

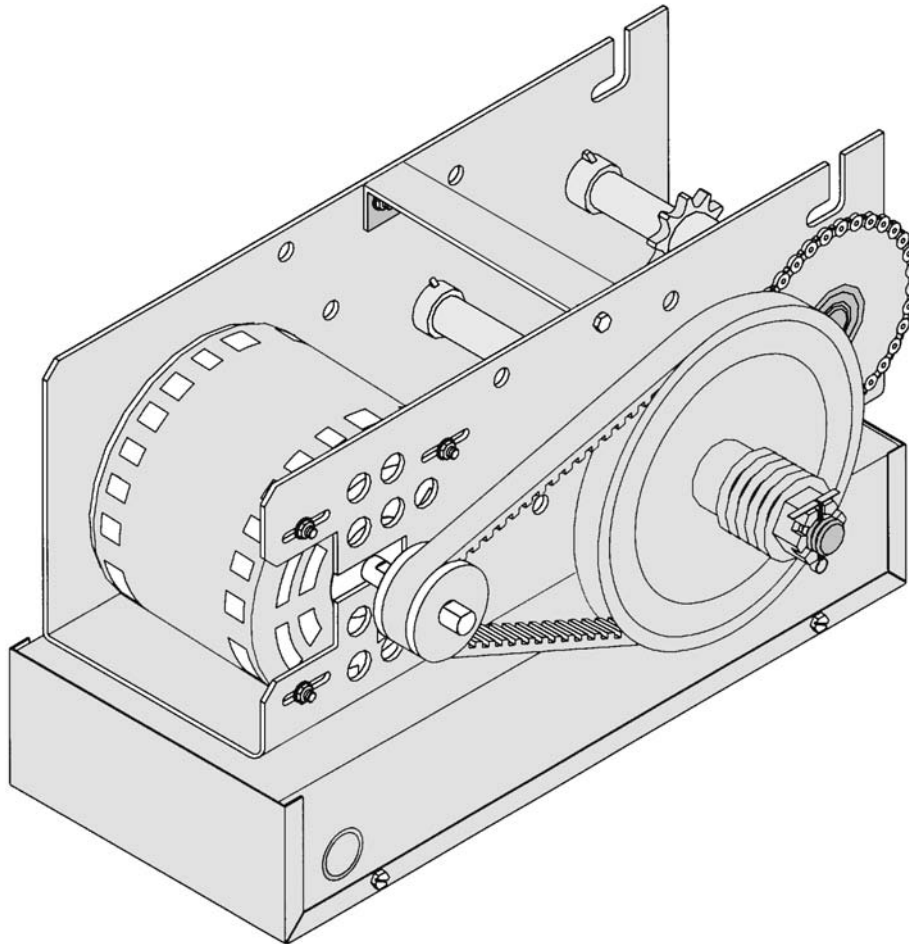
# OWNER'S MANUAL

# MODEL MT

## MEDIUM DUTY DOOR OPERATOR

FACTORY SET  
**C2 Wiring**

See page 11 for  
other wiring  
configurations



## INTENDED FOR PROFESSIONAL INSTALLATION ONLY

Visit [www.LiftMaster.com](http://www.LiftMaster.com) to locate a professional installing dealer in your area.

**2 YEAR WARRANTY**

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

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

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

**NOT FOR RESIDENTIAL USE**

**A SAFETY DEVICE IS HIGHLY RECOMMENDED**



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### **WARNING**

**Mechanical**

### **WARNING**

**Electrical**

### **CAUTION**

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

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

### IMPORTANT NOTES:

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

# OPERATOR SPECIFICATIONS

## MOTOR

**TYPE:** .....Intermittent duty  
**HORSEPOWER:** .....1/2 Horsepower  
**SPEED:** .....1000 RPM  
**VOLTAGE:** .....115V, 1 Phase, 60Hz 230V, 1 Phase, 50Hz  
**CURRENT:** .....See motor nameplate

## ELECTRICAL

**TRANSFORMER:** .....24Vac  
**CONTROL STATION:** .....NEMA 1 three button station.  
 OPEN/CLOSE/STOP  
**WIRING TYPE:** .....C2 (Factory Shipped)  
 Momentary contact to OPEN & STOP, constant pressure to  
 CLOSE, plus wiring for sensing device to reverse. See page 11  
 for control wiring options.  
**LIMIT ADJUST:** .....Linear driven, fully adjustable  
 screw type cams.

## MECHANICAL

**DRIVE REDUCTION:** .....Primary: Heavy duty (4L) V-Belt.  
 Secondary: #48 chain/sprocket. Output: #48 chain  
**OUTPUT SHAFT SPEED:** .....108 R.P.M.  
**DOOR SPEED:** .....Approximately 9" (22.86 cm) per sec.  
 depending on door  
**BRAKE (Optional):** .....Solenoid actuated disc brake  
**BEARINGS:** .....IronCopper sintered and oil impregnated.

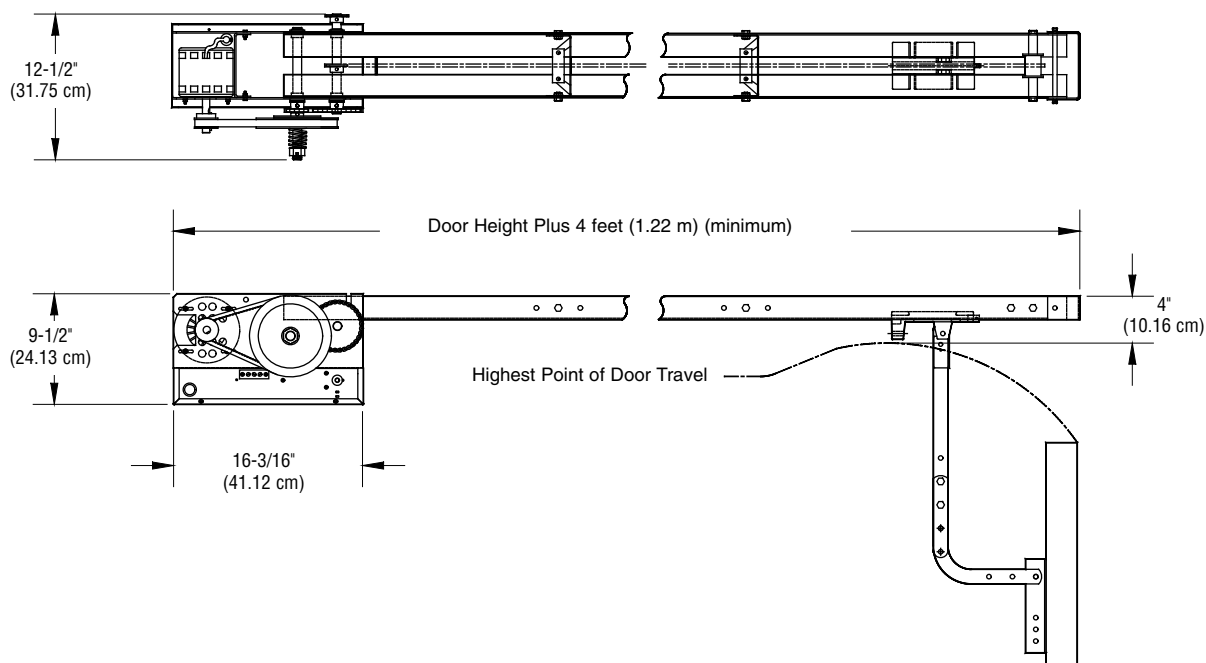
## SAFETY

**DISCONNECT:** .....Quick disconnect door arm for  
 emergency manual door  
 operation.  
**SENSING DEVICE:** .....Accepts photo electric controls  
 such as CPS, or an electric / pneumatic sensing edge can be  
 attached to the bottom edge of door.  
 A sensing device 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.

# OPERATOR DIMENSIONS

## WEIGHTS AND DIMENSIONS

**HANGING WEIGHT:80-110 LBS. (36.29-49.9 kg)**



# PREPARATION

## TRACK ASSEMBLY

1. Using the 3/8"-16 x 3/4" bolts and flange hex nuts provided, assemble the operator track by installing and tightening the track spacer brackets. Position the spacers evenly over the length of the track. **NOTE:** The nylon pad on the spacer bracket should face up.
2. Using (2) 3/8"-16 x 1" bolts and lock washers, install the front idler assembly to the second set of holes of one end of the track. Refer to the illustration below.
3. Slide the trolley carriage onto the track so that the take-up bolt will be toward the operator.

