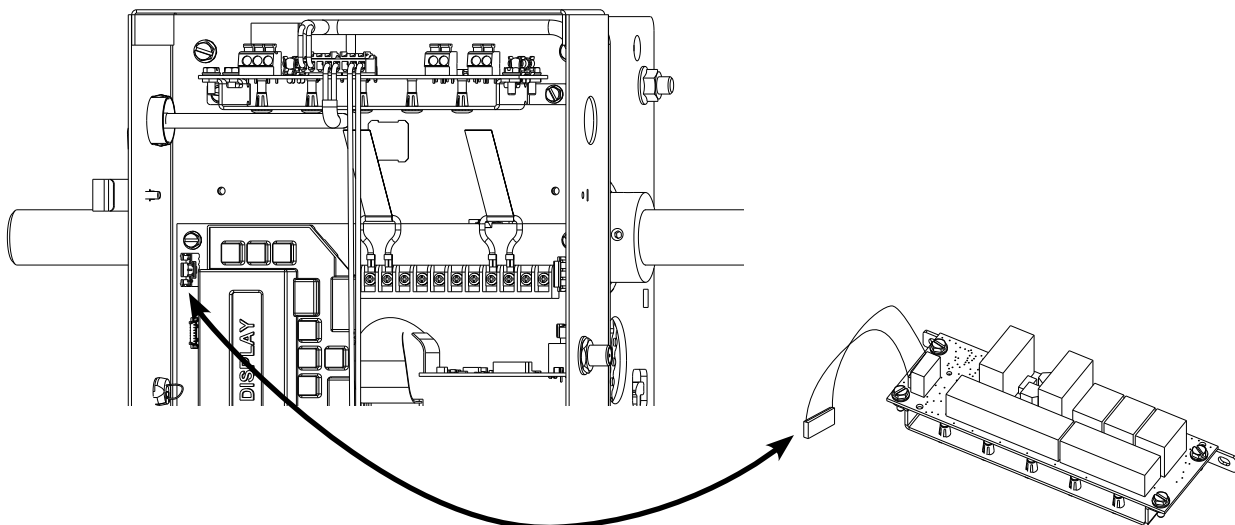
Optional Auxiliary Board (AOM or TCM)

NOTE: Only 1 (one) auxiliary board can be used on this operator.

Use Auxiliary Output Module (AOM) Board for additional grille position monitoring.

Use Timer Control Module (TCM) for adding additional monitored safety devices.

- 1) Mount board with included screws below EEG board as shown.
- 2) Plug Auxiliary circuit board ribbon cable into main circuit board connector.
- 3) Wire aux board according to instructions provided with board.



Section 5: Wiring

WARNING

- DO NOT apply power to operator until instructed to do so.
- It is strongly recommended, and may be required by law in some areas, 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.

AVERTISSEMENT

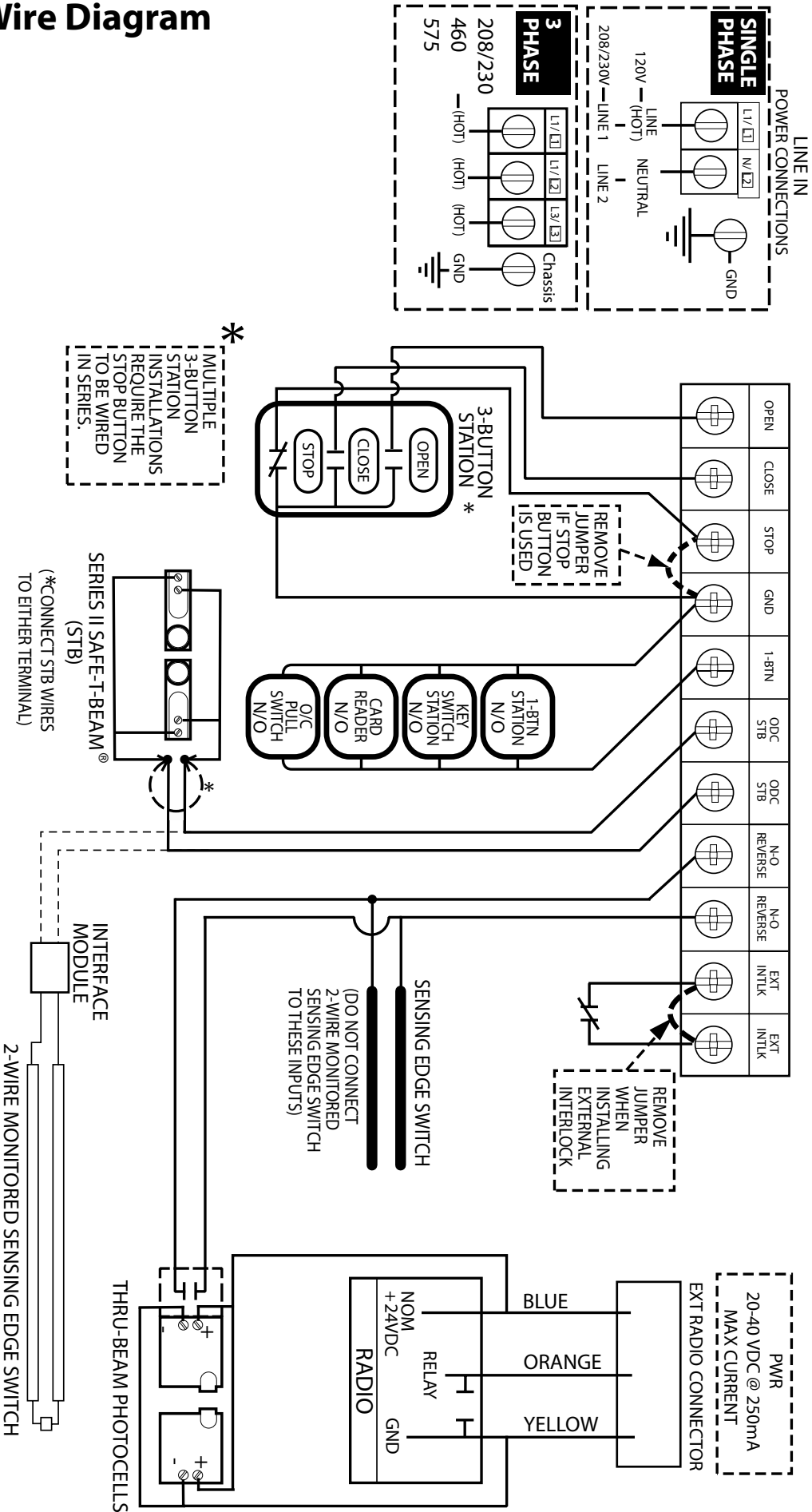
- NE PAS mettre sous tension tant que l'instruction n'est pas donnée de le faire.
- Il est fortement recommandé voire même exigé par la loi dans certaines régions, de contacter un électricien qualifié pour l'acheminement du fil électrique.
- Assurez-vous que l'alimentation électrique a été déconnectée des câbles d'alimentation d'entrée connectés à l'opérateur avant de manipuler ces câbles. Une procédure de verrouillage/étiquetage appropriée est recommandée.
- Le câblage au secteur doit satisfaire à tous les codes de construction locaux.
- Assurez-vous que les valeurs nominales de la plaque signalétique pour tension, phase et fréquence de l'opérateur correspondent à celles des tensions de l'alimentation sur site.
- La capacité d'entrée doit correspondre à la valeur nominale de l'ampérage des opérateurs indiquée sur la plaque signalétique.
- Pour réduire le risque de choc électrique, assurez-vous que le châssis de l'unité est correctement mis à la terre.

Installation of all wiring and connections, including Class 1 and Class 2 circuits, shall be performed in accordance with, but not limited to, the latest NFPA, UL, and N.E.C. standards and codes.

In addition, all installations subject to Canadian standards shall be performed in accordance with the Canadian Electrical Code, Part 1, with respect to wiring material type, wiring gauge related to power capacity requirements, circuit length and wiring methods.

Section 5: Wiring

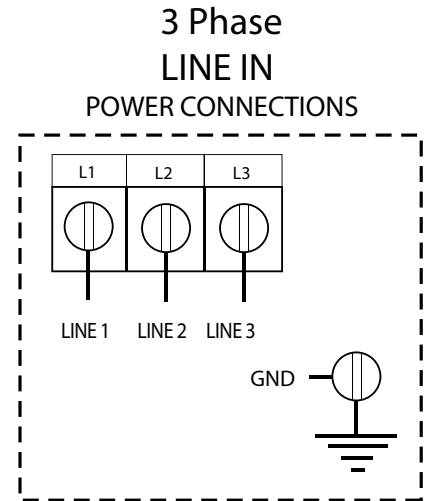
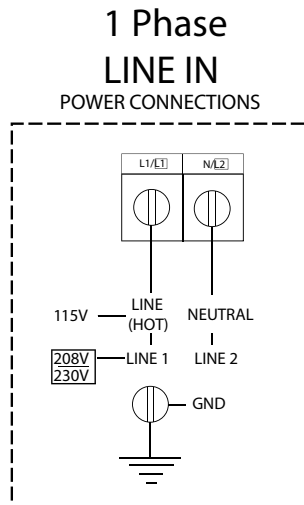
External Wire Diagram



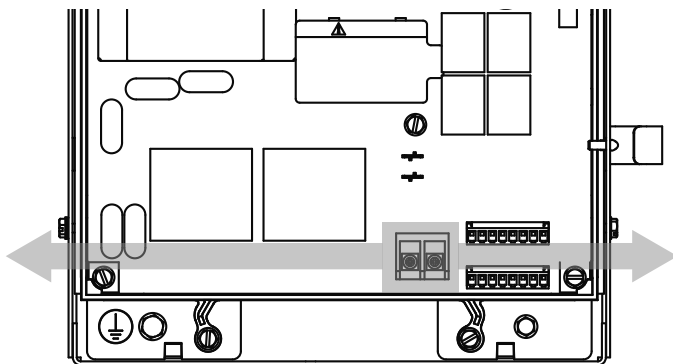
Section 5: Wiring

Line Voltage Wiring

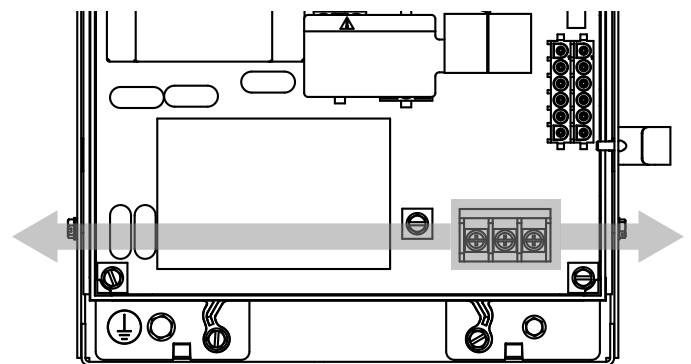
- 1) Remove LINE VOLTAGE INPUT PLUG and install proper fittings and 1/2" conduit.
- 2) Route proper LINE VOLTAGE wires into operator.
- 3) Locate LINE INPUT terminals on circuit board. Using correct connectors, attach wires to LINE INPUTS, and GROUND terminal.
 - Keep low voltage and line voltage wires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



Route Line Voltage wires in shaded areas



1 Phase Line Voltage Wiring



3 Phase Line Voltage Wiring

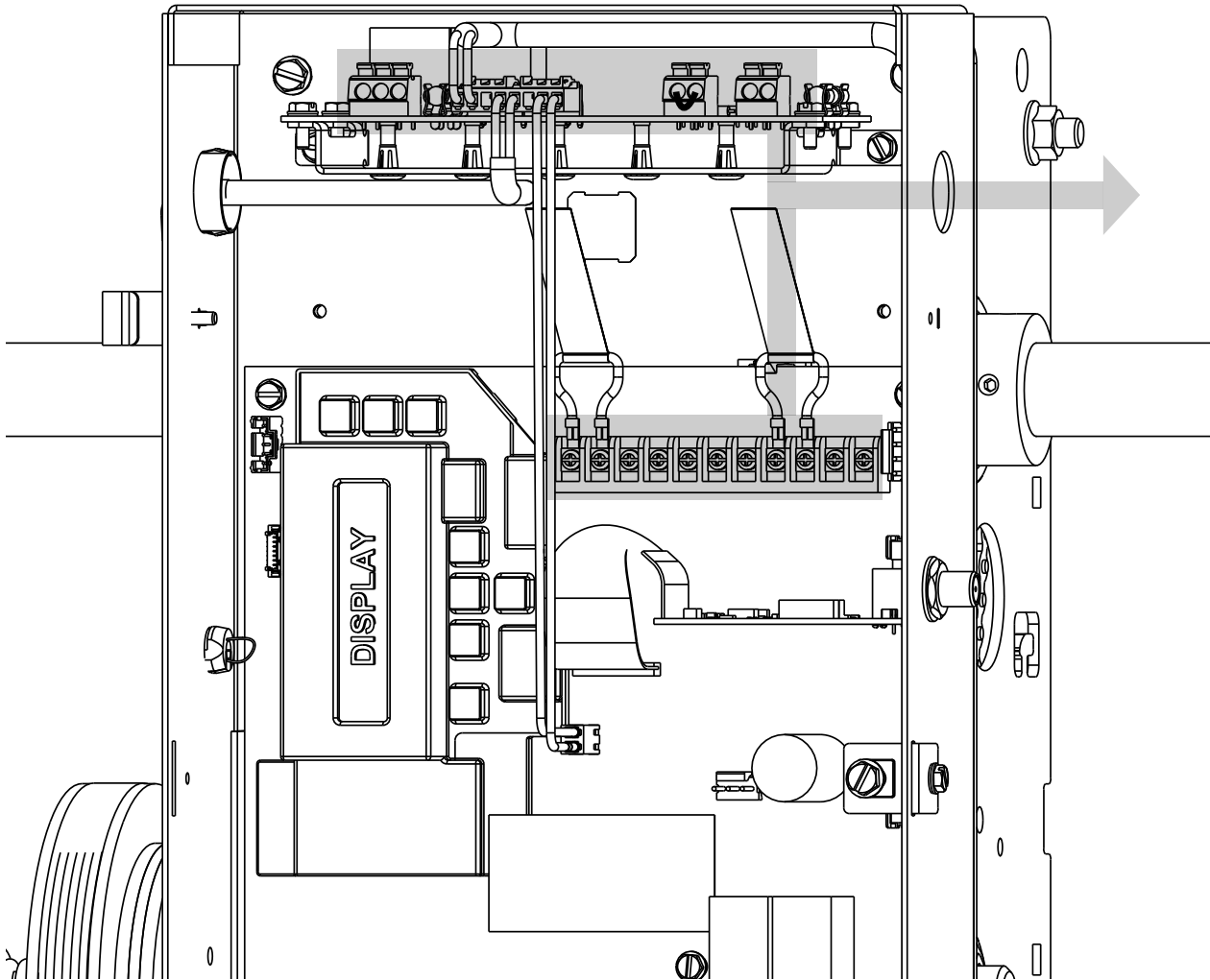
DO NOT APPLY POWER AT THIS TIME

Section 5: Wiring

Low Voltage Control Wiring

- 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.
 - Plug all unused conduit holes.

Route Low Voltage Control & EEG Module wires in shaded areas.



Section 5: Wiring

Wall Controls



WARNING:

- Wall Control(s) must be located so that the grille is within sight of the user and is far enough from the grille, or positioned such that the user is prevented from coming in contact with the grille while operating controls.
- Attach the Warning placard adjacent to the Wall Control. Fig. 3A.



AVERTISSEMENT:

- La ou les commandes murales doivent être situées de telle sorte que l'utilisateur puisse voir la porte et positionnées de telle sorte que l'utilisateur ne puisse pas entrer en contact avec la porte lorsqu'il se sert des commandes.
- Fixez le poster d'avertissement à côté de la commande murale. Fig. 3A.



WARNING:

Before momentary contact control can be used on the CLOSE button, a monitored external reversing device such as a photocell system or sensing edge switch must be used. See pages 5.7-5.9 for installation of entrapment protection devices.



AVERTISSEMENT:

Avant d'utiliser la commande à contact momentané sur le bouton FERMETURE, un dispositif d'inversion externe surveillée tel qu'un système de cellule photoélectrique ou un commutateur de détection de bord doit être utilisé. Voir l'installation des dispositifs de protection contre le coincement en pages 5.7-5.9.

