FACTORY SET

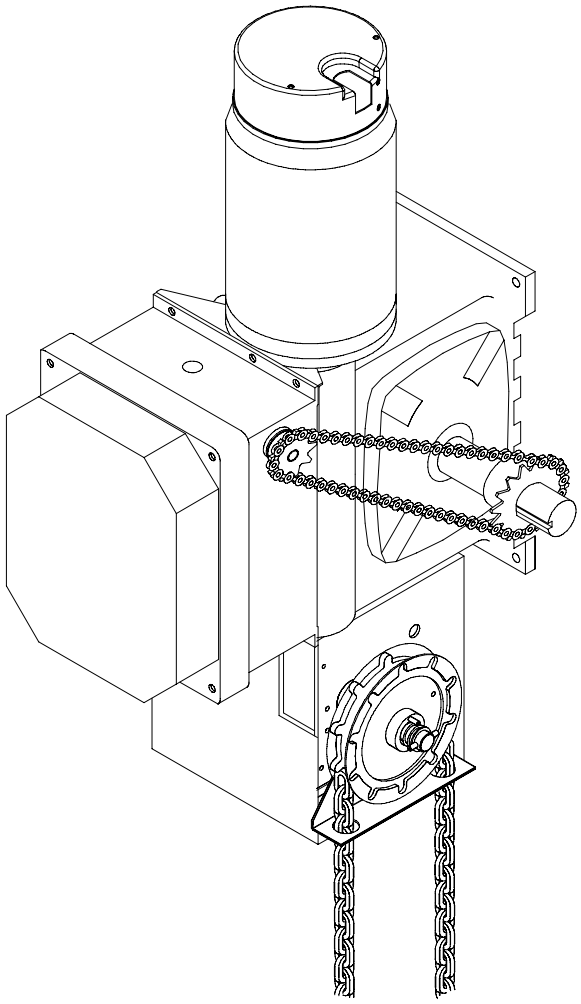
C2 Wiring

See page 8 for other wiring configurations

OWNER'S MANUAL

MODEL GH 5HP

HEAVY DUTY DOOR OPERATOR



2 YEAR WARRANTY

Serial # _____
(located on electrical box cover)

Installation Date _____

Wiring Type _____

SPECIFICATIONS

MOTOR

TYPE: .....AC Synchronous continuous duty brake motor

ENCLOSURE:.....ODP NEMA 184TC face mount.

HORSEPOWER: .....5 HP Three phase

SPEED: .....1725 RPM

VOLTAGE:.....208/230 & 460 Three phase OR 575V Three Phase

BRAKE HOLDING FORCE:.....15 Ft-Lbs

DRIVE SYSTEM

CONTINUOUS POWER RATING: .....1000 Ft-Lbs/Sec

GEAR BOX: .....Worm gear

LUBRICATION:.....Oil Bath

RATIO: 45:1

OUTPUT SPEED: .....38 rpm

DOOR SPEED: .....5" per sec. depending on door

OUTPUT SHAFT:.....1.5" Dia. with 3/8" keyway

OVERHUNG LOAD:.....1752 Lbs. (1.5" from output bearing face)

HOIST WHEEL: .....Standard mounting on left or right side.

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

ELECTRICAL

TRANSFORMER: .....3PH: 208/230/480 VAC 24VAC OR 3PH: 575VAC-24VAC

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

WIRING TYPE: .....Standard C2 Wiring- Standard operators are shipped from the factory set for C2 wiring, which requires momentary contact to open, constant pressure to close, stop on release.
Optional B2 Wiring- Which requires momentary contact to open, close and stop. See schematic diagram on page 12 for instructions on how to configure the operator for B2 wiring

Wiring for sensing device to reverse and auxiliary devices to open and close with open override.

LIMIT ADJUST: .....Rotary driven, fully adjustable screw type cams. Adjustable to 50 feet. (Provides 2 minutes of operator running time).

DUTY CYCLE:.....25 Reversing cycles per hour

DELAY ON REVERSE:.....Standard

SAFETY

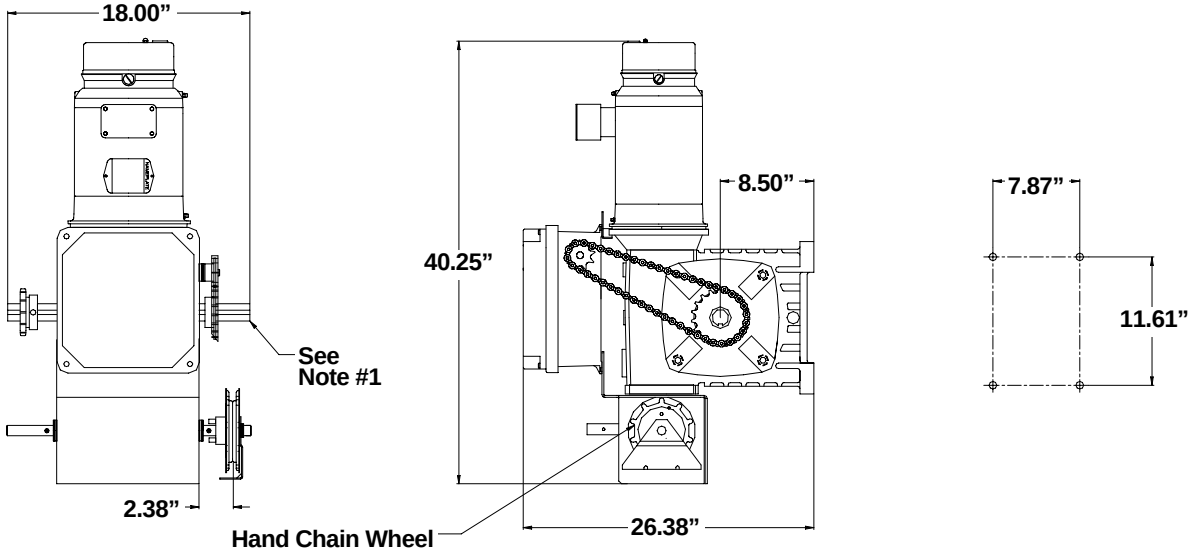
REVERSING EDGE:.....(Optional) Electric or pneumatic sensing device attached to the bottom edge of door.

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.

SHOULD THE CHAIN OR OPERATOR FAIL AS AN ADDED SAFETY FEATURE, IT IS RECOMMENDED TO USE STOP LOCK BEARINGS ON THE DOOR SHAFT TO PREVENT THE DOOR FROM CRASHING DOWN.