## POWERHEAD ATTACHMENT

1. Position the track assembly on the frame of the powerhead so that the motor side of operator is in back (away from door).
2. Loosely install two 3/8"-16 x 3/4" bolts and nuts in third hole from the end of the track.
3. Align the track so that the bolts inserted in step 2 line up with the L-Slots in the frame.
4. Connect the track to the powerhead by fastening two 3/8"-16 x 3/4" bolts and nuts through the frame and the end holes in track. Tighten all four bolts to secure the track to the powerhead.

## ⚠️ WARNING

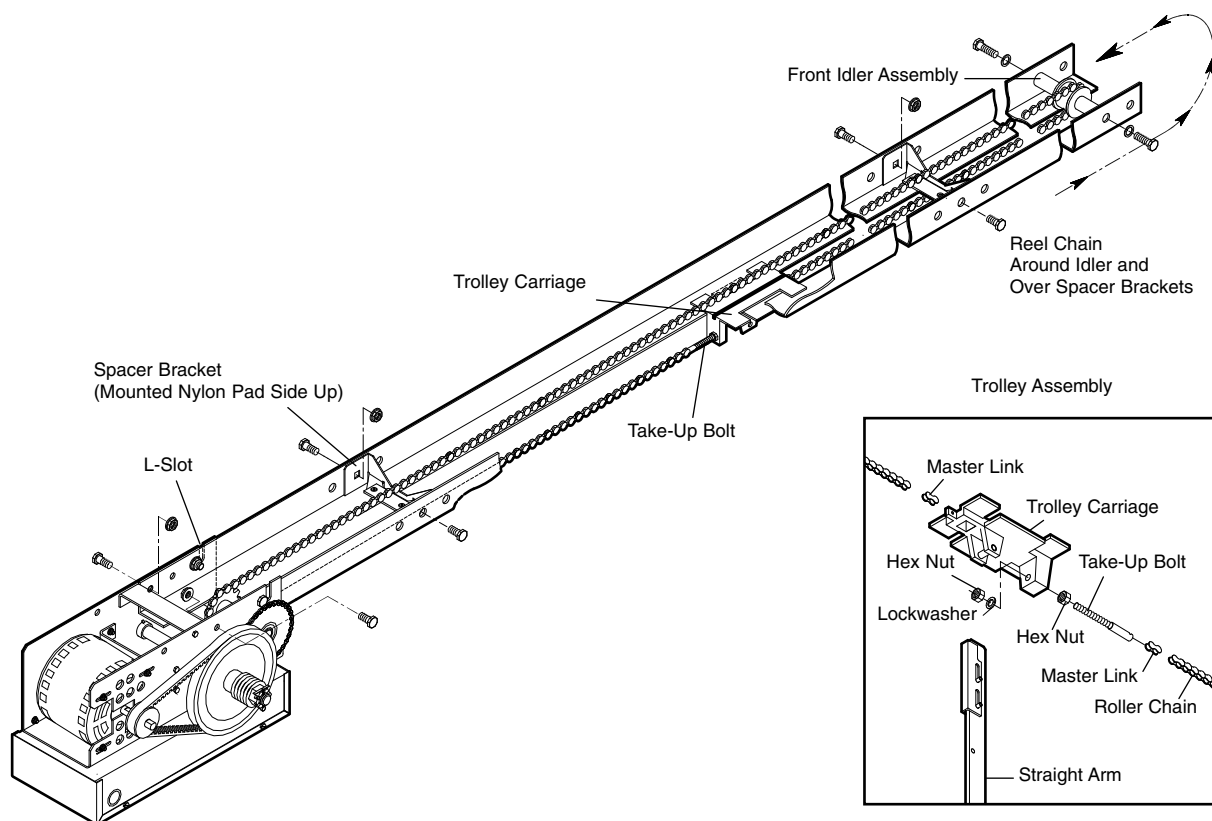
To prevent possible SERIOUS INJURY or DEATH:

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

## TROLLEY CARRIAGE / CHAIN ATTACHMENT

1. Attach the take-up bolt to the trolley carriage using 3/8"-16" hex nuts and lock washer, as shown below.
2. Using one of the master links, attach the chain to the other end of the trolley carriage. Reel the chain around the front idler shaft, over the spacer brackets, back to the drive shaft sprocket, and then to the take-up bolt on the carriage.
3. Using the other master link, attach the chain to the take-up bolt and tighten to the desired chain tension.

**Chain Tension:** With trolley positioned at either end of the track, a properly adjusted chain will sag about 3" (7.62 cm) at the mid-point. If necessary, remove links from the chain to achieve proper adjustment.



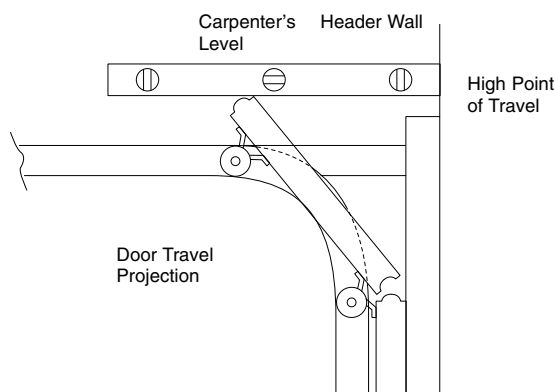
# INSTALLATION

**IMPORTANT NOTE:** Before the operator is installed, be sure the door has been properly aligned and is working smoothly. Although each installation will vary due to particular building characteristics, refer to the following general procedures to install the operator.

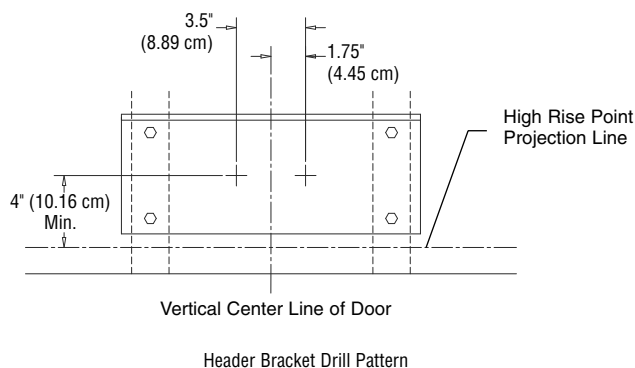
## MOUNT HEADER BRACKET

The trolley operator is generally mounted over the center of the door. However, off center mounting may be required due to interfering structures or location of door stile / top section support. In such cases, the operator may be mounted up to 24" (60.96 cm) off center on torsion spring doors. Extension springs require center mounting.

1. Locate the center of the door and mark a line on the wall directly above the door. Extend this line up the wall.
2. Determine the highest point of door travel. Slowly raise the door and observe the action of the top section. When the top section reaches its highest point, use a level and project a line from this point to the center line the of the door.

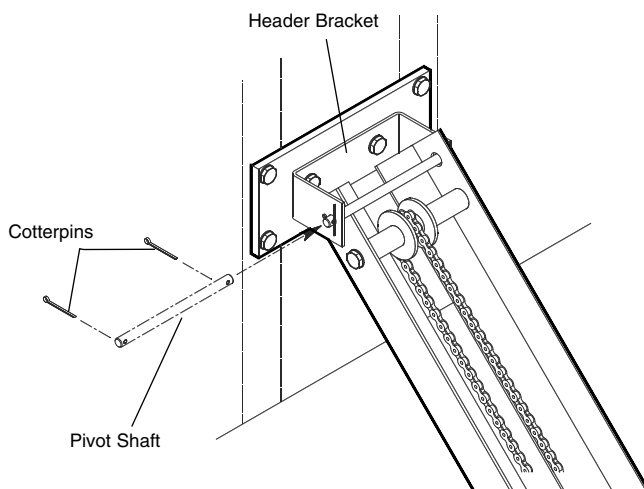


3. Using the projected lines for location, mount a suitable wood block or length of angle iron to the wall above the door opening. Refer to the illustration below. This will provide a mounting pad for the front header bracket of the operator. If necessary reinforce the wall with suitable mounting brackets to ensure adequate support of mounting pad. Using suitable hardware, mount the (U-shaped) front header bracket to the pad.

