

**NEW!**

**Cube Style  
Electrical Box**

FACTORY SET

**C2 Wiring**

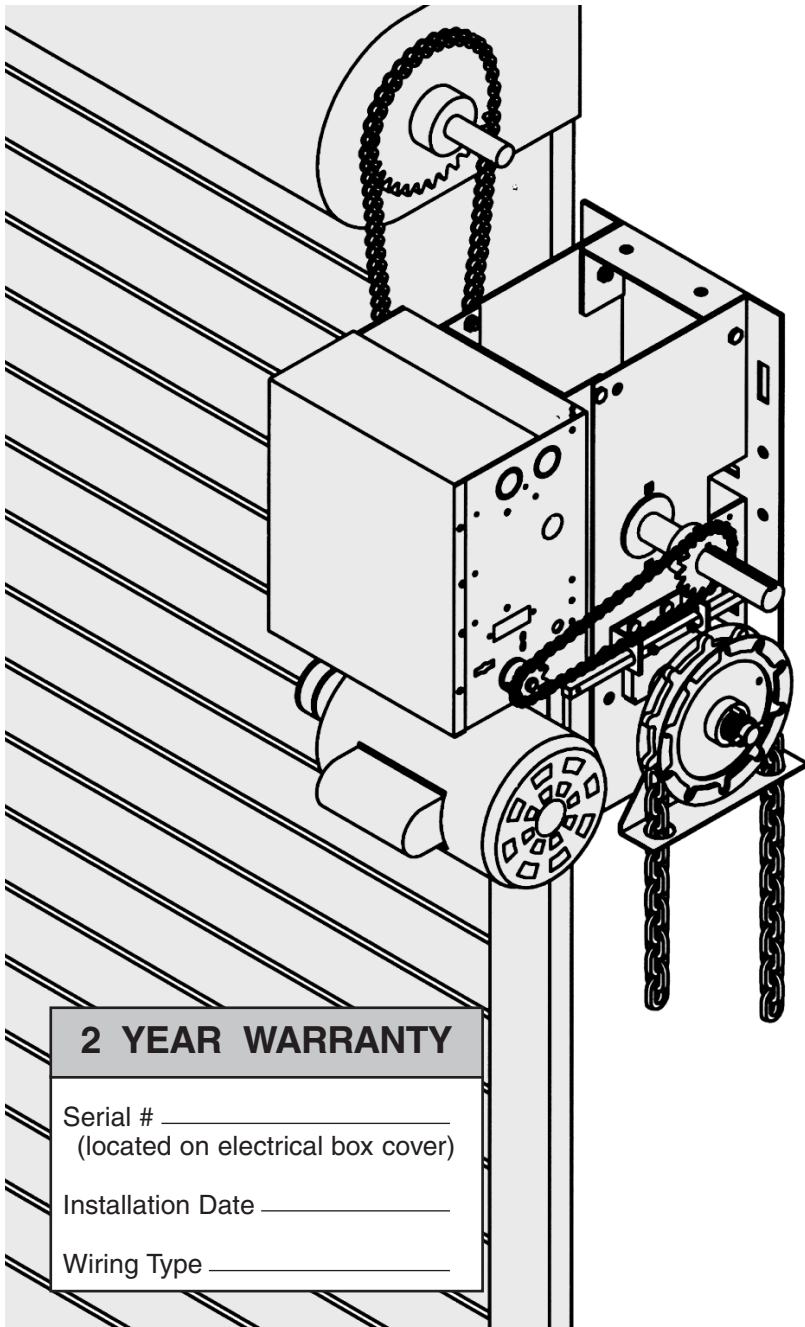
See page 8  
for other wiring  
configurations

# OWNER'S MANUAL

MODELS:

**J H HJ**

**INDUSTRIAL DUTY DOOR OPERATOR**



## 2 YEAR WARRANTY

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

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

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

NOT FOR RESIDENTIAL USE

41B6



LISTED DOOR OPERATOR

# SPECIFICATIONS

## MOTOR

**TYPE:** .....Continuous duty  
**HORSEPOWER:** .....1/3, 1/2, 3/4 & 1 Hp  
 Single or Three phase  
**SPEED:**.....1725 RPM  
**VOLTAGE:**.....115, 220, 230 Single  
 phase  
 208, 230, 460, 575 Three  
 phase  
**CURRENT:**.....See motor nameplate

## ELECTRICAL

**TRANSFORMER:**.....24VAC  
**CONTROL STATION:**.....NEMA 1 three button station.  
 OPEN/CLOSE/STOP  
**WIRING TYPE:**.....C2 (Standard)  
 Momentary contact to OPEN/CLOSE/STOP plus wiring  
 for sensing device to reverse and auxiliary devices to  
 open and close with open override. (Other types  
 available. See chart, Pg. 8)  
**LIMIT ADJUST:** .....Linear driven, fully  
 adjustable screw type cams. Adjustable to 30 feet.

## MECHANICAL

**DRIVE REDUCTION:** ..Primary: Heavy duty (5L) V-Belt.  
 Secondary: #48 chain/sprocket Output: #50 chain  
**OUTPUT SHAFT SPEED:**.....36 R.P.M.  
**DOOR SPEED:**.....6 - 7" per sec.  
 depending on door  
**BRAKE: (Optional)** .....Solenoid actuated disc  
 brake  
**BEARINGS:** .....Output Shaft: Shielded  
 Ball Bearing. Clutch Shaft: IronCopper sintered and  
 oil impregnated.  
**HAND CHAIN WHEEL:** .....Left or right handing  
*Models H and HJ only.*

## SAFETY

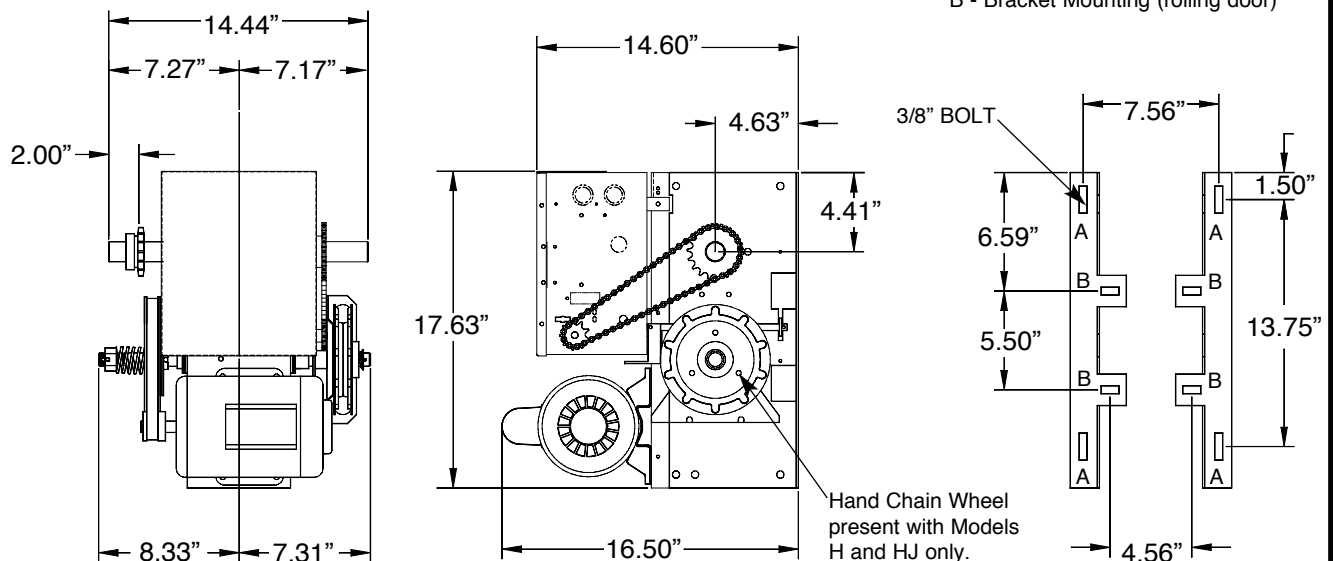
**DISCONNECT :**  
**Model J:** Floor level disconnect for emergency manual  
 door operation.  
**Model H:** Floor level chain hoist with electrical interlock  
 for emergency manual door operation.  
**Model HJ:** Includes both floor level disconnect  
 systems stated above.  
**REVERSING EDGE:**.....(Optional) Electric or pneumatic  
 sensing device attached to the bottom edge of door.  
**A REVERSING EDGE IS STRONGLY RECOMMEND-  
 ED FOR ALL COMMERCIAL OPERATOR INSTALLA-  
 TIONS. REQUIRED WHEN THE 3 BUTTON CON-  
 TROL STATION IS OUT OF SIGHT OF DOOR OR  
 ANY OTHER CONTROL (AUTOMATIC OR MANUAL)  
 IS USED.**

## WEIGHTS AND DIMENSIONS

**HANGING WEIGHT:** .....80-110 LBS.

### MOUNTING DIMENSIONS

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



## 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 SERVICE-MAN 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:

- Be rigid to prevent play between operator and door shaft.
- Provide a level base.
- 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. See Figure 1.

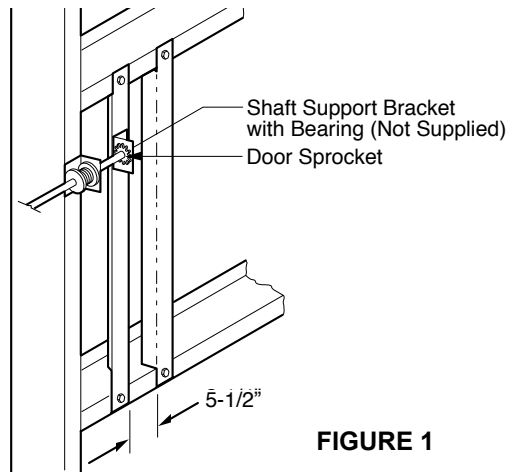


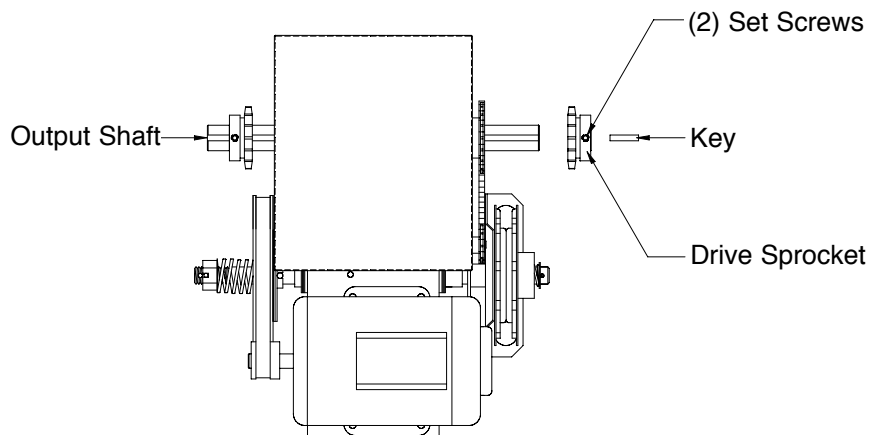
FIGURE 1

## OPERATOR PREPARATION

Both J and H 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 models H and HJ 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.

