STEP 1

OVERHEAD CLEARANCE

Measure the overhead clearance in your garage by measuring the distance above the bottom of the header that is free from obstructions (rafters, pipes, garage door opener, etc.) a distance "D" behind the back of the header (See Fig. 1).

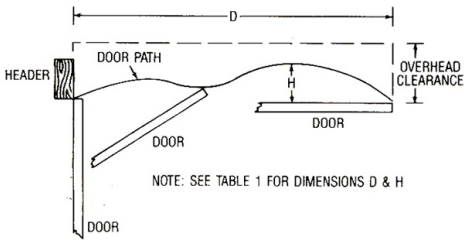


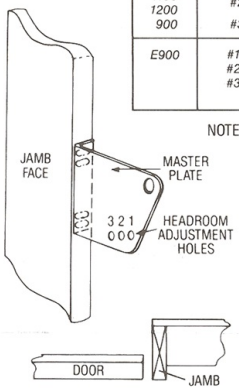
FIG. 1 OVERHEAD CLEARANCE

STEP 2

Select the appropriate headroom hole from table 1 based on your measurement from step 1.

TABLE 1

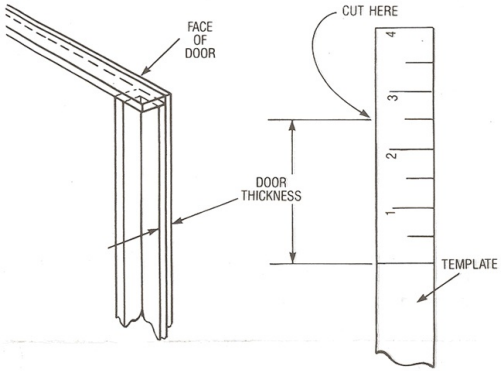
MODEL #	HEADROOM HOLE	HEADROOM H	D
1500 1100 1200 900	#1 #2 #3	6" 4" 2" (1st Peak)	49"
E900	#1 #2 #3	5" 3" 1" (1st Peak)	51"



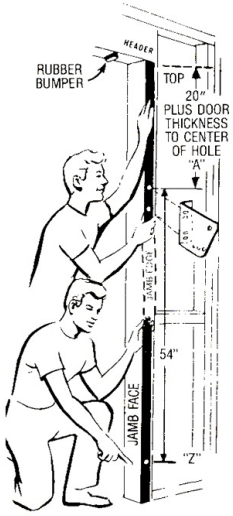
NOTE: Dimensions in table 1 correspond to the typical installation in which the back of the jamb, where the master plate mounts, is approximately flush to the back of the door, where the door angle mounts.
Hardware is preassembled in the #1 hole, ready for installation. Change only when overhead clearance is not sufficient.
For other configurations contact a professional door installer located under "Doors" in your local yellow pages.

STEP 3

Measure door thickness from face of door to mounting surface of door angle and cut-off template accordingly as shown.



STEP 4



NOTE: It is not recommended that a replacement set of hardware be installed in the existing jamb holes unless at least one of the following is done:

(1) Plug the existing holes with dowels.
(2) Use through bolts instead of lag screws.
(3) Add a support from the jamb to the master plate.
(4) Replace the existing jambs.

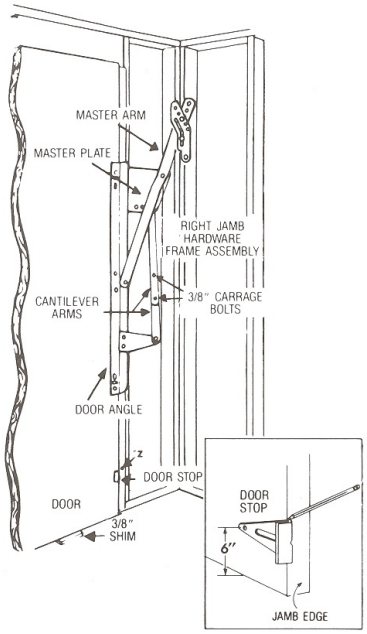
Nail rubber bumpers to bottom of header approximately 10" from each jamb.

Place top of template even with bottom of header and mark holes labeled "A". Drill 1/4" holes for 3/8" lag screws.

Measure 54" from "A" to "Z". Drill 1/4" hole for 3/8" lag screws.

Repeat on opposite jamb.

STEP 5



Loosen 3/8" carriage bolts on cantilever arms.

Position door in place. Shim 3/8" beneath the door. Door should be 3/8" narrower than the opening on each side. Make sure door is vertically upright with the top of the door against the header.

Mount the master plate to jamb using 3/8" washer and lag screw with its front face flush with jamb face.

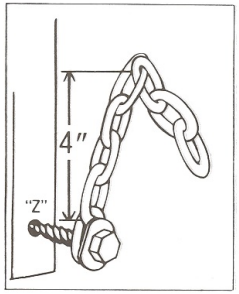
Put door angle against door, with the edge of door angle appox. ½" from the edge of door, and bolt to door with 5/16" lag screws. (For metal doors, bolt door angle to door with 5/16" x 3/4" hex head machine bolts and nuts.)

