2010 43QGP Allegro Bus

9/8/2012

60 – FYI – <u>ON BOARD COACH AIR SUPPLY.</u> There has been much discussion regarding the method of adding air pressure to a coach tire. For coaches with an air suspension system IMO the best air supply is mounted to the coach engine. The engine air compressor can provide 125 – 130 PSI of **DRY** air pressure. When adding pressure to your coach's tires the best supply of dry pressure would be nitrogen, it is dry and the molecules are larger than regular air but not much as air is about 80% nitrogen.

Back to the on-board air compressor, which most diesel coaches have this compressed air supply is mounted on the engine. The air regulator on the compressor allows the coach air pressure to drop to around 95 PSI before re-directing the air pressure from the air compressor which runs until the air pressure rises to 125 – 130 PSI where the air governor cuts off until the pressure again drops to 95 PSI where the cycle begins again.

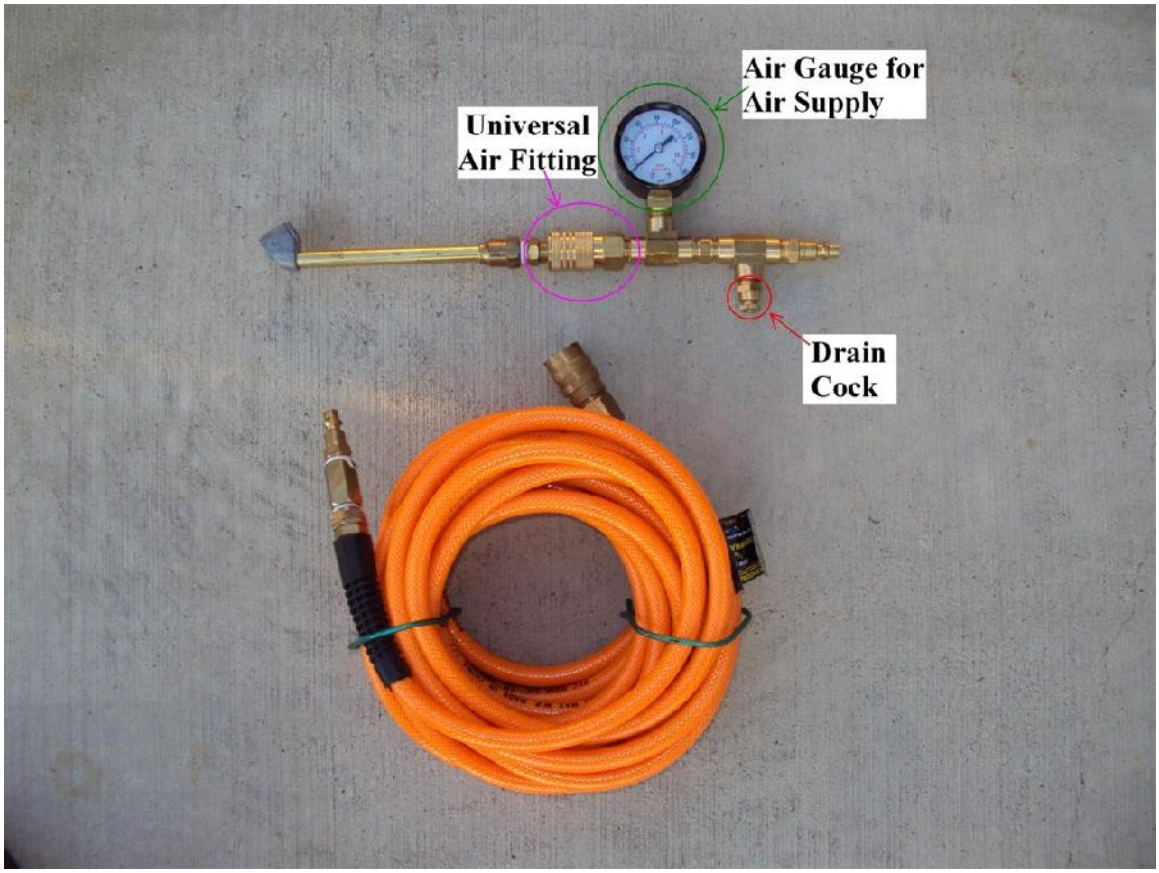
One reason many owners have decided to purchase small pancake type air compressors relates to their inability to pump air pressure into a tire when the coach air system's air pressure is lower than what they are trying to inflate the coach tire to. Such as pumping 120 PSI into a steer tire when the coach air compressor has cycled off and the coach air system ONLY has 100 PSI. This is a problem easily overcome for a few dollars in parts.

Both Freightliner and Spartan chassis' have an on-board customer air manifold which can be used to add air pressure to the coach tires. The Powerglide chassis has a second air manifold located near the passenger rear corner to allow easier access to the air system for adding air pressure to the tires. This additional location means Powerglide owners can use a 25 foot hose rather than needing a hose at least 50 feet long if the chassis is a Freightliner or Spartan which have only one port.

With the parts assembled as shown in the enclosed photo the coach air governor can be controlled (cycled ON and OFF) by opening and closing the drain cock. I cannot take credit for the original idea that credit belongs to Chas and a few other TRVN forum members. I just decided to add a few additional components to their idea.

Opening the drain cock until the coach air supply has drained below 95 PSI sends a signal to the coach air governor to re-direct the air pressure. Closing the drain cock allows the air compressor to build the coach air systems

pressure until the air governor cuts off the air flow to the air dryer. During this airing operation I have the coach engine running with the engine set to high idle. Running the engine at high idle on the Powerglide chassis is performed by turning ON the cruise control then depressing the SET button. High idle on our coach was set to 1,100 RPMs upon my request by Tiffin.



A couple of 25 foot coiled air hoses are carried which can be connected between to universal air fitting and the dual foot air chuck to provide more versatility.
In my opinion what I have assembled is about as simple as can be done to provide a method for adding up to 125 PSI of **DRY** air pressure to almost anything.