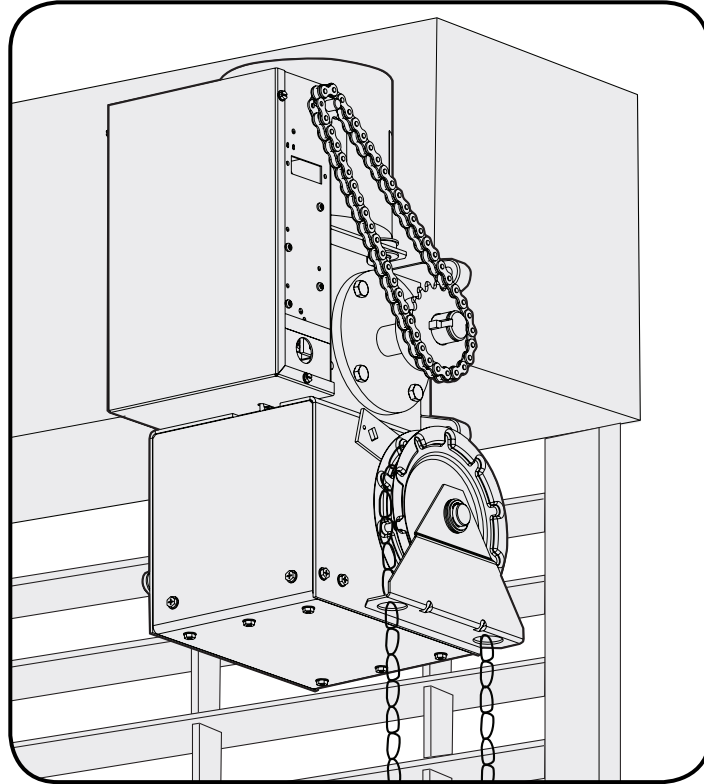


OWNER'S MANUAL

MODELS MGH & MGJ

MEDIUM DUTY DOOR OPERATOR



2 YEAR WARRANTY

Serial # _____
(located on electrical box cover)

Installation Date _____

Wiring Type _____

www.liftmaster.com

NOT FOR RESIDENTIAL USE

41B6



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WARNING

Mechanical

WARNING

Electrical

CAUTION

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of **serious injury** or **death** if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock. Read the warnings carefully.

When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your door and/or the door operator if you do not comply with the cautionary statements that accompany it. Read them carefully.

IMPORTANT NOTES:

- *BEFORE attempting to install, operate or maintain the operator, you must read and fully understand this manual and follow all safety instructions.*
- *DO NOT attempt repair or service of your commercial door and gate operator unless you are an Authorized Service Technician.*

CARTON INVENTORY

Before beginning your installation check that all components were provided.

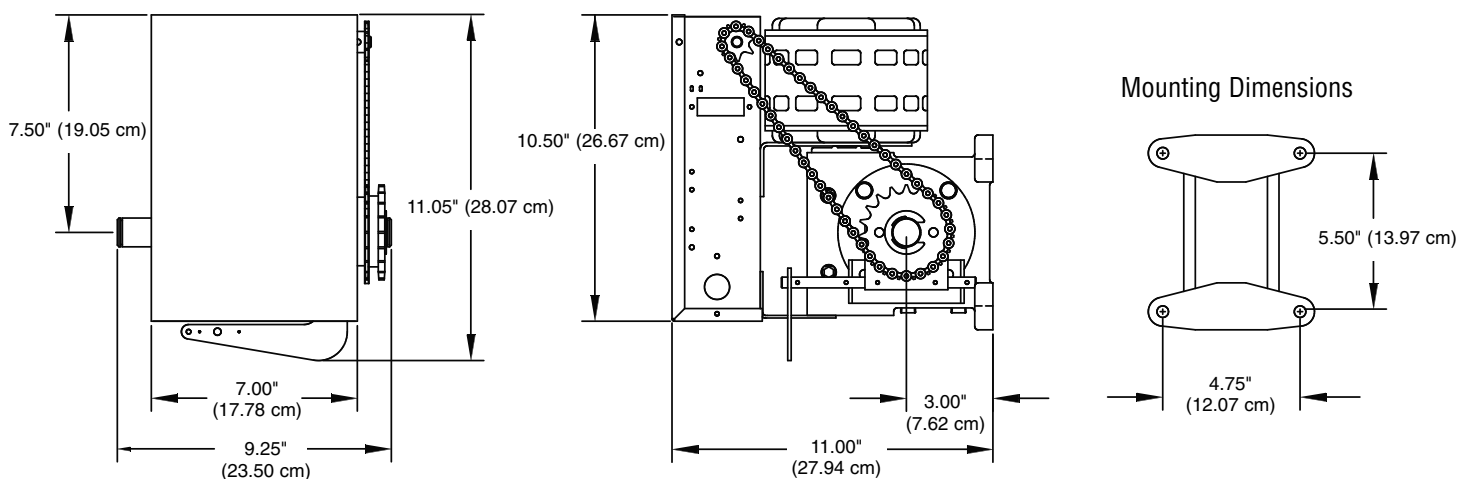
DESCRIPTION

- POWERHEAD ASSEMBLY
- OWNER'S MANUAL AND CAUTION LABELS
- HARDWARE BOX
- 3-BUTTON CONTROL STATION
- HOIST HAND CHAIN (MGH Model only)
- DOOR SPROCKET
- DOOR/OPERATOR DRIVE CHAIN

OPERATOR DIMENSIONS

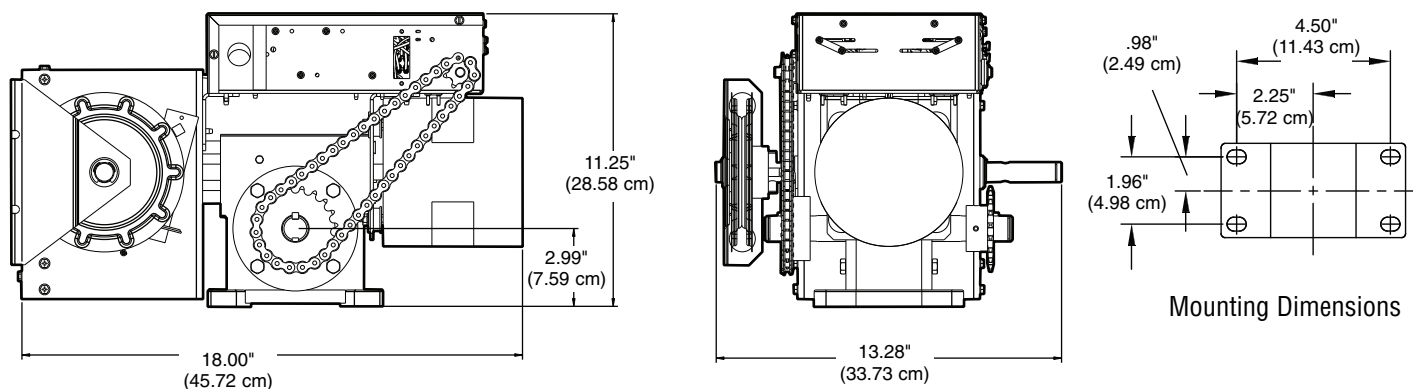
WEIGHTS AND DIMENSIONS - MGJ

HANGING WEIGHT: 50-60 LBS.