WEIGHTS AND DIMENSIONS

HANGING WEIGHT:.....**300 LBS.**



NOTES:

1) Output Shaft 1.5" Dia. with 3/8" Keyway.

IMPORTANT SAFETY NOTES

CAUTION

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

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

DO NOT CONNECT ELECTRIC POWER UNTIL INSTRUCTED TO DO SO.

WARNING

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

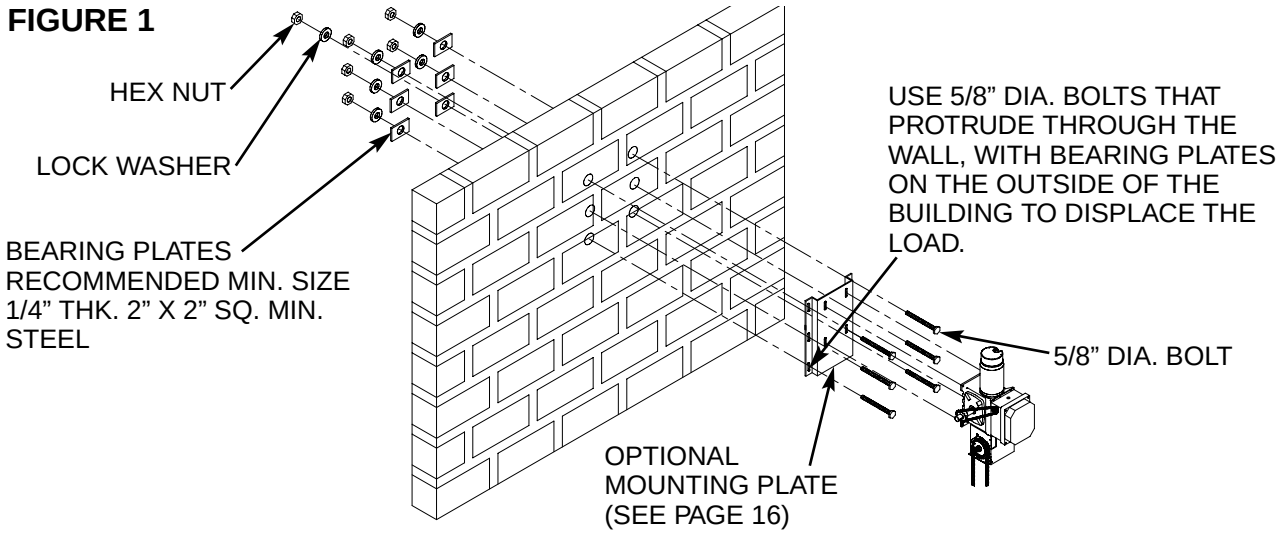
SITE PREPARATIONS

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

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

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

FIGURE 1



OPERATOR PREPARATION

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

Hand Chain Right/Left Conversion

Remove the outer snap ring securing the chain wheel assembly. In reverse of disassembly, install the chain wheel assembly on the opposite side of the gear hoist housing.

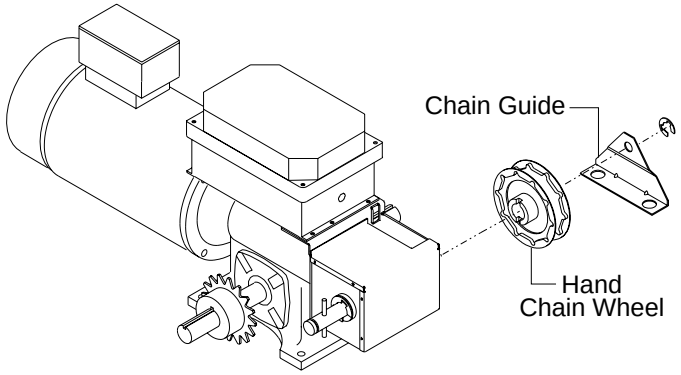
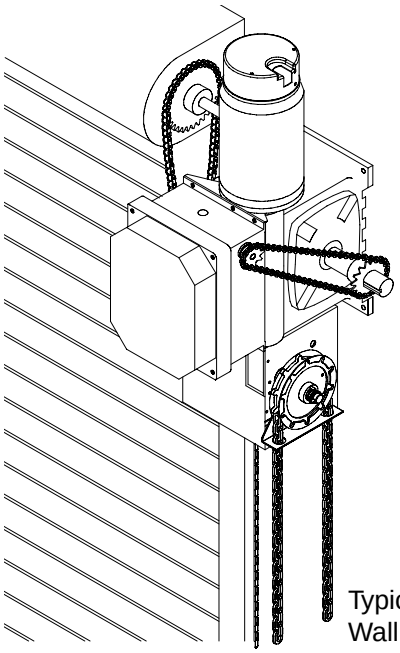


FIGURE 2

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. NOTE: The operator has a weight of 300 lbs.

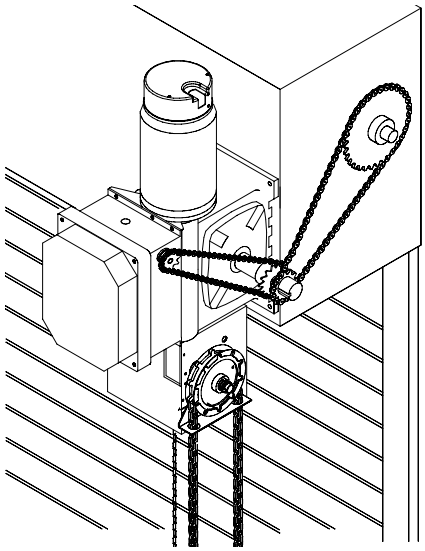
1a. **Wall Mounting**
The operator should generally be installed below the door shaft, and as close to the door as possible. Refer to Figure 3.



Typical Right Hand
Wall Mounted Operator

FIGURE 3

1b. **Bracket or Shelf Mounting**
The operator may be mounted either above or below the door shaft. 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 using suitable lifting apparatus 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).

