

Set-Up Is Risky Business

By George Porter

(George Porter is a consultant to the manufactured housing industry. He is president of Manufactured Housing Resources, P.O. Box 9, Nassau, DE 19969. One of the services his company provides is a seminar on the proper installation of HUD code housing.)

If you are in the business of setting up manufactured housing, this article is meant to scare you into taking action on a safety policy. There are some facts that we, in the industry, need to face. You should begin with a little self-examination to give you an idea of exactly where you stand in the field of safety in manufactured housing installation.

HOW SAFE ARE YOU AND YOUR CREW?

1. How many people per year in your state are hurt, disabled or killed installing manufactured housing? Take some time on this one. Find out for sure by calling Occupational Safety and Health Administration (OSHA) or the state manufactured housing association. You will probably find this information hard to come by. These accidents may well be grouped in a category called "other" along with swimming pools and playground equipment installers. If you do find that number, compare it to the number of people working in that part of the industry in your state. West Virginia, for instance, has an average of three fatalities per year. This works out to about 1 man for every twenty set-up crews per year. And there are probably many more major injuries.

2. Do you take any special steps strictly for the purpose of safety? Do you have meetings with your employees about safety? Do you give them any special training? Do you have any special equipment, such as cribbing that is used strictly for the purpose of making the workplace safer?

3. Do you share safety procedures you may have developed with anyone else in the industry? Do you ever get together with other installers, perhaps at your state association, and discuss the topic of safety?

4. If OSHA dropped by, would you measure up? Do you know about the fines OSHA can impose? Do you know what they would be looking for?

5. Do you know what a lawsuit costs? Millions! If you have enough insurance, it probably will protect you, but it will be reflected in the premiums for all of us. They also take 5-7 years to settle.

6. If one of your employees was permanently disabled or killed, what could you tell his family, his family lawyer, or especially yourself, that you had done to try and prevent this accident?

These are tough questions. Don't kid yourself about the answers. If you've been in the business any length of time, you surely have had some close calls and you also are familiar with fatalities or permanent disablements that have happened in your area. Do you know of any that could not have been prevented? What steps have you taken to be sure the same thing doesn't happen to you or your crew?

There is a distinction between responsibility and safety. The factory that makes the home should be responsible for making a home that is not dangerous to set-up. If the frame requires a jacking plate, it should be the factory's responsibility to tell you so. If they are aware of some design in the home which requires a special procedure so that it can be done safely during normal set-up, they should be responsible for informing the people who have to do it.

Manufacturers of jacking and rolling equipment should be responsible for making that equipment safe to use. They should be responsible for informing the user of this equipment of any precautions he must take with this equipment.

Because of the nature of the business, it has to be the set-up crews own responsibility to keep itself safe from harm. Safety should be the major consideration of the person who has the most to lose, and who can lose more than their life or the use of their limbs.

A manufacturer may or may not be responsible for the failure of a piece of equipment, but it is the crews' responsibility to be sure that if such a situation arises, that their safety is assured. You take a chance every time you go under a home. Only the crew doing the work can determine the odds of an accident. No one is there to do the work safely except them. A crew can drastically shift the odds in their favor by using back- up systems wherever they can. It has been my sad task to investigate many of these types of accidents, and I offer the following suggestions.

Take time to think about safety. I know time is money, but money will not buy you a new spinal cord, nor bring you back to life. It is definitely worth at least one hour a week. You will be amazed at what you come up with if you can get your crew to think about the problem and discuss it freely among themselves in an open and candid meeting, if only in the truck on the way to the job. "Did this company conduct any safety training," is one of the very first questions asked by OSHA when they are investigating an accident. One thousand to seven thousand dollar fines and higher are quite common. In the case of a Delaware man, the fine was paid by his widow because he was killed on the job and she was co-owner of the company.

