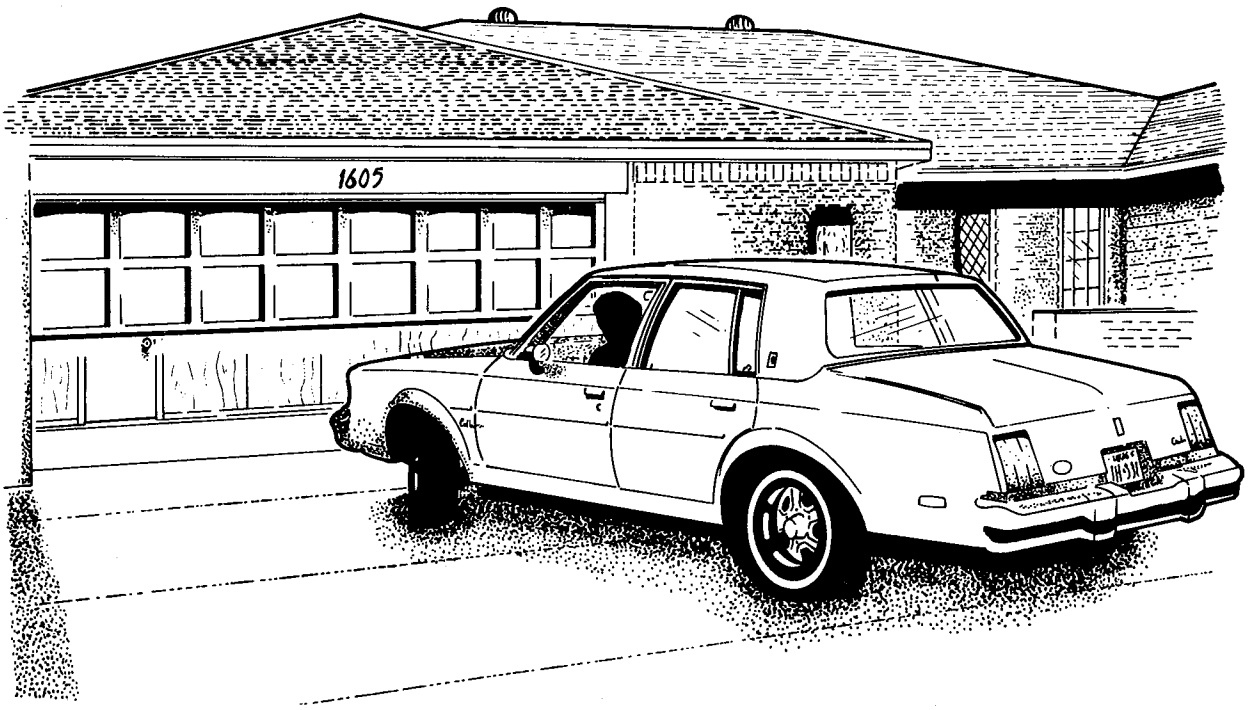
# MODEL 55A

## GARAGE DOOR OPENER SYSTEM

# ASSEMBLY, INSTALLATION AND OPERATING INSTRUCTIONS



# TABLE OF CONTENTS

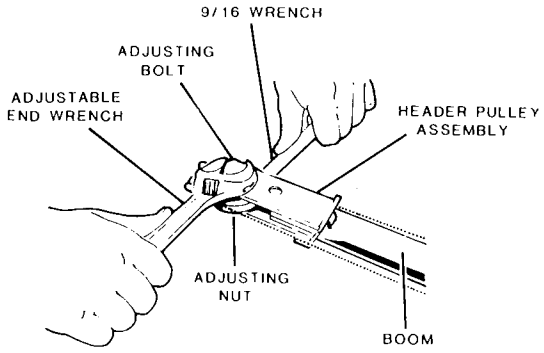


# HOW TO USE THIS BOOK

1. Use tools indicated by silhouettes at top of instruction.
2. Perform the instruction according to the words and illustration.
3. Put a check in box after completion of instruction.
4. Proceed to next step.

16☐  


Adjust drive chain-cable.




**EXAMPLE**

# TOOLS NEEDED

You will need the tools shown below to assemble and install this operator.


ELECTRIC DRILL
5/32 BIT
1/4 BIT


CARPENTER LEVEL


STEP LADDER
6-0


HACK SAW


ADJUSTABLE END WRENCH


NEEDLE NOSE PLIERS


END WRENCH
7/16 & 9/16


SLOTTED SCREWDRIVER


WIRE CUTTERS


NUTDRIVER
1/4

- TAPE MEASURE
- STRAIGHT EDGE
- PENCIL
- POCKET KNIFE
  OR
  WIRE STRIPPERS

# GENERAL NOTES

The following procedures must be performed before operator can be installed. Failure to complete the following procedures can cause operator failure and/or hazardous conditions which could cause personal injury.

1. Check working condition of door. Door should operate freely without sticking or binding. Lubricate door rollers and hinges with SAE 30 wt. oil. Replace damaged or broken rollers and hinges. Tighten all bolts and screws.
2. Check for broken counterbalance springs and worn or broken lift cables. Replace any defective parts.

**CAUTION**

Repairs and adjustments to cables and springs can be hazardous and should be performed by qualified door service people.

3. Counterbalance should be set so that door does not have to be held up or down.
4. If door is equipped with a locking device, make it inoperative by permanently securing the locking bar in an unlocked position.

**CAUTION**

Remove any lift or pull rope if door is so equipped.

**NOTE**

If adding "Door Minder" accessary kit; see instructions supplied with kit for installation.

**WARNING**

**TO REDUCE THE RISK OF INJURY TO PERSONS - USE THIS OPERATOR ONLY WITH A SECTIONAL DOOR.**

**CAUTION**

Do not use lighted-type pushbutton.

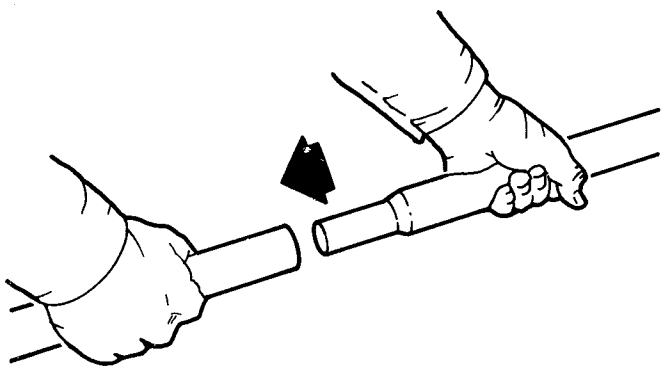
**WARNING**

**DO NOT CONNECT ELECTRICAL POWER TO UNIT UNTIL INSTRUCTED TO DO SO.**

# ASSEMBLY

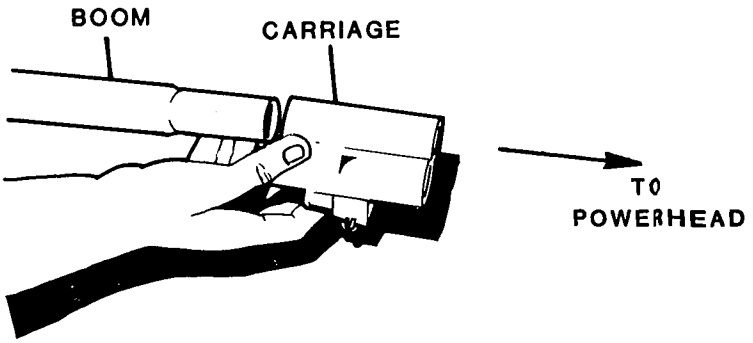
**1** ☐

Lay powerhead and boom on workbench or floor. Assemble boom (3 sections).



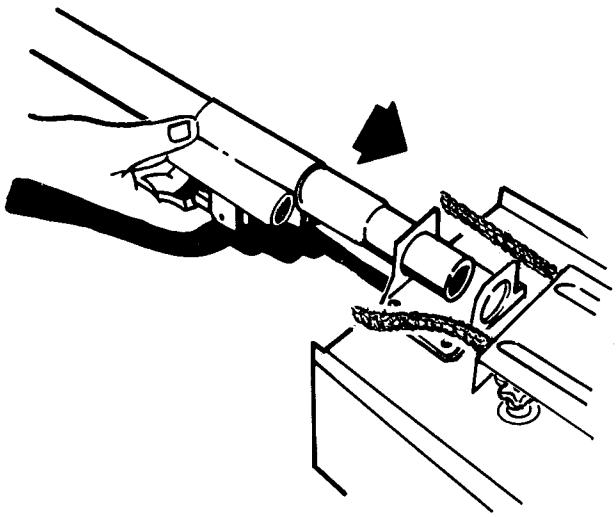
**2** ☐

Position carriage over tapered end of boom.



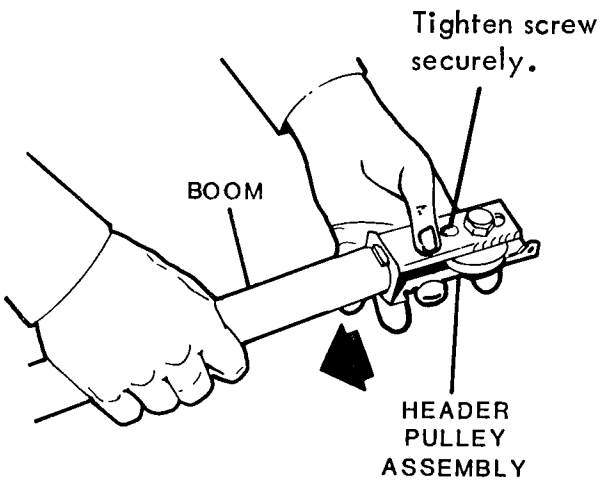

**3** ☐

Install boom into boom bracket.



**4** ☐

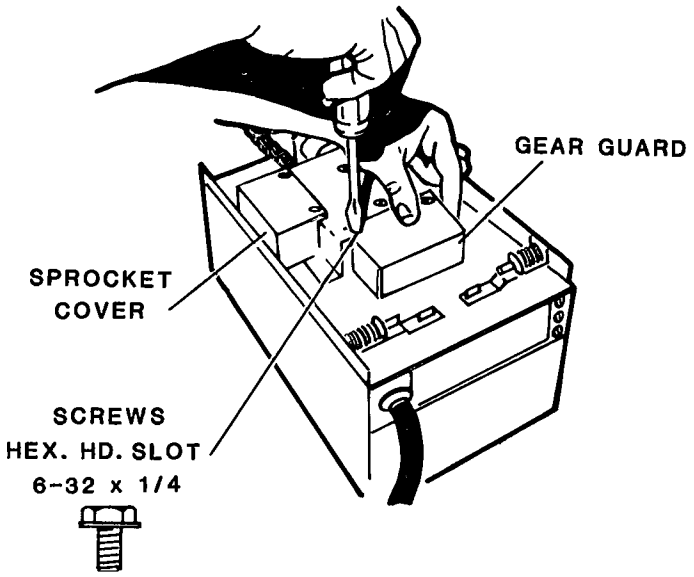
Install header pulley assembly on end of boom.