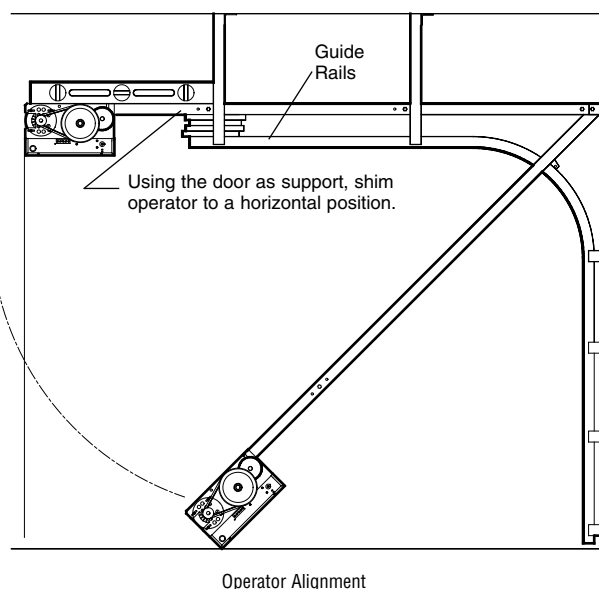


## MOUNT OPERATOR

1. Allowing the motor to rest on the floor, raise the front end of the track assembly to the front header bracket and fasten using the 3/8" dia. x 6.40" long pivot shaft and cotterpins provided.



2. Swing the operator to a horizontal position above the guide rails and temporarily secure with a suitable rope, chain, or support from the floor. Now open garage door slowly, being careful not to dislodge the temporary support. Using the door as a support, place a level against the rail and shim the operator until it is horizontal. Make sure that the operator is aligned with the center line of the door.



# INSTALLATION

## HANG THE OPERATOR

1. The illustration below shows a typical method of hanging the operator from the ceiling. Each installation may vary, but in all cases side braces should be used for additional strength.
2. For mounting of the support brace(s) to the powerhead. Four holes (clearance up to 3/8" bolts) are located on each side of frame.
3. Check to make sure the track is centered over the door (or in line with the header bracket if the bracket is not centered above the door).

**NOTE:** If the operator is longer than 15' (4.57 m) use of a mid-span support is recommended.

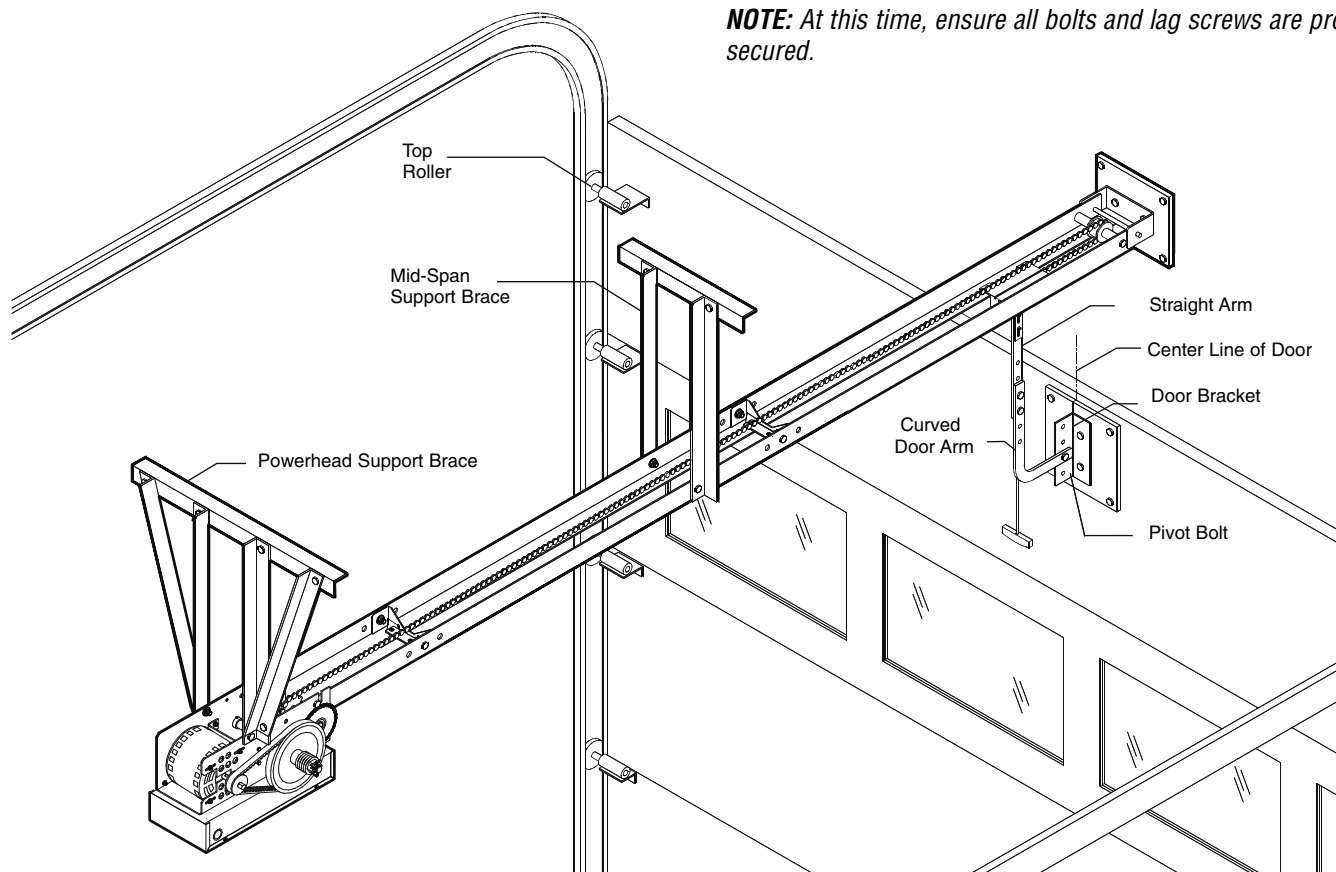
## ⚠ WARNING

To avoid possible **SERIOUS INJURY** from a falling operator, fasten it **SECURELY** to structural supports of the garage. Concrete anchors **MUST** be used if installing **ANY** brackets into masonry.

## STRAIGHT ARM ATTACHMENT

1. Fully close the door and move the trolley slider to within 2" (5.08 cm) of the front idler.
2. Latch the straight door arm to the fixed roll pin in the trolley carriage. Make sure the open side of notch on the arm faces the doorway.
3. Attach the door bracket to the door arm using the 3/8"-16 x 1" bolt and nylon locking nut provided. Leave the nut and bolt loose enough to allow the two pieces to pivot freely.
4. Using 3/8" hardware provided, bolt the curved door arm to the straight arm, aligning the mounting holes in such a way that the door bracket pivot bolt will be in line with the top rollers on the door.
5. Position the door bracket to the center line on the door. Using suitable hardware, attach the door bracket to the door. Many installations, except solid wood doors, will require additional support for the door. Refer to the illustration below.