- 1) For a single 3 - button installation, make connections as shown in Fig. 3.
- 2) For single button accessory controls, make connections as shown in Fig. 4.
- 3) For a multiple 3 - button installations, make connections as shown in Fig. 5.
- 4) Mount warning placard next to wall control. 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.

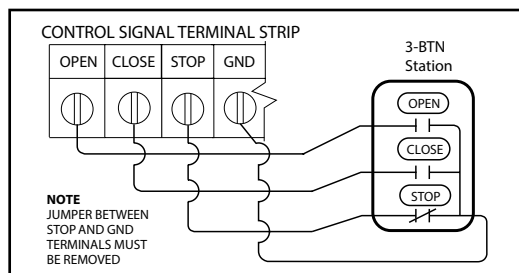


Figure 3

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

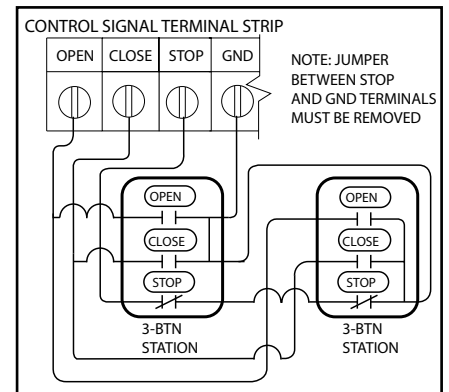


Figure 5

NOTE: Low voltage wiring can be run a maximum of 1000 feet. DO NOT use long distance wiring kits on this operator.

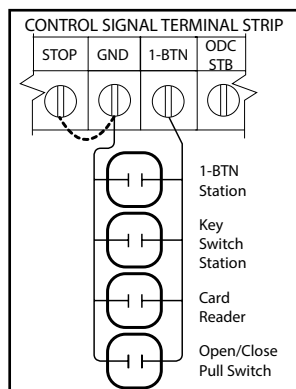


Figure 4



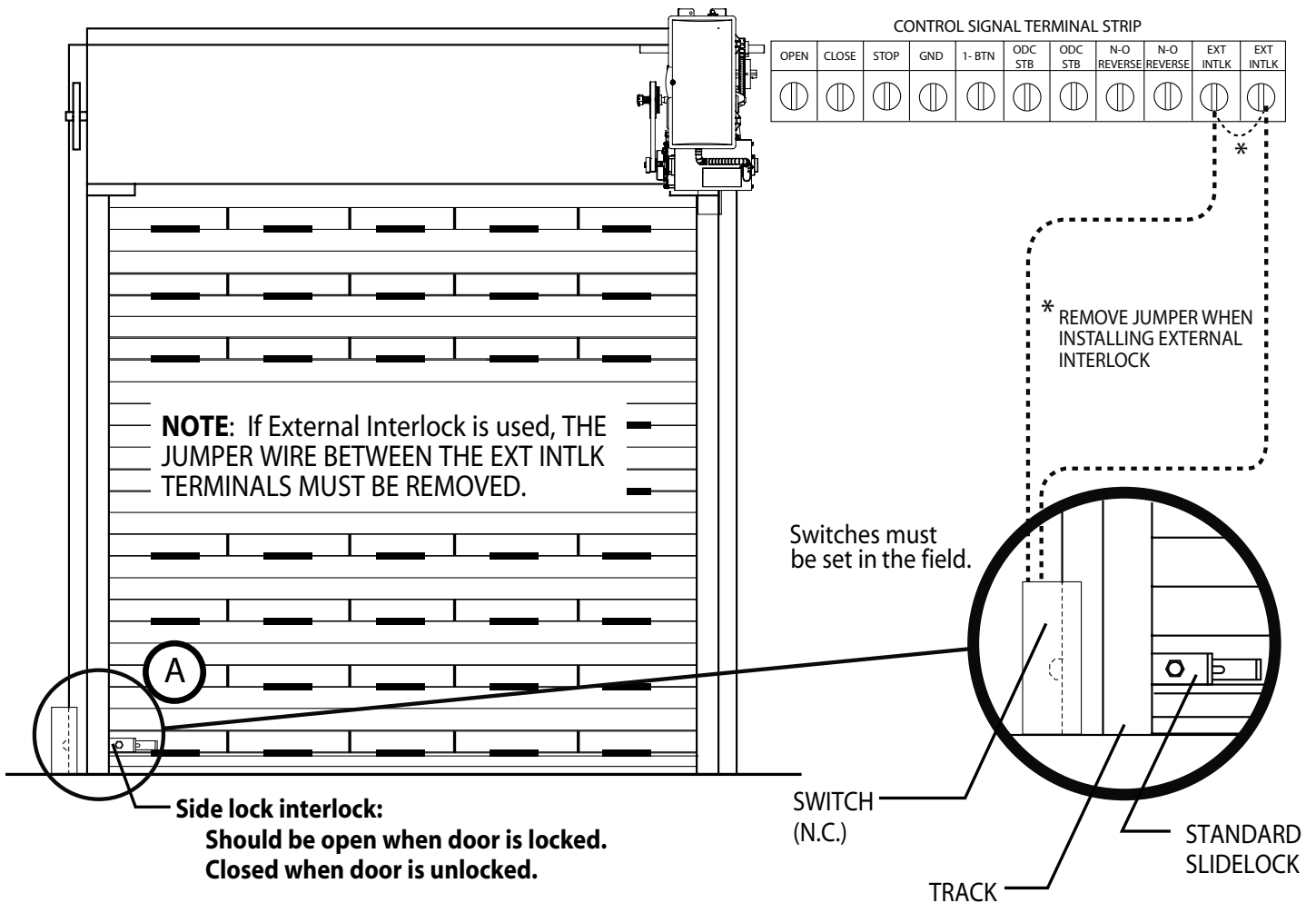
Entrapment Warning Placard

Figure 6

Section 5: Wiring

Interlock Switches

- 1) Optional external interlock switches are required with some Rolling Steel Grilles to prevent the grille from operating under certain conditions including the following:
 - If the grille is equipped with a functioning grille lock, an interlock switch (A) must be installed to prevent electric operation when the lock is engaged.
- 2) Interlock switches must be set in the field.



Section 5: Wiring

Monitored Sensing Edge Installation

MillerEdge® Wired Monitored Sensing Edge

Right hand installation shown, Left hand installation mirrored

NOTE: Only one monitored safety device can be installed on the ODC-STB terminals, If additional monitored safety devices are needed, install the Timer Control Module (TCM).

- 1) Mount junction box to wall One half the grille height plus 12 inches from floor.
- 2) Install Hard-wiring from operator and coil cord to junction box and secure with conduit clamps.
- 3) Connect hard-wiring from operator to coil cord with wire nuts and install junction box cover plate. These are not polarity sensitive.
- 4) Install hard-wires to **ODC STB** terminals in operator.
- 5) Attach coil cord to Monitored Edge Interface Module junction box and secure with conduit clamps.
- 6) Install wires to Monitored Interface Module as shown.
- 7) Install cover plate.

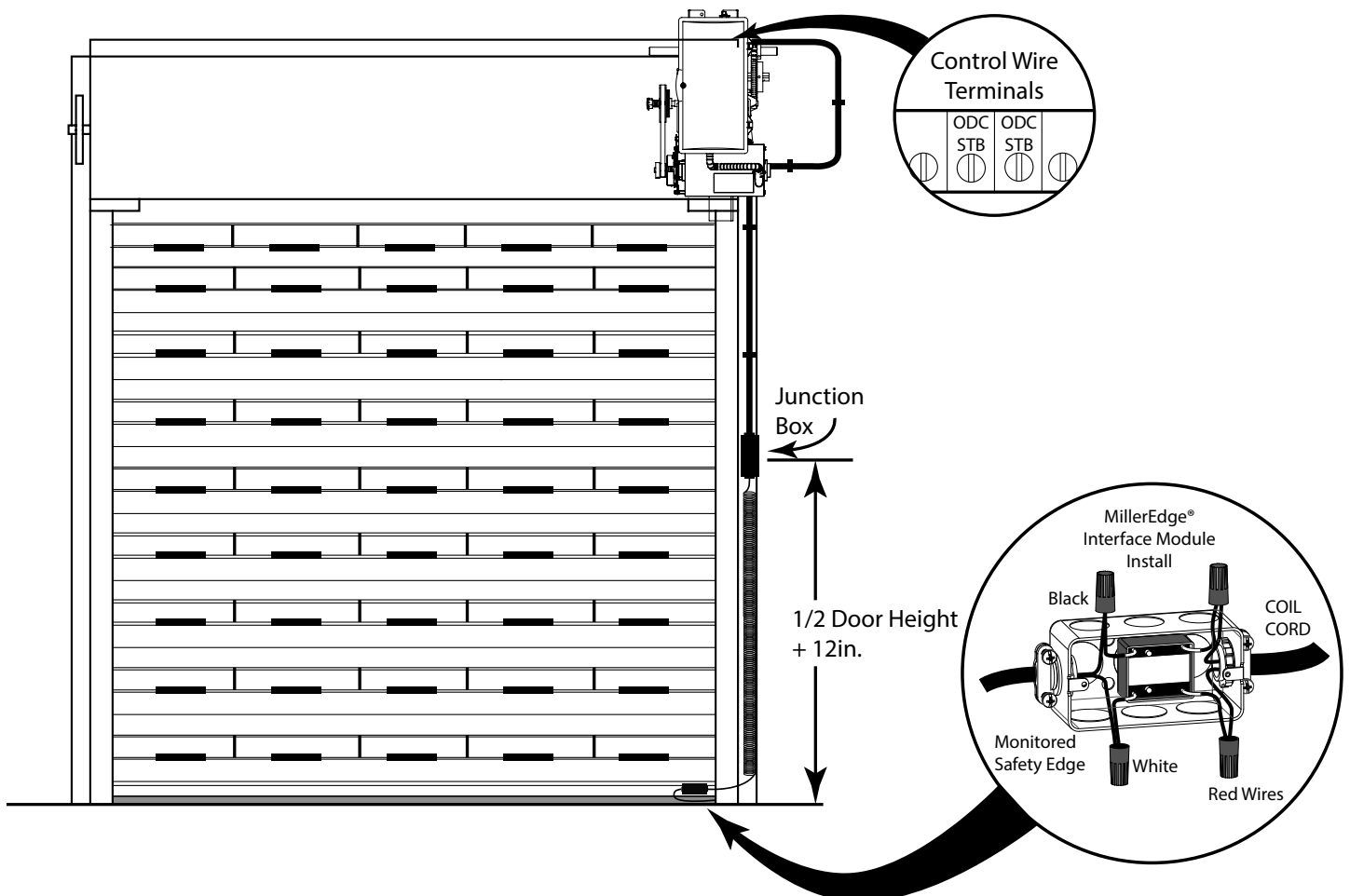


WARNING: Actuating the operator using constant contact on the CLOSE button will override non-functioning external reversing devices, including sensing edges.



AVERTISSEMENT: L'activation de l'opérateur avec un contact constant sur le bouton FERMER annulera les dispositifs de renversement externes non fonctionnels, y compris les systèmes de détection des bords.

NOTE: DO NOT use take up reels with Monitored Edge systems



Section 5: Wiring

Wireless Monitored Safety Edge Systems

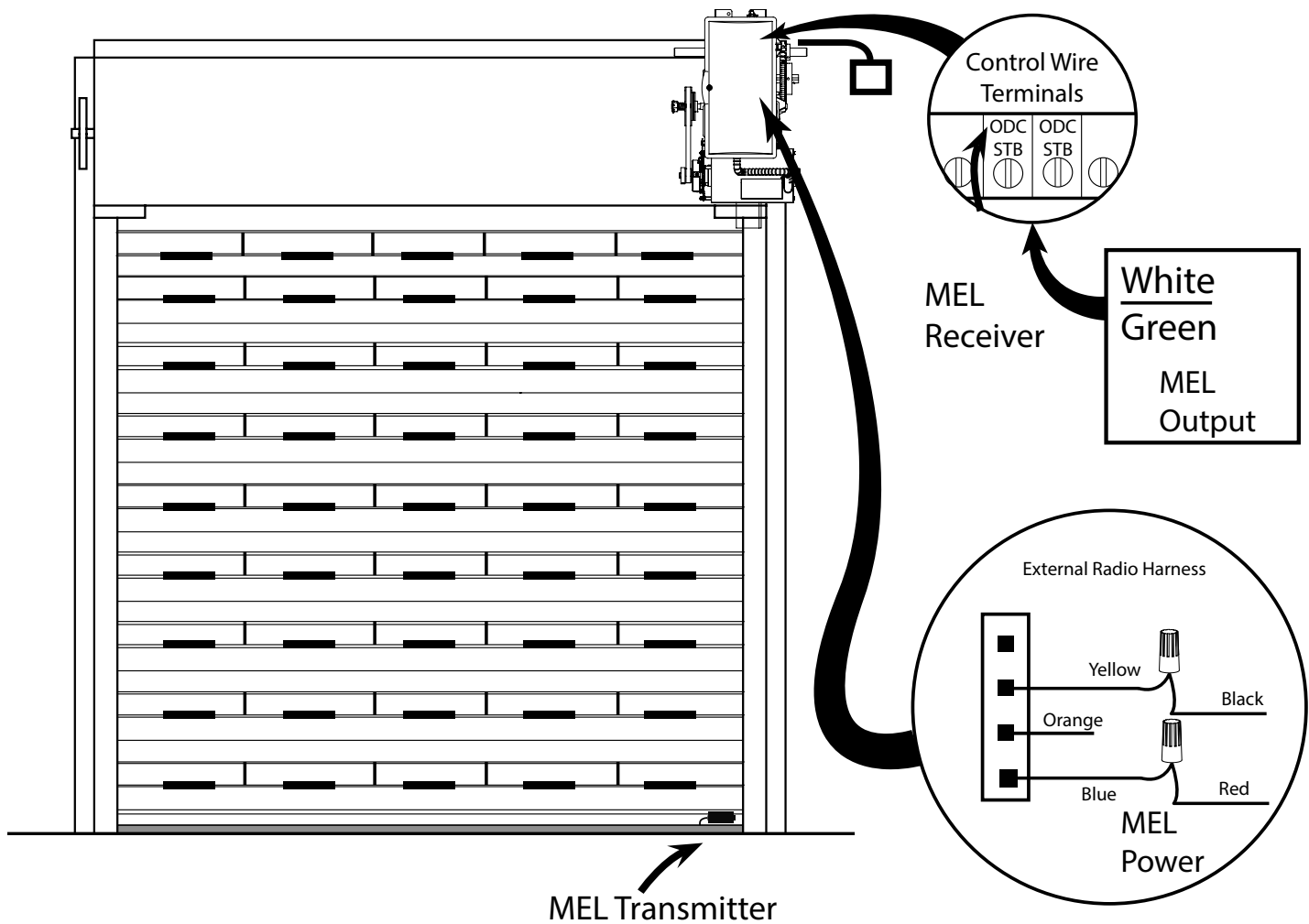
MillerEdge® MEL Wireless Monitored Sensing Edge

Right hand installation shown, Left hand installation mirrored

NOTE: Only one monitored safety device can be installed on th ODC-STB terminals, If additional monitored safety devices are needed, install the Timer Control Module (TCM).

- 1) Mount Wireless Edge Receiver adjacent to operator.
- 2) Route MEL wireless receiver wires into operator electric box using suitable conduit and clamp systems.
- 3) Attach MEL wireless receiver power wires (red/black) to external radio plug as shown.
- 4) Attach MEL wireless receiver trip wires (green/white) to ODC STB terminals on control wire terminal strip.
- 5) Mount MEL wireless transmitter to bottom edge of grille per MEL instructions.

NOTE: To obtain proper operation of MEL edge sensor, each transmitter/receiver set must be set to a unique address. Follow instructions provided with the MillerEdge® MEL kit to set the address.



