

Falmouth Fire-EMS Operating Guideline

Engine Company Operations

Objective:

To provide the standard by which Falmouth Fire-EMS Department will perform Engine Company operations and is intended to ensure optimum performance in such operations and maintain the integrity of safety for personnel.

General Information:

Company officers should realize that the quick attack and supply line concept is only one of several firefighting options available to the Falmouth Fire-EMS Department. Good sound judgment and decision-making still require an Engine Company officer to properly size up before deciding among available options when initiating any hose lay. The use of the 1 ¾" attack concept was never intended to be the standard tactical operation for an Engine Company in all situations.

Guidelines:

A. Engine Companies

1. Engine Companies responding should lay supply line out and connect to water sources if the size and intensity of the fire so dictates. Thus, when the 1st arriving Engine Company Officer selects the 1 ¾" quick attack concept, the following procedure shall apply:
2. The 1st arriving Engine Company shall initiate quick attack utilizing a minimum of a 1 ¾" hose line. The officer on the 1st arriving Engine Company shall advise the 2nd due Engine the need for a supply line.
3. NOTE: If the 1st due Engine Company lays its own supply line, a GATE VALVE shall be placed on the 2" plug outlet on the hydrant before water is turned in. The gate valve enables a later arriving Engine Company the ability to connect to the hydrant without shutting down the water supply. Please note, however, that a single supply line directly off the hydrant seriously limits the water flow capability of the hydrant and/or fire ground operation.
4. When so ordered, the 2nd arriving Engine Company shall be responsible for laying a supply line(s) from the attack Engine Company to the closest available hydrant. The Engine Company shall then connect to the hydrant and initiate pumping.
5. Supply lines shall be a minimum of 5" diameter. The Engine Company pumping the supply line(s) should maintain adequate pressure to support the attack operation.
6. Later arriving Engine Companies (3rd Engine, 4th Engine, etc.) required to support the operation are responsible for laying out to an available hydrant in order to ensure multiple water sources if so directed by the Incident Commander.

B. 2nd Arriving Engine - Operations (Supply / Search-Rescue)

1. The 2nd arriving Engine (Supply Engine) will be responsible for maintaining the water supply of the 1st Engine, unless ordered otherwise by the Incident Commander. Therefore, the 2nd arriving Engine should approach the scene and position the apparatus in such a way as to gain access to a fire hydrant.
2. In some cases, the 2nd Engine will not be able to access a fire hydrant by passing the 1st Engine. In this instance, this will require the apparatus to back into position and prepare to reverse lay to the hydrant.
3. For rural water supply situations, the 2nd Arriving Engine (Supply Engine) will position itself at the end of a driveway/road and prepare to send water to the Attack Engine while setting up to receive water from a Tanker or supply line using a Rural Hitch or drafting from a Dump Tank (See Rural Water Supply SOG). If the Attack Engine has not laid a supply line into the fire, the 2nd Arriving Engine may need to back up to the Attack Engine and prepare to reverse lay out from the Attack Engine before setting up to receive water from a Tanker or supply line using a Rural Hitch or drafting from a Dump Tank.
 - a. The officer of the 2nd Arriving Engine will assume the role of Water Supply Officer if the Incident Commander has not yet assigned someone to that role.
 - b. In the event the driveway is greater than 1000' an engine should be placed in-line every 1000' to perform relay operations. In this scenario an extra engine may need to be called to the scene.

C. 3rd Arriving Engine - Operations (Support / Sprinkler Supply)

1. Within a hydrant district, the 3rd arriving engine shall have the primary responsibility of supplying the sprinkler system when the structure possesses a system.
2. Where no sprinkler system exists, the 3rd arriving engine, unless otherwise ordered, should attempt to position itself on the opposite side of the building from the 1st arriving engine (C-side) for commercial buildings and at a 2nd hydrant for residential buildings.
3. The officer will evaluate the situation in that sector and report any findings to the incident commander or the sector commander (if the fire is sectored). The officer will initiate operations in that sector when ordered.
4. The operations of the 3rd arriving engine will generally require that they maintain their own water supply (laying out to hydrant) unless the water supply can be gained from the 1st or 2nd engine.
5. For incidents outside of a hydrant district, the 3rd Arriving Engine will stop at a dry hydrant or other hydrant and set up a fill site operation and prepare two outgoing lines to re-fill tankers. The officer of the 3rd Arriving Engine shall serve as the Fill Site Supervisor.

D. Vehicle Rescue – Threat of Fire

1. Many car crashes with extrications require that an engine company provide fire control protection to the victims and firefighters/EMS due to the presence of motor fuels. Should such fuels ignite, a victim could be dead in seconds unless the fire is controlled and/or extinguished. Thus, whenever a victim(s) is to be extricated from a vehicle accident in which there is any fuel spillage or danger of fire:
 - a. The engine company shall deploy a minimum of a 1¾" hose line in order to quickly suppress a fire should it occur. The engine operator should be prepared to flow foam.
 - b. Should a spill be extensive, the Incident Commander should "blanket" the fuel with Class B foam and consider calling for additional resources.

E. Pumping Pre-Connects while Supply Lines are being laid.

1. Engine Operators and Officers should be aware that when they are attacking a fire with pre-connect lines and awaiting continued water supply via supply lines, they are essentially in a "holding action" to prevent further spread of the fire or to protect exposures. Thus, in such situations, there is a need to limit GPM flows until the supply lines are charged.
2. Suggested GPM flows during "holding actions" should be limited to no more than 150 GPM through each pre-connect line. If a second pre-connect is added before water supply is established the operator may need to back both lines down to 100 GPM to conserve water. The crews on the end of the line must be kept aware of any change in pressure / GPM.
3. To assist operators in their pumping responsibilities, the following chart is provided to illustrate a simple "rule of thumb" approach to pumping pre-connects. Assuming the pre-connect length is 200', Operators can easily remember that pump pressures of 100, 150 and 200 PSI provide respective water flows of approximately 100, 150, and 200 GPM.
4. The normal starting rate of pressure for a 200-foot 1.75" attack line is 150 PSI. Crews operating the hose lines can ask for more or less pressure as needed.
5. PUMPING 200' PRE-CONNECTS - (1.75" HOSE)

Pump Pressure	Approx. GPM	Actual GPM
100 PSI	100 GPM	80 GPM
150 PSI	150 GPM	155 GPM
200 PSI	200 GPM	210 GPM

These guidelines may be changed or altered by the Fire Chief at any time.