

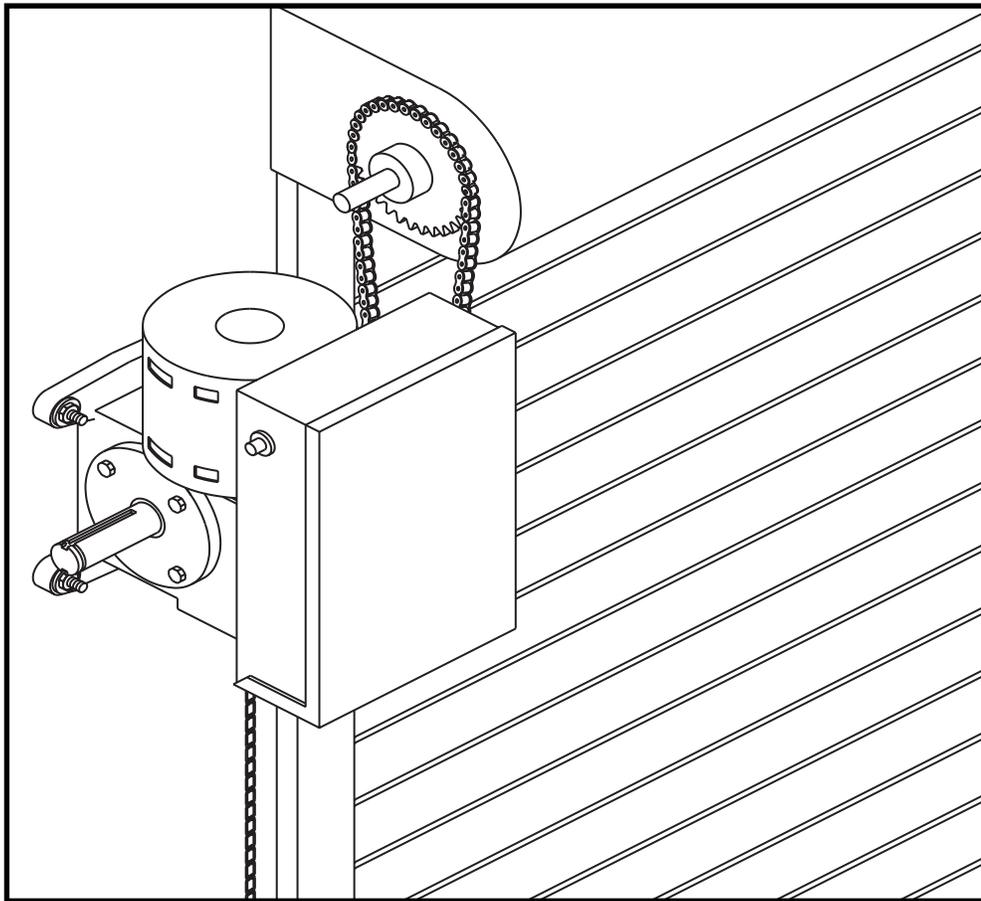


# OWNER'S MANUAL

MODEL

## MGJ (S-Series)

INDUSTRIAL DUTY DOOR OPERATOR  
FOR USE WITH SS90 FIRE DOOR CONTROLLER



### 2 YEAR WARRANTY

Serial # \_\_\_\_\_  
(located on electrical box cover)

Installation Date \_\_\_\_\_

Wiring Type \_\_\_\_\_

NOT FOR RESIDENTIAL USE





Before attempting to install, operate or maintain the operator, you must read and fully understand this manual and follow all safety instructions.



These instructions are intended to highlight certain safety related issues. These instructions are not intended to be comprehensive. Because each application is unique, it is the responsibility of the purchaser, designer, installer and end user to ensure that the total door system is safe for its intended use.

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## HARDWARE PACKING LIST

Before beginning your installation check that all components were supplied and received undamaged. Refer to list below for Factory Supplied parts.

<b>HARDWARE KIT MGJ SSSI (K77-18599)</b>		
<b>PART #</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
01-18600	OWNERS MANUAL, MGJ SSSI	1
02-103-R	REWORK, PBS, RED PAINT	1
10-10463	KEY HOLE BRACKET	1
19-41119MB	CHAIN #41X119 W/ MASTER	1
77-13709	LABEL KIT MED DUTY	1



## IMPORTANT SAFETY NOTES



### CAUTION

TO AVOID DAMAGE TO DOOR AND OPERATOR, MAKE ALL DOOR LOCKS INOPERATIVE. SECURE LOCK(S) IN "OPEN" POSITION.

IF THE DOOR LOCK NEEDS TO REMAIN FUNCTIONAL, INSTALL AN INTERLOCK SWITCH.

DO NOT CONNECT ELECTRIC POWER UNTIL INSTRUCTED TO DO SO.



### WARNING

KEEP DOOR BALANCED. STICKING OR BINDING DOORS MUST BE REPAIRED. DOORS, DOOR SPRINGS, CABLES, PULLEYS, BRACKETS AND THEIR HARDWARE MAY BE UNDER EXTREME TENSION AND CAN CAUSE SERIOUS PERSONAL INJURY. CALL A PROFESSIONAL DOOR SERVICEMAN TO MOVE OR ADJUST DOOR SPRINGS OR HARDWARE.

## SITE PREPARATIONS

It is imperative that the wall or mounting surface provide adequate support for the operator.