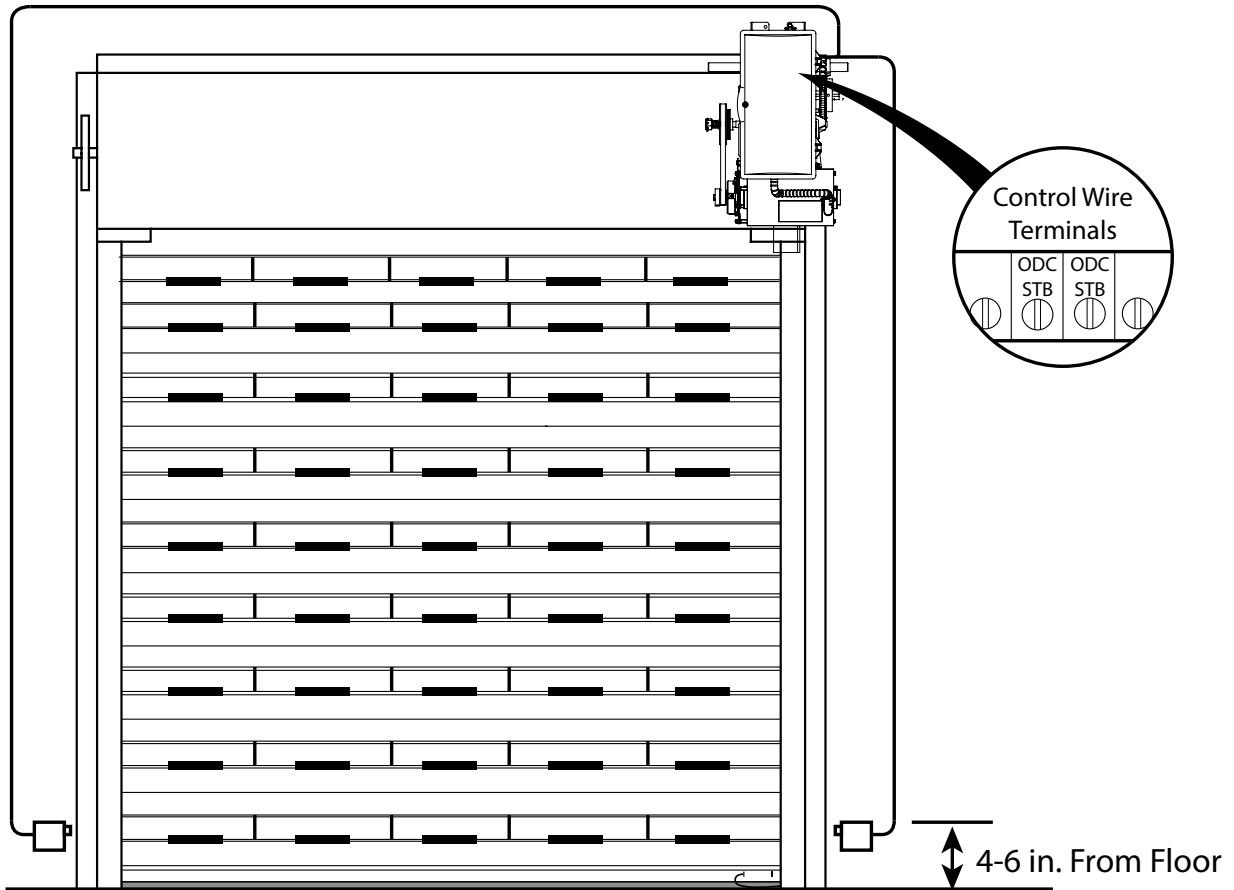
Section 5: Wiring

Photocell Installation

Any approved monitored photocell system can be used with the SX® Egress system. See ENTRAPMENT section on page 3.1.

NOTE: Only one monitored safety device can be installed on the ODC-STB terminals. If additional monitored safety devices are needed, install the Timer Control Module (TCM).

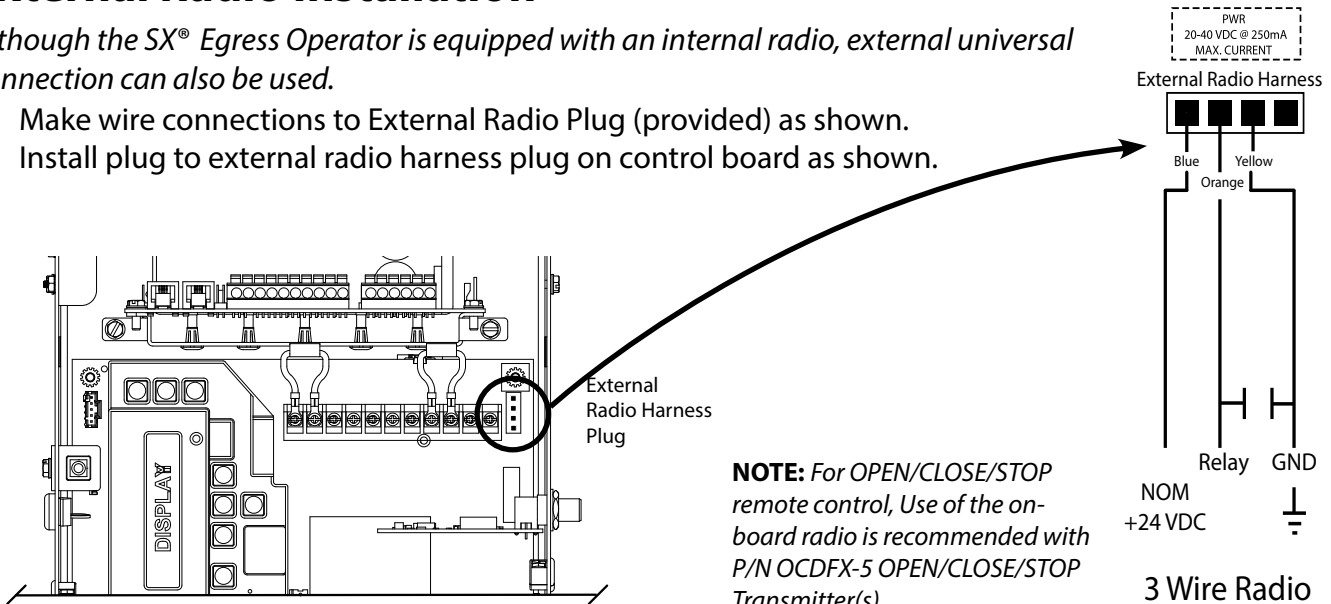
- 1) Mount photocell modules between 4 and 6 inches from floor.
- 2) Wire to ODC STB terminals.



External Radio Installation

Although the SX® Egress Operator is equipped with an internal radio, external universal connection can also be used.

- 1) Make wire connections to External Radio Plug (provided) as shown.
- 2) Install plug to external radio harness plug on control board as shown.

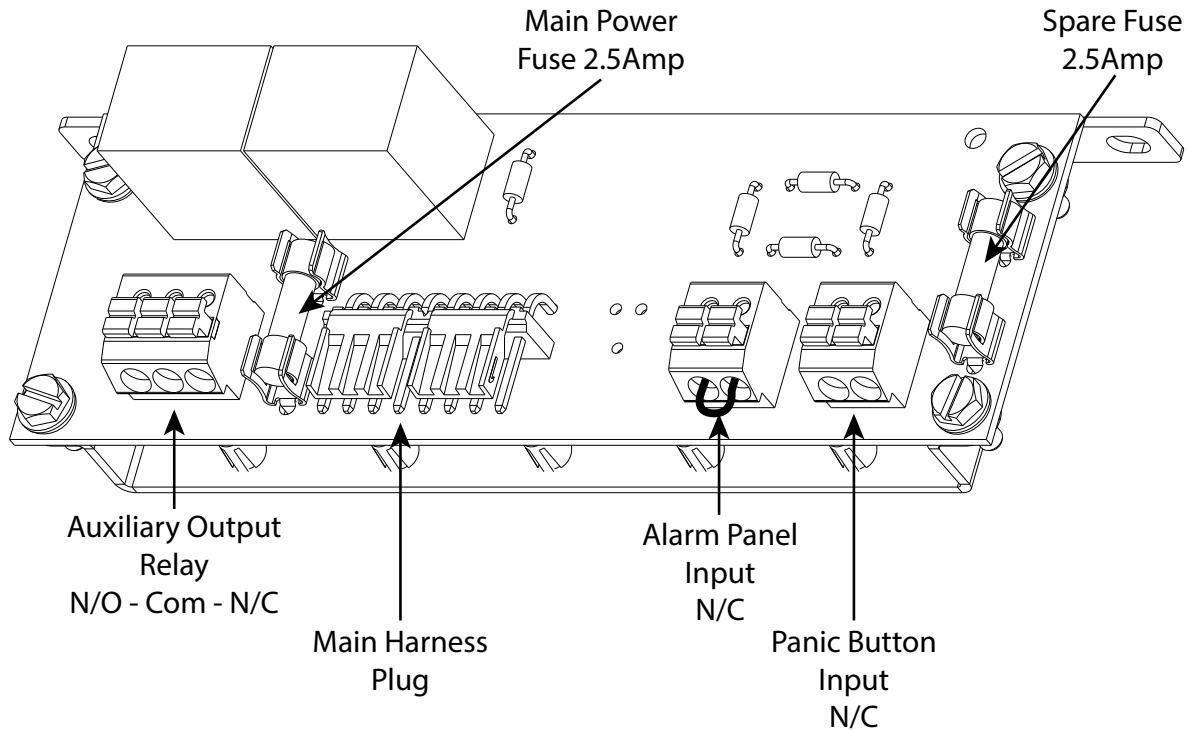


3 Wire Radio

Section 5: Wiring

EEG Board Wiring

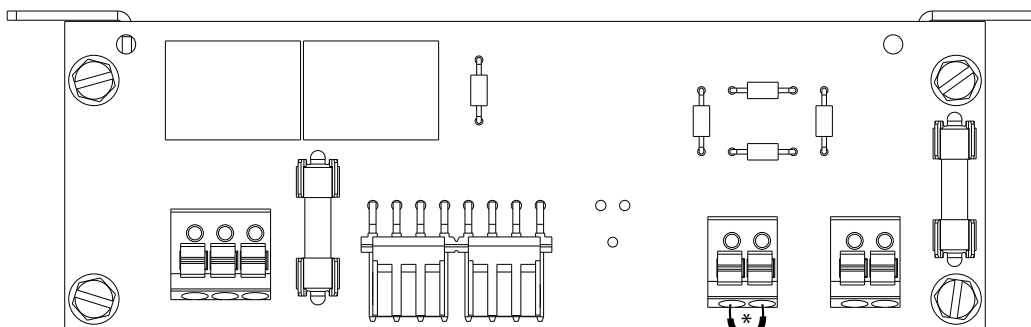
Egress Release System Control Board Terminal Assignments



Egress Control Board:

The EEG control board is the heart of the EEG operator. The main harness plug provides 24V for power, Clutch Release and Hoist interlock controls.

- The EEG control board also contains output relays with Normally Open (N/O) Com (Common) and Normally Closed (N/C) outputs for the addition of signals, lights, and monitoring.
 - The EEG control board also contains normally closed inputs for Control/Alarm panels and Panic buttons.
1. Wire provided keyswitch control to one of the N/C Control Inputs.



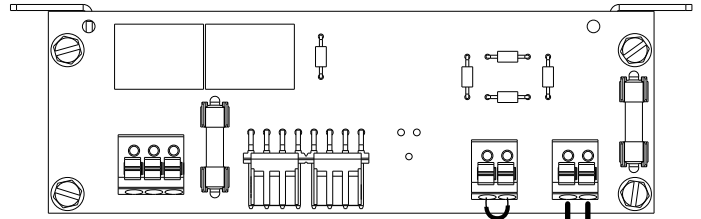
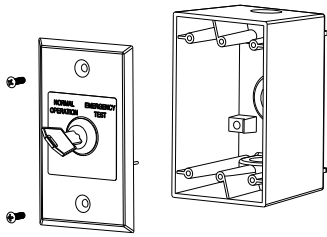
Output Relay is rated:
 15A @ 120VAC
 10A @ 230VAC
 7A @ 30VDC

Unit will not operate unless both inputs are closed.

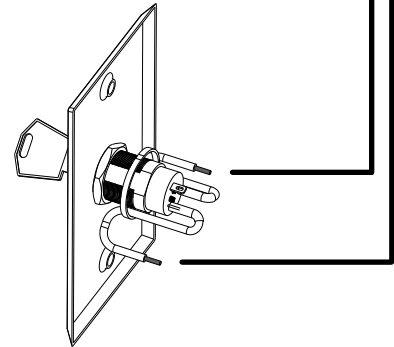
Section 5: Wiring

Egress Control Station Connection

Control Station



Egress Control Board (EEG Module)



- 1) Mount station in appropriate location.
 - 2) Use proper connectors, i.e conduit, wire grips, for field wiring.
 - 3) Use appropriate sized wire nuts to connect field wiring from keyswitch to EEG modules Panic Button inputs.
- (Connection is not polarity sensitive).

Motor Connection

1 Phase & 3 Phase



WARNING: Verify Line Voltage before making any connections to assure that motor harness is connected to proper motor connector on circuit board.



AVERTISSEMENT: Vérifiez la tension avant d'effectuer les connexions pour s'assurer que le harnais du moteur est relié au connecteur du moteur appropriée sur la carte du circuit.

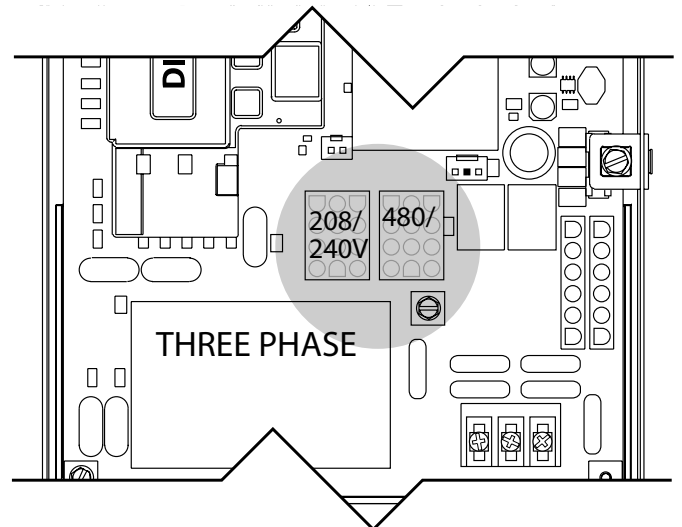
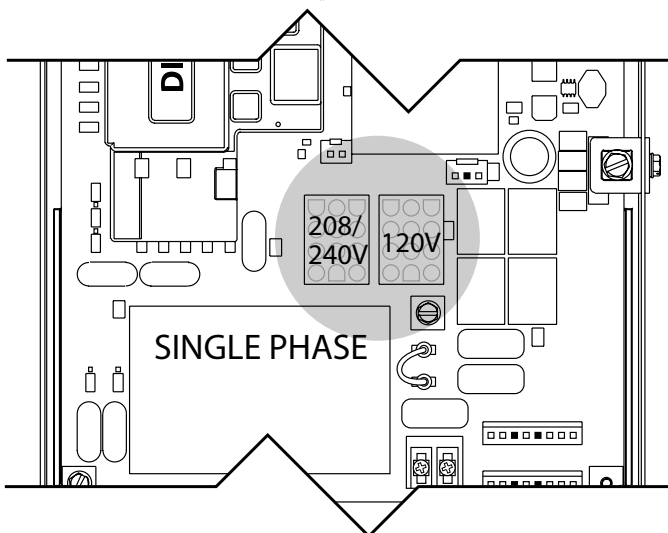


DANGER: After power is supplied to the operator, Do Not make contact with components inside the control panel except for the Keypad Keys.



DANGER: Après avoir mis l'opérateur sous tension, NE PAS entrer en contact avec des composants à l'intérieur du panneau de commande, sauf pour les touches du pavé numérique.

- 1) Plug motor harness into proper connector on control board in electrical box.
- 2) Apply Power to Operator.



Section 6: Operator Setup Procedure

Control Panel

SX® Egress 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. Operators 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.

⚠ 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.

⚠ DANGER: Après avoir mis l'opérateur sous tension, NE PAS entrer en contact avec des composants à l'intérieur du panneau de commande, sauf pour les touches du pavé numérique. Fig. 1.

⚠ WARNING: DO NOT calibrate operator or operate grille unless grilleway is in sight and free obstructions. Grille will move during setup. Keep people clear of opening while grille is moving.

⚠ AVERTISSEMENT: Calibrer l'opérateur et utiliser la porte uniquement si la porte est en vue et libre de tout obstacle.

La porte se déplacera pendant la programmation. Ne laisser personne se tenir dans l'ouverture de la porte pendant qu'elle est en mouvement.

AFTER WIRING HAS BEEN COMPLETED, APPLY POWER TO THE OPERATOR.

