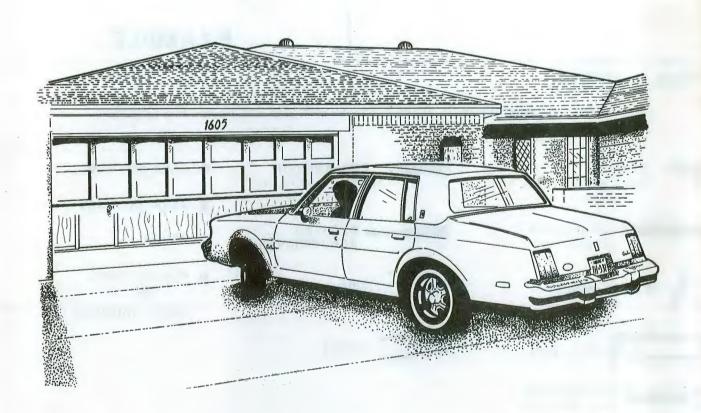
# MODEL 55 GARAGE DOOR OPENER SYSTEM

## ASSEMBLY, INSTALLATION AND **OPERATING INSTRUCTIONS**



INSTALLATION KIT NOT INCLUDED.

#### TABLE OF CONTENTS

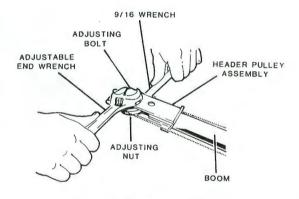
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#### HOW TO USE THIS BOOK

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



Adjust drive chain-cable.



#### **EXAMPLE**

#### **TOOLS NEEDED**

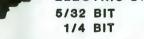
You will need the tools shown below to assemble and install this operator.



END WRENCH 7/16 & 9/16

SLOTTED

TAPE MEASURE



CARPENTER

STRAIGHT EDGE



LEVEL

SCREWDRIVER

PENCIL





POCKET KNIFE OR WIRE STRIPPERS



HACK SAW



PLIERS



ADJUSTABLE END WRENCH



NEEDLE NOSE PLIERS

## **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.

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.

. 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

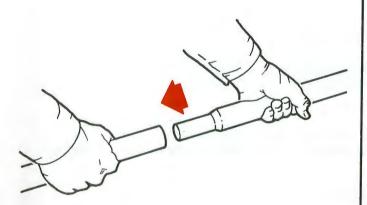
Remove any lift or pull rope if door is so equipped.

#### WARNING

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

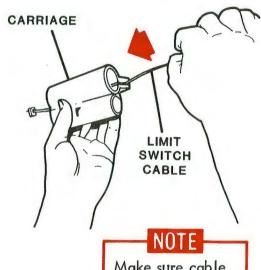
1

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



2

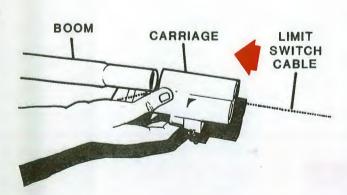
Read and remove red "caution" tag from cable. Thread cable through carriage.



Make sure cable is positioned in bottom of groove.

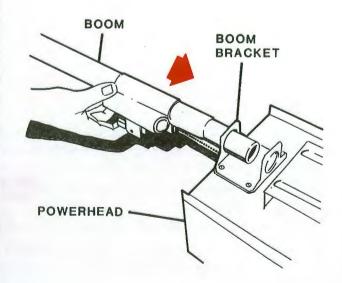
3

Position carriage over tapered end of boom.



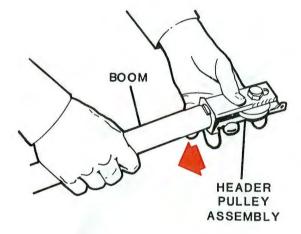
4

Install boom into boom bracket.



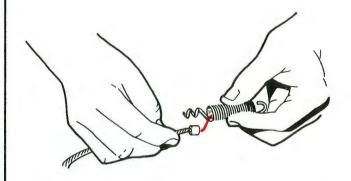
5

Install header pulley assembly on end of boom.

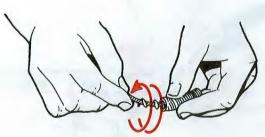


6

Insert cable stop into coil of spring.



