

OWNER'S MANUAL

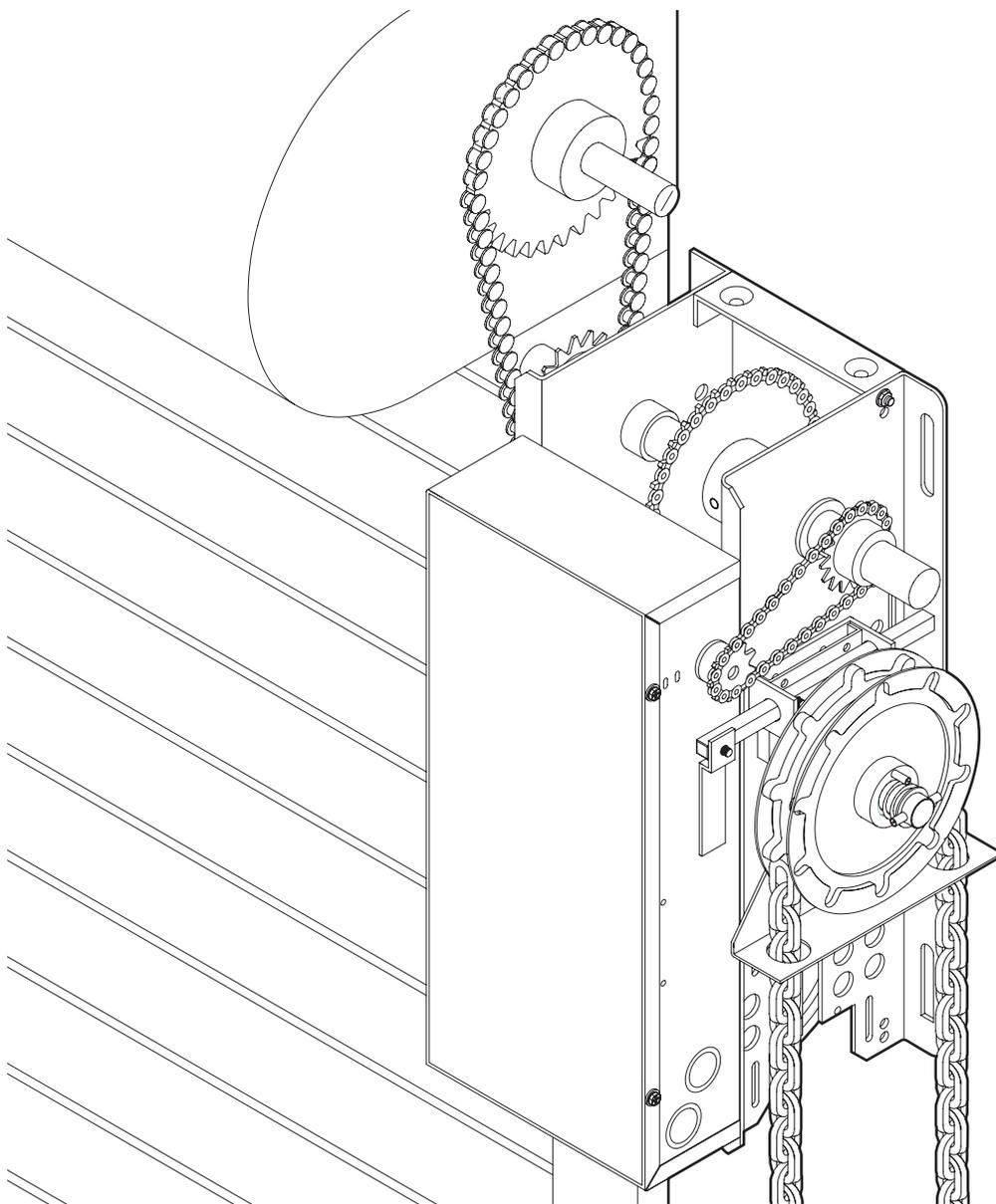
MODELS:

MJ ♦ MH ♦ HMJ
INDUSTRIAL DUTY DOOR OPERATOR

FACTORY SET

C2 Wiring

See page 8 for
other wiring
configurations



2 YEAR WARRANTY

Serial # _____
(located on electrical box cover)

Installation Date _____

Wiring Type _____

NOT FOR RESIDENTIAL USE

41B6



SPECIFICATIONS

MOTOR

TYPE:Intermittent duty

HORSEPOWER:1/2 HP

SPEED:.....1000 RPM

VOLTAGE:.....115V 1 Phase 60Hz,
230V 1 Phase 50Hz

CURRENT:.....See motor nameplate

ELECTRICAL

TRANSFORMER:.....24Vac

CONTROL STATION:.....NEMA 1 3-button station.
OPEN/CLOSE/STOP

WIRING TYPE:.....C2 (Standard)
Momentary contact to OPEN & STOP, constant pressure to CLOSE, open override plus wiring for sensing device to reverse. See pages 13 and 14 for optional control settings and operating modes.

LIMIT ADJUST:Linear driven, fully adjustable screw type cams. Adjustable to 24 feet.

MECHANICAL

DRIVE REDUCTION:.....Primary: Heavy duty (4L) V-Belt. Secondary: #48 chain/sprocket. Output: #48 chain

OUTPUT SHAFT SPEED:.....80 RPM

DOOR SPEED:.....approx. 9" per sec. depending on door

BRAKE (Optional):Solenoid actuated disc brake

BEARINGS:IronCopper sintered and oil impregnated.

HAND CHAIN WHEEL:Left or right handing
Models MH and HMJ only.

SAFETY

DISCONNECT :

Model MJ: Floor level disconnect for emergency manual door operation.

Model MH: Floor level chain hoist with electrical interlock for emergency manual door operation.

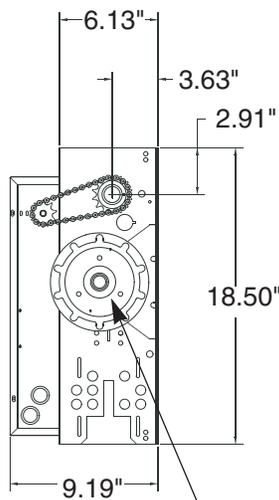
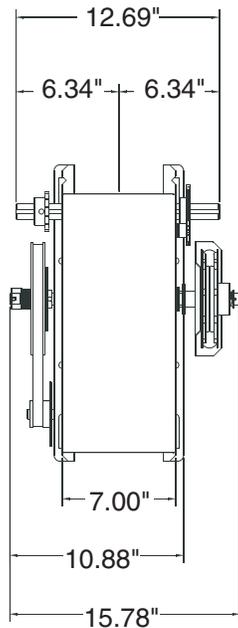
Model HMJ: Includes both floor level disconnect systems described above.

REVERSING EDGE:.....(Optional) Electric or pneumatic sensing device attached to the bottom edge of door.

A REVERSING EDGE IS STRONGLY RECOMMENDED FOR ALL COMMERCIAL OPERATOR INSTALLATIONS. REQUIRED WHEN THE 3 BUTTON CONTROL STATION IS OUT OF SIGHT OF DOOR OR ANY OTHER CONTROL (AUTOMATIC OR MANUAL) IS USED.

WEIGHTS AND DIMENSIONS

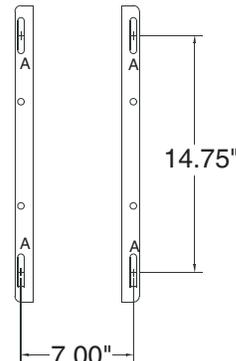
HANGING WEIGHT:80-110 LBS.



Hand Chain Wheel present with Model MH only.

MOUNTING DIMENSIONS

A - Wall Mounting
B - Bracket Mounting (rolling door)



IMPORTANT SAFETY NOTES

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.