This surface must:

- a) Be rigid to prevent play between operator and door shaft.
- b) Provide a level base.
- c) Permit the operator to be fastened securely and with the drive shaft parallel to the door shaft.

The safety and wear of the operator will be adversely affected if any of the above requirements are not met.

For metal buildings, fasten 2" x 2" x 3/16" (or larger) angle iron frames to the building purlins. For proper spacing, retain .275" between. See Figure 1.

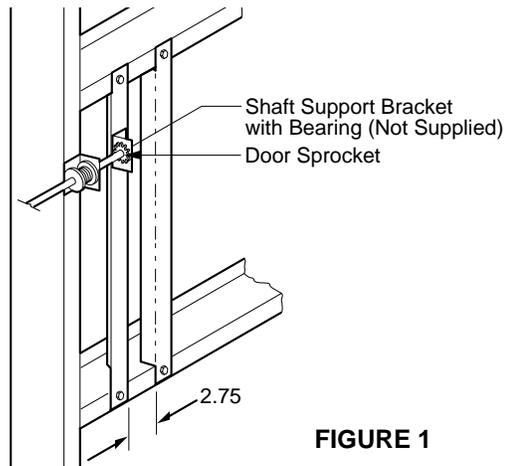


FIGURE 1

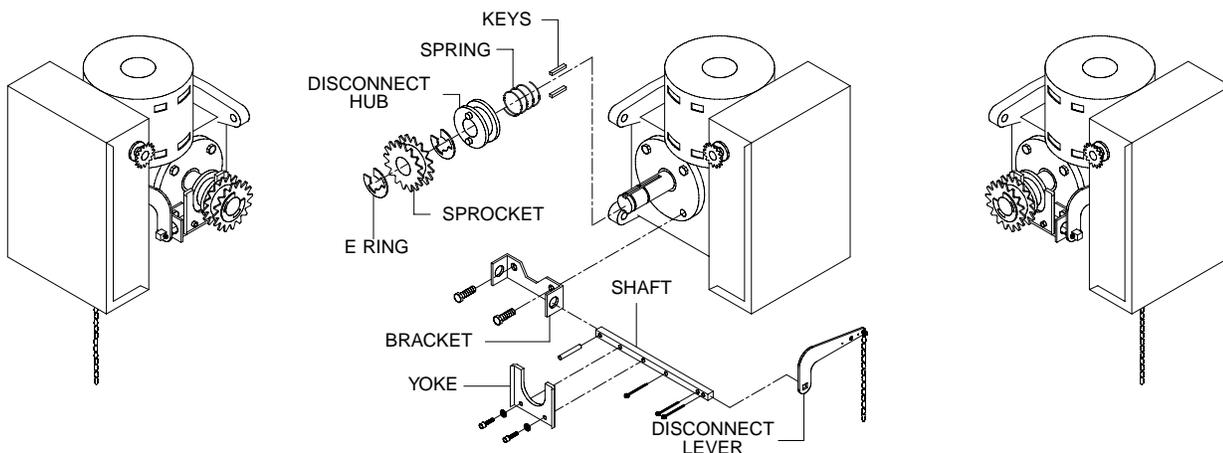
## OPPOSITE HANDING PREPARATIONS

Shipped from the factory for either left hand or right hand mounting. Refer to next to last digit in the model number for handing of your unit. If necessary, model MGJ may also be field modified to accommodate opposite handing. Refer to the conversion instructions below and on page 5.

### 1. Remove Disconnect Assembly Components

Remove the master link from the limit chain, remove the chain and set it aside.

Remove the two E Rings securing the sprocket on the gear reducer shaft. Remove the screws securing the yoke to the disconnect shaft, set the yoke aside.



Remove the three cotter pins from the disconnect shaft. Do not discard the pins. Slide the disconnect shaft out of the support bracket. The release lever will now be free inside the motor frame. Remove the release lever and sash chain from the motor frame. Slide the disconnect hub, compression spring, and flatwasher from the end of the gear reducer shaft. Remove the disconnect support bracket by first removing the the two gear reducer housing screws. Replace the screws in the gear reducer and firmly tighten.

## 2. Re-assemble Disconnect Assembly

Remove the two screws on the opposite side of the gear reducer and mount the disconnect support bracket with the notched side facing the motor. For the remainder of the installation, follow the steps outlined above in reverse order, referring to the illustration as necessary.

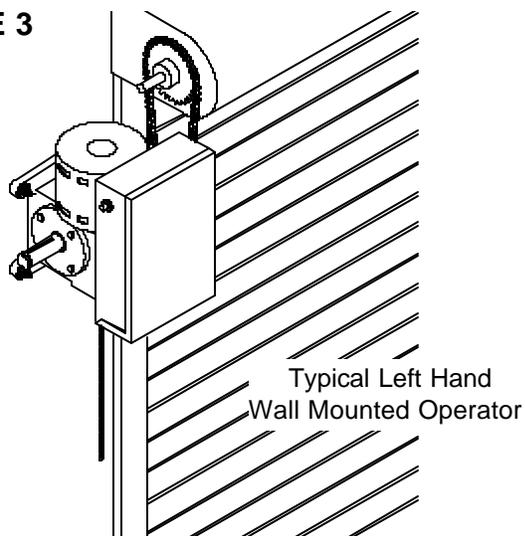
## OPERATOR MOUNTING

Before your operator is installed, be sure the door has been properly aligned and is working smoothly. The operator may be wall mounted or mounted on a bracket or shelf. If necessary, refer to the operator preparations on page 3. Refer to the illustration and instructions below that suits your application.