# ASSEMBLY

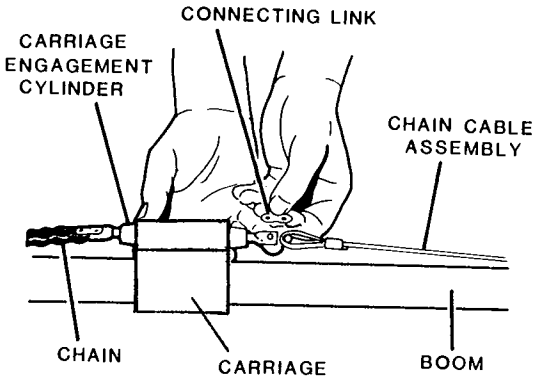
## 5 ☐  or  1/4

Remove gear guard and sprocket cover. Check to see that chain is correctly routed around sprocket and drive gear.



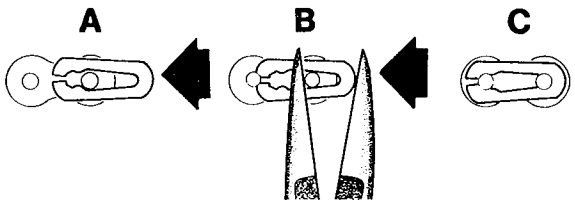

## 6 ☐

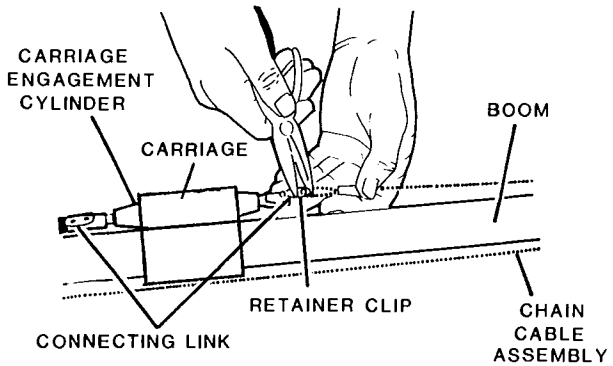
Insert carriage engagement cylinder into carriage. Wrap cable end of drive chain-cable around header pulley and back to carriage. Connect chain and cable to carriage engagement cylinder using connecting links.




## 7 ☐ 

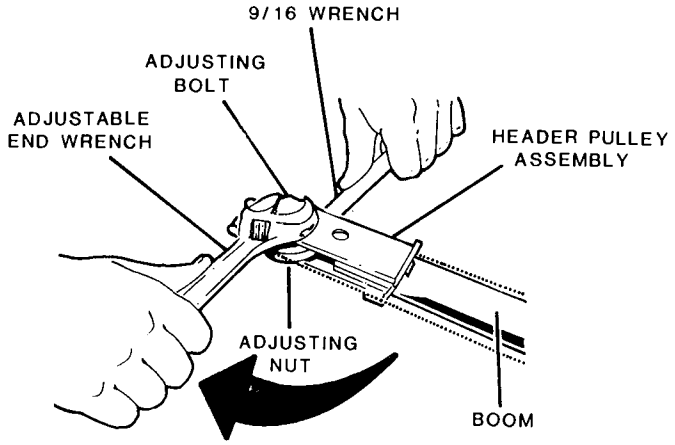
Install retainer clips on connecting links.




## 8 ☐   9/16

Adjust drive chain-cable.
Reinstall gear guard and sprocket cover.




**TO INCREASE TENSION**

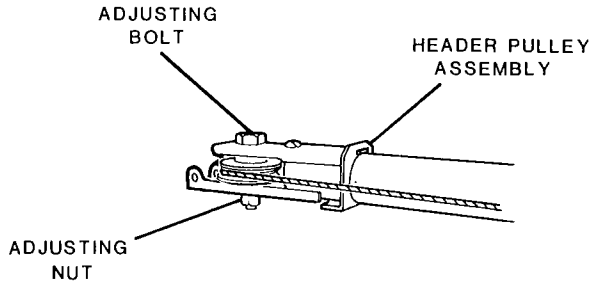
**IMPORTANT**

With carriage near header end of boom, chain should not sag below center line of boom more than 3/4".

# ASSEMBLY

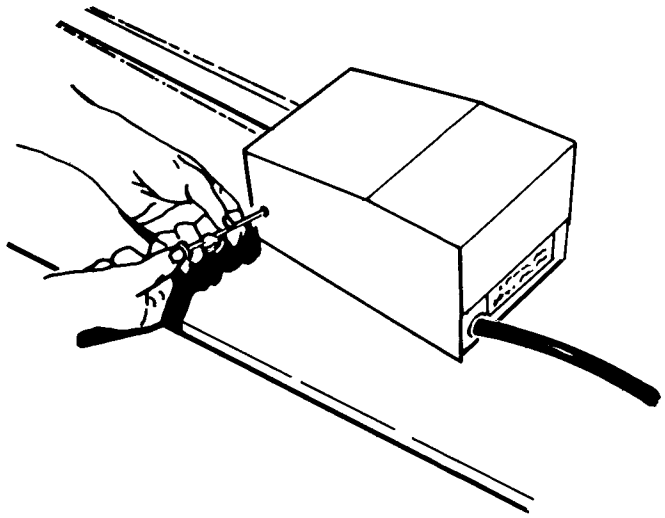
## 9 ☐

Correctly installed: - Header pulley assembly.



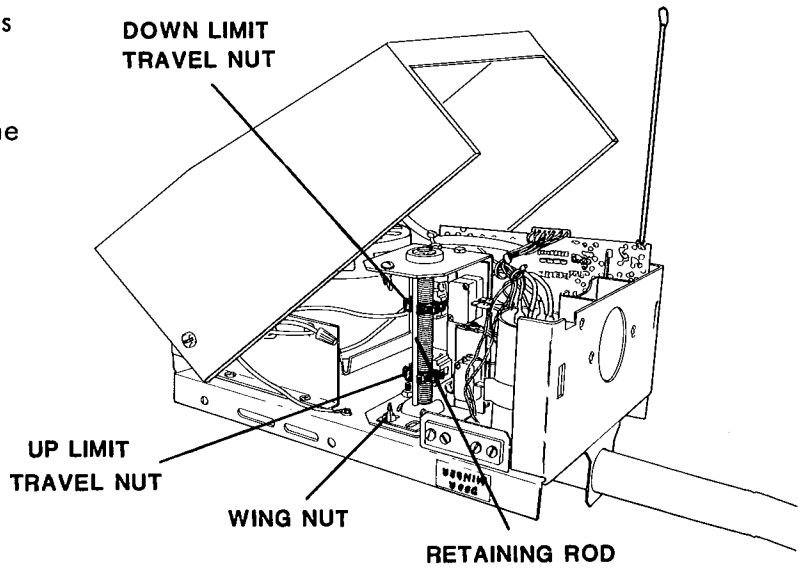

## 10 ☐  or  1/4

Remove front screws from operator cover and swing open.



## 11 ☐

Make initial adjustments to limits switches by plugging operator in and using transmitter to run operator. Refer to page 20 for instructions on how to set limit switches. The "Down" limit switch should be set so that the carriage stops approximately 7" from end of header pulley. The "Up" limit switch should be set so that the carriage stops approximately 18" from the powerhead.




**WARNING**

Keep hands and objects clear of powerhead when operator is running. Unplug operator when making adjustments to limit switches.

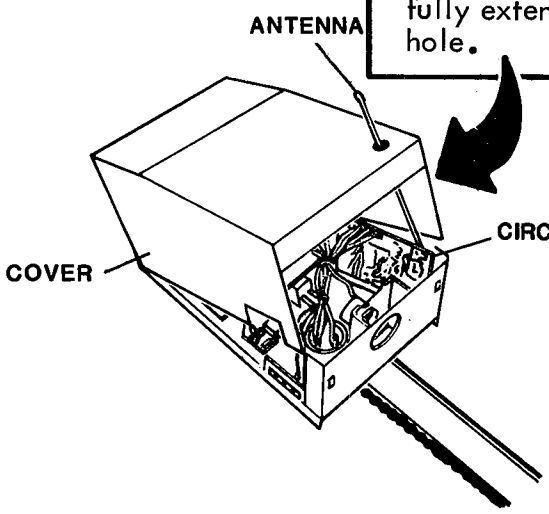
# ASSEMBLY

**12** ☐  or  ¼

Re-install cover.

**IMPORTANT**

Make sure antenna is fully extended through hole.



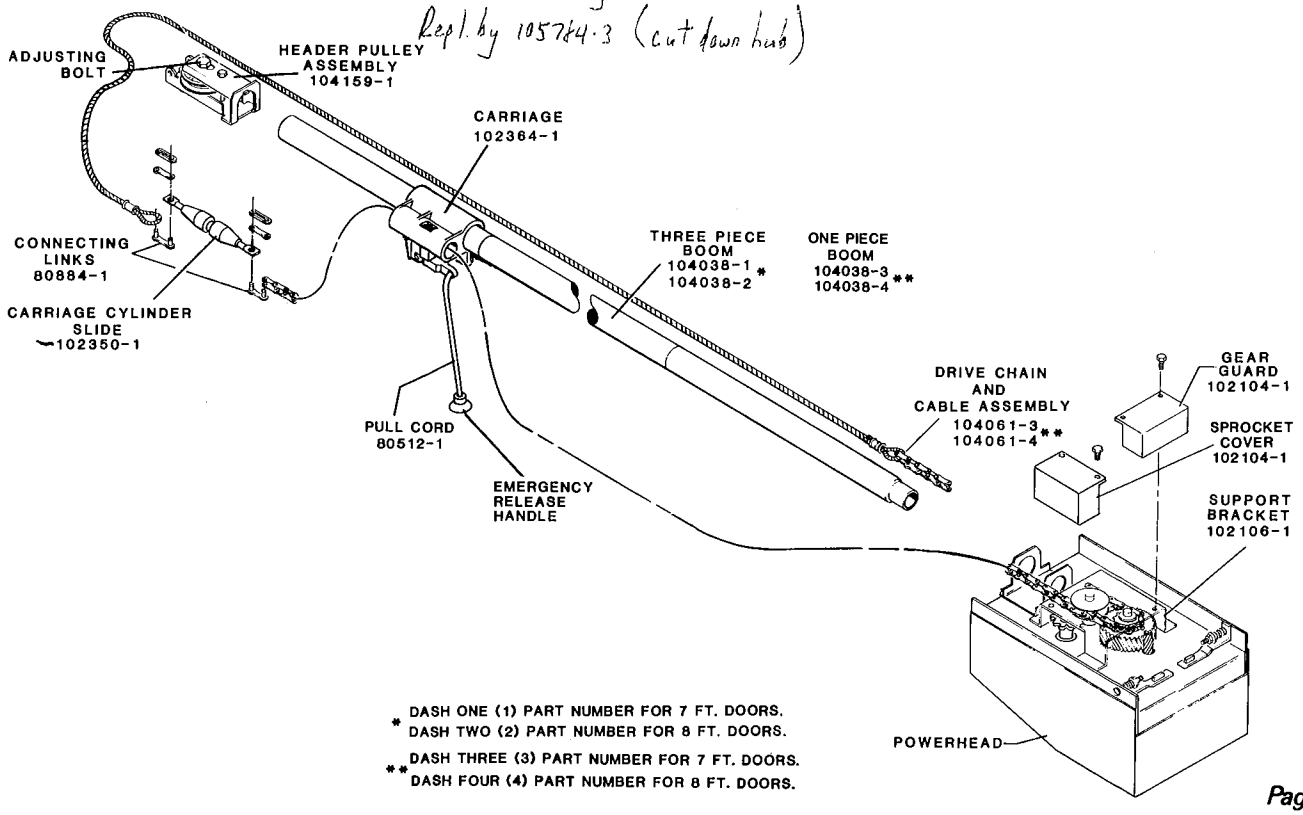

**13** ☐

**CHECKLIST**

- ☐ Header pulley assembly is positioned correctly.
- ☐ Drive chain is seated in drive sprocket and limit switch sprocket.
- ☐ Drive chain is not twisted.
- ☐ Cable is seated in header pulley.
- ☐ Limit switches set to initial dimensions.