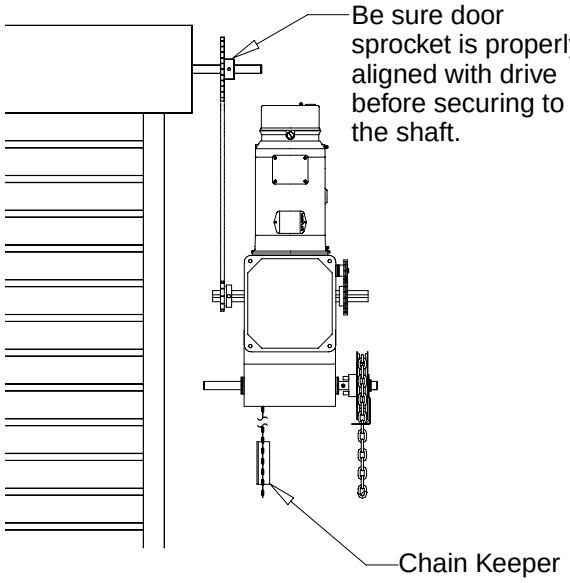
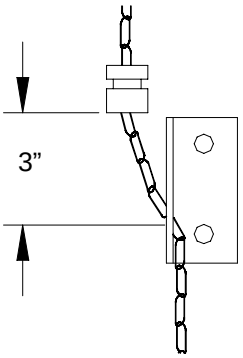


FIGURE 5

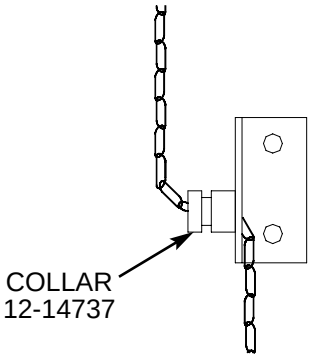
7. **Install Hand Chain**

   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. Install locking collar onto the disconnect chain. Place end through the keyhole in the chain keeper. With the disconnect chain having no slack slide collar up 3” from keyhole in the chain keeper and lock into place by tightening the set screw. Confirm that when the sash chain is pulled, the locking collar is against the chain keeper and at the same time, the bevel gears located in the operator hoist mechanism are in full engagment. If not then readjust the collar to assure full engagment. Remove excesss links if necessary.



Released Position



Engaged Position

EMERGENCY MANUAL OPERATION

This operator has provisions for manually operating the door in case of emergency or power failure.

Model GH 5HP

This operator is equipped with a manual hoist. An electrical interlock will disable the electrical controls when the hoist is used.

To operate the hoist:

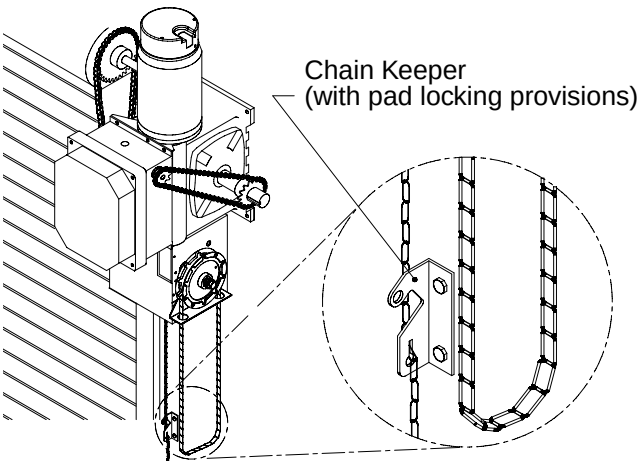
1. Pull the disconnect chain (small chain) to engage the hoist mechanism. The disconnect chain may be locked in position by slipping the end through the keyhole of the chain keeper mounted on the wall.

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.

WARNING

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



Manual Hoist

ENTRAPMENT PROTECTION ACCESSORIES (OPTIONAL)

SENSING EDGES

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

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

Important Notes:

a) Proceed with Limit Switch Adjustments before making any sensing edge wiring connections to operator as described below.

b) Electrician must hardwire the junction box to the operator electrical box in accordance with local codes.

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

WIRING:

For wiring of your sensing device to the operator, refer to the schematic 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

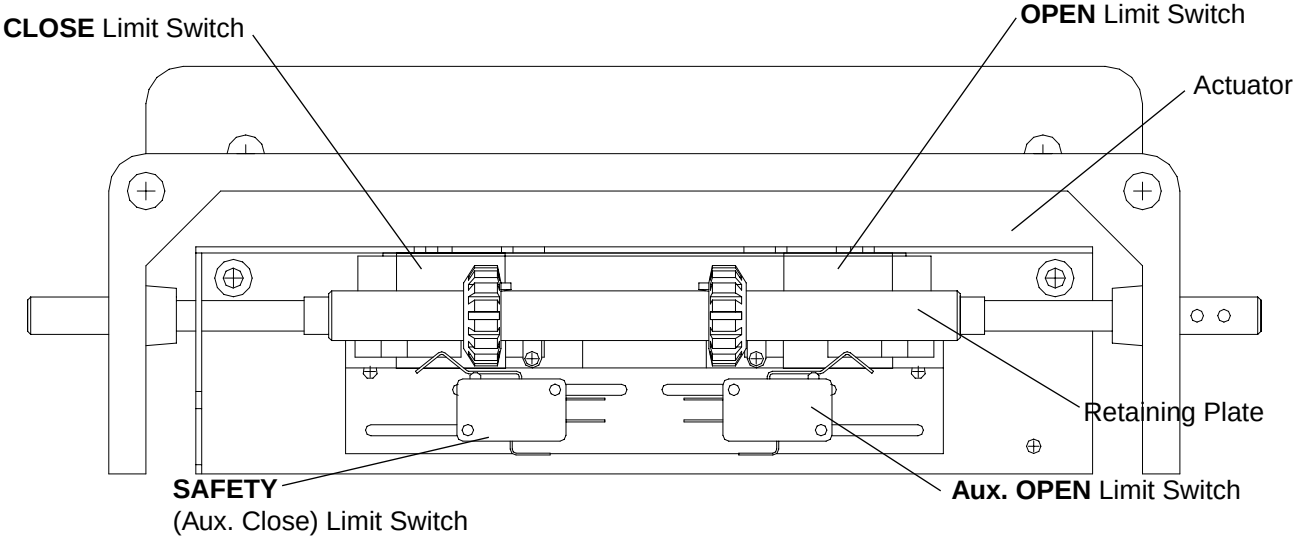
MAKE SURE THE LIMIT NUTS ARE POSITIONED BETWEEN THE LIMIT SWITCH ACTUATORS BEFORE PROCEEDING WITH ADJUSTMENTS.

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

WARNING

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

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 PERMANENTLY WIRED 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.

