

## **MAJOR PROGRAM POINTS**

# **"LADDER SAFETY IN CONSTRUCTION ENVIRONMENTS"**

**Part of the "CONSTRUCTION SAFETY KIT" Series**

**Quality Safety and Health Products, for Today...and Tomorrow**

# **OUTLINE OF MAJOR PROGRAM POINTS**

The following outline summarizes the major points of information presented in the program. The outline can be used to review the program before conducting a classroom session, as well as in preparing to lead a class discussion about the program.

- **Most of the time our days are spent with our feet firmly on the ground. At ground level, our tools and work surfaces are within easy reach.**
  - But there are times when we need access to things that are more difficult to get to.
  
- **Sometimes a truck with a "lift bucket" can be brought in to raise us to the desired height.**
  - For long-term projects, it may make sense to put up some scaffolding.
  
- **Most of the time though, working off the ground means bringing in a ladder.**
  
- **When we use them correctly, ladders make our jobs easier, and make us more productive.**
  - They allow us to work comfortably in places that are ordinarily out of our reach.
  - In fact, it's hard to imagine what we'd do without them.
  
- **But we've got to be careful, because whenever we're on a ladder there's always the possibility we could fall.**
  - If they're used incorrectly, ladders can lead to accidents and serious injuries.
  
- **There are many different types of ladders. Each one is designed for a specific purpose.**
  - They can all get you safely to the right height, providing you select the correct ladder for the job you're doing.

- **Straight ladders are often used to reach a roof or platform.**
  - They should be tall enough so that the top three rungs of the ladder extend beyond the roof edge or support point.
  - This will keep the ladder stable while you're on it.
- **Sometimes an extension ladder may be what you need to get where you want to go.**
  - To give you the proper support, there should be at least a three rung overlap between the two sections.
- **To determine how tall a ladder you need, follow the 4-to-1 ratio. Say you're putting a ladder against a wall.**
  - The ladder should be about 1 foot away from the wall for every 4 feet of working ladder height.
  - If the ladder you've chosen can't maintain this ratio and reach your desired destination, you need a longer ladder.
- **You should also think about how much weight the ladder will have to hold.**
  - Different ladders are built with different weight capacities.
- **Read the manufacturer's instructions to make sure the type of ladder you're using will support the weight you'll be putting on it.**
  - Remember, to get a safe match you need to add the weight of the tools and materials that you'll be carrying to what the scale says you weigh.
- **Many accidents occur when workers fail to notice problems that have developed with their ladders.**
- **Becoming familiar with the parts of the ladders that you use will help you to make sure they're in good condition.**
  - For instance, rungs should be firm and unbroken.
  - To provide a stable base that prevents slipping, ladders should also have sturdy, non-slip safety feet.
  - Make sure that the ropes, pulleys and other moving parts on extension ladders are in good working order.

- **If you're using a stepladder, verify that the spreader is in good condition and can be locked into position before you climb.**
  - Stepladders should also have braces to keep the rails and side supports from swaying.
- **Before climbing a ladder that is permanently fixed in place, make sure that:**
  - All the rungs are securely attached.
  - There is no rust or corrosion on the safety cage or the rungs themselves.
- **As you inspect your ladder, fix or replace any damaged parts.**
  - If you can't repair what's broken, talk to your supervisor, and get a new ladder!
- **Once you've selected the right ladder for the job, and inspected it, you need to set it up correctly.**
  - First make sure to secure the legs.
  - Place them on a level surface, keeping the area around the base of the ladder clear of debris.
- **As you set the ladder up, be sure the rails are perpendicular to the ground.**
  - This will help to ensure that the feet get positioned firmly.
- **If the ground is uneven, shore up the legs with wood, or ladder jacks.**
  - If the ground is soft, placing wide boards under the feet of the ladder can help to keep it steady.
- **If you have to place a ladder in front of a door, block or lock the door so no one can come through it while you're working.**
- **If you're using a straight or extension ladder, remember the 4-to-1 ratio.**
  - Set the ladder up to be one foot "out" for every 4 feet of working ladder height.
  - This will keep the ladder at about a 75 degree angle, and make climbing safe and easy.

- **Most new ladders have a sticker that helps you to set them up with a 4-to-1 ratio.**
  - Matching the angle of the ladder with the angle shown on the sticker will position the ladder correctly.
- **Try to get a "helper" to hold the ladder so it won't slip.**
  - If no one is available, tie off the ladder at the top with a rope.
  - Remember, it's always a good idea to put hazard signs around the area where you're working.
- **One of the things that makes ladders so useful is that they can be moved to wherever we need them.**
  - If possible, you should take the ladder down and carry it horizontally, at your side.
  - This will help you to keep your balance, and make the ladder easier to handle.
  - If you can't comfortably carry the ladder by yourself, don't risk an accident. Get help.
- **If you have to move a ladder while it's up, be very careful.**
  - Make the move slowly.
  - It's easy for an extended ladder to throw you off balance or knock something down.
  - This is another situation where it's a good idea to have someone else give you a hand.
- **There are some situations when you shouldn't climb a ladder at all.**
  - Don't climb a metal ladder if you're working near power lines, electrical wiring or machinery.
  - If a metal ladder comes in contact with an uninsulated power source, it will conduct the electricity straight to you!
- **If you're working around electricity, choose a non-conducting fiberglass or wooden ladder, to avoid the possibility of getting shocked.**
- **Never climb ladders in poor weather conditions.**
  - Rain and wind can make climbing dangerous.