# ASSEMBLY DRAWING

77115-2 Front Pulley
Repl. by 105764-3 (cut down hub)



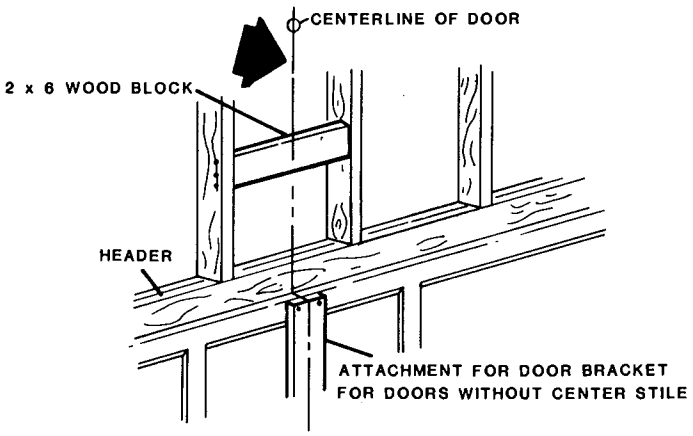

* DASH ONE (1) PART NUMBER FOR 7 FT. DOORS.
DASH TWO (2) PART NUMBER FOR 8 FT. DOORS.

** DASH THREE (3) PART NUMBER FOR 7 FT. DOORS.
DASH FOUR (4) PART NUMBER FOR 8 FT. DOORS.

# INSTALLATION

## 14 ☐

Measure width of door to determine center.

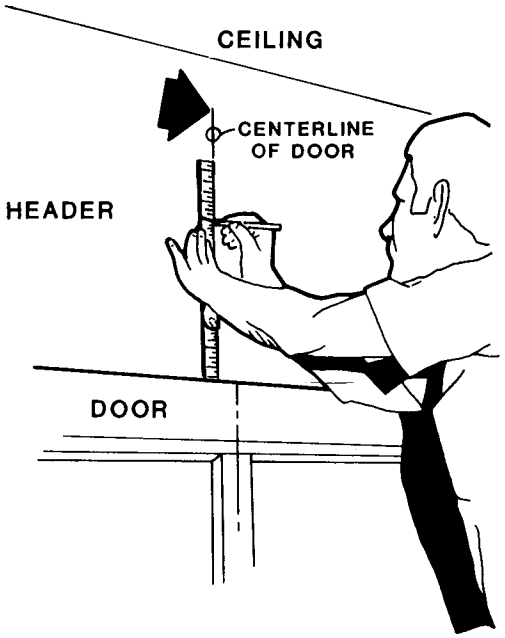



If header does not have suitable woodwork where header bracket will be installed, then such will have to be made. It is suggested that a wood 2"x6" be secured to nearby existing woodwork.

If door does not have a center stile or suitable attachment for attaching door bracket then door must be re-inforced with wood or steel at mounting point.

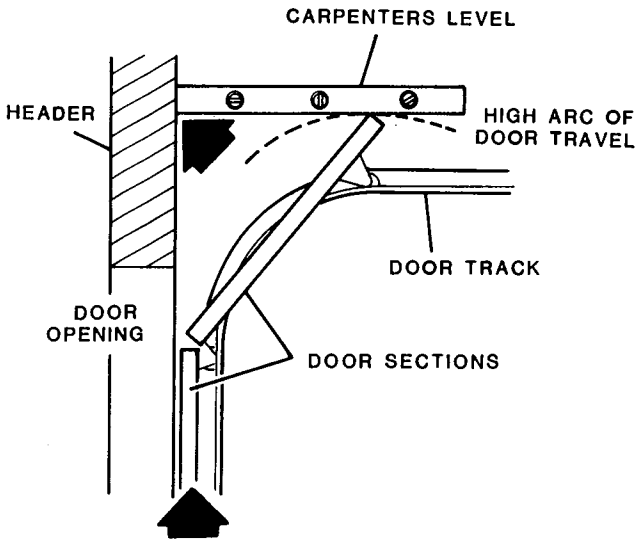
## 15 ☐

Mark center line on door and header.




## 16 ☐

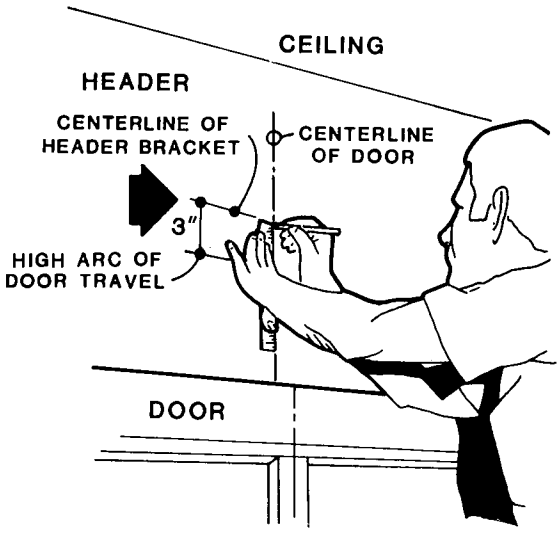
Raise door until top section reaches its highest arc of travel. Mark header on center line at point where level touches header.




**IT IS RECOMMENDED THAT OPERATOR BE MOUNTED A MINIMUM OF 7 FEET ABOVE FLOOR.**

## 17 ☐

Mark horizontal center line of header bracket three (3) inches above high arc of door travel.



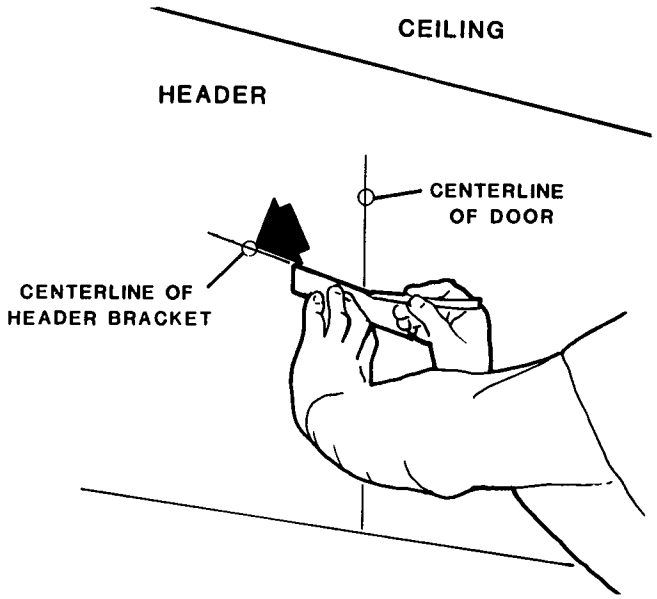

**NOTE**

1-5/8" minimum head room required above high arc of door travel.

# INSTALLATION

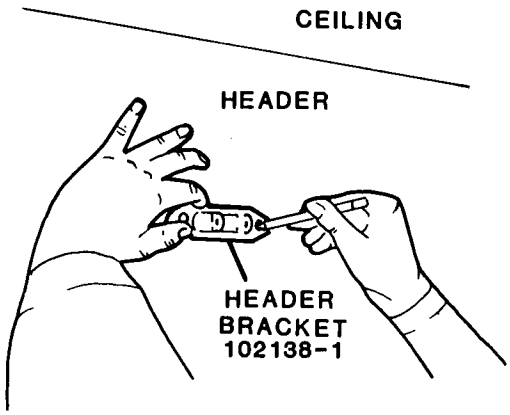
## 18 ☐

Mark horizontal center line of header bracket.



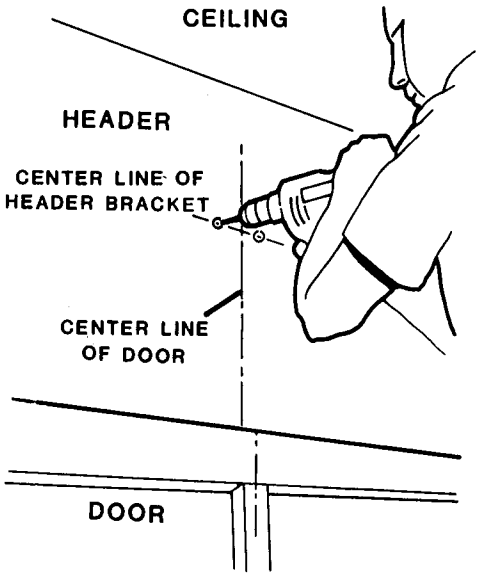

## 19 ☐

Position header bracket on center line and mark mounting hole locations on center line.



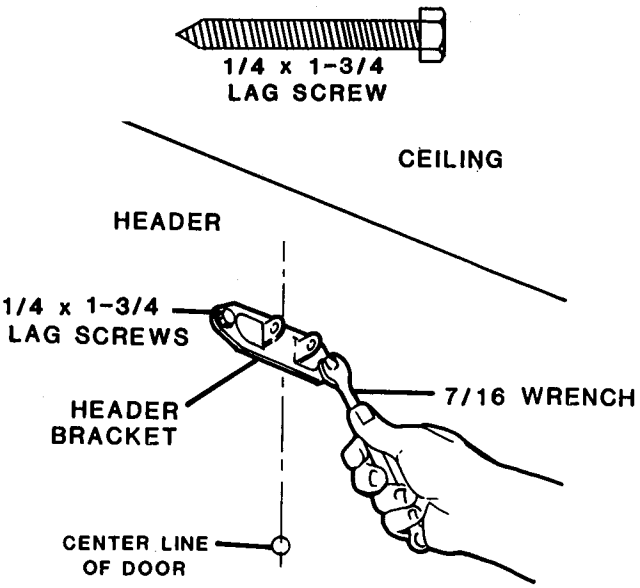

## 20 ☐

Drill 5/32" diameter holes at marked locations.




