

Beat the Quake!

California Earthquake Preparedness Month

Steps to Take

HUGHES

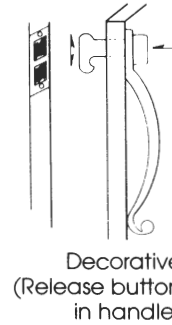
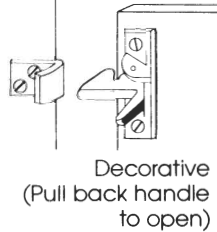
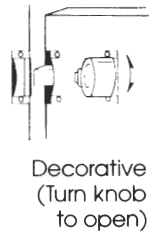
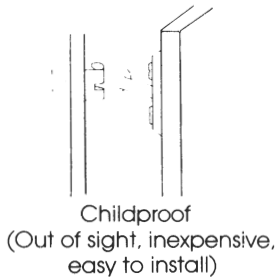
RADAR SYSTEMS GROUP
SPACE AND COMMUNICATIONS GROUP

SECURE FURNITURE:

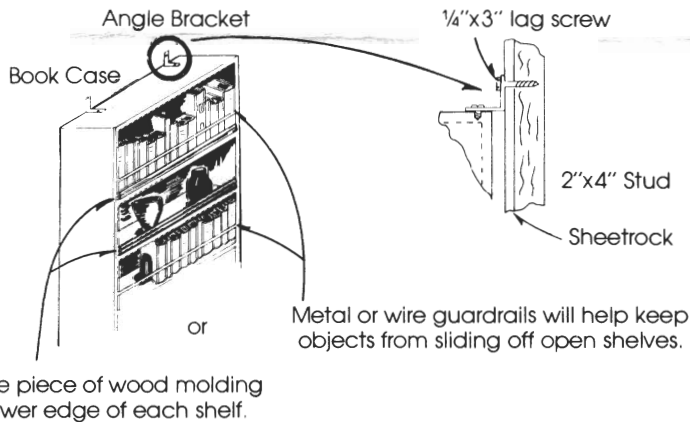
To prevent injury to your family and minimize damage.

Protect

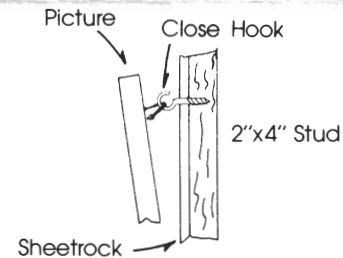
CABINETS



TALL FURNITURE OR OPEN SHELVES



HANGING PICTURES



Materials Needed

Cabinet Latches
Brackets
Lag Screws
Flat Head Screws
Wood Trim
Small Nails or Brads
Screw Hooks

Tools Needed

Screwdriver
Hammer
Pliers
Crescent Wrench

Cabinets

Install positive catching latches. Many variations are available at hardware stores.

Tall Furniture

Install metal "L" brackets between furniture and wall stud at top. (The "L" bracket can be installed inverted so it will be hidden from view.)

Open Shelves

Install guard across shelf, or install wood trim on front of shelf. Place heavy objects on lower shelves.

Hanging Pictures

Screw hooks into wood members only (stud or ceiling joists). Close hooks used for hanging pictures to prevent their falling.