After making sure the door is still in the correct position, tighten 3/8" carriage bolts on cantilever arms.

Put door stop in place between door and jamb and mark extension of door stop past jamb edge. When door is raised position, fasten with 1 3/4" long drive nails to jamb face about 6" above the floor.

Repeat on opposite jamb.

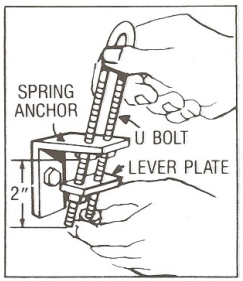
STEP 6



Put 3/8" washer and chain on 3/8" x 3 3/4" lag (see illustration) and screw bolt into hole marked "Z".

Repeat above instructions on opposite jamb.

OR

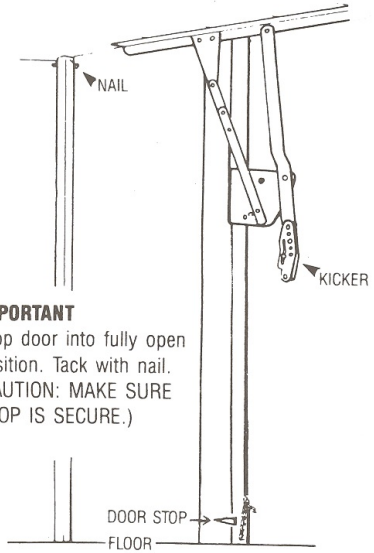


Put 3/8" x 3 3/4" lag screw in spring angle bracket and screw bolt into hole marked "Z".

Move top 5/16" nuts up 2" on each lag of "U" bolt before installing.

Repeat instructions on opposite jamb.

STEP 7

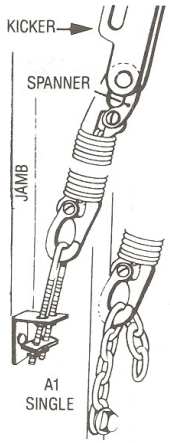


IMPORTANT

Prop door into fully open position. Tack with nail. (CAUTION: MAKE SURE PROP IS SECURE.)

STEP 8 SELECT THE INSTRUCTIONS FOR THE SPRING COMBINATION PROVIDED WITH YOUR HARDWAR

A FOR USE WITH HOOK END SPRINGS



A 1 SINGLE

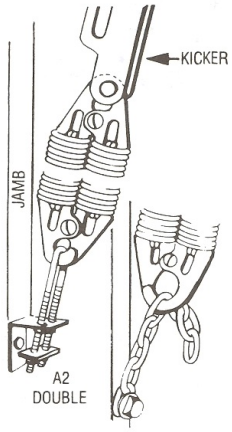
Install spring hook thru the U bolt (or chain). Stretch spring up and hook over lower bushing on kicker as shown. If hooks are not in line twist spring in the direction it turns easiest.

Attach Spanner with bolt and nut on each end. (see drawing). Repeat on opposite jamb.

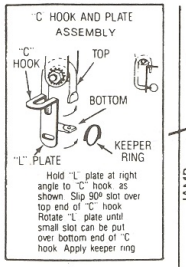
A 2 DOUBLE

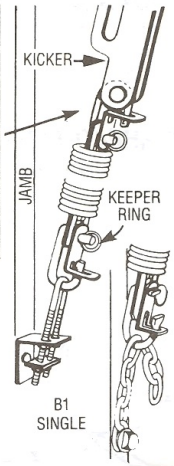
Install two springs by their hooks thru the U bolt (or chain). Stretch springs up and hook over lower bushing on kicker as shown. If required, twist springs in the direction they turn easiest to line up hooks.

Insert 1/4" x 5/8" R.H. stove bolt and nut for safety lock as shown. Repeat on opposite jamb.



B FOR USE WITH CLIP OR PLUG END SPRINGS





B 1 SINGLE

Install "C" hook thru the U bolt (or chain). Install other hook over the lower bushing in kicker, as shown.

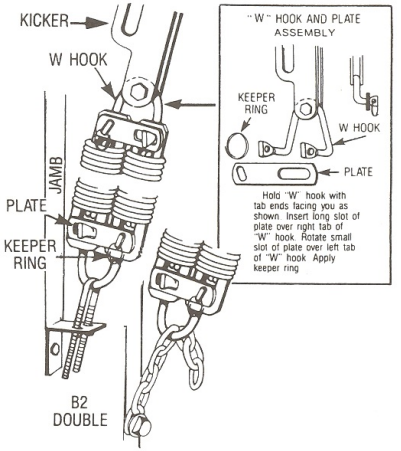
Attach spring to lower hook. Apply the plate and keeper ring according to sketch & instructions, then stretch to connect to upper hook. Apply plate and keeper ring. Repeat on opposite jamb.

B 2 DOUBLE

Install "W" hook thru the U bolt (or chain). Install other hook over the lower bushing in kicker, as shown.

Attach two springs to lower hook and add plate and keeper ring, as shown.

Stretch springs to connect to upper hook. Add plate and keeper ring. Repeat on opposite jamb.



