



Home Inspection Services Newsletter

July 1, 2006

Educational Section: **AC & Condensate**

Water is a by-product of conditioning warm humid air (think monsoon air). This water is called condensate water or “**condensate**”. Ensuring that condensate is routed **out of** and **off of** your home is critical. The **Maintenance tip of the month** on page two advises areas to check to avoid moisture problems related to AC Condensate. Some definitions:

Compressor: Also called the condenser, compresses refrigerant gas into liquid. This unit is located in the ground unit of split systems.

Air Handler: The fan assembly pulls household air past the evaporator coil and pushes cooled air through ductwork returning it to the home.

Evaporator Coil: This series of tubes (typically V shaped and looking a lot like a car radiator), allows liquid refrigerant to expand to a gaseous state while absorbing heat from your household air in the process.

Condensate: Water “squeezed” from the air as it cools (at evaporator coil).

Primary Condensate Pan: A pan (metal or plastic) that the AC unit manufacturer built-in under the evaporator coil to catch condensate.

Secondary Condensate Pan: For attic installations, a second pan should be installed under the air handler’s primary pan (redundant system).

Condensate pipes: Drain water from primary and secondary pans away from the structure (occasionally into the plumbing waste piping).

Whether you have a “packaged unit” (Compressor, evaporator coil, and air handler combined) or a “split system”, the process of air conditioning is the same. Household air gives up **heat** and **moisture** as it is pulled past the evaporator coil and then returned to the home; **cooler and drier**. Refrigerant liquid boils to gas in the evaporator coil then is cooled and compressed to liquid by cooling fins, fan, and condenser.

Water at the evaporator coil is a bi-product of air conditioning.

Condensate from roof units should be **pipied off of the roof**. Condensate from attic, closet, and garage air handlers **is pipied to the outside**.

Inspection Item for July: **AC Condensate**

(Each month, we select appropriate items so that over a 12 month period you are reminded to attend to most common household maintenance/inspection items.)

We recommend that you check the following:

For Attic air handlers: 98% of these installations have a high and low white PVC elbow on the exterior wall. When the AC unit has been running for several minutes, water should drip from the lower exterior elbow (if water is dripping from the upper elbow, the primary drainage system is blocked and should be serviced). Also, check your attic's secondary pan for standing water (there should be none).

For Closet air handlers: Check the area around the unit for evidence of moisture. Remove the filter under the unit as part of this check. Locate the end of the condensate pipe (with AC on) and ensure that it is flowing.

For Roof mounted units: Check to be sure the condensate pipe extends beyond the roof and is flowing when the AC is operating.

Question of the Month: **Why is water pressure tested?**

The generally recommended range for municipal supply is 60PSI +/- 20 and 35 to 45PSI for wells. **Pressure above 80PSI** puts undue stress on piping, joints, and plumbing fixtures and is corrected by the installation of a pressure regulator. Since we do one test, you should obtain further information from the water service provider relative pressure variations.

Safety Tip of the Month: **Garage door safety-reverse**

Electronic Eyes: Most openers installed after 1990 have light beams above floor level. Interrupting the beam should reverse a closing door.

Pressure: Modern electric garage door openers reverse when the closing door meets resistance. For safety, we suggest that sensitivity be adjusted to reverse the door if it meets low resistance.

Raffle for July: **Bottle of Red Wine– Mark's Pick**

To enter, send a reply email with "July Raffle" in the subject along with your name and Ph# to Lauren@hainspect.com Scott B. from Glendale was last month's winner.

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