

# ShoeBox Compressor Manual

**Warning!!** This product is not a toy! Use or misuse can cause severe injury or death! Use only with adult supervision. This unit is only to be used with tanks, hoses and fittings rated for a minimum of 4500 LBS per square inch. Do not operate with an input pressure of more than 100 pounds per square inch or less than 85 pounds per square inch to the compressor or explosion and injury will result. Unplug power before removing cover. Do not operate with cover removed. Under NO circumstances should this unit be used with CO2 tanks or any tank rated less than 4500 pounds per square inch.

## **⚠WARNING:**

For your own safety, never operate unit until all assembly steps are complete and until you have read and understood the entire operator's manual.

## **⚠WARNING:**

Do not put any type of oil into the compressor air lines or explosion could result.

## Safety Instructions

This manual contains information that you should know and understand. Understanding this information is for your SAFETY and to PREVENT EQUIPMENT PROBLEMS. To help recognize this information, observe the following symbols.

## Safety Signal Words

**NOTICE:**      **!CAUTION:**      **!WARNING:**      **!DANGER:**

**! DANGER** indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

**! WARNING** indicates a potentially hazardous situation, which if not avoided, **COULD** result in death or serious injury.

**! CAUTION** indicates a potentially hazardous situation, which if not avoided, **MAY** result in minor or moderate injury.

**NOTICE** indicates important information, which if not followed, may cause damage to equipment..

# Intended Use

This compressor is designed to fill air tanks rated to 4500 or 3000psi depending on the model. For best performance it requires an 85 psi feed from a shop compressor (not supplied) to the nipple on top of the unit. We recommend one of the small shop compressors that are oil-free and generally cost less than 100 dollars. The compressor uses less than 1 cubic foot per minute and virtually all inexpensive shop compressors can deliver that flow rate.

# Setup

The compressor as shipped does not have the fill nipple on top of the unit or the vent knob installed.

- 1: Find the fill nipple provided in the yellow plastic bag and screw it into the threaded hole in the top of the compressor. There is Teflon sealing tape pre-installed on the fill nipple, do not remove. Use a wrench to fully tighten.
- 2: Remove the front cover after unplugging the power and all air lines by unscrewing the four bolts on the sides.

**⚠WARNING:**  
Release all pressure and disconnect power before making any repair or adjustment.



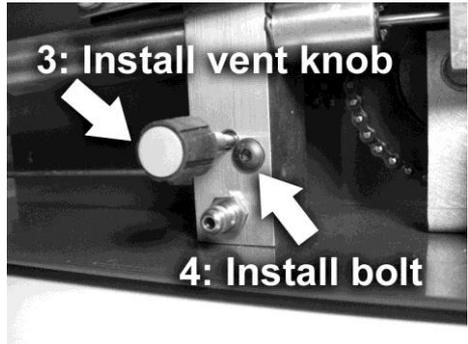
**⚠WARNING:**  
Do not operate unit if damaged during shipping, handling or use. Damage may result in bursting and cause injury or property damage.

**⚠WARNING:**  
To reduce the risk of injury, if any parts are missing, do not attempt to operate the air compressor until the missing parts are obtained and installed correctly.

3: Take the vent knob shaft and screw it part way into the upper threaded hole just above the output nipple in the front.

4: Find the black retaining bolt with the wide head in the yellow parts bag and screw that into the lower right threaded hole. You might have to screw the vent knob in and out to get the retaining screw into place and seated up against the block. Once properly in place, the vent knob shaft should be restrained by the retaining bolt, so it doesn't unscrew out of the block. Unscrew the vent rod all the way OUT to seal and pump up to pressure.

5: Reinstall front cover before use.



## Shop Air Compressor for 85 psi Feed (not supplied)

To achieve minimum fill times, the ShoeBox Compressor requires a minimum external feed of 85 psi air from a small oil free air compressor. More input pressure than 100 psi can cause damage to the compressor and injury. This acts like a "first stage" and reduces the fill times by a factor of six. **Do NOT run the ShoeBox without a pressure feed. Doing so will cause the system to shut off at approximately 6,000 psi instead of approximately 4,500 psi.**

### **⚠WARNING:**

Only use white lithium grease for lubrication.

### **⚠WARNING:**

The ShoeBox compressor requires a minimum of 85 psi input for proper operation.

### **⚠WARNING:**

This compressor is NOT  
DESIGNED TO SUPPLY  
BREATHABLE AIR.

## Air Feed Hookup

Before attaching input hose, set the output pressure of the shop compressor to 85 psi. Attach the hose from your shop compressor to the fill nipple you installed on top of the ShoeBox

Compressor. Attach a high pressure rated hose to output port on the front of the compressor. Attach other end of hose to the fill nipple on your psi rated tank. Unscrew the vent knob above the output port on the front until it hits the stop. Make sure all covers are secure and in place.