### 1a. Wall Mounting

The operator should generally be installed below the door shaft, and as close to the door as possible. The optimum distance between the door shaft and operator drive shaft is between 12" - 15". Refer to Figure 3.

FIGURE 3

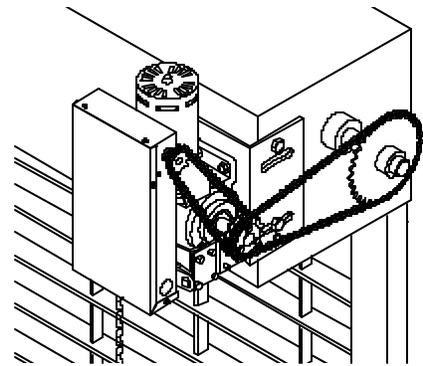


- 1c. Place door sprocket on the door shaft. Do not insert the key at this time.
2. Wrap drive chain around door sprocket and join roller chain ends together with master link.
3. Raise operator to approximate mounting position and position chain over operator sprocket.
4. Raise or lower operator until the chain is slightly taut (not tight). Make sure the operator output shaft is parallel to door shaft and sprockets are aligned. When in position, secure the operator to wall or mounting bracket.
5. Align sprockets and secure, (see Figure 5).

### 1b. Bracket or Shelf Mounting

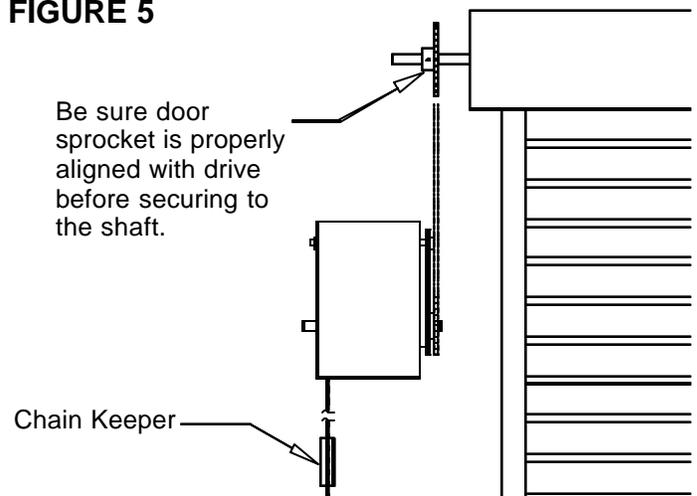
The operator may be mounted either above or below the door shaft. The optimum distance between the door shaft and operator drive shaft is between 12" - 15". Refer to Figure 4.

FIGURE 4



**IMPORTANT:** The shelf or bracket must provide adequate support, prevent play between operator and door shaft, and permit operator to be fastened securely and with the drive shaft parallel to the door shaft.

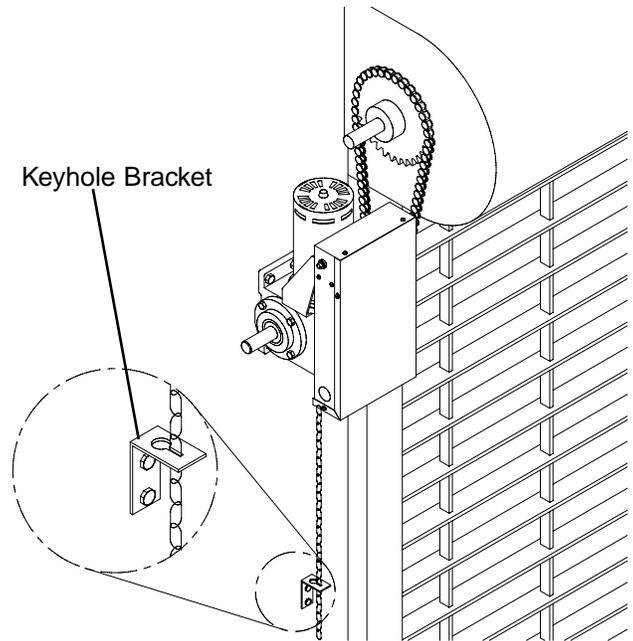
FIGURE 5



## OPERATOR MOUNTING CONT'D

### 6. Mount Chain Keeper / Keyhole Bracket

Using suitable hardware mount the chain keeper approximately 4 feet above the floor, near the free hanging chain. Remove disconnect sash chain from bag and place the end through the keyhole in the chain keeper. Remove excess links if necessary.



## EMERGENCY MANUAL OPERATION



### CAUTION

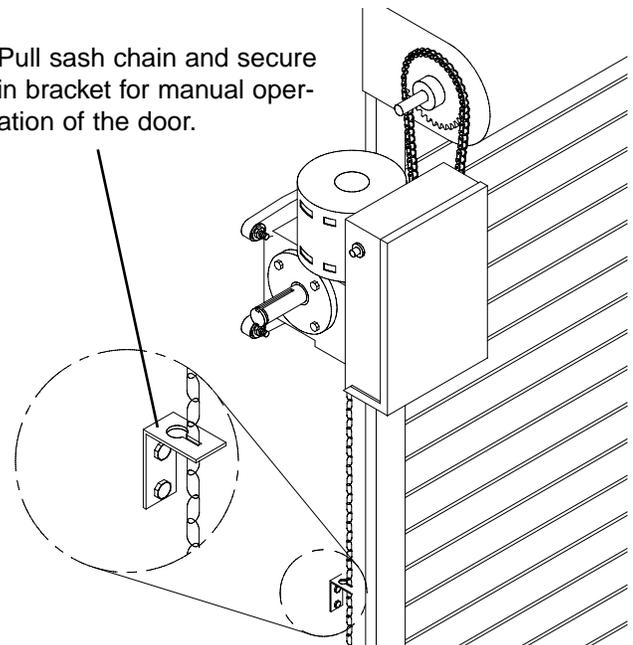
TURN OFF POWER TO THE OPERATOR BEFORE MANUALLY OPERATING YOUR DOOR.