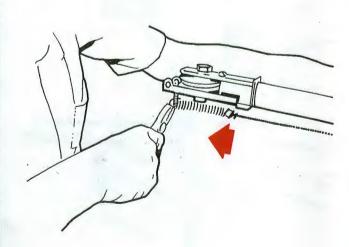
Wind cable (counter-clockwise) into spring end.



Hook spring to header pulley assembly.

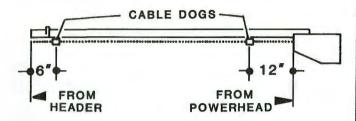


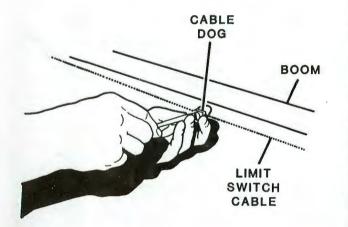
Make sure cable will not pull out of spring.



9

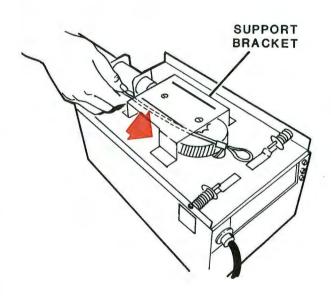
Install cable dogs on limit switch cable.





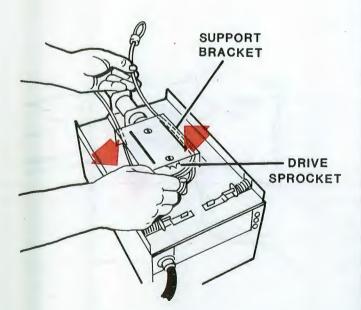
10

Route cable end of drive chain-cable through support bracket.



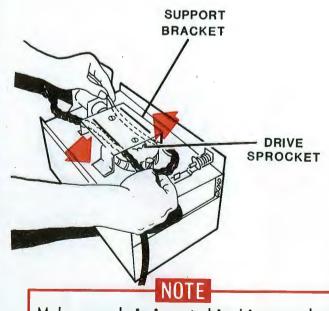
11

Wrap around drive sprocket and back through support bracket.



12

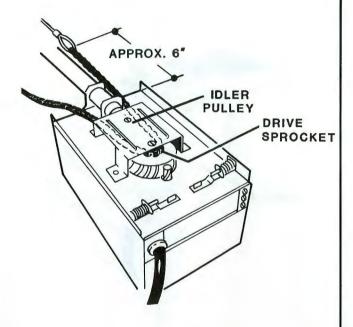
Pull cable through until chain has wrapped drive sprocket and extends past front of powerhead six (6) inches.



Make sure chain is seated in drive sprocket and idler pulley.

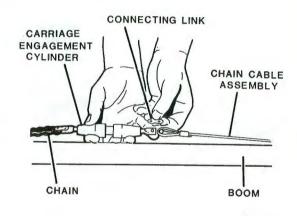
**13** 

Make sure chain is seated in drive sprocket and idler pulley.



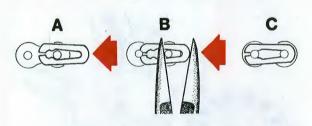
14

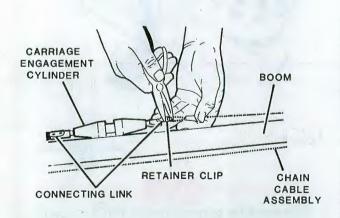
Insert carriage engagement cylinder into carriage. Wrap cable end of drive chain-cable around header pulley and back to carriage. Connect chain and cable to carriage engagement cylinder using connecting links.



15

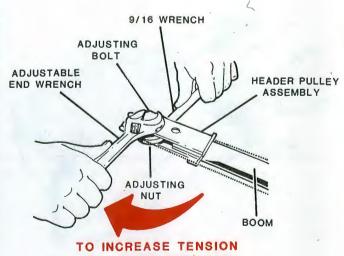
Install retainer clips on connecting links.





16 2 200 16

Adjust drive chain-cable.

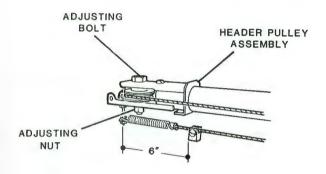


IMPORTANT

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

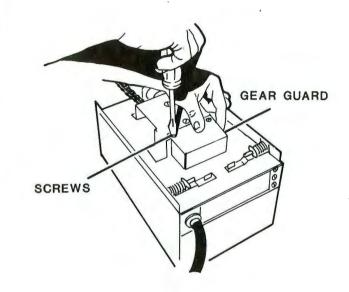
Correctly installed: - Header pulley assembly. - Limit switch cable.