**NOTE:** At this time, ensure all bolts and lag screws are properly secured.



# INSTALLATION

## 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.*

## WARNING

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

**TAKE-UP REEL:** Take-up reel should be installed 12" (30.48 cm) above the top of the door.

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

# ADJUSTMENT

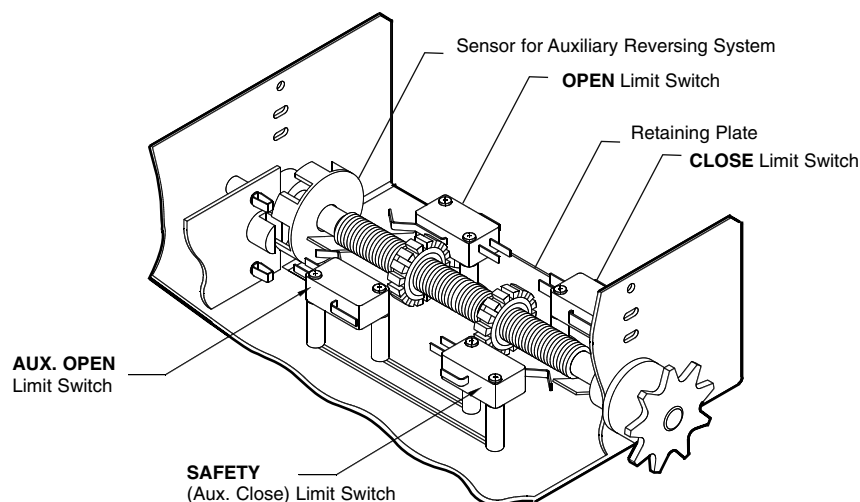
## LIMIT SWITCH ADJUSTMENT

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

1. Depress retaining plate to allow nut to spin freely. After adjustment, release plate and move nut back and forth to ensure it is fully seated in slot.
2. To **increase** door travel, spin nut **away** from limit switch. To **decrease** door travel, spin limit nut **toward** limit switch.
3. Adjust open limit nut so that door will stop in open position with the bottom of the door even with top of door opening.
4. Repeat steps 1 and 2 for close cycle. Adjust close limit nut so that the limit switch is engaged as door fully seats at the floor.

## WARNING

To avoid SERIOUS PERSONAL INJURY or DEATH from electrocution, disconnect electric power BEFORE manually moving limit nuts.

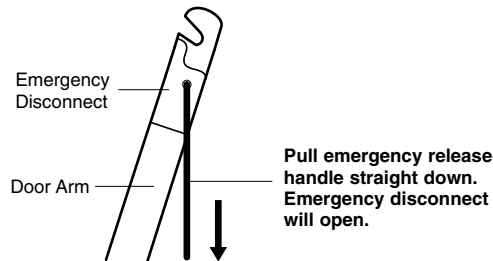


# ADJUSTMENT

## EMERGENCY DISCONNECT SYSTEM

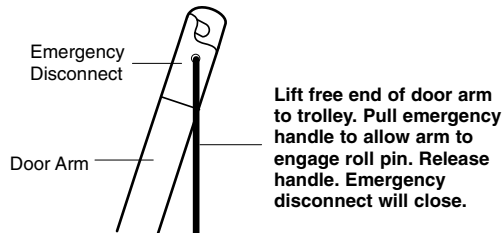
### TO DISCONNECT DOOR FROM OPERATOR

The door should be in the fully closed position if possible. Pull down on the emergency release handle (so that the trolley release arm snaps into a vertical position) and lift the door manually. The lockout feature prevents the trolley from reconnecting automatically, and the door can be raised and lowered manually as often as necessary.



### TO RECONNECT DOOR ARM TO TROLLEY

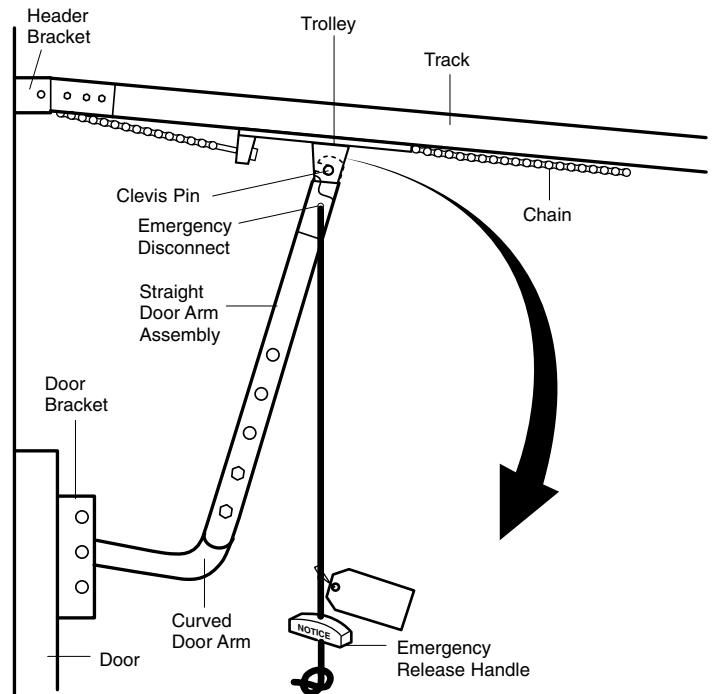
Pull the emergency release handle toward the operator at an angle so that the trolley release arm is horizontal. The trolley will reconnect on the next UP or DOWN operation, either manually or by using the door control or remote.



## ⚠ WARNING

To prevent possible **SERIOUS INJURY** or **DEATH** from a falling door or arm:

- **DO NOT** stand under the door arm when pulling the emergency release.
- If possible, use emergency release handle to disengage trolley **ONLY** when door is **CLOSED**. Weak or broken springs or unbalanced door could result in an open door falling rapidly and/or unexpectedly.
- **NEVER** use emergency release handle unless doorway is clear of persons and obstructions.



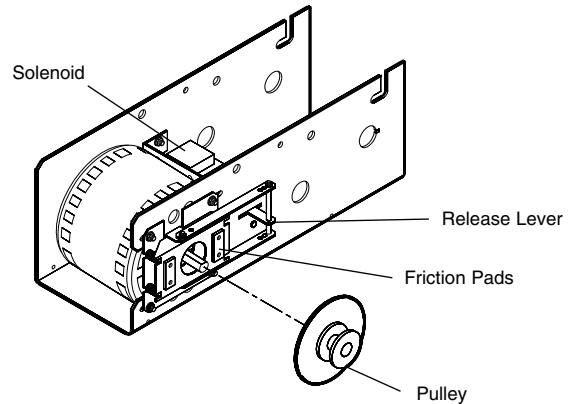


# ADJUSTMENT

## BRAKE ADJUSTMENT

A solenoid brake is an optional modification. If provided, the brake is adjusted at the factory and should not need additional adjustment for the the life of the friction pad.

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



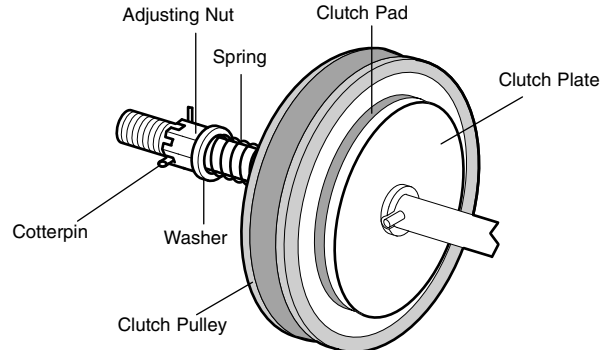
## CLUTCH ADJUSTMENT AND AUXILIARY REVERSAL SYSTEM

The **Auxiliary Reversal System** is designed to protect the door and motorized operator. It is NOT a substitute for a safety sensing device. The Auxiliary Reversal System works in tandem with the adjustable clutch to detect if a closing door runs into or comes across an obstruction. If an obstruction is met and causes the clutch to slip, the Auxiliary Reversal System will return the door to the full open position when closing or stops the door when opening.

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

## ! WARNING

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



# POWER WIRING

## **WARNING**

To reduce the risk of SEVERE INJURY or DEATH:

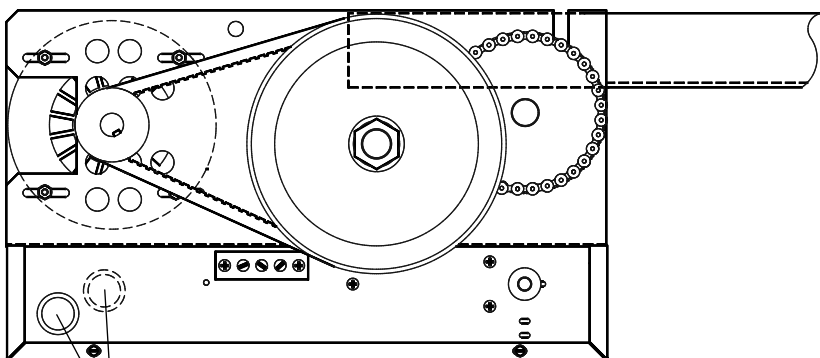
- ANY maintenance to the operator or in the area near the operator **MUST NOT** be performed until disconnecting the electrical power and locking-out the power via the operator power switch. Upon completion of maintenance the area **MUST** be cleared and secured, at that time the unit may be returned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

## **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.

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.



