



Manufactured Home Update

Oregon Department of Consumer & Business Services ■ Building Codes Division

July 2006

RV law, market are changing

By Monte Taylor

There have been several changes in the Oregon recreational vehicle law and market that affect dealers.

Beginning Jan. 1, 2006, recreational vehicles that have been lawfully registered and titled within the United States no longer require an Oregon insignia of compliance. Simply put, used RVs are exempt from state requirements.

New RVs for sale in Oregon are still required to display an Oregon insignia of compliance. State-certified manufacturers purchase insignias in bulk and are authorized to affix them at their manufacturing facility. Noncertified manufacturers are required to notify the Building Codes Division to request visual inspections for units sent to Oregon dealers.

Oregon is experiencing a boom in new manufacturers wishing to sell products in our state. This upswing, coupled with manufacturer employee turnover, causes confusion about inspections. We ask dealers to check incoming products to verify compliance with Oregon insignia requirements.

Continued on Page 2

Park trailer regulations get new twist

The latest edition of the ANSI A119.5 code for recreational park trailers with a width of 8 ½ feet or more requires the units to be equipped with a liquid petroleum (LP) detector under chapter 3, section 3-5. The detector must meet the requirements of UL 1484, Standards for Safety Residential Detectors. Now for the twist: The LP detectors typically found in the recreational vehicle industry are 12-volt battery detectors. But park trailers usually don't have a 12-volt system.

There are LP detectors that plug directly into an existing wall outlet receptacle. More information on

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these detectors can be found on the Web at <http://www.safehomeproducts.com>.

A couple of other changes affecting park trailers deal with bathrooms and range/stove requirements.

- ANZI A119.5 2005 Edition, section 5-3.5.3, no longer requires a park trailer (8 1/2 feet in width) to provide a bathroom if the manufacturer chooses not to.
- ANZI A119.5 1998, section 3-1.1.1, was specific on requiring a range or appropriate space for installing a range. This is no longer necessary in the ANZI A119.5 2005 edition. ■

Check the circuit breaker when installing appliances _____

By Dan Jones

Upgraded appliances are very common, with a wide variety of manufacturers, makes, and models. If you are installing, shipping loose, or replacing appliances, take a moment to verify that the appliance is compatible with the circuit breaker installed.

The appliance rating plate is typically located on the inside of the range door. Below is information for the range demand, which should not exceed 150 percent of the nameplate rating.

Free-standing range	
Nameplate rating (in watts)	Use (in watts)
10,000 or less	80 percent of rating
10,001 to 12,500	8,000
12,501 to 13,500	8,400
13,501 to 14,500	8,800
14,501 to 15,500	9,200
15,501 to 16,500	9,600
16,501 to 17,500	10,000

Example: 12.6 W@120/240 volt
 $12.6 \times 1,000 = 12,600$ watts
 $12,600 = 8,400$
 $8,400 / 240$ volts = 35 amp minimum
 $35 \times 1.5 = (150 \text{ percent}) 52.5$ amp maximum

A typical installation is a 40-amp breaker with #8 wire.

Some appliances, such as two-door double ovens, have a high rating and may require a 50-amp breaker; this is not common, but may occur. Table 310-16 of the National Electrical Code (NEC) indicates #6 wire would be needed for a 50-amp breaker.

If you are installing a range, remember to remove and discard the bonding strap at the ground-to-neutral connection. This is located on the appliance, where the cord connection is made. Make sure to review the manufacturer's installation instructions; some appliances have a strap, and others have the ground (green) and neutral (white) wire under the same screw. The instructions for the 4-wire system will indicate the method to isolate the ground from the neutral.

Cooktops and wall ovens have different requirements; this will be reviewed in the next Manufactured Home Update. ■

RV law *continued from Page 1*

When we perform a visual inspection at the request of a dealer, there is no charge to the dealer for the inspection and insignia. BCD will bill the manufacturer.