This operator has a floor level disconnect chain to disconnect the door from the door operator allowing for manual operation of the door in case of emergency or power failure.

1. To disengage, pull the chain and secure in the disengaged position by slipping the end through the keyhole bracket mounted on the wall. Or if emergency egress device is used, pull handle to disengage operator from door.

2. The door may now be pushed up or pulled down manually. Release the disconnect chain to operate the door again electrically.

Pull sash chain and secure in bracket for manual operation of the door.



## ENTRAPMENT PROTECTION ACCESSORIES (OPTIONAL)

### ELECTRIC SENSING EDGES

Electric sensing edges with an isolated normally open (N.O.) output are compatible with your operator. If your door does not have a bottom sensing edge and you wish to purchase one, contact the supplier of your operator.

If not pre-installed by the door manufacturer, mount the sensing edge on the door according to the instructions provided with the edge. The sensing edge may be electrically connected by either coiled cord or take-up reel. Refer to the steps below

#### Important Notes:

- a) Proceed with Limit Switch Adjustments before making any sensing edge wiring connections to operator as described below.
- b) Electrician must hardwire the junction box to the operator electrical box in accordance with local codes.

**IT IS STRONGLY RECOMMENDED THAT A SENSING EDGE OR OTHER ENTRAPMENT PROTECTION DEVICE BE USED IN CONJUNCTION WITH THIS OPERATOR.**



### WARNING

**AN ELECTRIC SENSING EDGE IS REQUIRED WHEN USING THIS OPERATOR IN CONJUNCTION WITH THE SS90 FIRE DOOR CONTROLLER.**

**TAKE-UP REEL:** Take-up reel should be installed 12" above the top of the door.

**COIL CORD:** Connect operator end of coil cord to junction box (not supplied) fastened to the wall approximately halfway up the door opening.

## LIMIT SWITCH ADJUSTMENT

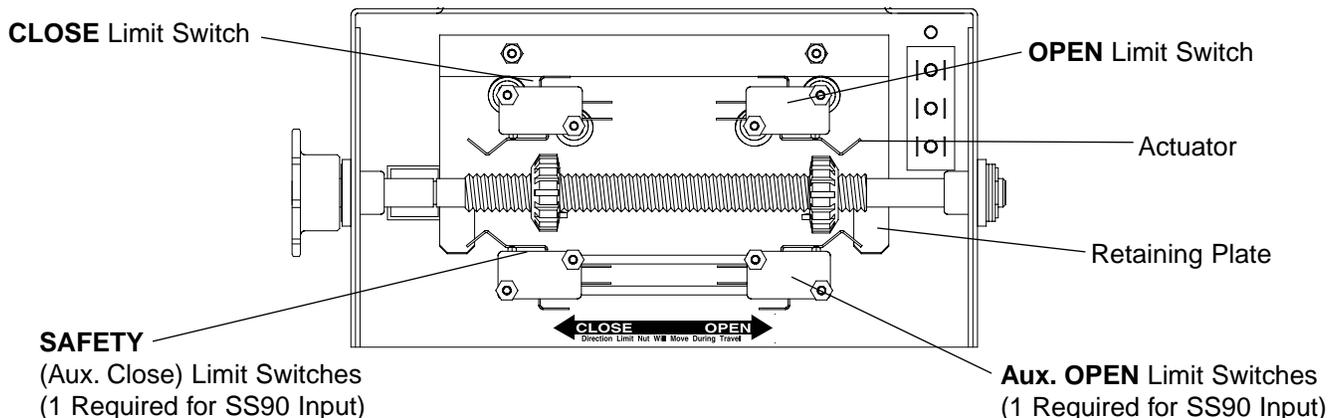
**MAKE SURE THE LIMIT NUTS ARE POSITIONED BETWEEN THE LIMIT SWITCH ACTUATORS BEFORE PROCEEDING WITH ADJUSTMENTS.**

1. To adjust limit nuts depress retaining plate to allow nut to spin freely. After adjustment, release plate and ensure it seats fully in slots of both nuts.
2. To **increase** door travel, spin nut **away** from actuator. To **decrease** door travel, spin limit nut **toward** actuator.
3. Adjust open limit nut so that door will stop in open position with the bottom of the door even with top of door opening.
4. Repeat Steps 1 and 2 for close cycle. Adjust close limit nut so that actuator is engaged as door fully seats at the floor.



### WARNING

**TO AVOID SERIOUS PERSONAL INJURY OR DEATH FROM ELECTROCUTION, DISCONNECT ELECTRIC POWER BEFORE MANUALLY MOVING LIMIT NUTS.**



## MAINTENANCE SCHEDULE

**Check at the intervals listed in the following chart.**

ITEM	PROCEDURE	EVERY 3 MONTHS	EVERY 6 MONTHS	EVERY 12 MONTHS
Drive Chain	Check for excessive slack. Check & adjust as required. Lubricate.*	●		✓
Sprockets	Check set screw tightness	●		✓
Fasteners	Check & tighten as required		●	✓
Manual Disconnect	Check & Operate		●	✓
Bearings & Shafts	Check for wear & lubricate	●		✓

\* Use SAE 30 Oil (Never use grease or silicone spray).