WEIGHTS AND DIMENSIONS - MGH

HANGING WEIGHT: 70-80 LBS.



PREPARATION

Shipped from the factory for either left hand or right hand mounting. Refer to the last digit in the model number for handing of your unit. If necessary, the operators may also be field modified to accommodate opposite handing.

MGJ OPPOSITE HANDING PREPARATIONS

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 two gear reducer housing screws. Replace the screws in the gear reducer and firmly tighten.

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.

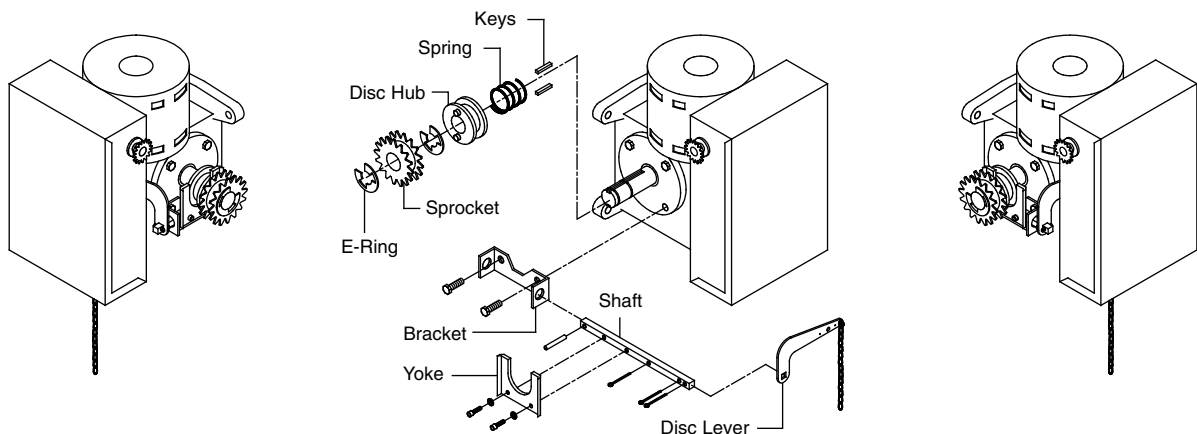
WARNING

To prevent possible SERIOUS INJURY or DEATH:

- DO NOT connect electric power until instructed to do so.
- If the door lock needs to remain functional, install an interlock switch.
- ALWAYS call a trained professional door serviceman if door binds, sticks or is out of balance. An unbalanced door may not reverse when required.
- NEVER try to loosen, move or adjust doors, door springs, cables, pulleys, brackets or their hardware, ALL of which are under EXTREME tension and can cause SERIOUS PERSONAL INJURY.
- Disable ALL locks and remove ALL ropes connected to door BEFORE installing and operating door operator to avoid entanglement.

REMOVE LIMIT SWITCH SHAFT ASSEMBLY

Remove limit chain. Remove the e-ring and washers from the side away from the limit chain sprocket. Remove limit shaft. The limit adjust nuts will need to be unscrewed while removing shaft. To reassemble follow the above steps in reverse order.



PREPARATION

MGH LEFT HAND MOUNTING PREPARATIONS

The operator may be mounted on either the right (standard) or left side of door, and in either a vertical (standard) or horizontal mounting position. Refer to the steps below if you require the hand chain and/or disconnect chain to be on the opposite side of the operator; or if the operator is being mounted in a horizontal position.

HAND CHAIN RIGHT/LEFT CONVERSION

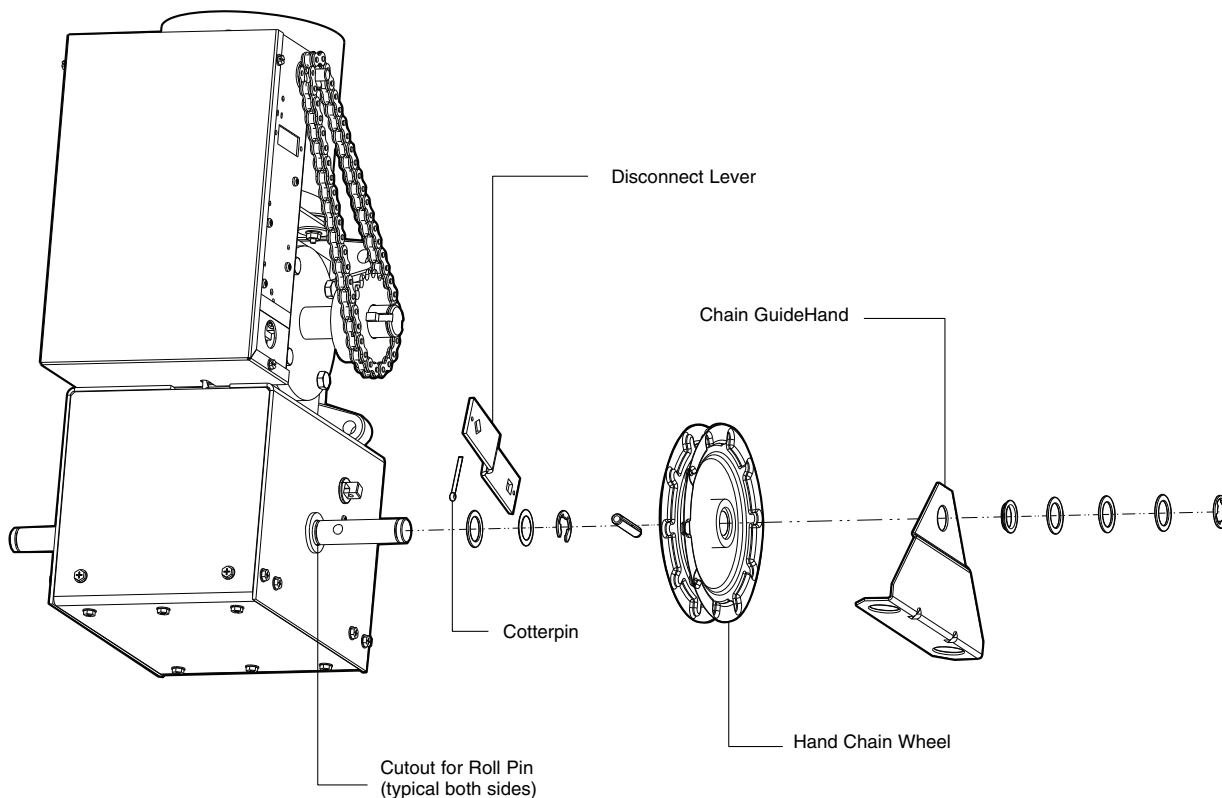
1. Remove snap ring from end of shaft on the hoist side.
2. Remove the washers, chain guide and chain wheel.
3. Remove drive pin from shaft and relocate to the opposite side.
4. Install chain wheel, chain guide, washers and snap ring.