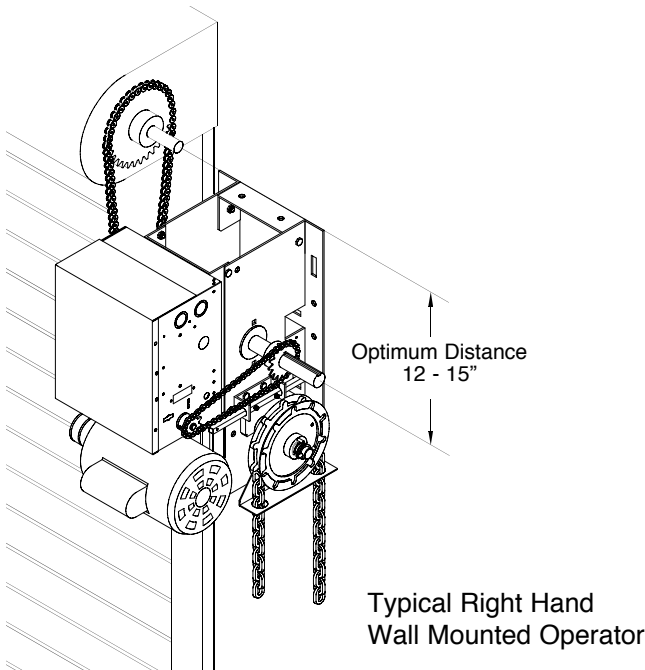


# OPERATOR MOUNTING

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

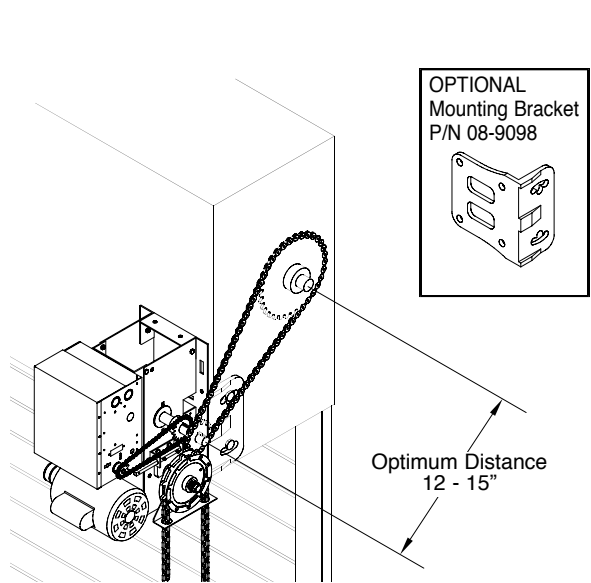
The operator should generally be installed below the door shaft, and as close to the door as possible. The optimum distance between the door shaft and operator drive shaft is between 12" - 15". Refer to Figure 3.



**FIGURE 3**

## 1b. Bracket or Shelf Mounting

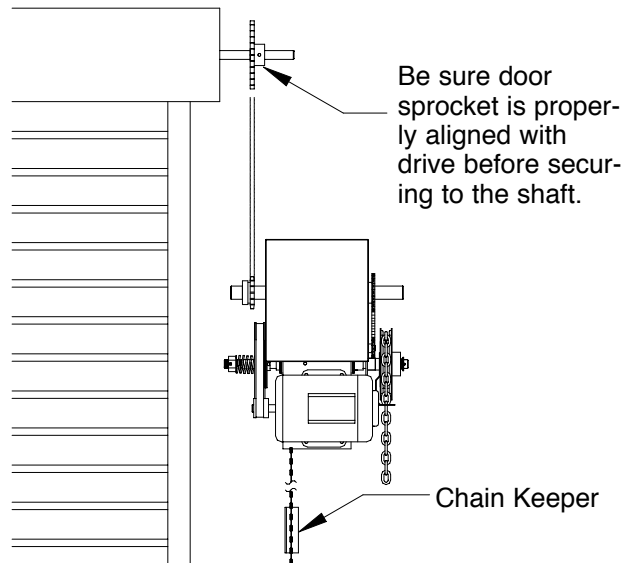
The operator may be mounted either above or below the door shaft. The optimum distance between the door shaft and operator drive shaft is between 12" - 15". Refer to Figure 4.



**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, (see Figure 5).



**FIGURE 5**

- 7. Install Hand Chain (Models H and HJ 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.

## EMERGENCY 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 H

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 J

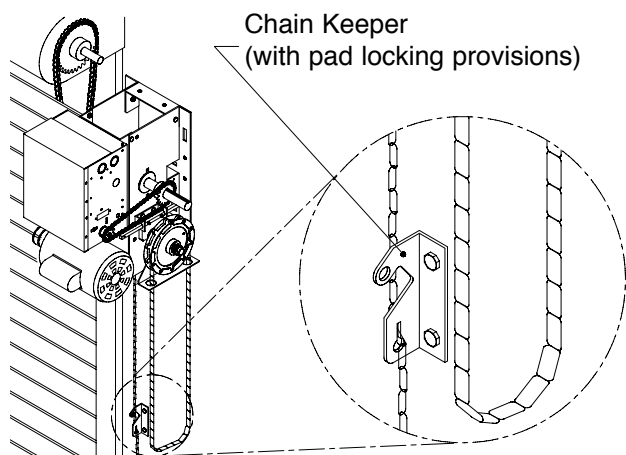
This operator has a floor level disconnect chain to disconnect the door from the door operator.

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.

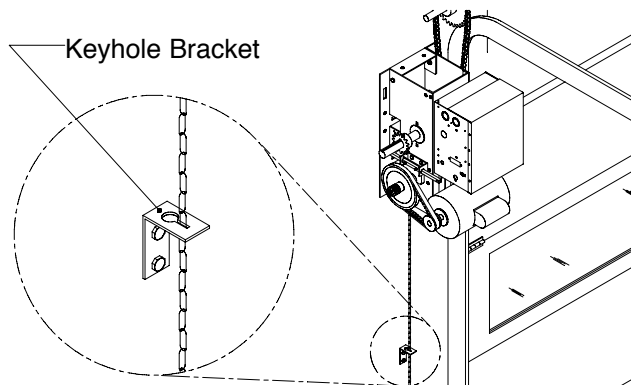
### Model HJ

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

1. Refer to Model H instructions for hoist operation.
2. Refer to Model J instructions for manual operation.



Electrical Interlock with Hoist for Models H and HJ



Manual Disconnect for Models J and HJ

## ENTRAPMENT PROTECTION ACCESSORIES (OPTIONAL)

### SENSING EDGES & PHOTO EYES

Sensing devices supplied for door industry type operators with an isolated normally open (N.O.) output are compatible with your operator. This includes pneumatic and electric edges, and through beam and retro reflective photo eyes. If your door does not have a bottom sensing edge or safety photo eyes and you wish to add a safety device to your application, please contact your local LiftMaster Authorized Dealer.

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.

## NOTICE

**IT IS STRONGLY RECOMMENDED THAT A SAFETY PHOTO EYE OR SENSING EDGE BE USED IN CONJUNCTION WITH THE OPERATOR.**

#### 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

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

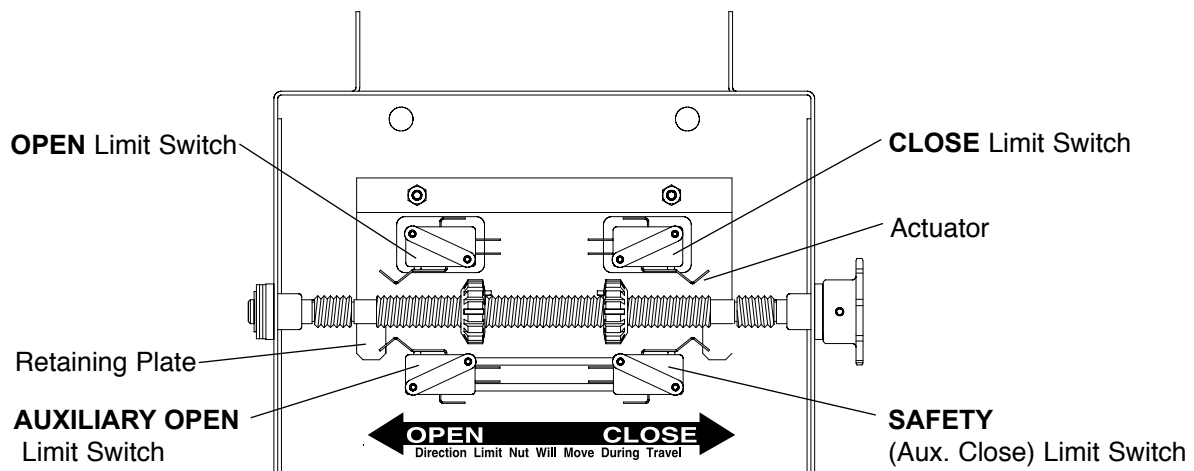
- To adjust limit nuts depress retaining plate to allow nut to spin freely. After adjustment, release plate and ensure it seats fully in slots of both nuts.
- To **increase** door travel, spin nut **away** from actuator. To **decrease** door travel, spin limit nut **toward** actuator.
- Adjust open limit 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 CONNECTIONS

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.**



### WARNING

**DISCONNECT POWER AT THE FUSE BOX BEFORE PROCEEDING.**

**OPERATOR MUST BE PROPERLY GROUNDED AND CONNECTED IN ACCORDANCE WITH LOCAL ELECTRICAL CODES. NOTE: THE OPERATOR SHOULD BE ON A SEPARATE FUSED LINE OF ADEQUATE CAPACITY.**

**ALL ELECTRICAL CONNECTIONS MUST BE MADE BY A QUALIFIED INDIVIDUAL.**



### WARNING

**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.**

### POWER WIRING

1. 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.

2. 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.

**DO NOT TURN POWER ON UNTIL YOU HAVE FINISHED MAKING ALL POWER AND CONTROL WIRING CONNECTIONS AND HAVE COMPLETED THE LIMIT SWITCH ADJUSTMENT PROCEDURE.**

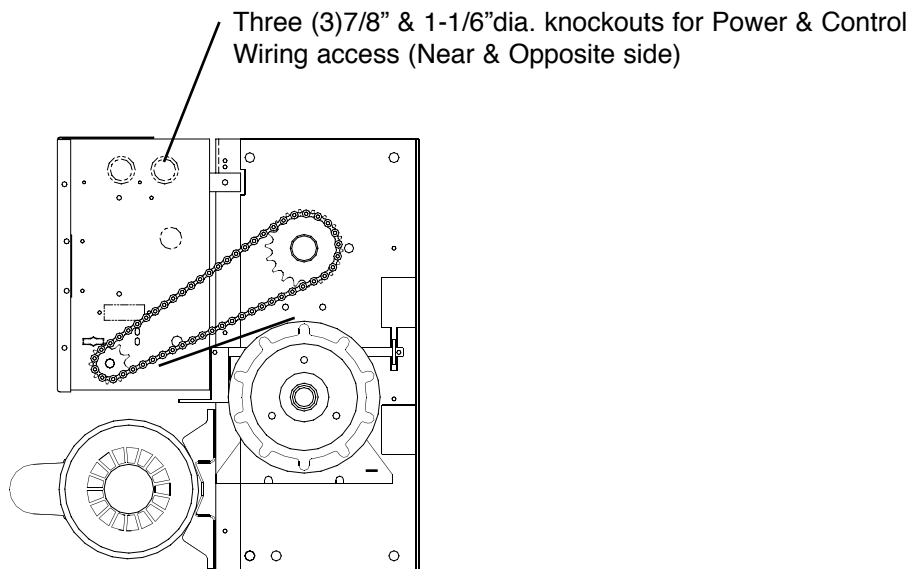
**CAUTION: THIS UNIT MUST BE PROPERLY GROUNDED. A GROUND SCREW IS SUPPLIED IN THE ELECTRICAL BOX FOR CONNECTION OF THE POWER SUPPLY GROUND WIRE. FAILURE TO PROPERLY GROUND THIS UNIT COULD RESULT IN ELECTRIC SHOCK AND SERIOUS INJURY.**

### 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 correct this, interchange any two of the incoming three phase power lines.