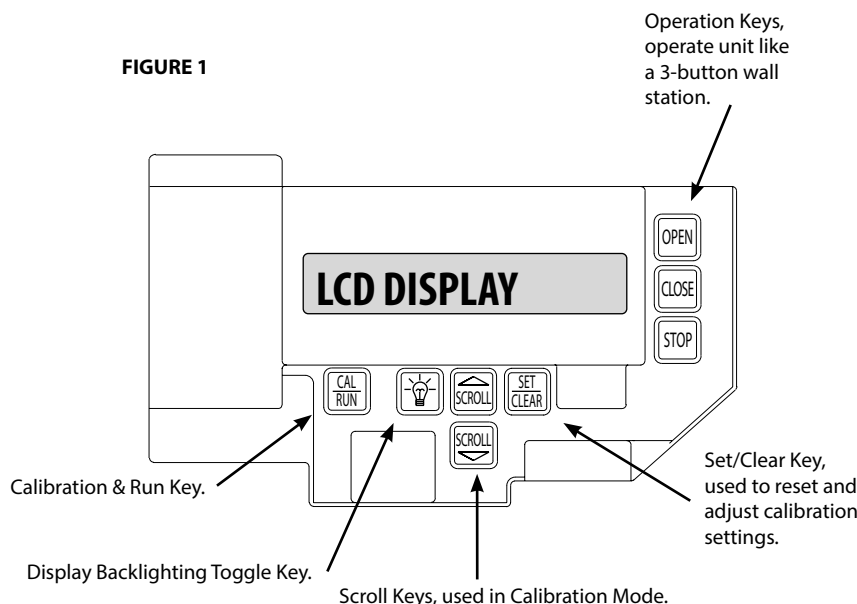
Control Operating Modes

SX® Egress 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 key to toggle between operating modes.

- The first display in CALIBRATION mode is "SET CLOSE DIR."
- The display in RUN mode will be one of the condition codes listed on page 7.3.



Section 6: Operator Setup Procedure

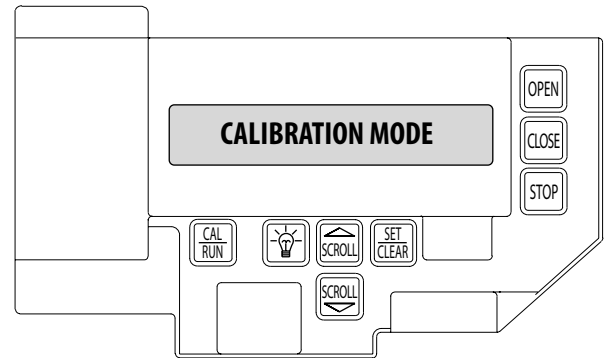
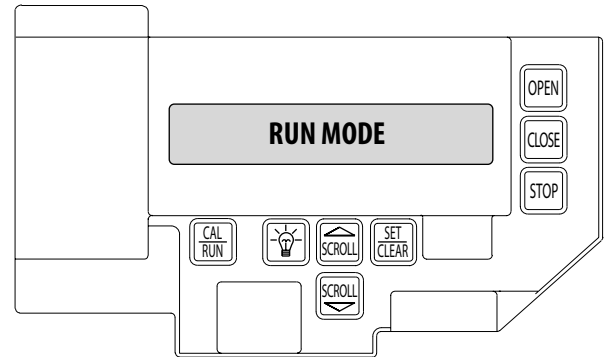
Calibration Mode Structure

If at any time should programming become confused. Press the CAL/RUN key once to enter RUN MODE then press CAL/RUN key again to reenter CALIBRATION MODE.

Press the SCROLL key(s) to locate or check the settings on any menu item.

EEG Operator Calibration Menu Structure

1. SET CLOSE DIR> -HIT SET/CLEAR TO ENTER THIS MODE-
 - PRESS CLOSE KEY BRIEFLY
 - DID DOOR CLOSE?
 - YES NO
2. UP LIMIT>SET OR CLR
3. DOWN LIMIT> SET OR CLR
4. MID-STOP> SET OR CLR
5. LIMIT OVERRUN> 0-9
6. OPEN MODE> C-STP OR MOM
7. CLOSE MODE> C-STP OR C-REV OR MOM
8. ODC STB> ON OR OFF
9. TLC DELAY> 0:00 TO 5:00
10. BRAKING RATE>0-9
11. MAX RUN TMR> SET OR CLR
12. GDO TYPE> TROLLEY OR J-SHAFT
13. LEARN NEW XMTR? -HIT SET FOR YES-
 - PUSH XMTR BUTTON TWO TIMES TO LEARN XMTR
14. REMOVE XMTR? - HIT SET FOR YES-
 - ARE YOU SURE?-YES/NO
15. REMOVE ALL XMTRS? -HIT SET FOR YES-
 - ARE YOU SURE?-YES/NO
16. CYCLES> 000000
17. GDO V#> 020.00.000
18. RUN CODE 1> CODE & DESCRIPTION
19. ERROR CODE 1> CODE & DESCRIPTION



When returning to CALIBRATION MODE. Menu will always start at the first item (SET MOTOR DIR) press the SCROLL key to bypass this item until desired menu item is displayed.

- Item 11 (MAX RUN TMR) will set itself once limits have been programmed and grille has run one complete cycle.
- Items 18-19 (RUN and ERROR codes) will retain the last 10 codes encountered. Press the SET/CLEAR key to toggle through all codes.

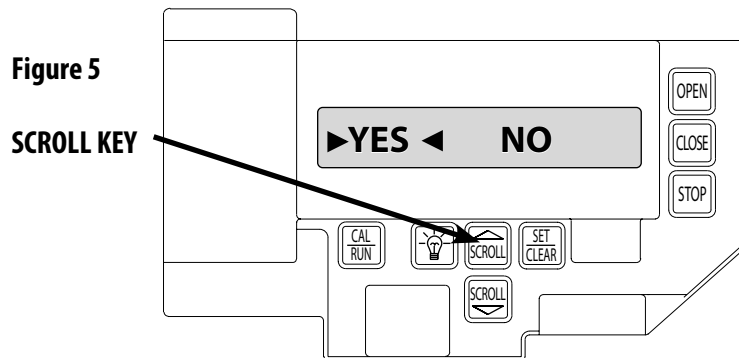
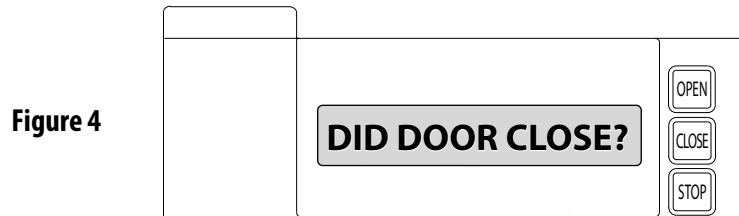
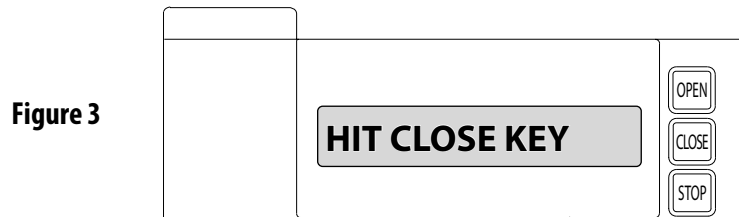
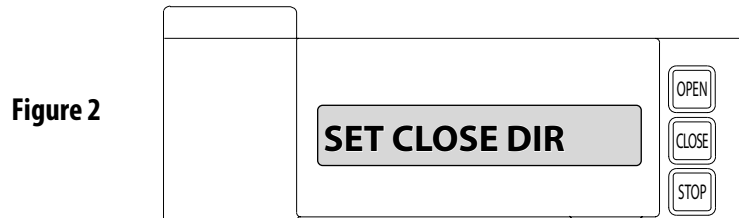
NOTE: Menu structure will change when any auxiliary board(s) are added. See instructions for each auxiliary board for changes.

Section 6: Operator Setup Procedure

Setting Close Direction

The direction of motor rotation depends on mounting position and/or how the main input power phases are wired. This setting is used to insure the grille is closing and opening according to the input commands.

- 1) If operator is in RUN mode, press CAL/RUN to enter calibration mode.
- 2) Press SET/CLEAR to begin the calibration procedure and advance to the next screen. Figure 3.
- 3) Briefly press the CLOSE key. (Pressing the Scroll key at this point will exit this control function.)
 - The display will read " DID DOOR CLOSE?" Figure 4.
- 4) Press SCROLL key (up or down) to toggle between YES and NO. Figure 5.
 - If YES is selected, no change to operator calibration is made. If NO is selected the board will change the operator's down direction.
- 5) Press the SET/CLEAR key.
- 6) Press CAL/RUN to return to run mode.

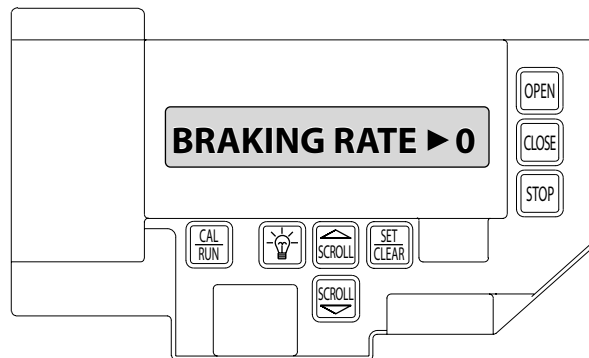


Section 6: Operator Setup Procedure

Setting Braking Rate

- 1) If operator is in RUN mode, press CAL/RUN to enter calibration mode.
- 2) Press Scroll until display reads "BRAKING RATE >#." where # is the deceleration rate, ranging from 0 to 9. 0=Max. braking. 9=Min. braking. Figure 6.
- 3) Press SET/CLEAR key to toggle between 0 and 9—one digit at a time.
- 4) Pick a value and operate the grille. Adjust as necessary.
- 5) Press a SCROLL key to shift to a new function and lock in the setting.
- 6) Press CAL/RUN to return to run mode.

Figure 6



Section 6: Operator Setup Procedure

Setting Travel Limits

UP Limit

- 1) If operator is in RUN mode, press CAL/RUN to enter calibration mode.
- 2) Press SCROLL until display reads "UP LIMIT>CLR " Figure 7A.
- 3) Jog the grille using the OPEN or CLOSE key until you reach the MAXIMUM GRILLE OPEN HEIGHT.
★ **Open limit must be set at maximum height for proper recovery from egress operation. If a lower up limit height is desired, use MID-STOP feature.**
- 4) Press SET/CLEAR key to switch display to "UP LIMIT>SET" Figure 8A.
- 5) Press a SCROLL key to shift to a new function and lock in the limit setting.
- 6) Press CAL/RUN to return to run mode.

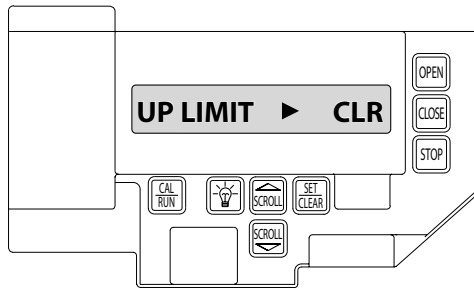


Figure 7A

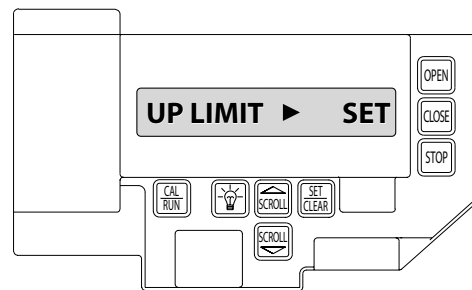


Figure 8A

NOTE: The recommended set point for the DOWN Travel Limit is normally at approximately 2 inches off the floor. This final distance will be covered by the Limit Overrun Function to establish a more accurate seal.

DOWN Limit

- 1) If operator is in RUN mode, press CAL/RUN to enter calibration mode.
- 2) Press SCROLL until display reads "DN LIMIT>CLR " Figure 7B.
- 3) Jog the grille using the OPEN or CLOSE key until down limit is reached.
- 4) Press SET/CLEAR key to switch display to "DN LIMIT>SET" Figure 8B.
- 5) Press a SCROLL key to shift to a new function and lock in the limit setting.
- 6) Press CAL/RUN to return to run mode.

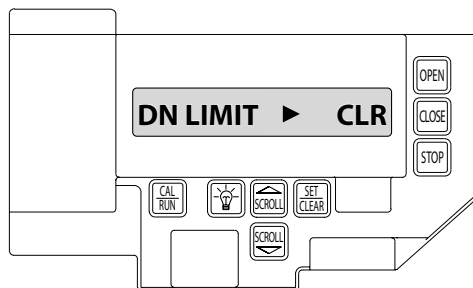


Figure 7B

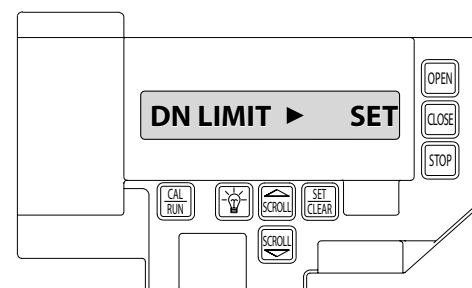


Figure 8B

★ **After limits are set, an Egress Test should be performed to ensure up limit is properly set.**

NOTE: Controls will be constant contact at this point.

- 1) If operator is in CAL mode, press CAL/RUN to enter RUN mode.
- 2) Use the OPEN and CLOSE keys on the main control board to operate unit from full open to full close twice. (This sets the MRT)
- 3) Close door completely and test Egress Operation using any Egress activation control.
 - Door should release and open fully.
 - Check display screen to ensure display reads "IDLE OPEN LIMIT" and "OPEN INTLK".
- 4) If the message above is NOT shown, reset open limit per instructions above.

Section 6: Operator Setup Procedure

Setting Limit Overrun

! WARNING: The Limit Overrun 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 grille travel controlled by the Limit Overrun function.

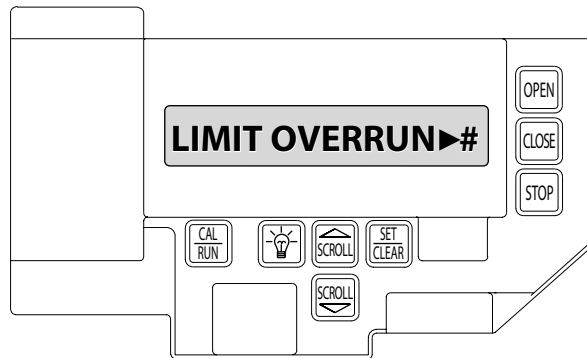
The Down Limit Overrun function should be used to close the grille no more than the final 2".

! AVERTISSEMENT: La fonction de dépassement de limite annulera les dispositifs de renversement externes, y compris les cellules photoélectriques et des systèmes de détection ou d'inversion aux bords. En conséquence, tous les dispositifs externes connectés seront désactivés pendant la partie de la course de la porte qui est contrôlée par la fonction de dépassement de limite.

La fonction de dépassement de limite inférieure doit être utilisée pour fermer la porte uniquement aux derniers 5 cm..

- 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 grille and the floor.
- B) The Limit Overrun setting can be varied between 0 and 9.
- 0 - disables the Limit Overrun so that the grille stops at the down limit switch setting.
 - 9 - causes the greatest amount of grille travel beyond the limit switch setting. Grille should close gently with light tension.
- 1) Press CAL-RUN to enter calibration mode
 - 2) Press scroll (DN) until the display reads "LIMIT OVERRUN >(0-9)." Fig. 9.
 - 3) Press SET/CLEAR until the display reads the desired value.
 - 4) Press the OPEN key to open the grille a few feet, then release
 - 5) Press the CLOSE key to close the grille and hold until the operator stops.
 - 6) Check the grille seal and repeat steps 3-5 until the appropriate seal is obtained between the grille and the floor.
 - 7) Press CAL-RUN to return to Run mode.

Figure 9



! 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 6.5. Then adjust the Limit Overrun as instructed above.