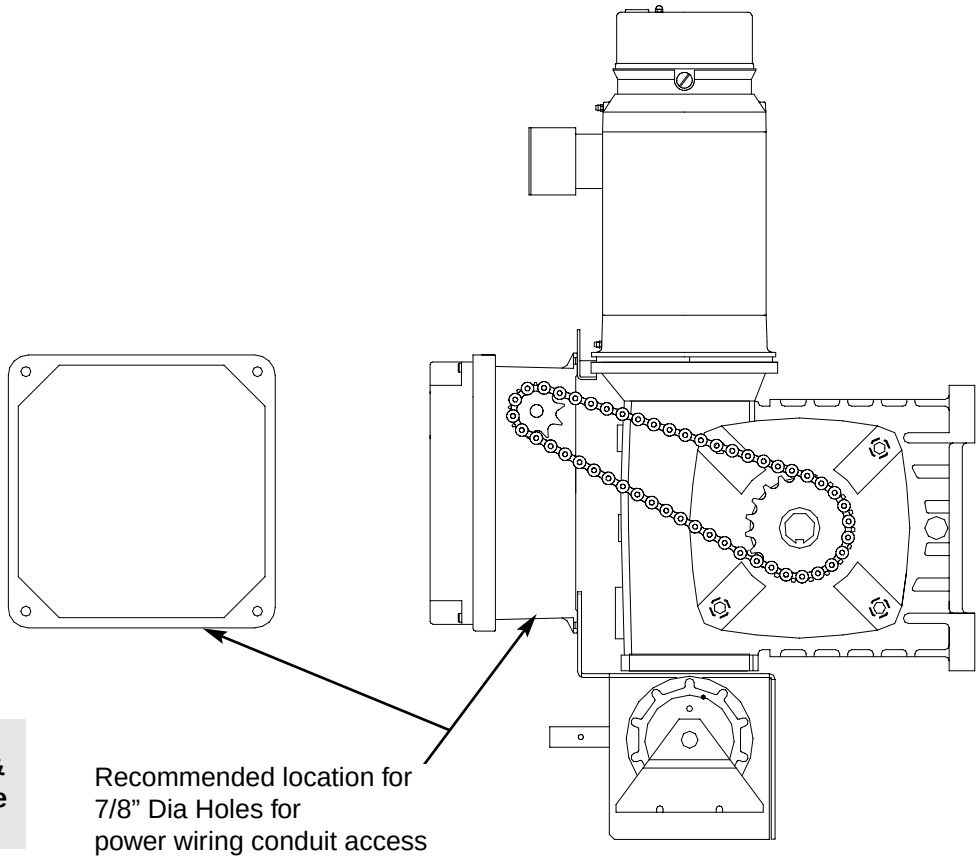
POWER WIRING

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, and motor nameplate.

2. Recommended conduit entrance to be 7/8" Dia. to be drilled by installer. Take care not to damage the internal components, see 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.

IMPORTANT: 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.



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

Recommended location for 7/8" Dia Holes for power wiring 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

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.

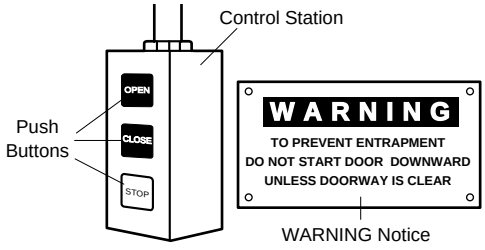
LOCATING THE CONTROL STATION
All operators are supplied with some type of control station. Generally a three button station (OPEN/CLOSE/STOP) is provided. A two-position key switch or control station (OPEN/CLOSE) may be added or substituted when requested at the time of order. Mount the control station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



Radio Controls

On all models with type B2 control wiring, a terminal block marked R1 R2 R3 is located in the inside of the electrical enclosure. All standard radio control receivers may be used. 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 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.

CONNECT REVERSING EDGE DEVICE (OPTIONAL)

WARNING

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 PERSONAL INJURY OR DEATH TO PERSONS TRAPPED BENEATH THE DOOR.

The operator has been pre-wired to accept connection of a reversing edge device. Connect the normally open contacts to terminals T4 and T8 on the low voltage terminal block. A cut-off switch will de-activate the safety device during the last few inches of the door's downward travel.

NOTICE:
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

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.

MAINTENANCE SCHEDULE

Check at the intervals listed in the following chart.

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

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

✔ **Repeat ALL procedures.**

- **Motor grease fitting to be greased every 12,000 Hrs. of Motor operation. Recommended grease for standard service conditions is Polyrex EM (Exxon Mobile).**
- **Inspect and service whenever a malfunction is observed or suspected.**
- **CAUTION: BEFORE SERVICING, ALWAYS DISCONNECT OPERATOR FROM POWER SUPPLY.**