Two 7/8" and 1-1/16" Knockouts  
(1 each side) for Control and Power Wiring

# CONTROL STATION 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.

### Constant pressure on close (C2 wiring)

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

### Momentary contact on close (B2 wiring)

Move RED wire from terminal block #12 to terminal #2. The operator will require only momentary contact to close the door.

## SPECIAL CONTROL WIRING

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

## ⚠ WARNING

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

SPECIAL CONTROL WIRING DIAGRAM		WI
This Operator has Control Wiring.	<input type="checkbox"/>	Wiring Type
SUPPLEMENTAL WIRING DIAGRAM(S)		
REPLACEMENT WIRING DIAGRAM		
<p><b>Note:</b> Supplemental Wiring Diagrams are to be used in addition to 1742-1. Replacement Wiring Diagram is to be used in place of 1742-1</p>		

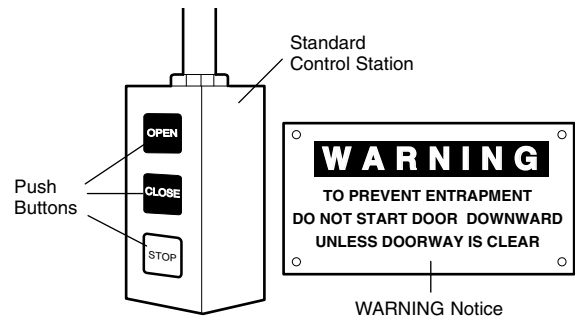
Wiring Diagram label on inside cover of electrical box

## MOUNT WARNING NOTICE

### LOCATING THE CONTROL STATION

All operators are provided 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.

**IMPORTANT:** Mount WARNING NOTICE beside or below the push button station. Mount control station(s) within line of sight of door(s).



# CONTROL STATION WIRING

## ***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**

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

## ***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.

## TESTING AND MAINTENANCE

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 7 for fine adjustment of the limit switches.

### IMPORTANT NOTES:

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

### **WARNING**

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

## MAINTENANCE SCHEDULE

Check at the intervals listed in the following chart:

ITEM	PROCEDURE	EVERY 3 MONTHS	EVERY 6 MONTHS	EVERY 12 MONTHS
Drive Chain	Check for excessive slack. Check and adjust as required. Lubricate.	●●		◆
Sprockets	Check set screw tightness.	●		◆
Clutch	Check and adjust as required.		●	◆
Belt	Check condition and tension.		●	◆
Fasteners	Check and tighten as required.		●	◆
Manual Disconnect	Check and operate.		●	◆
Bearings and Shafts	Check for wear and lubricate.	●●		◆

### **WARNING**

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

### ◆ Use SAE 30 Oil (Never use grease or silicone spray).

- Do not lubricate motor. Motor bearings are rated for continuous operation.
- Do not lubricate clutch or V-belt.

### ◆ Repeat ALL procedures.

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

## HOW TO ORDER REPAIR PARTS

OUR LARGE SERVICE ORGANIZATION SPANS AMERICA

Installation and service information are available.

Call our TOLL FREE number:

**1-800-528-2806**

[www.liftmaster.com](http://www.liftmaster.com)

**FIG. 10-10**

(OPTIONAL) LIGHT  
MAX. 100W

(OPTIONAL) BIMETAL RELAY

WIRE NUT

CLOSE-B

RES.

CAPACITOR

MOTOR \*

WIRE NUT

PR1.

24VAC. SEC.

10VA. Y/BK

STOP

MOVE JUMPER WIRE TO TERMINAL #2 FOR MOMENTARY CONTACT ON CLOSE

OPEN

SAFETY EDGE

AUX. CLOSE L/S

RPM SENSOR BOARD

PULL SWITCH TO OPEN & CLOSE

CLOSE

OPEN L.S.

AUX. OPEN L/S

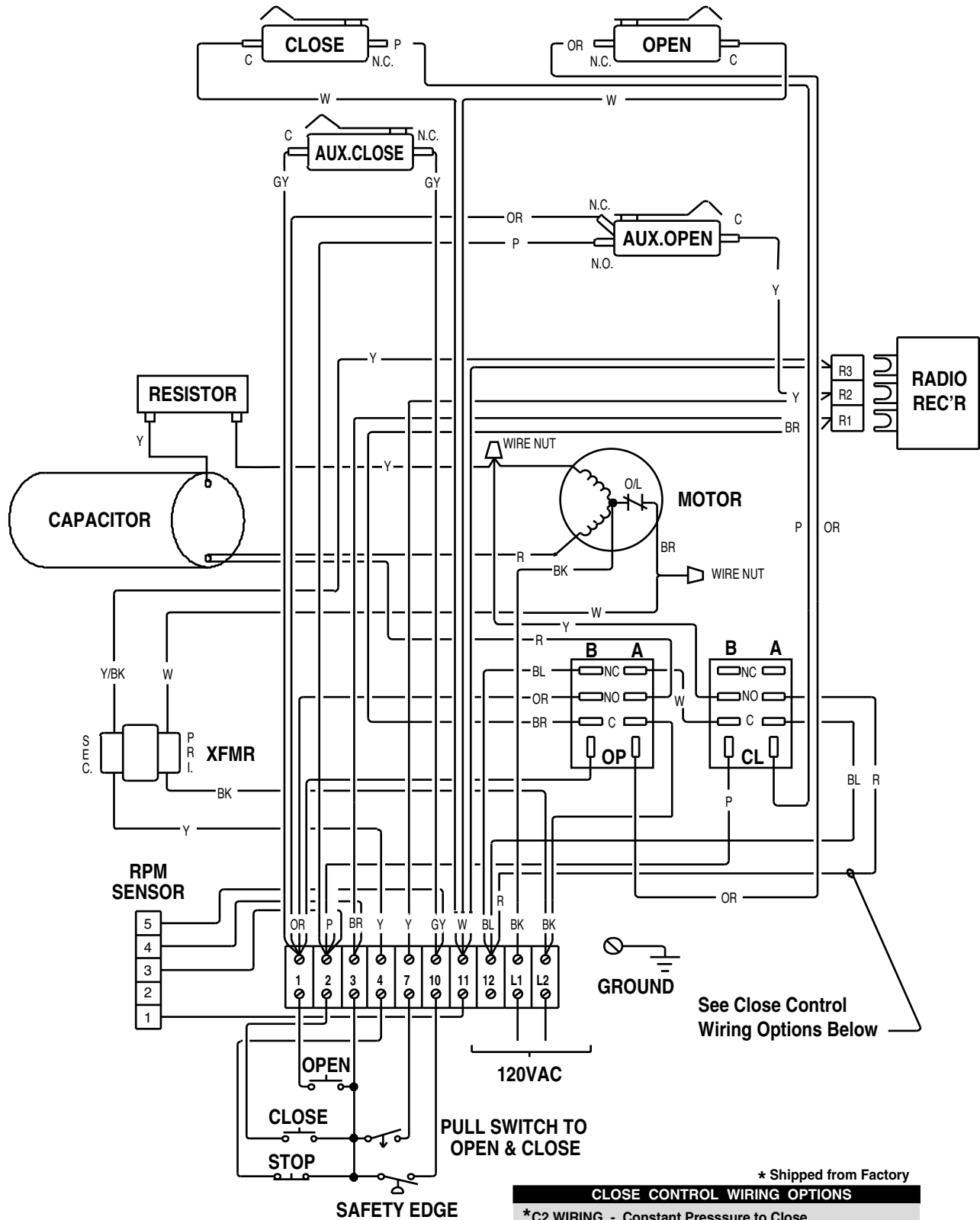
CLOSE L/S

FIG. 10-11

14

# WIRING DIAGRAM FOR MT5011 • 1753

TO REVERSE MOTOR DIRECTION,  
INTERCHANGE RED & YELLOW WIRES.