#### WARNING

**Do Not Run Power & Control Wiring in the Same Conduit**



**CONDUIT ACCESS**



## 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.

#### 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 jumper setting below.

- **Constant pressure on close (C2 wiring)**  
Red jumper wire was placed on terminal #2 in 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 DATA

WI

This Operator has Control Wiring.

SUPPLEMENTAL WIRING DIAGRAM(S)

---

REPLACEMENT WIRING DIAGRAM

---

**Note:** Supplemental Wiring Diagrams are to be used in addition to 1742-1. Replacement Wiring Diagram is to be used in place of 1742-1.

Wiring Type

Wiring Diagram label on inside cover of electrical box


### SPECIAL CONTROL WIRING

If your operator was shipped from the factory with non-standard control wiring or with optional accessories that require addition 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.*

### 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.

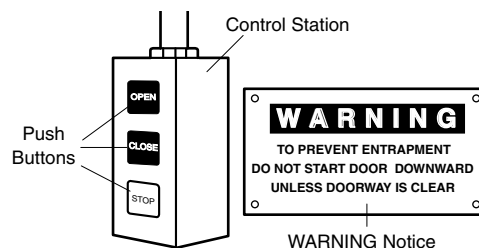


## WARNING

**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.






## CONTROL WIRING (con't)

### Radio Controls

On all models with type B2 control wiring, a terminal bracket marked R1 R2 R3 is located on the outside of the electrical enclosure. All standard radio control 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 transmitter, a commercial three-channel radio set (with connections for OPEN/CLOSE/STOP) is recommended.

**WARNING**

**DO NOT USE RADIO CONTROLS WITH YOUR OPERATOR UNLESS YOU HAVE INSTALLED SOME TYPE OF ENTRAPMENT PROTECTION DEVICE. THE USE OF RADIO CONTROLS PRESENTS POTENTIAL HAZARDS DUE TO THE USER'S ABILITY TO OPEN OR CLOSE THE DOOR WHEN OUT OF SIGHT OF THE DOOR. IN ADDITION, IF A SINGLE CHANNEL CONTROL IS USED, THE USER WILL NOT BE ABLE TO STOP THE DOOR FROM THE TRANSMITTER.**

### Additional Access Control Equipment

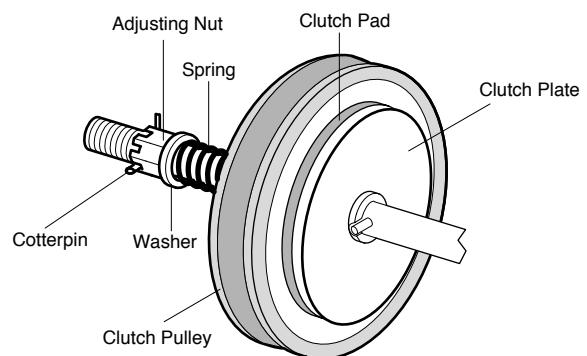
Locate any additional access control equipment as desired (but so that the door will be in clear sight of the person operating the equipment), and connect to the terminal block in the electrical enclosure as shown on the FIELD WIRING CONNECTIONS diagram. Any control with a normally (N.O.) isolated output 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.

## CLUTCH ADJUSTMENT

1. Remove cotterpin from nut on the clutch shaft (taped to 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. Install Cotterpin in holes provided.



**CAUTION: 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.**

## 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

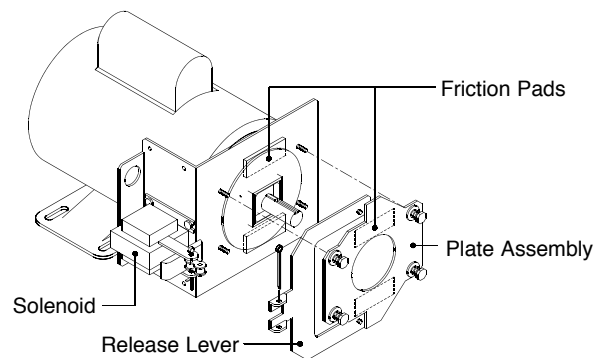
**DO NOT PLACE HANDS OR TOOLS IN OR NEAR THE OPERATOR WHEN THE POWER IS ON OR WHEN TESTING CONTROL OR SAFETY DEVICES. ALWAYS DISCONNECT POWER BEFORE SERVICING OR ADJUSTING THE OPERATOR.**

## BRAKE 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<br>3 MONTHS | EVERY<br>6 MONTHS | EVERY<br>12 MONTHS |
|-------------------|--|-------------------|-------------------|--------------------|
| Drive Chain       | Check for excessive slack.<br>Check & adjust as required.<br>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.
- 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 6 DAYS A WEEK  
CALL OUR TOLL FREE NUMBER - 1-800-528-2806  
HOURS 7:00 TO 3:30 p.m. (Mountain Std. Time)  
MONDAY Through SATURDAY

**WHEN ORDERING REPAIR PARTS  
PLEASE SUPPLY THE FOLLOWING INFORMATION:**

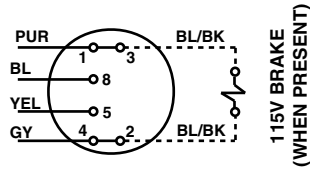
*PART NUMBER DESCRIPTION MODEL NUMBER*

**ADDRESS ORDER TO:**

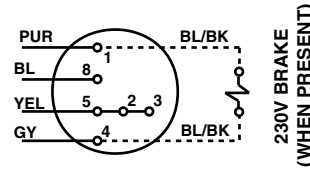
THE CHAMBERLAIN GROUP, INC.  
Electronic Parts & Service Dept.  
2301 N. Forbes Blvd., Suite 104  
Tucson, AZ 85745

