

Relay Pumping

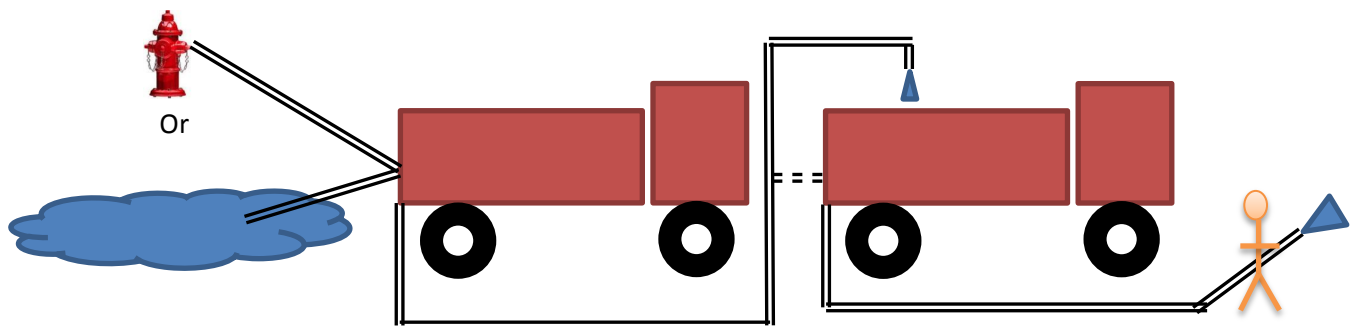
Relay pumping is used where a source of water sufficient for the operation is a long distance from the operation or when an uninterrupted water supply for an operation is required.

Relay pumping consists of a number of pumps spaced at intervals between a water source and the incident. The water source can be a hydrant or a dam/stream/pool. Multiple pumps are used to overcome pressure and flow losses due to friction and head. A quick-fill portable can be used as one of the relay points. Relay pumping may use an open circuit or closed circuit.

Open Circuit

In an open circuit relay, water is delivered into a holding dam or the tank of each truck in the relay. It is often used to keep the tank topped up.

The water can be delivered into an RFS tanker via the 65mm quick-fill/hydrant point or by manually inserting the hose into the top of the tank. It is important to note that the supply goes via the tank before passing through the pump of the truck supplying water to the incident. Therefore if the pump fails the crew with the branch lines will lose all water flow and pressure.



Closed Circuit

In a close circuit relay, water is fed directly into the inlet of each subsequent pump including the truck supplying water to the incident. On RFS tankers this is usually achieved by supplying water via the 75mm draughting inlet on the rear left corner. Therefore if the pump should fail on the truck supplying water to the branch lines, the preceding pump(s) will take up some of the slack albeit with reduced pressure and flow until the operators increase the pressure of their pumps.

Although more difficult to setup the closed relay system guarantees an uninterrupted water supply. Pump operators should aim to keep the compound gauge at 200-500 kPa. If the gauge drops to zero the 65mm lay-flat supply line will collapse. Increase the supply, or manipulate the draughting inlet valve to reduce the bypass, or decrease the demand on the pump and vice versa if the compound gauge is reading above 500 kPa.