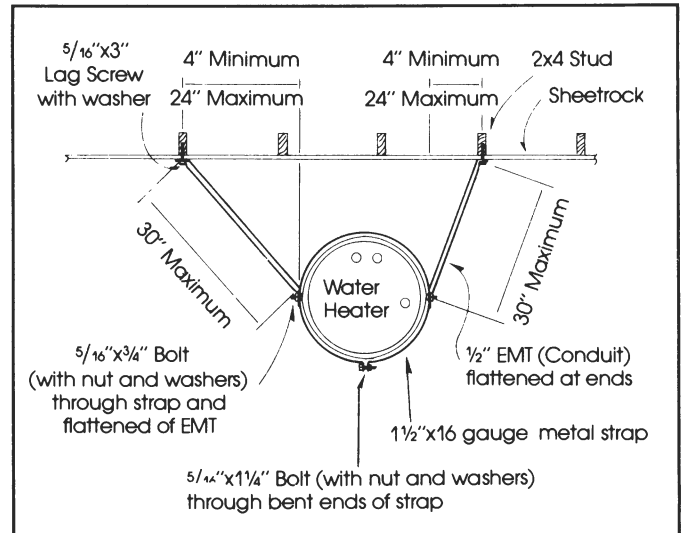
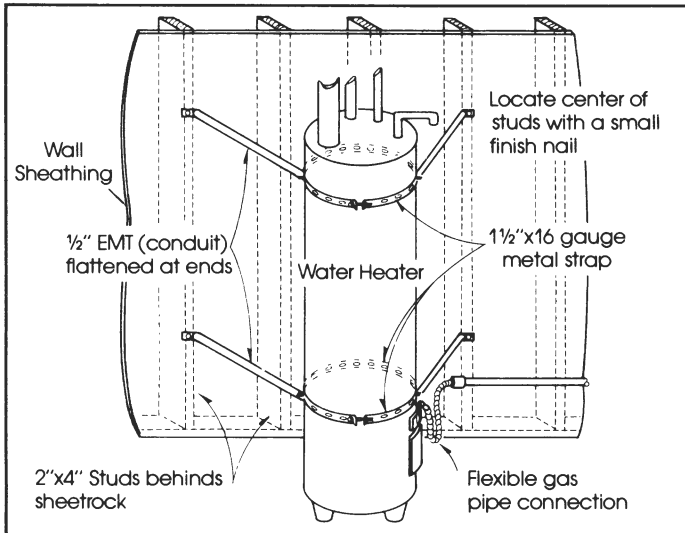
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Steps to Take

Protect

STRAP WATER HEATER:



Materials Needed

- (2) 6' lengths of 1 1/2" 16 gauge pre-drilled strap
- (1) 10' length 1/2" EMT tube (conduit)
- (4) 5/16" x 3" lag screws with washers
- (4) 5/16" x 3/4" long hex head machine bolts with 4 nuts and 8 washers
- (2) 5/16" x 1 1/4" hex head machine bolt with 1 nut and 2 washers each

Tools Needed

- | | |
|-----------------|-----------------|
| Tape Measure | Power Drill |
| Hammer | 3/8" Drill Bit |
| Hack Saw | 3/16" Drill Bit |
| Crescent Wrench | Center Punch |
| Vise or Clamp | |

1. Strapping your water heater and making sure it is fitted with a flexible gas supply line will greatly reduce the danger of fire or explosion from a gas leak after an earthquake. If your water heater does not have a flexible gas supply line, contact a licensed plumber to install one. *These instructions are for a 30-40 gallon water heater within 12" of a stud wall.*

2. Mark water heater at 6" down from top and about 18" up from bottom. Transfer these marks to wall. Locate the studs in the wall on both sides of the water heater.

3. Drill a 3/16" hole 3" deep through the wall sheathing and into the center of the wood studs at the four marks made in step 2.

4. Measure around the water heater and add 2" to the measurement. Using a hacksaw, cut the two 1 1/2" x 16 gauge metal straps to this length for encompassing water heater.

5. Mark 1 1/2" from each end and insert in a vise or under a heavy object and bend the ends outward to approximately a right angle. Bend the straps into a curve.

6. Measure the distance from a point midway on each side of the water heater to the holes drilled in the wall. (Probably two different lengths.) Add 1 1/2" to these measurements. Using a hacksaw, cut two pieces of conduit to each of these two lengths.

7. Using a hammer, flatten approximately 1 1/2" at each end of the four pieces of tubing by laying the tube on a flat metal or concrete surface and striking with the hammer. Be sure you flatten both ends on the same plane.

8. Insert the flattened ends of the tubes, one at a time, into a vise or clamp. With the hammer and center punch make a mark 3/4" from each end at the center of the flattened area of the tube. Drill 3/8" holes in the ends of all four tubes (8 holes). Be sure tubes are clamped down while drilling. Bend each end to about 45 degrees.

9. Wrap the straps around the heater and insert a 5/16" x 1 1/4" bolt with washers into the bent ends. Tighten nuts with fingers. Insert 5/16" x 3/4" bolts through strap from the inside at the mid-point on each side of water heater. Attach one end of each tube strut to a protruding bolt, add a washer and nut, and tighten with fingers. Insert 5/16" lag screw in the opposite end of each tube strut and insert in hole in the wall stud. You may need to tap the lag screw gently into the hole to start it, then tighten with crescent wrench.

10. Adjust the straps to the proper height and tighten all nuts snugly, but not too tight.

Note: There are many methods to strapping water heaters. The above method is recommended for fire safety in that metal is the only material that comes in contact with the water heater. Reproduced with permission from: *Home Earthquake Preparedness Guide*, EQE, Incorporated, San Francisco, CA.