# SINGLE PHASE SCHEMATIC DIAGRAM

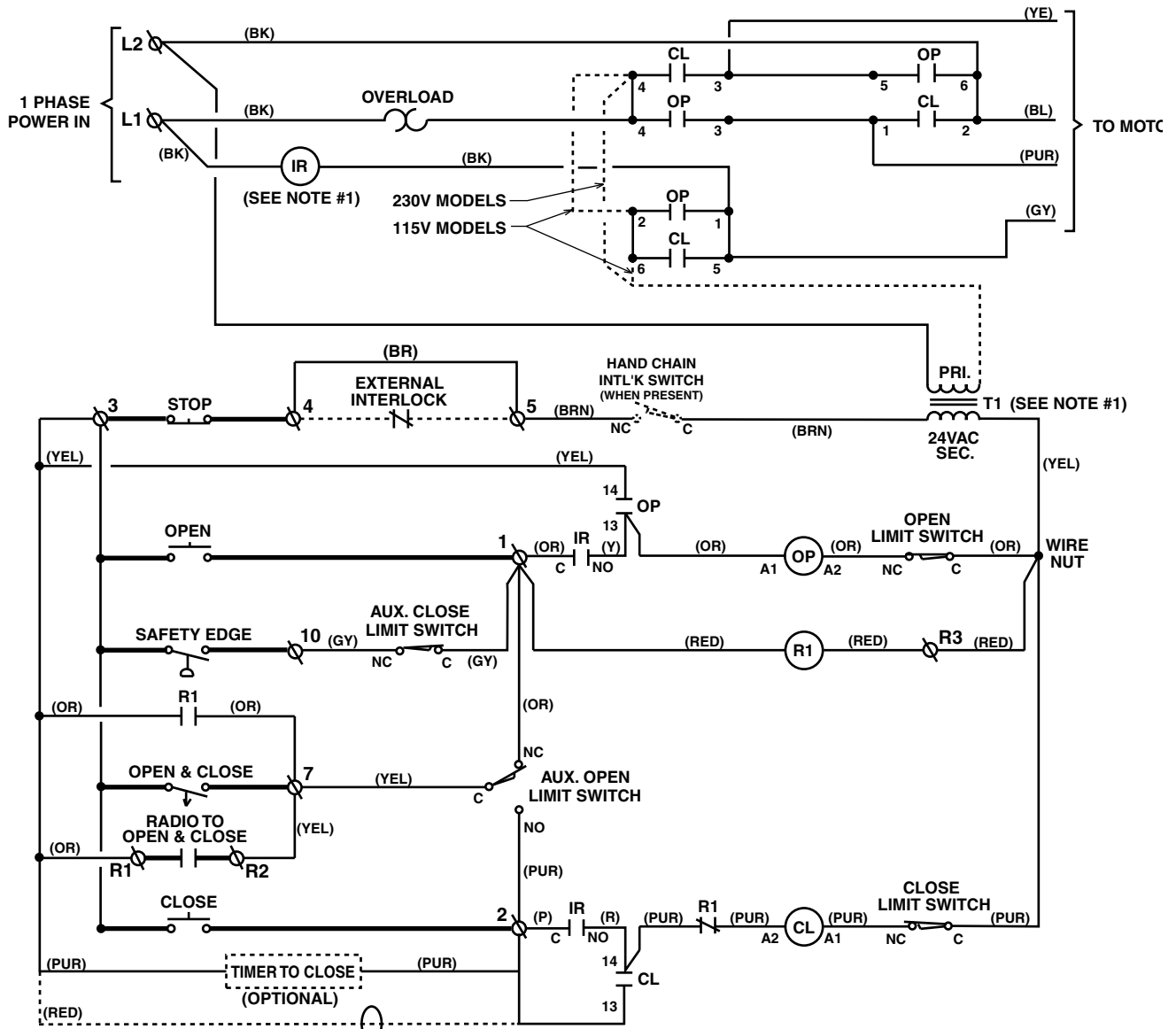
# 1742-1



115 VOLT - 1 PHASE MOTOR CONNECTION



230 VOLT - 1 PHASE MOTOR CONNECTION



\* - Shipped from Factory

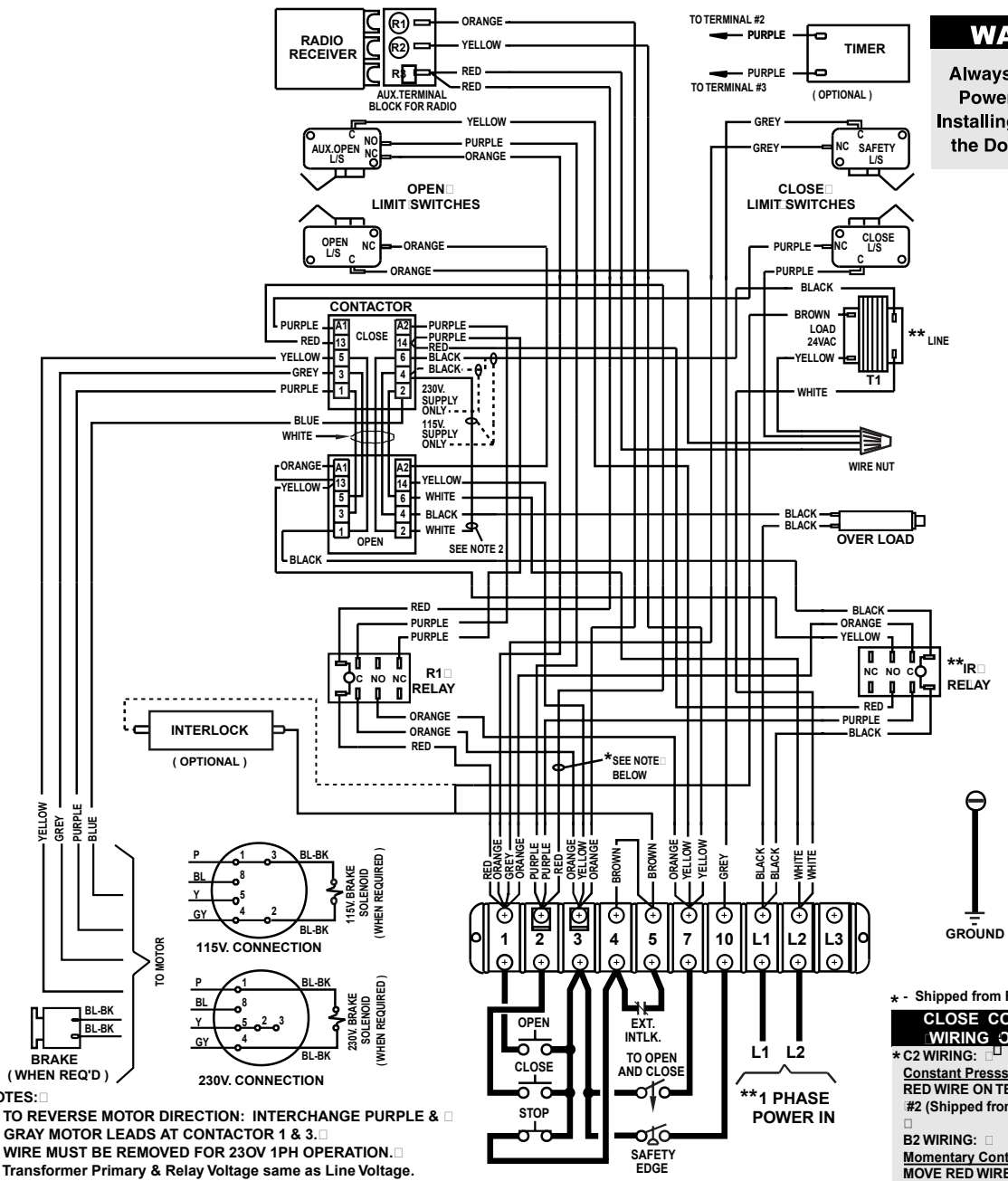
**CLOSE CONTROL WIRING OPTIONS**

\*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

NOTE:  
 1. Voltage same as line voltage.

# SINGLE PHASE WIRING DIAGRAM

# 1742-1



**WARNING**  
Always Disconnect Power Whenever Installing or Servicing the Door Operator.

- NOTES:
- 1) TO REVERSE MOTOR DIRECTION: INTERCHANGE PURPLE & GRAY MOTOR LEADS AT CONTACTOR 1 & 3.
  - 2) WIRE MUST BE REMOVED FOR 230V 1PH OPERATION.
- \*\* - Transformer Primary & Relay Voltage same as Line Voltage.

\* - Shipped from Factory

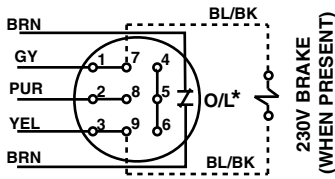
**CLOSE CONTROL WIRING OPTIONS**

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

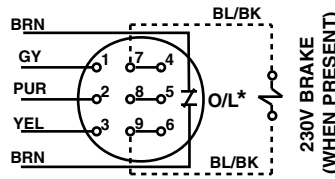
B2 WIRING:  Momentary Contact to Close  MOVE RED WIRE FROM TERMINAL #2 TO TERMINAL #3

# THREE PHASE SCHEMATIC DIAGRAM

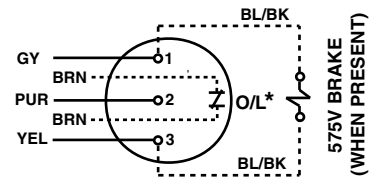
# 1742-3



230 VOLT - 3 PHASE MOTOR CONNECTION

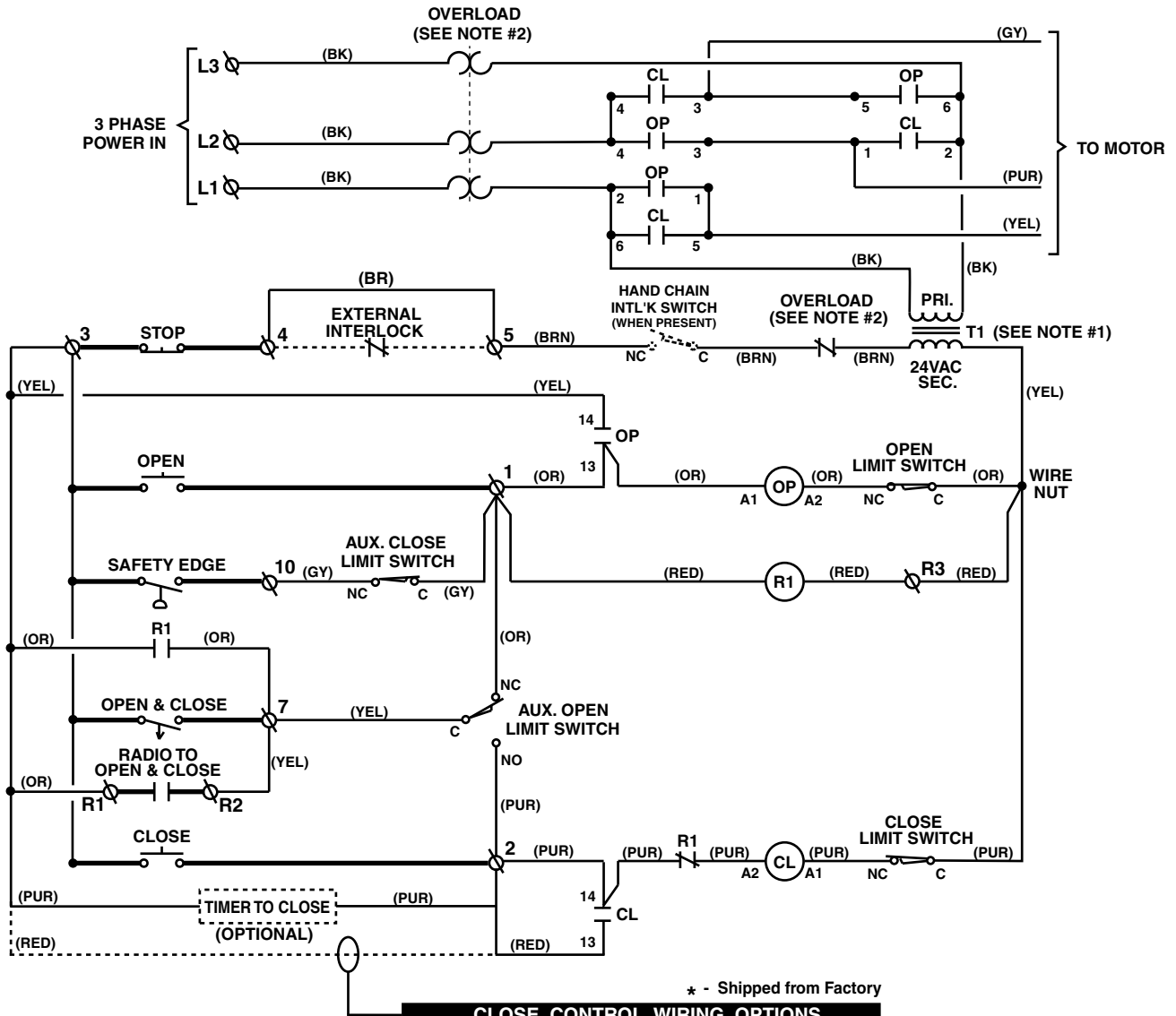


460 VOLT - 3 PHASE MOTOR CONNECTION



575 VOLT - 3 PHASE MOTOR CONNECTION

\* - SEE NOTE #2



\* - Shipped from Factory

### CLOSE CONTROL WIRING OPTIONS

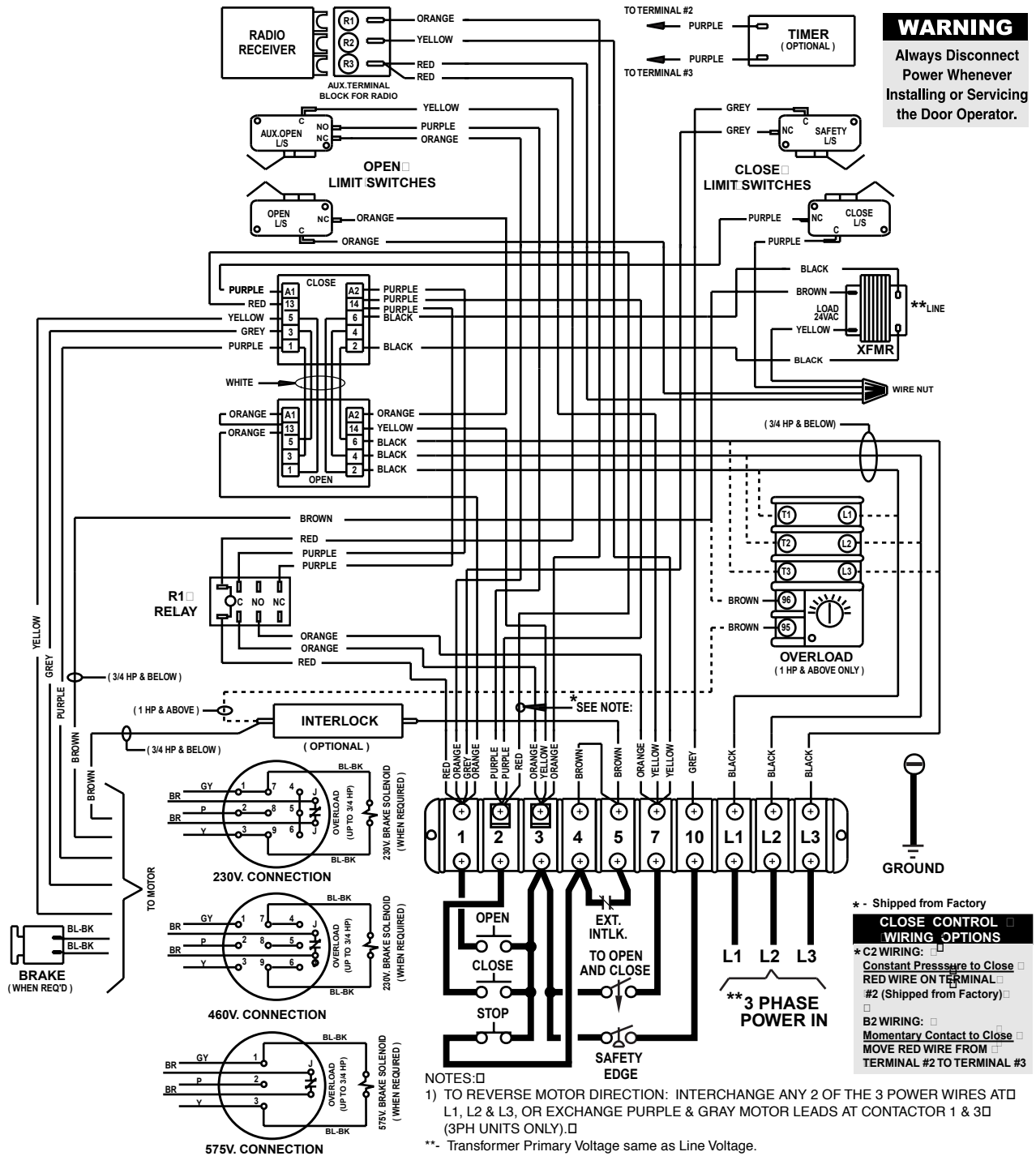
- \*C2 WIRING - Constant Pressure to Close  
RED WIRE ON TERMINAL #2 (Shipped from Factory)
- B2 WIRING - Momentary Contact to Close  
MOVE RED WIRE FROM TERMINAL #2 TO TERMINAL #3

