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## STOPPING AIR FLOW FROM INTERIOR TO EXTERIOR

Staying comfortable in winter with the indoor temperature at 72 degrees Fahrenheit while keeping one's energy costs low is our goal. Doing a few simple things one can reduce your energy costs by half.

Tip: follow the stock price for HO=F (Heating Oil) and order your heating oil when the price has dropped. Set the graph to show 'year to date.' With the savings by buying oil cheaper one can invest in home improvements, which you'll easily feel and further help you save money. On the iPhone the app is called Stocks. Look up the symbol and add it to your 'watchlist.'

## **Basic Home Air Sealing & Door/Window Insulation**

Sealing air gaps in windows, doors and at other exterior wall penetrations:.

This is the single most important thing one can do to help improve the interior temperature and quality of life, during both summer and winter. Once completed, one can then think about insulation enhancements.

AIR LEAKS: Make sure there are no gaps around doors, windows and your attic hatch. A clue that there is a problem is that you can hear outdoor sound in the interior. Passing vehicles, lawn mowers and the like should be muffled. One certainly shouldn't be able to hear people talking. If you can there are probably air gaps. To find out professionally, an expert will seal every door, window and other opening with sheet plastic, and then perform an air pressure test on each opening, to see if the pressure drops. The homeowner can use the feel of cold air on one of the coldest days of the year to identify problem areas. This doesn't work in the summer as cool air from the interior will escape to the outside. A short term fix is to use painter's tape to seal the crack.

DOOR SEALS AND INSULATION: A quality door will be insulated and have a seal that is continuous around the corners. All too often cheap seals won't meet at the corners and thus allow cold air to enter the home. Visually verify your seals are good, especially at the bottom sill (between the door and the floor).

ATTIC HATCH: Fixing this one area is probably the easiest thing to do that also has the greatest impact on interior comfort and one's utility bills. During winter, one really doesn't feel cold air rushing in below an attic hatch. This is because your warm air is rushing out. By insulating the hatch and sealing around its

perimeter one can significantly improve the interior conditions. This can be done by purchasing insulation boards and stacking them on the attic floor so you have at least an R-20 value, and making sure any ladder hinge doesn't push the insulation up. You need to make a solid seal at the floor but it doesn't have to be glued down, just let it rest on the floor and look for and fill any gaps. By sealing where hot air escapes, one also lessens the amount of cold outdoor air is sucked in from other areas of the house. This will both reduce drafts and the cost to heat the home.

- VENTS, DUCTS, ETC.: Make sure flaps close completely on the exterior. Use pipe insulation on the interior. Use expandable foam at the wall penetration with exterior grade caulking on the exterior to completely seal.
- WINDOWS including insulating around the frame: The installation of new doors and windows should include using expandable foam insulation (soft foam) around the frame and between/around studs and headers. This will help prevent the migration of hot/cold temps between the inside and outside of one's home.
- HOT WATER PIPE INSULATION: Use R-3 or greater foam insulations 'tubes' one can purchase at most hardware stores. Pipe insulation prevents water condensation and keeps the water at the desired temperature.
- OUTLETS/SWITCHES on exterior walls. Since your typical batt insulation won't fit behind the junction box of a typical wall outlet, fill around the outside of the junction box with expandable foam insulation.