

## Some Key Points About Drafting Operations using the *Trident Automatic AirPrime*

- Drafting is like painting your living room; it is all in the preparation.
- If the pumper is equipped with an electronic pressure governor, it **must** be in the **RPM** mode.
- If the pumper is equipped with a 2-stage pump it should be primed in the Parallel (Volume) position.
- Normally leave the AirPrime rocker switch in “**AUTO**” mode.  
*See AirPrime Operating Instructions.*
- Don't put the pumper in pump gear until:
  1. You are sure that your positioning is correct and the wheel chock(s) is down.
  2. The tank-to-pump valve is closed.
  3. You are certain that all suction hose connections are airtight.
  4. You are sure all discharges, drains and bleeders are closed and capped if necessary.
  5. You have a circulating line ready – this can be as simple as using the deck gun.
- It is especially important to not put the pump into gear prematurely if you do not have an intake control valve through which you can draft.
- Allowing the impeller to spin in a pump without water builds up heat and can ruin the impeller, clearance rings and mechanical seals.
- When drafting from one suction inlet, it is preferable to draft from a suction inlet close to the pump (meaning the driver or officer side suction inlet). Use of the front, or rear intake will usually reduce your intake capability due to the bends in the pipe as it makes its way to the pump's intake manifold.
- The Auto AirPrime is most efficient at about 1,000 RPM.
- Look for signs of water rising in the hard suction hose:
  1. Hose is “dipping” from the weight of the water.
  2. Hear the Auto AirPrime operating.
- Check for any air leaks and tighten the couplings if necessary.
- If the coupling itself is leaking, wrapping with duct tape will provide a temporary fix.
- Once you achieve the prime, you should see a pressure reading on the master discharge gauge. Throttle up and open the valve to the circulating line. You may have to throttle up some more if the pressure starts dropping as you open the valve. Once you have water moving through the hard suction sleeve, you can open valves to other discharges.

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- Flushing the hard suction sleeve with water from your booster tank should be done with caution. You can lose your tank water very quickly; and most tank to pump valves leak. If there is not water above the tank to pump valve to seal off air, you may not get a prime once your tank water is gone!
- With a valved suction intake that you can draft through, you have more options if the truck is equipped with multi location remote priming using separate primer control push-buttons. These valved intake(s) can be manually pre-primed, with water up to the intake valve even while the Auto AirPrime is still engaged.
- Once you have completely transitioned to drafting, open the circulating line and cut the tank fill back - but make sure you refill your tank, you can flush it out later if you usually carry clean water.
- When filling tankers, you should aim for 1000 GPM at a residual pressure of at least 35 pounds at the tank fill. Most modern tankers can handle more pressure but you must never exceed a fill pressure of 100 PSI. It may be necessary for you to shut off your circulating line to get enough pump capacity to fill the tanker; just make sure you remember to open it back up when the tanker is filled.
- Not all intake valves are made to draft through, some after market piston intake valves will leak air through the intake relief valves.
- Successful drafting followed later in the operation by loss of flow and high vacuum readings means that something has sucked up against your strainer blocking the intake of water.
- Successful drafting followed later in the operation with loss of flow and high vacuum readings means that something has happened to cause you to suck in air (strainer may be flipped over, etc.).
- Successful drafting followed by cavitation when filling the first tanker means that your lift is too high for you to achieve 1000 GPM. You will have to cut back your flow. To gain capacity, you can add hard sleeves to another intake and reprime, or use a portable pump to feed another intake.

Questions and concerns about drafting can be directed to the folks at [www.gotbigwater.com](http://www.gotbigwater.com) or by joining the Members Area of the website.

Also visit [www.TridentAutoAirPrime.com](http://www.TridentAutoAirPrime.com) for more information about the AirPrime Fire Pump Primer.

**Questions...** Contact Parker Browne, Product Specialist at (330) 612-3567 or [brownefire@aol.com](mailto:brownefire@aol.com)