## 21 ☐ 7/16

Secure header bracket to header.

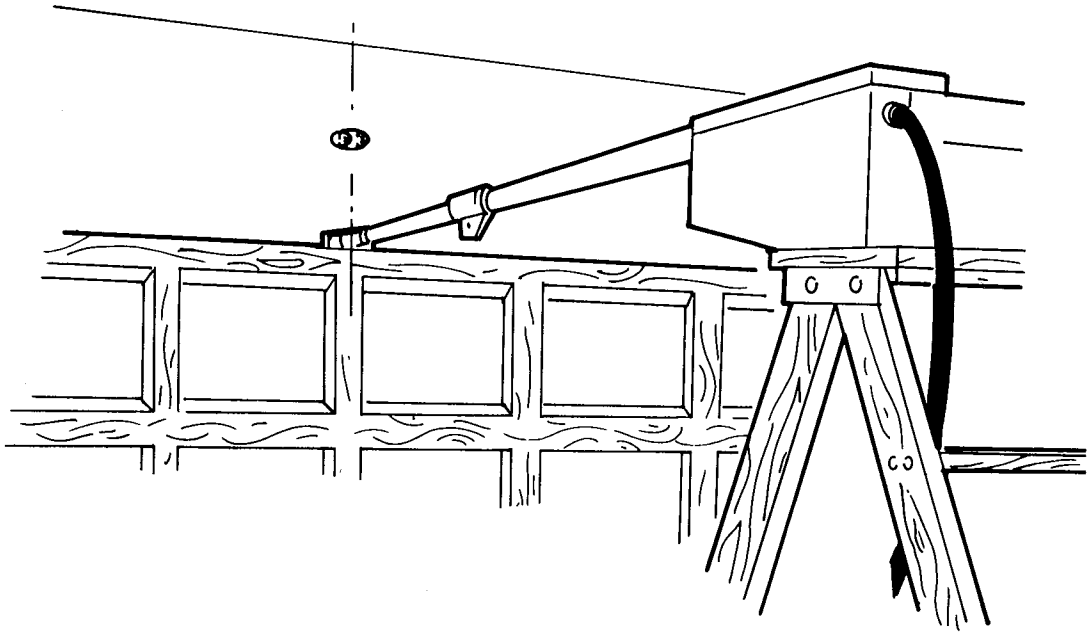


# INSTALLATION

## 22□ A

Rest header end of boom on top edge of top door section and powerhead on top of step ladder.

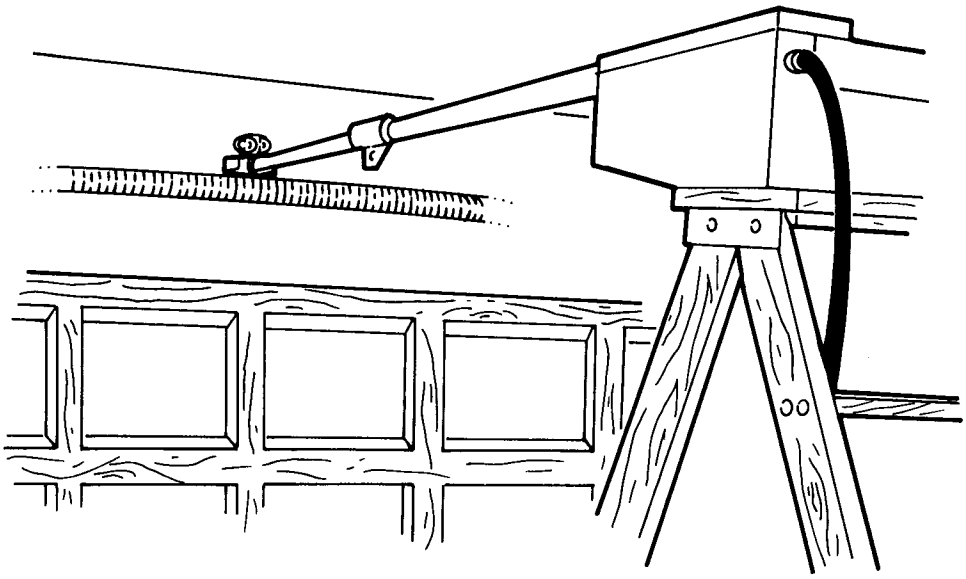
## EXTENSION SPRING DOOR



# OR

Rest header end of boom on torsion spring and powerhead on top of step ladder.

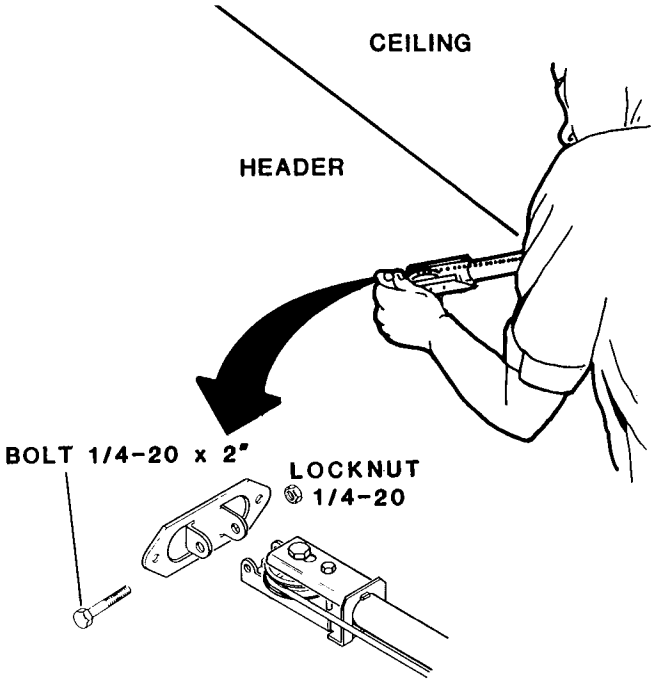
## TORSION SPRING DOOR



# INSTALLATION

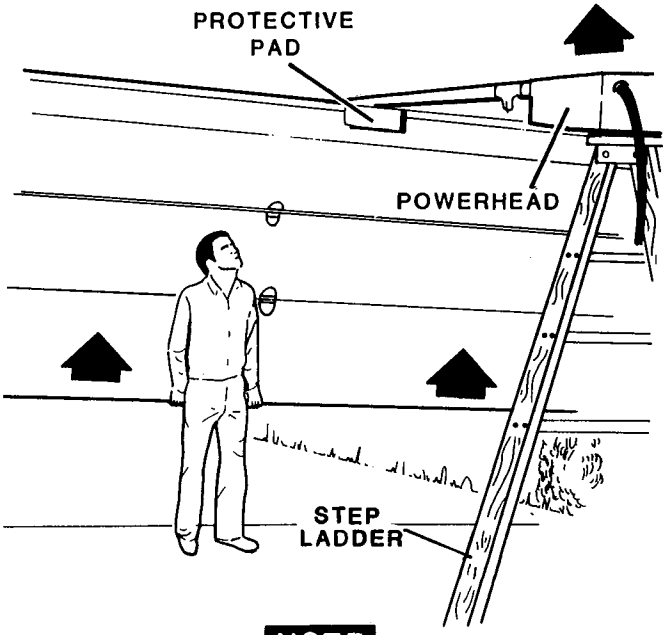
## 23 ☐  


Attach header pulley assembly to header bracket.




## 24 ☐

To raise powerhead: raise door slowly.

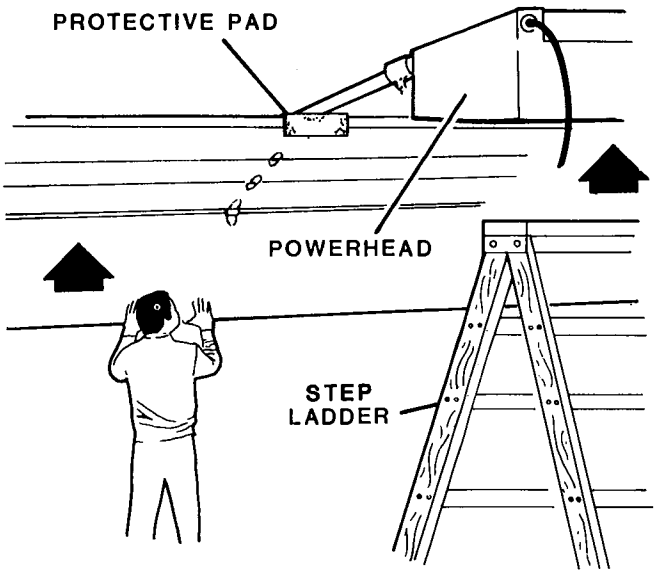



**NOTE**

Carriage should be located near powerhead when raising operator.

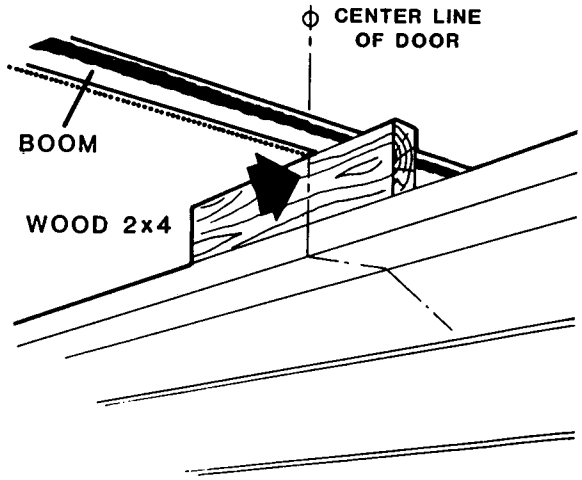
## 25 ☐

Continue raising door until fully open.




## 26 ☐

Position a wood 2x4 on edge between top door section and boom. Use center line of door to correctly align boom.