DISCONNECT LEVER RIGHT/LEFT CONVERSION

1. Remove cotterpins on the ends of the disconnect shaft (square shaft).
2. Move the disconnect lever arm and the washer to the opposite sides.
3. Replace the cotterpins.

HORIZONTAL MOUNTING CONVERSION

1. Remove cotterpin on the ends of the disconnect shaft (square shaft).
2. Remove lever and turn 90 degrees so that the lever is pointing away from the motor. The lever will be directly under the hoist shaft.
3. Replace cotterpin.



INSTALLATION

IMPORTANT NOTE: 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 preparation on page 5. Refer to the illustration and instructions below that suits your application.

MOUNT THE OPERATOR

1. **Wall Mount:** The operator should generally be installed below the door shaft, and as close to the door as possible (Figure 1).

Bracket Shelf Mounting: The operator may be mounted either above or below the door shaft (Figure 2).

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.

NOTE: The optimum distance between the door shaft and operator drive shaft is between 12-15" (30.5-38.1 cm).

2. Place door sprocket on the door shaft. Do not insert the key at this time.
3. Place drive sprocket on the appropriate side of the operator. Do not insert the key at this time.
4. Wrap drive chain around door sprocket and join roller chain ends together with master link.
5. Raise operator to approximate mounting position and position chain over operator sprocket.
6. Raise or lower operator until the chain is 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.
7. Align sprockets and secure (Figure 3).
8. **Install Hand Chain (Model MGH only)**
Place hand chain around hand chain wheel. Be sure to pass it through both openings in the chain guide. Remove enough links so chain hangs approximately 2' (.61 m) above the floor.
9. **Mount Chain Keeper / Keyhole Bracket**
Using suitable hardware mount the chain keeper approximately 4' (1.22 m) 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.

FIGURE 1

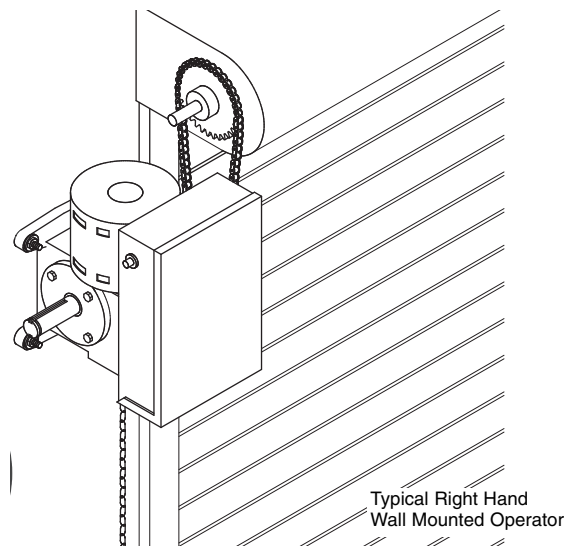


FIGURE 2

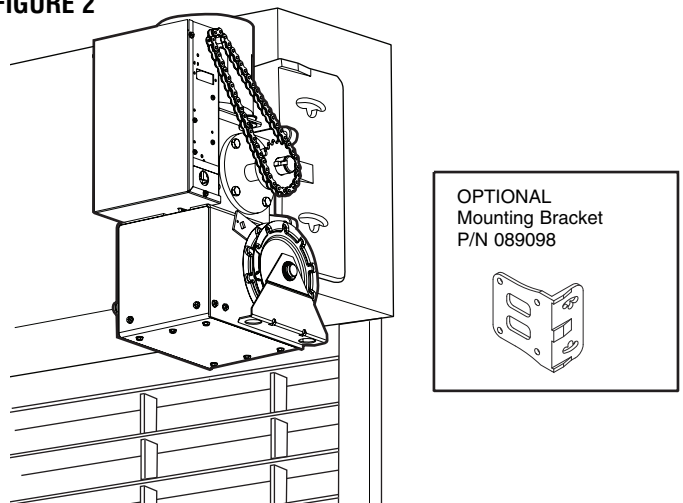
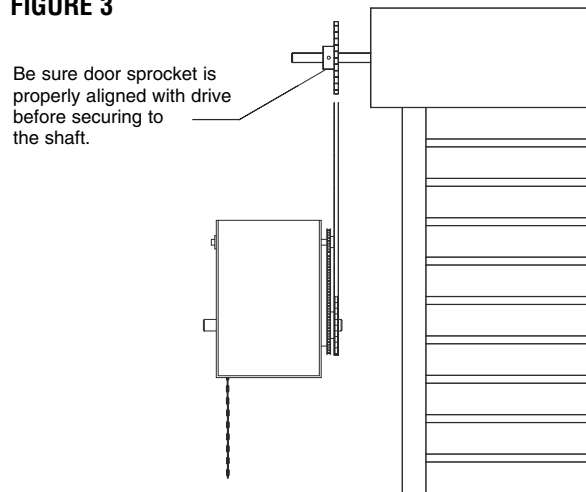


FIGURE 3



INSTALLATION

MANUAL OPERATION

This operator is equipped with a floor level disconnect chain to allow for manual operation of the door in case of emergency or power failure.

MODEL MGJ

1. To disengage, pull the sash 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 or if equipped with manual hand chain hoist (model MGH only), door can be raised or lowered with hand chain. Release the disconnect chain to operate the door again electrically.

MODEL MGH

1. Pull the disconnect chain (small chain) to engage the interlock to disable the controls. The disconnect chain may be locked in position by slipping the end through the keyhole of the chain keeper mounted on the wall.
2. Operate the door in the desired direction by pulling on one side or the other of the continuous loop hoist chain (large chain).
3. The disconnect chain must be released from the chain keeper before the door will operate again electrically.

ENTRAPMENT PROTECTION ACCESSORIES (OPTIONAL)

SENSING EDGES

All types of sensing edges with an isolated normally open (N.O.) output are compatible with your operator. This includes pneumatic and electric edges. 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.

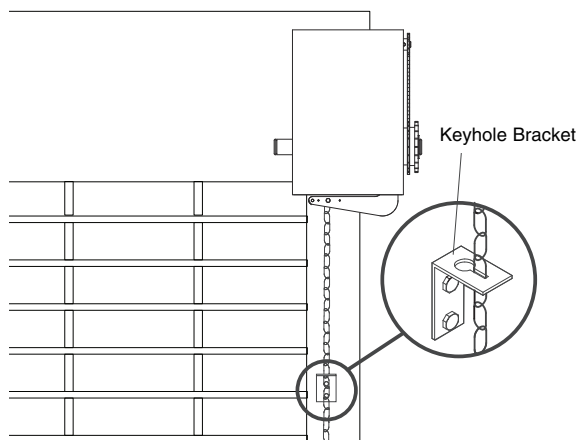
IMPORTANT NOTES:

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

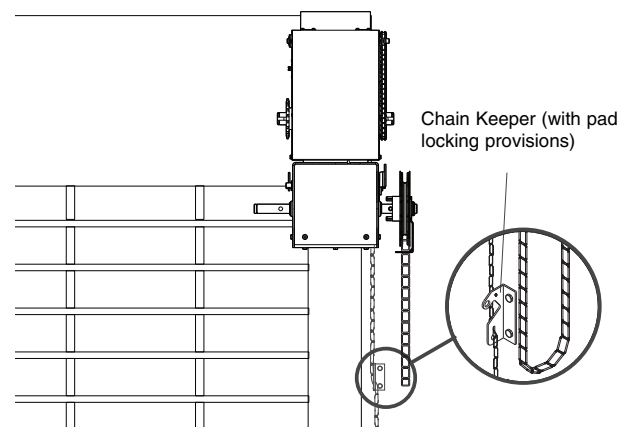
⚠ WARNING

To prevent possible **SERIOUS INJURY** from a moving chain, **DISCONNECT** electric power to the operator **BEFORE** manually operating your door.

