



Los Angeles Fire Department

# TRAINING BULLETIN

*DOUGLAS L. BARRY, Interim Fire Chief / Bulletin No. 130 / Date of Issue: 07/2007*

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## NEW LADDER PIPE ASSEMBLY

The LAFD has purchased the Akron Brass Company model 1495 ladder pipe assembly (Photo 1). The assembly contains new features and components designed to make ladder pipe operations safer, more efficient, and allow for 1000 GPM flow. The Akron 1495 will replace the Akron 1496 that is currently issued to **all** truck companies throughout the City.

Photo 1



Akron Brass Company Model 1495 Ladder Pipe Assembly

LTI and American LaFrance aerial ladder trucks using the Akron 1495 ladder pipe assembly may flow 1000 GPM by using the 2" straight tip or the Akron Turbo Master Spray Nozzle.

Seagrave aerial ladder trucks will also use the Akron 1495 ladder pipe assembly, but are limited to 800 GPM using the 1½" or 1¾" straight tip or the 500 GPM setting on the spray nozzle, as per the Manual of Operations 2/1-28.27. **Members are prohibited from using the 2" tip or flowing 1,000 GPM on Seagrave aerial ladder trucks.**

LAFD Ladder Pipe Components:

- Ladder pipe Assembly with 2½" In Line Shut-Off
- 4" Gate Valve Shut-Off (AKA cluster)
- 2½" Stream Straightener
- Smooth Bore Nozzles (1½", 1¾" and 2")
- Akron Turbo Master Spray Nozzle (350 to 1000 GPM)  
(assigned to random apparatus)

### **Attaching and Securing the Ladder Pipe Assembly to the Aerial Ladder**

The new ladder pipe assembly is longer and therefore requires the ladder to be raised out of the bed and rotated to the right prior to attachment.

The ladder pipe assembly shall be secured to the top two rungs on the fly section as follows:

1. Hook the upper clamp over the top rung and center the entire assembly on the rung (Photo 2).
2. Release the lower clamp brake knob (rotate counterclockwise) and slide the lower clamp over the second rung (Photo 3).
3. With the lower clamp pushed securely against the rung, rotate the brake knob clockwise until tight (Photo 4). **WARNING: The ladder pipe should fit securely onto the two rungs before operating. If not, the lower clamp assembly must be adjusted to provide a secure fit.**
4. Install the two ball lock pins through the lower clamp (Photo 5).
5. Be sure the unit is centered and securely attached to the rungs and all four ball lock pins are in place before flowing water. **Ladder straps should not be utilized to secure the Akron 1495 onto the ladder.**

Photo 2



Hook top rung of fly section

Photo 3



Slide lower clamp snug to 2<sup>nd</sup> rung back

Photo 4



Tighten brake knob hand tight

Photo 5



Secure safety pins (four total)

#### 4" Gate Valve Shut-Off (Cluster)

The slow close, gate type valve, provided to control water flowing to the ladder pipe assembly **shall be** used during ladder pipe operations. The shut-off should be placed in the closed position prior to the supply line being loaded (actuator handle rotated clockwise until it stops; there is no indicator for the "OPEN" or "CLOSED" position). The cluster must be attended while flowing water through the ladder pipe assembly.

### **Stream Straightener**

The stream straightener provided with the Akron 1495 (shorter than the stream straightener used with the previous issue Akron 1496) shall be utilized with all nozzles during ladder pipe operations. This stream straightener allows members to reach the spray nozzle and has a swivel eye to attach a tag line when the ladder pipe is utilized in an unmanned operation.

### **Smooth Bore Nozzle Pressures**

The following pump **pressures** have been calculated for the Akron 1495 ladder pipe assembly. These pressures include pumping through the cluster, 100' of 3" hose, the ladder pipe assembly and tip, with the aerial ladder extended to 70'. Friction loss for the supply line must be added to the pressures listed below to achieve proper pump pressure:

<b>Tip</b>	<b>GPM</b>	<b>PSI</b>
1½"	600	150
1¾"	800	170
2"	1000	190

### **Akron Turbo Master Spray Nozzle**

Setting	350	140
Setting	500	160
Setting	750	180
Setting	1000	220

<b>Hydro-Foam Nozzle</b>	660	175
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This new ladder pipe assembly provides a higher degree of safety. All members shall become familiar with this equipment.