DOOR IN FULLY OPEN POSITION

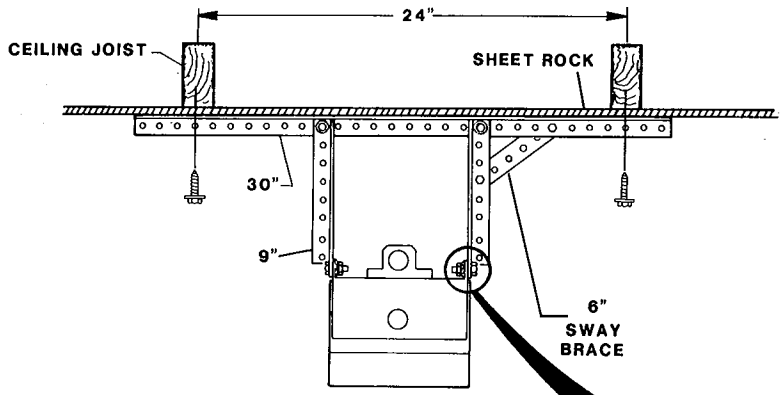
# INSTALLATION

27 □   


1. Shown are examples of various installation configurations. Determine the configuration which best suits your requirements.
2. If necessary, span ceiling joists with wood 2 x 4's sufficient enough to support operator.
3. Hold ceiling mounting angle in mounting position. Using holes in angle as a guide, drill 3/16" diameter pilot holes in ceiling joists or 2 x 4 framing.
4. Using 1/4" x 1-3/4" lag screws, secure ceiling mounting angle to ceiling joists or 2 x 4 framing.
5. Notch operator end of vertical angles (Detail A).
6. Using 1/4"- 20 x 1/2" hex head bolts and lock nuts, secure angle brackets to operator.
7. Using 1/4"- 20 x 1/2" hex head bolts and lock nuts, secure vertical mounting angles to ceiling angle. Vertical angles may be bent at notch if necessary (Detail B).

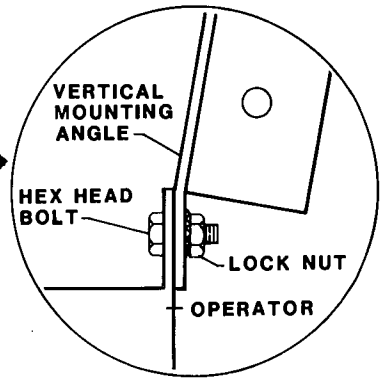
## LENGTHWISE CEILING JOISTS

ON CENTER

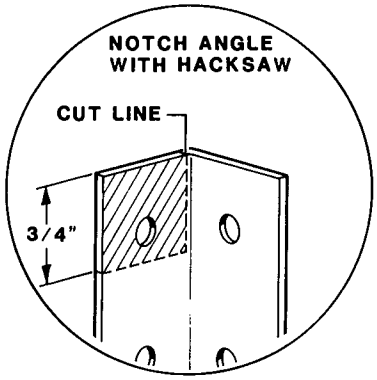



**NOTE**

IT IS RECOMMENDED THAT OPERATOR BE MOUNTED A MINIMUM OF 7 FEET ABOVE FLOOR.




**DETAIL B**

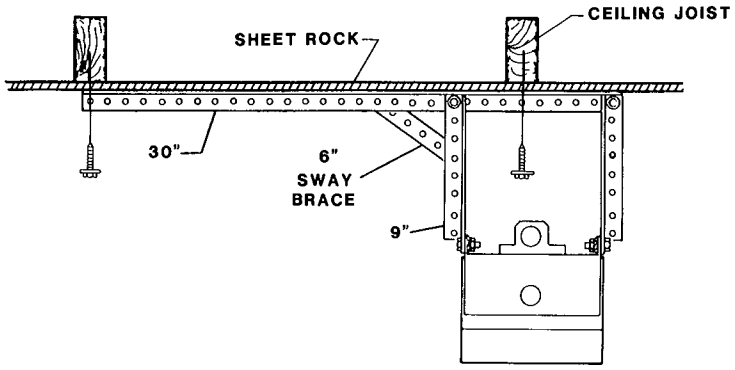



**DETAIL A**

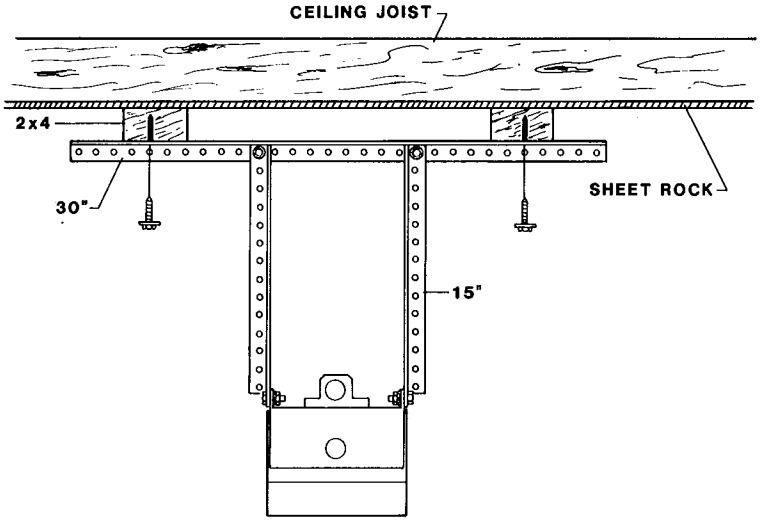
# INSTALLATION

## LENGTHWISE CEILING JOISTS

OFF-CENTER

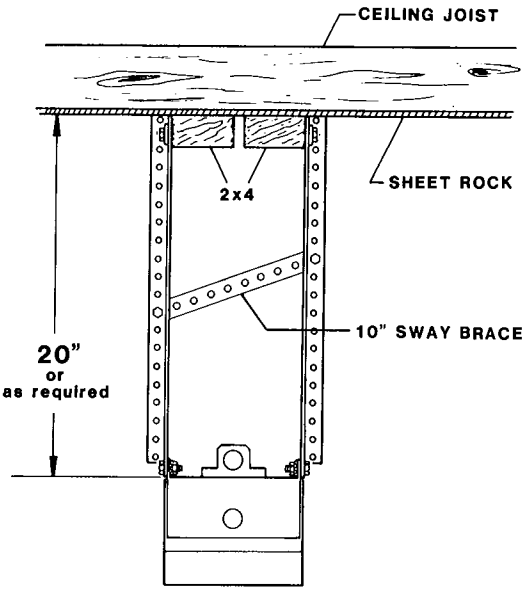



## CROSSWISE CEILING JOISTS




## CROSSWISE CEILING JOISTS

HIGH CEILING

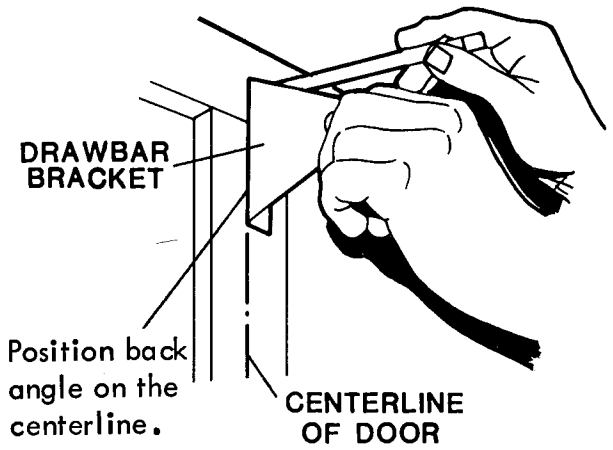


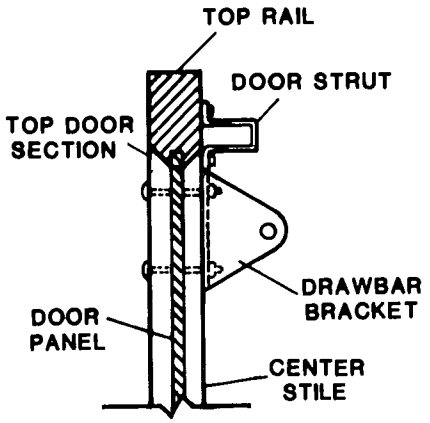
# INSTALLATION

## 28☐

Drawbar bracket should be mounted in line with top fixture roller and secured to top rail and center stile of doors so equipped. If door strut interferes with this position; move bracket below strut. DO NOT CUT OR MODIFY STRUT IN ANY WAY.

Position back angle of bracket on door centerline and mark mounting hole locations.



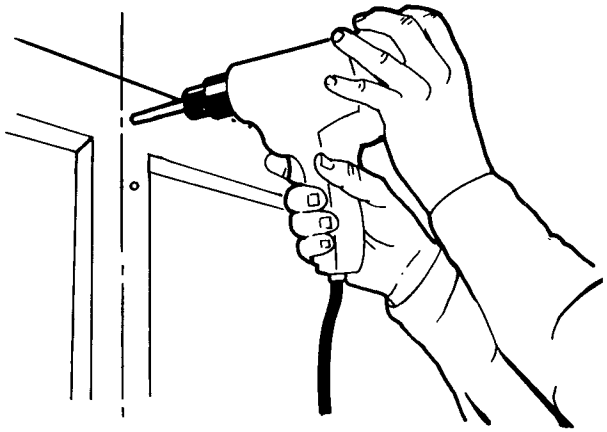

SECTION THRU PANEL DOOR

**NOTE**

If operator is to be installed on Steel or Fiberglass doors, use Attachment Kit P/N 105383-1

## 29☐

Drill 1/4" diameter holes through door at locations marked.

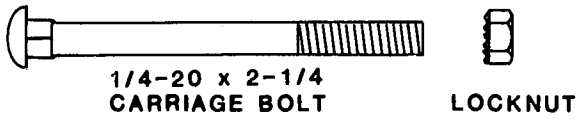


**NOTE**

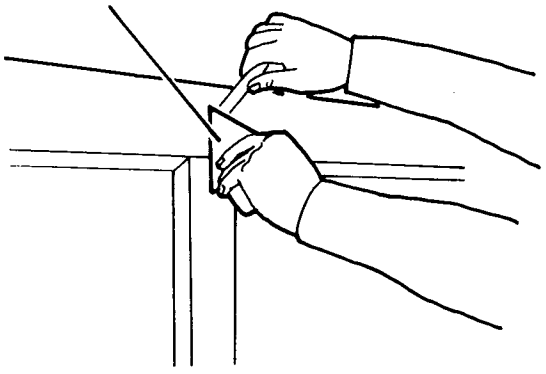
If necessary raise door to avoid drilling into header.

## 30☐ 7/16

Secure drawbar bracket to door using 1/4"-20 x 2- 1/4" carriage bolts.