✓ Repeat ALL procedures.

■ Do not lubricate motor. Motor bearings are rated for continuous operation.

■ Inspect and service whenever a malfunction is observed or suspected.

■ CAUTION: BEFORE SERVICING, ALWAYS DISCONNECT OPERATOR FROM POWER SUPPLY.

### HOW TO ORDER REPAIR PARTS & CUSTOMER SUPPORT

INSTALLATION AND SERVICE INFORMATION  
ARE AVAILABLE 5 DAYS A WEEK  
CALL OUR TOLL FREE NUMBER - 866-522-9007  
HOURS 8:00 TO 5:00 p.m. Eastern Standard Time)  
MONDAY Through FRIDAY

# CONTROL WIRING

## DETERMINE WIRING TYPE

Refer to the wiring diagram located on the inside cover the electrical box to determine the type of control wiring.

## MODEL MGJ

### Standard C2 or B2 Wiring

Model MGJ operators are shipped from the factory with jumper set for C2 wiring, which requires constant pressure on button to close the door. If momentary contact on close direction is desired (B2 wiring) you must include an entrapment protection device. See close control jumper setting below.

### Constant pressure on close (C2 wiring)

Red jumper wire was placed on terminal #2 in the electrical enclosure. The operator will require constant pressure on close control in order to keep door moving in the close direction.

### Momentary contact on close (B2 wiring)

Move red jumper wire from terminal #2 to terminal #3. The operator will require only momentary contact to close the door.

## LOCATING THE CONTROL STATION

All operators are supplied with some type of control station. Generally a three button station (OPEN/CLOSE/STOP) is provided. A two-position key switch or control station (OPEN/CLOSE) may be added or substituted when requested at the time of order. Mount the control station near the door.

## SPECIAL CONTROL WIRING

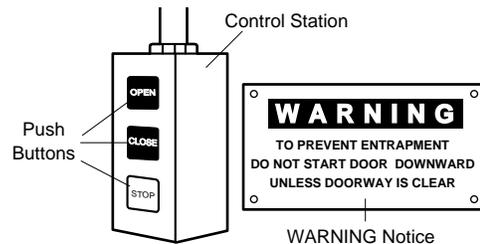
If your operator was shipped from the factory with non-standard control wiring or with optional accessories that require additional instructions, refer to the wiring diagram(s) indicated in the special control wiring data box. When a replacement wiring diagram is present, wiring diagrams in this manual will not apply. Refer only to the replacement wiring diagram for all connections.