Another shift in the marketplace has been the growing popularity of park model RVs. New park model manufacturers are contacting BCD monthly seeking certification information. Some manufactured dwelling manufacturers also are producing park models for their dealer network. It is important to

note that as of May 1, 2005, recreational vehicle dealers that sell park trailers wider than 8 feet, 6 inches are required to be licensed by the Building Codes Division. This is a change in the law. Dealers selling park models are also required to furnish their customers with a disclosure form. This form and the laws regulating recreational vehicles and park models are available on BCD's Web site: www.bcd.oregon.gov.

Feel free to contact me with any questions at (503) 373-7542. ■

Carefully check information on installer tags

By Irene Lickiss, *insignia specialist*

First of all, I want to tell you what a fantastic job you have done in reporting your tags! I wrote an article some time ago asking you to let me know the town of the dealer's lots. You responded immediately, and it has helped me immensely. You also have been sending in or faxing your reports in a timely manner. It makes me feel like we have a team effort.

I would like to tell you about something that has recently come up in the industry. Lending institutions are getting stricter about secondary sets and the age of the homes. In fact, they are starting to check the installer tags and verify that a home is in its primary location before they will approve a loan on a manufactured home. So please be especially careful when reporting the name of

the manufacturer and the manufacturer's serial number. The information on the tags is critical to a homeowner's purchase or sale, so please do not make up either a manufacturer's name or serial number. I have samples of the formats of the manufacturer's serial numbers and the portion we use, which previously have been printed in this newsletter. If you would like a copy, I will either mail or fax it to you. For newer installers, information is available in the packet sent with your first order of tags.

You may reach me at (503) 373-1257, or fax me at (503) 378-4101. If you have any ideas or suggestions, I would appreciate your feedback. ■

Clarifying the code

By Albert Endres

Park streets

In Section 10-5.1.2(k) of the Manufactured Dwelling and Park Specialty code, there is an error in the designed minimum capacity for the single-axle load requirement. The book currently shows the load to be 5,000 pounds, but it should say 18,000 pounds.

Masonry block skirting

Section 3-5.12.2 of the Manufactured Dwelling and Park Specialty Code has some misleading or incomplete information about the size of blocks that can be used for perimeter supports if the blocks are used in conjunction with a mortared-in skirting enclosure. The section implies that you can use only

8-inch wide by 8-inch high by 16-inch long blocks. Although this is correct for individual piers, when the blocks are mortared in as an enclosure, you can use 6-inch wide by 8-inch high by 16-inch long blocks. You can also use 4-inch wide by 8-inch high by 16-inch long blocks if they are mortared in and used as the perimeter enclosure.

Keep in mind that if you are using the perimeter enclosure as a retaining wall that retains more than 8 inches of backfill and you choose to use block that is 6 inches or 4 inches wide, you must use vertical rebar every 48 inches and fill the cells with grout or concrete. The footing also requires rebar. See Section 3-9.8 for all of the specifics. ■

Plumbing tests ensure homes are safe, functional

By Kurt Pugh

In the last issue of *Manufactured Home Update*, we reviewed the required electrical testing at the time of set-up. In this edition, we will look at the required plumbing tests.

There are several reasons we perform plumbing tests. Most of our manufacturers ship loose some plumbing parts that need to be installed when the home is set. During transit, fittings could have worked loose or been damaged. But the most important reason for the tests is to ensure the homeowner receives a safe and functional home.

There are basically two types of plumbing systems installed: in the floor and below the floor. Liberty and Goldenwest have below-floor systems because of the longitudinal joist installation. The plumbing on these homes will be below the bottom board. The rest do in-floor installations using a transverse system.

Section 5-4 (page 91) of the Oregon set-up manual outlines the required tests. The first test is the water test. After completing the water connections, we pressurize all water lines from the site's water supply. If this is not available, we pressurize the system with a minimum of 80 psi of air. If the lines are CPVC (Fleetwood and Skyline), pressure must be reduced to 30 psi. CPVC is rated for the pressure, but if there is a problem the line could shatter and become a safety issue. We then record the pressure and hold for 15 minutes and check the gauge after the required time to ensure there has not been a drop in pressure. After the water lines are full, we check all visible connections for leaks.

