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**READ ALL INSTRUCTIONS BEFORE INSTALLING AND USING CHIM-A-LATOR<sup>®</sup>**

*NOTE: IF YOU HAVE MORE THAN ONE FIREPLACE FLUE IN YOUR CHIMNEY COMPLETE THIS TEST*

## **1.0 CROSS OVER SMOKING TEST**

### **A. DEFINITION**

There is a phenomenon that sometimes occurs in masonry flues that run parallel through the same chimney called "crossover smoking". Crossover smoking occurs when the homeowner starts a fire in their upstairs fireplace and notices that there is smoke coming into the house through their downstairs fireplace opening.

There are two primary reasons why smoke from one fireplace enters the house through the other fireplace. First, winds, downdrafting, and/or deflection can cause smoke to come down the other flue. Or second, smoke could be communicating from one flue to the other through cracks in the flue tile joints. It is this second situation that is called crossover smoking from one flue to the other.

Putting a Chim-A-Lator<sup>®</sup> on will solve the first problem. However, a Chim-A-Lator<sup>®</sup> will not solve the second problem. In fact, installing a Chim-A-Lator<sup>®</sup> may make the problem more noticeable. The Chim-A-Lator<sup>®</sup> does not cause the problem, but by sealing off the second flue, the crossover smoke can not escape up the second flue. The smoke instead is drawn down the second flue, thus making the existing problem more noticeable.

### **B. TO TEST**

Cover unused flue at the top with a piece of cardboard and a weight. Start up a fairly hot fire in the other fireplace. Then open the damper in the other fireplace and observe in the flue with a flashlight whether or not any smoke is crossing over. Also, turn on a kitchen and bathroom fan and observe under extreme conditions. If there is a power attic ventilator, it should never run when using the fireplace. It pulls too much air out of the house.

### **C. TO CORRECT THE PROBLEM**

There is a very simple, practical, cost-free method of dealing with crossover smoking once Chim-A-Lators<sup>®</sup> are installed: open both Chim-A-Lators<sup>®</sup>, reverse the draft in both chimneys in the usual manner, and then start your fire. Also, the opening of a window or the installation of an Air-A-Lator<sup>®</sup> fresh air intake to reduce the negative pressure in the home would help.

This is a solution but does not solve the problem with your fireplace. Try sealing up any cracks or holes, including the expansion crack just inside and above the fireplace opening. Use high temperature fireplace caulk or crinkled foil to seal holes and cracks. If this does not correct the problem, the leaks are most likely in the joints of the flue tile. This condition is best left to the experts. Many chimney sweeps and masons are relining, repairing and insulating chimney flues today with modern and proven methods.



## 2.0 CHIM-A-LATOR® INSTALLATION INSTRUCTIONS

### WARNING: BEFORE GOING TO THE ROOF

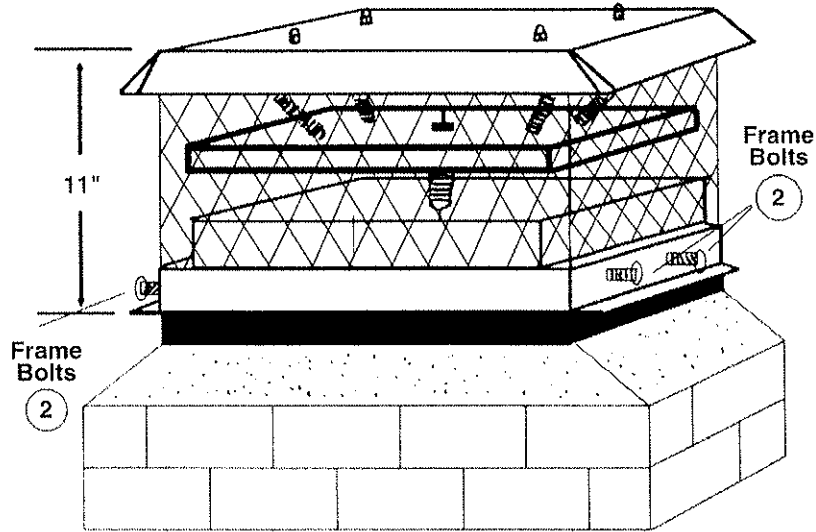
**TAKE NECESSARY, PRECAUTIONS WHEN ON LADDER OR ROOF. IT CAN BE VERY DANGEROUS. We recommend that you call your local chimney sweep or mason; they will be able to do the installation for you, safely! They can also inspect and clean your chimney to be sure it is safe.**