! ATTENTION: Si une adhésion appropriée ne peut être obtenue à un réglage de 9, réinitialiser le dépassement de limite à 0 puis la position de déplacement de la limite inférieure selon les instructions de la page 6.5. Régler ensuite le dépassement de limite tel qu'indiqué ci-dessus

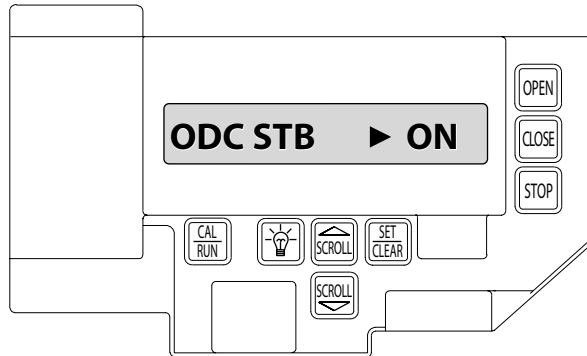
Section 6: Operator Setup Procedure

Monitored Reversing Devices

ODC SAFE-T-BEAM® (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 16
- 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.

Figure 16



Section 6: Operator Setup Procedure

Setting Open and Close Modes (Constant vs. Momentary Contact)

OPEN

1. If operator is in RUN mode, press CAL/RUN to enter calibration mode.
2. Press SCROLL (up or down) until display reads "OPEN MODE>MOM" or "OPEN MODE>C-STP." Figure 10.
 - MOM=momentary contact, meaning you press and release the OPEN or CLOSE key and the grille will continue to move until it reaches its travel limit. (See NOTE)
 - C-STP=constant contact-stop, meaning if you release the key prior to the grille reaching its travel limit, the grille will stop.
3. Press SET/CLEAR key to toggle between "OPEN MODE>C-STP" or "OPEN MODE>MOM" on the display.
4. Press SCROLL (up or down) to shift to a new function and lock setting.
5. Press CAL/RUN to return to run mode.

CLOSE

- 1) If operator is in RUN mode, press CAL/RUN to enter calibration mode.
2. Press SCROLL (up or down) until display reads "CLOSE MODE>MOM," "CLOSE MODE>C-STP" or "CLOSE MODE>C-REV." Figure 10.
 - MOM=momentary contact, meaning you press and release the OPEN or CLOSE key and the grille will continue to move until it reaches its travel limit. (See NOTE)
 - C-STP=constant contact-stop, meaning if you release the key prior to the grille reaching its travel limit, the grille will stop.
 - C-REV=constant contact-reverse, meaning if you release the key prior to the grille reaching its travel limit, the grille will reverse direction. (See NOTE)
3. Press SET/CLEAR key to toggle between "CLOSE MODE>C-STP" or "CLOSE MODE>C-REV" or "CLOSE MODE>MOM" on the display.
4. Press SCROLL (up or down) to shift to a new function and lock setting.
5. Press CAL/RUN to return to run mode.

NOTE: Momentary contact (MOM) or Constant Reverse (C-REV) may not be used unless both the OPEN and CLOSE Limits have been set.

In situations where an external reversing device is either not installed or not operating properly, Constant Contact (C-STP) MUST BE USED.

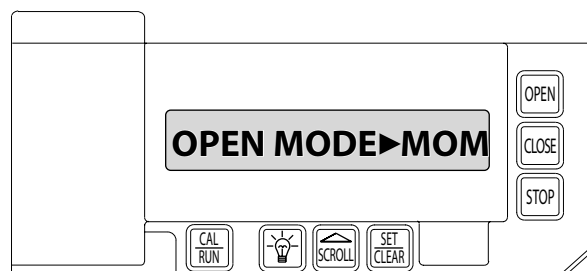


WARNING: Before momentary contact control can be used on the CLOSE button, a monitored external reversing device such as a photocell system or sensing edge switch must be used. See pages 5.7-5.9 for installation of entrapment protection devices.



AVERTISSEMENT: Avant d'utiliser la commande à contact momentané sur le bouton FERMETURE, un dispositif d'inversion externe surveillée tel qu'un système de cellule photoélectrique ou un commutateur de détection de bord doit être utilisé. Voir l'installation des dispositifs de protection contre le coincement en pages 5.7-5.9.

Figure 10



NOTE: During adjustment of a Travel Limit, the Open and Close Modes will automatically fail-safe to Constant Contact until the Limit has been set or reset. At that time the Open and Close Modes will revert to their previous setting.

Section 6: Operator Setup Procedure

Transmitter Programming (Optional)

Adding a Transmitter

1. If operator is in RUN mode, press CAL/RUN to enter calibration mode.
2. Press SCROLL (up or down) until display reads "LEARN NEW XMTR?" Figure 11.
 - This question along with the instruction "HIT SET FOR YES" will continuously pan across the display window. (Pressing SCROLL or CAL/RUN will cancel the operation.)
3. Press SET/CLEAR .
 - Display will read "PUSH XMTR BUTTON TWO TIMES TO LEARN XMTR."
4. Press Transmitter button two times.
 - The display will read "XMTR ___ LEARNED." Where it assigns a random number between 1 and 255 to the transmitter. That transmitter is entered and ready to operate the grille. (Label/mark the transmitter.)
5. Press SCROLL (up or down) to move on to another menu item, or CAL/RUN to exit the CAL mode.

Removing Individual Transmitter

- 1) If operator is in RUN mode, press CAL/RUN to enter calibration mode.
2. Press SCROLL (up or down) until display reads "REMOVE XMTR?" Figure 12.
 - This question along with the instruction "HIT SET FOR YES" will continuously pan across the display window. (Pressing SCROLL or CAL/RUN will cancel the operation.)
3. Press SET/CLEAR
 - A menu displaying the available transmitter numbers will appear.
 - Press SCROLL (up or down) to cycle through the menu to the number of the transmitter to be removed. (Pressing CAL/RUN will cancel the operation.)
4. Press SET/CLEAR
 - The transmitter is removed.
5. Press SCROLL (up or down) to move on to another menu item, or CAL/RUN to exit the CAL mode.

Figure 11



Figure 12



Removing All Transmitters

1. If operator is in RUN mode, press CAL/RUN to enter calibration mode.
2. Press SCROLL (up or down) until display reads "REMOVE ALL XMTRS" Figure 13.
 - This question along with the instruction "HIT SET FOR YES" will continuously pan across the display window. (Pressing SCROLL or CAL/RUN will cancel the operation.)
3. Press the SET/CLEAR key.
 - The display will read "ARE YOU SURE."
4. Press SET/CLEAR key.
 - All transmitters are removed.
5. Press SCROLL (up or down) to move on to another menu item, or CAL/RUN to exit the cal mode.

Figure 13



Section 6: Operator Setup Procedure

Setting Mid-Stop Limit

The SX® Egress Operator includes a programmable Mid-Stop*. This feature allows the operator to stop at a user selectable point when opening. The Mid-Stop does not effect the operator when closing. To operate grille to full open position from mid-stop, press open button again.

★ **NOTE:** Set up travel limit to maximum grill open travel. Open limit must **NOT** be set below this limit for proper open limit recovery in case of egress operation. If a lower up limit height is desired, use this MID-STOP feature.

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

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press the CLOSE to close the grille to the down limit.
- 3) Press SCROLL until the display reads "MID-STOP > CLR". FIGURE 14.

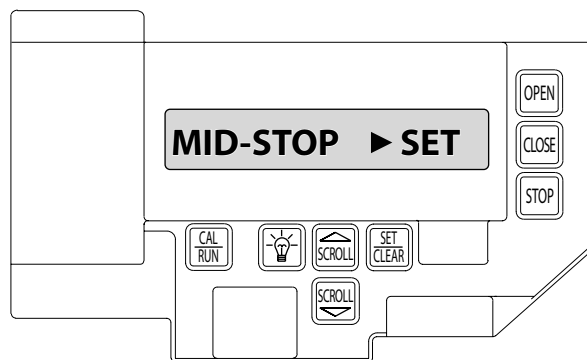
NOTE: If the display reads "MID-STOP > SET" at this point, first clear the MID-STOP as described below then repeat steps 1-3 and continue.

- 4) Press the OPEN to open the grille to desired mid-stop height.
- 5) Press SET/CLEAR until the display reads "MID-STOP >SET"
- 6) Press CAL/RUN to return to run mode.

To Clear the MID-STOP limit:

- 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 14



Section 6: Operator Setup Procedure

Resetting the MRT (Max Run Timer)

The Max Run Timer is set automatically once the unit is cycled between Limits.

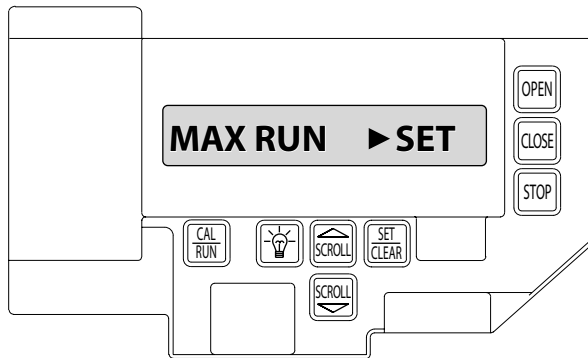
The Max Run Timer prevents the unit from running continuously in the event of a problem. The MRT's are set to the time required to run from one limit to the other, plus 5 seconds (nominal). When the MRT is exceeded, the operator stops and will not respond to any command until it is reset by pressing one of the calibration keys or by cycling power to the unit.

TO RESET

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (up or down) until display reads "MAX RUN TMR > SET." Figure 15.
- 3) Press SET/CLEAR until display reads "MAX RUN TMR > CLR."
- 4) Press CAL/RUN to return to RUN mode.
- 5) Cycle the grille between limits.

NOTE: The Max Run Timer must be reset each and every time the Travel Limits are adjusted.

Figure 15



CAUTION: The MID-STOP feature must be turned off in order to properly set the Max Run Timer.



ATTENTION: La fonction MID-STOP doit être désactivée afin de régler correctement la minuterie de course maximum.

Section 6: Operator Setup Procedure

Timer to Close Delay

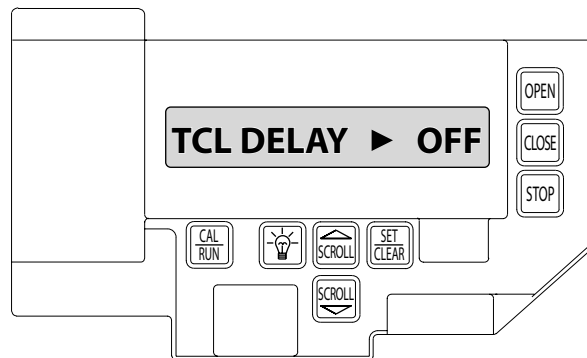
The SX® Egress Operator features an on-board self closing timer. This timer will only close the grille if a monitored safety device is installed, programmed, and performing correctly. This feature can be set OFF or from 2 seconds up to 5 minutes.

NOTE: Minutes can be set in 1 minute increments. Seconds can be set in 2 second increments.

Setting TCL Delay (Optional)

- 1) If operator is in RUN mode, press CAL/RUN to enter calibration mode.
- 2) Press SCROLL (up or down) until display reads "TCL DELAY >OFF" Figure 17
- 3) Press SET/CLEAR key to toggle between OFF, 1,2,3,4,5 minutes.
- 4) Press SCROLL (down) to shift to the seconds.
- 5) Press SET/CLEAR to scroll through the seconds. (2 second increments)
- 6) Press CAL/RUN to return to run mode.

Figure 17

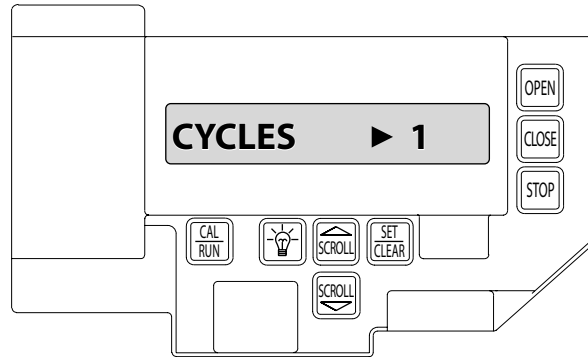


Section 6: Operator Setup Procedure

Operator Cycle Count

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL until display reads "CYCLES>1,2,3 etc. where the number is the number of open/close cycles the operator has performed. Figure 18.
- 3) Press CAL/RUN to return to run mode.

Figure 18



GDO and Display Firmware

- 1) Press CAL/RUN to enter calibration mode.
- 2) Press SCROLL until display reads "GDO V# > #####." Figure 19.
 - This display will cycle between the version number of the current GDO firmware and the current Display Firmware.
- 3) Press CAL/RUN to return to run mode.

Figure 19

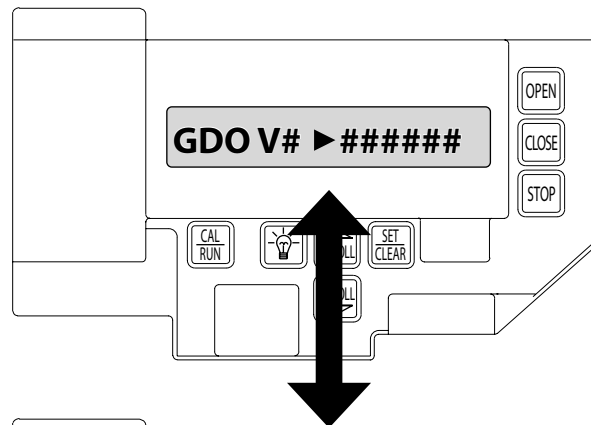
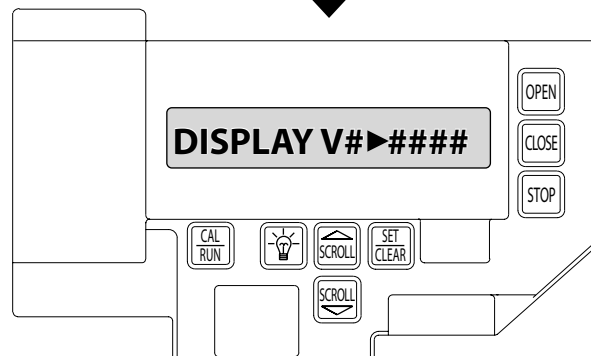


Figure 19



Section 6: Operator Setup Procedure

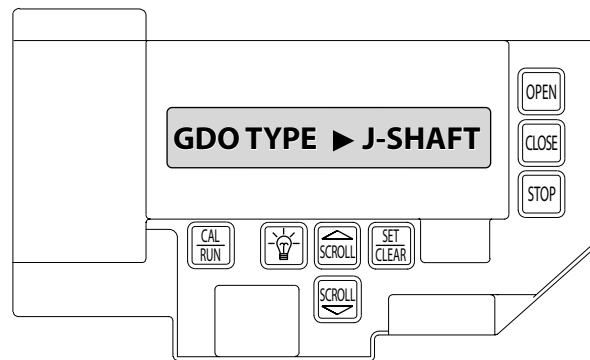
GDO Type

SX® Egress Operators are available for use in jackshaft configuration only. However, the same control board is used for Jackshaft and Trolley configurations. 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 until display reads "GDO TYPE > ."
 - This will display the current 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 20



Test Egress Operation

Once the Egress operator is fully programmed a function and reset test must be performed.

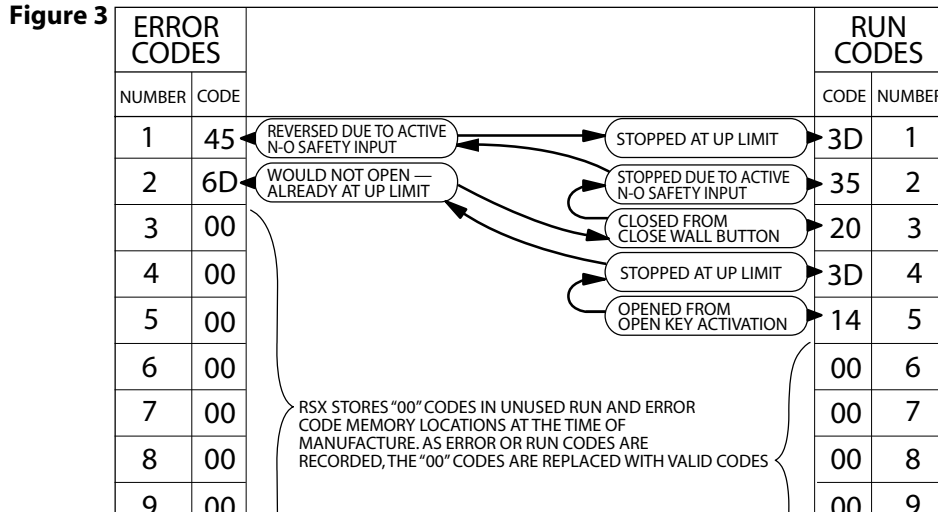
- 1) If operator is in CAL mode, press CAL/RUN to enter RUN mode.
- 2) Use the OPEN and CLOSE keys on the main control board or wall control to operate unit to the close position.
- 3) Test Egress Operation using any Egress activation control.
 - Door should release and open fully.
 - Check display screen to ensure display reads "IDLE OPEN LIMIT" and "OPEN INTLK".
- 4) If the message above is NOT shown, reset open limit per instructions on page 6.5.
 - Restore operator to normal operating condition.