MGJ



MGH



⚠ WARNING

To reduce the risk of **SEVERE INJURY** or **DEATH**, **ALWAYS** install reversing sensors when the 3-button control station is out of sight of door or **ANY** other control (automatic or manual) is used. Reversing devices are recommended for **ALL** installations.

TAKE-UP REEL

Take-up reel should be installed 12" (30.48 cm) above the top of the door.

COIL CORD

Connect operator end of coil cord to junction box (not provided) fastened to the wall approximately halfway up the door opening.

ADJUSTMENT

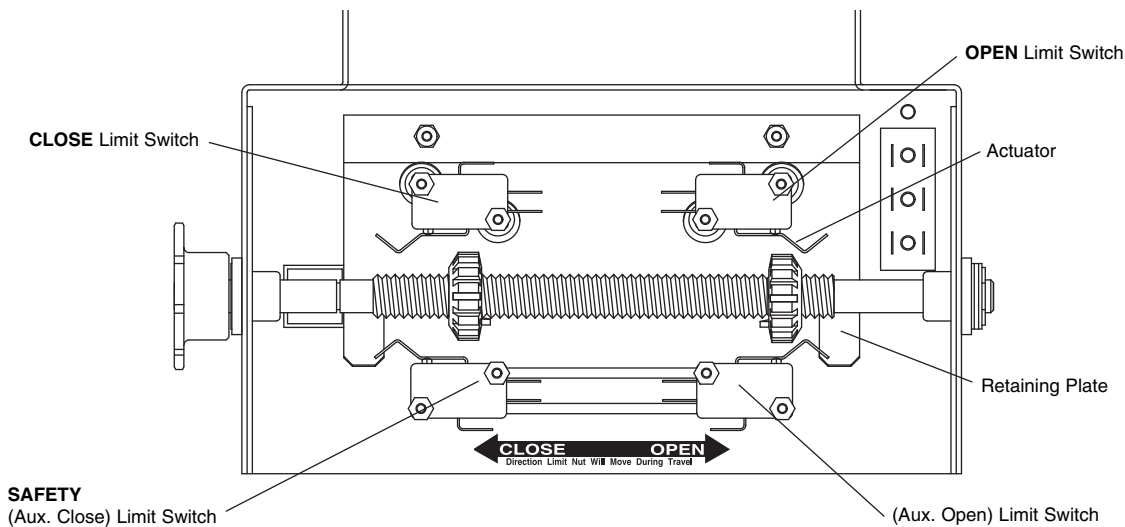
LIMIT SWITCH ADJUSTMENT

NOTE: Make sure the limit nuts are positioned between the limit switches before proceeding with adjustments.

1. Depress retaining plate to allow nut to spin freely. After adjustment, release plate and move nut back and forth to ensure it is fully seated in slot.
2. To **increase** door travel, spin nut **away** from limit switch. To **decrease** door travel, spin limit nut **toward** limit switch.
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 the limit switch 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.



POWER WIRING & GROUND WIRING

WARNING

To reduce the risk of SEVERE INJURY or DEATH:

- ANY maintenance to the operator or in the area near the operator MUST NOT be performed until disconnecting the electrical power and locking-out the power via the operator power switch. Upon completion of maintenance the area MUST be cleared and secured, at that time the unit may be returned to service.
- Disconnect power at the fuse box BEFORE proceeding. Operator MUST be properly grounded and connected in accordance with local electrical codes. The operator should be on a separate fused line of adequate capacity.

- ALL electrical connections MUST be made by a qualified individual.
- DO NOT install ANY wiring or attempt to run the operator without consulting the wiring diagram. We recommend that you install an optional reversing edge BEFORE proceeding with the control station installation.
- ALL power wiring should be on a dedicated circuit and well protected. The location of the power disconnect should be visible and clearly labeled.
- ALL power and control wiring MUST be run in separate conduit.

POWER WIRING CONNECTIONS

1. Connect power wires coming from the main to the captive terminal block in the electrical box enclosure marked with the label. All power and control wiring must be run in separate conduit in accordance with local electrical codes.
2. Be sure to run all power wires through the conduit hole in the electrical box enclosure marked with the label shown below.

NOTE: Must use #14 AWG or thicker wire for power wiring.

POWER WIRING

USE COPPER WIRE ONLY 40-10031B

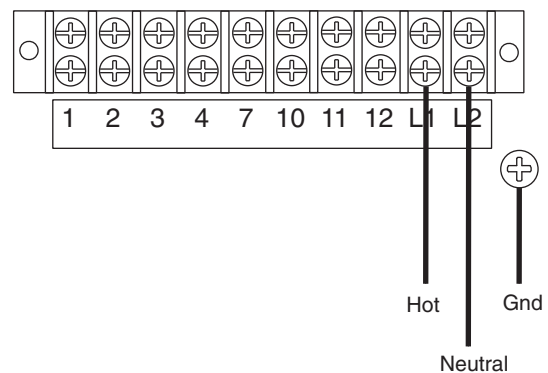
ON THREE PHASE MACHINES ONLY: Incorrect phasing of the power supply will cause the motor to rotate in the wrong direction. To change motor rotation, exchange incoming power leads L1 and L2.

GROUND WIRING CONNECTIONS

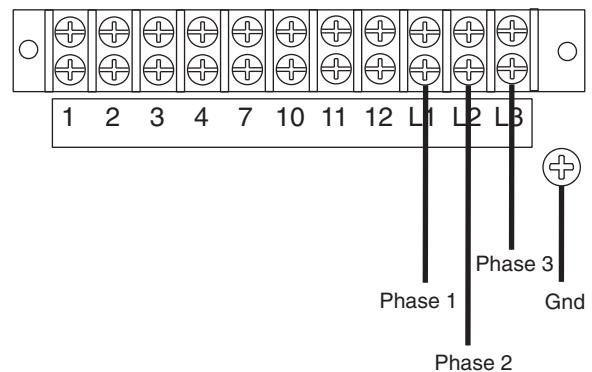
1. Connect earth ground to the chassis ground screw in the electrical box enclosure.
2. Use same conduit entry into the electrical box as the power wiring.

IMPORTANT NOTE: This unit must be properly grounded. Failure to properly ground this unit could result in electric shock and serious injury.