- **Don't climb ladders if you're sick, or taking medication that makes you drowsy.**
  - It's too easy to lose your balance if you're not feeling right.
- **Some people have a fear of being in high places.**
  - Don't force or badger anyone into climbing a ladder, it could put both them, and you, at risk.
- **Once you've determined that your ladder is in good condition, and that the area you'll be working in is safe, read the manufacturer's instructions to determine if there are any special precautions you should take.**
  - Then it's "time to climb".
- **First, get a good grip on the ladder.**
  - Make sure that your shoes, hands and the rungs of the ladder are dry, and free of oil or other slippery substances.
- **When possible, use the "buddy system."**
  - This is where a coworker holds the bottom of the ladder so it won't slip.
  - They'll also make sure that no one bumps into the ladder while you're working.
- **If you're alone on the job, tie the ladder off and set up "hazard signs" to keep people away from it.**
- When you're climbing follow the "3-Point Rule".
  - Keep two hands and a foot or one hand and two feet in contact with the ladder at all times.
- **Always face the front of the ladder, and never rush.**
  - Keep your hands on the side rails, and don't try to slide down or jump off when you're finished.
- **To avoid falling accidents, you need to keep your weight centered between your ladder's rails.**
  - Try using the "Belt Buckle Rule".
  - By keeping your belt buckle between the rails of the ladder at all times, you'll be sure to maintain your center of gravity.

- **You shouldn't lean out to the side or back when you're on a ladder either.**
  - Stay close, so your weight is in line with the rails.
- **Standing too close to the top of a ladder is something else you should avoid.**
  - It can cause you to lose your balance and hit the ground, hard!
- **In general, it's a good idea not to stand on the top 4 rungs of an extension ladder or the top 2 steps of a stepladder.**
  - If you can't follow these guidelines with the ladder you have, get a bigger one.
  - Don't play games with your safety!
- **Never have more than one person on a ladder at a time.**
  - Another person's movements can upset your balance.
  - The extra weight and stress can also weaken the ladder over time.
- **Stepladders are no exception.**
  - Never let someone stand on the back of the ladder to help the person on the front, unless they're using a specially built "two person" ladder.
- **Hoisting tools or materials up with you while you're climbing can be very dangerous.**
  - Instead, wear a tool belt, and pull up any other materials that you need after you've reached the top.
  - Fasten containers or tool holders to your ladder to hold things that you have to have quick access to.
- **They may not hurt you, but falling objects are dangerous to anyone below.**
  - Watch out for people beneath you.
  - Be careful when you're handling your tools and materials.
- **Never leave a raised ladder unattended.**
  - Once you're finished with it, store your ladder in a safe, dry place.

- **Sometimes, no matter how careful we are, things just go wrong.**
  - If an accident does occur, it's important to be prepared.
- **If you do fall off a ladder, knowing how to fall "the right way" can prevent a serious injury.**
- **Tense muscles increase the potential for getting hurt, so it's important to relax when you fall.**
  - Absorb the concussion by bending your arms and legs.
  - This way they will act as "shock absorbers" when you hit the ground.
  - Rolling in the direction of the fall will "cushion" you even more.
- **If someone does fall from a ladder, they could end up with broken bones, a concussion or even damage to their spinal column.**
  - Don't move them unless they are in a very dangerous location (movement will only make these injuries worse).
  - Instead, call for medical assistance immediately.
  - While you wait for help to arrive, monitor the victim's breathing and work to stop any bleeding.
  - In some cases, the victim may also need to be treated for shock.

### **\*\*\* SUMMARY \*\*\***

- **As we've seen, ladders can be a big help.**
  - But they can also be dangerous if they're not used correctly.
- **Pick the right ladder for the job.**
  - Make sure it's tall enough.
  - Check its weight capacity.
- **Inspect every ladder before you use it.**
  - Take care of any needed repairs.

- **Set your ladder up on a firm, dry base, and make sure it's at the right angle.**
  - Remember the "4-to-1" rule.
- **Climb with safety in mind. Secure the ladder firmly, and use the "3-point" climbing technique.**
- **Stay inside the rails of your ladder at all times.**
  - Never lean out or back at an angle.
- **If an accident does occur, be prepared to act.**
  - Know what types of first aid may be needed.
- **Ladders can help us to be more efficient and productive. But if you don't use them correctly, you could find yourself "grounded", for a long time!**