Be sure every jack has a suitable foundation. When the ground is soft, it's easy for a 4" concrete block to break under the pressure of a jack. Give the foundation under the jack as much or more consideration as you would give the foundation under the home you are setting. Even though it is very temporary, you do not want that jack to move. Did you know that the steel head of the jack resting on the steel frame takes very little outside force to make it slip? Use a jacking plate. Make your own or buy one commercially. It should consist of a U-shaped piece of metal 3/16" thick or more that will fit snugly around the I- beam and has a lip of at least 3/8". The underside of this U-shaped piece of metal should have a shallow cup arrangement capable of holding the head of the jack. With the use of such a device, it becomes nearly impossible for the jack to slip off the frame. The cup arrangement holds the jack and the U-channel holds the frame. The jack is practically locked to the home. If the jack is sitting on a foundation which is level, stable, and strong you should all but have eliminated any possibility of problems with jack slippage.

Keep your equipment in good repair. Why should a jack have to fail before you send it off to be rebuilt? Keep a record on jacks and other equipment and do regular preventative maintenance. You have to take care of it, if you want it to take care of you.

The use of cribbing when anyone is underneath the home is the most basic safety precaution a person could take. There should be stacks of cribbing under the home that have nothing else to

do but catch the home if it should fall, and they should be located within a very few inches from the frame they are expected to catch. Most homes, when they fall, do not come straight down. Many times, they twist on one end equal to the height of the jack that is holding them up. If a jack is three feet in the air, it's possible that the home could land three feet to the left or right of wherever it began. If you are using a small cribbing pile that's only half way between the ground and the frame, there's a strong possibility it would miss the entire thing when it fell. Keep your cribbing no more than one to two inches away from the frame, and move it whenever it becomes more than a few inches off center of the frame if you are sliding the home sideways.

Also think about what you are using for cribbing? Will it really catch a home? If you choose wood or some other material that is light, easy to handle, comfortable to use, you may be sacrificing the strength you need to keep the home in the air. 4 x 4's made out of yellow pine are not strong enough to catch a home after it has travelled three or four inches if you stack them in a log cabin style four foot square cribbing pile. Most people feel comfortable with 6 x 6 oak about four feet long stacked three pieces to the layer and with each layer 90 degrees to the last.

The length of the cribbing has to determine the height it can be stacked. The higher it goes, the less stable it becomes. Tall cribbing stacks can be just as dangerous as tall jacks when the time comes for it to do its job. Keep your cribbing in good shape. Constant movement in and out of the truck and bumping into other pieces of cribbing will take the edges off it and cause it to be rounded. Obviously a rounded piece of wood is not nearly as stable as one that has square corners and flat sides. The taller a cribbing stack gets, the more important it is that its base be very stable. If you are building a relatively tall cribbing stack on relatively soft ground, you will want to consider increasing the surface area of the base in order to support the load it may have to carry. You can do this by simply putting more pieces of cribbing on the ground before you start going up.

Does your crew wear hard hats and steel-toed shoes? Today's modern hard hat does not fall off your head like a plastic beanie. They are lightweight, fairly comfortable in the heat, and have an optional insulated liner to wear in the winter. More importantly, when your head collides with the edge of an outrigger, the hat will receive the gouge, not your scalp.

When you work with concrete blocks, it's always possible to drop one on your foot. When that happens, you will be glad you had the steel-toed shoes.

When you strip the plastic off the two sections of a multi-section home in preparation for closure, do you pull out the nails and pound any strapping flat that may be sticking out so that you can't cut yourself? Generally, these homes will be located fairly close together and when you are walking down the center of them, you have all these jagged pieces of steel sticking out at you. At least clean up the stuff that's as high as your head when you are walking along the ground. It only takes a minute, but I've seen people cut themselves so badly they had tendon and nerve damage in their hand and couldn't work for months.

Whenever possible, lay on your back or on your side under a home. Don't sit on your heels and knees any more than you absolutely have to. Should something go wrong, and the home come down, you could receive a severe back injury in that position. The home doesn't even have to go all the way to the ground in order for you to damage your spinal cord. You just can't bend that much and that could mean a wheelchair for the rest of your life.

Keep the track of your roller assembly clean and clear of small stones. A stone half the size of a pea will stop the rollers dead in their tracks.

If you are using a come-along to pull the two halves together, you now have the possibility of pulling the home off the jacks.

There are dozens and dozens of other safety tips, if we only gave safety the thought it deserved, we would save ourselves a lot of pain and suffering. If you stay in the installation business long enough, there will come a day when the opportunity for disaster will occur. You will immediately be placed in one of two very distinct categories: the people who took adequate safety precautions and the people who wished to God they had.