HOW TO ORDER REPAIR PARTS

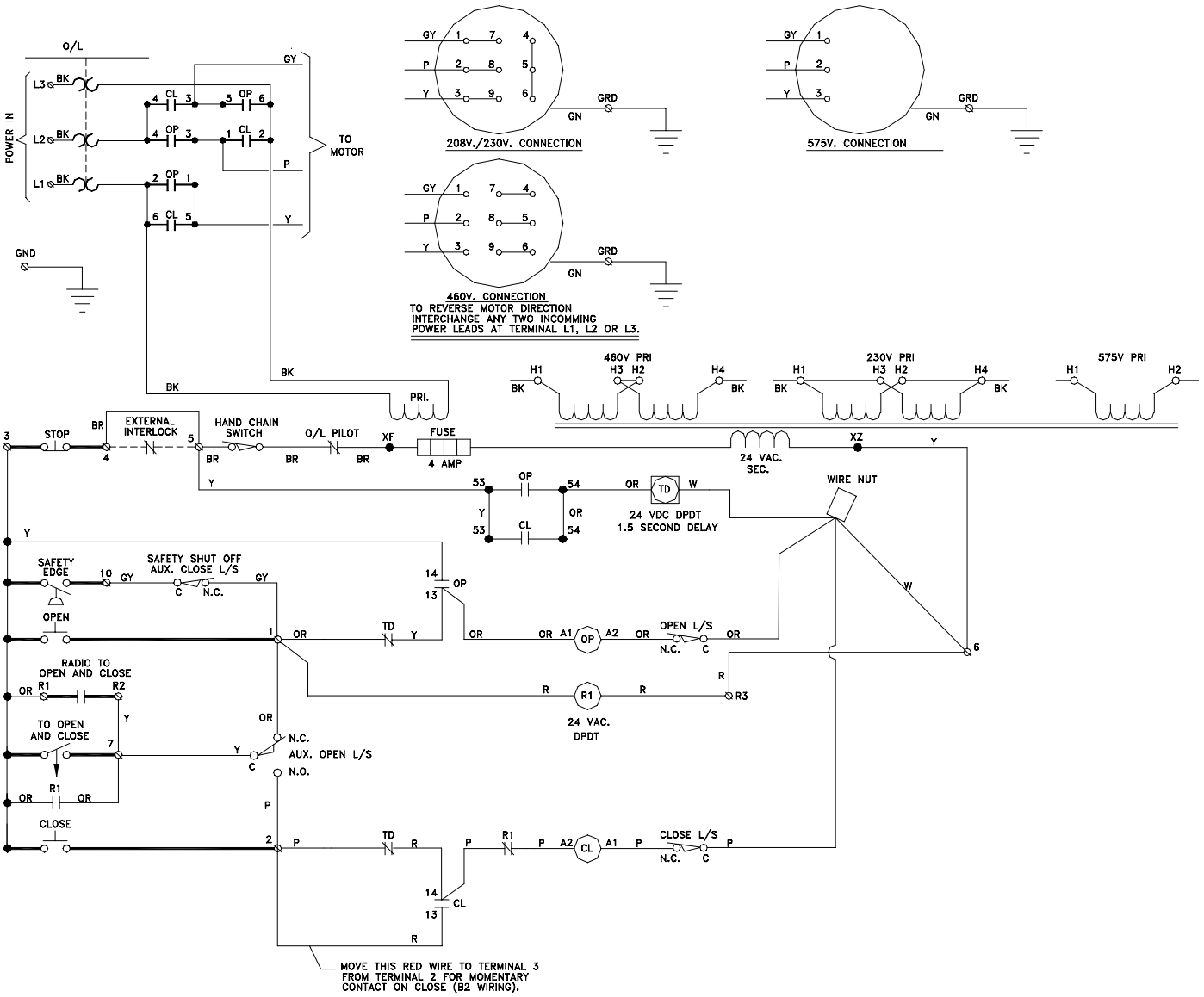
OUR LARGE SERVICE ORGANIZATION
SPANS AMERICA
INSTALLATION AND SERVICE INFORMATION
ARE AVAILABLE 6 DAYS A WEEK
CALL OUR TOLL FREE NUMBER - 1-800-528-2806
HOURS 7:00 TO 3:30 p.m. (Mountain Std. Time)
MONDAY Through SATURDAY

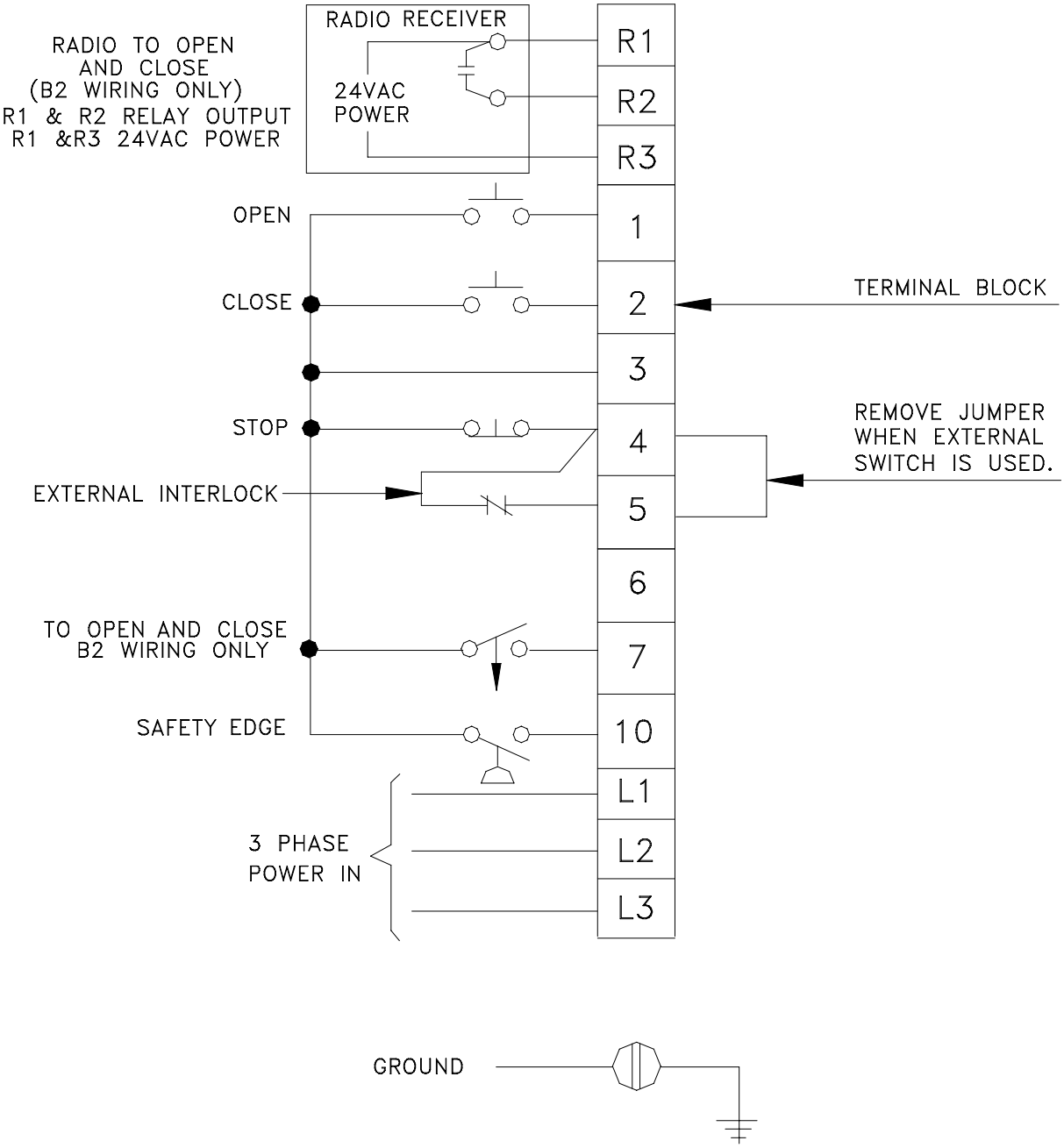
WHEN ORDERING REPAIR PARTS
PLEASE SUPPLY THE FOLLOWING INFORMATION:
PART NUMBER DESCRIPTION MODEL NUMBER

ADDRESS ORDER TO:

THE CHAMBERLAIN GROUP, INC.
Electronic Parts & Service Dept.
6020 S. Country Club Road
Tucson, AZ 85706

THREE PHASE SCHEMATIC DIAGRAM 1942





ATTENTION ELECTRICAN

WE RECOMMEND THE USE OF 16 GAUGE OR HEAVIER WIRE FOR ALL CONTROL CIRCUIT WIRING.