DRAWBAR BRACKET



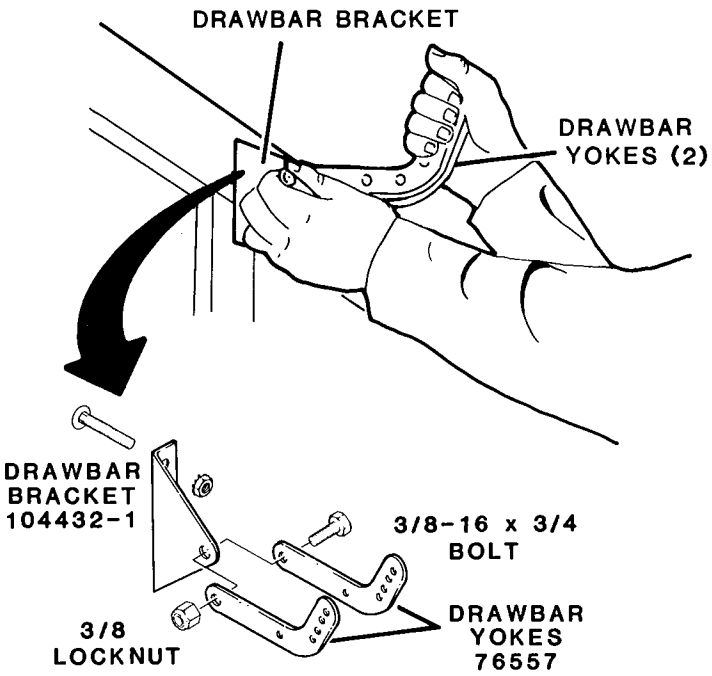
**NOTE**

Install bolts thru front of door.

# INSTALLATION

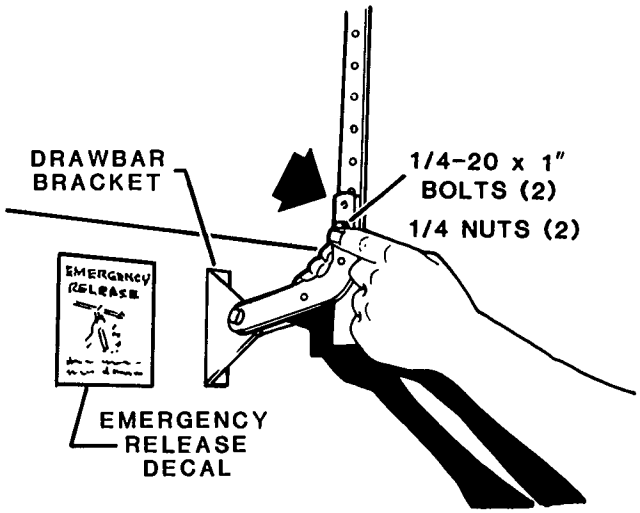
## 31☐ 9/16

Attach yokes to drawbar bracket. Tighten locknut but do not compress yokes to bracket. Yokes must move freely.




## 32☐ 7/16

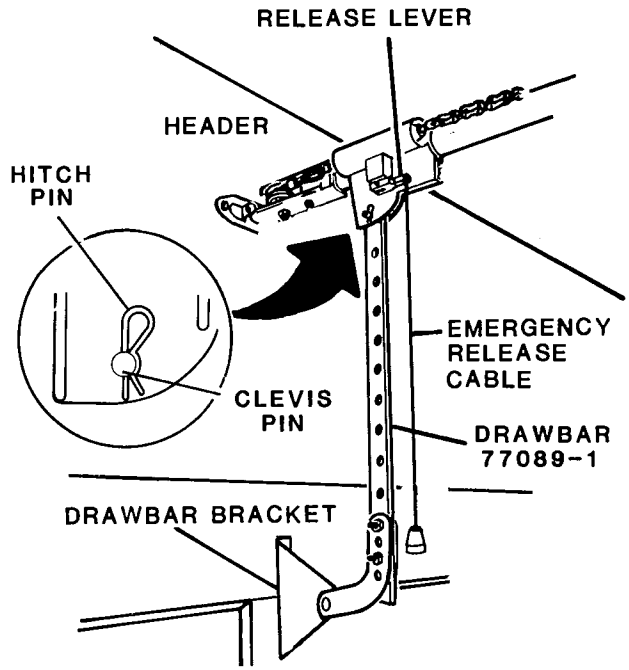
After pinning drawbar into carriage, move carriage toward header until drawbar can be connected to drawbar yokes.
Drawbar yokes should be in a vertical position.
Align two (2) holes in drawbar arm with two holes in drawbar yokes and secure.




Remove protective backing from EMERGENCY RELEASE decal and install on door, near drawbar bracket.

## 33☐

Route pull cord through release lever.
Install pull knob on pull cord approximately six (6) feet from floor.




## 34☐

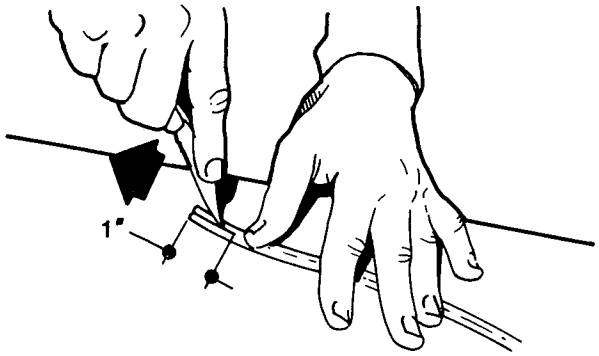
**CHECKLIST**

- ☐ Header bracket secure.
- ☐ Door bracket-yoke pivot bolt secure, but not too tight.
- ☐ Header pulley assembly pivot bolt secure but not too tight.
- ☐ Hanging bracket bolts tight.
- ☐ Drawbar to yoke bolts tight.
- ☐ Drive chain-cable is tight (tensioned correctly).
- ☐ Carriage engagement cylinder is engaged with carriage.
- ☐ Make fine adjustments on "UP" and "DOWN" limit switches . (See page 20).

# WIRING

## 35 ☐

Separate end of push button wire.

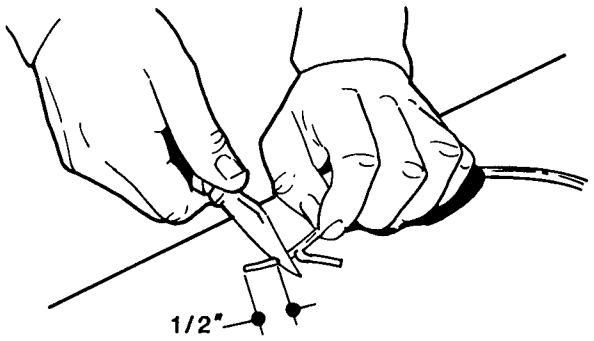



**NOTE**

Use only wire supplied with operator or equivalent gauge.

## 36 ☐

Carefully cut insulation around wire. DO NOT cut wire.

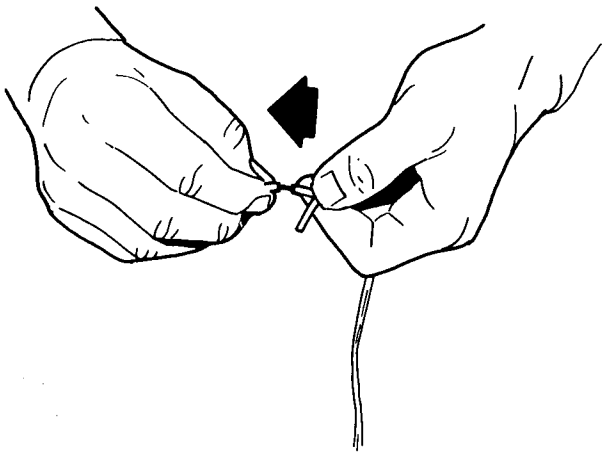



**NOTE**

This procedure is best performed by using wire strippers.

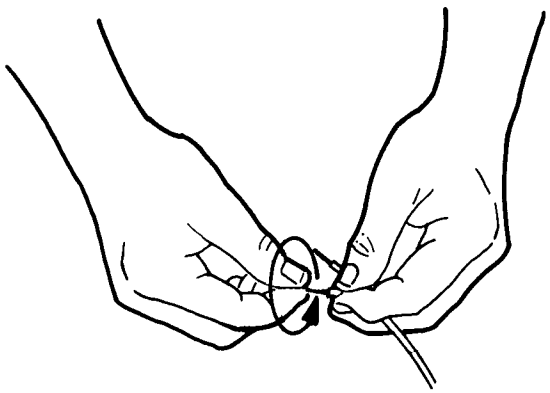
## 37 ☐

Remove insulation.



## 38 ☐

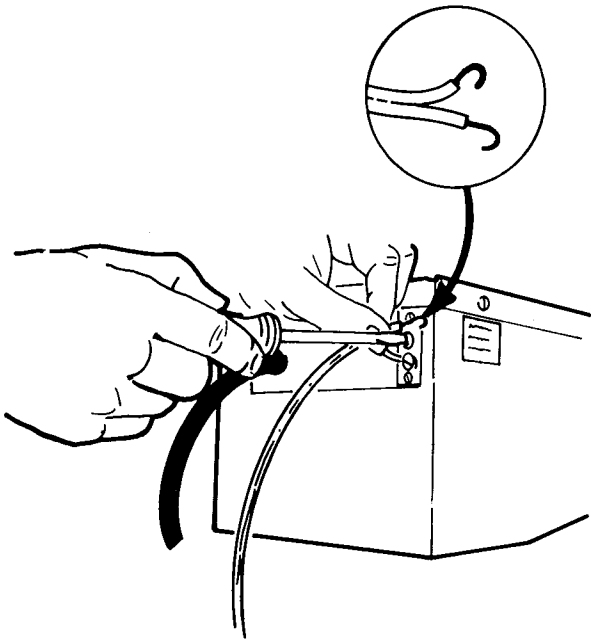
Twist ends of wire strands together.



# WIRING

## 39☐

Shape wire leads like a hook, and connect leads to operator terminals.



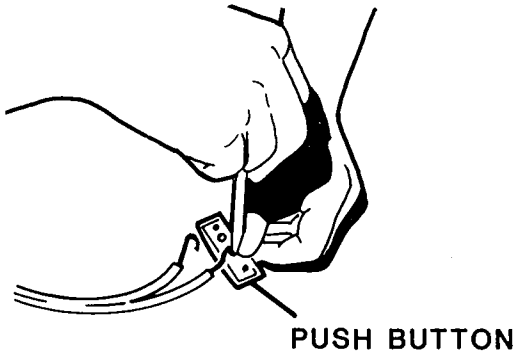
## 40☐

Route push button wire from powerhead along ceiling to house entrance door. Staple wire as necessary to prevent entanglement or contact with moving objects.

**CAUTION**

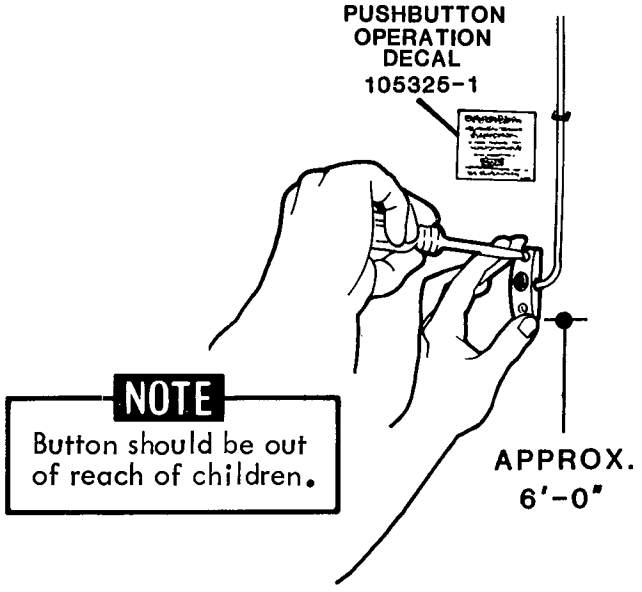
Be careful not to pierce wire insulaton with staples

Shape wire leads like a hook, and connect leads to push button terminals.