**NOTE:**

1. Voltage same as line voltage
2. Overload in motor for models up to 3/4 Hp, located in limit box for 1 Hp and above.

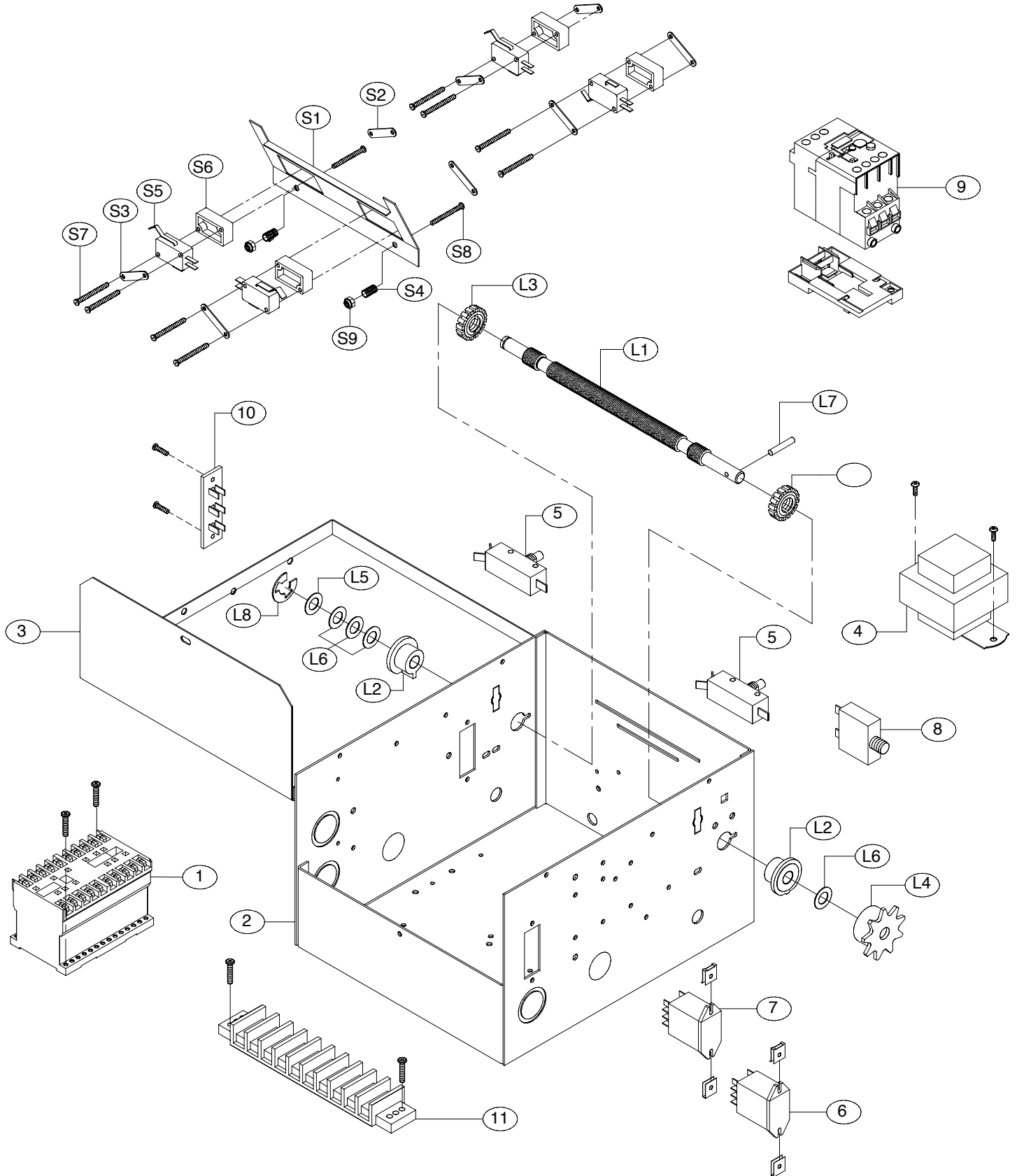
# THREE PHASE WIRING DIAGRAM

# 1742-3





# 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 Replacement Kits

To order a complete electrical box replacement kit, add a K- prefix to the model number of your operator. For example:

J5011M (Operator) = K-J5011M (Electrical Box Replacement Kit)

## Electrical Box Sub-Assembly Kits

K72-12510 Limit Shaft Assembly  
K75-12511 Limit Switch Assembly

## Motor Kits

K20-1033B2 Models H/J3311M, H/J3321M  
K20-3033B4 Models H/J3323M, H/J3338M, H/J3343M  
K20-3033M5 Model H/J3353M  
K20-51033B Model H/J3325M  
K20-1050B2 Models H/J5011M, H/J5021M  
K20-3050B4 Models H/J5023M, H/J5038M, H/J5043M  
K20-3050M5 Model H/J5053M  
K20-51050B Model H/J5025M  
K20-1075B2 Model H/J7511M, H/J7521M  
K20-3075B4 Models H/J7523M, H/J7538M, H/J7543M  
K20-3075B5 Model H/J7553M  
K20-51075B Model H/J7525M  
K20-1100B2T Models H/J1011M, H/J1021M  
K20-3100B4T Models H/J1023M, H/J1043M  
K20-3100B5T Model H/J1053M

## Shaft Assembly Kits

K72-12531 Clutch Shaft Assy, J      K72-12532 Output Shaft Assy, J  
K72-12563 Clutch Shaft Assy, H      K72-12564 Output Shaft Assy, H  
K72-12556 Clutch Shaft Assy, HJ      K72-12557 Output Shaft Assy, HJ

## Disconnect Assembly Kits

K75-12558 Disconnect Assy Kit, Right Hand  
K75-12560 Disconnect Assy Kit, Left Hand

*Model J and Right Hand Model H to use right hand assembly, Left hand Model H to use left hand assy, Model HJ requires both assemblies*

## Brake Kits

71-B120J 115 Volt Model J      71-B120H 115 Volt Model H  
71-B240J 230-460 Volt Model J      71-B240H 230-460 Volt Model H  
71-B575J 575 Volt Model J      71-B575H 575 Volt Model H

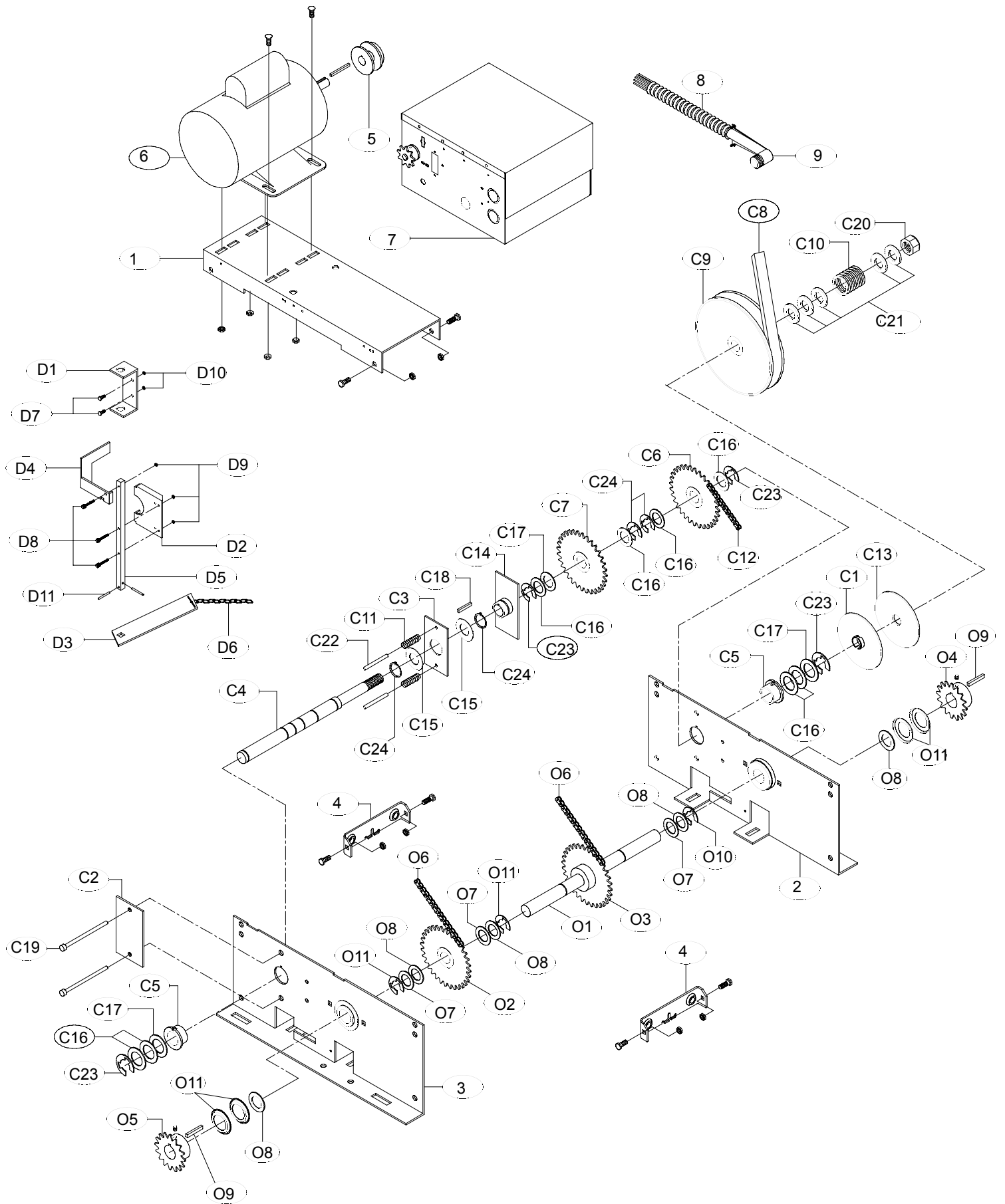
| * COMPLETE ELECTRICAL BOX KITS |            |                             |     |
|--------------------------------|------------|-----------------------------|-----|
| Item                           | P/N        | Description                 | Qty |
| 1                              | 03-8024-K  | Contactors                  | 1   |
| 2                              | 10-13792M1 | Electrical Box              | 1   |
| 3                              | 10-13899   | Electrical Box Cover        | 1   |
| 4                              | 21-5xxx    | (See Variable Components)   | 1   |
| 5                              | 23-10916   | SPDT Interlock Switch       | 1   |
| 6                              | 24-xxx-x   | (See Variable Components)   | 1   |
| 7                              | 24-24-1    | 24VAC DPDT Relay            | 1   |
| 8                              | 25-2xxx    | (See Variable Components)   | 1   |
| 9                              | 25-4xxx    | (See Variable Components)   | 1   |
| 10                             | 42-10040   | Terminal Block, Radio       | 1   |
| 11                             | 42-110     | Terminal Block, 10 Position | 1   |

| K72-14130 LIMIT SHAFT ASSEMBLY KIT |             |                                    |     |
|------------------------------------|-------------|------------------------------------|-----|
| Item                               | P/N         | Description                        | Qty |
| L1                                 | 11-13361    | Limit Shaft, Cube Style            | 1   |
| L2                                 | 12-10028    | Flange Bearing, 3/8" I.D.          | 2   |
| L3                                 | 13-10024    | Limit Nut                          | 2   |
| L4                                 | 15-48B9AXX  | Sprocket 48B9 x 3/8" Bore          | 1   |
| L5                                 | 80-10025    | Washer, Shim 3/8" I.D. x .050 THK. | 1   |
| L6                                 | 80-10026    | Washer, Shim 3/8" I.D. x .010 THK. | 4   |
| L7                                 | 86-RP04-100 | Roll Pin, 1/8 DIA. x 1" Long       | 1   |
| L8                                 | 87-E-038    | E Ring, 3/8"                       | 1   |

