Lincoln County Fire and Rescue Association

Standard Operating Guideline (SOG)

Adopted Date: August 21, 2007 Effective Date: May 1, 2012

Number: 203

Title: Tanker-Shuttle Operations

Purpose: To promote safety, efficiency, and standardization in the movement of water via fire department apparatus from a fill site to an incident scene. This SOG shall strongly support the current NFPA 1901 standard in reference to the construction and operational features for apparatus constructed or refurbished after December 31, 2004. For the purpose of this SOG, apparatus described within can also serve in the capacity as an Engine Company.

Apparatus Features:

1. Fire Pump: A rated fire pump capable of delivering 1000 gpm or larger will be the standard.
2. Water Tank Volume: A minimum capacity of 1000 U.S. gallons shall be installed. Adequate venting allowances will be constructed into the tank features to enhance dump times and reduce the chance of over-pressurization. An illuminated tank level indicator should be located in 3 locations: Cab dash, pump panel and rear exterior of apparatus.
3. Foam Concentrate Storage: A minimum of 30 U.S. gallons of AFFF/AR foam concentrate shall be carried on the apparatus. It is strongly recommended that an on-board storage tank and foam proportioning system is included in the operation of the apparatus. All fire departments are strongly encouraged to use and store foam concentrate brands that are compatible and will not polymerize when mixed or shared on an incident scene.
4. Rear Direct Tank Fill Inlet(s): It is strongly recommended that direct tank fill access be located on the rear exterior of the apparatus in the lower portion of the water tank. This shall promote ease of operation and safety to the shoulder (curb) side of the apparatus. A standard of two (2), inlets and valves of 2 ½" or larger shall allow complete filling of the tank in less than 1 minute when input pressure is under 100 psig. Labeling shall be placed on the exterior surface directly above the inlet which reads "Maximum of 100 psi when filling". The inlet shall be finished with a ¼ turn ball valve and a 4" stortz connection. A blind cap will be at each department's preference.
5. Portable Drop Tank: It is strongly recommended that every apparatus equipped with a rear-dump valve shall carry a square collapsible portable drop tank with a capacity of 2000-2300 U.S. gallons and a rail height not to exceed 32" above ground level.
6. Rear Dump Valve/Chute: A gravity fed discharge opening will be installed in the center rear of the apparatus of an opening size that will allow the entire tank volume to be emptied in less than 1 minute. The discharge opening shall extend at least 18" beyond the tailboard of the apparatus when fully extended at a height not lower that 36" above ground level. Activation mechanism can be either electric or pneumatic with a single control switch located and labeled on the left rear exterior corner of the apparatus to

eliminate personnel having to position themselves between the apparatus and drop tank.

7. Rear Lighting: Shall be sufficient to illuminate discharge operations during low light conditions.
8. Pre-connected Discharges: The following discharges and hose lengths shall be a minimum for quick placement into service.
    1. Two, 1 ¾" hoselines of 200' lengths
    2. One, 2 ½" hoseline of 200' length
    3. One master stream device capable of 1000 gpm.

Fill Site Goals:

1. Minimal amount of apparatus backing.
2. Paved surface to reduce deterioration when wet.
3. Supplemental lighting in low light conditions.
4. Fire pump support when utilizing multiple fill hoses.

Discharge Site Goals:

1. Hard, flat, level surface for drop tank.
2. Minimal amount of apparatus backing.
3. Access to multiple sides of tank for dumping.
4. Backing spotter to operate dump controls.
5. Drivers to remain in operator's seat with transmission in neutral and parking brake set as signified with left hand extended from driver's window.
6. Full tankers waiting to dump as opposed to empty tankers to fill.
7. The largest water volume tanker in reserve at fill site to support shuttle delays or mechanical failures as needed.

Fill connection to hydrant or fire pump:

The 1st Tanker apparatus to establish and identify a hydrant fill site shall set up the following 3 steps for other arriving Tankers to hasten their re-fill operation.

1. Deploy a pre-assembled fill hose consisting of the following:
    1. A 50 foot 2 ½" or 3" hoseline with 2 ½" couplings.
    2. A ¼ turn ball valve or a hydrant valve on the fill hose line, HYDRANT SIDE, allowing the hydrant to *remain fully open* during the entire operation.
    3. A 4" stortz fitting attached to the apparatus end of the hose.
2. A traffic cone placed on the ground to quickly reference the tailboard location for the driver.