- Cable dog.

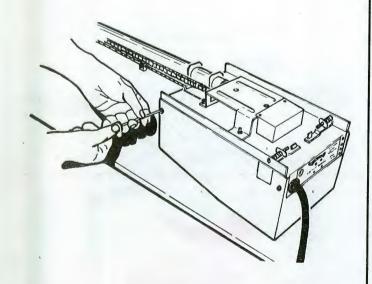


18

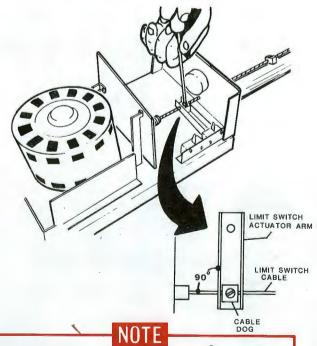
Install gear guard.



Remove cover (4 screws).

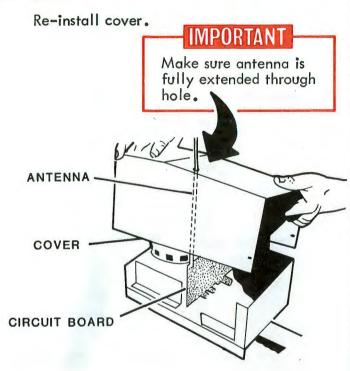


Center limit switch actuator arm.



Arm must be perpendicular (90°) to cable and parallel with front of chassis.

21

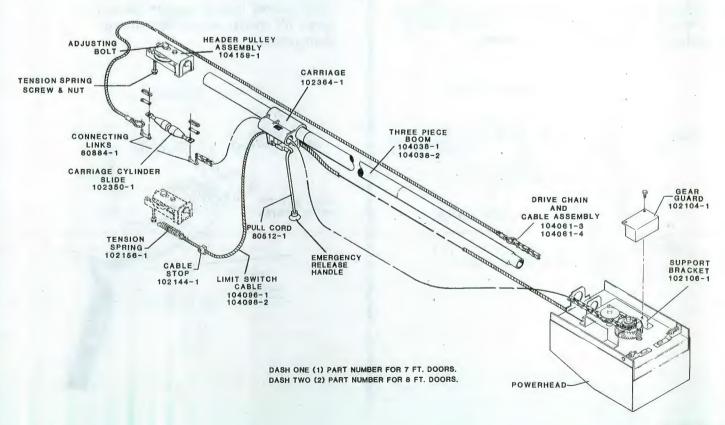


22

CHECKLIST

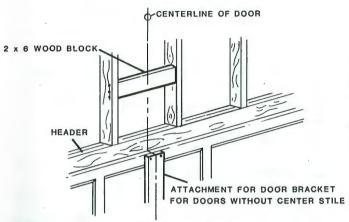
- Header pulley assembly is positioned correctly.
  - Drive chain is seated in drive sprocket.
- Drive chain is not twisted.
  - Cable is seated in header pulley.
- Sensitivity cable dogs installed securely.

## **ASSEMBLY DRAWING**



23

Measure width of door to determine center.

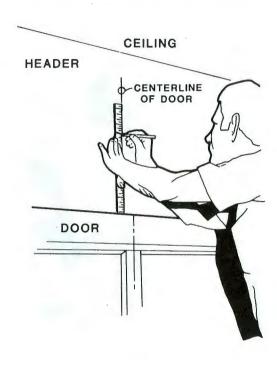


If header does not have suitable woodwork where header bracket will be installed, then such will have to be made. It is suggested that a wood 2"x 6" be secured to nearby existing woodwork.

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.

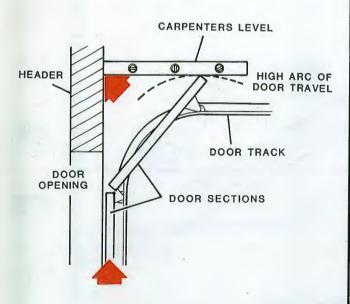
24

Mark center line on door and header.