REPAIR PARTS KITS – ELECTRICAL BOX

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 KITS

Item	P/N	Description	Qty
1	03-8224-D	Contactor	1
2	03-ABDIN-4	Din Rail	1
3	10-10477-1	Electrical Panel (Reworked)	1
4	21-xxxx	Transformer 230/460V 3 HP	1
5	24-24-1	24VAC DPDT Relay	1
6	24-264-4	24VDC DPDT Relay	1
7	25-xxxx	(See Overloads)	1
8	27-8002-D	Contact Block	2
9	35-204	Fuse 4 Amp 125V	1
10	42-114	Terminal Block, 14 Position	1
11	44-18194	Enclosure 12 x 10 x 6	1
12	80-10054	Washer, #8 Terminal	1
13	82-HS10-06	Screw, #10-32 x 3/8” Long	4
14	82-PX08-04T	Screw, #8-32 x 1/4” Long	8
15	82-PX08-10T	Screw, #8-32 x 11/16” Long	6
16	82-WS08-06G	Screw, #8-32 x 3/8” Long	2
17	85-FW-10	Flatwasher, #10	4
18	85-LS-10	Lockwasher, #10	4

Overloads

25-4018-D	Overload	Model GH5HP23M
25-4010-D	Overload	Model GH5HP43M
25-4008-D	Overload	Model GH5HP53M

Transformers

21-3460-1	Model GH5HP23M & Model GH5HP43M
21-3575-1	Model GH5HP53M

Electrical Box Kits

74-17965	Model GH5HP23M
74-17966	Model GH5HP43M
74-18081	Model GH5HP53M

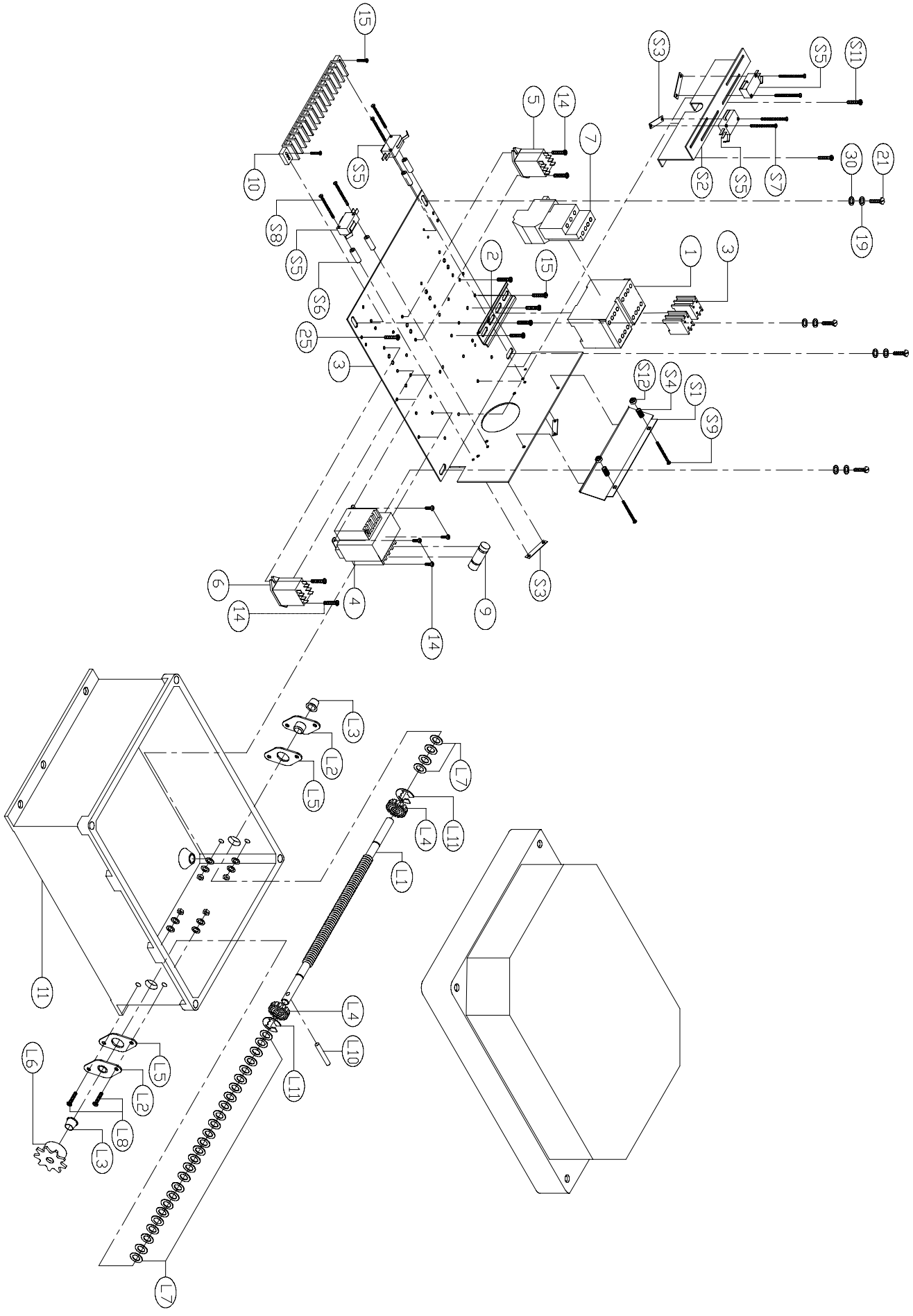
K74-18346 LIMIT SHAFT ASSEMBLY KIT

Item	P/N	Description	Qty
L1	11-10480	Limit Shaft	1
L2	12-10481	Flange Bearing	2
L3	12-10483	Bearing Seal, 3/8” I.D.	2
L4	13-10024	Limit Nut	2
L5	13-10516	Neoprene Gasket	2
L6	15-48B18AXX	Sprocket 48B18 x 3/8” Bore	1
L7	80-10026	Washer, Shim	32
L8	82-PX08-10T	Screw, #8-32	4
L9	84-FN-08	Nut , #8-32 Serrated Flange	4
L10	86-RP04-100	Roll Pin, 1/8 DIA. x 1” Long	1
L11	87-E-038	E Ring, 3/8”	2

