

## Back Flushing a Centrifugal Pump

**Purpose:** To Establish a procedure for back flushing a centrifugal pump on an Engine company.

**Tactical Objective:** To back flush a centrifugal pump as part of monthly maintenance and after using contaminated water supply using fresh hydrant water.

**Background:** The following procedure is from IFSTA Pumping Apparatus Driver/Operator Handbook 1<sup>st</sup> Edition. This is one method for removing debris from a centrifugal pump. Follow any manufacture's recommendations for your specific apparatus for any additional maintenance procedures.



### Procedure:

- ❑ Place hydrant gate valve on hydrant.
- ❑ Flush hydrant until water runs clear and contains no debris.
- ❑ Remove all intake screens and gaskets.
- ❑ Close tank-to-pump valve and open intake.
- ❑ Connect a supply line from the hydrant and the other end to an intake.

- ❑ Open discharges, one at a time and flow water through the pump until debris is removed.
- ❑ Reverse order and connect a supply line from the hydrant and the other end to the highest discharge on the Engine company.
- ❑ Open discharge and flush water through pump until all debris is removed.

**Considerations:**

- ❑ Remove intake screen from relief valves and clean out in clean water.
- ❑ If tank water was filled with contaminated water, dump the tank water and fill back up with clean water. Repeat procedure until clear water runs out free of debris. Do this prior to back flushing the pump.
- ❑ Remove any external intake valves and intake screens prior to back flushing and replace any broken ones. If any large pieces break off and enter the pump they should come out during back flushing. Intake screens are typically made of a soft metal like zinc so and will dissolve in time unlike a rock stuck in an impeller.



- ❑ Clean, inspect, and lubricate all nozzles as after use and during monthly maintenance per the manufacturer's recommendations.
- ❑ Lubricate ball valves with soapy water. Place dish soap in tank water and exercise valves. Spray with push pull valves with a lubricant follow manufacturer's recommendations.
- ❑ Run fresh water through any other auxiliary devices used with contaminated water.