

Air-55 Operations  
(January 2023, V 4)

1. Park as close to the fire scene as possible, but avoid being in the direct path of smoke, vehicle exhaust and traffic hazards. Do Not allow someone who knows nothing about A-55 make you park otherwise.
2. Shift transmission to Neutral, set Parking Brake. When you exit the cab, set chock blocks in front of and behind left rear tires.
3. Before you leave the cab, if you think you will immediately use the compressor, or verify that the PTO will engage, or need electricity (night operations) engage PTO by pressing bottom blue button on the left-hand side of the control screen in the consol area in the cab of the truck. RPM's will set automatically. The PTO engages the generator which produces electricity to power the AC outlets and the motor for the air compressor. Check electrical panel for power.
4. Unlock compartment doors on both sides of the truck. Handle locks are located between the cab of the truck and the box on the forward bulkhead of the box.
5. **Fully** Lift left and right-side Compressor Compartment doors on both sides of truck. Open firmly but slowly. Do not slam the doors open. Safety switches at the front at the top of the compartment must be engaged. They are engaged when doors are fully open. As you lift the door on the Driver's side, if Compressor has been left in the ON position, cut it off before you fully raise the door, until you need to produce air. The only controls we are allowed to operate in the compressor compartment are: ON / OFF Switch. Kill Switch and Reset button (not necessary in normal operations). Water drain lever is simple to operate. Make sure the water drain valve is left in the closed or off position. **DO NOT DRAIN (RED Turn Valve) COMPRESSOR OIL.** PSI range for compressor oil is 44 to 88.2 psi. Fail switch is set at 45 psi.
6. Make Certain the Emergency Stop Button is pulled OUT.
7. Turn Compressor On when you need to produce air. Leave Compressor Off if you do not need to produce air.
8. Compressor will not come on if it does not need to produce air. Compressor will not come on if PTO is not engaged. If there is a problem with the PTO not engaging (a rare problem), you can only provide air from storage. Advise Command that you have a problem and can only fill a limited number of bottles. Consider filling bottles to 3,500 psi or less.
9. Fill Station: Observe the 3 Air System controls. SCBA fill. High Pressure Hose Reel. Low Pressure Fill. Read all Instructions! Low- & High-Pressure side have shut offs behind the control panel, just above the high-pressure Inlet gauge.
10. Set up Pressure Valve to the proper psi for filling bottles. Most bottles are 4,500 psi. A few 2,200 psi bottles are still in use. Check each bottle for the proper psi. If a bottle is overfilled by a specific psi, the fail-safe device will pop out and air will escape rapidly. LOUD NOISE! Mark bottle out-of-service. Apologize to the bottle owner.
11. Hydro - FD's (every 5 years on carbon fiber bottles) have the responsibility to ensure that their bottles are in hydro. If you note that a bottle is out of hydro, do not fill it. Apply scene tape and advise the FD member who has the bottle. See item 12. A.
12. Set up for SCBA bottle fill. Use green and red tarp (right rear compt). Fill From Storage or Fill from Compressor, result is the same. Normally we fill from Storage. This allows the storage tanks to refresh the air continued in them. Fill Station cylinders are set for MSA and normal size Scott bottles. Remove spacers at bottom of fill cylinders when filling larger size Scott bottles. Be sure bottles are at the bottom of the cylinder, resting on the spacer, so they do not hang by the fill hose! Otherwise, the hose and fittings will fail quicker than normal. After fill hose has been properly connected, open bottle valve. The PSI content of the bottle will display on the corresponding gage at Fill 1 or Fill 2. Close containment door completely. When bottle is full, open door (air flow will stop), shut off bottle, open bleed valve slowly, remove fill line (a gentle turn with slip lock pliers may be necessary) and place bottle back in service.

12. A. NEW REQUIREMENT: Record the SCBA serial number, hydro date, final psi and which FD owns the tank in the book provided. Note the number of times you fill the bottle. Do not fill bottles that are out of hydro (5 Years for the majority of bottle we fill). Mark the bottle OFS with a tag (in black toolbox and scene tape).

13. Fill bottles as slowly as practical, especially when you fill bottles that going back on Air-55 in the storage rack at the end of the event. The faster a bottle fills the hotter it gets. PSI will drop as the bottle cools. Industry Standard is 100 PSI per minute, which is not practical at a major fire when you have multiple bottles to be filled. Fill rate is determined by adjusting black knobs at Fill 1 and Fill 2. After you set them and are satisfied with the rate of fill, you do not have to adjust them. When you open the door to the containment area, air flow stops. You will have to shut off air flow on the opposite side if you are filling one bottle.

14. If you are filling From Storage and you note that the PSI has dropped below 4,500 - 5,000 PSI and the Compressor has not engaged, turn Compressor off and turn it back on again. It should engage. If not, turn it off, wait 10 minutes and the try again. Compressor should engage at about 5,300 to 5,400 psi when any bank reaches that level.

15. Shut Down. - Rear Compartment: Close all open storage tanks. Close fill valves 1 and 2. Bleed air off Pressure Regulator and Inlet pressure gage. Compressor Compartment: **Turn Compressor Off**. Drain Water from collection reservoir. Truck: Close all compartment doors and lock levers behind cab. Return chock blocks to storage. Take truck out of PTO. Fuel: Fill up into the lower portion of the neck of the tank, otherwise fuel tank is not full. Return fuel card to cab of truck!

16. Controls. - Pressure, Air Flow, Controls for Banks, and Black Knobs in general. **DO NOT OVER-TIGHTEN**. Open or closed, hard to look and tell. Knobs are designed to strip out in order to protect the valve. Discuss what to do if a control knob will not turn.

17. O Rings - Where are the spares and what do we replace? O rings seem to fail more often lately. Spares are in the black toolbox.

18. Tools - Where are they? What is a Morrisville wrench? Black toolbox.

19. Loose fittings and thread tap. What do we do if we have an air leak.

20. Things that go wrong. 1. Holes in fill line. 2. PTO shaft comes loose. 3. Air Leaks. 4. Warning lights in Compressor Compartment.

Pay attention to Warning Lights on the Compressor Control panel. 1 Flash: most likely means compressor compartment doors are not fully open. This can also mean that there is high temperature in the compressor. High temperature is unlikely when the compressor has not been operated in a while.

21. Special bottles: Dive Bottles, Durham Highway, Morrisville, Raleigh and other 5,500 psi bottles. OJT.

22. Scene Lights and Rehab. OJT.

23. Chairs and awnings. OJT.

24. Stationary Cascades that we fill at fire departments is OJT.

25. Proper air flow around the compressor is critical in regard to keeping the compressor at a safe operating temperature. **Do not store anything in the compressor compartment**. It is OK to put turn out gear there if you remove it when you are running the compressor.

26. Remember to reconnect shoreline. Failure to do so results in loss of air pressure and battery over several days.

27. Remember to go about Air 55 operations deliberately, at a reasonable and safe pace.
28. Before going on a call, check for ice in both coolers. Add if necessary. You have time to do this.