SPRINGS SHOULD BE STRETCHED ENOUGH TO HOLD THE DOOR UP AGAINST THE HEADER IN THE OPEN POSITION, BUT THE AMOUNT OF STRETCH SHOULD NOT EXCEED 2" AT ANY TIME.

If a spring produces excessive noise when door closes, (a) brace door open (b) unhook spring at kicker and (c) twist the end of the spring 180 degrees IN THE DIRECTION IT TURNS MOST EASILY. Hook spring on kicker and put bolt and nut in place.

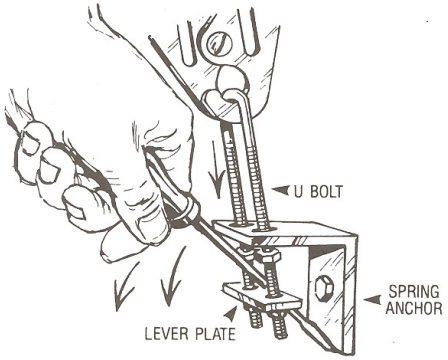
STEP 8A

FOR SPRING ANCHOR

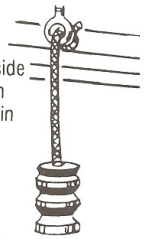
A certain amount of pre-stretch of the springs is required to keep the door snug against the header when open. At no time should there be more than 2" of pre-stretch.

Apex has developed two different methods to do this with the same basic hardware.

1. Using a heavy screwdriver as shown, force down the lever plate. Raise or lower the upper nuts, with screwdriver still in place as required.
2. The second method is to raise or lower the upper nuts with a wrench.



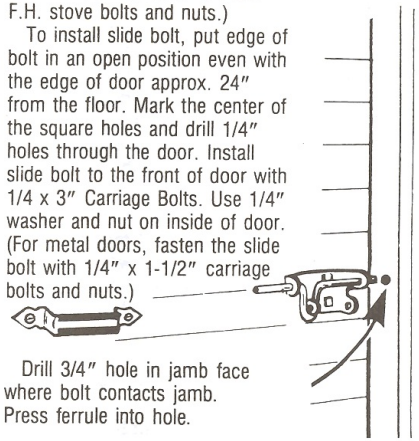
STEP 9



Attached screw eye on the inside center of door approx. 20" from the bottom of door. Insert rope in screw eye and tassel and knot both ends.

Install handle on the outside center of door with #10-1 1/2" Drive Screws, approx. 18" from the floor. (For metal doors, fasten door handle with 3/16" x 1-1/2" F.H. stove bolts and nuts.)

To install slide bolt, put edge of bolt in an open position even with the edge of door approx. 24" from the floor. Mark the center of the square holes and drill 1/4" holes through the door. Install slide bolt to the front of door with 1/4 x 3" Carriage Bolts. Use 1/4" washer and nut on inside of door. (For metal doors, fasten the slide bolt with 1/4" x 1-1/2" carriage bolts and nuts.)



Drill 3/4" hole in jamb face where bolt contacts jamb. Press ferrule into hole.

STEP 10 FINAL ADJUSTMENT (IF NECESSARY)

ADJUSTA-MATIC KICKER

A) If door is hard to pull down, remove extra shoulder bolt from master plate and insert in the first empty hole above bolt already in kicker.

B) If door comes down too easily, remove extra shoulder bolt from master plate and insert in the first empty hole below the bolt already in kicker.

NOTE: If it is difficult to insert bolt into new adjustment hole:
1. Insert bolt as far as possible.
2. Align holes with holes in master arm if necessary.
3. Apply nut.
4. Pull bolt thru by tightening the nut with a wrench until fully inserted.

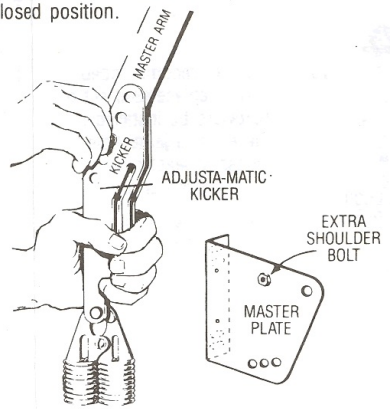
C) Put nut on newly inserted bolt.

D) Remove nut from original bolt.

E) Remove original bolt.

F) Repeat on opposite jamb.

Not only have you quickly changed the leverage hole, you have changed the amount the spring will stretch when the door is in the closed position.



CAUTION: ALWAYS MAKE ADJUSTMENT WHEN DOOR IS OPEN. MAKE SURE PROP IS SECURE. (AS IN STEP NO. 7) REPEAT IF NECESSARY

REGULAR KICKER

A) If door is hard to pull down
1) Move kicker assembly "UP", one adjustment hole at a time.
2) Move spring hook "UP" one link on the chain each time kicker is moved "UP", to maintain same spring tension.

B) If door comes down to easily
1) Move kicker assembly "DOWN", one adjustment hole at a time.
2) Move spring hook "DOWN" one link on the chain each time kicker is moved "DOWN" to maintain same spring tension.