| K75-12511 LIMIT SWITCH ASSEMBLY KIT |            |                                   |     |
|-------------------------------------|------------|-----------------------------------|-----|
| Item                                | P/N        | Description                       | Qty |
| S1                                  | 10-10013   | Depress Plate                     | 1   |
| S2                                  | 10-12553   | Nut Plate                         | 4   |
| S3                                  | 10-12806   | Backup Plate                      | 2   |
| S4                                  | 18-10036   | Spring, Depress Plate             | 2   |
| S5                                  | 23-10041   | Limit Switch                      | 4   |
| S6                                  | 31-12542   | Standoff, Limit Switch            | 4   |
| S7                                  | 82-PX04-20 | Screw, #4-40 x 1-3/8" Pan Head Ph | 8   |
| S8                                  | 82-PX06-16 | Screw, #6-32 x 1" Pan Hd Phil     | 2   |
| S9                                  | 84-LH-06   | Locknut, #6-32 Nylon Hex          | 2   |

| VARIABLE COMPONENTS |            |                        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |   |
|---------------------|------------|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---|
| ITEM                | PART NO.   | DESCRIPTION            | H/J3311M | H/J3321M | H/J3323M | H/J3343M | H/J3353M | H/J3325M | H/J3338M | H/J5011M | H/J5021M | H/J5023M | H/J5043M | H/J5053M | H/J5025M | H/J5038M | H/J7511M | H/J7521M | H/J7523M | H/J7543M | H/J7553M | H/J7525M | H/J7538M | H/J1011M | H/J1021M | H/J1023M | H/J1043M | H/J1053M |   |
| 4                   | 21-5115    | Transformer, 115 Volts | ●        |          |          |          |          |          |          | ●        |          |          |          |          |          |          | ●        |          |          |          |          |          |          | ●        |          |          |          |          |   |
|                     | 21-5230    | Transformer, 230 Volts |          | ●        | ●        |          |          | ●        |          |          | ●        | ●        |          | ●        |          |          |          | ●        | ●        |          |          | ●        |          |          | ●        | ●        |          |          |   |
|                     | 21-5460    | Transformer, 460 Volts |          |          |          | ●        |          |          | ●        |          |          | ●        |          | ●        |          |          |          |          |          | ●        |          | ●        |          |          |          |          |          | ●        |   |
|                     | 21-5575    | Transformer, 575 Volts |          |          |          |          | ●        |          |          |          |          |          |          | ●        |          |          |          |          |          |          | ●        |          |          |          |          |          |          |          | ● |
| 6                   | 24-115-1   | Relay, 115 Volts       | ●        |          |          |          |          |          |          | ●        |          |          |          |          |          |          | ●        |          |          |          |          |          |          | ●        |          |          |          |          |   |
|                     | 24-230-5   | Relay, 230 Volts       |          | ●        |          |          |          | ●        |          |          | ●        |          |          | ●        |          |          |          | ●        |          |          |          | ●        |          |          | ●        |          |          |          |   |
| 8                   | 25-2006    | Overload, 6 Amp        |          | ●        |          |          |          | ●        |          |          | ●        |          |          | ●        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |   |
|                     | 25-2008    | Overload, 8 Amp        | ●        |          |          |          |          |          |          |          |          |          |          |          |          |          |          | ●        |          |          |          | ●        |          |          | ●        |          |          |          |   |
|                     | 25-2010    | Overload 10 Amp        |          |          |          |          |          |          |          | ●        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |   |
|                     | 25-2015    | Overload 15 Amp        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | ●        |          |          |          |          |          |          |          |          |          |          |   |
|                     | 25-2020    | Overload 20 Amp        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | ●        |          |          |          |   |
| 9                   | 25-4001-8K | Overload 1.2-1.8 Amp   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | ● |
|                     | 25-4002-5K | Overload 1.6-2.5 Amp   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | ●        |          |   |
|                     | 25-4004-K  | Overload 2.5-4.0 Amp   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | ●        |          |          |   |

# ILLUSTRATED PARTS – Model J



## REPLACEMENT PARTS LIST – MODEL J

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 11 for all repair part ordering information.

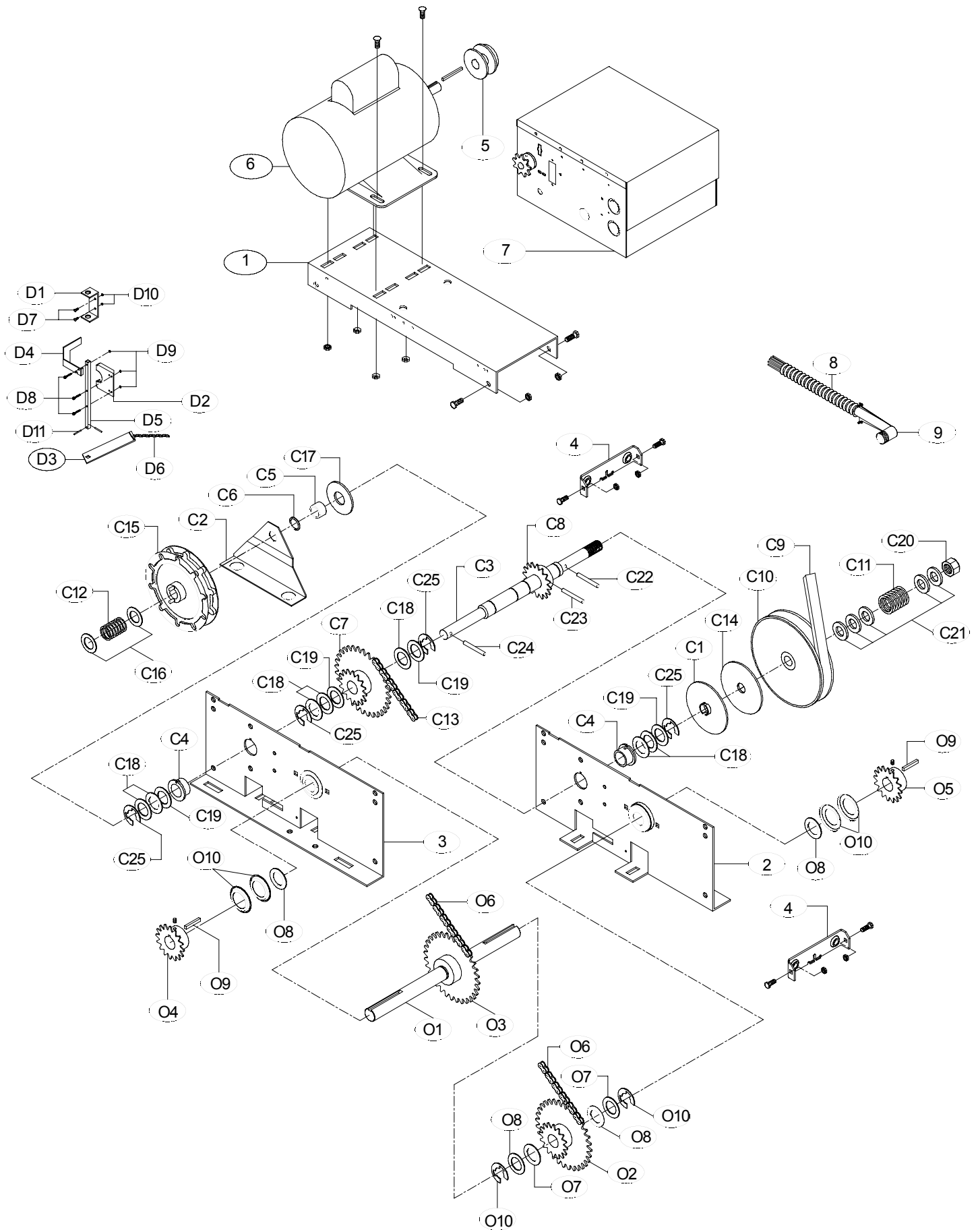
| INDIVIDUAL PARTS |             |                           |     |
|------------------|-------------|---------------------------|-----|
| ITEM             | PART #      | DESCRIPTION               | QTY |
| 1                | 10-15569    | Motor Plate               | 1   |
| 2                | 75-15012    | Side Plate LH             | 1   |
| 3                | 75-15013    | Side Plate RH             | 1   |
| 4                | 10-10874    | Frame Connecting Bracket  | 2   |
| 5                | 17-6014     | 2" Motor Pulley           | 1   |
| 6                | See Page 21 | Motor Replacement Kit     | 1   |
| 7                | See Page 21 | Elec. Box Replacement Kit | 1   |
| 8                | 28-10218    | Conduit, 3/8"             | 1   |
| 9                | 28-10219    | Connector, 90 degree      | 1   |

| K72-12532 OUTPUT SHAFT ASSEMBLY KIT |             |                              |     |
|-------------------------------------|-------------|------------------------------|-----|
| ITEM                                | PART #      | DESCRIPTION                  | QTY |
| O1                                  | 11-10879    | Output Shaft                 | 1   |
| O2                                  | 15-10885    | Sprocket Assy, 48B32/48B14   | 1   |
| O3                                  | 15-48B32LXX | Sprocket, 48B332             | 1   |
| O4                                  | 15-48B18LGE | Sprocket, 48B18 x 1" Bore    | 1   |
| O5                                  | 15-50B12LGH | Sprocket, 50B12 x 1" Bore    | 1   |
| O6                                  | 19-48047M   | #48 Chain 47P W/ML           | 2   |
| O7                                  | 80-206-10   | Spacer 1-1/32 x 1-1/2 x 1/64 | 3   |
| O8                                  | 80-206-11   | Spacer 1-1/16 x 1-1/2 x 1-16 | 5   |
| O9                                  | 80-207-19   | Key 1/4 x 1/4 x 1-1/2        | 2   |
| O10                                 | 87-E-100    | E Ring, 1" Plated            | 3   |
| O11                                 | 87-P-100S   | Push on Fastener             | 4   |

| K75-12558 RIGHT HAND DISCONNECT ASSY KIT |             |                             |     |
|--|-------------|-----------------------------|-----|
| ITEM                                     | PART #      | DESCRIPTION                 | QTY |
| D1                                       | 10-10707    | Disconnect Support Bracket  | 1   |
| D2                                       | 10-10708    | Yoke                        | 1   |
| D3                                       | 10-10875    | Disconnect Lever            | 1   |
| D4                                       | 10-10898    | Interlock Switch Actuator   | 1   |
| D5                                       | 11-10878    | Disconnect Shaft            | 1   |
| D6                                       | 19-8A-12    | 12 ft. Of Sash Chain        | 1   |
| D7                                       | 82-HN25-12  | 1/4-20 x 3/4 HEX HD CAP Scr | 2   |
| D8                                       | 82-SH10-14  | Screw 10-32 x 7/8"          | 3   |
| D9                                       | 84-FN-10    | Serrated Flange Nut, #10-32 | 3   |
| D10                                      | 84-FN-25    | Nut, 1/4-20 Serrated Flange | 2   |
| D11                                      | 86-RP04-100 | Roll Pin 1/8 x 1"           | 2   |

| K72-12531 CLUTCH SHAFT ASSEMBLY KIT |             |                                   |     |
|-------------------------------------|-------------|-----------------------------------|-----|
| ITEM                                | PART #      | DESCRIPTION                       | QTY |
| C1                                  | 10-10166    | Clutch Plate                      | 1   |
| C2                                  | 10-10930    | External Disconnect Bracket       | 1   |
| C3                                  | 10-10932    | Internal Disconnect Plate         | 1   |
| C4                                  | 11-15604    | Clutch Shaft                      | 1   |
| C5                                  | 12-10715    | 1" Flanged Keyed Bearing          | 2   |
| C6                                  | 15-10885    | 48B32/48B14 Idler Sprocket Assy   | 1   |
| C7                                  | 15-10923    | Compound Sprocket #48B32 x 14     | 1   |
| C8                                  | 16-5L300    | V Belt, 5L x 30"                  | 1   |
| C9                                  | 17-10165    | 7" Pulley                         | 1   |
| C10                                 | 18-10168    | Compression Spring LG MW ZP       | 1   |
| C11                                 | 18-10931    | Compression Spring                | 2   |
| C12                                 | 19-48047M   | #48 Chain 47P W/ML                | 1   |
| C13                                 | 39-10167    | Clutch Pad                        | 1   |
| C14                                 | 75-10921    | Rotor Assembly                    | 1   |
| C15                                 | 80-202-24   | Flatwasher                        | 2   |
| C16                                 | 80-206-10   | Spacer 1-1/32 x 1-1/2 x 1/64      | 8   |
| C17                                 | 80-206-11   | Spacer 1-1/16 x 1-1/2 x 1/16      | 3   |
| C18                                 | 80-207-19   | Key 1/4 x 1/4 x 1-1/2             | 2   |
| C19                                 | 82-PX10-28  | #10-32 x 3 SLTD RNH HD-ZP         | 2   |
| C20                                 | 84-SH-76    | Hex Castle Nut 3/4 x 16 ZP        | 1   |
| C21                                 | 85-FW-75    | Washer .75 I.D. x 1.5 O.D. x .125 | 5   |
| C22                                 | 86-RP10-208 | Roll Pin 5/16 x 2-1/2"            | 2   |
| C23                                 | 87-E-100    | E Ring, 1" Plated                 | 6   |
| C24                                 | 87-E-150    | External Snap Ring, Zinc Coated   | 2   |

# ILLUSTRATED PARTS – Model H



## REPLACEMENT PARTS LIST - MODEL H

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 11 for all repair part ordering information.