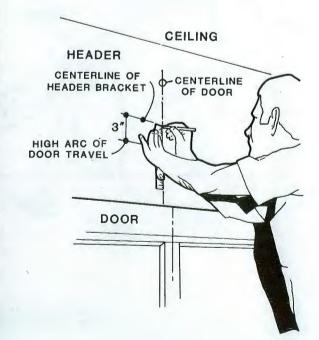
25

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



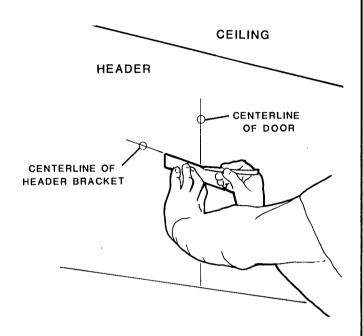
26

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



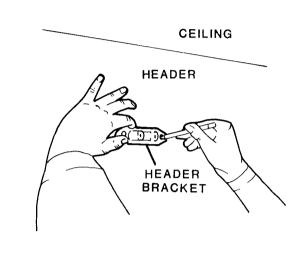
27

Mark horizontal center line of header bracket.



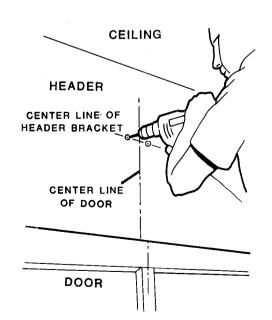
**28**  $\square$ 

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



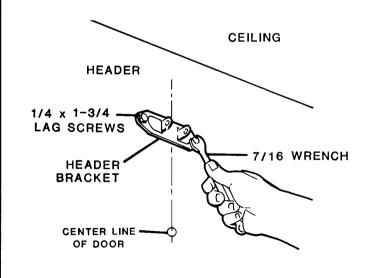
29**\_ 7** 

Drill 5/32" diameter holes at marked locations.



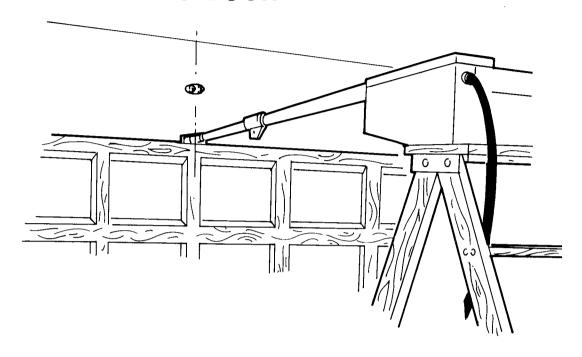
**30** → <sup>7</sup>16

Secure header bracket to header.



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

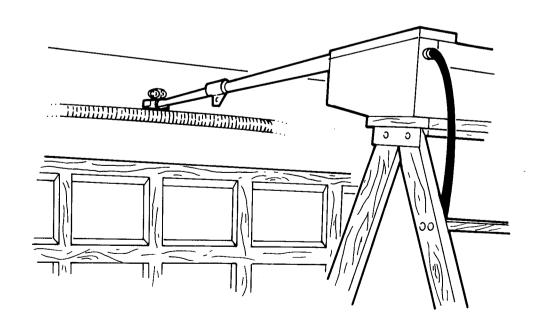
#### **EXTENSION SPRING DOOR**



#### OR

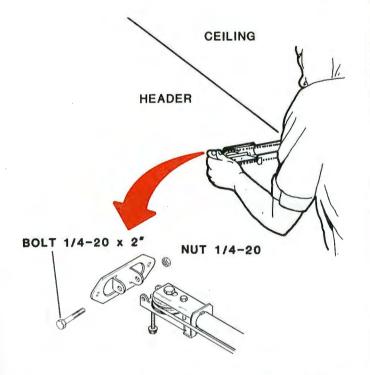
Rest header end of boom on torsion spring and powerhead on top of step ladder.

#### **TORSION SPRING DOOR**



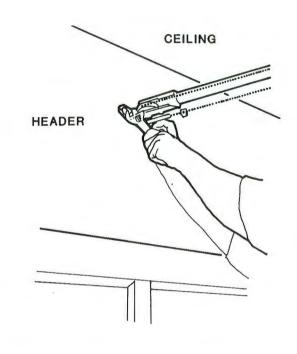
**32** 

Attach header pulley assembly to header bracket.