Section 7: Troubleshooting

Troubleshooting Example

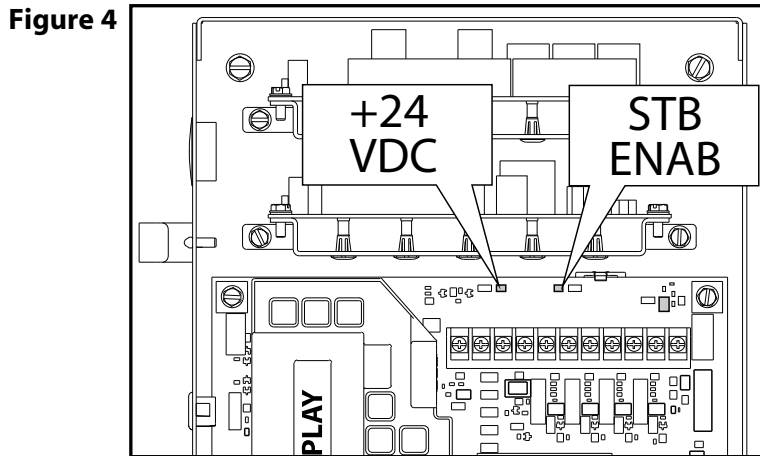
1. In Calibration Mode, display and write down each Run Code and Error Code stored in memory.
2. List as shown in Fig. 3.
3. Refer to pages 7.2-7.7 to interpret the codes.

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.



LED Indicators

SX™ Egress Operators include a self-diagnostic circuit board using troubleshooting LED indicators to signal the technician of a problem. Fig. 4.



The SX® Egress Operator contains troubleshooting LEDs on the main control board as well as a display screen. The EEG module also has an LED troubleshooting system that will also display most

TROUBLESHOOTING LED'S

STB ENABLE	NORMALLY ON - STB ENABLED	OFF - STB DISABLED
+ 24 VOLTS DC	NORMALLY ON - POWER AVAILABLE	OFF - CHECK AC POWER SUPPLY CHECK FUSES

Section 7: Troubleshooting

Display Operation in Run Mode

SX™ Egress Operators display their status on the integrated 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.

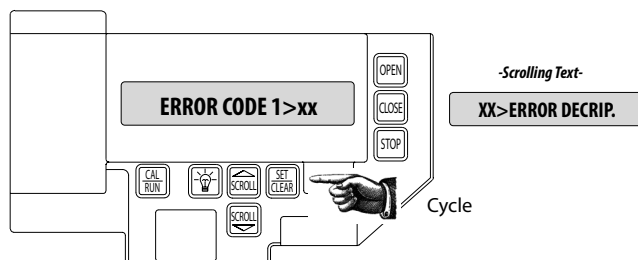
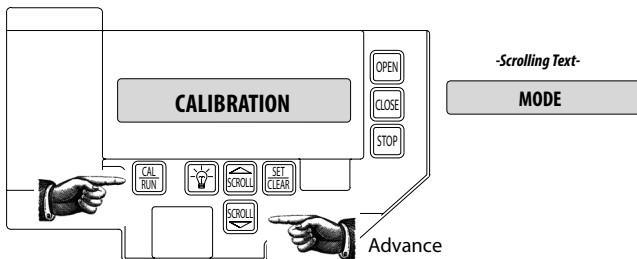
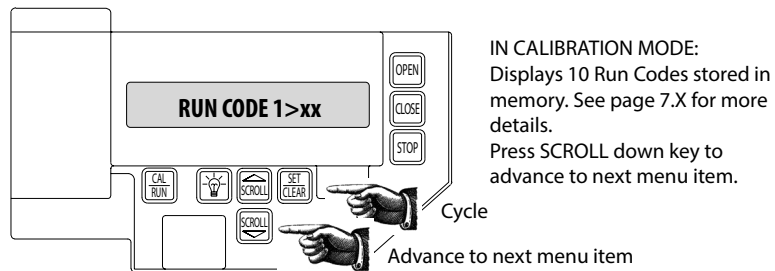
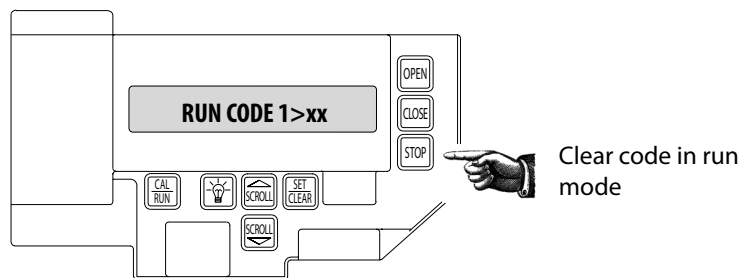
The Operator will display any uncleared trouble codes, in turn, on the integrated display, alternating with the active condition (error or run) code, until all of the trouble codes have been cleared. Trouble Codes can only be cleared after the condition causing the code has been resolved, and the key-switch is turned to the RESET position. Trouble Codes are not cleared by pressing the STOP button or STOP key on the keypad. Trouble Codes are not stored in the Operator's memory.

Run Codes

To aid in troubleshooting problems, SX™ Egress Operators include an Error Code Memory that stores the most recent 10 error events. These codes are stored with or without power. The latest 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 its codes in time sequence. Once 10 codes are stored, the oldest code will be erased to make room for the next newest code. These codes are displayed in Calibration Mode. The display will flash the number of the code in the sequence and the 2 digit code ID, followed by a description of the code.

For a listing of all RUN codes, see page 7.3



Section 7: Troubleshooting. Run Code Displays

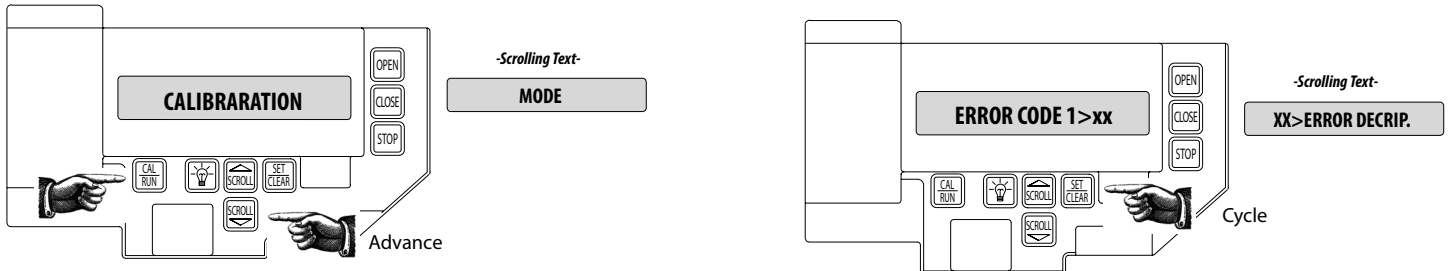
Code	Display	Detailed/Expanded Description	Corrective Action
0C	IDLE > DOWN LIMIT	The grille is at the Down Limit position.	None
0D	IDLE > UP LIMIT	The grille is at the Up Limit position.	None
0E	IDLE > MID STOP	The grille is at the Mid-Stop Limit position.	None
0F	IDLE > NO LIMIT	The grille is at no established limit position.	None
10	OPENING > OPEN BTN	The Open Pushbutton input was activated causing the grille to move in the opening direction.	None
11	OPENING > ONE BTN	The 1- Button input was activated causing the grille to move in the open direction.	None
12	OPENING > RADIO	The External Radio input was activated causing the grille to move in the open direction.	None
13	OPENING > AUX OPEN	The Auxiliary Open input (on the TCM Module) was activated causing the grille to move in the open direction.	None
14	OPENING > OPEN KEY	The Open Key (on the circuit board) was activated causing the grille to move in the open direction.	None
20	CLOSING > CLOSE PB	The Close Pushbutton input was activated causing the grille to move in the close direction.	None
21	CLOSING > ONE BTN	The 1- Button input was activated causing the grille to move in the close direction.	None
22	CLOSING > RADIO	The External Radio input was activated causing the grille to move in the close direction.	None
24	CLOSING > CLOSE KP	The Close Key (on the circuit board) was activated causing the grille to move in the close direction.	None
2A	CLOSING > TCM CLS	The TCM Module sent a close signal causing the grille to move in the close direction.	None
2B	CLOSING > FDM CLS	The Fire Grille Module sent a signal causing the grille to move in the close direction.	None
30	HALT > WALL BUTTON	The grille stopped because the Stop Pushbutton was activated.	None
31	HALT > ONE BUTTON	The grille stopped (and /or reversed) because the 1-Button input was activated.	None
32	HALT > RADIO	The grille stopped and reversed because the Radio input was activated.	None
33	HALT > AUX. OPEN	The grille stopped (and /or reversed) because the Auxiliary Open input on the TCM Module was activated.	None
34	HALT > KEYPAD KEY	The grille stopped because the Stop Key was activated.	None
35	HALT > N-O SAFETY	The grille stopped and reversed because the Normally Open Reverse input was activated.	None
36	HALT > ODC STB	The grille stopped and reversed because the Safety Beam or Monitored Edge with the Monitored Edge Interface Module was activated.	None
37	HALT > N-C SAFETY	The grille stopped and reversed because the Normally Close Reverse input on the TCM Module was activated.	None
38	HALT > MON. EDGE	The grille stopped and reversed because the Monitored Edge input on the TCM Module was activated.	None
39	HALT > Grille FORCE	The grille stopped because the Speed of the Limit Assembly slowed down (Trolley Models only).	Check the grille balance. Check the Clutch adjustment to make sure it's not slipping. Check for mechanical issues. Replace the Limit Module. Replace the Main Control Board.
3A	HALT > LOSS OF C/C	The grille stopped (and /or reversed) because the constant contact activation was removed before the grille reached a limit.	None. User input was removed.
3B	HALT > SHUTDOWN	The grille stopped because the Hoist Interlock, External Interlock circuit became active (opened) or the motor overheated.	Check the Hoist Interlock switch and wires. Check an External Interlock switch and wires. If no External Interlock is use check the gray jumper between the two EXT INTLK terminals. Check for a hot motor.
3C	HALT > DOWN LIMIT	The grille stopped because it reached the Down limit position.	None
3D	HALT > UP LIMIT	The grille stopped because it reached the Up limit position.	None
3E	HALT > MID STOP	The grille stopped because it reached the Mid-Stop limit position.	None

Section 7: Troubleshooting

Error Codes

To aid in troubleshooting problems, SX™ Egress Operators include an Error Code Memory that stores the most recent 10 error events. These codes are stored with or without power. The latest 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 its codes in time sequence. Once 10 codes are stored, the oldest code will be erased to make room for the next newest code. These codes are displayed in Calibration Mode. The display will flash the number of the code in the sequence and the 2 digit code ID, followed by a description of the code.



Code	Display	Detailed/Expanded Description	Corrective Action
3F	HALT > MODULE FAIL	The grille stopped because it determined there was a problem with an Expansion Module. (Timer Close or Auxiliary Output Module)	Check Expansion Module LED Status. Power the operator off, remove the module and re-apply power, if the operator starts working replace the module.
40	REV > OPEN BUTTON	The grille stopped traveling down and reversed and is now traveling open because the Open Pushbutton was activated.	Check the Open Pushbutton and Open Pushbutton wires for a closed circuit.
41	REV > ONE BUTTON	The grille stopped traveling down and reversed and is now traveling open because the 1-Button input was activated.	Check the 1-Button and 1-Button wires for a closed circuit.
42	REV > RADIO	The grille stopped traveling down and reversed and is now traveling open because the External Radio input was activated.	Check the External Radio for a short circuit.
43	REV > AUX OPEN	The grille stopped traveling down and reversed and is now traveling open because the Auxiliary Open input on the Timer Close Module was activated.	Check the Auxiliary Open Input on the Timer Close Module and the Auxiliary Open Input wires for a closed circuit.
44	REV > OPEN KEY	The grille stopped traveling down and reversed and is now traveling open because the Open Key (on the circuit board) was activated.	Power the unit down and back up. If the error persist then replace the main circuit board.
45	REV > N-O SAFETY	The grille stopped traveling down and reversed and is now traveling open because the Normally Open Reverse input was activated.	Check the N-O Reverse input and N-O Reverse wires for a closed circuit.
46	REV > ODC STB	The grille stopped traveling down and reversed and is now traveling open because the Monitored Safety Beam (STB) or Monitored Edged with the Monitored Edge Interface Module input was activated.	Check the ODC STB input and ODC STB wires for a open or shorted (closed) circuit.
47	REV > N-C SAFETY	The grille stopped traveling down and reversed and is now traveling open because the Normally Close Safety Input on the Timer Close Module was activated.	Check the Normally Closed Safety Input on the Timer Close Module and the Normally Closed Safety Input wires for a open circuit.
48	REV > MON. EDGE	The grille stopped traveling down and reversed and is now traveling open because the Monitored Edge Input on the Timer Close Module was activated.	Check the Monitored Edge Input on the Timer Close Module and the Monitored Edge Input wires for a Open or shorted (closed) circuit.
49	REV > DOOR FORCE	The grille stopped traveling down and reversed because the Speed of the Limit Assembly slowed down (Trolley Models only).	Check the grille balance. Check the Clutch adjustment to make sure it's not slipping. Check for mechanical issues. Replace the Limit Module. Replace the Main Control Board.
4A	REV > LOSS OF C/C	The grille stopped traveling down and reversed because the constant contact activation was removed before the grille reached the down limit.	User input was removed.

Section 7: Troubleshooting. Error Code Displays

Code	Display	Detailed/Expanded Description	Corrective Action
4B	REV > MAX RUN TMR	The grille stopped traveling down and reversed because the Maximum Run Time between Limits was exceeded.	Check the grille balance. Check the Clutch adjustment to make sure it's not slipping. Re-record the Max Run Timer values in both directions.
4F	REV > EXP MOD FAIL	The grille stopped traveling down because it determined there was a problem with an Expansion Module.	Review the menu looking for a missing menu item. For example, if the limit module is defective there will not be any limit setting information in the menu.
50	STOP > HOT MOTOR	The grille stopped moving because the motor overheated.	Check for a hot motor. Check the motor plug on the main board making sure the plug and wires are seated.
51	STOP > OPEN MRT	The grille stopped traveling open because the Maximum Run Time between Limits was exceeded.	Check the grille balance. Check the Clutch adjustment to make sure it's not slipping. Re-record the Max Run Timer values in both directions.
52	STOP > CLOSE MRT	The grille stopped traveling close because the Maximum Run Time between Limits was exceeded.	Check the grille balance. Check the Clutch adjustment to make sure it's not slipping. Re-record the Max Run Timer values in both directions.
57	STOP > OPEN INTLK	The grille stopped because the External Interlock circuit became active (open). Or the Egress circuit is open.	Check the Hoist Interlock switch and wires. Check an External Interlock switch and wires. If no External Interlock is use check the gray jumper between the two EXT INTLK terminals
58	STOP > WRONG GDO	The grille stopped because it determined the circuit board is set as a J-Shaft (side-mounted unit) but is installed on a Trolley unit.	Review the "GDO TYPE" in the calibration setting of the unit.
59	STOP > DOOR FORCE	The grille stopped traveling up because the Speed of the Limit Assembly slowed down (Trolley Models only).	Check the grille balance. Check the Clutch adjustment to make sure it's not slipping. Check the GDO Type in the set-up menu for the proper setting for the model installed (Trolley or J-Shaft). Check for mechanical issues. Replace the Limit Module. Replace the Main Control Board.
5A	STOP > WRONG LIMIT	The grille stopped traveling because the unit was looking for the Up Limit and the Down Limit became active or the unit was looking for the Down Limit and the UP limit became active.	Review the calibration setting. Reset motor direction and limits.
5B	STOP > WRONG DIR	The grille stopped traveling because the unit was looking for Limit direction input in one direction but received input in the opposite direction.	Review the calibration setting. Reset motor direction and limits.
5C	STALL > DOWN LIMIT	The grille stopped traveling because it expected the Down Limit to clear (grille moved off the down limit position) but it did not receive that signal.	Check grille balance. Review the calibration setting. Reset motor direction and limits.
5D	STALL > UP LIMIT	The grille stopped traveling because it expected the Up Limit to clear (grille moved off the up limit position) but it did not receive that signal.	Check grille balance. Review the calibration setting. Reset motor direction and limits.
5E	STALL > MID-STOP	The grille stopped traveling because it expected the Mid Stop Limit to clear (grille moved off the mid stop limit position) but it did not receive that signal.	Check grille balance. Review the calibration setting. Reset motor direction and limits.
60	CHECK STOP BTN	The grille will not move because the Stop Circuit (normally closed circuit) in not completed.	Check the Stop Pushbutton and Stop Pushbutton wires.
61	TCM DISABLED	The grille will not time out and close because there are no Monitored Sensing/Safety devices enabled and/or not working.	Check the ODC STB and ODC STB wires. Check the Monitored Edge, review the set-up in the menu to ensure the proper setting for the installed safety input.
62	NO RADIO >> C/C	The grille will not move with a radio input (transmitters) because the unit is set for Constant Contact in the Open and/or Close Modes.	Review the calibration setting. Reset Open and Close Modes to Momentary
63	CHECK AUX OPEN	The unit determined the Auxiliary Open input on the Timer Close Module is active. This input will be ignored until it changes state.	Check the Auxiliary Input device wired into the Timer Close Module and Auxiliary Input device wires for a closed circuit.
64	CHECK STOP KEY	The unit will not run because it determined the Stop Key input on the circuit board is active.	Power the unit down and back up. If the error persist then replace the main circuit board.
65	CHECK N-O SAFETY	The unit will not close because it determined the Normally Open Reverse input on the circuit board is active (shorted).	Check the N-O Reverse device wired into the main board and the N-O Reverse Input device wires for a closed circuit.
66	CHECK ODC STB	The unit will not close because it determined the ODC Safe-T-Beam input on the circuit board is active.	Check the ODC STB and ODC STB wires.