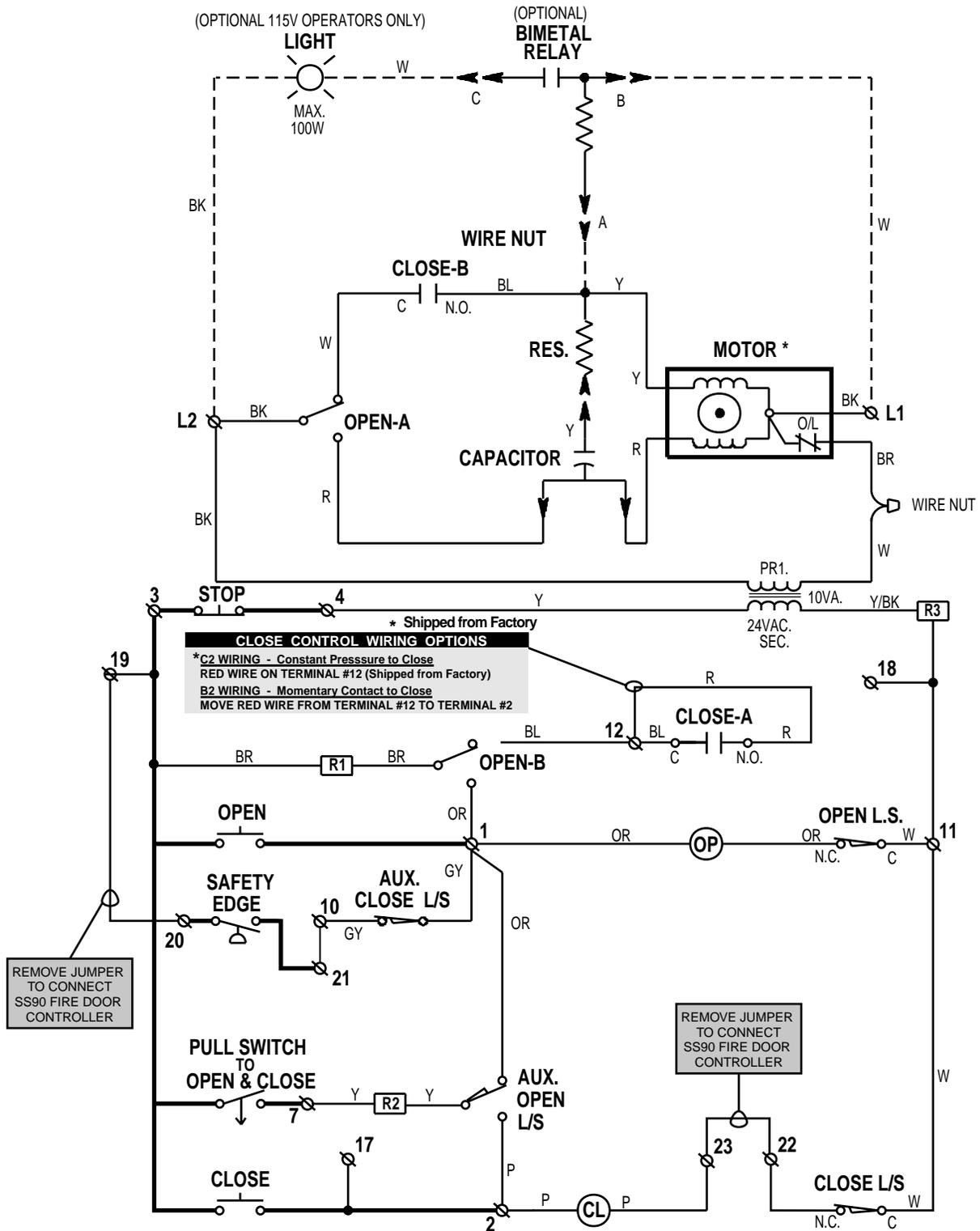
**WARNING**

**INSTALL THE CONTROL STATION WHERE THE DOOR IS VISIBLE, BUT AWAY FROM THE DOOR AND ITS HARDWARE. IF CONTROL STATION CANNOT BE INSTALLED WHERE DOOR IS VISIBLE, OR IF ANY DEVICE OTHER THAN THE CONTROL STATION IS USED TO ACTIVATE THE DOOR, A REVERSING EDGE *MUST BE INSTALLED ON THE BOTTOM OF THE DOOR*. FAILURE TO INSTALL A REVERSING EDGE UNDER THESE CIRCUMSTANCES MAY RESULT IN SERIOUS INJURY OR DEATH TO PERSONS TRAPPED BENEATH THE DOOR.**