After the water distribution test, we perform the drain test. We begin the test after the home's drain system is complete — including any ship-loose material and crossover lines — and has been connected to the building sewer. We first remove all access panels to p-traps, cleanout, and fixture-drain

connections inside the walls and floor. We test each fixture and receptor, which includes the washer stand pipe, for a minimum of three minutes by letting water flow at the normal operating pressure. If water pressure is unavailable, we test with at least three gallons of water into each fixture and receptor. We visually check each p-trap, cleanout, fixture, and receptor for leaks and repair as needed. After a successful test, we replace all insulation in order to protect p-traps from freezing when they are under the floor decking of the home. Then, we replace all of the access covers that were removed.

If the home fails any of the tests, all leaks need to be repaired and retested. If the failures continue, it's time to contact the authorized factory service personnel. All manufacturers perform these tests at the factory to a specific set of guidelines and are monitored by state inspectors.

An area of particular concern is the placement of tubs and showers in the axle areas. In a lot of cases, the manufacturers will ship loose the p-trap at these locations, so they will need to be hooked up. The manufacturer needs to provide a plumbing schematic and all the materials to complete the system on site.

There is one new item that must be addressed at setup. Manufacturing plants throughout the country will have to start installing a pan under the water heater inside new homes. This pan has a drain that goes through the bottom board. In most cases, this drain will have to be carried out to the exterior of the home by the set-up crew. The manufacturer needs to provide all the materials and instructions to complete this.

If you have any questions, please contact the Building Codes Division at (503) 378-5975 or the manufacturer of the home. ■

Quizzin' corner

By Irene Lickiss

It's time for another name game. I have picked out another 30 names of active installers completely at random. Is it you? Do you know someone by that name? Have you heard of any of these installers? Can you find them all? You can go right to left, left to right, bottom up, top down, horizontal, backward, and forward. Have fun!

A	S	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	P	Q	R
Y	H	X	O	W	N	O	S	N	E	K	C	I	D	V	U	T	E	T	S
Z	U	A	B	U	C	H	A	N	S	E	N	D	E	F	S	G	T	D	H
W	M	V	U	T	L	S	R	Q	P	O	N	M	L	I	K	J	E	O	I
X	W	Y	A	Z	Q	D	N	O	S	I	R	R	A	G	W	R	R	O	Y
H	A	Z	X	D	C	V	E	B	N	M	L	T	H	J	K	L	S	W	G
A	Y	F	D	S	S	A	Q	N	W	Q	S	W	R	Y	T	I	E	P	O
W	V	Z	S	A	W	I	M	O	B	O	R	N	E	Q	R	S	N	U	N
K	T	I	S	S	E	R	T	E	S	T	E	N	S	O	N	N	W	E	M
S	A	E	F	S	T	E	U	T	Y	R	E	M	O	G	T	N	O	M	I
V	W	G	M	E	I	S	K	N	R	L	K	J	H	G	F	I	U	T	E
N	E	L	O	L	H	O	M	O	E	E	R	V	W	X	S	U	I	U	P
E	K	E	M	M	W	W	T	S	E	Q	X	U	I	N	N	Q	S	O	P
S	C	R	J	E	M	R	E	D	G	H	C	L	A	R	K	W	A	N	S
B	O	F	L	I	V	W	S	R	A	U	Y	O	E	M	D	S	U	A	I
O	L	L	U	E	Z	L	J	A	P	E	H	Z	L	R	M	F	P	H	L
C	R	S	C	R	T	U	T	H	L	K	M	H	N	E	G	B	F	P	B
A	C	B	H	L	R	Q	U	C	I	L	L	E	Y	O	E	L	K	O	R
J	W	G	S	F	L	E	M	I	N	G	M	D	F	H	G	E	Y	S	R
P	U	S	E	G	M	W	I	R	K	R	I	E	T	Z	E	R	O	S	E

Adsitt
Asselmeier
Boulden
Clark
Cole
Dickenson
Estenson
Fleming
Garrison
Hansen

Hawks
Jacobsen
Krietzer
Locke
Luchs
Montgomery
Oborne
Page
Petersen
Quinn

Richardson
Shumway
Sophan
Trexler
Tsiatsos
White
Wood
Zhepaj
Ziegler

Registration cards record owner's identity

By Tom Nicolai

Manufacturers are required to provide each home with registration cards, under Federal Standards 3282.211, Record of Purchasers. They should provide at least three detachable cards with blanks for the following information: the name and address of the dealer or seller of the home; the name and address of the person buying the home; the address where the home will be located, if different than the purchaser's; the date of the sale to the purchaser; the month, day, and year the home was manufactured; the identification number of the home; the model of the home; and the designation of the zones for which the home is equipped.