Section 7: Troubleshooting. Error Code Displays

Code	Display	Detailed/Expanded Description	Corrective Action
67	CHECK N-C SAFETY	The unit will not close because it determined the Normally Closed Reverse input on the Timer Close Module is active (Open circuit).	Check the Normally Close (N-C Safe) Input device wired into the Timer Close Module and device wires for an open circuit.
68	CHECK MON. EDGE	The unit will not close because it determined the Monitored Edge (MON EDGE) input on the Timer Close Module is active.	Check the Monitored Edge (MON EDGE) Input device wired into the Timer Close Module and device wires.
69	OVERHEATED MOTOR	The unit will not run because it determined the Thermal Overload in the motor is active.	Check the grille balance. Check the wires in the motor connector that plugs into the circuit board. Replace the motor.
6C	NO RUN > DOWN LIM	The unit will not run because the Down/close input was activated but the unit was already at the Down Limit position.	User input error
6D	NO RUN > UP LIMIT	The unit will not run because the Up/open input was activated but the unit was already at the Up Limit position.	User input error
6E	NO RUN > MID STOP	The unit will not run because the Up/open input was activated but the unit was already at or beyond the Mid Stop Limit position. This active input is preventing the unit from closing as well.	User input error
6F	EXP MODULE FAIL	The unit may not run because it had lost communication with one or more Expansion Modules (Limit Module, On-board Radio, Timer Close Module and/or Auxiliary Output Module)	Review the menu looking for a missing menu item. For example, if the limit module is defective there will not be any limit setting information in the menu.
85	EXP PORT PROBLEM	The unit may not run because it has determined that it has lost communication with one or more Expansion Modules (Limit Module, On-board Radio, Timer Close Module and/or Auxiliary Output Module)	Review the menu looking for a missing menu item. For example, if the limit module is defective there will not be any limit setting information in the menu.
88	TCM FAILURE	The unit has determined that the Timer Close Module has stopped communicating.	Check the ribbon cable connection. Power the unit down and back up. If the error persists then replace the Timer Close Module.
8A	AOM FAILURE	The unit has determined that the Auxiliary Output Module has stopped communicating.	Check the ribbon cable connection. Power the unit down and back up. If the error persists then replace the Auxiliary Output Module.
8C	LOW SYSTEM VOLTS	The unit has determined that the secondary voltage is less than acceptable.	Check supply voltage to the unit. Make sure the Motor Connector is plugged into the correct socket for the voltage supplied.
8D	HI SYSTEM VOLTS	The unit has determined that the Line Voltage input to the unit is too high for the configuration of the unit.	Check supply voltage to the unit. Make sure the Motor Connector is plugged into the correct socket for the voltage supplied. Contact an Electrician
8E	REV INTERRUPTED	The unit did not complete a 2 second reversal before it had encountered an issue and stopped.	None
8F	LIMIT MOD. FAIL	The unit has determined that the Limit Module has stopped communicating.	Check the limit cable connection. Power the unit down and back up. If the error persists then replace the Limit Module.
90	DIAGNOSTIC MODE	NEED ENGINEERING INPUT ON THIS ERROR CODE	
A0	OPEN BTN BAD > PU	The unit determined that the Open Pushbutton input was active (shorted) when power was applied. This input will be ignored until it changes state.	Check the Open Pushbutton and Open Pushbutton wires for a closed circuit.
A1	CLOSE BTN BAD > PU	The unit determined that the Close Pushbutton input was active (shorted) when power was applied. This input will be ignored until it changes state.	Check the Closed Pushbutton and Close Pushbutton wires for a closed circuit.
A2	ONE BTN BAD > PU	The unit determined that the 1-Button input was active (shorted) when power was applied. This input will be ignored until it changes state.	Check the 1-Button and 1-Button wires for a closed circuit.
A3	RADIO BAD > PWR UP	The unit determined that the External Radio input was active when power was applied. This input will be ignored until it changes state.	Check the External Radio for a short circuit.
A4	AUX OPEN BAD > PU	The unit determined that the Auxiliary Open input on the Timer Close Module was active (shorted) when power was applied. This input will be ignored until it changes state.	Check the Auxiliary Input device wired into the Timer Close Module and Auxiliary Input device wires for a closed circuit.

Section 7: Troubleshooting. Error Code Displays

Code	Display	Detailed/Expanded Description	Corrective Action
A5	OPEN KEY BAD > PU	The unit determined that the Open Key input on the circuit board was active (shorted) when power was applied. This input will be ignored until it changes state.	Power the unit down and back up. If the error persist then replace the Main Circuit Board.
A6	CLOSE KEY BAD > PU	The unit determined that the Close Key input on the circuit board was active (shorted) when power was applied. This input will be ignored until it changes state.	Power the unit down and back up. If the error persist then replace the Main Circuit Board.
A7	MULT KEYS BAD > PU	The unit determined that more than one input on the circuit board keypad was active (shorted) when power was applied. These inputs will be ignored until they change state.	Power the unit down and back up. If the error persist then replace the Main Circuit Board.
B0	OPENING > XMTR #	The unit received a valid input from a "Learned" transmitter and the door is traveling open. The transmitter ID is displayed.	None
B1	CLOSING > XMTR #	The unit received a valid input from a "Learned" transmitter and the door is traveling close. The transmitter ID is displayed.	None
B2	HALT > XMTR #	The unit received a valid input from a "Learned" transmitter and has stopped the door. The transmitter ID is displayed.	None
B3	"Rev > XMTR# NO XMTR > CC"	The unit received a valid input from a "Learned" transmitter and the closing door stopped and reversed and is now traveling open	None
I2C Comm Error	I2C Comm Error	The system can not communicate on the I2C communication line.	While the operator is powered start unplugging the expansion devices one at a time (Timer Close Module, Auxiliary Output Module, On-board Radio, Limit Module), allow the unit to try to re-initiate, if the operator is able to re-initiate the LCD will update with the current status. If this happens then the last device you have unplugged is defective and needs to be replaced. if all devices have been unplugged and the operator still displays I2C Comm Error, replace the main control board.

Section 8: Service and Maintenance

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

▲ **WARNING:**

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

▲ **AVERTISSEMENT:**

Si les instructions de service et de maintenance recommandés ne sont pas suivies, l'opérateur pourrait tomber en panne prématurément.

▲ **WARNING:**

A closed, or partially open grille will automatically open when power is disconnected.

▲ **AVERTISSEMENT:**

Une grille fermée ou partiellement ouverte sera automatiquement ouvert lorsque l'alimentation est coupée.

▲ **WARNING:**

To avoid SERIOUS INJURY or DEATH:

- Disconnect power BEFORE performing ANY adjustment or maintenance.
- ALL maintenance MUST be performed by qualified service personnel.

▲ **AVERTISSEMENT:**

Pour éviter LES BLESSURES GRAVES OU MORTELLES :

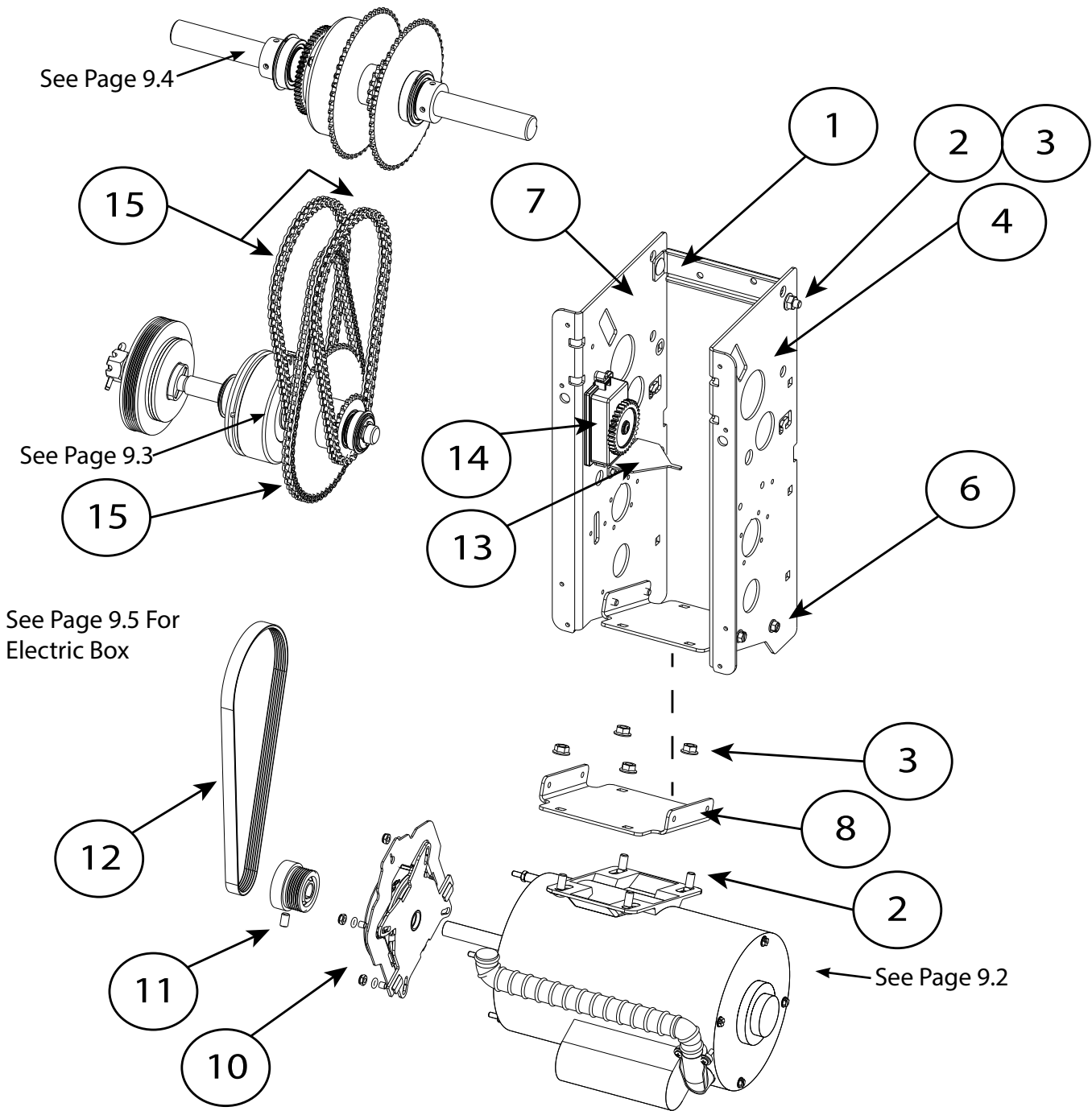
- Coupez l'alimentation avant d'effectuer toute opération de réglage ou d'entretien.
- Les opérations d'entretien doivent obligatoirement être effectuées par un personnel qualifié.

Maintenance Schedule

SERVICE ITEM	SERVICE INTERVAL	
	MONTHLY	EVERY 6 MO. OR 5000 CYCLES
SENSING EDGE OPERATION	X	
CHECK ALL SPROCKET SET SCREWS		X

SERVICE ITEM	SERVICE INTERVAL	
	EVERY 12 MO. OR 10000 CYCLES	EVERY 36 MO. OR 30000 CYCLES
CHECK DRIVE CHAINS AND LUBRICATE	X	
CLUTCH ADJUSTMENT	X	
CHECK FOR LOOSE OR MISSING HARDWARE	X	
CONDUCT EEG TEST SEQUENCE	X	
CHECK LIMIT POSITION		X
GEAR TRAIN WEAR		X

Section 9: Parts Breakdown



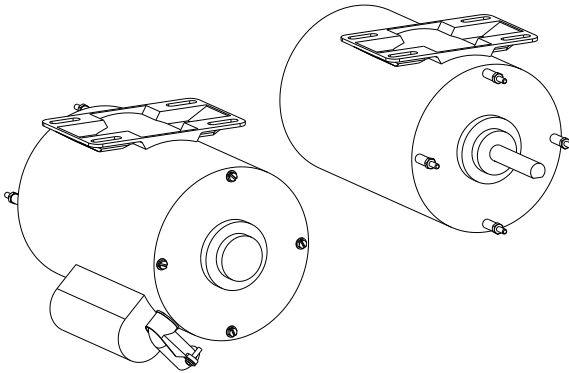
Item	Part Number	Description	QTY.
1	110627.0001	Bracket	1
2	086420.0506	Bolt, Carriage	6
3	24121C05	Nut, Flange	6
4	112160.0001	Frame, RH	1
6	086575.1008	Screw, Self Tapping	4
7	112160.0002	Frame, LH	1
8	110636.0001	Motor Mount Plate	1
10	111396.0001	Brake Assembly, 1/2HP-1Ph	1
	111396.0002	Brake Assembly, All others	1
11	111404.0001	Motor Pulley w/setscrews	1

12	111010.0001	Belt	1
13	111460.0001	Plate	1
14	111421.0003	Limit Module	1
15	110877.0072	Chain,	3

Section 9: Parts Breakdown

Standard Equipment Motors

All motor assemblies come complete with motor side conduit connector, flexible conduit, and complete wire harness pre-installed.