#### STEP 1:

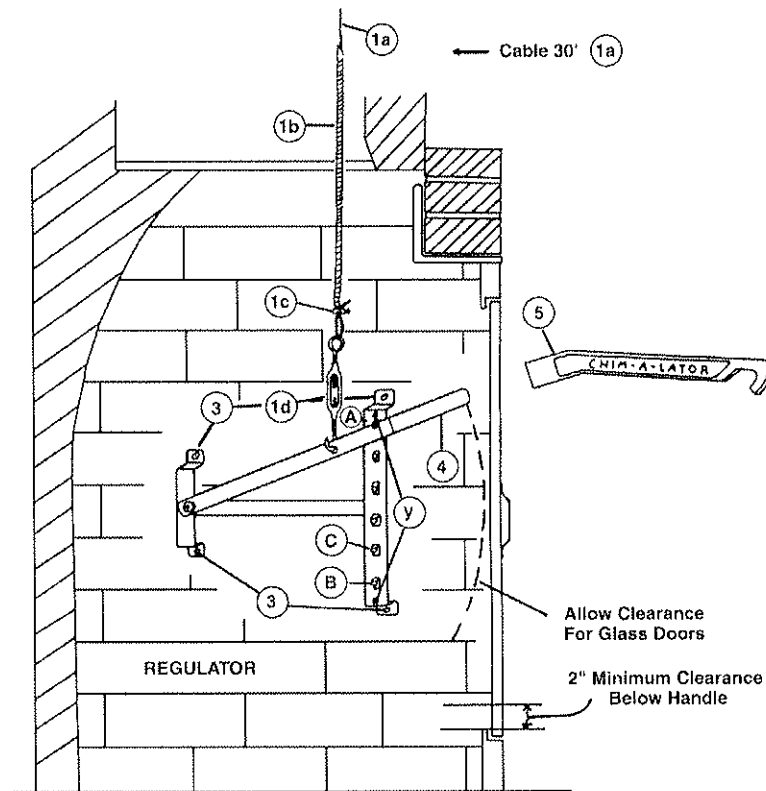
- A. Open existing damper. Screw four frame bolts (1/4-20 x 1 1/2") into frame.
- B. Proceed to roof with UPPER UNIT and a screwdriver, a flashlight is also handy.  
**NOTE:** There must also be at least 1 1/2" of flue tile extending from cement cap - if not; you will need a flue extension.
- C. Unwind entire cable assembly (1) (cable, cable casing and turnbuckle) by spreading out over roof.  
**NOTE: BE CAREFUL NOT TO KINK CABLE.**
- D. Lower turnbuckle, cable casing and cable down flue.
- E. Set upper unit on flue tile, center unit and tighten frame bolts (2). Do not over tighten.
- F. You are now done on the roof. Proceed to fireplace.

#### STEP 2: AT FIREPLACE

- A. Pull excess cable down through damper area. Be sure there are no kinks in cable.
- B. Position regulator unit on right or left side of fireplace, whichever brings the cable down more straight. (For LEFT WALL installation remove screws at (y). Flip hooks so they are pointing down.) Test location with removable handle (5) on end of lever (4). Move it up and down to be sure it does not hit the frame of the glass door, the lintel, or floor. Holes are best drilled in center of firebricks if possible.
- C. Mark and drill (4) clean holes for regulator bracket using 3/16" masonry drill bit. Attach to wall with #14 x 1 1/4" (3) sheet screws. (These screws work best and will not loosen or melt.) (If drilling into steel fireplace wall use 7/32" drill bit)  
**Note: If screw gets tight do not force it. Back off screw 1/4 turn and try again, if still tight remove screw and drill clean hole and ream hole a little bit with drill bit.**
- D. Hook turnbuckle (1d) in lever (4) as shown. With lever beneath the top hook (A), loosen cable clamp (1c) and pull cable through eye of turnbuckle. Look at where the cable touches the old damper frame. At this point notch frame or drill hole in frame of old damper and thread cable through hole. This allows you to also close the lower damper. Closing the lower damper will reduce frost build-up on upper unit and also help reduce any smell from coming down flue.
- E. Set turnbuckle half way (Pic. # 2). With lever beneath top hook (A), pull cable until you feel spring tension. Make small loop and tighten cable clamp and cut off excess cable.
- F. Adjust turnbuckle, holding upper eye. Cable is properly adjusted when you need a little extra pressure to put the lever (4) in the bottom hook (B).



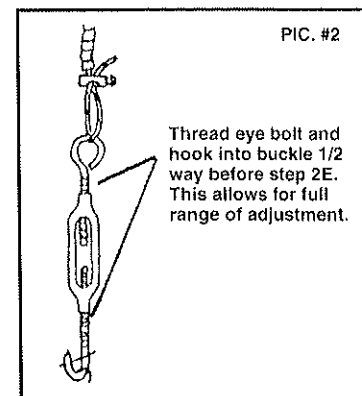
1. CABLE ASSEMBLY
  - 1a. CABLE (400 LB TEST - 30 Ft.)
  - 1b. CABLE CASING (7 Ft.)
  - 1c. CABLE CLAMP & SCREW
  - 1d. TURNBUCKLE
2. FRAME BOLTS - 4 ea. 1/4-20 x 1 1/2
3. #14 X 1 1/4 SHEET SCREWS (4 EA.)
4. LEVER
5. REMOVABLE HANDLE