### **⚠WARNING:**

**Do not fill CO2 tanks under any circumstances or explosion, injury or death could result.**

## Running Compressor

Plug in the compressor to an electrical outlet supplying 110 volts AC and flip the black switch to the right to start compressor. The switch arm is on a spring and will feel compliant to the touch. The compressor will start running. Monitor pressure build up on the tanks gauge. If no gauge is present on your tank, make sure to use a pressure gauge installed on the rated fill hose to monitor pressure. Compressor does not have a precision shut off so it will turn off anywhere from 4000 to 5000 psi. See adjustment section to adjust shut off pressure. Once compressor shuts off when the tank has reached the set pressure, remove the 85 psi compressor feed hose and screw in the vent knob until you feel resistance. From there, screw the vent knob about one additional turn just you hear the air venting from the airline vent hole. Once the air has COMPLETELY vented you may then disconnect your tank from the fill line. MAKE SURE to unscrew the vent knob back out or your compressor will leak when you turn it on next time.

## Lubrication

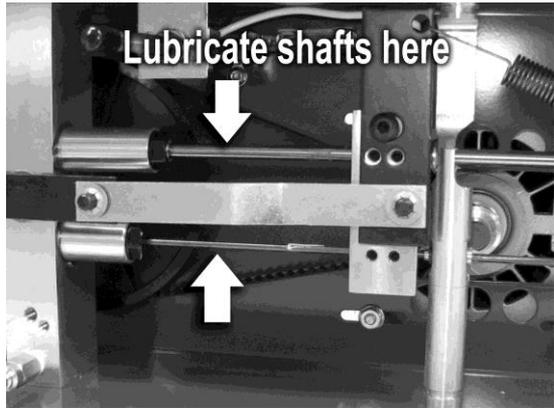
Follow the warnings in this manual and on the compressor and unplug all air lines and power from the unit before removing front cover. The four screws on the side corners

### **⚠WARNING:**

**NEVER use any oil in any airline on this compressor or an explosion could result.**

hold the cover in place.

Your compressor uses oil impregnated bushings which should not need lubrication. **NEVER PUT OIL IN THE AIRLINES OF THE COMPRESSOR or an explosion could result!!**



To lubricate both air pistons **ONLY USE WHITE LITHIUM GREASE**. Disassembly of the pistons is not required. Simply put a dab of grease on the exposed piston shaft near the end of the cylinder. Once the unit is turned on, the grease will get pulled into the cylinder as the piston moves in and out. See our website videos on the Support page at [Shoeboxcompressor.com](http://Shoeboxcompressor.com)

## AC Motor

The Dayton AC motor is 1/3 horsepower and runs off standard 110 volt household current. It should be plugged into a grounded 20 amp receptacle. The motor has built-in overload protection and will shut off if overheated. The motor will start unexpectedly when cooled off, so be sure to unplug unit if overheating occurs.

## Belt Tension

The cog belt will need to be tightened occasionally. It must be very tight to work

### **⚠WARNING:**

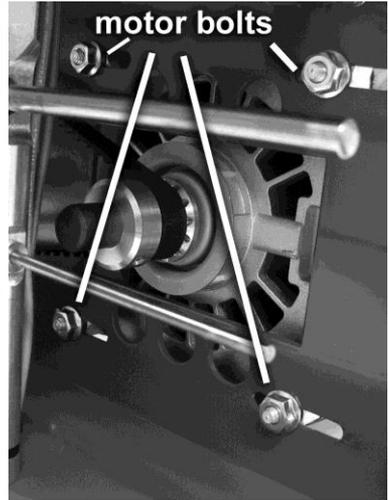
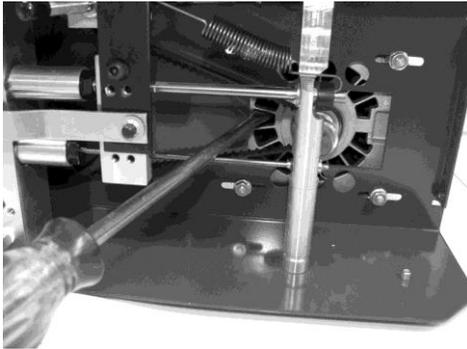
**The motor must be allowed to cool down before start-up is possible. The motor will automatically restart without warning if left plugged into electrical outlet, and the motor is turned on. Do not leave motor plugged in during cool down**

### **⚠WARNING:**

**If not properly grounded, this tool can cause an electrical shock, particularly when used in damp locations, in proximity of plumbing, or out of doors.**

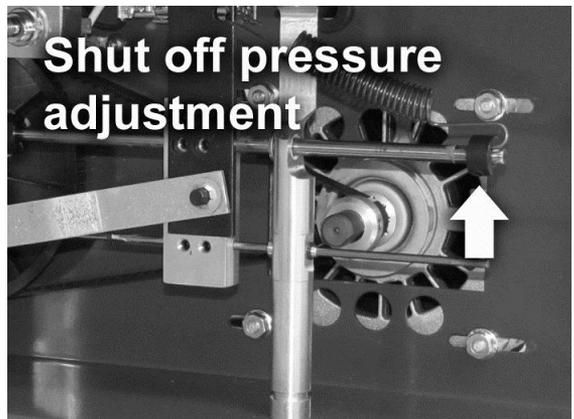
properly and have long life. Remove front cover as described in **Lubrication**.