PREPARATION

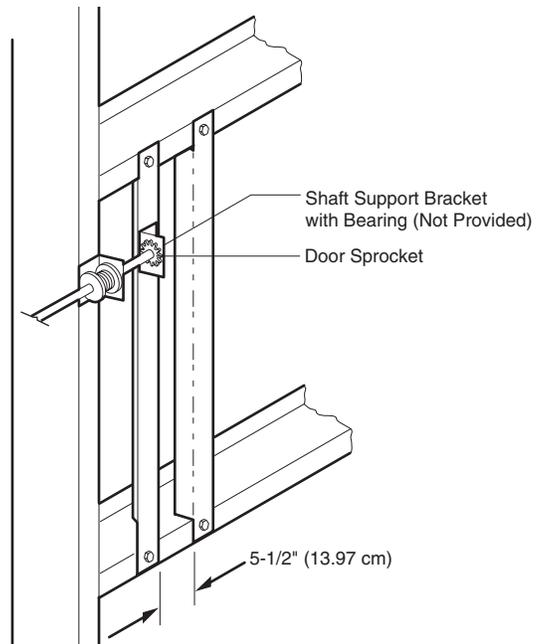
It is imperative that the wall or mounting surface provide adequate support for the operator.

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.

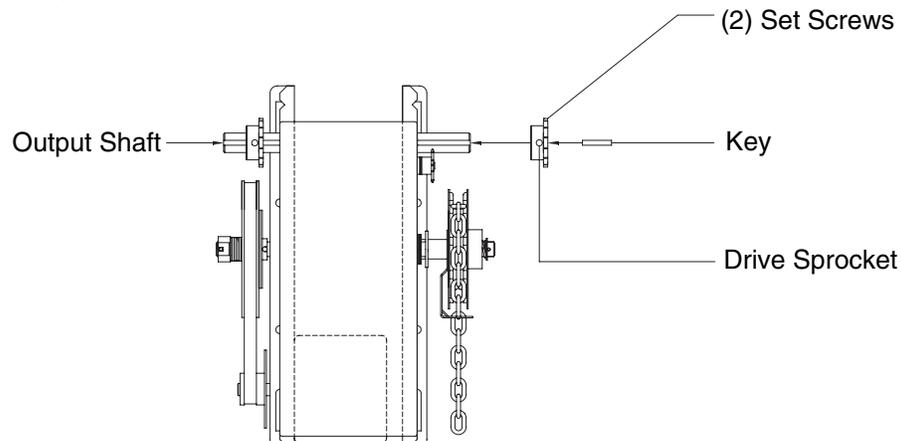
For metal buildings, fasten 2" x 2" x 3/16" (or larger) angle iron frames to the building purlins. Retain 5-1/2" between frames (Figure 1).



All MJ, MH, and HMJ series operators have dual output shafts and may be mounted on either the right (standard) or left side of door, and in either a vertical (standard) or horizontal mounting position. If you need to move the drive sprocket, loosen BOTH set screws, remove the sprocket and key, and place on the opposite side of the drive shaft. Be sure to tighten BOTH set screws securely.

Hand Chain Handing

For MH and HMJ models with manual hoist hand chain systems, the handing of the operator must be determined at the time of order. The handing is indicated by last letter of the model name (R or L). **The hand chain wheel can not be switched on site.** If your installation causes the hand chain to hang in the door opening, hook the chain off to the side near the top of the door jamb.



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 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" (Figure 3).

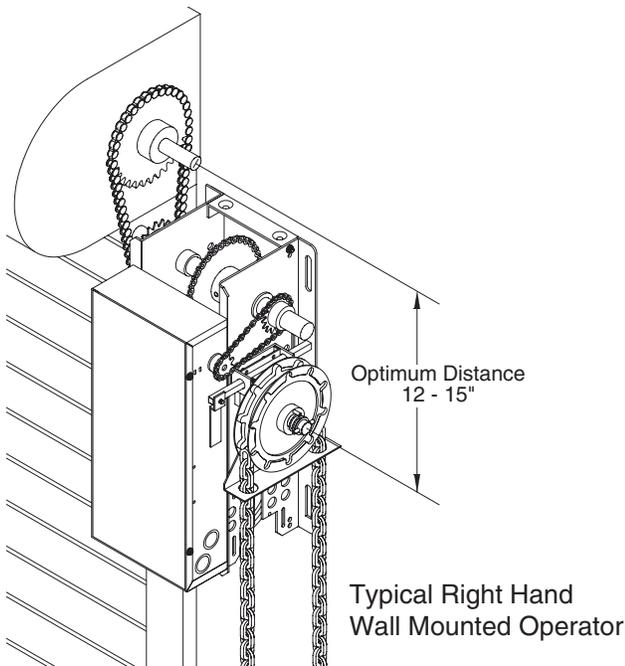
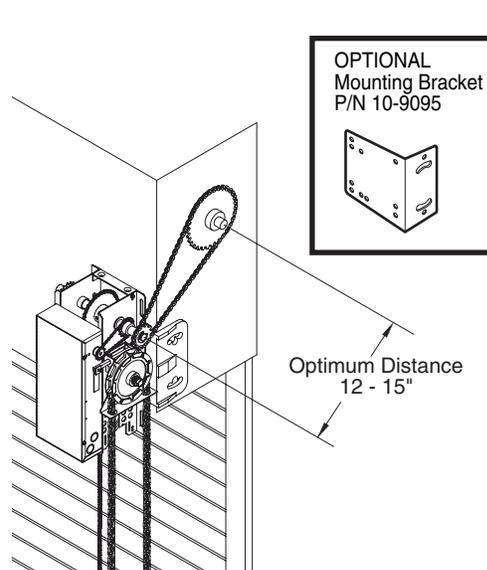


FIGURE 3

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" (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 4

- 1c. Place door sprocket on the door shaft. Do not insert the key at this time.
2. Place drive sprocket on the appropriate side of the operator. Do not insert the key at this time.
3. Wrap drive chain around door sprocket and join roller chain ends together with master link.
4. Raise operator to approximate mounting position and position chain over operator sprocket.
5. 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.
6. Align sprockets and secure (Figure 5).

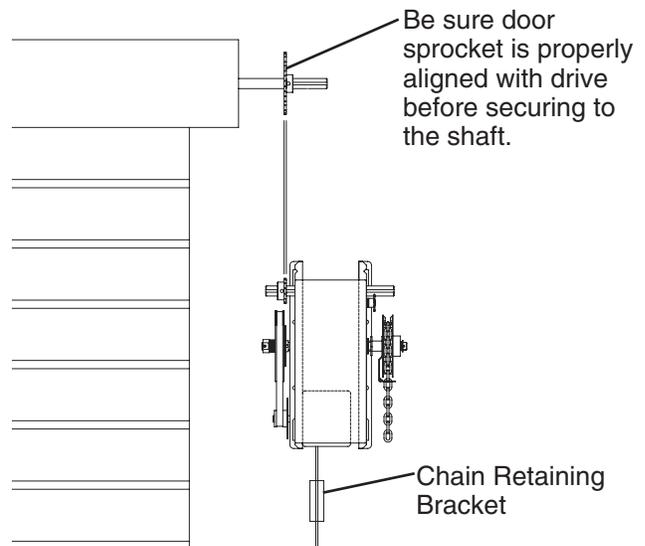


FIGURE 5

- 7. Install Hand Chain (Models MH and HMJ 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 two feet above the floor

- 8. 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 the chain keeper. Remove excess links if necessary.

MANUAL OPERATION

This operator has provisions for manually operating the door in case of emergency or power failure. Refer to the appropriate instructions below for your model operator.

Model MH

These operators are equipped with a manual hoist. An electrical interlock will disable the electrical controls when the hoist is used. To operate the hoist:

1. Pull the disconnect chain (small chain) to engage the hoist mechanism. 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.

Model MJ

This operator has a floor level disconnect chain to disconnect the door from the door operator.

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.

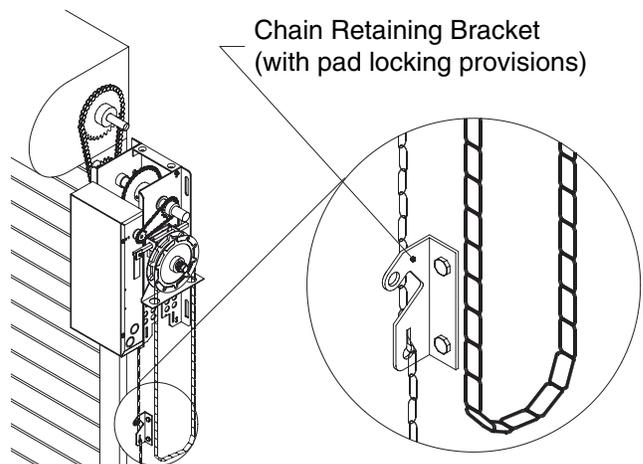
Model HMJ

This operator includes both a floor level disconnect chain to disconnect the door from the door operator and a disconnect chain with manual hoist to electrically disable the operator controls.