### K72-12563 CLUTCH SHAFT REPLACEMENT KIT

| ITEM | PART #      | DESCRIPTION                  | QTY |
|------|-------------|------------------------------|-----|
| C1   | 10-10166    | Clutch Plate                 | 1   |
| C2   | 10-10882    | Chain Guide                  | 1   |
| C3   | 11-15605    | Clutch Shaft                 | 1   |
| C4   | 12-10715    | Bushing Flange, 1"           | 2   |
| C5   | 12-10882    | Bushing .753 I.D. x 5/8"     | 1   |
| C6   | 12-10883    | NY Liner Bearing             | 1   |
| C7   | 15-10885    | Sprocket, 48B32/48B14        | 1   |
| C8   | 15-48B14LXX | Sprocket, 48B14 x 1" Bore    | 1   |
| C9   | 16-5L300    | V Belt, 5L x 30.4"           | 1   |
| C10  | 17-10165    | 7" Pulley                    | 1   |
| C11  | 18-10168    | Spring, Comp. - Clutch       | 1   |
| C12  | 18-11379    | Spring, Comp. - Hoist        | 1   |
| C13  | 19-48047M   | #48 Chain 47P W/ML           | 1   |
| C14  | 39-10167    | Clutch Pad                   | 1   |
| C15  | 75-10884    | Chain Wheel Assy             | 1   |
| C16  | 80-10022    | Spacer .80 I.D.              | 2   |
| C17  | 80-10883    | Washer .753 I.D.             | 1   |
| C18  | 80-206-10   | Spacer 1-1/32 x 1-1/2 x 1/64 | 7   |
| C19  | 80-206-11   | Spacer 1-1/16 x 1-1/2 x 1/16 | 4   |
| C20  | 84-SH-76    | Hex Castle Nut 3/4 x 16 ZP   | 1   |
| C21  | 85-FW-75    | Washer 3/4 I.D.              | 5   |
| C22  | 86-RP08-200 | Roll Pin 1/4" x 2"           | 1   |
| C23  | 86-RP10-200 | Roll Pin 5/16" x 2"          | 1   |
| C24  | 86-RP10-208 | Roll Pin 5/16" x 2-1/2"      | 1   |
| C25  | 87-E-100    | E Ring 1" Plated             | 4   |

### INDIVIDUAL PARTS

| ITEM | PART #      | DESCRIPTION                    | QTY |
|------|-------------|--------------------------------|-----|
| 1    | 10-15569    | Motor Plate                    | 1   |
| 2    | 75-15012    | Side Plate RH                  | 1   |
| 3    | 75-15013    | Side Plate LH                  | 1   |
| 4    | 10-10874    | Frame Connecting Bracket       | 2   |
| 5    | 17-6014     | 2" Motor Pulley                | 1   |
| 6    | See Page 21 | Motor Replacement Kits         | 1   |
| 7    | See Page 21 | Electrical Box Replacement Kit | 1   |
| 8    | 28-10218    | Conduit, 3/8"                  | 1   |
| 9    | 28-10219    | Connector, 90 degree           | 1   |

### K72-12564 OUTPUT SHAFT REPLACEMENT KIT

| ITEM | PART #      | DESCRIPTION               | QTY |
|------|-------------|---------------------------|-----|
| O1   | 11-10879    | Output Shaft              | 1   |
| O2   | 15-10885    | Sprocket, 48B32/48B14     | 1   |
| O3   | 15-48B32LXX | Sprocket, 48B32 x 1" Bore | 1   |
| O4   | 15-48B18LGE | Sprocket, 48B18 x 1" Bore | 1   |
| O5   | 15-50B12LGH | Sprocket, 50B12 x 1" Bore | 1   |
| O6   | 19-48047M   | #48 Chain 47P W/ML        | 2   |
| O7   | 80-206-10   | Spacer 1-1/32 x 1/64      | 2   |
| O8   | 80-206-11   | Spacer 1-1/16 x 1/16      | 4   |
| O9   | 80-207-19   | Key 1/4 x 1/4 x 1-1/2     | 2   |
| O10  | 87-P-100S   | Push Ring 1" Plated       | 4   |

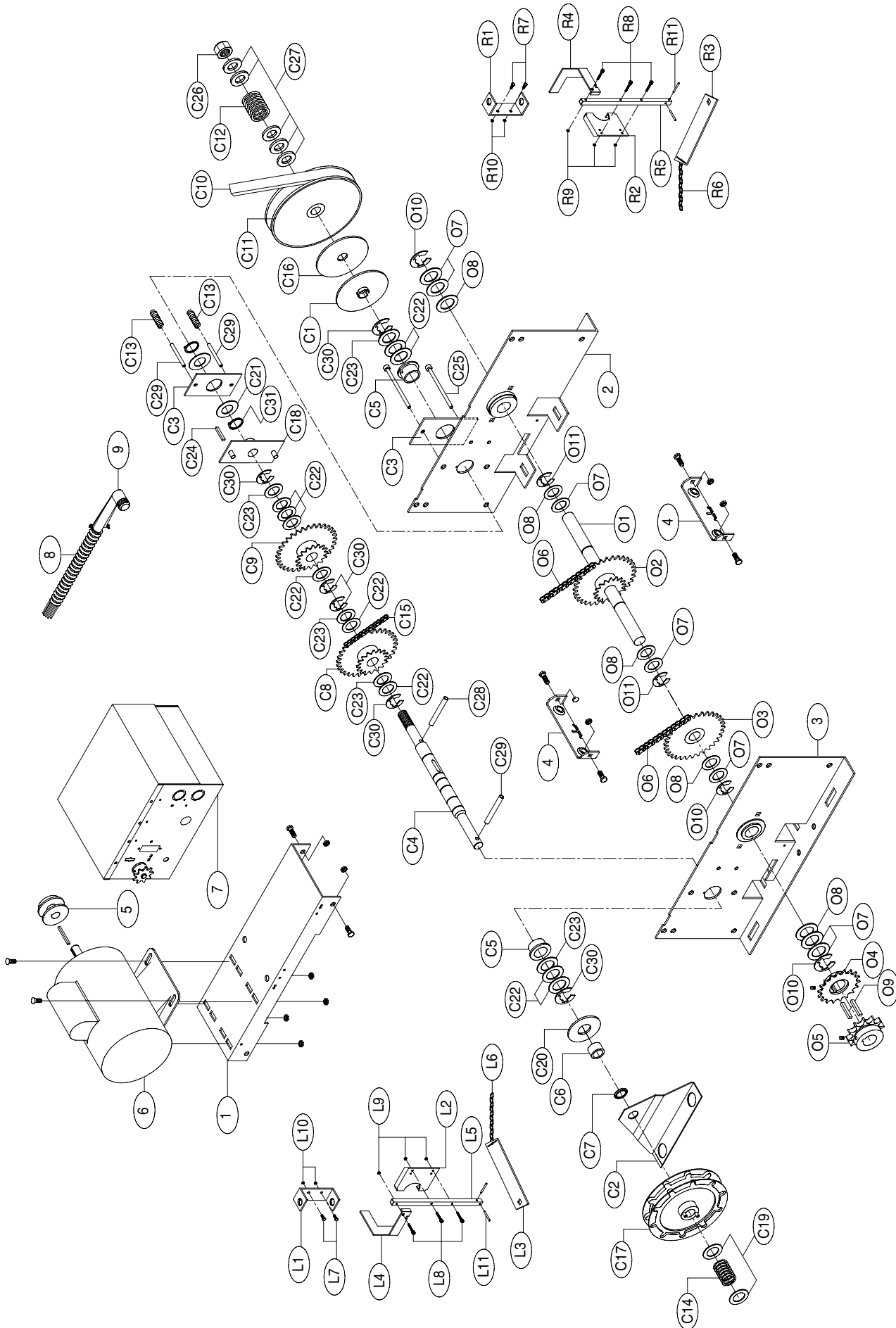
### K75-12558 RIGHT HAND DISCONNECT ASSY KIT

| ITEM | PART #      | DESCRIPTION                 | QTY |
|------|-------------|-----------------------------|-----|
| D1   | 10-10707    | Disconnect Support Bracket  | 1   |
| D2   | 10-10708    | Yoke                        | 1   |
| D3   | 10-10875    | Disconnect Lever            | 1   |
| D4   | 10-10898    | Interlock Switch Actuator   | 1   |
| D5   | 11-10878    | Disconnect Shaft            | 1   |
| D6   | 19-8A-12    | 12 ft. Of Sash Chain        | 1   |
| D7   | 82-HN25-12  | 1/4-20 x 3/4 HEX HD CAP Scr | 2   |
| D8   | 82-SH10-14  | Screw 10-32 x 7/8"          | 3   |
| D9   | 84-FN-10    | Serrated Flange Nut, #10-32 | 3   |
| D10  | 84-FN-25    | Nut, 1/4-20 Serrated Flange | 2   |
| D11  | 86-RP04-100 | Roll Pin 1/8 x 1"           | 2   |

### K75-12560 LEFT HAND DISCONNECT ASSY KIT

| ITEM | PART #      | DESCRIPTION                 | QTY |
|------|-------------|-----------------------------|-----|
| D1   | 10-10707    | Disconnect Support Bracket  | 1   |
| D2   | 10-10708    | Yoke                        | 1   |
| D3   | 10-10875    | Disconnect Lever            | 1   |
| D4   | 10-10898-L  | Interlock Switch Actuator   | 1   |
| D5   | 11-10878    | Disconnect Shaft            | 1   |
| D6   | 19-8A-12    | 12 ft. Of Sash Chain        | 1   |
| D7   | 82-HN25-12  | 1/4-20 x 3/4 HEX HD CAP Scr | 2   |
| D8   | 82-SH10-14  | Screw 10-32 x 7/8"          | 3   |
| D9   | 84-FN-10    | Serrated Flange Nut, #10-32 | 3   |
| D10  | 84-FN-25    | Nut, 1/4-20 Serrated Flange | 2   |
| D11  | 86-RP04-100 | Roll Pin 1/8 x 1"           | 2   |

# ILLUSTRATED PARTS – MODEL HJ





## REPLACEMENT PARTS LIST – MODEL HJ

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 11 for all repair part ordering information.

