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## CONSERVATION TALK

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Does anyone really care about safety? Interesting question. I don't know how much American industry spends on safety training, although OSHA reports that 6 million workers suffer nonfatal injuries every year at a cost to U.S. businesses of more than \$125 billion. Sounds like we may not be spending enough, whatever the amount.

Workshops on cemetery conservation rarely spend much time on safety. Our justification is that people pay money to attend these workshops to learn about conservation techniques, not safety. Sure, there are perfunctory warnings, but not much real discussion. This neglect is evident by what I see being posted on the internet. Such as the fellow who complains that an "honest-to-God tripod" (such as the Spanco 1 or 2-ton aluminum tripod, [www.spanco.com/products/tripods/](http://www.spanco.com/products/tripods/)) costs too much. So he has built his own—an 8 foot tall sawhorse built out of 2x4 timber and using channel steel overhead. Of course it failed (no surprise), so now he's building an even bigger one. Or you see Rube Goldberg contraptions consisting of I-beams supported by scaffolding used to lift stones.

The problem with such home-made devices is that you simply don't know what the safe capacity is. There is no testing or compliance with any recognized code. You are taking your life—and the life of any volunteers or employees—in your hands. Is the repair of that stone worth dying for? Scaffolds are designed to support walk boards with specific ratings, not the concentrated weight of I-beams lifting stones!

I also bet that the person who rigs together some lifting device is on e-Bay purchasing an unrated hoist from an unknown manufacturer because it is cheap. This is yet another risk since such lifting devices don't comply with the ASME/ANSI standard B30.16 Overhead Hoists (Underhung). A good overview of hoists is available at <http://www.labsafety.com/refinfo/ezfacts/ezf328.htm>. This document will outline how to inspect your hoist to keep it working safely.

I've seen nylon tie-downs used for slings fail, dropping a 2,100 pound marble block on the ground. Fortunately no one was hurt, but it emphasized the need for using the correct equipment. A device that avoids using straps is the Monument Liftall—a scissor-like mechanism that can lift up to 2,500 pounds. It is perfect for dies and many obelisks.

While using the correct equipment is expensive, there are firms that rent lifting devices. One is Lifting Gear Hire

Corporation, with locations throughout the United States. You can contact them at 800-878-7305 or on-line at [www.lgh-usa.com](http://www.lgh-usa.com). They will rent hoists, beam clamps and trolleys and aluminum gantries with 2- and 3-ton ratings. While you can't rent slings, they aren't that expensive and will last years if treated correctly.

Other safety issues are just as important.

If you use a generator to power your drill in the cemetery, do you use an appropriate gasoline safety can? This can will have a capacity of 5 gallons or less and be equipped with a spring-closing lid and spout cover, a means to relieve internal pressure and flash-arresting screen. Or are you still using that leaky plastic can? How about GFI protection? This device prevents electrocution by interrupting electrical flow when potentially lethal ground currents occur.

Is your extension cord rated for your tools and the length of the run from the electrical outlet to the tool? For example, with a run of 50 feet, an 18 gauge extension cord can operate a maximum of 5 amps. A typical ½-drill, however, requires about 7 amps. Use a cord that is too light and you'll ruin your equipment and possibly start a fire.

If you're drilling marble, sandstone, or other crystalline silica-producing stones, are you aware of the risk posed by silicosis and do you take proper precautions? A good introduction is [www.osha.gov/Publications/silicosis.html](http://www.osha.gov/Publications/silicosis.html). Make certain that whenever possible you use wet methods for sawing or drilling stone. You can wear a N95 NIOSH-approved respirator. You can clean drill holes using water rather than compressed air. Or you can use fans to blow dust away from workers.

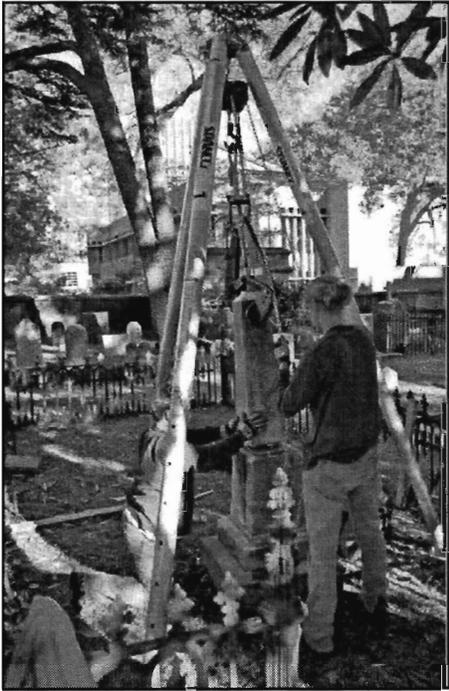
Are you wearing steel toed boots? These are boots that comply with the American Society for Testing and Materials (ASTM) standard F2413-05, formerly the American National Standards Institute's (ANSI) Z41-1999. Safety toe boots are tested to meet either an impact rating of 50 or 75 foot pounds (the equivalent of 1,750 or 2,500 pounds, respectively).

How about gloves designed to reduce vibration or protect against abrasions? There is no US standard for vibration gloves, but there is a tough European anti-vibration glove standard. Look for certification with EN ISO 10819.

Have you had a first aid course recently? What about CPR training? Do you know how to tell emergency

workers the location of the cemetery where you are working?

Some people talk about safety being a priority. Unfortunately, priorities change and often safety isn't as important as getting the job done. Safe work practices also ensure that the stone is well cared for and treated appropriately—a true win-win. ♦



Here Chicora conservators are using a Spanco 1-ton tripod to lift an obelisk into position. Instead of straps we're using a Monument Liftall, a device that can safely pick up and hold heavy stones. Note also that everyone is wearing gloves and steel-toed boots.