

Question: *Every time a fire pump is placed in service, is priming system activation required?*

In many instances activating the electric vacuum primer is not required at all if the pump is "wet" (water filled). If the pump is "dry" (drained) and you are working from a booster tank or pressurized hydrant water supply, you can purge the air out of the pump without activating the primer by using incoming water pressure. For example, most midship pump equipped engines carry an on-board water supply in a booster tank. Booster tanks generally hold from 500 to 1,000 gallons of water. Since the water level in a full booster tank is at a higher level (elevation) than the pump, it naturally exerts force called head pressure on the pump, after opening the tank-to-pump valve.

The slight pressure of incoming booster tank water is enough to expel air inside the pump if the air is bled off by momentarily cracking open a discharge valve or the booster-tank fill valve. Therefore, if we start operation with a "dry" pump (the pump was previously drained) and proceed to open the tank-to-pump valve, the slightly pressurized incoming water from the booster tank fills the pump casing and "primes" the pump.

The slight head pressure exerted by the column of water in the booster tank forces water into the pump without the need to manually activate the electric vacuum pump priming system. This same procedure will work when the fire pump is connected to a hydrant fed by a city water supply - only the hydrant has much more pressure to do the job.

Caution: When using large diameter hose (LDH), always open a bleeder valve on the hydrant side of the fire pump inlet valve/supply hose connection prior to opening the hydrant, so trapped air can escape from the supply hose!