## 41☐

Install push button on wall near house entrance door approximately six (6) feet from floor.




**NOTE**

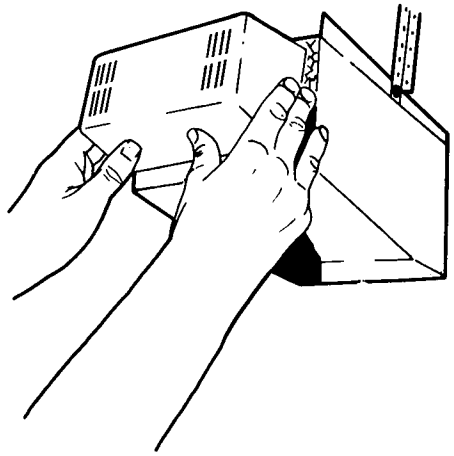
Button should be out of reach of children.

Peel backing off "PUSHBUTTON OPERATION" decal and attach to wall near pushbutton.

## 42☐

Install light bulb.

Depress ends of light lens to install or remove lens.



**IMPORTANT**

USE MAXIMUM 60 WATT BULB.

# WIRING

## 43 ☐

**WARNING**

It is important that electrical power to operator be cut off when powerhead cover is removed. Electrical power must remain disconnected while making electrical connections and limit switch adjustments. Keep hands and objects clear of powerhead if electrical power is re-connected with cover off.

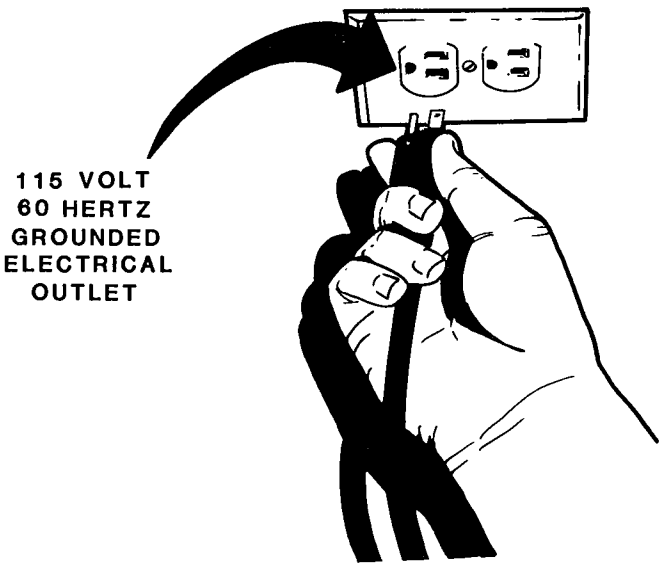
Operator is equipped with a factory installed power cord and must be plugged into a 115 volt, 60 hertz, grounded electrical outlet.

**CAUTION**

For maximum safety it is essential that operator be properly grounded.

If a convenient electrical outlet has to be installed it is recommended that such work be performed by a licensed electrician. Use of an extension cord is NOT RECOMMENDED.

When installing a convenient electrical outlet, it is suggested that an electrical switch be installed to facilitate emergency power cutoff.




## 44 ☐

If local electrical codes require permanent wiring, it is recommended that such work be performed by a licensed electrician.

Remove cover (4 screws).

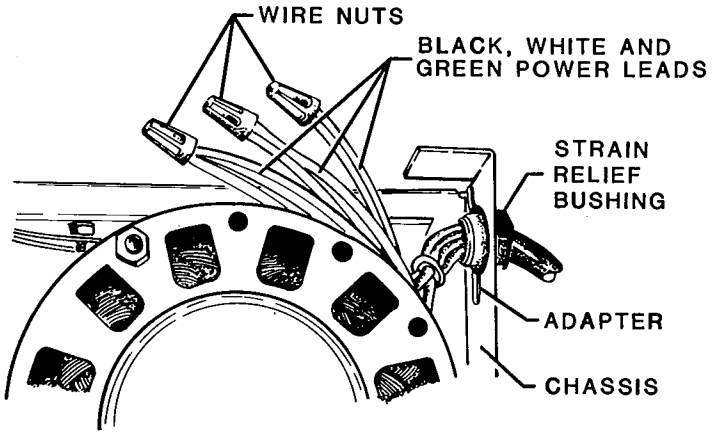
Remove and discard strain relief bushing and adapter.

Remove wire nuts and disconnect power cord lead wires.

Make conduit connection to chassis.

Connect permanent wiring leads to powerhead leads and re-install wire nuts.

Re-install cover.



# OPERATION & ADJUSTMENT

## 45 ☐

For transmitter operation and frequency code setting, see Instructions enclosed with operator.

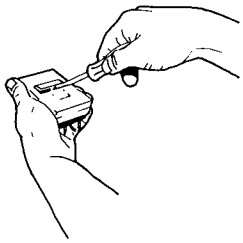
Operator is furnished with "TRINARY DIGITAL" radio controls. Make sure Frequency Code Switches are set the same on operator circuit board as those in transmitter.

The cover will have to be removed to set Frequency Code on operator circuit board.

**CAUTION**

Make sure electrical power has been disconnected from operator before removing cover.

To set transmitter Frequency Code, remove snap out cover as shown.



## 46 ☐

**TO START OPERATOR:**

Press transmitter button 1 time.

Press push button 2 times within 3 seconds. (Door will automatically stop in "fully opened" or "fully closed" position.)

**TO STOP OPERATOR:**

Press transmitter button 1 time.

Press push button 1 time.

**TO RESTART OPERATOR:**

Press transmitter button 1 time.

Press push button 2 times. (Door will move in opposite direction.)

**TO TURN LIGHT ON:**

Press push button 1 time. (Light comes on after a brief delay.)

**TO TURN LIGHT OFF:**

Press push button 1 time. (Light goes off after a brief delay.)

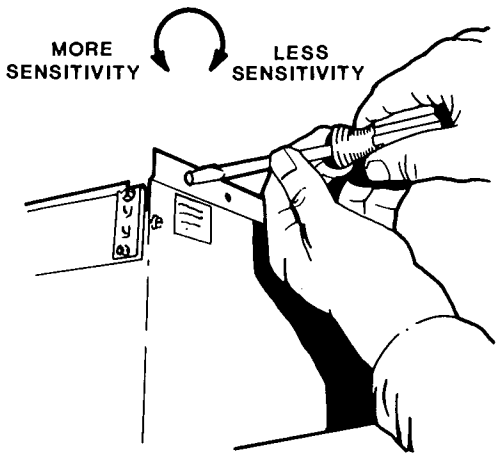
## 47 ☐

Both "UP" and "DOWN" sensitivity must be adjusted to insure proper operation of door. Adjustments must be made in 1/2-turn increments.

Turning adjusting screws...
- clockwise, decreases sensitivity.
- counter-clockwise, increases sensitivity.

Door should open fully without stopping.
Door should close completely without reversing.
Door should reverse ONLY when it contacts an obstruction in "CLOSE" cycle.
Door should stop ONLY when it contacts an obstruction in "OPEN" cycle.

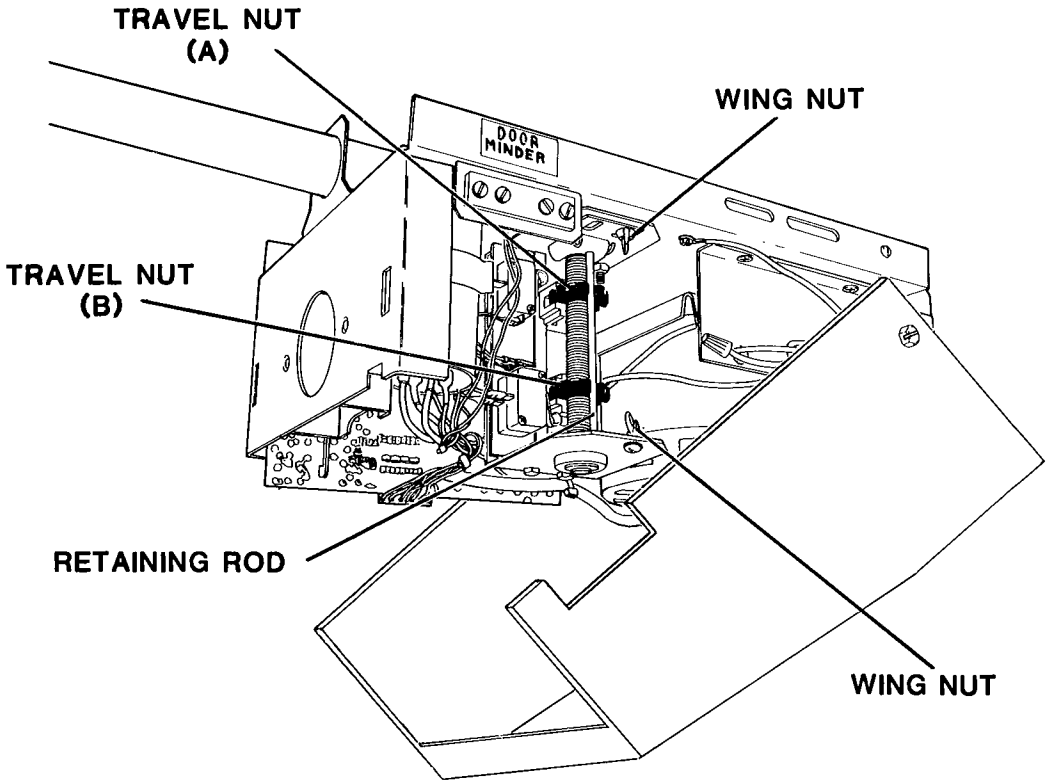
Test safety reverse by putting empty carton in doorway and start operator to close door. Door should not crush empty carton before reversing. Adjust as necessary.



# OPERATION AND ADJUSTMENT

## 48□

Adjustments to the limit switches are made by loosening the wing nuts and moving the retaining rod away from the travel nuts. Adjust travel nut "A" for the "UP" limit and travel nut "B" for the "DOWN" limit. Moving a travel nut one full turn toward its switch will cause the carriage to move approximately 4 inches less in that direction and 4 inches more if the travel nut is moved away from its switch.