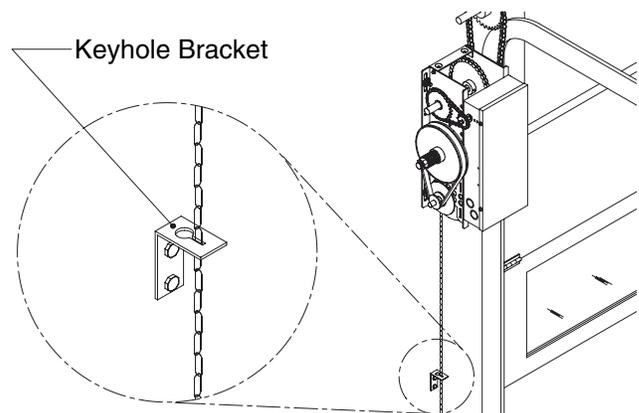
1. Refer to Model MH instructions above for hoist operation.
2. Refer to Model MJ instructions above for manual operation.

⚠ WARNING

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



Electrical Interlock with Hoist for Models MH and HMJ



Manual Disconnect for Models MJ and HMJ

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:

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

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.

WIRING:

For wiring of your sensing device to the operator, refer to the wiring diagram supplied with your operator. See field connection terminals identified as Sensing Device or Safety Edge.

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

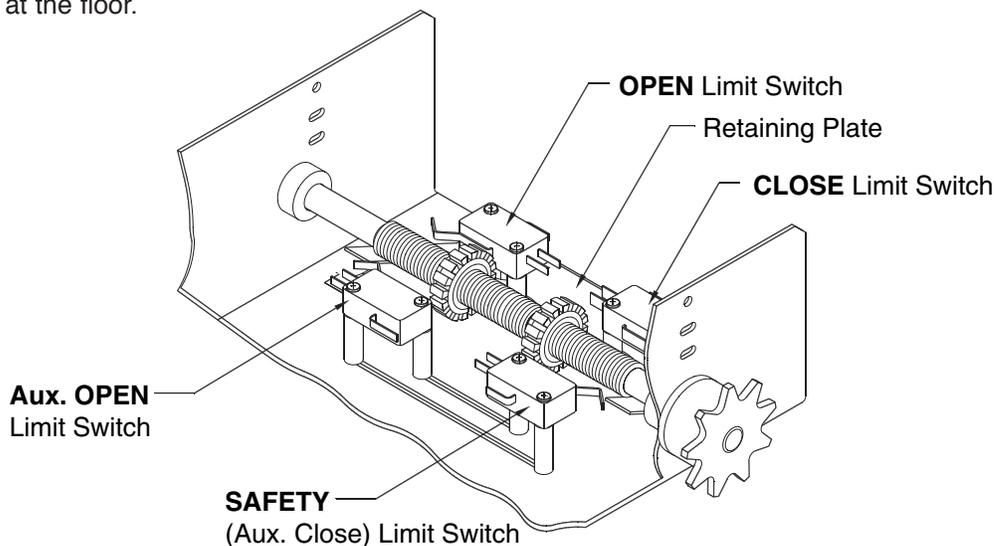
NOTE: Make sure the limit nuts are positioned between the limit switch actuators before proceeding with adjustments.

- 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.
- To **increase** door travel, spin nut **away** from actuator. To **decrease** door travel, spin limit nut **toward** actuator.
- Adjust open limit nut so that door will stop in open position with the bottom of the door even with top of door opening.
- 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.

If other problems persist, call our toll-free number for assistance - 1-800-528-2806.



POWER 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.
- To avoid damage to door and operator, make **ALL** door locks inoperative. Secure locks(s) in "OPEN" position. If the door lock needs to remain functional, install an interlock switch.

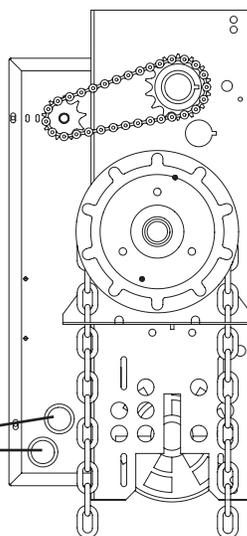
POWER WIRING CONNECTIONS

1. Remove the cover from the electrical enclosure. Inside this enclosure you will find the wiring diagram(s) for your unit. Refer to the diagram (glued on the inside of the cover) for all connections described below. If this diagram is missing, call the number on the back of this manual. **DO NOT INSTALL ANY WIRING OR ATTEMPT TO RUN THIS OPERATOR WITHOUT CONSULTING THE WIRING DIAGRAM.**
2. Be sure that the power supply is of the correct voltage, phase, frequency, and amperage to supply the operator. Refer to the operator nameplate on the cover.
3. Using the 1-1/16" dia conduit access hole as shown below, bring supply lines to the operator and connect wires to the terminals indicated on the **WIRING CONNECTIONS DIAGRAM.**
4. Important **NOTE:** Connect earth ground to the chassis ground screw in the electrical box enclosure. Do not turn power on until you have finished making all power and control wiring connections and have completed the limit switch adjustment procedure.

ON THREE PHASE MACHINES ONLY!

Incorrect phasing of the power supply will cause the motor to rotate in the wrong direction (open when CLOSE button is pressed and vice-versa). To change motor rotation, exchange incoming power leads L1 and L2.

Three (3) 7/8" & 1-1/6" DIA. Knockouts for Power & Control Wiring access (Near & Opposite side)



CONDUIT ACCESS

CONTROL WIRING

DETERMINE WIRING TYPE

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

Standard C2 or B2 Wiring

Standard 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 settings to the right.

Constant pressure on close (C2 wiring)

In the electrical enclosure, a RED wire was placed on terminal block #12. With this setting, the operator will require constant pressure on close control in order to keep door moving in the close direction.

⚠ WARNING

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

Momentary contact on close (B2 wiring)

Move RED wire from terminal block #12 to terminal #2. 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.

SPECIAL CONTROL WIRING DATA	WIRING TYPE
This Operator has Control Wiring. <input type="checkbox"/>	Wiring Type
SUPPLEMENTAL WIRING DIAGRAM(S) _____ _____	
REPLACEMENT WIRING DIAGRAM _____ _____	
<small>Note: Supplemental Wiring Diagrams are to be used in addition to 1753 or 1754. Replacement Wiring Diagram is to be used in place of 1753 or 1754.</small>	

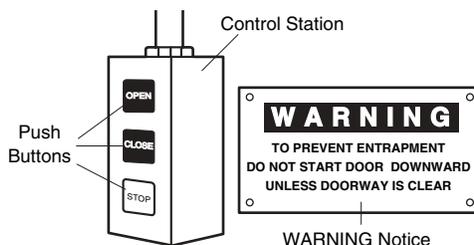
Wiring Diagram label on inside cover of electrical box

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.

MOUNT WARNING NOTICE

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



CONTROL WIRING (cont'd)

⚠ WARNING

Install the control station and receiver where the door is visible, but away from the door and its hardware. When a receiver is used to activate a commercial door opener, 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.

Radio Controls

On all models with type C2 control wiring, a terminal bracket marked R1 R2 R3 is located on the outside of the electrical enclosure. All standard radio receivers (single channel residential type) may be mounted to this bracket. The operator will then open a fully closed door, close a fully open door, and reverse a closing door from the radio transmitter. However, for complete door control from a remote, a commercial three-channel radio receiver (with connections for OPEN/CLOSE/STOP) is recommended.

Additional Access Control Equipment

Locate any additional access control equipment as desired (but so that the door will be in clear sight of the person operating the equipment), and connect to the terminal block in the electrical enclosure as shown on the **FIELD WIRING CONNECTIONS** diagram. Any control with a normally (N.O.) isolated output contact may be connected in parallel with the OPEN button. More than one device may be connected in this manner. Use 16 gauge wire or larger for all controls. **DO NOT USE THE CONTROL CIRCUIT TRANSFORMER (24VAC) IN THE OPERATOR TO POWER ANY ACCESS CONTROL EQUIPMENT OTHER THAN A STANDARD RESIDENTIAL TYPE RADIO RECEIVER.**

External Interlock Switch

The operator has a terminal connection for an external interlock switch. This switch must be a normally closed (N.C.) two-wire device with a contact rating of at least 3 amps @ 24VAC. When such a switch is connected as shown on the **FIELD WIRING CONNECTIONS** diagram, the control circuit will be disabled when the switch is actuated, thereby preventing electrical operation of the door from the control devices.

