



# Manufactured Home Update

Oregon Department of Consumer & Business Services ■ Building Codes Division

October 2006

## Installer license renewal

By Irene Lickiss

It is getting to be that time again when licenses will come up for renewal for manufactured home installers (MDI) and licensed skirting installers (LSI). Licenses expire every two years on Jan. 1.

Please check your licenses now and see if your expiration date is Jan. 1, 2007. Also, if your address has changed since you received your license, you may call Marilyn Mohler at (503) 378-3980 or submit that change in writing. You may fax that information to the licensing department at (503) 373-2322 or myself at (503) 378-4101. I will be happy to make sure the licensing department gets the information.

The renewal notices will be going out approximately six weeks before the expiration date. So be on the lookout for your notice around Nov. 15. If you do not receive a renewal notice by Dec. 1, please check with Marilyn Mohler in the licensing department.

If your license expires, you must reapply and then you will be issued a different license number. This is specified in the Oregon Administrative Rules 918-515-0360.

You may reach me at (503) 373-1257. If you have any comments, I would appreciate your feedback. ■

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## Remember to check the breaker size

It seems there are so many makes and models of appliances with various options. In general, they seem to be getting bigger, and so do their ratings. Recently, there was an issue involving the branch circuit installation of an upgraded appliance. If you are installing, replacing, or upgrading appliances, take a moment to verify the circuit breaker in the main panel will meet the demand of the appliance.

Requirements for separate cooktop and wall-oven units are different than free-standing ranges as reviewed in the previous Manufactured Home Update.

To determine the size of the circuit breaker, determine the amperage of the appliance.

First, locate the data plate on the appliance indicating the wattage and voltage. This is typically located inside of the oven door and underneath the cooktop.

Then divide the wattage by the voltage to achieve the amperage.

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## Breaker size, *continued from page 1*

### Examples:

#### **Cooktop rated 3.9 (x1000) 3900 watts**

$$3900/240 \text{ (volts)} = 16.2 \text{ amps}$$

$$16.2 \times 100\% = 16.2 \text{ min.}$$

$$16.2 \times 150\% = 24.3 \text{ max.}$$

*In this case, a 20-amp breaker should be installed.*

#### **Wall oven rated 7.7 (x1000) 7700 watts**

$$7700/240 \text{ (volts)} = 32 \text{ amps}$$

$$32 \times 100\% = 32 \text{ min}$$

$$32 \times 150\% = 48 \text{ min}$$

*In this case, a 35- or 40-amp breaker should be installed.*

If installing cord-connected appliances, make sure to remove and discard the bonding device between the neutral and ground. This may consist of a bonding strap or require the clips at the pigtail connection to be reconfigured. Refer to the appliance manufacturer's installation instructions for which method to use [3280.809(b)].

If replacing wiring, you cannot use aluminum conductors, aluminum alloy conductors, and aluminum core conductors such as copper clad aluminum [3280.801(e)]. ■

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## Here comes the rain

*By Gary Hart*

Where has all the time gone? This summer was one of the driest on record. Unfortunately, the rainy season is just around the corner.

Hopefully the method everyone has been using to close the center lines all summer long was adequate enough to prevent the entrance of wind-driven rain. However, in some cases, the "rain test" has revealed that there may be a flaw in the process. By the time it is discovered, several homes may be affected. It's time to look at all those little things that help keep moisture from entering the home.

1. Keep windows and doors shut both at the plant and during the installation process. This probably seems like a no-brainer, but even a small amount of moisture sneaking into an unheated home can lead to development of mold and mildew.
2. Try to minimize the number of holes cut in the close-up plastic.
3. Keep shingles in place by using methods such as hand tabbing.

Another concern is the installation, or "soft setting," of the exterior doors. 3280.307(b) states: "Joints between dissimilar materials and joints between coverings and frames of openings shall be protected with a compatible sealant suitable to resist the infiltration of air or water." Because the doors may not always be installed when the home is leveled in the production facility and the home could be racked during delivery, the Building Codes Division has allowed exterior door installation to be completed at the manufacturer's discretion during the installation of the home. The manufacturer is responsible for providing the installer written instructions, component parts, and approved sealant to meet the requirements of the standards mentioned above. On some occasions, the units have been held in storage before installation or have not been installed and sealed properly — resulting in water damage to either the floor or interior panels around the opening. Ultimately, the manufacturer is responsible for complying with this requirement. During the "walk through" most manufacturers or dealers conduct with the homeowner, check the doors to make sure that they have been properly sealed to prevent problems. ■

# Properly installed roofs can prevent leaks

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By Mark Campion

## Attic Cavity Vents

Any time a roof has a penetration, there is a possibility of a leak.