- 1: Use the proper wrench to loosen the motor bolts as shown in the picture at right.
- 2: Use a screw driver as a lever to tighten the belt as shown below.
- 3: Tighten the motor bolts, belt should “twang” at proper tension.



## Shut Off Adjustment

The pressure shut off is not very precise. The shut off point can vary by several hundred lbs from fill to fill and you should not try to “chase” the shut off point by constantly adjusting the unit. Lack of lubrication on the piston shafts will also cause the shut off point to vary. Reduction or increase of the input pressure from the shop compressor will also change the shut off pressure. The compressor has a large spring attached to the release arm that pushes on the on-off switch to turn off the system. The far end of this spring is hooked to a collar on the piston shaft. There is a small amount of adjustment to the shut off pressure by loosening the collar's set screw and sliding it along the shaft. Slide the collar to the left to decrease shutoff pressure, to the right to increase shut off



pressure. Do not bend the spring! Make sure that the collar does not hit the bearing when the piston moves all the way into the cylinder. Keeping your piston shafts lubricated with white lithium grease will give the most repeatable performance for the shut off pressure.

## Burst Disk Overload Protection

The ShoeBox Compressor is equipped with a burst disk that can be found behind the main air block. If the compressor sees pressures greater than approximately 7500psi, the copper seal in this device will blow out and vent the system. This burst disk is industry standard and must be replaced after a venting incident. Use the same pressure rated burst disk for replacement. Replacements are available from Technicor Industries.

<p><b>▲WARNING:</b> Burst disk must be replaced with unit pressure rated to the same specification as the one removed.</p>
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## O-rings and Back Check Valves

There are only 7 o-rings which are active seals in the compressor. These o-rings are accessed by removing the cylinders. Replacing these o-rings should only be replaced after watching the rebuild videos on the website at [Shoeboxcompressor.com](http://Shoeboxcompressor.com). For technical support please go to our forum at [Shoeboxcompressor.com/forum/](http://Shoeboxcompressor.com/forum/)

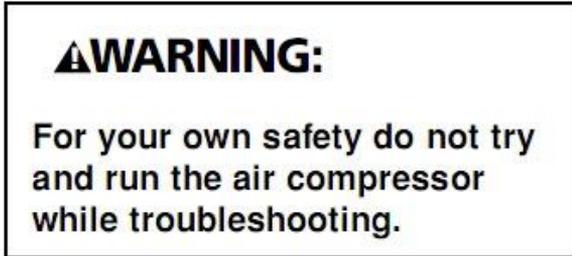
## Water Traps and Filters

There is no filter or water trap supplied with this compressor. We recommend filtering the incoming 85 psi line. See your shop compressor dealer for these accessories. There are additional links to useful water traps and other accessories on the website at: [Shoeboxcompressor.com](http://Shoeboxcompressor.com)

<p><b>▲WARNING:</b> Do not spray flammable materials in vicinity of open flame or near ignition sources including the compressor unit.</p>	
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## Heat Buildup

Under normal running conditions the parts inside the compressor can reach temperatures in excess of 150 degrees Fahrenheit. Handling these parts immediately after shutdown can cause severe burns. Never spray the compressor with any flammable material or solvents. Always use the compressor in an area with adequate ventilation.



## How to Maintain the ShoeBox Compressor

### Lubrication

The ShoeBox requires manual lubrication about every 2-3 hours. To do this you simply remove the front cover and dab a spot of white lithium grease on the pistons. See our [How To Videos](#) to see exactly how to do it.

### Rebuild Cylinders

After about 70 to 100 hours of run time the o-rings will likely need replacing. We provide a spare set of o-rings with the unit and maintenance kits with o-rings are available on our store. The compressor is made to be user serviceable. Removing the snap rings and air lines from the cylinders allows them to slide out. Once the nut holding the spacers and o-rings is removed, the o-rings

are replaced and the unit is reassembled. The ShoeBox can be rebuilt many, many times. See our [How To Videos](#) which walk you through the whole process.

## Warranty

There is a 90 day parts and labor warranty to the original purchaser from date of purchase. The customer is required to send the unit back to us at their expense; we will repair or replace the defective parts and ship the unit back. Technical Support is handled online at [Shoeboxcompressor.com](http://Shoeboxcompressor.com) under the ShoeBox Compressor forum. Most questions are answered the same day.

The warranty applies only to the original purchaser at retail and may not be transferred. TECHNICAL INDUSTRIES, INC. MAKES NO WARRANTIES, REPRESENTATIONS OR PROMISES AS TO THE QUALITY OR PERFORMANCE OF ITS AIR COMPRESSORS OTHER THAN THOSE SPECIFICALLY STATED. TECHNICAL INDUSTRIES, INC. MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, INCLUDING AS NOTED BELOW.

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