⚠ WARNING

To prevent possible **SERIOUS INJURY** or **DEATH** from a moving gate or garage door:

- **ALWAYS** keep remote controls out of reach of children. **NEVER** permit children to operate, or play with remote controls.
- Activate gate or door **ONLY** when it can be seen clearly, is properly adjusted, and there are no obstructions to door travel.
- **ALWAYS** keep gate or garage door in sight until completely closed. **NEVER** permit anyone to cross path of moving gate or door.

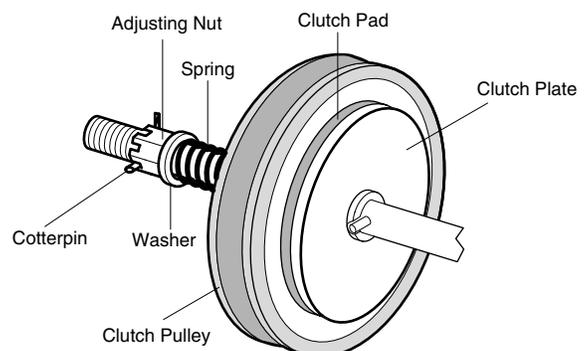
CLUTCH ADJUSTMENT

1. Remove cotterpin from nut on the clutch shaft.
2. Back off clutch nut until there is very little tension on the clutch spring.
3. Tighten clutch nut gradually until there is just enough tension to permit the operator to move the door smoothly but to allow the clutch to slip if the door is obstructed. When the clutch is properly adjusted, it should generally be possible to stop the door by hand during travel.
4. Reinstall cotterpin.

NOTE: The adjustable friction clutch is NOT an automatic reversing device. An electric or pneumatic reversing edge can be added to bottom edge of door if desired.

⚠ WARNING

To prevent possible **SERIOUS INJURY** or **DEATH**, install reversing sensors when the 3-button control station is out of sight of the door or any other control (automatic or manual) is used. Reversing devices are recommended for **ALL** installations.



TEST THE SYSTEM

Turn on power. Test all controls and safety devices to make sure they are working properly. It will be necessary to refer back to page 6 for fine adjustment of the limit switches.

IMPORTANT NOTES:

- Do not leave operator power on unless all safety and entrapment protection devices have been tested and are working properly.
- Be sure you have read and understand all Safety Instructions included in this manual.
- Be sure the owner or person(s) responsible for operation of the door have read and understand the Safety Instructions, know how to electrically operate the door in a safe manner, and know how to use the manual disconnect operation of the door operating system.

WARNING

To reduce the risk of SEVERE INJURY or DEATH:

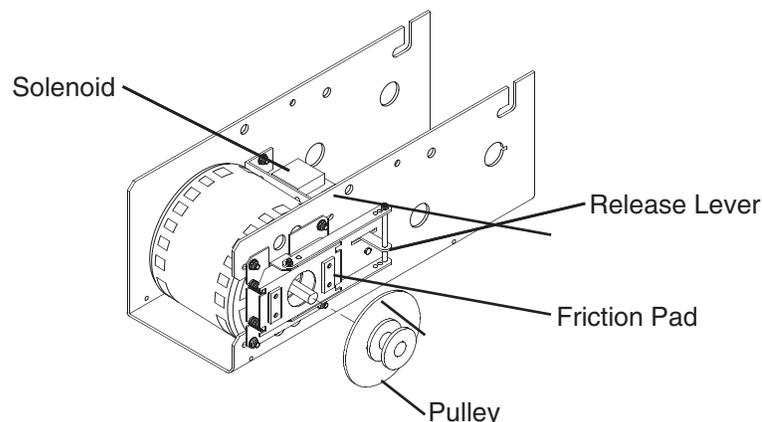
- ANY maintenance to the operator or in the area near the operator **MUST NOT** be performed until disconnecting the electrical power and locking-out the power via the operator power switch. Upon completion of maintenance the area **MUST** be cleared and secured, at that time the unit may be returned 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.

ADJUSTMENT

A solenoid brake is an optional modification. If present, the brake is adjusted at the factory and should not need additional adjustment for the the life of the friction pad. If desired, a brake can also be field installed. To order a kit for field installation on an existing operator, call the parts and service department at 1-800-528-2806.

Replace friction pads when necessary. Refer to the illustration for identification of components for the solenoid type brake system.

Solenoid Brake System



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	●		✓
Clutch	Check & adjust as required		●	✓
Belt	Check condition & tension		●	✓
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.

■ Do not lubricate clutch or V-belt.

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

WARNING

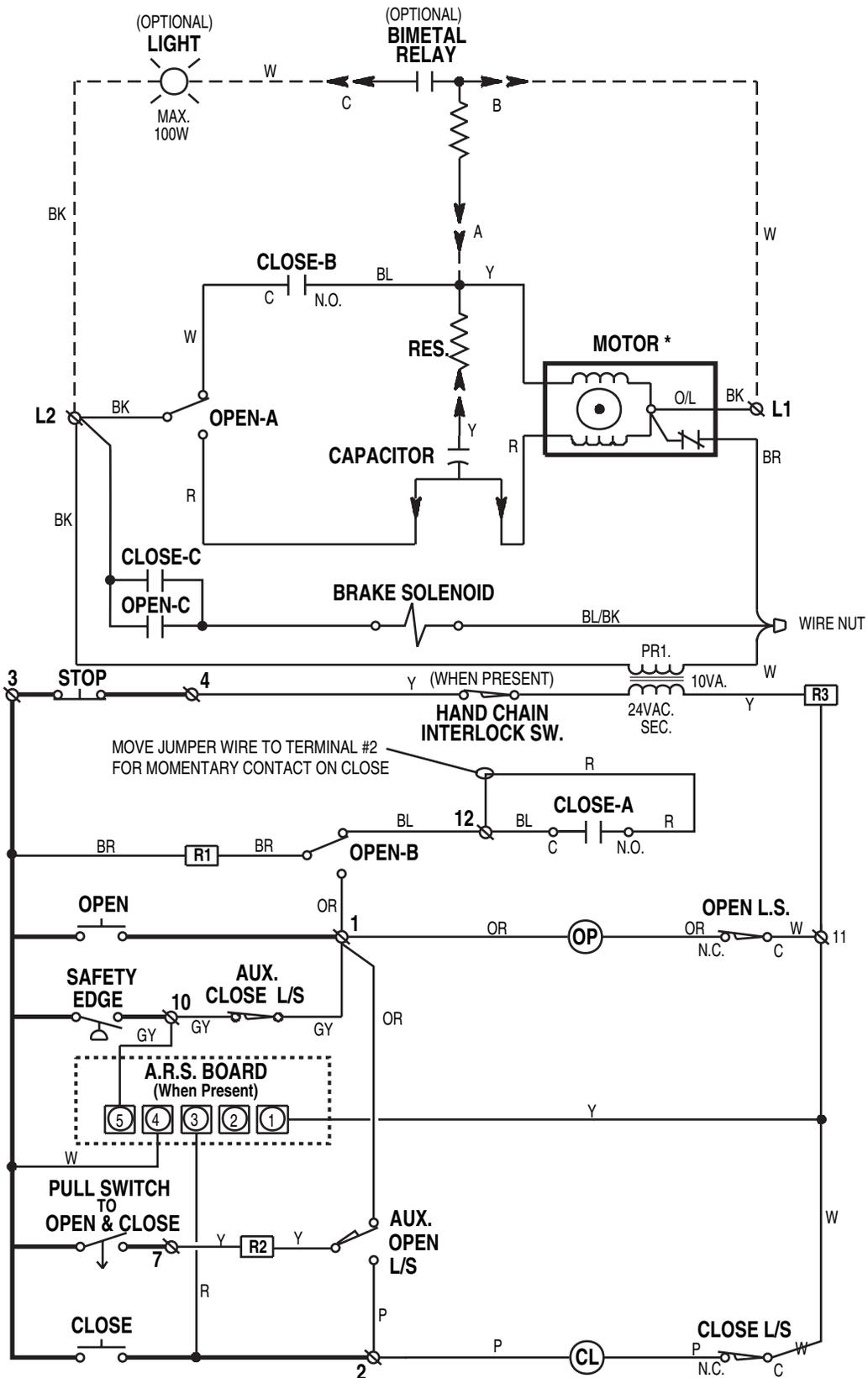
To avoid SERIOUS PERSONAL INJURY or DEATH from electrocution, disconnect ALL electric power BEFORE performing ANY maintenance.