TO OPERATE:

1. Open CHIM-A-LATOR® full open. The top hook is the full open position.
2. Start fire.
3. After fire is burning and flue is warmed up, close down CHIM-A-LATOR® by lowering lever one notch at a time. When smoke starts to back up into house, open one notch or until smoke stops. In doing this, more heat is realized and wood lasts longer.
4. As fire burns down and you loose draft, open the CHIM-A-LATOR® all the way to prevent smoking.
5. After fire is out close damper to stop heated home air from escaping up the flue.

NOTE: Under extreme cold temperatures damper could frost shut. If this happens open to 2nd notch (C), damper should free within a few minutes.



### 3.0 FIREPLACE PROBLEMS AND SOLUTIONS

There are several reasons why a fireplace may emit smoke back into a room. This is known as "Back-Smoking." "Down Drafting" means that the "Back-Smoking" is caused by wind blowing down the chimney. "Cross-over Smoking" means that the "Back-Smoking" is caused by smoke crossing from one flue to another.

#### A. PROBLEM

1. Fireplace "Back-Smokes" only when the fire is first started. See 1-2.
2. Fireplace continues to "Back-Smoke" after chimney is well-heated. See 3-4-5-6-7-8-9-10.
3. Cold air comes down out of chimney when fireplace is not being used. See 10-11-12-13.

#### B. SOLUTIONS

1. Make sure the damper is fully opened at start.
2. As soon as the damper is opened, the cold outside air (which is heavier than warm air) wants to push down causing a reverse draft. Where the fireplace chimney is built on the outside wall of the house it may be necessary to warm up the flue by rolling up newspaper torches, lighting and holding the torch up in the throat of the flue to start the draft.
3. If there are trees, hill, a neighboring house, or anything higher than your chimney, the wind coming over them drives down and creates a "Down-draft" and causes "Back-Smoking". Installing a Chim-A-Lator® absolutely stops "Down-drafting" and is guaranteed to do this.
4. Check if the existing damper is large enough. Damper opening area should be 50% larger than the flue area. To correct this condition, remove old damper and enlarge opening, if possible. Then install a Chim-A-Lator® instead of the old style damper.
5. Sometimes a fireplace "Back-Smokes" because there is not a large enough smoke chamber. The smoke chamber is the hooded area just above the fireplace opening. The chamber must be large enough for the smoke to gather and funnel up the flue. Lowering the top edge of the fireplace opening with a closure hood can enlarge the smoke chamber.
6. Some fireplaces "Back-Smoke" because the fireplace hearth opening is more than 10 times the area of the flue opening (on short chimneys, 7 times is desirable). Again, a closure hood that reduces the size of the fireplace opening at the top can remedy this condition; or another method would be to raise the hearth with one or more layers of brick (an "AD" Air-A-Lator® could easily be installed with brick).
7. "Back-Smoking" can be caused because the house is shut up too tight. Exhaust fans, kitchen fans, furnace operating, actually can create a vacuum in the house. Power attic ventilators can draw a lot of air out of house proper - thru conduits, cracks, etc. Open a window about 2" to 6" to see if this is the case, or open the ash pit damper and the "clean-out door" outside the house. Smoking can occur when there are openings or cracks in the smoke chamber.
8. "Back-Smoking" can occur when there is a low barometric pressure, heavy humid air, no wind or lack of sufficient heat rising to create a draft. ALWAYS MAINTAIN A HOT ENOUGH FIRE.
9. Clean chimney. Too much soot or tar is caused by green wood, other poor fuels, or lack of air. To clean, call a "chimney sweep." Ask for a periodic inspection.
10. Very old fireplaces were built without a smoke shelf or with an improper smoke shelf, thus wind blows in quite easily. Installing a Chim-A-Lator® eliminates the need for a smoke shelf.
11. Metal to metal dampers are not airtight, even when they are new, and they warp from the extreme heat. Installing a Chim-A-Lator® corrects this problem, because it fits tight and the damper will never warp.
12. Many times the old damper is broken or inoperable. Installing a Chim-A-Lator® is the only practical way to replace it.
13. Where chimneys are built at the outside wall line (and even though there is an airtight Chim-A-Lator® damper installed), a certain amount of cold air can come down. This type of chimney is almost entirely exposed to cold outside air and a slow "convection current" occurs. The warm air rises in the flue, cools, and falls at a slow rate. To stop this, close lower damper also or ball up a newspaper plug and stuff it up in the throat. Use this to start the next fire. NOTE: When building a new fireplace, be sure to install a fresh air intake in front of the grate. This does wonders for a successful fireplace. Ask for our Air-A-Lator® brochure.