



## Home Inspection Services Newsletter

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September, 2007

### Educational Section: **Trusses**

Years ago, all house framing was built on site. In the late 1940s, trusses for roof support began being built on the ground at the site and then put into position on the home. With the advent of production housing and standard dimensions, most standard trusses were manufactured in factories and shipped to the job site. Soon, trusses for custom applications were also being made in factories. These trusses are designed by engineers for the appropriate spans, live (i.e. wind) and dead (i.e. roofing material) loads for both production and custom homes. Trusses are engineered for the job and specific installation instructions must be followed to ensure proper structural functionality.

Home inspectors look for manufacturing, installation, or modification issues:  
Manufacturing:

- Miss-aligned connector plates
- Missing connector plates
- Large knots, splits in the wood, etc.
- Damage

Installation (Limited because installation instructions are not available)

- Damaged lumber
- Compression or buckling of connector plates
- Insufficient attachment to the structure (visible at pre-drywall stage)
- Haphazard bracing
- Proper attachment to non bearing walls (fasteners that allow movement as the house expands and contracts)

Modifications (Trusses are an engineered product and can not be modified without engineering approval stapled to the truss)

- Cut trusses (typically for HVAC, recessed lights, roof vents, or attic fans)
- Change of load (house designed for asphalt shingles now has concrete tile), Attic storage (trusses are not designed for storage)
- Repaired trusses that do not bear an engineering approval

Trusses constitute an engineered structural system. The main thing to remember is that trusses cannot be modified or repaired on site without written engineering documentation from the truss manufacturer or structural engineer.

## Inspection Item for September:    **Condensate drip**

(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.)  
When moist air is made cooler, water is squeezed out of the air. This occurs at your AC unit's evaporator coil which is located near the air handler (blower system). You should know where your condensate water drains are and check the condensate drain and safety pan (on attic located air handlers). Condensate water that drains onto roofs, walls, or in the home can create major damage (and the possibility of mold). Be vigilant this time of year; blockages in condensate drain lines are very common.

## Question of the Month:    **What is an anti-tip device?**

An-Anti tip device is a bracket mounted on a cabinet or floor that does not allow a free standing kitchen range to tip over. These brackets were developed due to incidents in which children stood on the stove door to reach a microwave or cabinet thus tipping the range over.

## Safety Tip of the Month:    **Uncapped Gas Lines**

Activating the valve at the end of and uncapped gas line will fill the house with gas. All unused gas pipes require a threaded cap or plug to prevent such an occurrence. I have seen this at least a dozen times in the last couple of months (usually at the dryer or kitchen range).

**Inspection class for realtors:** Arizona Academy of Real Estate (Bell and 99<sup>th</sup> Ave) offers a **3 credit hour course** "lowering risk through inspection". This monthly course is taught by Mark Andrews (yours truly). Please contact the Academy for details. Ph# 623 505 5380

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