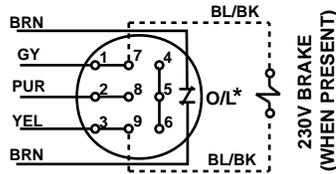
## MOUNT WARNING NOTICE

**IMPORTANT:** Mount WARNING NOTICE beside or below the push button station.

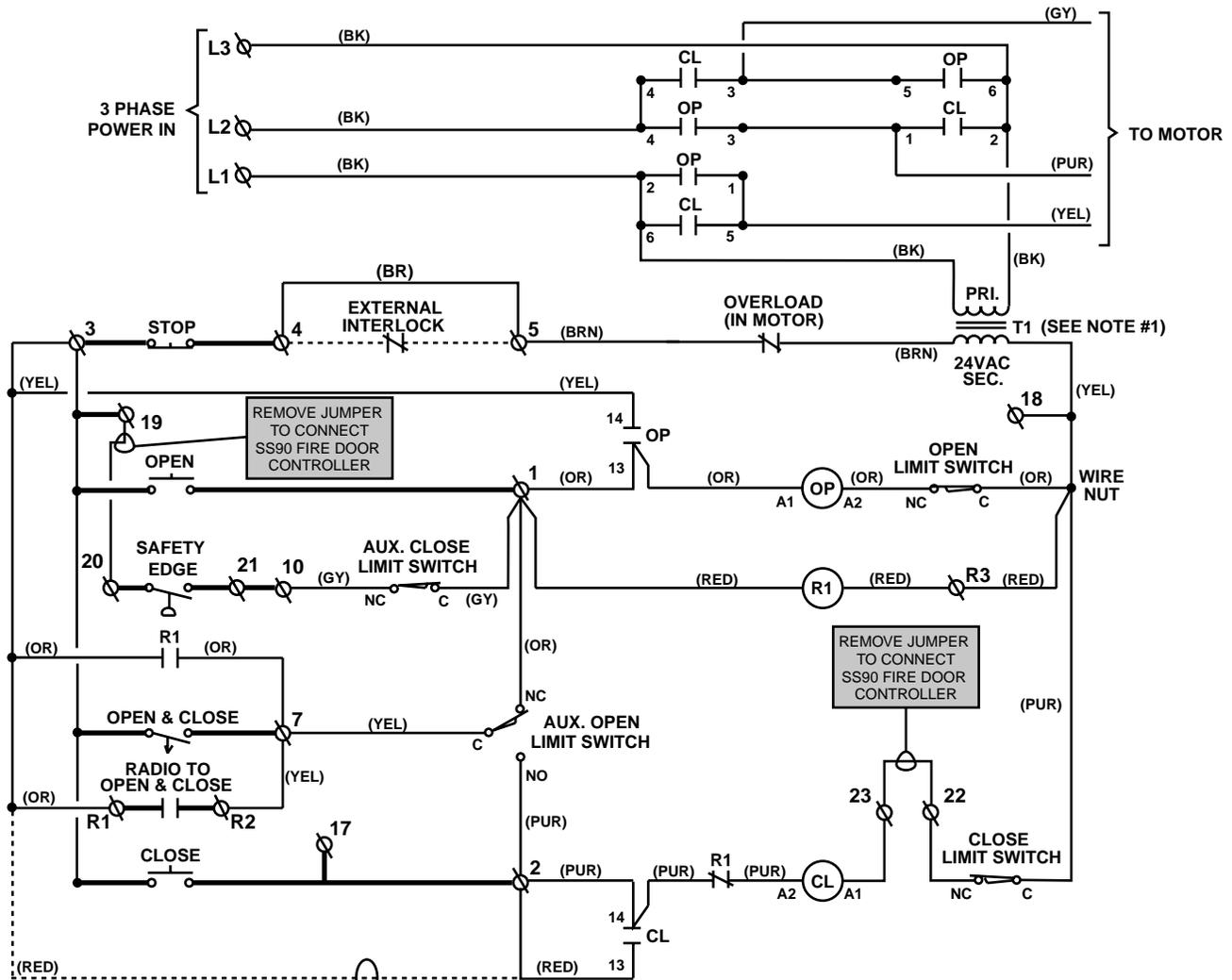




\* TO REVERSE MOTOR ROTATION INTERCHANGE RED AND YELLOW MOTOR WIRES.



**230 VOLT - 3 PHASE  
MOTOR CONNECTION**



**NOTE:**  
1. Voltage same as line voltage.

\* - Shipped from Factory

**CLOSE CONTROL WIRING OPTIONS**

\*C2 WIRING - Constant Pressure to Close  
RED WIRE ON TERMINAL #2 (Shipped from Factory)

B2 WIRING - Momentary Contact to Close  
MOVE RED WIRE FROM TERMINAL #2 TO TERMINAL #3

## REPLACEMENT PART KITS MGJ

Below are replacement kits available for your operator. For replacement of electrical box, motor or brake components be sure to match model number of your unit to kit number below to ensure proper voltage requirements. Optional modifications and/or accessories included with your operator may add or remove certain components from these lists. Please consult a parts and service representative regarding availability of individual components of kits specified below. Refer to page 8 for all repair part ordering information.

### Complete Electrical Box Replacement Kits

K-MGJ5011L	Model MGJ5011LS
K-MGJ5023L	Model MGJ5023LS
K-MGJ5011R	Model MGJ5011RS
K-MGJ5023R	Model MGJ5023RS

### Electrical Box Sub-Assemblies

K72-12565	MGJ Limit Shaft Assembly
K75-18566	MGJ SSSI Limit Switch Assembly

### Motor Kits

K20-1050C1M-R	Model MGJ5011
K20-3050C4M-R	Models MGJ5023

### Disconnect Assembly Kit

K75-12567	Model MGJ Operators
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COMPLETE ELECTRICAL BOX KITS			
Item	P/N	Description	Qty
1	03-11112	Reversing Contactor (See Notes)	1
2	10-11403-R	Electrical Box Cover	1
3	10-11420-R	Electrical Box	1
4	10-11421	Capacitor Clamp (See Notes)	1
5	(See Var. Comp.)	Transformer	1
6	24-24-1	24V DPDT Relay	2
7	29-10338	Capacitor, 7MFD (See Notes)	1
8	29-2	Resistor, 20 Ohm	1
9	42-10040	Terminal Block Assy, 3 Lug	1
10	42-110	10 Position Terminal Block	1
11	42-112-2	12 Position Terminal Block	1
12	40-18552	Auxiliary Block Marker	1
13	10-18552	Bracket, Auxiliary Terminal Block	1

K72-12565 LIMIT SHAFT ASSEMBLY KIT			
Item	P/N	Description	Qty
L1	11-11373	MGJ Limit Shaft	1
L2	12-10458	3/8" Bearing, Plastic Flange	2
L3	13-10024	Limit Nut	2
L4	15-48B07AXX	Sprocket, 48B07	1
L5	80-10026	Washer, Shim 3/8" I.D. x .01	1
L6	85-FW-38	Flatwasher, 3/8"	2
L7	86-RP04-012	Roll Pin, 1/8" Dia. x 3/4" Long	1
L8	87-E-038	E Ring, 3/8"	1