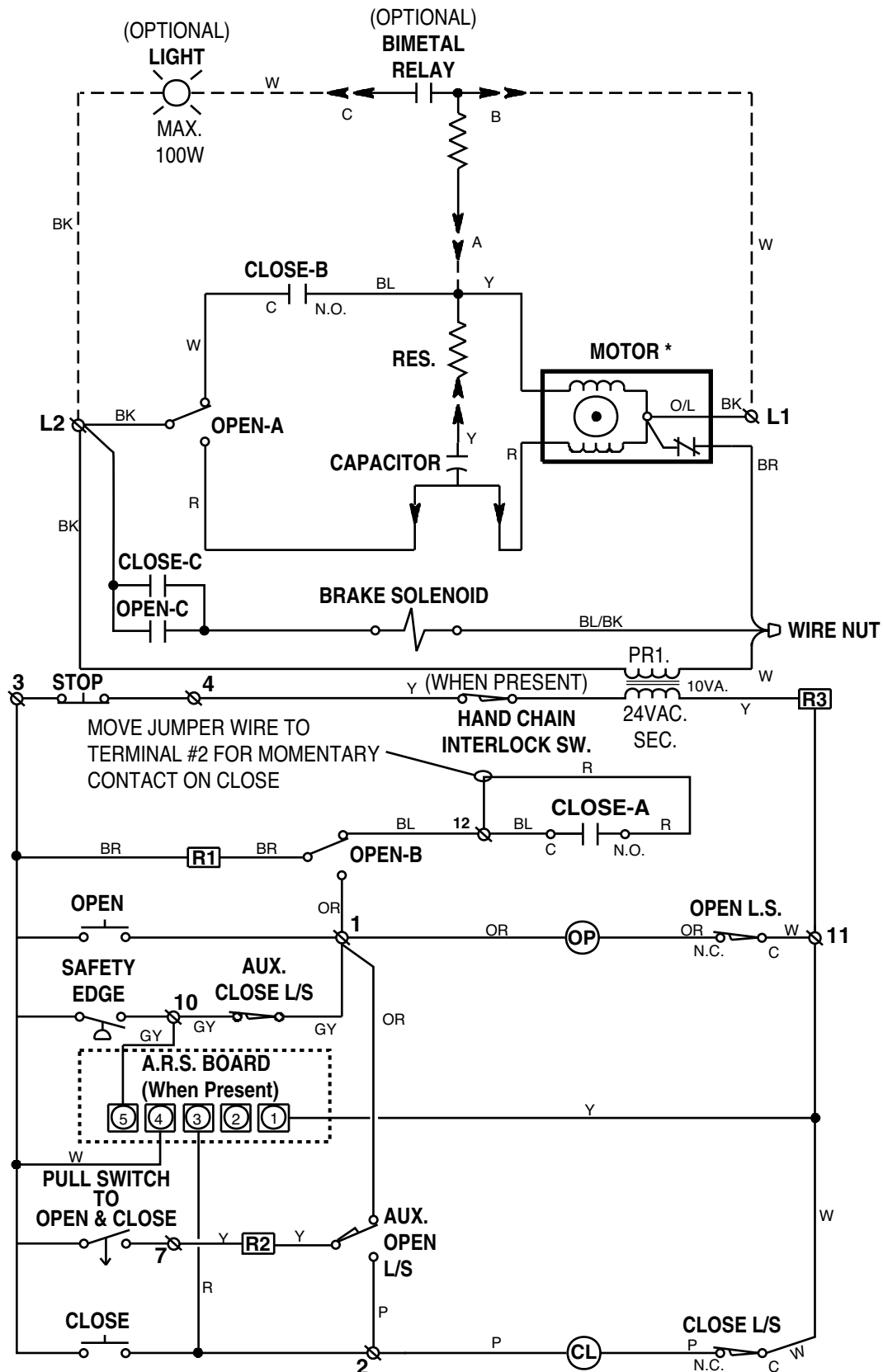


\* Shipped from Factory

## CLOSE CONTROL WIRING OPTIONS

\*C2 WIRING - Constant Pressure to Close  
RED WIRE ON TERMINAL #12 (Shipped from Factory)  
B2 WIRING - Momentary Contact to Close  
MOVE RED WIRE FROM TERMINAL #12 TO TERMINAL #2

