



Haskel Air Booster Operational Facts 101

- 1) When operating the Haskel booster, the SCBA cylinder valve, the air panel or fill station fill valve, if you have them, should be open. If not open, the booster may not be able to get a full stroke filling just the low volume available in just the HP tubing of the panel.
- 2) The booster uses Haskel's newest and most sensitive automatic stop air pilot valve, called the *Remote Set*. Like electric air compressors, boosters stop automatically when pressure reaches a preset pressure. The pressure sensing switches have a dead band, an area where the pump or compressor will not start until the pressure drops to a specific point. For the Haskel booster it can be as much as 10% of the rated pressure for the booster, either 5000 or 6000 PSI. If the equalized pressure between the supply cylinders and the SCBA cylinders being refilled fall within this range, the booster may not start. Setting your booster to automatically stop at 5000 PSI, when using a downstream regulator to control SCBA fill pressure, will help avoid this situation. See Item 3 below for more information on this subject.
- 3) Remove the red mesh and the white plastic from the gauges on the booster. Normal outlet pressure showing on the LP gauge, above the Yellow handle, should be about 110-140 PSI. This pressure reading may vary when booster is operating, as booster cycles.
- 4) If using a downstream HP regulator to control filling pressure to the SCBA cylinders, the booster's "Remote set air pilot valve" should be set to automatically stop the booster at 5000 PSI. The HP regulator will limit the SCBA fill pressure to 2216, 3000 or 4500 PSI. When adjusting the black knob of the remote set air pilot valve, first loosen the locking nut. Failure to do so will strip the threads of the knob on the miniature regulator. This regulator sits on top of the booster beside of a LP gauge. The adjusted pressure on the gauge should be approximately 46 PSI for 5000 PSI booster outlet pressure.

5) The miniature regulator is a dynamic regulator. When the system is pressurized, the regulator will vent a small amount of air. This is normal. Do not attempt to use your finger and find the air leak, which may be slightly audible. Blocking the vent port of the regulator will rupture the regulator's diaphragm. If the air leak becomes easy to hear, then the diaphragm may be ruptured and the regulator may need to be replaced

6) The booster should not exceed one stroke per second. (60 RPM) This will help give you the longest service period before a major overhaul is required. Faster RPMs causes heat and heat is the killer of all pumps/compressors.

7) The booster has a black/white plastic "speed" muffler on it. This is where the drive air is exhausted from the pump after a stroke. This muffler has an Allen screw in the end that can be adjusted to control the speed of the booster, much like a "Jake brake" on a diesel truck. Initially, this screw needs to be turned counter clockwise until there is no restriction to the air exhausting and then needs to be adjusted, with the yellow valve hand full open, to where the booster cycles between 50-60 RPM. This easiest way to do this is to have one of the supply cylinders down around 1500-2500 PSI after equalizing with one or two SCBA cylinders in the fill station. During filling operations where the supply cylinder(s) are around 850-1200 PSI, the adjustment on the speed muffler can be tweaked to maintain the 50-60 RPMs. The pump works harder and the strokes are slower as it nears 4500 PSI. The speed muffler will help keep the booster from high revolutions and heat.

8) The yellow handle on the Haskel is its primary on/off control. The exception to this is when the booster is to be remotely controlled. Then it is usually left open. The user needs to adjust the position of this lever to control the cycle rate, if not using a speed muffler. If the yellow lever is in line with the 1/2 copper tubing, it is in the open position.

9) The booster will not operate until the remote on/off panel valve is opened, which allows air pressure to go to the pressure sensing switch. When the panel on/off valve is closed, the switch sees this as high pressure and it stops the pump.

10) The booster is just an expensive coupler between the manifold and the HP panel regulator, when not being used. HP air flows through the booster.

11) Make sure the HP air line to the booster comes from the panel manifold just before it would go to the regulator, if a booster were not being used. The HP line from the booster goes to the inlet on the HP air regulator situated on control panel or downstream from the booster, when used without a control panel.

12) The small hoses from the booster to the air panel on/off valve can be connected to either side of the on/off and it should work fine. It is important that the lines are connected to the correct port on the Remote Set sensor.

13) Check to be sure there's pressure going from DOT supply cylinders through the booster, through the regulator and through the fill hose in the Boombox. Try to equalize a SCBA cylinder from storage without the booster being operated. If this happens, then the HP lines to and from the booster are connected correctly to the booster. The booster has check valves on the end caps that prevent air from going back through the booster. Look at the chrome HP regulator gauge to see the pressure the booster should be seeing.

14) The refill port on the air control panel does not go back through the Haskel booster. It can't with the pump's check valves. The refill air is plumbed to go directly to the supply manifold.

15) When finished with refilling operations, and after refilling supply cylinders, turn off supply cylinders and drain air from the system.

16) Depending upon amount of use, booster may require preventative maintenance once a year. The maintenance required is the removal of the cycling spool, lubrication of the eight o-rings and re-insertion of the spool. The cycling spool is located directly under the brass elbow of the LP air line, just below the Yellow handle on the ball valve. This service is detailed in the Owners Manual shipped with the booster.