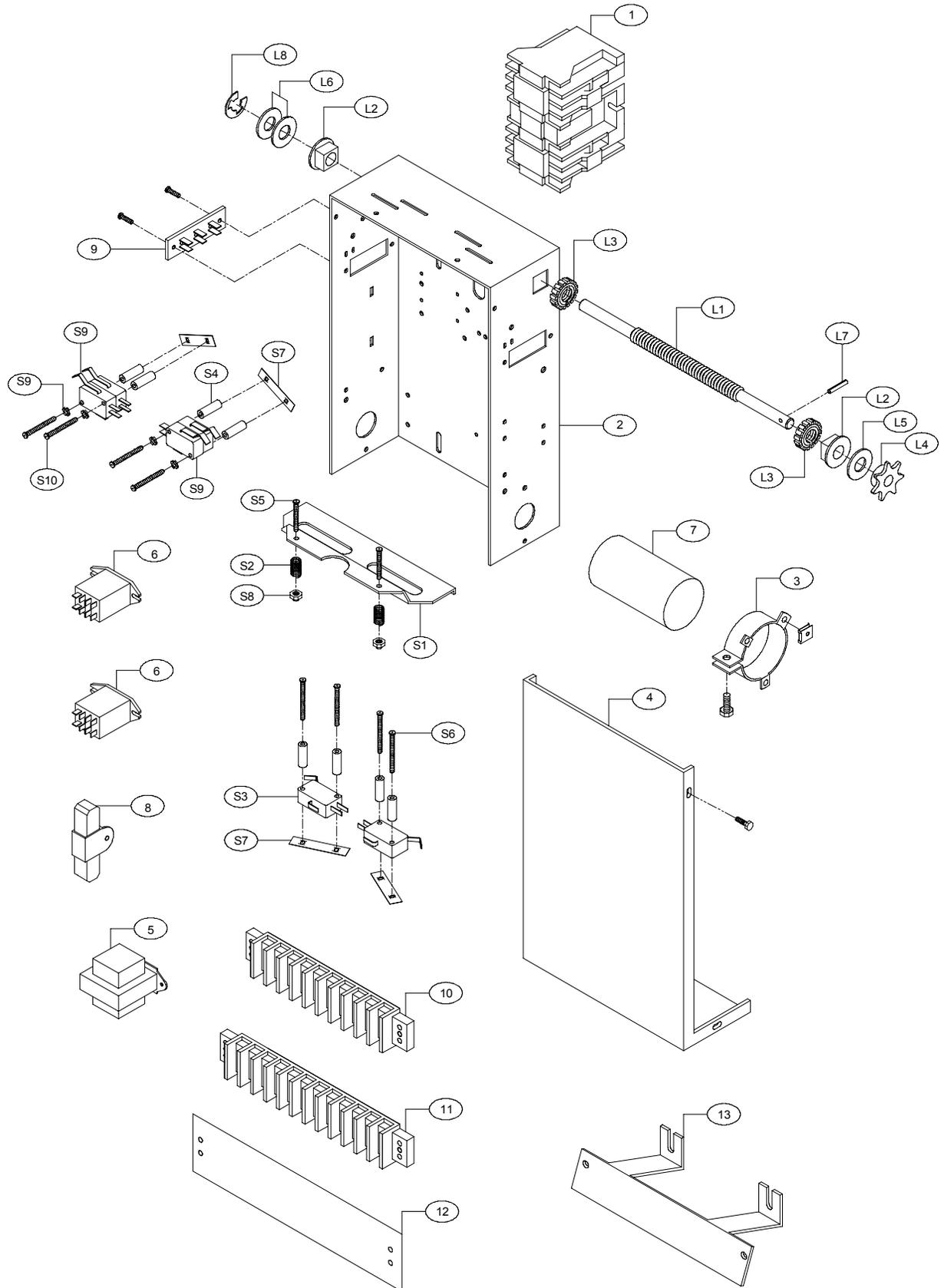
K75-18566 LIMIT SWITCH ASSEMBLY KIT			
Item	P/N	Description	Qty
S1	10-11419	Depress Plate	1
S2	18-10036	Spring, Depress Plate	2
S3	23-10041	SPDT Limit Switch	2
S4	31-13062	Spacer, .115" ID x 5/8" Long	8
S5	82-PX06-16	Screw, #6-32 x 1" Pan HD PH	2
S6	82-PX04-20	Screw, #4-40 x 1-1/2" Pan HD PH	4
S7	84-DT-06	Nut, #6-32 Double Tinnerman	4
S8	84-LH-06	Locknut #6-32	2
S9	23-10041-1	Limit Switch, Double	2
S10	82-PX04-24	Screw, #4-40 x 2" Pan HD PH	4

VARIABLE COMPONENT KITS				
Item	P/N	Description	MGJ5011	MGJ5023
5	21-5115	Transformer, 115V	●	
	21-5230	Transformer, 230V		●

### NOTES:

- 1) Reversing Contactor (03-11112), Used only on three phase operators. Single phase operators use relays.
- 2) Capacitor (29-10338), Capacitor Clamp (10-11421) and Resistor (29-2) used only on single phase operators.

# MGJ ELECTRICAL BOX - ILLUSTRATED PARTS



## REPLACEMENT PART LISTS – MODEL MGJ

Refer to the parts lists below for replacement kits available for your operator. If optional modifications and/or accessories are included with your operator, certain components may be added or removed from these lists. Individual components of each kit may not be available. Please consult a parts and service representative regarding availability of individual components. Refer to page 8 for all repair part ordering information.

<b>K75-12567 DISCONNECT ASSEMBLY KIT</b>			
ITEM	PART #	DESCRIPTION	
D1	07-11418	Disconnect Hub	1
D2	10-11023	Bevel Gear Yoke	1
D3	10-11358	Disconnect Support Bracket	1
D4	10-11394	Release Lever	1
D5	11-11361	Disconnect Shaft MGJ	1
D6	15-11377	Sprocket, 41B19 x 1.25 Bore	1
D7	18-10467	Compression Spring	1
D8	19-8A-12	12ft. Of Sash Chain	1
D9	80-11416	Disconnect Key 1/4 x 1/4 x 7/8	2
D10	80-206-11	Washer, 1" I.D. x 1/16" Thick	1
D11	82-SH10-12	Screw, #10-32 Hex Head Socket	2
D12	85-LS-10	#10 Lock Washer ZP	2
D13	86-CP04-112	Cotter Pin, 1/8" x 1-3/4" Long	4
D14	86-RP04-100	Roll Pin, 1/8" Dia. x 1" Long	1
D15	87-E-100	E Ring, 1" Plated	2

<b>INDIVIDUAL PARTS</b>			
ITEM	PART #	DESCRIPTION	
1	10-11357	Brake Mounting Plate	1
2	10-11359	Front Bracket	1
3	32-11414-R	Gear Reducer, 45:1	1
4	See Page 20	Electrical Box	1
5	See Page 20	Motor	1

**ILLUSTRATED PARTS – MODEL MGJ**