### K72-12557 OUTPUT SHAFT ASSEMBLY KIT

| ITEM | PART #      | DESCRIPTION                  | QTY |
|------|-------------|------------------------------|-----|
| O1   | 11-10879    | Output Shaft                 | 1   |
| O2   | 15-10885    | Sprocket Assy, 48B32/48B14   | 1   |
| O3   | 15-48B32LXX | Sprocket, 48B32              | 1   |
| O4   | 15-48B18LGE | Sprocket, 48B18 x 1" bore    | 1   |
| O5   | 15-50B12LGH | Sprocket, 50B12 x 1" bore    | 1   |
| O6   | 19-48047M   | #48 Chain 47P W/ML           | 2   |
| O7   | 80-206-10   | Spacer 1-1/32 x 1-1/2 x 1/64 | 3   |
| O8   | 80-206-11   | Spacer 1-1/16 x 1-1/2 x 1-16 | 5   |
| O9   | 80-207-19   | Key 1/4 x 1/4 x 1-1/2        | 2   |
| O10  | 87-E-100    | E Ring, 1" Plated            | 3   |
| O11  | 87-P-100S   | Push on Fastener             | 4   |

### INDIVIDUAL PARTS

| ITEM | PART #      | DESCRIPTION               | QTY |
|------|-------------|---------------------------|-----|
| 1    | 10-15569    | Motor Plate               | 1   |
| 2    | 75-15012    | Side Plate LH             | 1   |
| 3    | 75-15013    | Side Plate RH             | 1   |
| 4    | 10-10874    | Frame Connecting Bracket  | 2   |
| 5    | 17-6014     | 2" Motor Pulley           | 1   |
| 6    | See Page 21 | Motor Replacement Kit     | 1   |
| 7    | See Page 21 | Elec. Box Replacement Kit | 1   |
| 8    | 28-10218    | Conduit, 3/8"             | 1   |
| 9    | 28-10219    | Connector, 90 degree      | 1   |

### K75-12558 RIGHT HAND DISCONNECT ASSY KIT

| ITEM | PART #      | DESCRIPTION                 | QTY |
|------|-------------|-----------------------------|-----|
| R1   | 10-10707    | Disconnect Support Bracket  | 1   |
| R2   | 10-10708    | Yoke                        | 1   |
| R3   | 10-10875    | Disconnect Lever            | 1   |
| R4   | 10-10898    | Interlock Switch Actuator   | 1   |
| R5   | 11-10878    | Disconnect Shaft            | 1   |
| R6   | 19-8A-12    | 12 ft. Of Sash Chain        | 1   |
| R7   | 82-HN25-12  | 1/4-20 x 3/4 HEX HD CAP Scr | 2   |
| R8   | 82-SH10-14  | Screw 10-32 x 7/8"          | 3   |
| R9   | 84-FN-10    | Serrated Flange Nut, #10-32 | 3   |
| R10  | 84-FN-25    | Nut, 1/4-20 Serrated Flange | 2   |
| R11  | 86-RP04-100 | Roll Pin 1/8 x 1"           | 2   |

### K75-12560 LEFT HAND DISCONNECT ASSY KIT

| ITEM | PART #      | DESCRIPTION                 | QTY |
|------|-------------|-----------------------------|-----|
| L1   | 10-10707    | Disconnect Support Bracket  | 1   |
| L2   | 10-10708    | Yoke                        | 1   |
| L3   | 10-10875    | Disconnect Lever            | 1   |
| L4   | 10-10898-L  | Interlock Switch Actuator   | 1   |
| L5   | 11-10878    | Disconnect Shaft            | 1   |
| L6   | 19-8A-12    | 12 ft. Of Sash Chain        | 1   |
| L7   | 82-HN25-12  | 1/4-20 x 3/4 HEX HD CAP Scr | 2   |
| L8   | 82-SH10-14  | Screw 10-32 x 7/8"          | 3   |
| L9   | 84-FN-10    | Serrated Flange Nut, #10-32 | 3   |
| L10  | 84-FN-25    | Nut, 1/4-20 Serrated Flange | 2   |
| L11  | 86-RP04-100 | Roll Pin 1/8 x 1"           | 2   |

### K72-12556 CLUTCH SHAFT ASSEMBLY KIT

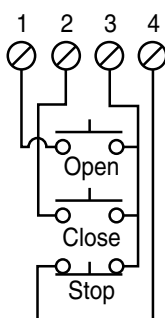
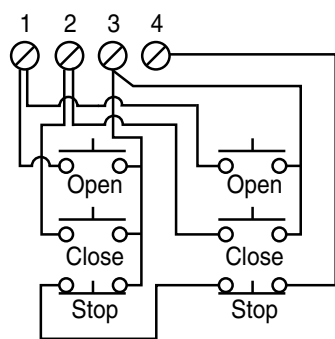
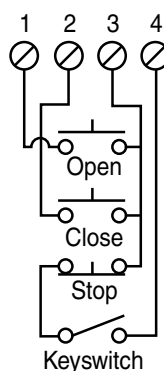
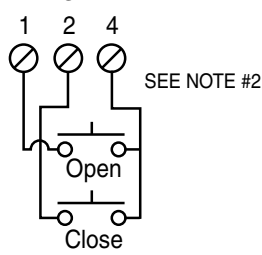
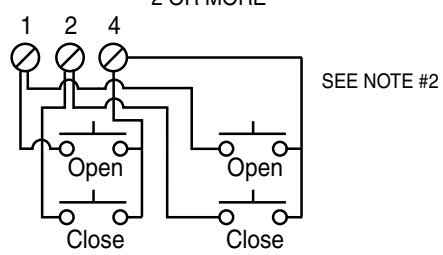
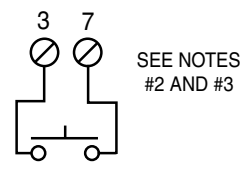
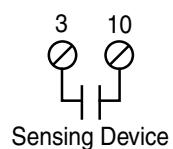
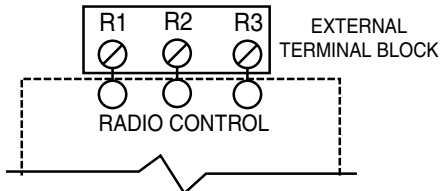
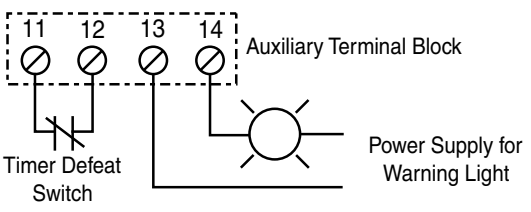
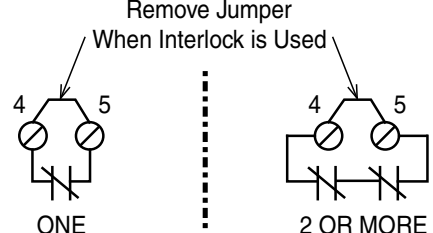
| ITEM | PART #      | DESCRIPTION                          | QTY |
|------|-------------|--------------------------------------|-----|
| C1   | 10-10166    | Clutch Plate                         | 1   |
| C2   | 10-10882    | Chain Guide                          | 1   |
| C3   | 10-10932    | Internal Disconnect Plate            | 2   |
| C4   | 11-15606    | Clutch Shaft                         | 1   |
| C5   | 12-10715    | 1" Flanged Keyed Bushing             | 2   |
| C6   | 12-10882    | Bushing .753 I.D. x 1.003 O.D. x 5/8 | 1   |
| C7   | 12-10883    | NY Liner Bearing                     | 1   |
| C8   | 15-10885    | 48B32/48B14 Idler Sprocket Assy      | 1   |
| C9   | 15-10923    | Sprocket #48B32/48B14                | 1   |
| C10  | 16-5L300    | V Belt, 5L x 30.4"                   | 1   |
| C11  | 17-10165    | 7" Pulley                            | 1   |
| C12  | 18-10168    | Spring, Comp. - Clutch               | 1   |
| C13  | 18-10931    | Spring, Comp. - Disconnect           | 2   |
| C14  | 18-11379    | Spring, Comp. - Hoist                | 1   |
| C15  | 19-48047M   | #48 Chain 47P W/ML                   | 1   |
| C16  | 39-10167    | Clutch Pad                           | 1   |
| C17  | 75-10884    | Chain Wheel Assy                     | 1   |
| C18  | 75-10921    | Rotor Assembly                       | 1   |
| C19  | 80-10022    | Spacer .80 I.D. x 1.125 O.D. x .050  | 2   |
| C20  | 80-10883    | Washer .753 I.D. x 2.50 O.D. x 1/8   | 1   |
| C21  | 80-202-24   | Flatwasher                           | 2   |
| C22  | 80-206-10   | Spacer 1-1/32 x 1-1/2 x 1/64         | 10  |
| C23  | 80-206-11   | Spacer 1-1/16 x 1-1/2 x 1/16         | 5   |
| C24  | 80-207-19   | Key 1/4 x 1/4 x 1-1/2                | 1   |
| C25  | 82-PX10-28  | #10-32 x 3 SLTD RNH HD-ZP            | 2   |
| C26  | 84-SH-76    | Hex Castle Nut 3/4 x 16 ZP           | 1   |
| C27  | 85-FW-75    | Washer 3/4 I.D. x 1-1/2 O.D. x .125  | 5   |
| C28  | 86-RP08-200 | Roll Pin 1/4" x 2"                   | 1   |
| C29  | 86-RP10-208 | Roll Pin 5/16 x 2-1/2"               | 3   |
| C30  | 87-E-100    | E Ring 1" Plated                     | 6   |
| C31  | 87-E-150    | External Snap Ring, ZP               | 2   |

# 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.

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

| 3 BUTTON STATION or 3 POSITION KEYSWITCH w/ SPRING RETURN TO CENTER AND STOP BUTTON  |  |   |
|--|--|---|
| <p style="text-align: center;">STANDARD</p>  <p style="text-align: center;">ALL CONTROL WIRING TYPES</p>                    | <p style="text-align: center;">2 OR MORE</p>  <p style="text-align: center;">ALL CONTROL WIRING TYPES</p>   | <p style="text-align: center;">KEY LOCKOUT</p>  <p style="text-align: center;">ALL CONTROL WIRING TYPES</p>  |
| 2 BUTTON STATION or 3 POSITION KEYSWITCH w/ SPRING RETURN TO CENTER  |  | 1 BUTTON STATION or ANY AUXILIARY DEVICE  |
| <p style="text-align: center;">STANDARD</p>  <p style="text-align: center;">ALL CONTROL WIRING TYPES</p>                   | <p style="text-align: center;">2 OR MORE</p>  <p style="text-align: center;">ALL CONTROL WIRING TYPES</p> |  <p style="text-align: center;">OPEN / CLOSE</p> <p style="text-align: center;">B2 or T1<br/>WIRING TYPES ONLY</p>  |
| SENSING DEVICE TO REVERSE OR STOP  |  | RESIDENTIAL RADIO CONTROLS  |
|  <p style="text-align: center;">Sensing Device</p> <p style="text-align: center;">ALL CONTROL WIRING TYPES</p>            |  | <p style="text-align: center;">*OPEN TIMER TO CLOSE</p>  <p style="text-align: center;">ALL CONTROL WIRING TYPES<br/>* T1 WIRING - RADIO TO OPEN ONLY</p> |
| TIMER TO CLOSE w/ WARNING LIGHT  |  | EXTERNAL INTERLOCK  |
| <p>Warning Light will activate 15 sec. before door closes.</p>  <p style="text-align: center;">T1 CONTROL WIRING ONLY</p> |  | <p style="text-align: center;">Remove Jumper<br/>When Interlock is Used</p>  <p style="text-align: center;">ALL CONTROL WIRING TYPES</p>                  |