Skylights, attic ventilation caps, VTRs, and gas, stove, and fireplace flues, if improperly installed and sealed, can be the source of some very expensive repair costs due to rot, mold, destroyed drywall, etc. Proper sealing under the shingles where they cover the flange and sealing under the flange where it sits on the roof will eliminate the possibility of most rainwater and snow leaks. However, some products suggest and/or require fasteners in the exposed downhill part of the flange. If the factory forgets to seal the fasteners or the homeowner is not diligent about maintenance, it is only a matter of time before the fastener will work loose and a leak will start.

Factories should examine their installation instructions and choice of products, especially for attic ventilation caps, to see if fasteners in the exposed part of the flange are really necessary. In my experience, roof caps that require the fasteners to be placed in the sides of the flange where they are covered by the shingle are readily available. In addition, hiding a fastener under the shingle is not always allowed, especially for fireplace flue bases and skylights. When the product manufacturer's installation instructions require an exposed fastener in the downhill part of the flange, you can use nails with rubber or neoprene gaskets. And you can apply an allowable sealant to the head of the fastener for extra insurance.

## Triplewide Roofs

One of the potential problems with triplewides is that the roofs do not always line up on the same plane. During the 1990s, it was not uncommon to see a triplewide in the field where the center section was lower than the outside sections. In extreme cases, the shingles over the marriage line would have a reverse cup, allowing rain water to pond and work back under the shingles and into the roof. Thankfully this problem is not as prevalent today.

Section 3-1.8 "Basic Requirement" of the Manufactured Dwelling and Park Specialty Code states that "... the foundation shall assure the manufactured dwelling has adequate support, a level floor, flush roof ...". Chapter 3 addresses marriage line connections and sealing. However, the code does not define "flush." Nor does the code offer specific, measurable guidance as to the allowable difference between the sections of the roof decking on a triplewide home.

This is a question that is raised on occasion by both installers and building inspectors, so here are some guidelines. A "flush" roof means the sections can vary by a maximum of  $\frac{3}{16}$  of an inch. Ideally, if there is a variance, the center section would be slightly higher than the outside sections. Regardless, shingles that allow the water to pond are not acceptable, for any reason. If the installer takes care to measure the decking from the center section to the outside section before installing the shingles at the marriage line, he or she can easily measure the  $\frac{3}{16}$ -inch maximum. A variation this slight will not be apparent to the eye. ■

## Park trailer dealers must be licensed

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With the growing popularity of “park trailers,” RV retailers who sell them now must be licensed through the Building Codes Division.

Park trailers are in excess of 8½ feet and fall under the category of a manufactured structure as defined in **ORS 446.561**. These units are generally sold through RV retailers. The retailers must have a license if they:

- (1) Sell or offer to sell, broker, trade, or exchange manufactured structures.
- (2) Display new or used structures for sale.
- (3) Act as an agent for the owners to sell their structure.

Oregon statutes do allow for exemptions to these rules under **ORS 446.676** such as privately owned units being sold, one per year; selling abandoned units; or park owners showing units for dealers. These are only a few of the exceptions.

Retailers can obtain a license through BCD if they submit an application, are bonded, and pay the appropriate fees as stated in **ORS 446.691**. Some RV dealers may already have a surety bond for

the Department of Motor Vehicles (DMV). This bond is not valid for the manufactured structures dealer license. The application shall include name and address of applicant, name under which the business will be conducted, address of the business, and whether the business handles used units.

A dealer selling new or used RV park trailers in excess of 8½ feet also must provide an affidavit stating that the applicant will maintain a service facility for those recreational vehicles at a street address provided in the application.

The manufactured structures dealer license is valid for three years. At the end of the term, the dealership will receive a renewal notice and must resubmit all the initial paperwork and forms. A dealer may open additional places of business under the same business name by obtaining a supplemental license from BCD. You may contact Marilyn Mohler in BCD’s licensing department at (503) 378-3980 with any questions.