ODP, Single and Three Phase Motors
(Open Drip Proof) Standard Equipment

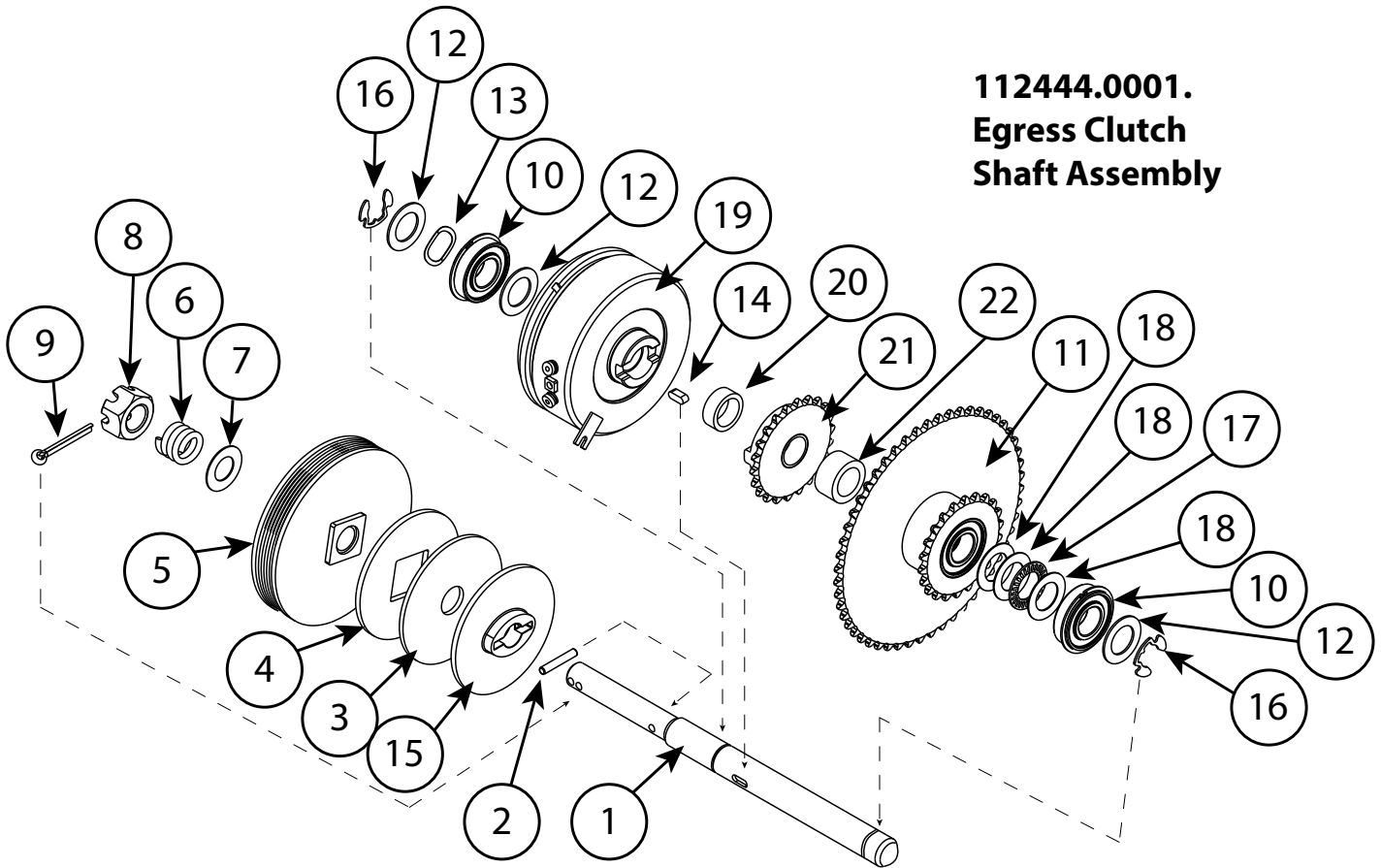
Single Phase

Part Number	Horsepower	Available Voltages
110635.0001	1/2 HP	115, 208, 230
110635.0003	1 HP	115, 208, 230

Three Phase

Part Number	Horsepower	Available Voltages
110635.0004	1/2 HP	208, 230, 460
110635.0006	1 HP	208, 230, 460
110635.0007	1/2 HP	575
110635.0009	1 HP	575

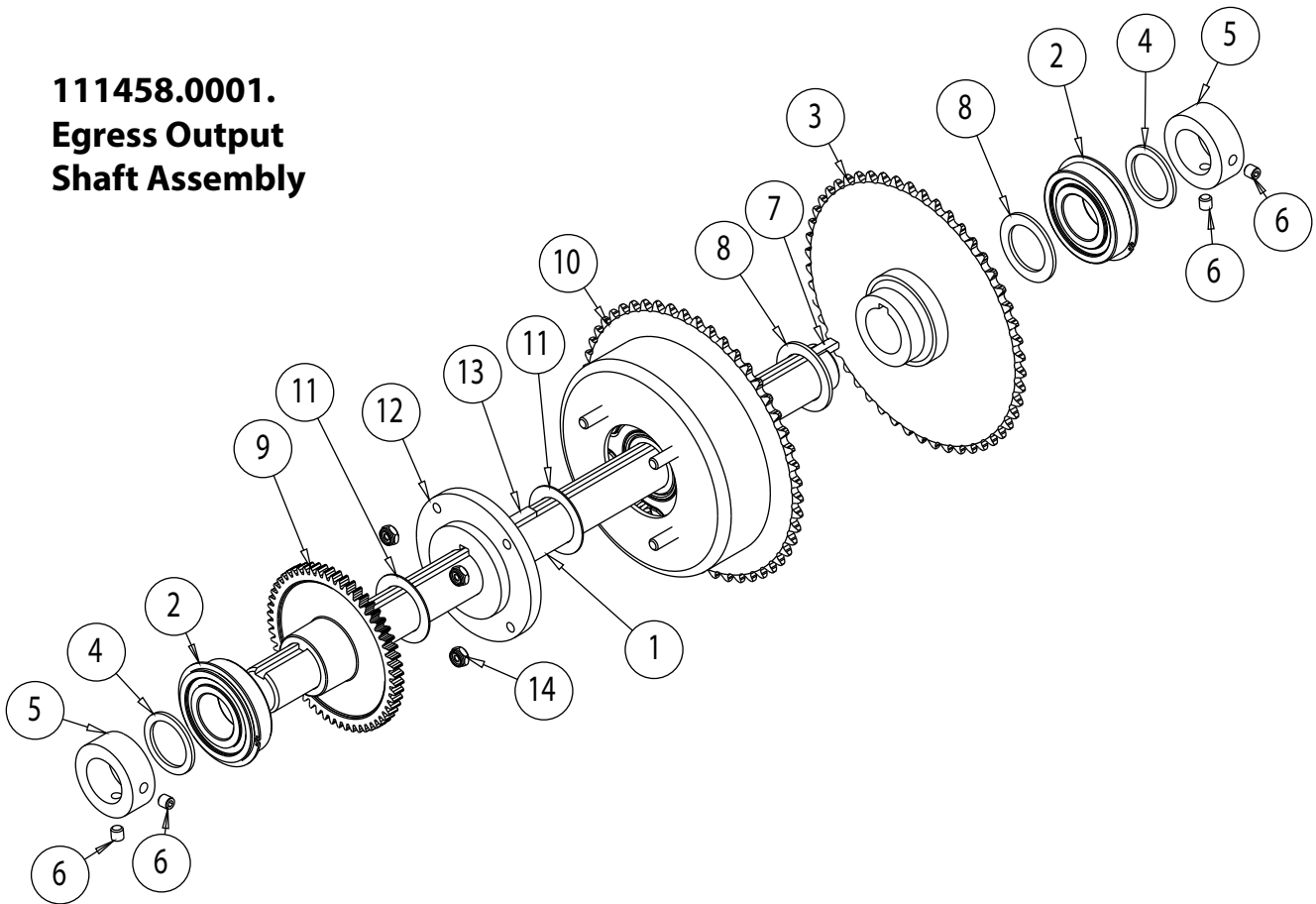
Section 9: Parts Breakdown



Item #	Part Number	Description	QTY.
1	112445-0001	SHAFT, CLUTCH, SXJ, EMER EGRESS	1
2	110881-0001	PIN, DOWEL, .188 X 1.13/1.00	1
3	075193-0000	LINING, CLUTCH	1
4	108015-0001	DISC, CLUTCH - MOVABLE	1
5	111433-0001	PULLEY ASSY, CLUTCH, 4.65 DIA.	1
6	075197-0000	SPRING, CLUTCH	1
7	086649-0029	WASHER, THRUST, .64	1
8	110472-0001	NUT, HEX, SLOTTED, 5/8-11	1
9	080401-0624	PIN, COTTER, 3/16 X 1 1/2 L	1
10	110695-0001	BEARING, .750 ID	2
11	111582-0001	SPRKT & BEARING ASSY, 22T-52T	1
12	110819-0003	WASHER, .770 ID	3
13	110818-0004	WASHER, WAVE SPRING, .780 ID	1
14	111217-0001	KEY, ROUND END, .188 X 1.50	1
15	111037-0001	DISC, CLUTCH	1
16	111382-0001	RING, RTNG, HIGH GRIP STRENGTH	2
17	111402-0001	BEARING, THRUST	1
18	111403-0001	WASHER, THRUST	3
19	112158-0001	CLUTCH & BUSHING ASSEMBLY, SX FDO	1
20	111475-0001	SPACER, CLUTCH AIR GAP	1
21	111471-0001	SPRKT & BUSHING ASSY, CLUTCH, 22T	1
22	111579-0001	SPACER, CLUTCH SHAFT	1

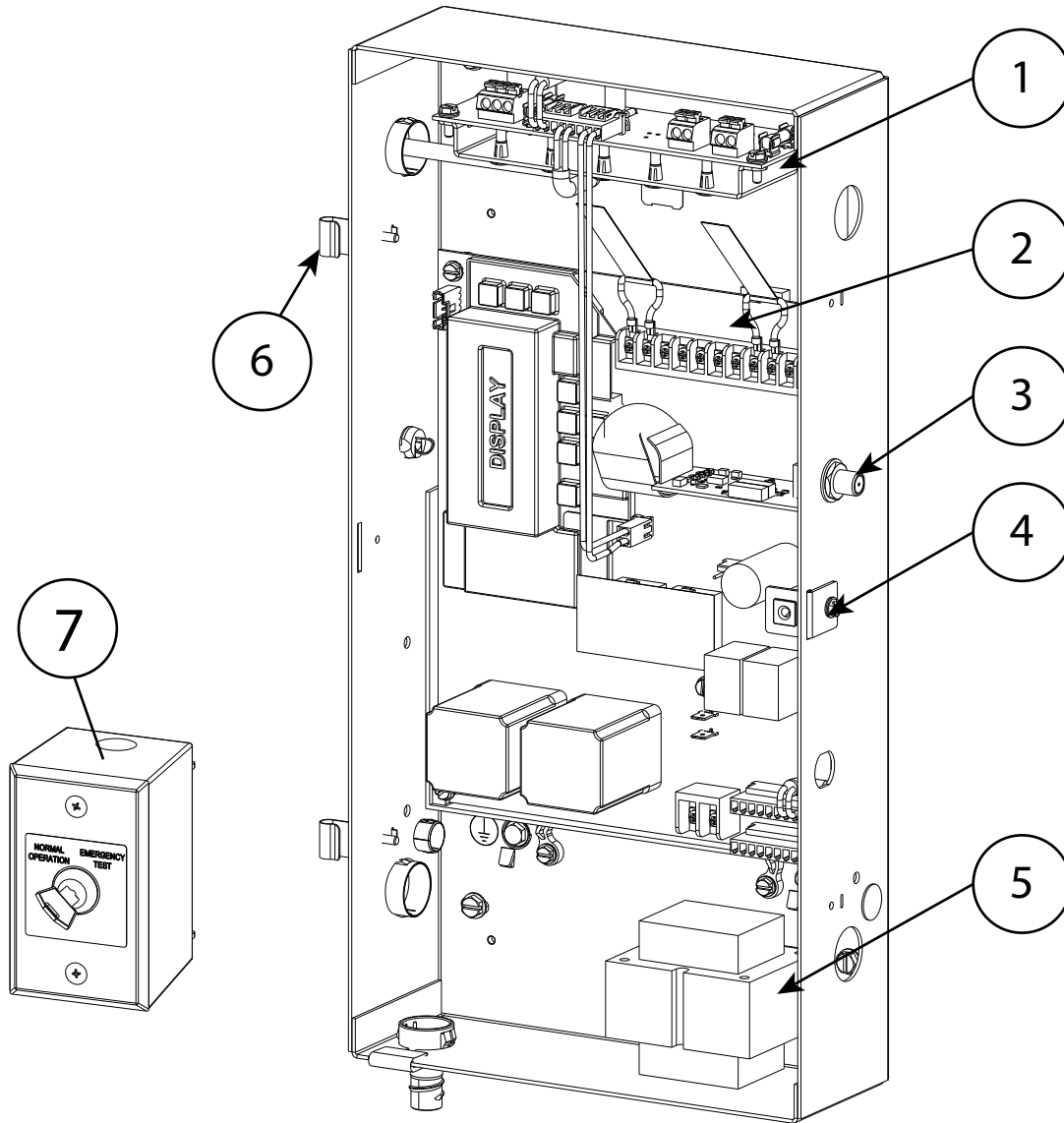
Section 9: Parts Breakdown

111458.0001. Egress Output Shaft Assembly



Item #	Part Number	Description	QTY.
1	110644.0003	SHAFT, OUTPUT, 1.00 DIA, SDMT	1
2	110694.0001	BEARING, 1.000 ID	2
3	111577.0001	SPRKT, 50T, #35	1
4	110819.0002	WASHER, PLAIN 1.026 ID	2
5	604297.4100	SET CLR, 1" ID X 1 5/8 OD	2
6	080300.1604	"SCR, SET, SCH, KNRLD, 1/4-20 X 1/4"	4
7	080340.0074	KEY, STD, SQ, 1/4 X 7/8	1
8	110393.0001	WASHER, SPACER 1.015 ID	2
9	111074.0001	GEAR, LIMIT, 56T, SIDEMOUNT	1
10	111455.0001	GOVERNOR ASSY, 19T-50T	1
11	111325.0001	WASHER, GOVERNOR	2
12	111578.0001	SUPPORT HOUSING, GOVERNOR	1
13	080340.0078	KEY, STD, SQ, 1/4 X 5/8	2
14	601108.0007	NUT, LK, HEX, PLD, #10-32	4

Section 9: Parts Breakdown



Item #	Part Number	Description	QTY.
1	38423R	EEG Module Kit	1
2	111854.0001	PCB Kit. 1/2HP 1-Phase	1
	111854.0002	PCB Kit, 1HP 1Phase	1
	111854.0004	PCB Kit. All 3-Phase	1
	111854.0005	PCB Kit, 575	1
3	111397.0001	Radio Board Kit w/antenna	1
4	111398.0001	Lid Latch Kit.	1
5	111087.0001	Transformer Assembly, All 1 Phase	1
	111087.0002	Transformer Assembly All 3 Phase except 575VAC	1
	111087.0003	Transformer Assembly 575VAC	
6	110950.0001	Lid hinge Kit	2
7	112769.0001	Egress Keyswitch	1
N/S	111439.0001	Radio Pigtail	1
N/S	111405.0001	Fuse Kit. 10pcs. ea. .25A & 2.5A	1
N/S	110100.0015	15amp Breaker (1hp/1ph only)	1



Limited Warranty

The authorized distributor of Overhead Door Corporation products whose name appears below ("Seller") warrants to the original purchaser of the Operator specified below ("Operator"), subject to all the terms and conditions hereof, that the Operator will be free from defects in material and workmanship under normal use and service until the earlier of the following to occur:

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

Sellers sole obligation under this warranty is specifically limited to repairing or replacing, at its option, any parts which shall be determined by Seller to be defective during the warranty period. Any labor charges are excluded and will be the responsibility of the owner.

This warranty applies only to an operator which is installed in commercial or industrial building applications. This warranty does not apply if the Operator has been altered or repaired by any person not authorized by Overhead Door Corporation to do so, or if it has been damaged due to misuse, accident or failure to provide necessary maintenance. This warranty is made only to the original purchaser of the Operator and is not transferable or assignable.

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 Overhead Door CORPORATION BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES, even if Overhead Door Corporation 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, interruption of business, or other similar indirect financial loss.

Claims under this warranty must be made in writing promptly to the Seller whose name and address appears to the right, and must be made within the warranty period. (Proof of purchase and identification as the original purchaser may be required.)

Overhead Door Corporation's Operator Division will only accept returned materials that are in warranty. Products being returned must be accompanied by a Return Authorization (RA) Tag. To obtain a Return Authorization Tag please use the following guidelines.

- Complete Operators will not be replaced without prior approval from the Operator Division.
- To return an Operator part during the warranty period, the Seller must contact the Technical Service Group of the Operator Division at 1-800-275-6187. The following information is required: Operator Model Number, Date Code, Voltage, Phase & Horsepower, and a description of the malfunction. The Technical Service Group will issue, via mail, an RA Tag for the part.
- Upon receipt of the part, the Operator Division will evaluate the part for a defect in material and/or workmanship. If it is determined there is a defect, the Seller will be credited the cost of the part. If it is determined there is not a defect in material and/or workmanship, no credit will be issued.

Model # (On electric box cover) _____
 Serial # (On electric box cover) _____
 Date Code _____
 Original Purchaser _____
 Installation Address _____
 Grille Number (Multiple grille installations) _____
 Grille Type _____
 Seller _____
 Sellers Address _____
 Date of Installation _____
 Signature of Seller _____



2501 S. State Highway
121 Bus. Suite 200
Lewisville, Texas 75067
1-800-275-6187