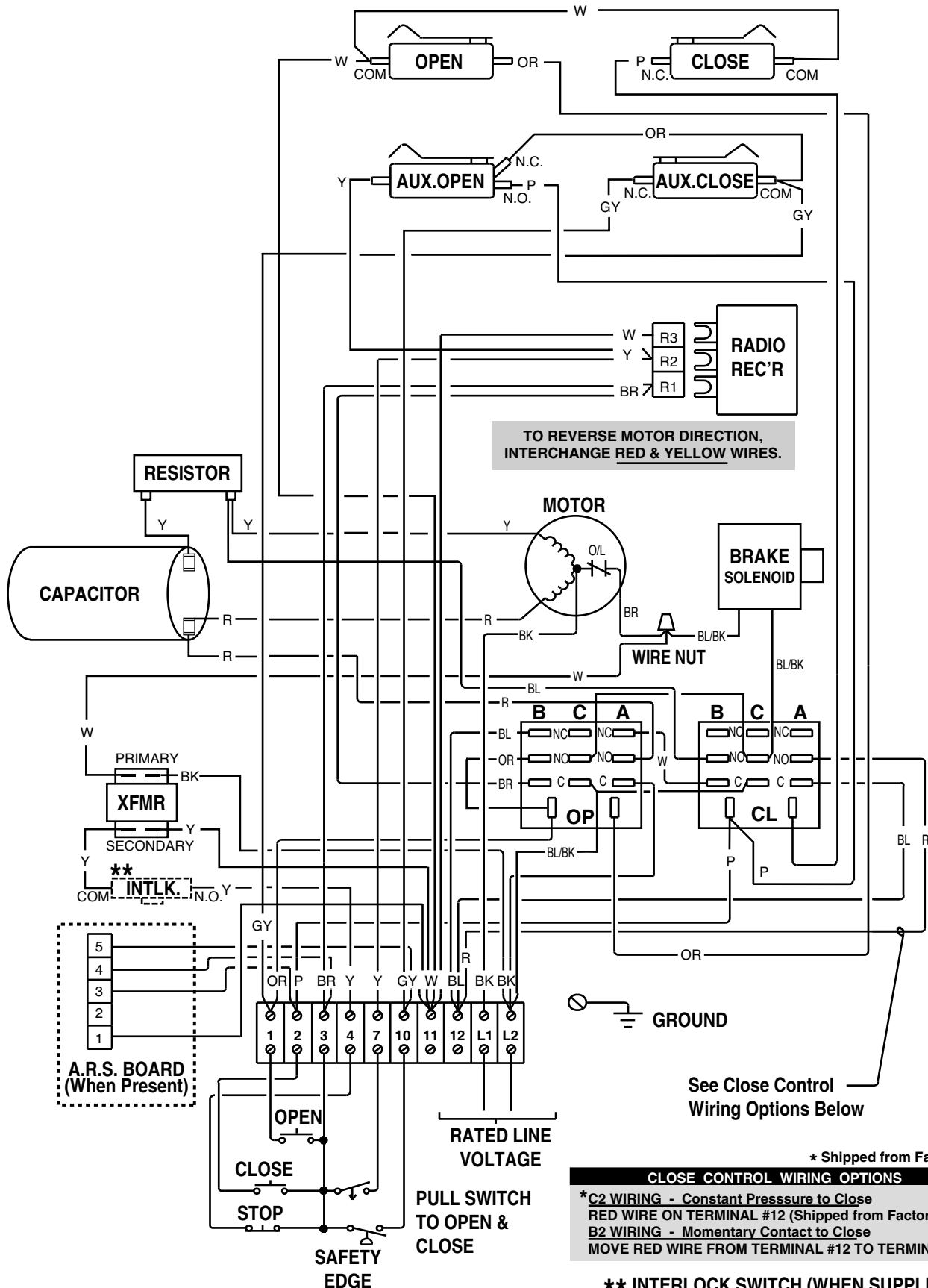
# SCHEMATIC DIAGRAM FOR BMT5011 • 1754



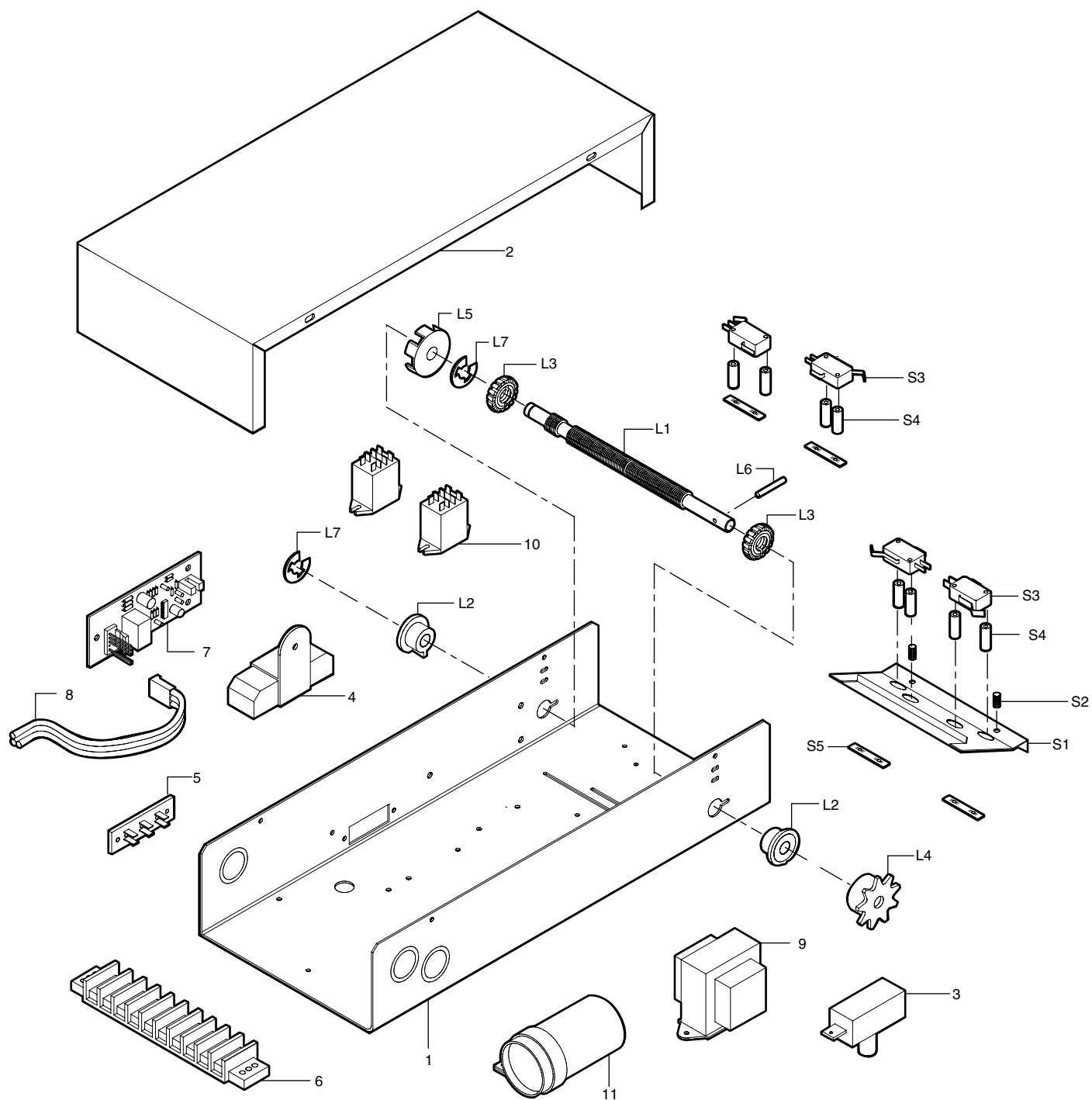
\* TO REVERSE MOTOR ROTATION, INTERCHANGE RED AND YELLOW MOTOR WIRES.



# WIRING DIAGRAM FOR BMT5011 • 1754



# ELECTRICAL BOX



## REPAIR PARTS - 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 13 for all repair part ordering information.

### Complete Electrical Box

K-MT5011	Model MT5011, 115V Single Phase
K-MT5025	Model MT5025, 230V 50Hz
K-BMT5011	Model BMT5011, 115V Single Phase
K-BMT5025	Model BMT5025, 230V 50Hz

### Motor Kits

K20-5150LD	Models MT5011, BMT5011
K20-5250LD	Models MT5025, BMT5025

### Electrical Box Sub-Assemblies

K72-12487	Limit Shaft Assembly
K75-12493	Limit Switch Assembly
K75-12489	Auto Reversal System(ARS) PCB

#### INDIVIDUAL PARTS

ITEM	PART #	DESCRIPTION	QTY
1	10-10315	MT Electrical Box	1
2	10-10316	MT Electrical Box Cover	1
3	23-10916	SPDT Interlock Switch (Not on MT)	1
4	29-2	Resistor, 2 Ohm	1
5	42-10040	Terminal Assembly 3 Lug	1
6	42-110	10 Position Terminal Block	1
7	71-10345	RPM Sensor Board (MT Only)	1
8	74-10352	RPM Sensor Board Harness	1
9	(See Var. Comp.)	Transformer	1
10	(See Var. Comp.)	Relay, 24V	2
11	(See Var. Comp.)	Motor Capacitor	1
		<b>Not Shown</b>	
	31-10350	Standoff	
	K75-12489	MT Auto Reversal System (ARS) Logic	

#### VARIABLE COMPONENT KITS

PART #	DESCRIPTION	MT5011	MT5025	BMT5011	BMT5025
13-10024	Limit Nut	•	•	•	•
23-10041	Limit Switch	•	•	•	•
29-2	Resistor, 2 Ohm	•	•	•	•
21-10340	Transformer, 115V	•		•	
21-5230	Transformer, 230V		•		•
29-10338	Capacitor, 70MFD	•		•	
29-12110	Capacitor, 20MFD		•		•
24-24-1	Relay, DPDT	•	•		
24-24-6	Relay, 3PDT			•	•