K72-18345 LIMIT SWITCH ASSEMBLY KIT

Item	P/N	Description	Qty
S1	10-10476	Depress Plate	1
S2	10-10478	Aux. L/S Mtg. Bracket	1
S3	10-12553	Nut Plate, Switch	4
S4	18-10036	Spring, Depress Plate	2
S5	23-10041	Limit Switch	4
S6	31-12378	Standoff, Limit Switch	4
S7	82-PX04-12	Screw, #4-40 x 3/4” Long	4
S8	82-PX04-20	Screw, #4-40 x 1-1/2” Long	4
S9	82-PX06-16	Screw, #6-32 x 1” Pan Hd Phillips	2
S10	82-PX08-04T	Screw, #8-32 x 1/4” Long	2
S12	84-LH-06	Locknut, #6-32 Nylon Hex	2

ILLUSTRATED PARTS – ELECTRICAL BOX



REPAIR PARTS KITS – MODEL GH 5HP

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	09-17985	32 Degree Stop Block	1
2	09-17986	0 Degree Stop Block	1
3	09-17989	Wedge	2
4	10-17940	Elec. Box Mounting Bracket	1
5	10-17984	Interlock Bracket	1
6	10-17988	Housing-Gear Hoist	1
7	10-17990	Cover Gear Hoist	1
8	15-48B18TKK	Sprocket, 48B18 TKK	1
9	15-100B15TKK	Sprocket, 100B15 TKK	1
10	23-10916	SPDT Interlock Switch	1
11	32-17914-1	Gear Reducer	1
12	44-18194	Electrical Box	1

K09-17987-1 ENGAGEMENT LEVER ASSEMBLY

ITEM	PART #	DESCRIPTION	QTY
L1	09-17987-1	Engagement Lever	1
L2	10-17983	Interlock Actuator	1
L3	12-18052	Radial Ball Bearing	2
L4	31-18054	Spacer	2
L5	80-10022	Shim Washer	6
L6	82-SH31-10S	Shoulder Bolt 3/8” Body x 5/8” Long	4

K75-18323 CHAIN WHEEL ASSEMBLY KIT

ITEM	PART #	DESCRIPTION	QTY
C1	10-10882	Hand Chain Guide	1
C2	12-10883	Nyliner Bearing	1
C3	75-10884	Chain Wheel Assembly	1
C4	80-10022	Shim Washer	1
C5	87-E-075	E Ring, 3/4”	1

K75-13344 CHAIN ASSY/ BRAKE RELEASE KIT

ITEM	PART #	DESCRIPTION	QTY
R1	18-18190	Safety Draw-Bar Extension Spring	1
R2	80-11646	Double Sleeve	2
R3	80-1012	S-Hook	2
R4	82-18077	Hex Bolt-Modified	1
R5	84-FN31	Hex Nut, Serrated Flange 5/16-18	1
R6	85-FW-31	Flat Washer For 5/16 Bolt	1
R7	96-3575	Braided Cable	1

OPTIONAL ACCESSORIES

PART #	DESCRIPTION
50-18084	Mounting Bracket Kit

Motors

20-3500C-4B	Model GH5HP23M & Model GH5HP43M
20-3500C-5B	Model GH5HP53M

K75-18324 HAND CHAIN SHAFT KIT

ITEM	PART #	DESCRIPTION	QTY
H1	08-17694-1	Bevel Gear	1
H2	08-17695-1	Bevel Gear	1
H3	11-18051	Shaft	1
H4	12-10029	Flanged Bearing	2
H5	18-9301	Compression, Spring	1
H6	31-18053	Spacer	1
H7	80-10022	Shim Washer, .050 Thk.	2
H8	80-10026	Shim Washer, 3/8” I.D. x .010 Thk.	5
H9	86-DP06-104	Dowel Pin 3/16 Dia. x 1.25 Long	1
H10	86-RP08-112	Roll Pin, 1/4” x 1-3/4” Long	1
H11	86-RP10-208	Roll Pin, 5/16” x 2-1/2” Long	2
H12	87-E-075	E-Ring, 3/4”	3