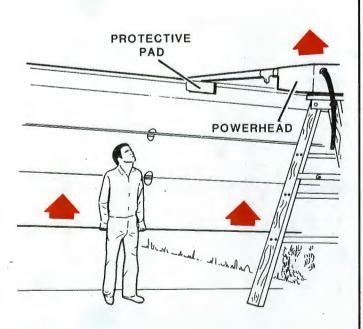
33 7 76

Secure header bracket bolt.



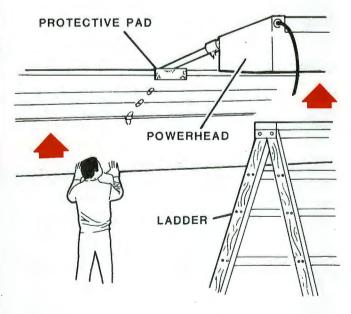
34

To raise powerhead: raise door slowly.



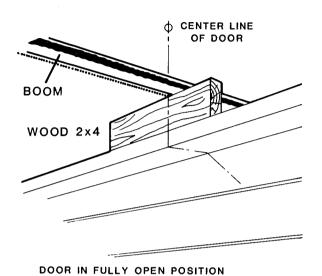
**35** 

Continue raising door until fully open.



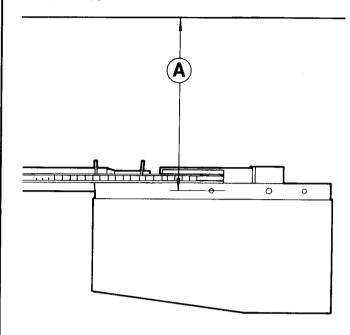
36

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



**37** 

Measure distance from powerhead mounting hole to ceiling. This distance (A) will be used to determine length of hanging brackets.



38 🗆 🗀

Subtract 2 inches from distance (A)

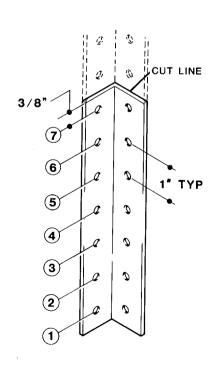
#### **EXAMPLE**

If dimension (A) equals 9-1/2 inches, hanging brackets will have to be at least 7-1/2 inches long.

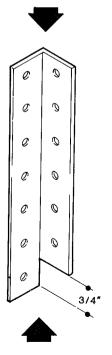
Count up 7 holes.

Cut angles 3/8 inch above 7th hole.

Notch lower end of angles.



SECURE THIS END TO CEILING ANGLE

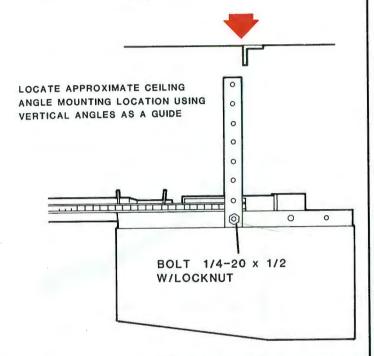


SECURE THIS END TO OPERATOR

39 - 76

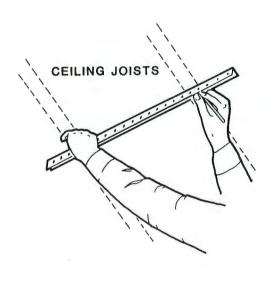
Secure mounting angles to powerhead.

Locate ceiling joists.



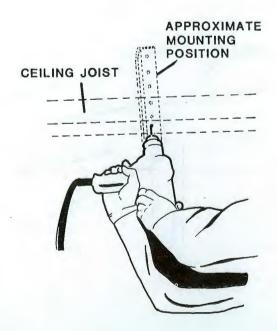
40

Hold ceiling angle in mounting position and mark mounting hole locations using appropriate holes in angle as a guide.



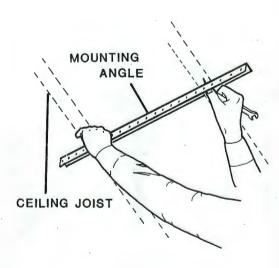
41 7

Drill 5/32" diameter pilot holes through ceiling into ceiling joists at marked locations.



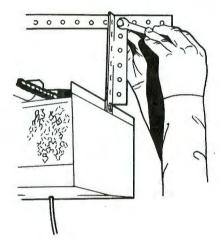
42 - <sup>7</sup>16

Secure ceiling angle to ceiling using 1/4"x 1-3/4" Lag screws.