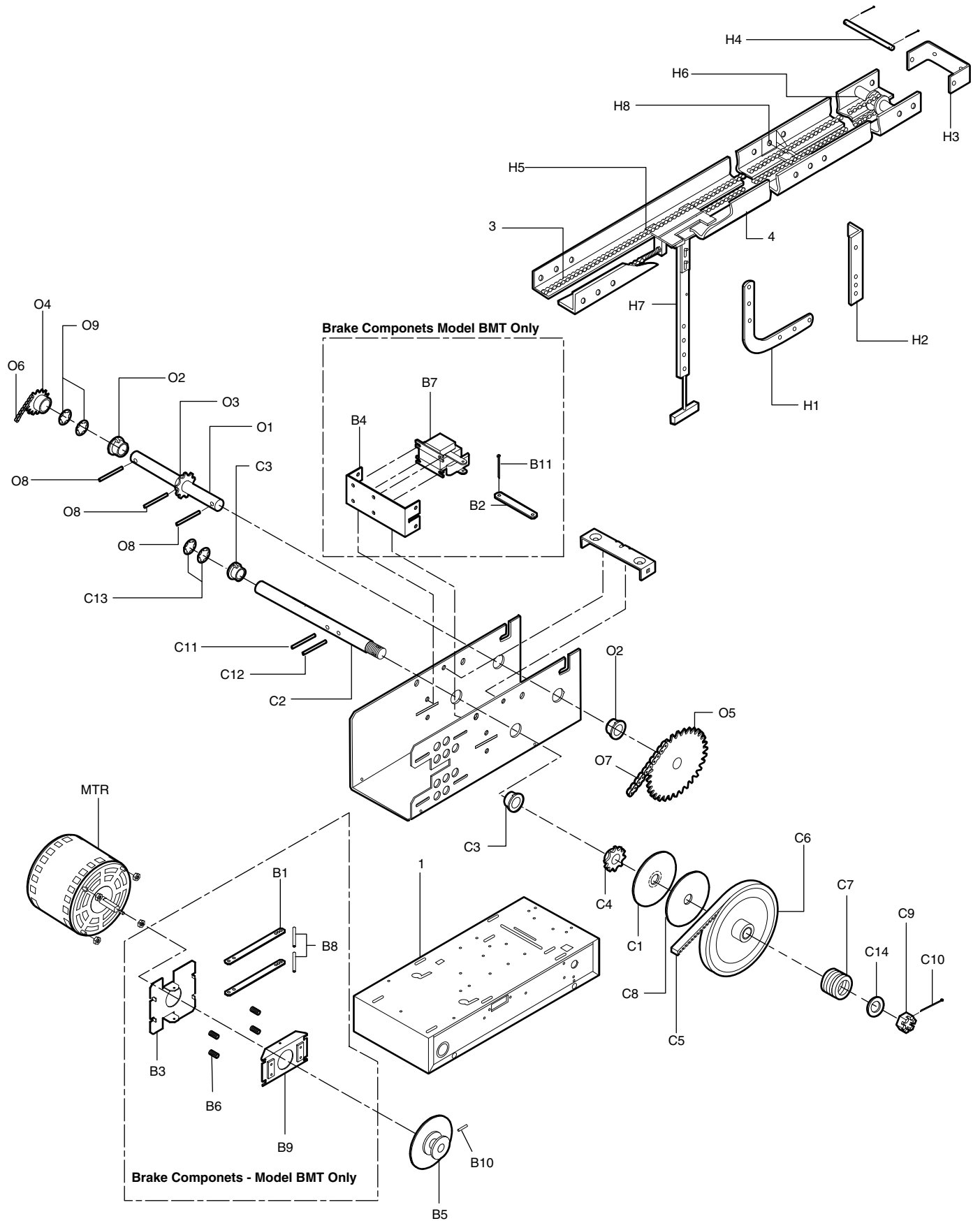
#### K75-12493 • LIMIT SWITCH ASSEMBLY KIT

ITEM	PART #	DESCRIPTION	QTY
S1		Depress Plate	1
S2		Spring, Depress Plate	2
S3	23-10041	Limit Switch	4
S4		Standoff, Limit Switch	8
S5		Nut, Double Tinnerman	4

#### K72-12487 • LIMIT SHAFT ASSEMBLY KIT

ITEM	PART #	DESCRIPTION	QTY
L1	11-10321	Limit Shaft	1
L2		Flange Bearing 3/8" I.D.	2
L3	13-10024	Limit Nut	2
L4		Sprocket 48B9 x 3/8" Powder Metal	1
L5		RPM Sensor Interrupter Cup	1
L6		Rollpin 1/8 x 1" Long	1
L7		E Ring, 3/8"	2

# ILLUSTRATED PARTS



# REPAIR PARTS KITS

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 13 for all repair part ordering information.

## BRAKE ASSEMBLY KITS

ITEM	PART #	DESCRIPTION	QTY
B1	10-10354	Brake Release Arm	2
B2	10-10355	Solenoid Link	1
B3	10-10356	Brake Mounting Plate	1
B4	10-10357	Solenoid Bracket	1
B5	17-10363	Pulley & Disc Assembly	1
B6		Compression Spring .360 O.D. x .045WD	4
B7	22-120	115V Brake Solenoid	1
	22-240	230V Brake Solenoid	1
B8	31-10364	Spacer .20 I.D. x .260 OD x 1	2
B9	75-10359	Brake Plate Pad Assembly	1
B10	82-NH25-03	1/4-20 x 3/16 S.S. Knurled Cup	1
B11	86-CP05-108	Cotterpin 5/32" x 1-1/2" Long	1

### Brake kits for model BMT only

K75-12492	Model BMT5011
K75-12494	Model BMT5025

## K72-12471 CLUTCH SHAFT ASSEMBLY KIT

ITEM	PART #	DESCRIPTION	QTY
C1	10-10166	Clutch Plate	1
C2	11-10320	Clutch Shaft	1
C3	12-10029	Bearing 3/4" I.D.	2
C4	15-48B10GXX	Sprocket, 48B10 x 3/4"	1
C5	16-4L290	Cogged Belt	1
C6	17-10336	4L Motor Pulley 7" O.D.	1
C7	18-10164	Spring, Clutch (1/3 & 1/2 HP)	1
C8	39-10167	Clutch Disc	1
C9	84-SH-76	Castle Nut 3/4-16	1
C10	86-CP04-112	Cotterpin 1/8" x 1-3/4" Long	1
C11	86-RP08-102	Roll Pin 1/4" x 1-1/8" Long	1
C12	86-RP08-200	Roll Pin 1/4" x 2" Long	1
C13	87-P-075	Turac 3/4" Push on Fastener	2
C14	85-FW-75	Flatwasher 3/4"	5

## K72-12472 OUTPUT SHAFT KIT

ITEM	PART #	DESCRIPTION	QTY
O1	11-10319	Output Shaft	1
O2	12-10029	Bearing 3/4" I.D.	2
O3	15-48B10GXX	Sprocket, 48B10 x 3/4"	1
O4	15-48B10G1	Sprocket, 48B10 x 3/4" Powder Metal	1
O5	15-48B24GXX	Sprocket, 48B24 x 3/4"	1
O6	19-48027M	Chain #48 x 27 Links with master link	1
O7	19-48033M	Chain #48 x 33 Links with master link	1
O8	86-RP08-102	Roll Pin 1/4" x 1-1/8" Long	3
O9	87-P-075	Turac 3/4" Push on Fastener	2

## K77-12486 HARDWARE KIT

ITEM	PART #	DESCRIPTION	QTY
H1	10-10203	Curved Arm	1
H2	10-10204	Door Bracket	1
H3	10-10205	Header Bracket	1
H4	11-10130	Header Pivot Pin	1
H5	75-10170	Slider Assembly	1
H6	75-10174	Front Idler Assembly	1
H8	75-10259	Track Spacer Assembly	2

## K75-12870 STRAIGHT & CURVED ARM ASSEMBLY

H1	10-10203	Curved Arm	1
H2	10-10204	Door Bracket	1
H7	75-10214	Straight Arm Assembly	1

## ELECTRICAL BOX REPLACEMENT KITS

ITEM	DESCRIPTION	KIT #
EB	Electrical Box Replacement Kits	See page 19

## MOTOR

See page 19 for more information.

## Heavy Duty Straight Arm

PART #	DESCRIPTION
K75-17034	Upgrade Kit

## DOOR TRACK & DRIVE CHAIN

ITEM	PART #	DESCRIPTION
3	19-5810	#48 Chain Doors 8' to 10'
	19-5812	#48 Chain Doors to 12'
	19-5814	#48 Chain Doors to 14'
4		Door Track*

\*Call for pricing and availability.

## OPERATOR NOTES

[illegible]

## OPERATOR NOTES

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# CONTROL CONNECTION DIAGRAM

## IMPORTANT NOTES:

- 1) The 3-Button Control Station provided must be connected for operation.
- 2) If a STOP button is not used, a jumper must be placed between terminals 3 and 4.
- 3) Auxiliary control equipment may be any normally open two wire device such as pullswitch, single button, loop detector, card key or such device.
- 4) When adding accessories, install them one at a time and test each one after it is added to ensure proper installation and operation with the Commercial Door Operator.
- 5) Attention Electrician: Use 16 gauge or heavier wire for all control circuit wiring.

3 BUTTON STATION OR 3 POSITION KEYSWITCH WITH SPRING RETURN TO CENTER AND STOP BUTTON	
<p>STANDARD</p>	<p>2 OR MORE</p>
<p>KEY LOCKOUT</p>	
2 BUTTON STATION OR 3 POSITION KEYSWITCH WITH SPRING RETURN TO CENTER	
<p>STANDARD</p>	<p>2 OR MORE</p>
1 BUTTON STATION OR ANY AUXILIARY DEVICE	RESIDENTIAL RADIO CONTROLS
<p>To Open, Close and Reverse while closing</p>	<p>OPEN TIMER TO CLOSE</p>
SENSING DEVICE TO REVERSE OR STOP	EXTERNAL INTERLOCK
<p>Sensing Device</p>	