**NOTE**

After each adjustment of a travel nut and before starting the operator, make sure that the retaining rod is properly seated in the slots of the travel nuts and that the wing nuts are securely tightened.

**WARNING**

Keep hands and objects clear of powerhead when operator is running. Unplug operator when making adjustments to limit switches.

# TROUBLE SHOOTING GUIDE

This trouble shooting guide is for you to compare the problem with the possible cause.

| SYMPTOM | POSSIBLE CAUSE |
|---|---|
| Light cycles on and off every 3-4 seconds. | Short in wall pushbutton or push-button circuit. |
| Door starts down, runs 1 second and reverses. | ✱Open safety switch or safety switch circuit. |
| Door starts up, runs 1 second and stops. | ✱Open safety switch or safety switch circuit. |
| Door runs down, hits floor and reverses within 1/2 second. | Improper adjustment of down limit switch<br>✱Defective limit switch.<br>✱Defective circuit board. |
| Door starts down, runs longer than 1 second, then reverses. | Obstruction in doorway or roller pathway.<br>✱Hard operating or defective door.<br>Sensitivity control set too light. |
| Door raises, carriage hits powerhead. | Improper adjustment of up limit switch<br>✱Limit switch defective.<br>✱Defective circuit board. |
| Door starts up, runs longer than 1 second, then stops. | Obstruction in doorway or roller pathway.<br>✱Hard operating or defective door.<br>Improper adjustment of sensitivity control. |
| Door runs up, won't run down. | ✱Down limit switch or down limit switch circuitry open.<br>✱Defective circuit board. |
| Door runs down, won't run up. | ✱Up limit switch or up limit switch circuitry open.<br>✱Defective circuit board. |
| Door runs down, hits obstruction, does not reverse immediately, but reverses in 30 seconds. | ✱Defective safety switch, safety switch circuit, or safety switch mechanism. |
| Door will not open using radio or pushbutton. | Operator unplugged.<br>✱Defective circuit board.<br>Motor overheated. |
| Motor runs, door will not open. | ✱Broken chain, chain-cable, drive sprocket, or drive gear. |

✱Requires the assistance of a qualified repairman.

# PARTS LIST

| | | |
|---|---|---|
| 1. | 105330-X | * Cover Assembly |
| 2. | 102147-1 | Motor Support |
| 3. | 102142-1 | Motor |
| 4. | 102137-1 | Motor Mounting Angle |
| 5. | 102105-1 | Motor Bracket |
| 6. | 102101-1 | Safety Trigger |
| 7. | 105359-1 | Circuit Board Mounting Bracket |
| 8. | 105358-1 | Circuit Board Mounting Bracket |
| 9. | 104103-2 | Circuit Board |
| 10. | 76869-6 | Limit Switch Assembly |
| 11. | ~~77156-1~~ 107871-1 | Capacitor |
| 12. | 77452 | Capacitor Clip |
| 13. | 105350-1 | Shaft Weldment Assembly 108267-1 Sleeve |
| 14. | 604297-1 | Set Collar |
| 15. | 72018 | Bushing |
| 16. | 105328-1 | Limit Switch Assembly Mounting Bracket |
| 17. | 104005-1 | Travel Nut Retaining Rod |
| 18. | 102158-1 | Retaining Rod Slide Bracket |
| 19. | 72017-1 | Travel Nuts |
| 20. | 76866 | Bolt, #10-32 x 4-3/4" |
| 21. | 77538 | Bushing 1/2" I. D. |
| 22. | 80415-17 | Retaining "E" Ring ( .375) |
| 23. | 604058-1 | Terminal Strip |
| 24. | 104040-1 | Sensitivity Switch |
| 25. | 80628-1 | Adapter |
| 26. | 76877-12 | Strain Relief Bushing |
| 27. | 77085 | Power Cord |
| 28. | 105327-1 | Main Frame |
| 29. | 104050-1 | Eyelet |
| 30. | 102102-1 | Safety Trigger Retainer |
| 31. | 102087-1 | Sensitivity Spring |
| 32. | 104086-1 | Main Drive Gear Assembly |
| 33. | 102103-1 | Chain Idler |
| 34. | 102106-1 | Support Bracket |
| 35. | 102104-1 | Gear Guard |
| 36. | 102151-1 | Boom Bracket |
| 37. | 604067-1 | Lampholder |
| 38. | 104059-1 | Light Lens |
| 39. | 104039-1 | Lampholder Bracket |
| 40. | 80813-1 | Bell Cord Wire |
| 41. | 86147 | Push Button |
| 42. | 105352-1 | Control Wiring Harness (not shown) |
| 43. | 104107-1 | Power Wiring Harness (not shown) |
| 44. | 101601-1 | Terminal Bracket |
| 45. | 104703-1 | Terminal Strip |
| 46. | 102104-1 | Sprocket Cover |

* Specify color when ordering.

-1 is for Silver.
-2 is for Brown.

# PARTS AND SERVICE

For parts and service, contact the nearest Distributor.

When ordering parts, specify:

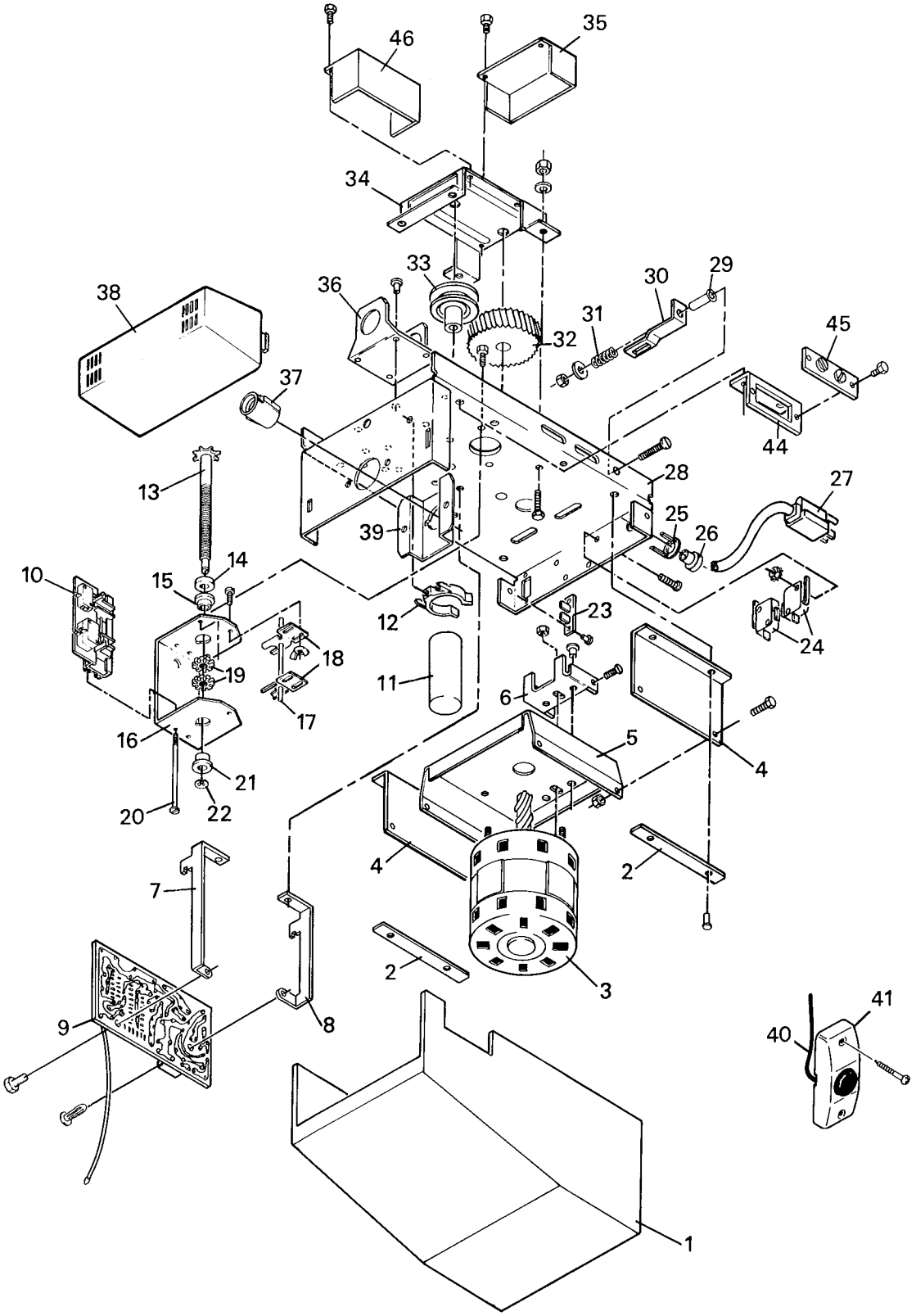
MODEL NUMBER

PART NUMBER

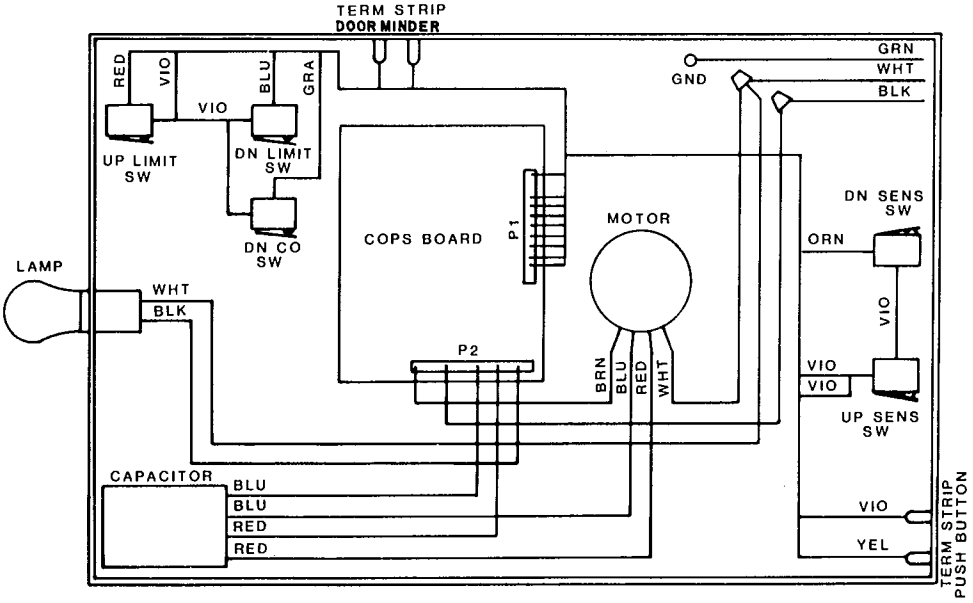
PART DESCRIPTION

Repairs to transmitter and receiver should be performed by a qualified repairman. See Radio Control Instructions.

# ILLUSTRATED PARTS BREAKDOWN



# WIRING DIAGRAM




# WIRING SCHEMATIC