



## DIAGNOSIS OF PERFORMANCE PROBLEMS

- GATHER INFORMATION ABOUT THE SYMPTONS
- MAKE A TENTATIVE DIAGNOSIS OF THE PROBLEM AND CONDUCT TESTING TO ASCERTAIN THE CAUSE
- SPECIFY AN EFFECTIVE SOLUTION

### WIND INDUCED DOWNDRAFTS

- RAISE THE CHIMNEY HEIGHT (HOWEVER KEEP IN MIND THAT THIS COULD LOWER THE FLUE GAS TEMPERATURE TO COUNTER THE CORRECTIVE MEASURED)
- INSTALL A WIND DEFLECTION TUPE OF CHIMNEY CAP, MANY WILL TAKE ADVANTAGE OF THE WIND CONDITION (BE AWARE THAT THE CHIMNEY COULD ADVERSELY AFFECT DRAFT AND/OR FLOW)

A SIMPLE LESSON TO ALWAYS KEEP IN MIND WHEN OFFERING A DIAGNOSIS OR EFFECTING A CHANGE EVERY ACTION HAS AN OPPOSITE AND EQUAL REACTION!

### FLOW REVERSAL PROBLEMS

CAUSE=LOWER PRESSURE IN THE HOME

- HOUSE ACTING AS THE CHIMNEY
- COMPETITION FROM OTHER APPLIANCES
- EXHAUST FANS
- RETURN AIR DUCTS
- LEAKY UPPER AREA CONSTRUCTION
- LOW PRESSURE ZONES ON DOWN WIND SIDE OF HOUSE

### EXTREME FLOW REVERSAL

THE CHIMNEY CAN COMPLETELY REVERSE SENDING ALL FLUE GASES INTO THE RESIDENCE.

### LOW FLUE GAS TEMPERATURES

THE REASON FOR A GREAT MAJORITY OF DRAFT AND PERFORMANCE PROBLEMS

- OVERSIZED FLUES
- OUTSIDE CHIMNEYS EXPOSED TO COLD AIR
- LONG CONNECTORS
- HEAT EXCHANGERS
- LARGE SMOKE CHAMBERS

### BACK PUFFING

- PREDOMINANT IN OLDER WOODSTOVES
- EXPLOSIONS OCCURING IN STOVE, CONNECTOR, OR CHIMNEY FROM LACK OF OXYGEN FOR COMBUSTION

## VENTED GAS LOGS

ARE THEY DRAFTING?  
WILL THEY DRAFT TONIGHT?  
WILL SOOT APPEAR MYSTERIOUSLY IN THE HOUSE ONE DAY?

## TYPES OF GAS VENTS

- **TYPE B GAS VENT**-A vents for venting gas appliances with draft hoods and other Category 1 gas appliances listed for use with Type B-Vents.
- **TYPE B-W GAS VENT**-A vent for venting gas-fired vented wall furnaces.
- **TYPE L VENT**- A vent for venting appliances listed for use with Type L vents and appliances listed for use with Type B Vent.
- **SPECIAL GAS VENTS**- Gas vents for venting Category II/ III/IV gas appliances.

## DIRECT VENT APPLIANCES

### NFPA 54- NATIONAL FUEL GAS CODE 7.2.5.

**DIRECT-VENT EQUIPMENT**-Listed direct-vent gas utilization equipment shall be considered properly vented when installed in accordance with the terms of it's listing, the MANUFACTURES INSTALLATION INSTRUCTIONS AND 7.8c The vent terminal of a direct-vent appliance with an input of 10,000 BTU or less shall be located at least 6'' from any opening into a building, and such an appliance with an input over 10,000 BTU but not over 50,000 BTU shall be installed with a 9'' vent termination clearance and an appliance with an input over 50,000 BTU shall be at least 12'' above grade.

## VENTED GAS APPLIANCE

- **CATEGORY I**-An appliance, which operates with a non-positive vent static pressure ad with a vent gas temperature that, avoids excessive condense production in the vent.
- **CATEGORY II**-An appliance, which operates with a non-positive vent static pressure and with a vent gas temperature that, may cause excessive condense production in the vent.
- **CATEGORY III**-An appliance that operates with a positive vent static pressure and with a vent gas temperature that avoids excessive condenses production in the vent.
- **Categories IV**-An appliance that operates with a positive vent static pressure and with a vent gas temperature that may cause excessive condense production in the vent.

## THE NUMBER ONE RECOMMENDATION FROM MANUFACTURERS and DISTUIBUTORS REGARDING VENTING AND VENTING PROBLEMS?

### READ THE MANUAL

THE LIBRARY OF EVERY RETAILER AND INSTALLER SHOULD CONTAIN:

- SUCCESSFUL CHIMNEY SWEEPING
  - NFPA 211
  - NFPA 54
- HEARTH EDUCATION FOUNDATION MANUALS
  - LOCAL CODES AND STANDARDS
- MANUALS FOR EACH APPLIANCE AND VENTING SYSTEM
  - ANY OTHER RATED INDUSTRY PUBLICATION