The licensing requirement was effective May 1, 2005. BCD asks park trailer manufacturers to help spread the word to their retailers. ■

## HUD code changes incomplete

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*By Albert Endres*

As many of you know, the HUD Manufactured Housing Standards adopted some significant changes in a number of areas. These changes were slated to become effective on May 30. Some of the changes did take effect, but others have been delayed because of confusion, parts availability, and challenges to the code.

The Building Codes Division is waiting for HUD to issue formal interpretations before enforcing the code. Homes that leave the factory during this period have been inspected and certified by the manufacturer. The homes are built to the design approval valid on the date of production.

If one of the changes to the HUD standards affects a home previously produced, BCD will look at the issue individually and take appropriate action.

One thing to note is that the new HUD standards adopted the 2005 National Electrical Code (NEC) but did not adopt the arc fault circuit interrupter application. HUD retains the right to overrule other portions of the NEC. If you have any questions about the new standards, please contact me at (503) 378-5975 or [Albert.G.Endres@state.or.us](mailto:Albert.G.Endres@state.or.us). ■

# Jurisdictions must cite the code

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*By Albert Endres*

During the past several weeks we have had several questions from local jurisdictions about the Oregon Manufactured Dwelling and Park Specialty Code and its relationship to the Oregon Residential Specialty Code and the HUD Code. The questions or concerns have centered around which code is applicable to star washers, earthquake bracing, tie downs, and appliances.

Most of these questions can be answered by referring to the 2002 edition of the Manufactured Dwelling and Park (MD&P) Specialty Code. According to Section 1-1.2 through 1-1.6, the MD&P is the prevailing code for the installation of a manufactured home, and jurisdictions cannot demand requirements greater than those in the code. When in conflict with other codes, including the Oregon Residential Specialty Code, the MD&P code prevails.

Jurisdictions also may have questions about which code applies after the installation. A manufactured home is a product regulated under the authority of HUD Manufactured Housing Standards. As with any other product that is built to a specific standard, it cannot be changed or modified by the local jurisdiction. If the local jurisdiction finds something unusual or something that just doesn't look right, the jurisdiction should contact the Building Codes Division for clarification. When the issue is clearly defined in the HUD standards or interpretations, the local jurisdiction has no authority to require a change.

Additionally, a new Oregon Administrative Rule (OAR) 918-098-1900 (the "write it and cite it" rule), requires an inspector issuing a corrective notice to adequately cite the applicable specialty code reference, OAR, or Oregon Revised Statute. For manufactured home installations, the applicable specialty code is the MD&P code; when dealing with the manufactured home itself, the HUD standards are applicable.

When local jurisdictions do not fully understand or agree with the MD&P code, it can cause unnecessary delays for contractors and homeowners. Delays in move-in plans, closing of loans, and payments to contractors can cost money. These delays can be avoided when everyone understands the requirements.

If you have and questions concerning these issues, please feel free to contact me at (503) 378-5975 or [Albert.G.Endres@state.or.us](mailto:Albert.G.Endres@state.or.us). ■

# LOIS System update

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By Sherry Mitchell

- You may have noticed the new “Supplemental” tab that appeared in the LOIS System in April. This tab now includes the “date of sale” and “sales price” fields. Since those fields have moved, they are not as obvious and this information is being missed. As a result, the counties are having a difficult time collecting sales information for new homes. This information is *very valuable* for the county assessment/taxation offices. Please take the time to click on the “Supplemental” tab and then the “Sales Information” sub-tab to enter this valuable information.
- We are still having a problem (although not as bad) with duplicate home entry. Generally, duplicate entries are created when:
  - The dealer does not wait for the manufacturer to enter the home. If you need to enter owner and site information on a new manufactured home and cannot locate the home in the system, ask the manufacturer to enter the home for you. It is important for the manufacturer to initiate the new homes in LOIS so that the information appears on our federal HUD reports. If you follow this process, it should greatly reduce the number of duplicate homes in the LOIS system.
  - Users are not performing a thorough search before entering a home using the “New Home Entry” button, so they are entering a home that already is in the system. If you are unable to locate the home, you can contact the Manufactured Structure Ownership Program at (503) 373-1309 to assist in searching for the home. We may not be able to find it for you, but we may know a few search “tricks” to help locate the correct home.
- We recently sent approximately 1,000 letters to homeowners who have a home in the LOIS system with a pending site that has not been removed. Generally, the reason for this is:
  - Homes were moved before the Building Codes Division assumed the ownership program (or during the transition) from the Department of Motor Vehicles. These homes were moved with DMV permits, which were not forwarded to BCD for completion.
  - Homes were moved from the factory to a site (not a dealer lot), but were still listed as “Dealer Inventory.” The statute does not require homes that are dealer inventory to have a trip permit while being moved. “Dealer Inventory” means that the home is being transported to a dealer lot. If the home is moving to an actual site, where it will be placed for sale or occupancy, a trip permit should be purchased at the time the home is moved.
  - Homes were moved from the factory or dealer lot to a site outside of the state of Oregon, but still had a pending site entered into the LOIS System. Homes that are moving out of state from a factory or dealer lot location do not require trip permits; therefore, a pending site should not be entered.
  - Homes purged from DMV’s system were recreated in the LOIS system, but the site information was not completed.
- We are contacting the owners of homes that did not have a trip permit; however, if the home legitimately needed a trip permit at the time the home was moved, we will be contacting the dealer or transporter to correct this error. Expect to hear from us soon with a list of homes that were sold from your office. ■