The manufacturer is responsible for filling in the blanks on the cards for the month, day, and year the home was manufactured, the identification (serial) number of the home, the model of the home, and the designation of the zones for which the home is equipped. Under Federal Standards 3282.255, the dealer is responsible for filling out the remaining blanks on the card including the dealer's name and address; the name and address of the person buying the home; the address where the home will be located, if different than the purchaser's; and the date of sale to the purchaser. The dealer then should detach the card and drop it in the mail. Each card is already addressed to the manufacturer and has adequate postage on it.

Almost without exception the manufacturer knows who the homeowner is through various internal records such as purchase orders and service records. However, in rare instances, the information card serves as the only record of the homeowner's identity and location. If a serious defect or safety hazard involving the home is discovered, and the dealership is no longer in business, the information card could be the only means for the manufacturer to contact the homeowner.

As part of the Building Codes Division's SAA program, I am responsible for ensuring the information cards are present as I review files at the manufacturing facilities. During the past few years, we have increased emphasis on this issue to ensure compliance with the federal requirement. In most cases, the dealers are complying. But some dealerships still do not send in the cards. All dealerships should take the time to review this issue with their sales staff and office personnel to ensure the cards are being filled out during the paperwork stage of the sale and forwarded to the manufacturer. ■

When — and when not — to anchor a manufactured home

Building Codes Division receives numerous calls regarding when a manufactured home needs to be anchored. Many people believe that anytime you install a manufactured home in a high wind and seismic zone 4, it must be anchored.

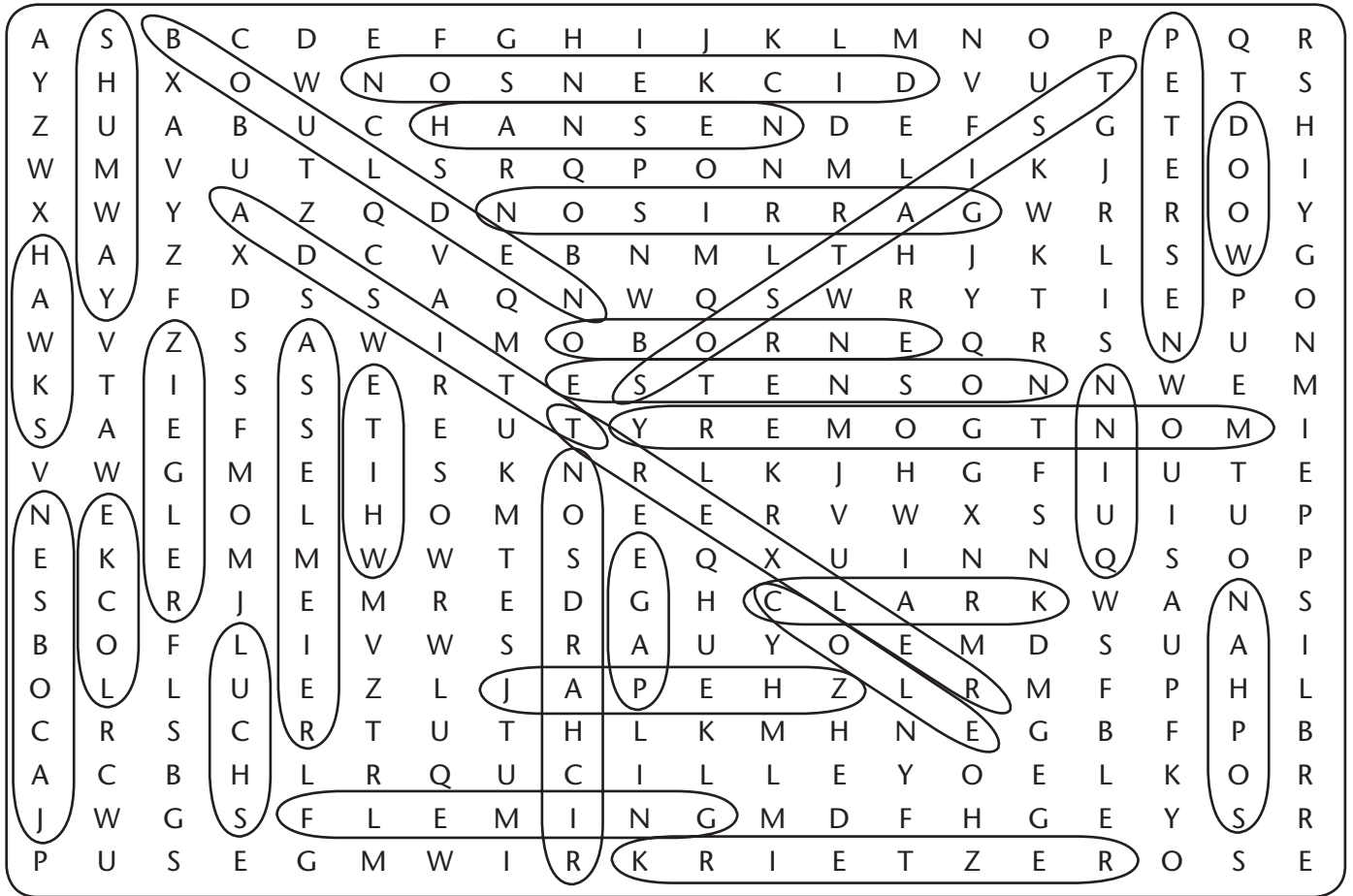
According to the Oregon Manufactured Dwelling & Park Specialty Code 3-2.5.3:

(a) Manufactured dwellings shall be limited in height to 2 feet as measured from the top of the footing to the bottom of the main frame for 75 percent of the underfloor area, and (b) Manufactured dwellings shall be limited in height to 5 feet as measured from the top of the footing to the bottom of the main frame for 25 percent of the underfloor area.

That means that if the home is set to the 2-foot height limitation for 75 percent of the underfloor area, and the remaining 25 percent of the home does not exceed the 5-foot height limitation, the home does not need to be anchored. Only homes that exceed the height limitations need to be anchored. In that case, plans for a support system must be designed by an Oregon professional engineer or architect or approved by the manufacturer's Design Approval Primary Inspection Agency (DAPIA). The local jurisdiction also must approve the plans.

If you have any questions, contact Dwight West at (503) 378-2620. ■

Quizzin' key



Adsitt
 Asselmeier
 Boulden
 Clark
 Cole
 Dickenson
 Estenson
 Fleming
 Garrison
 Hansen

Hawks
 Jacobsen
 Krietzer
 Locke
 Luchs
 Montgomery
 Osborne
 Page
 Petersen
 Quinn

Richardson
 Shumway
 Sophan
 Trexler
 Tsiatsos
 White
 Wood
 Zhepaj
 Ziegler

Special recognition

By Irene Lickiss

Donald Montgomery has retired from the manufactured home installation industry. Don resides in the southern part of Oregon. According to our records, he has been a licensed installer since July 17, 1990, but he could have been in the business longer, because our records only go back that far. We would like to thank Don for all his hard work. We hope he has a wonderful retirement, with all the fishing, camping, hunting, and traveling he plans on doing. I am sure there are many hard-working installers who would love to be in his shoes! ■

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

Editing, design and production

Rosie Baker, designer, DCBS Communications
Lisa Morawski, editor, DCBS Communications



BCD Administrator

Mark S. Long

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440-2667 (7/06/COM)



Oregon Department of
Consumer & Business Services
Building Codes Division
1535 Edgewater NE, Salem, Oregon
Mailing address:
P.O. Box 14470, Salem, OR 97309-0404

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