Single Phase Power Wiring



Three Phase Power Wiring



CONTROL WIRING & INSTALLATION

WARNING

To reduce the risk of SEVERE INJURY or DEATH:

- ANY maintenance to the operator or in the area near the operator MUST NOT be performed until disconnecting the electrical power and locking-out the power via the operator power switch. Upon completion of maintenance the area MUST be cleared and secured, at that time the unit may be returned to service.
- Disconnect power at the fuse box BEFORE proceeding. Operator MUST be properly grounded and connected in accordance with local electrical codes. The operator should be on a separate fused line of adequate capacity.
- ALL electrical connections MUST be made by a qualified individual.
- DO NOT install ANY wiring or attempt to run the operator without consulting the wiring diagram. We recommend that you install an optional reversing edge BEFORE proceeding with the control station installation.
- ALL power wiring should be on a dedicated circuit and well protected. The location of the power disconnect should be visible and clearly labeled.
- ALL power and control wiring MUST be run in separate conduit.

DETERMINE WIRING TYPE

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

STANDARD C2 OR B2 WIRING

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 in 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.

SPECIAL CONTROL WIRING

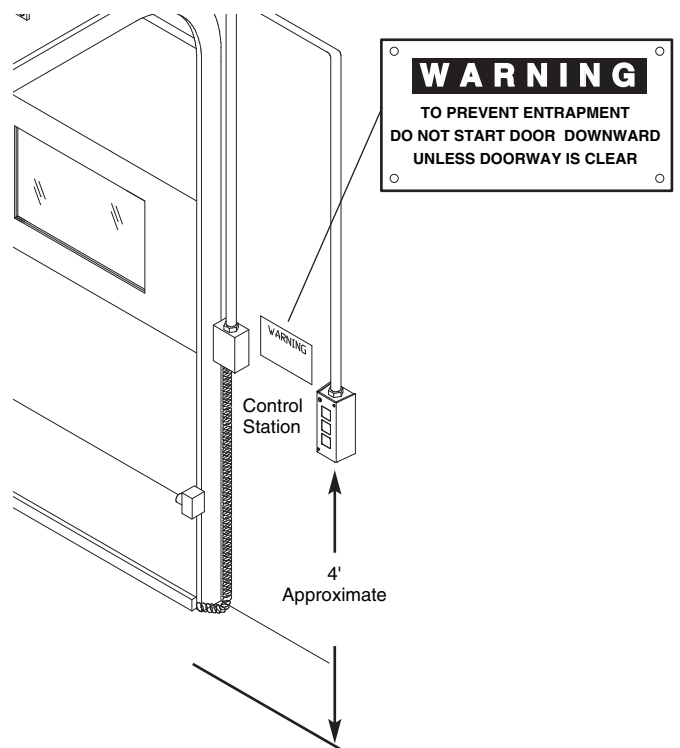
If your operator was shipped from the factory with non-standard control wiring or with optional accessories that require additional instructions, refer to the wiring diagram(s) indicated in the special control wiring data box. When a replacement wiring diagram is present, wiring diagrams in this manual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

IMPORTANT NOTE: If your wiring diagram is missing, or you are unsure of the wiring type for your operator, contact the customer service department @ 1-800-528-2806.

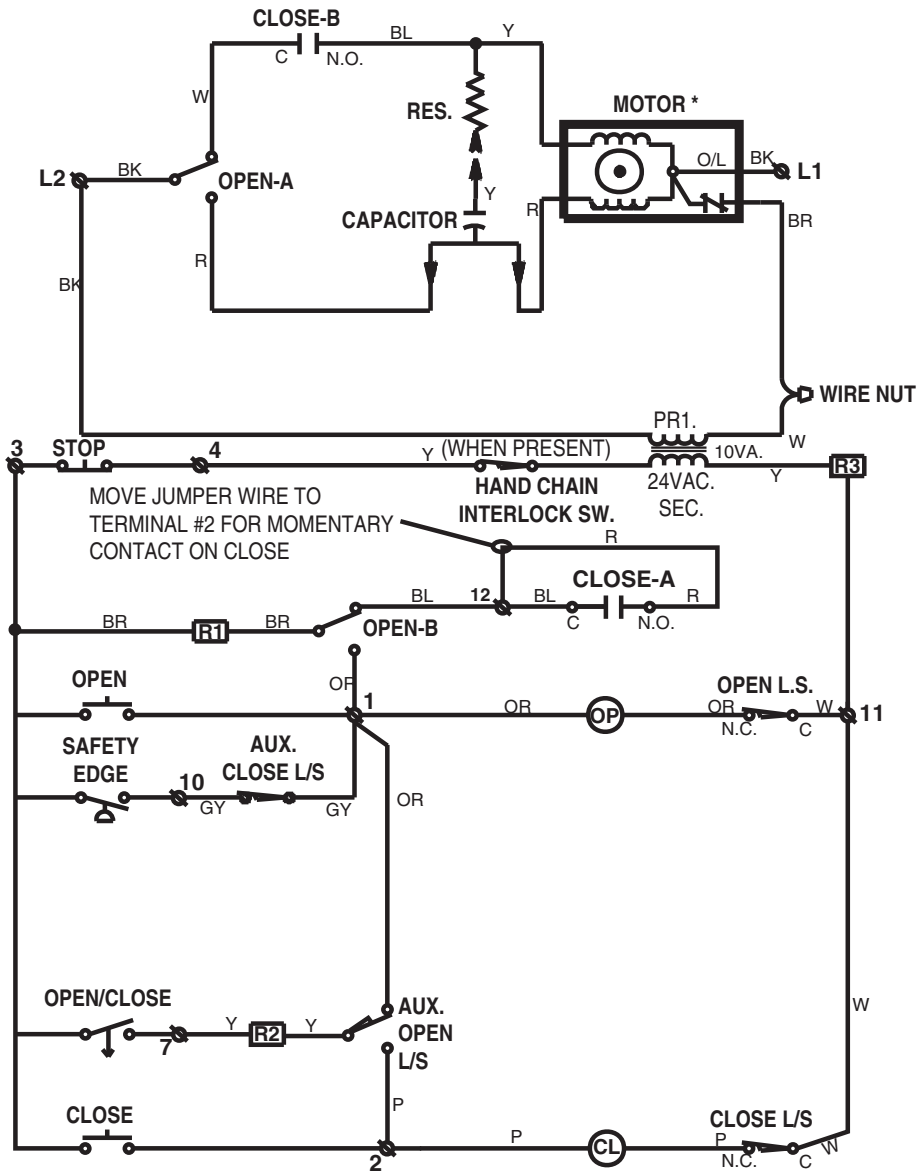
MOUNTING INSTRUCTIONS

All operators are supplied with some type of control station. Generally a 3-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.

1. Mount WARNING NOTICE beside or below the control station.
2. Mount control station(s) within line of sight of door(s).

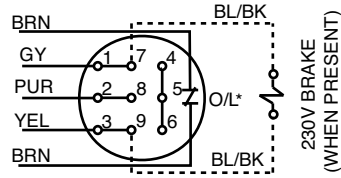


SINGLE PHASE SCHEMATIC DIAGRAM FOR MGJ/MGH

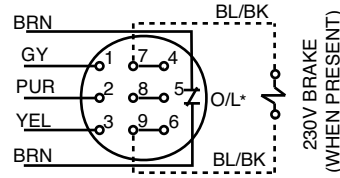


* TO REVERSE MOTOR ROTATION, INTERCHANGE RED AND YELLOW MOTOR WIRES.