43 - <sup>7</sup>16

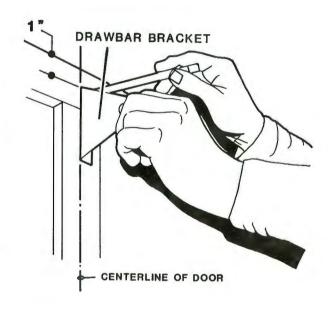
Secure hanging angles to ceiling angle tighten all bolts and nuts.



44

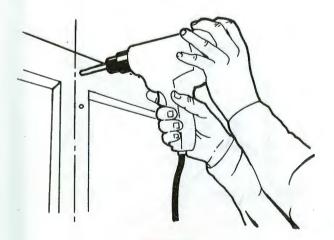
Hold drawbar bracket in mounting position with back of angle on center line of door.

Mark mounting hole locations.



45 7

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

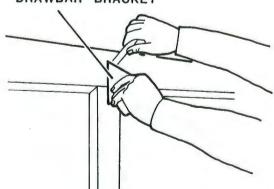


If necessary raise door to avoid drilling into header.

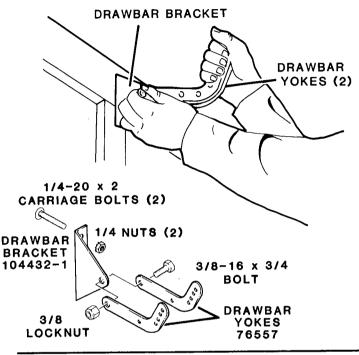
46 - 7

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

DRAWBAR BRACKET

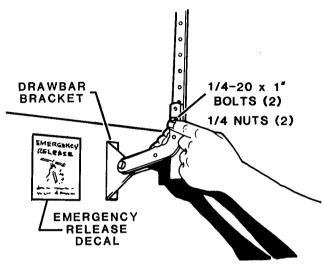


Attach yokes to drawbar bracket. Tighten locknut but do not compress yokes to bracket. Yokes must move freely.



With carriage against header-end limit switch dog, connect drawbar arm to carriage.

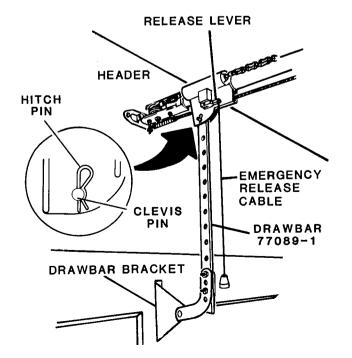
Align two (2) holes in drawbar arm with two holes in drawbar yokes and secure.



Remove protective backing from EMERGEN-CY RELEASE decal and install on door, near drawbar bracket.

**49** 

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



**50** 

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.

Drawbar to yoke bolts tight.

Drive chain-cable is tight (tensioned)

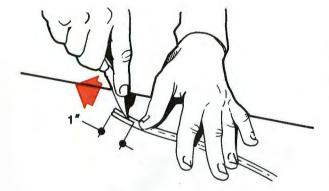
correctly).

Carriage engagement cylinder is engaged with carriage.

## **WIRING**

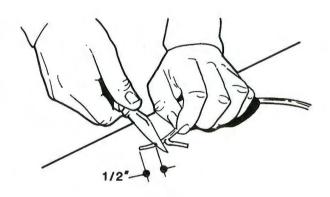
51

Separate end of push button wire.



**52** 

Carefully cut insulation around wire. Do not cut wire.

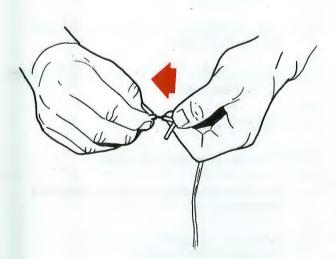


NOTE

This procedure is best performed by using wire strippers.

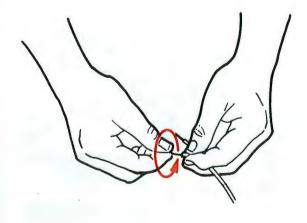
53

Remove insulation.



54

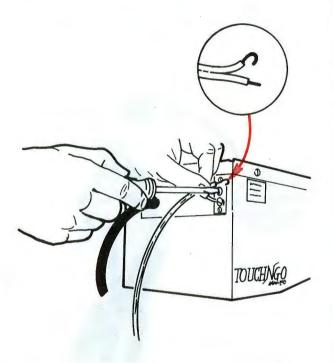
Twist ends of wire strands together.