HOW TO ORDER REPAIR PARTS

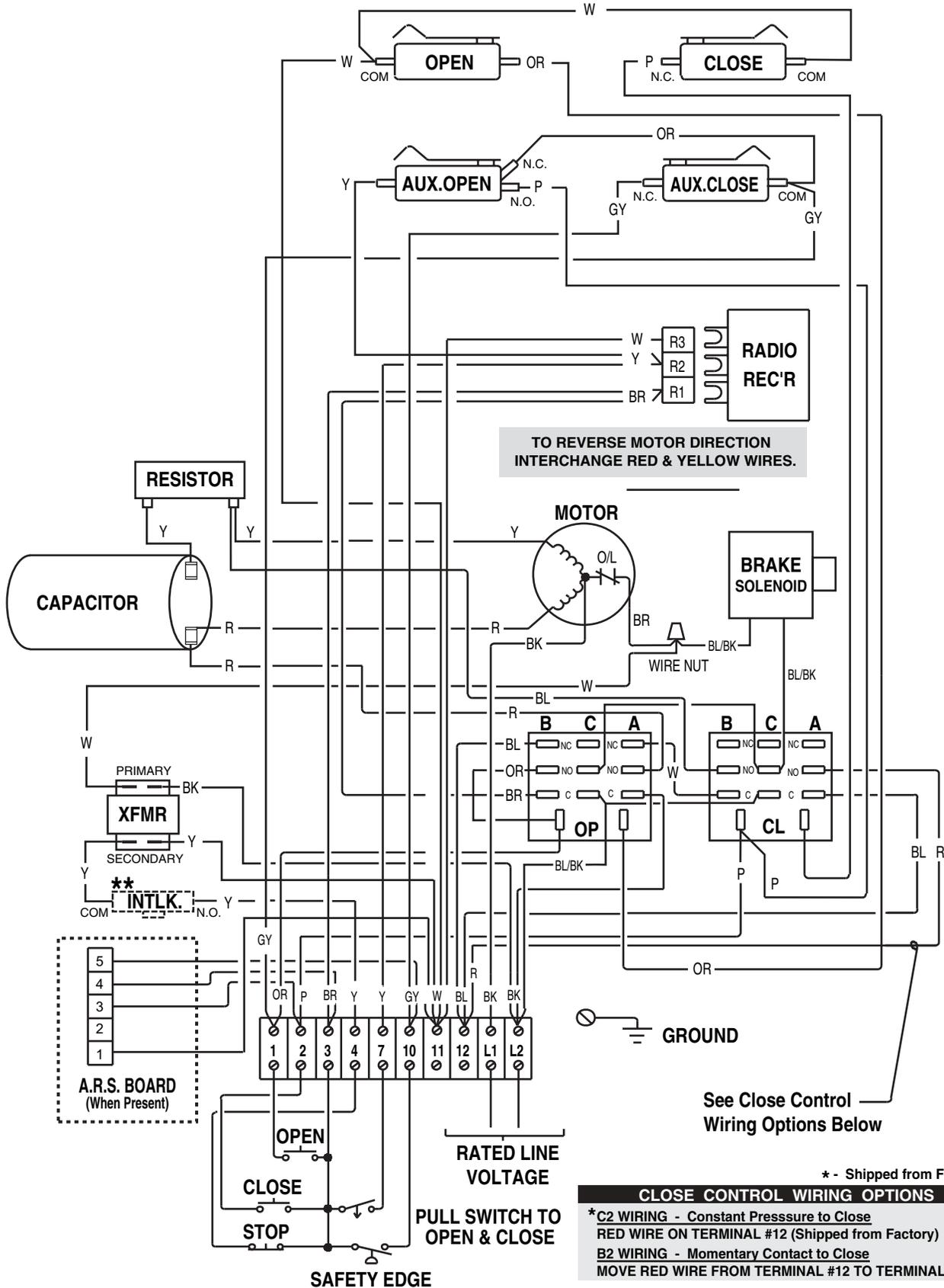
OUR LARGE SERVICE ORGANIZATION SPANS AMERICA
Installation and service information is available
CALL OUR TOLL FREE number:
1-800-528-2806

**WHEN ORDERING REPAIR PARTS
PLEASE SUPPLY THE FOLLOWING INFORMATION:
PART NUMBER DESCRIPTION MODEL NUMBER**

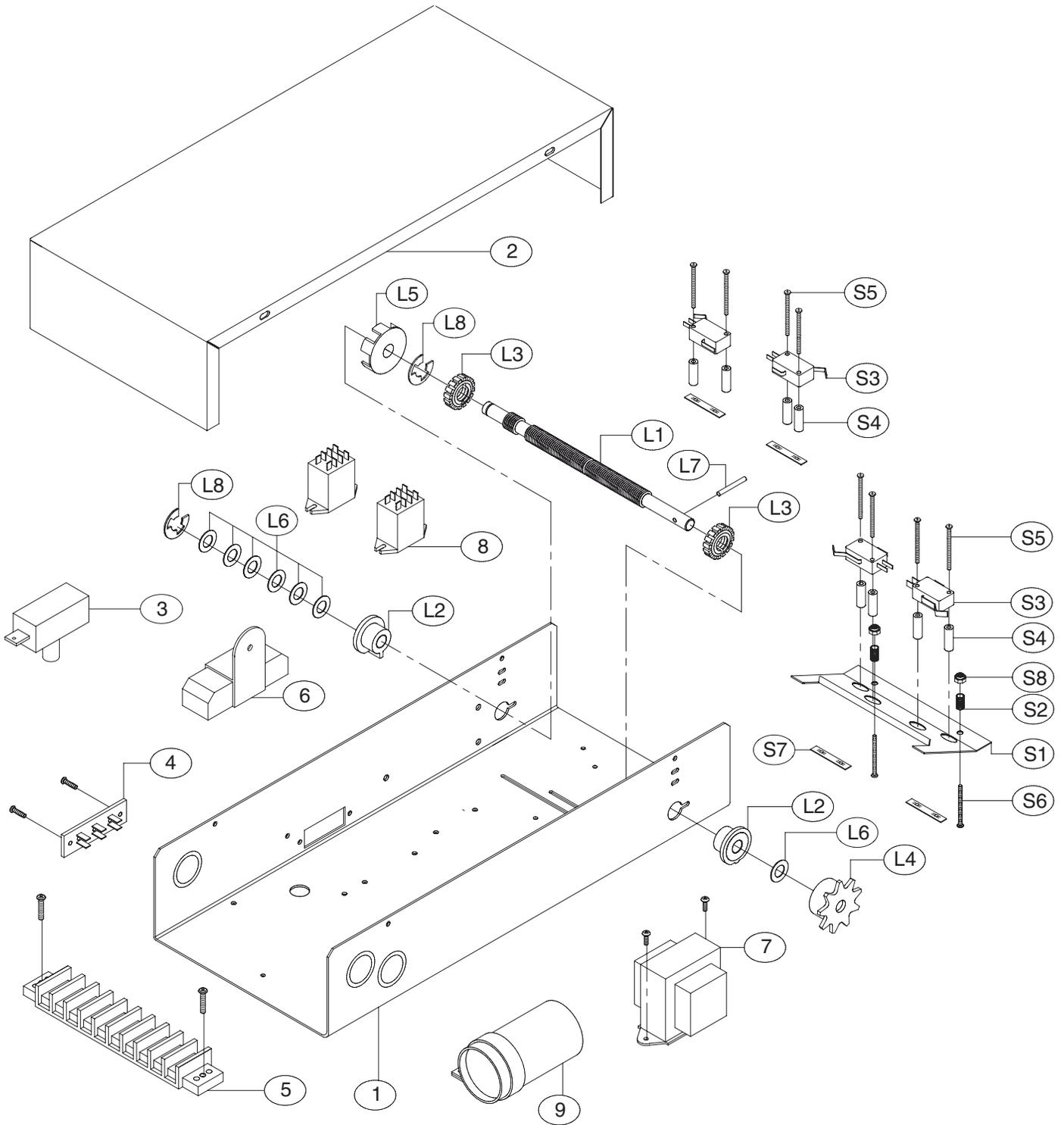
ADDRESS ORDER TO:
THE CHAMBERLAIN GROUP, INC.
Technical Support Center
6020 S. Country Club
Tucson, AZ 85706



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



ELECTRICAL BOX - ILLUSTRATED PARTS



REPLACEMENT PART KITS

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 11 for all repair part ordering information.

