



AIR COMPRESSORS

Innovations Manufacturing, Inc. (the Company)

Version: 2

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Purpose

Though air compressors are exceptionally versatile, supremely useful, and functionally essential to WHAT WE DO HERE AT Innovations Manufacturing, they are only as valuable as they are safe. Safe operating and maintenance procedures not only ensure worker safety, but also protect equipment, reduce downtime, increase productivity, and lower long-term operating and capital costs.

Scope

This program covers all employees involved in the use of equipment that utilizes compressed air.

General Safety

Air compressors are powerful tools. When used incorrectly, they have the potential to cause serious damage to both workers and equipment. Overheated components can cause contact burns, while damaged or broken air hoses can result in serious bodily injury. Pressurized air can rupture the skin or even internal organs if directed at the body. And burst pressure tanks are liable to result in serious damage.

First and foremost, if you operate or perform maintenance on the air compressors, it's important to thoroughly read and understand the owner's manual before performing your duties. On-site training should be provided to all workers who will be using the equipment, and follow-up sessions scheduled as needed to make sure everyone's up to date on safety procedures. Workers should always wear appropriate protective equipment, including safety glasses or face shields along with adequate ear protection depending on the purpose for which they are using compressed air.

Air compressors should be kept in a clearly visible area, with air tanks positioned out in the open for easy inspection. Instructions for equipment use should be clearly displayed on the air system itself. The air intake should have access to a fresh air source; if you're operating indoors, you can increase air circulation with fans or other devices.

Electrical wires should be clean, unobstructed, and inspected for damage before the machine is turned on. Ensure that your machine is properly grounded. Improperly grounded machines can cause damage to electrical circuits, resulting in electrocution or fire.

Operation

When using an air hose with a blowgun, ensure that the nozzle is pointed in a safe direction, and that the trigger is not engaged. Air nozzles or air tools should never be pointed at the face or body. Hair and clothing should be properly secured and kept away from tools at all times.

Make sure that a shutoff valve is always within reach of operators. If anything goes wrong during operation, immediately cut off the air supply using the shutoff valve and address the issue before restarting the equipment.

Intake air can contain pollutants and carbon monoxide and should never be inhaled without the proper filtration and monitoring equipment. Pressure gauges should be monitored regularly to ensure that the maximum working pressure of the air receiver is never exceeded.

If air nozzles are used to clean the body, the air pressure shall be reduced to 30 psi or less and a back blow safety nozzle shall be used.

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Maintenance

The manufacturer safe air compressor operating procedures should be followed during maintenance of the air compressor. Regular servicing and maintenance of the compressor is the best way to ensure your equipment is in proper working order.

Pressure-regulating equipment should never be changed, replaced, or adjusted by anyone other than trained personnel. These devices should be installed so that they cannot be removed or rendered inactive during operation.

When performing an inspection, shut off the source of air, bleed the air pressure, and disengage the air hose. Oil or fuel should only be changed or added when the machine is off, and after it has adequately cooled. If you remove a tool from the compressed air system, the tool should always be isolated from the compressed air and should be fully depressurized first.

Air tanks rust over time from the inside-out due to high humidity and the presence of condensate. The tend to rust out near the bottom where the condensate collects. Rust eats away at the metal leaving it thinner and less capable of handling pressure. A rusted tank is very dangerous as it increases the likelihood that the integrity of the vessel cannot withstand the pressure and may burst causing major damage to personnel and/or the facility. If you suspect your tank poses reason for concern, bleed the tank of air, and have an authorized dealer examine it so they can recommend the proper course of action.

Basic Requirements

- **Double Check Equipment is Off Before Servicing:** Before performing any type of maintenance or repair, air compressors need to be disconnected from their power and fully powered down to ensure there is no built-up pressure. Lock out, tag out of the electrical disconnect must be performed before servicing equipment.
- **Let Air Compressor Cool Down Before Maintenance:** After running, air compressor components are hot to the touch and can easily cause burns. Give the machine time to cool down before handling. Changing oil or fuel in a hot air compressor can also lead to smoke, or in some cases, fires.
- **Regularly Drain the Compressor Tank:** To prevent rust or explosions, the compressor tank needs to be drained on a regular basis. A rusted tank can lead to workplace hazards and put other employees in danger. A no air loss, pneumatic controlled drain is recommended to avoid faulting and loss of compressed air. This is a good way to ensure that moisture is not collecting in the tank.
- **Be Mindful of Hair, Hands, and Clothing:** Air compressors are comprised of quickly rotating parts- cooling fans, couplings, and belts. These components can quickly and easily catch on to any loose clothing and can cause serious injury.
- **Protect Your Ears and Eyes:** Air compressor operators will be exposed to loud machines that create lots of debris, making ear and eye protection is a must. Daily exposure to loud machinery can lead to permanent hearing loss, and the debris from these machines can lead to eye injury and vision impairment.
- **Secure tools and hoses before powering on air compressor:** always check that the trigger on pneumatic tools are not engaged and that hoses are properly secured. Lose hoses can whip around and cause serious injury. All hoses should have the proper safety clamps on each end to avoid hoses breaking loose.
- **Do not use PVC Pipe:** OSHA does not approve the use of PVC in compressed air applications, and therefore should never be used. PVC is susceptible to cracking and bursting.
- **Always Keep Safety Top of Mind:** Air compressors should always be handled with care. Never point hoses or tools at yourself or anyone else. Even low pressures are capable of causing serious bodily harm. It's also important to remember that industrial compressed air is not approved as breathing air as it does not have the appropriate filtration, treatment, and monitoring. There are strict health and safety standards in place for breathing air that industrial equipment does not meet.

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