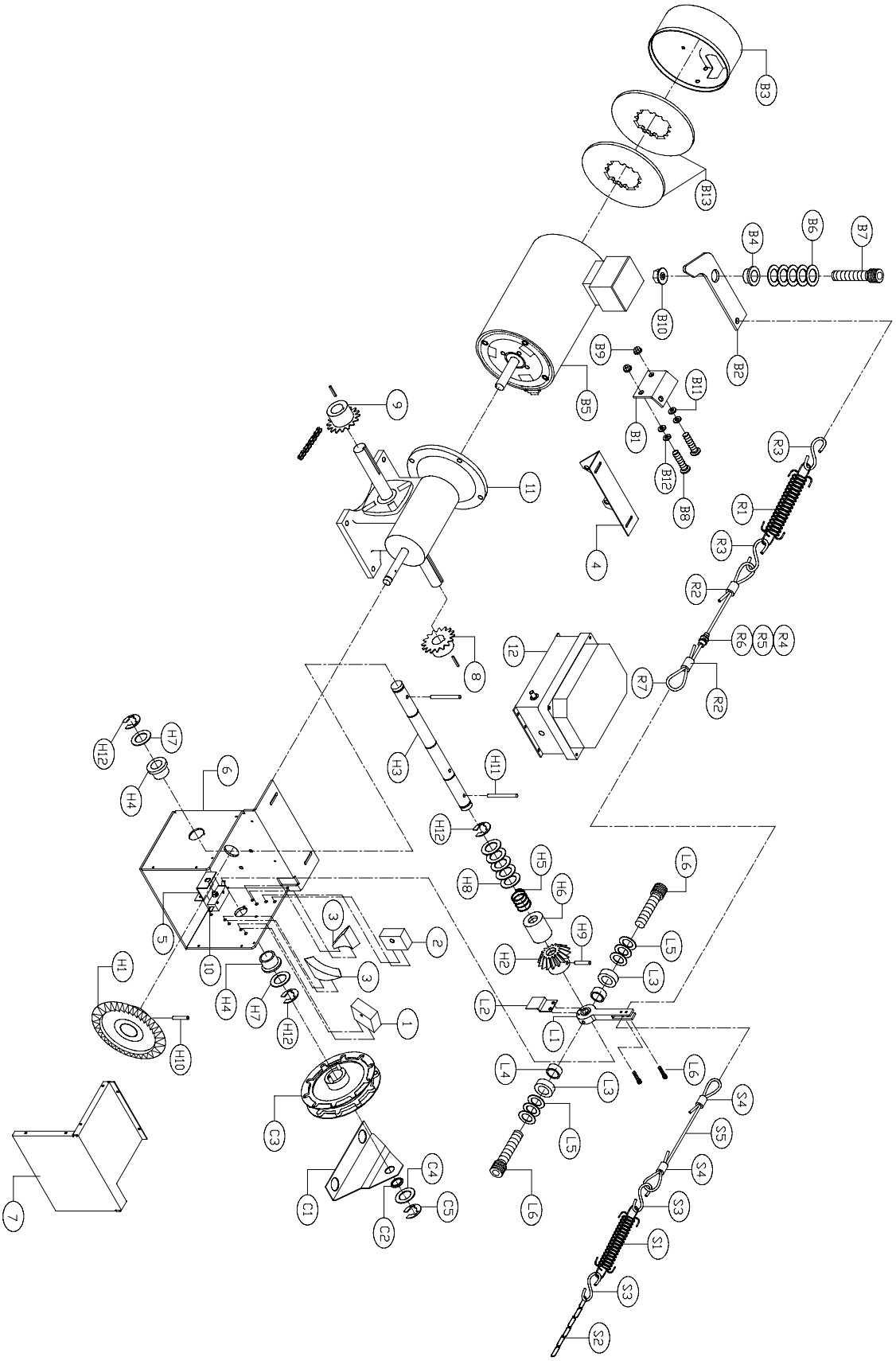
K75-18180 MOTOR BRAKE ASSEMBLY KITS

ITEM	PART #	DESCRIPTION	QTY
B1	10-17996	Brake Release Bracket	1
B2	10-17997	Brake Motor Release Arm	1
B3	10-18057	Motor, Brake Cover (Reworked)	1
B4	12-18074-1	Flanged Bearing (Reworked)	1
B5	20-xxxx	(See Motors)	1
B6	80-10026	Shim Washer	5
B7	82-SH31-06S	Shoulder Bolt 3/8” Body x 3/8”Long	1
B8	82-PX25-10	Pan Head Screw 1/4-20 x 5/8 Long	2
B9	84-FN-25-2	Hex Nut, Serrated Flange 1/4-20	2
B10	84-FN-31	Hex Nut, Serrated Flange 5/16-18	1
B11	85-FW-25	Flat Washer for 1/4 Dia. Bolt	2
B12	85-LS-25	Lock Washer for 1/4 Dia. Bolt	2
B13	39-18086	Friction Disc Kit	1

K75-18075 CHAIN ASSY/ CABLE - SASH KIT

ITEM	PART #	DESCRIPTION	QTY
S1	18-13343	Safety Draw-Bar Extension Spring	1
S2	19-17160	Sash Chain-12’	1
S3	80-1012	S-Hook	2
S4	80-11646	Double Sleeve	2
S5	96-3575	Braided Cable	1

ILLUSTRATED PARTS – MODEL GH 5HP



OPERATOR NOTES

OPERATOR NOTES

CONTROL CONNECTION DIAGRAM

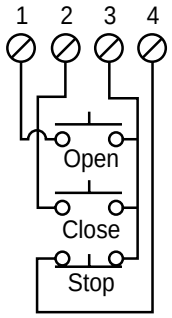
IMPORTANT NOTES:

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 termianls 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.

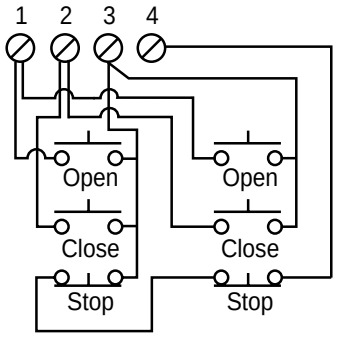
3 BUTTON STATION or 3 POSITION KEYSWITCH w/ SPRING RETURN TO CENTER AND STOP BUTTON

STANDARD



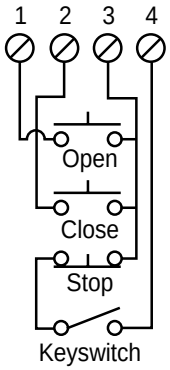
ALL CONTROL WIRING TYPES

2 OR MORE



ALL CONTROL WIRING TYPES

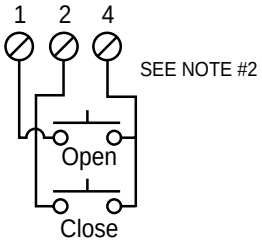
KEY LOCKOUT



ALL CONTROL WIRING TYPES

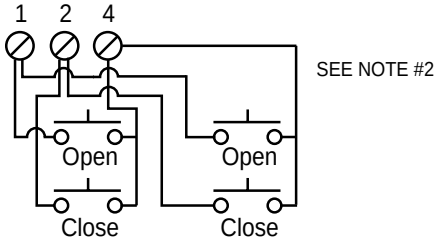
2 BUTTON STATION or 3 POSITION KEYSWITCH w/ SPRING RETURN TO CENTER

STANDARD



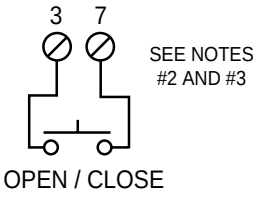
ALL CONTROL WIRING TYPES

2 OR MORE



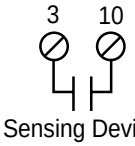
ALL CONTROL WIRING TYPES

1 BUTTON STATION or ANY AUXILIARY DEVICE



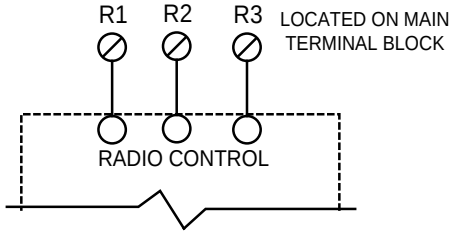
B2 WIRING TYPES ONLY

SENSING DEVICE TO REVERSE OR STOP



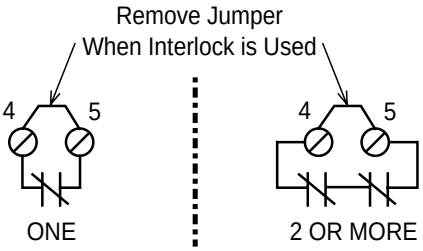
ALL CONTROL WIRING TYPES

RADIO CONTROLS



B2 WIRING TYPES

EXTERNAL INTERLOCK



ALL CONTROL WIRING TYPES