#### WIRING

55

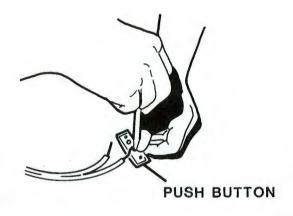
Shape wire leads like a hook, and connect leads to operator terminals.



56

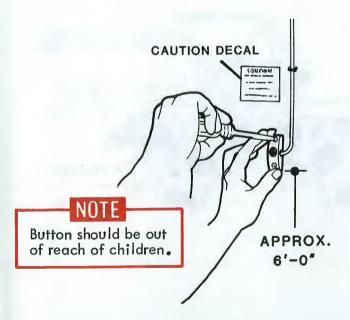
Route push button wire from powerhead along ceiling to house entrance door. Staple wire as necessary to prevent entanglement or contact with moving objects.

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



57

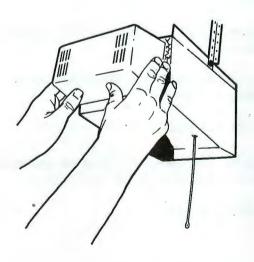
Install push button on wall near house entrance door approximately six (6) feet from floor.



Peel backing off "PUSH BUTTON - CAUTION" decal and attach to wall near pushbutton.

**58** 

Depress ends of light lens to install or remove lens.



- IMPORTANT

USE MAXIMUM 75 WATT BULB.

#### WIRING

59

#### 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 cable adjustments. Keep hands and objects clear of powerhead if electrical power is re-connected with cover off.

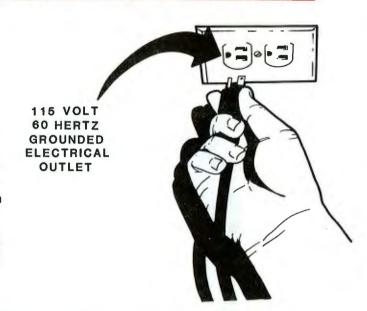
Operator is equipped with a factory installed power cord and must be plugged into a 115 volt, 60 hertz, grounded electrical outlet.

#### 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.



### **60**

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

Remove cover (4 screws).

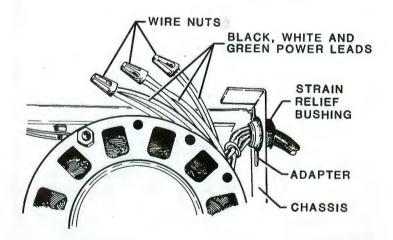
Remove and discard strain relief bushing and adapter.

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**

61

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

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



## **62**

TO START OPERATOR:

Press transmitter button 1 time
Press push button (within 3 seconds) 2 times

TO STOP OPERATOR:

Press transmitter button 1 time
Press push button 1 time
(Operator will restart in opposite direction.)

TO TURN LIGHT ON:

Press push button 1 time (Light comes "ON" after short delay.)

TO TURN LIGHT OFF:

Press push button 1 time
Door restarts in "OPEN" cycle after power failure.





63

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, allows door to travel.

- counter-clockwise, restricts door travel.

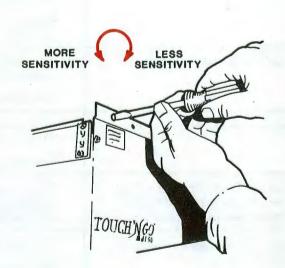
Door should open fully without stopping.

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.



#### 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 dog.
	Door limit switch dog slipping.
	*Defective limit switch.
	*Defective circuit board.
Door starts down, runs longer than 1 second, then reverses.	Obstruction in doorway or roller pathway.
	*Hard operating or defective door.
	Sensitivity control set too light.
Door raises, carriage hits power- head.	Improper adjustment of up limit switch dog.
	Up limit switch dog slipping.
	*Limit switch defective.
	*Defective circuit board.
Door starts up, runs longer than 1 second, then stops.	Obstruction in doorway or roller pathway.
	*Hard operating or defective door.
	Improper adjustment of sensitivity control.
Door runs up, won't run down.	*Down limit switch or down limit
	switch circuitry open.
	*Defective circuit board.
Door runs down, won't run up.	*Up limit switch or up limit switch circuitry open.
	*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 from radio or pushbutton.	Operator unplugged.
	*Defective radio receiver.
	*Defective circuit board.
	Motor overheated.
Motor runs, door will not open.	*Broken chain, chain-cable, drive sprocket, or drive gear.

