

## Priming, Draughting and filling

1. The secret to a successful prime is check that **all sources of air are blocked from entering the system** during the priming operation; turn off the recirculation valve, check hose lines are off, check the suction line storz fittings are secure
2. You should get a prime in about 10-20 seconds (longer on the Cat 7 and 9 as they are manually operated), if not stop and check if a valve is open. Monitor the Compound gauge (if fitted) for vacuum.
3. Refer to the cheat sheet on the back of the truck to set the valves
4. Referring to the image below of a geared primer, the suction line has been placed into the water and the primer operated.
  - a. The primer pushes/pumps the air from the suction side of the primer to the discharge/outlet side.
  - b. This lowers the air pressure in the suction side compared to the surrounding atmospheric pressure.
  - c. Nature hates pressure differences so it wants to replace the air that is missing in the suction line.
  - d. The only avenue is via the suction line opening which is in the dam (storage tank) so the higher surrounding atmospheric pressure pushes the water up the suction line to the priming pump.
  - e. In a typical setup on the RFS trucks, the primer is located downstream after the main pressure pump which means the suction line runs through the main pump, past the closed valves (recirc, hoses, etc). If one of these valves is open the air will enter the suction line via this easier avenue rather than push water uphill up the suction line.