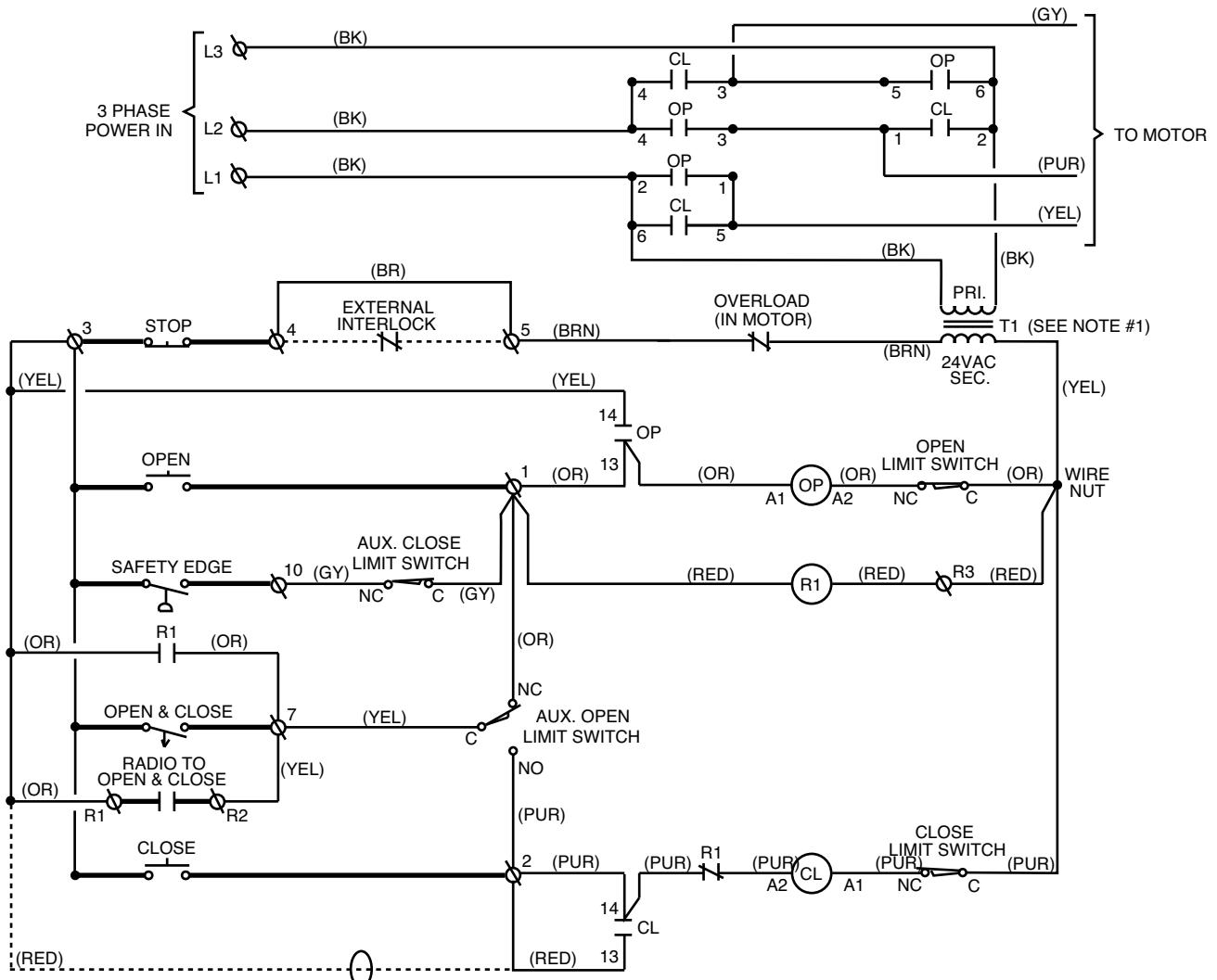
THREE PHASE SCHEMATIC DIAGRAM FOR MGJ ONLY



230 VOLT - 3 PHASE
MOTOR CONNECTION



460 VOLT - 3 PHASE
MOTOR CONNECTION



NOTE: Voltage same as line voltage.

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

MAINTENANCE

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 and tighten as required		●	◆
Manual Disconnect	Check & Operate		●	◆
Bearing & Shafts	Check for wear & lubricate	●		◆

WARNING

To avoid **SERIOUS PERSONAL INJURY** or **DEATH** from electrocution, disconnect **ALL** electric power **BEFORE** performing **ANY** maintenance.

- ◆ 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

OUR LARGE SERVICE ORGANIZATION SPANS AMERICA

Installation and service information are available.

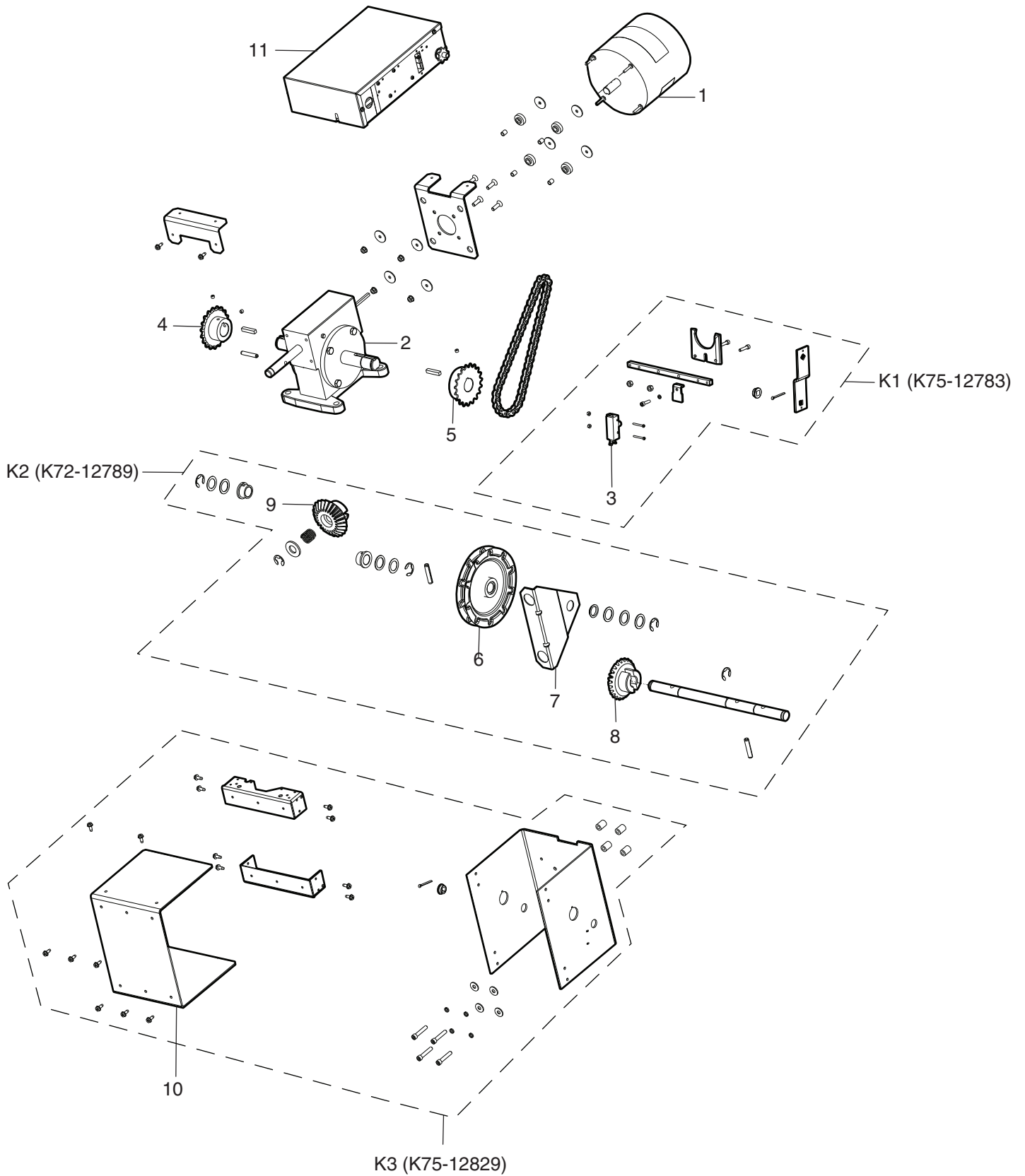
Call our TOLL FREE number:

1-800-528-2806

www.liftmaster.com

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MGH ILLUSTRATED PARTS



REPLACEMENT PART KITS MGH

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.

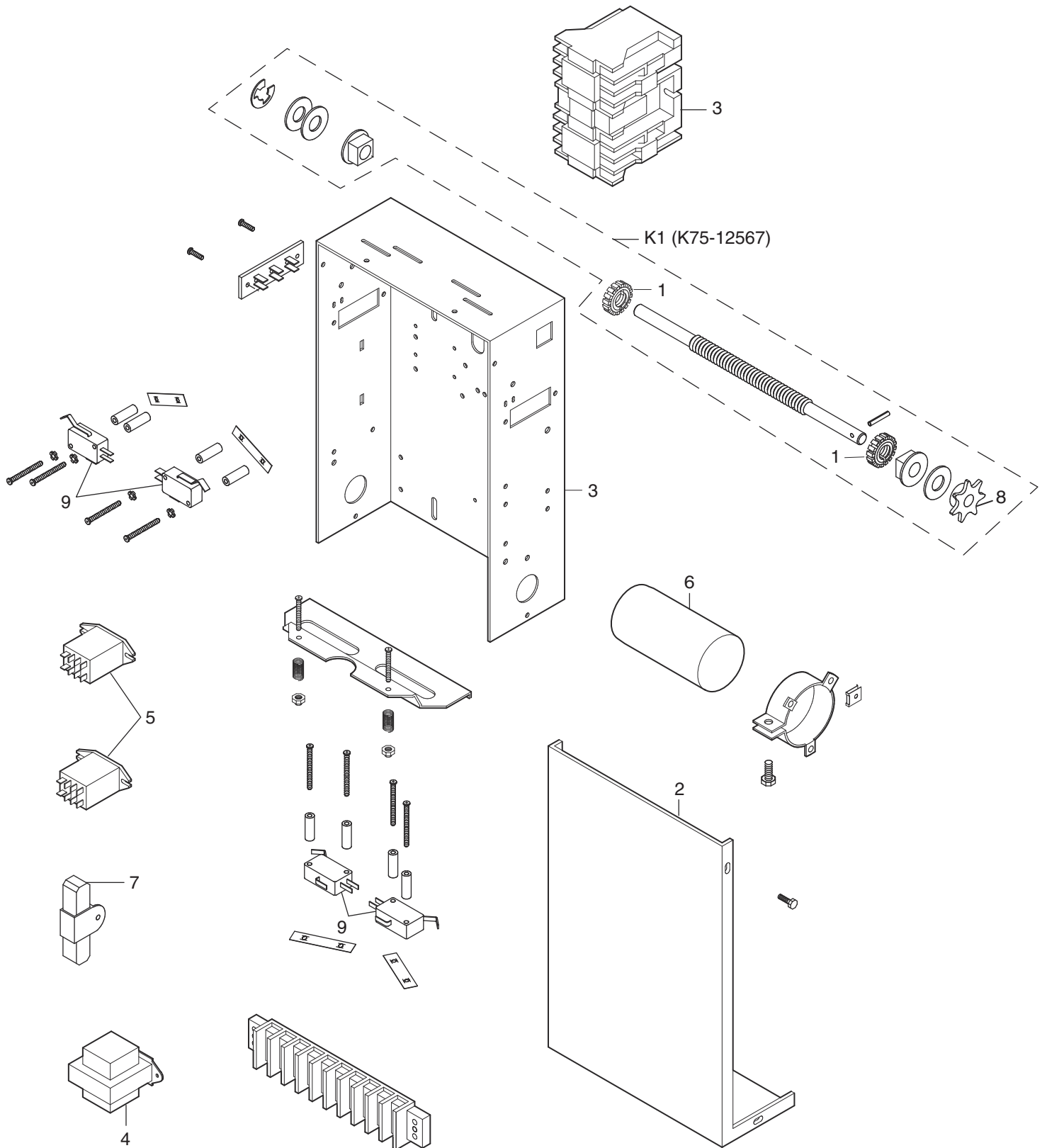
SERVICE KITS

Item	Part #	Description
K1	K75-12783	Disconnect assembly Complete with: Bevel gear yoke, disconnect release lever, retaining plate, disconnect shaft sprocket, compression spring, key, screws, flatwasher, cotter pin, roll pin and e-ring.
K2	K72-12789	Hand chain shaft kit (1/2 thru 2 HP) Complete with: Bevel gear 5/8" ID, bevel gear 3/4" ID, hand chain guide, hand chain shaft, bearing 3/4" ID, nyliner bearing, compression spring, chain wheel, washers, roll pins and e-rings.
K3	K75-12829	Gear housing kit (Includes all parts from K2) Complete with: Housing support bracket, pads and pressure plate, housing with cover, disconnect kit, hand chain shaft and brake kit.

INDIVIDUAL PARTS

Item	Part #	Description
1	K20-1050C-1M-1	1/2 HP Motor
	K20-1075C-1M	3/4 HP Motor
2	32-34291	Gear reducer
3	23-10916	Switch assembly interlock
4	15-41B19LKGFO	Sprocket
5	15-48B19LKGEO	Sprocket
6	75-10884	Chain assembly wheel
7	10-10882	Hand chain guide
8	08-11013	Gear
9	08-11012	Bevel gear
10	K10-34319	Gear housing cover
11	(see page 19)	Complete electrical box

MGJ/MGH ELECTRICAL BOX - ILLUSTRATED PARTS



ELECTRICAL BOX- MODELS MGJ & MGH

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.