# Gas testing is required at setup

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By Kurt Pugh

*This is the third and final article on the testing required to the homes' electrical, plumbing, and gas systems during setup.*

Chapter 6-5, page 108 of the Manufactured Dwelling and Parks Specialty Code outlines the gas tests required during the setup of a manufactured home. Here is a quick review.

The person making the gas connections is required to complete the tests. Gas systems are designed to operate between  $\frac{1}{4}$  and  $\frac{1}{2}$  pounds per square inch (psi). The manufacturer is required to install a tag close to the inlet indicating the size and BTU of the listed gas connector to be used.

In preparing for the test, ensure the orifices of all fuel-burning appliances are correct for the fuel being used. Different types of gas require different orifices. High altitude also could affect the orifices. Check the manufacturer's installation instructions. In addition, ensure that the ambient air and piping are the same temperature. If they are not, you could get a false test result. If the air source you are using exceeds  $\frac{1}{2}$  psi or 8 ounces, you will need a pressure-reducing valve. This is required because too much pressure could blow out the orifice installed in the appliance. Lastly, verify all gas appliance roof jacks are connected and properly secured to the appliance.

After the home is installed, the piping system will be subjected to two different test methods. These are the same methods each home manufacturer is required to conduct on each home.

With the appliance valves shut off, the system will be subjected to a 3-psi test for a minimum of 10 minutes without showing any drop in pressure. Three psi is

3 pounds or 48 ounces. If there is a drop in pressure, you must identify and repair the leak and then retest the system.

After completing the high-pressure test, release the pressure through the air source. Do not open the appliance valves, because this could damage some of the internal parts. After the pressure is released, open all of the appliance valves. Then pressurize the system with a continual air source between 6 and 8 ounces. The continual air source is based on the old appliances; you could not maintain the pressure because they would leak through the pilot lights. This is not a problem anymore, so you can just charge the system to the required pressure and remove the air source. If you do this, you must check the gauge after the test to make sure it has maintained the pressure at which it was originally set.

Test each connection from the shut-off valve to the appliance. The manual states to use suitable soapy water or bubble solution, but the requirements of the appliance flex connector state to use an anti-leak detection fluid, which can be purchased at any auto parts store. All of the plants are now doing this. If any leaks are detected, they must be repaired until the pressure is maintained. After the test, whatever fluid is used to check the connections must be washed off with water and dried. This is to keep them from corroding.

If you have any questions, please feel free to contact me at (503) 378-6065. ■

# Look up inspector certifications online

By Albert Endres

The Building Codes Division Web site now allows you to look up inspector certifications.

If you go to [www.bcd.oregon.gov](http://www.bcd.oregon.gov), and click on "certification holder search" under "Top Links" on the home page, you can look up the person by name. Enter the name, and, if you are looking for a specific discipline, click on it as well. This should narrow the search.

If you don't find the person the first time, go back and search again by entering the name and clicking only on "certification" (under "profession"). You may have to look through a longer list, but you should find the person you are looking for. ■

*Manufactured Home Update* is a regular publication of the Building Codes Division of the Oregon Department of Consumer & Business Services.

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