#### **PARTS LIST**

1. 2. 3. 4. 5. 6. 7.	102152-1 102147-1 102142-1 102137-1 102105-1 102101-1 104047-1	Cover Assembly Motor Support Motor Motor Mounting Angle Motor Bracket Safety Trigger Circuit Board Mounting Brackef
8.	104036-1	Circuit Board Mounting
9. 10. 11. 12. 13. 14.	104103-2 77543 77156 -1 77452 102149-1 102156-1 104089-1	Bracket Circuit Board Limit Switch Capacitor Capacitor Clip Limit Switch Arm Tension Spring Limit Switch Bracket
16. 17. 18. 19. 20. 21. 22. 23. 24.	604058-1 104040-1 80628 -1 76877-12 77085 102145-1 104050-1 102102-1 102087-1 104086-1	Assembly Terminal Strip Sensitivity Switch Adapter Strain Relief Bushing Power Cord Main Frame Eyelet Safety Trigger Retainer Sensitivity Spring Main Drive Gear
26. 27. 28. 29. 30. 31. 32. 33. 34. 35.	102103-1 102106-1 102104-1 102151-1 102151-2 604067-1 86168 -3 102144-1 104059-1 104039-1 80813 -1 86147	Assembly Chain Idler Support Bracket Motor Guard Boom Bracket (3 piece) Boom Bracket (1 piece) Lampholder Nylon Snap Bushing Cable Dog Light Lens Lampholder Bracket Wire, Bell Cord Push Button

#### PARTS AND SERVICE

For parts and service, contact the nearest Overhead Door Distributor.

When ordering parts, specify:

MODEL NUMBER

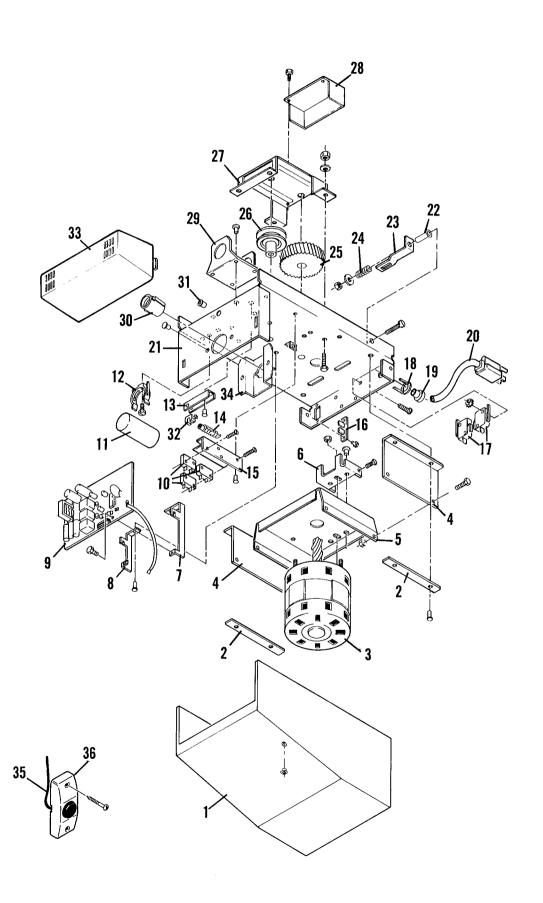
PART NUMBER

PART DESCRIPTION

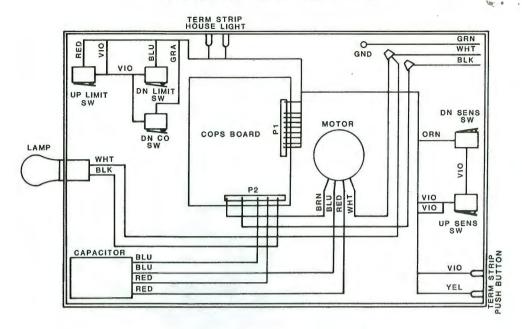
Repairs to transmitter and receiver should be performed by a qualified repairman. See Radio Control Instructions.

<sup>\*</sup>Requires the assistance of a qualified repairman.

#### ILLUSTRATED PARTS BREAKDOWN



#### **WIRING DIAGRAM**



#### WIRING SCHEMATIC