SERVICE KITS

ITEM	PART #	DESCRIPTION
K1	K72-12565	Limit shaft assembly Complete with: Limit shaft, limit nuts, plastic flange bearing, limit sprocket, washer, flatwashers, roll pin, and e-ring.
K2	K72-12566	Limit shaft assembly Complete with: Depress plate, depress spring plate, limit switches, spacers, screws, nuts, and locknuts.

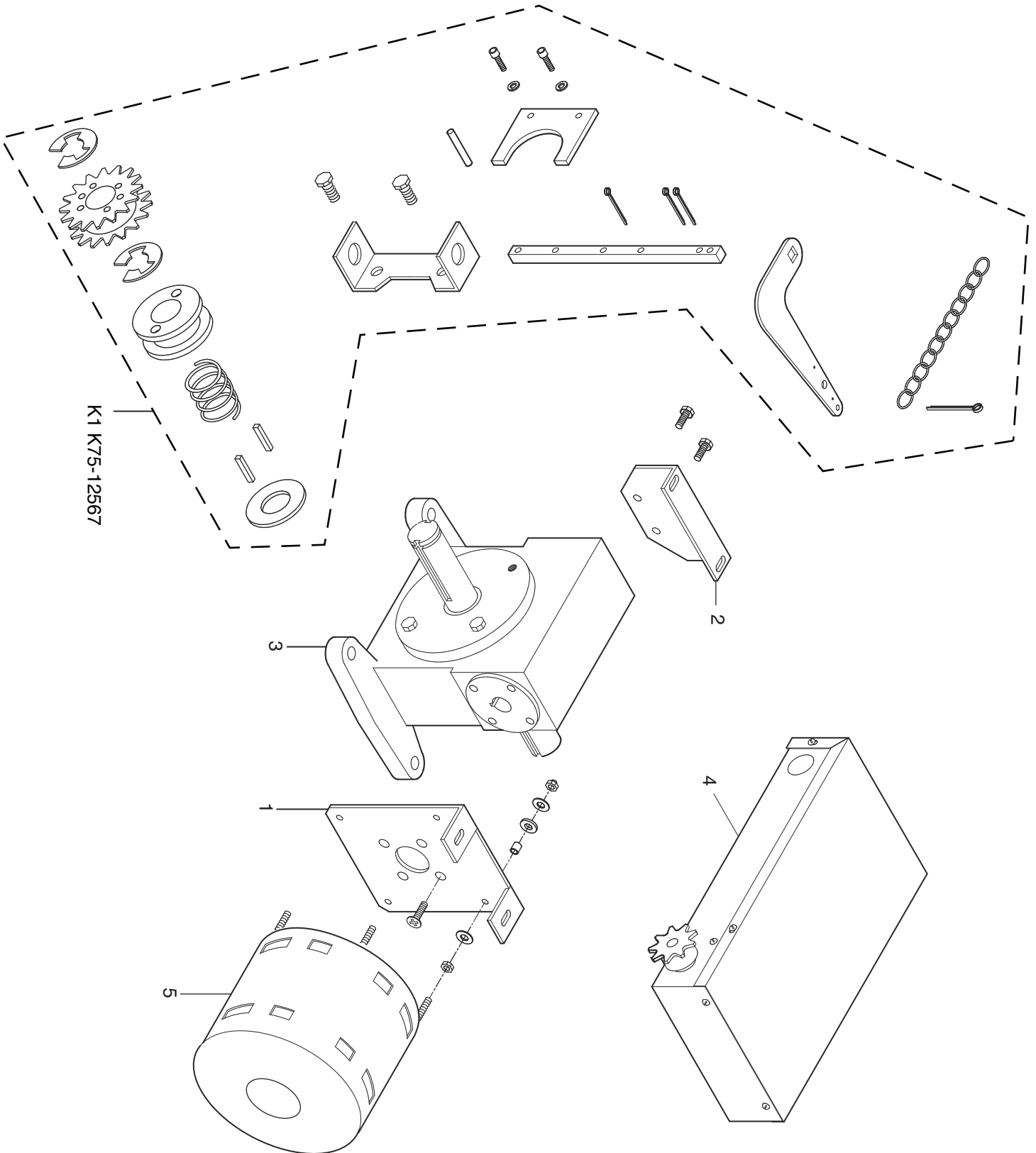
- To order a complete electrical box kit, add a K- prefix to the model number of your operator. For example: T5011L3 (Operator) = K-T5011L3 (Electrical box kit).

INDIVIDUAL PARTS

ITEM	PART #	DESCRIPTION
1	13-10024	Limit nut
2	10-11403	Electrical box cover
3	03-11112	Reversing contactor (See note)
4	21-5115	Transformer, 115V
	21-5230	Transformer, 230V
	21-5460	Transformer, 460V
5	24-24-1	Relay, 24V DPDT
6	29-10338	Capacitor - 1/2 HP 70 MFD with bracket
	30B652	Capacitor - 3/4 HP 89 MFD with screw
7	29-2	Resistor, 200hm
8	15-58B07AXX	Sprocket 48B07
9	23-10041	Limit switch SPDT

NOTE: Reversing Contactor (03-8024-K), used only on three phase operators. Single phase operators use relays.

ILLUSTRATED PARTS - MODEL MGJ



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.

MOTOR KITS

K20-1050C-1M-1	Model MGJ5011
K20-3050C4M	Models MGJ5023, MGJ5038, MGJ5043
K20-5150C6M	Model MGJ5025
K20-1075C-1M	Model MGJ7511

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.

SERVICE KITS

ITEM	PART #	DESCRIPTION
K1	K75-12567	Disconnect assembly kit Complete with: Disconnect hub, bevel gear yoke, disconnect shaft, release lever, disconnect support bracket, sprocket 41B19 x 1.25 bore, compression spring, sash chain (12') disconnect key, screws, lockwashers, cotter pins, roll pins and e-rings.

INDIVIDUAL PARTS

ITEM	PART #	DESCRIPTION
1		Brake mounting plate
2		Front bracket
3	32-11414	Gear reducer, 45:1
4	See Page 19	Electrical Box
5	K20-1050C-1M-1	Motor - model MGJ5011
	K20-3050C4M	Motor - models MGJ5023, MGJ5038, and MGJ5043
	K20-5150C6M	Motor - model MGJ5025
	K20-1075-1M	Motor - model MGJ7511

CONTROL CONNECTION DIAGRAM

IMPORTANT NOTES:

1. The 3-Button Control Station provided must be connected for operation.
2. If a STOP button is not used, a jumper must be placed between terminals 3 and 4.
3. When adding accessories, install them one at a time and test each one after it is added to ensure proper installation and operation with the Commercial Door Operator.
4. Auxiliary control equipment may be any normally open two wire device such as pull switch, single button, loop detector card key or such device.

ATTENTION ELECTRICIAN:
USE 16 GAUGE OR HEAVIER WIRE
FOR ALL CONTROL CIRCUIT WIRING.