Complete Electrical Box Service Kits

K-MJ5011	Model MJ5011, 115V
K-MJ5025	Model MJ5025, 230V
K-MH5011R	Model MH5011R, 115V RH
K-MH5011L	Model MH5011L, 115V LH
K-MH5025R	Model MH5025R, 230V RH
K-MH5025L	Model MH5025L, 230V LH
K-HMJ5011R	Model HMJ5011R, 115V RH
K-HMJ5011L	Model HMJ5011L, 115V LH
K-HMJ5025R	Model HMJ5025R, 230V RH
K-HMJ5025L	Model HMJ5025L, 230V LH

* COMPLETE ELECTRICAL BOX KITS			
1	10-10315	MT Electrical Box	1
2	10-10316	MT Electrical Box Cover	1
3	23-10916	SPDT Interlock Switch	1
4	42-10040	Terminal Assembly 3 Lug	1
5	42-110	10 Position Terminal Block	1
6	29-2	Resistor, 2ohm	1
7	(See Var. Comp.)	Transformer	1
8	(See Var. Comp.)	Relay, 24V	2
9	(See Var. Comp.)	Motor Capacitor	1

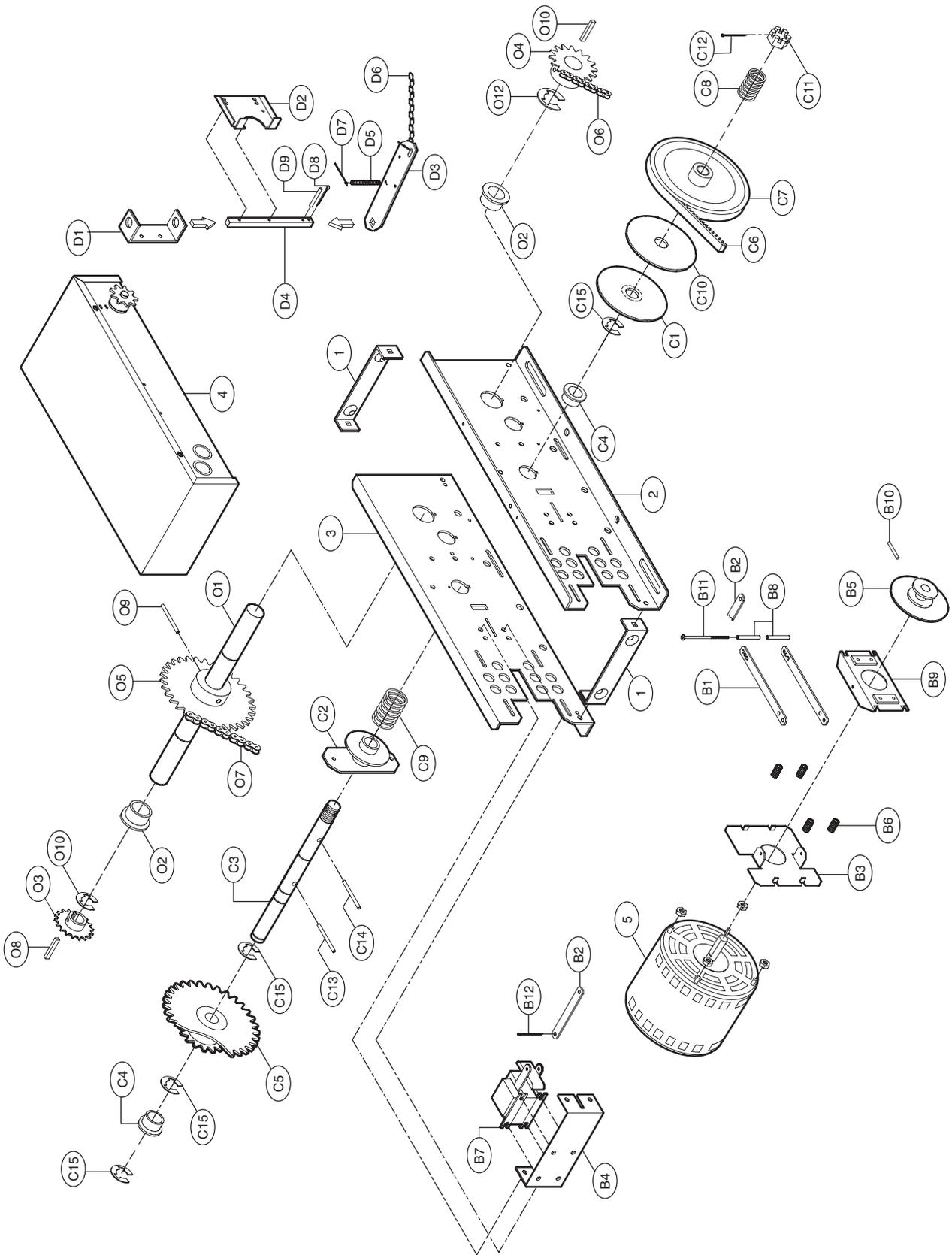
* Electrical Box Kits include parts from K72-12487 and K75-12493

K75-12493 LIMIT SWITCH ASSEMBLY KIT			
Item	P/N	Description	Qty
S1	10-10318	Depress Plate	1
S2	18-10036	Spring, Depress Plate	2
S3	23-10041	Limit Switch	4
S4	31-10043	Standoff, Limit Switch	8
S5	82-PX0419	Screw, #4-40 x 1-3/8" Pan Hd Phil	8
S6	82-PX0616	Screw, #6-32 x 1" Pan Hd Phil	2
S7	84-DT-04	Nut, Double Tinnerman	4
S8	84-LN-06	Locknut, #6-32 Nylon Hex	2

K72-12487 LIMIT SHAFT ASSEMBLY KIT			
Item	P/N	Description	Qty
L1	11-10321	MT Limit Shaft	1
L2	12-10028	Flange Bearing 3/8" I.D.	2
L3	13-10024	Limit Nut	2
L4	15-48B9A1	Sprocket 48B9 x 3/8" Powder Metal	1
L5	29-10344	RPM Rotating Cup	1
L6	80-10026	Washer, Shim 3/8" I.D. x .010 THK.	7
L7	86-RP04-100	Rollpin 1/8 x 1" Long	1
L8	87-E-075	E Ring, 3/8"	2

VARIABLE COMPONENT KITS											
PART NUMBER	DESCRIPTION	MJ5011	MJ5025	MH5011R	MH5011L	MH5025R	MH5025L	HMJ5011R	HMJ5011L	HMJ5025R	HMJ5025L
		K13-10024	Limit Nut, (set of 2)	●	●	●	●	●	●	●	●
K23-10041	Limit Switch	●	●	●	●	●	●	●	●	●	●
K29-2	Resistor, 2 Ohm	●	●	●	●	●	●	●	●	●	●
K21-10340	Transformer, 115V	●		●	●			●	●		
K21-5230	Transformer, 230V		●			●	●			●	●
K29-10338	Capacitor, 70MFD	●		●	●			●	●		
K29-12110	Capacitor, 20MFD		●			●	●			●	●
K24-24-6	Relay, 3PDT	●	●	●	●	●	●	●	●	●	●

ILLUSTRATED PARTS – Model MJ



REPAIR PARTS LIST – MODEL MJ

INDIVIDUAL PARTS

ITEM	PART#	DESCRIPTION
1	10-10030	Frame Spacer
2	10-10713	Frame, Right Side
3	10-10714	Frame, Left Side
4	K-HMJ5011R	Electrical Box - HMJ5011R, 115V RH
	K-HMJ5011L	Electrical Box - HMJ5011L, 115V LH
	K-HMJ5011R	Electrical Box - HMJ5025R, 230V RH
	K-HMJ5011R	Electrical Box - HMJ5025L, 230V LH
5	K20-5150LD	Motor - Model HMJ5011
	K20-5250LD	Motor - Model HMJ5025

K75-12587 · MJ DISCONNECT SERVICE KIT

ITEM	PART#	DESCRIPTION
J1	10-10707	Disconnect Support Bracket
J2	10-10708	Yoke
J3	10-10709	Disconnect Lever
J4	11-10710	Disconnect Shaft
J5	18-10178	Tension Spring
J6	19-8A-12	Sash Chain, 12'
J7	86-CP04-112	Cotter Pin 1/8x1-3/4" ZP
J8	86-CP05-108	Cotter Pin 5/32x1-1/2"
J9	86-RP04-100	Roll Pin 1/8x1"

K72-12591 · CLUTCH SHAFT KIT

ITEM	PART#	DESCRIPTION
C1	10-10166	Clutch Plate
C2	10-10712	Disconnect Plate
C3	10-10882	Chain Guide
C4	10-10985	Release Holder
C5	11-10706	Clutch Shaft
C6	12-10029	Bearing 3/4" O.D.
C7	12-10882	Bushing .753 I.D.x.625
C8	12-10883	Nyliner Bearing
C9	15-10717	Sprocket Assembly 48B10/41A24
C10	16-4L290	Cogged Belt 4L290
C11	17-10336	4L Pulley 7" O.D.
C12	18-10164	Clutch Spring
C13	18-10711	Disconnect Spring
C14		Hoist Spring
C15	39-10167	Clutch Disc
C16	75-10884	Chain Wheel Assembly
C17	84-SH-76	Nut, 3/4 - 16
C18	86-CP05-108	Cotter Pin, 5/32"x1-1/2"
C19	86-RP08-102	Roll Pin, 1/4"x1-1/8"
C20	86-RP08-200	Roll Pin, 1/4"x2"
C21	158A53	E-Ring, 3/4" Plated

K75-12588 · MH DISCONNECT SERVICE KIT

ITEM	PART#	DESCRIPTION
H1	10-10707	Disconnect Support Bracket
H2	10-10708	Yoke
H3	10-10875	Disconnect Lever
H4	10-10988	Interlock Switch Actuator
H5	11-10982	Disconnect Shaft
H6	19-8A-12	Sash Chain, 12'

BRAKE ASSEMBLY KITS

ITEM	PART#	DESCRIPTION
B1	10-10354	Brake Release Arm
B2	10-10355	Solenoid Link
B3	10-10356	Brake Mounting Plate
B4	10-10357	Solenoid Bracket
B5	17-10363	Pulley & Disc Assembly
B6	18-10362	Compression Spring
B7	22-120	115V Brake Solenoid
	22-240	230V Brake Solenoid
B8		Spacer .20 I.D.x.260 ODx1
B9	75-10359	Brake Plate Pad Assembly
B10	82-NH25-03	Knurled Cup 1/4-20x3/16 SS
B11	82-PX10-28	10-32x3" SLTD Pan Head ZP
B12	86-CP05-108	Cotter Pin 5/32"x1-1/2"

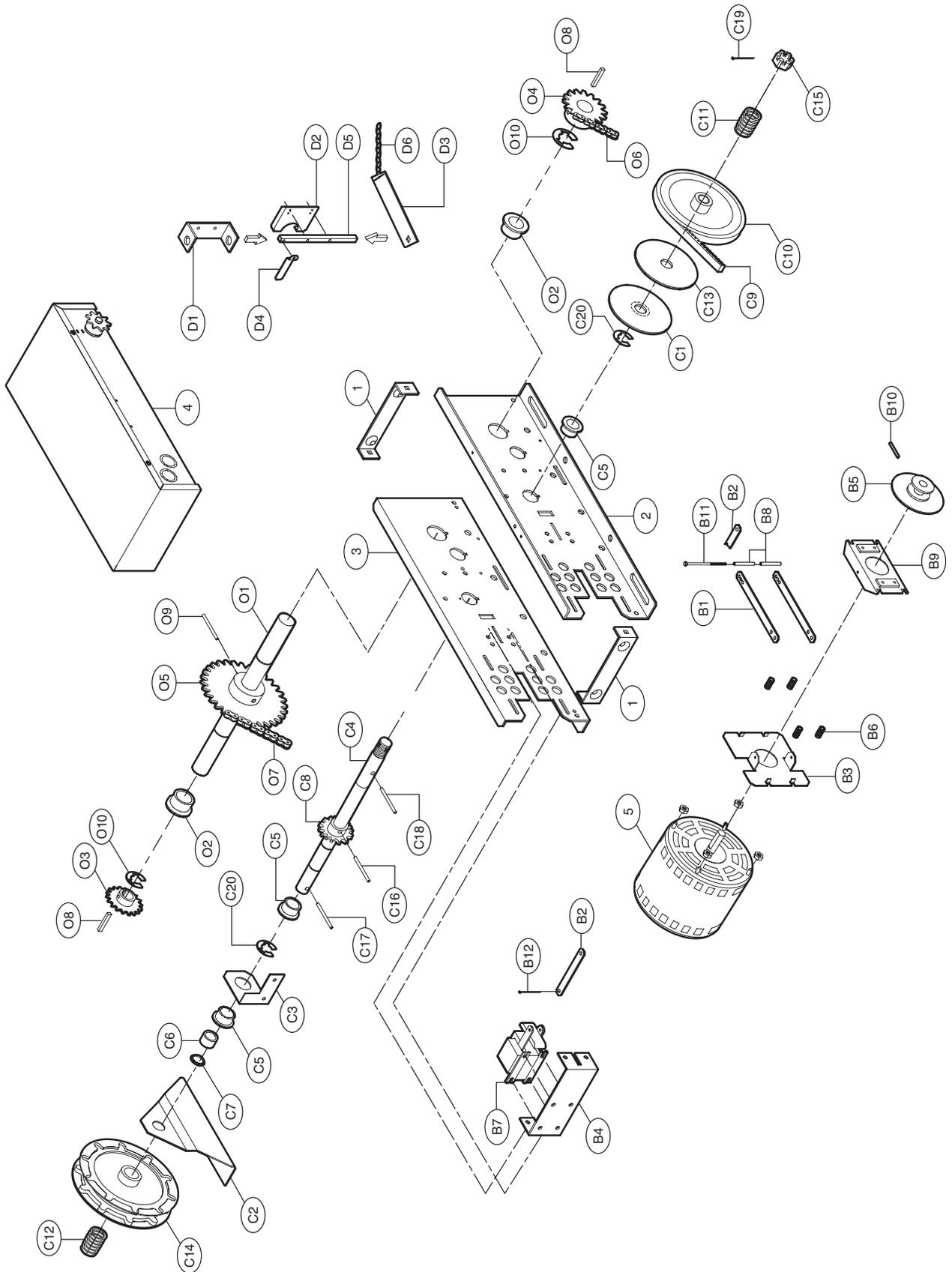
Brake Kits

K75-12492	For 115 Volt Operators
K75-12494	For 230 Volt Operators

K72-12592 · OUTPUT SHAFT KIT

ITEM	PART#	DESCRIPTION
O1	11-10705	Output Shaft
O2	12-10715	Flange Bearing 1" OD
O3	15-41B14LGH	Sprocket, #41B14x1" Bore
O4	15-48B18LGE	Sprocket, #48B18x1" Bore
O5	15-48B32LXX	Sprocket, #48B32x1" Bore
O6	19-48027M	Chain, #48x27 Links with Master
O7	19-48043M	Chain, #48x43 Links with Master
O8		Key 1/4"x1-1/2"
O9	86-RP10-200	Roll Pin 5/16x2"
O10	87-E-100	E-Ring, 1" Plated

ILLUSTRATED PARTS – Model MH



REPLACEMENT PARTS LIST – MODEL MH

SERVICE KITS

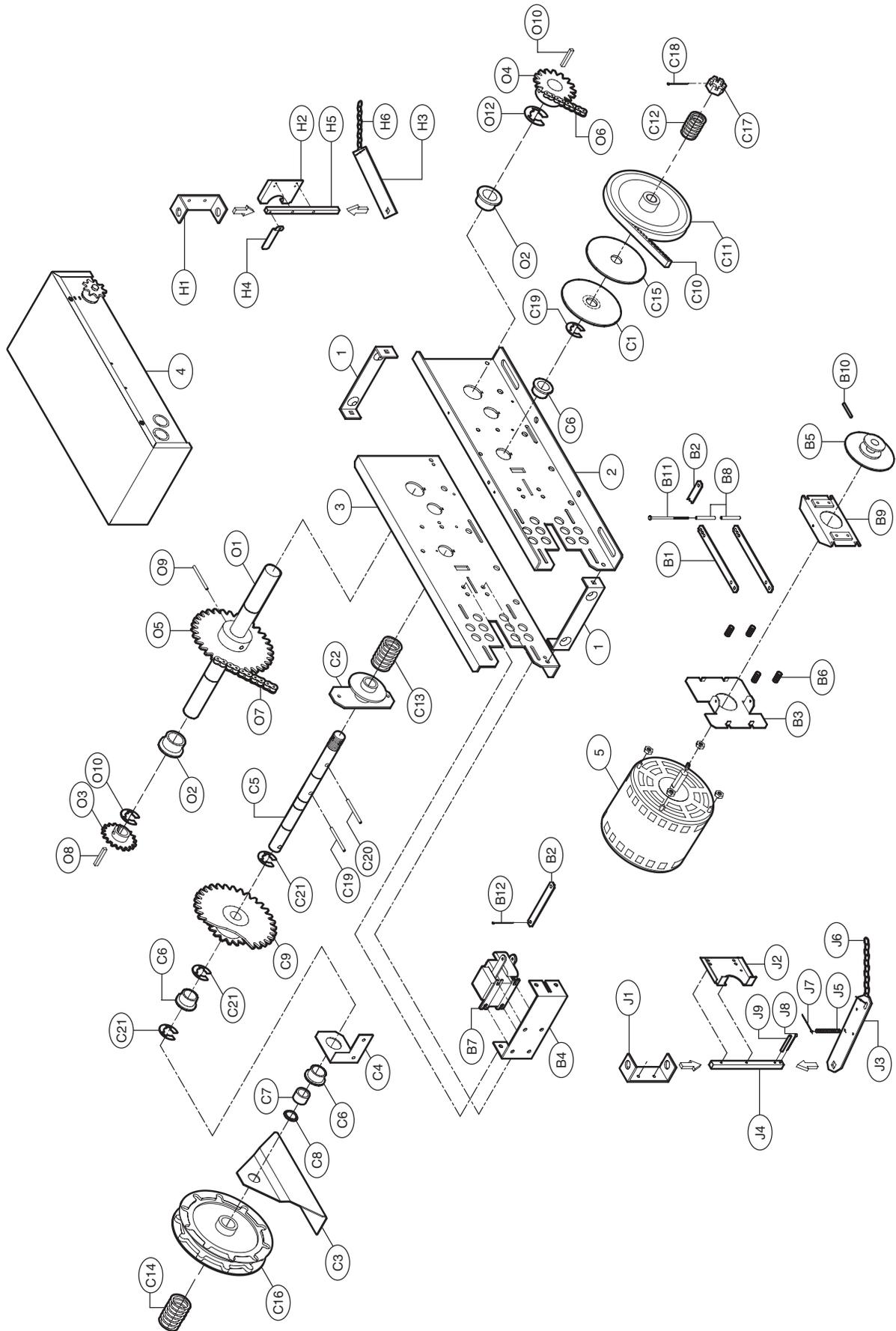
ITEM	PART#	DESCRIPTION
K1	K72-19979	Clutch Shaft Kit Complete with: Clutch Shaft, Keyed Flange Bearing, Dual Sprocket 32/14, 14 Tooth Sprocket, E-Ring, Compression Spring, Chain Wheel Assembly, Pulley Assembly, Chain Guide Assembly, Shim Washer, Washer, Thrust Washer and Roll Pins.
K2	K72-19974	Output Shaft Kit Complete with: Output Shaft, Sprocket Assembly, Dual Sprocket 32/14, Sprocket 48B18x1", Sprocket 50B12x1", Ring, Washer, Key, Set Screw, Roll Pin and Thin Walled Receivers.
Not Shown		
K75-12492	71-B120H*	Brake Kit, 115 Volt Models
K75-12494	71-B240H*	Brake Kit, 230- 460 Volt Models
	71-B575H*	Brake Kit, 575 Volt Models Complete with: Brake Hub Kit, Brake Release Lever, Brake Disk, Spring Cup, Studs, Compression Springs, Brake Solenoid, Solenoid Cover, Spacers, Mounting Plate, Pressure Plate, Feather Key and Conduit.
	K73-HFRAME-L	H Frame Kit, Left Hand
	K73-HFRAME-R	H Frame Kit, Right Hand

INDIVIDUAL PARTS

ITEM	PART#	DESCRIPTION
1	11-19471	Clutch Shaft - H
2	12-19504	Keyed Flange Bearing 1"
3	15-19480	Dual Sprocket 32/14
4	15-19481	Sprocket, 14 Tooth
5	18-11379	Compression Spring
6	75-10884	Chain Wheel Assembly
7	75-19985*	Pulley Assembly
8	75-19986*	Chain Guide Assembly
9	15-19478	Sprocket Assembly
10	15-19480	Dual Sprocket 32/14
11	15-48B18LGE	Sprocket 48B18x1"
12	15-50B12LGH	Sprocket 50B12x1"
13	16-5L304	Cogged Belt 30.4"
14	K75-19978-L	Frame Kit (LH)
15	K75-19978-R	Frame Kit (RH)
16	K75-19981	Arm Kit - H
17	17-6014	Motor Pulley
18	See Motor Replacement Kits, pages 62 & 63	
Not Shown		
	19-48047M	Roller Chain, #48x47 Pitch with Master Link
	12-10891	1" Flange Ball Bearing

* Call for Pricing and Availability

ILLUSTRATED PARTS – Model HMJ



REPLACEMENT PARTS LIST – MODEL HMJ

SERVICE KITS		
ITEM	PART#	DESCRIPTION
K1	K72-19975	Clutch Shaft Kit Complete with: Clutch Shaft, 1" Keyed Flange Bearings, Dual Sprocket 32/14, Splined Core Sprocket, E-Ring, Compression Spring, Pulley Assembly, Washers, Thrust Bearing, Retaining Ring, Splined Hub and Roll Pin.
K2	K72-19974	Output Shaft Kit Complete with: Output Shaft, Sprocket Assembly, Dual Sprocket 32/14, Sprocket 48B18x1" Bore, Sprocket 50B12x1" Bore, Ring, Washers, Set Screw, Roll Pin and Thin Walled Receiver.
Not Shown		
K75-12492	71-BT20H*	Brake Kit, 115 Volt Models
K75-12494	71-B240H*	Brake Kit, 230-480 Volt Models
	71-B575H*	Brake Kit, 575 Volt Models Complete with: Brake Hub Kit, Brake Release Lever, Brake Disk, Spring Cup, Studs, Compression Springs, Brake Solenoid, Solenoid Cover, Spacers, Mounting Plate, Pressure Plate, Feather Key and Conduit.

INDIVIDUAL PARTS		
ITEM	PART#	DESCRIPTION
1	11-19470*	Clutch Shaft - J
2	12-19504	Keyed Flange Bearing 1"
3	15-19480	Dual Sprocket 32/14
4	15-19484	Splined Core Sprocket
5	18-30957	Compression Spring
6	75-19985*	Pulley Assembly
7	80-19846	Splined Hub, J Disconnect
8	15-19478	Sprocket Assembly
9	15-48B18LGE	Sprocket 48B18x1"
10	15-50B12LGH	Sprocket 50B12x1"
11	16-5L304	Cogged Belt 30.4"
12	K75-19978-L	Frame Kit (LH)
13	K75-19978-R	Frame Kit (RH)
14	K75-19977	J Arm Kit
15	17-6014	Motor Pulley
16		See Motor Replacement Kits, page 63
Not Shown		
	19-48047M	Roller Chain, #48x47 Pitch with Master Link

* Call for Pricing and Availability

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) Auxiliary control equipment may be any normally open two wire device such as pullswitch, single button, loop detector, card key or such device.
- 4) 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.
- 5) Use 16 gauge or heavier wire for all control circuit wiring.

