TOLEDO FIRE & RESCUE DEPARTMENT

C-2 Aerial Apparatus Operations

Emergency Manual

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Policy/Procedure

Toledo Fire and Rescue personnel assigned to Ladder Trucks shall adhere to the following rules during aerial ladder operations:

1. Toledo Fire and Rescue Department personnel are not to climb an aerial until the operator indicates the ladder is set for climbing and the rungs are aligned for climbing.

2. Aerial ladders are not to be moved with personnel on them. When stationary on the ladder, members shall secure themselves to the ladder utilizing a life belt. Fire personnel shall not use a leg lock on an aerial ladder.

3. Fire personnel shall not be on the ladder of a straight stick aerial when water is flowing.

4. An aerial is to be used only in the **unsupported configuration**, it should never be rested upon another structure

5. Ladders are not to be used as battering rams and are not to be forcefully extended against a structure or to force open doors or vents, or for similar tasks.

6. Ground plates shall be utilized at all times when operating the aerial ladder.

7. Deliberate and smooth application of power shall be employed when operating the ladder. Jerky orerratic application of power shall be avoided.

8. Brakes shall be set and the PTO engaged before exiting the cab.

9. The number of fire personnel permitted on the ladder and on each section of the ladder shall be limited to the manufacturer's specifications. Weight shall be distributed by keeping personnel at least 10’

apart while deployed on the ladder.

10. The inclinometer shall be utilized to determine safe operating and loading angles.

11. Special care shall be utilized when working around electrical wires. If contact is made with live wires, ground personnel shall be ordered not to touch the truck as they may provide an electrical path to the ground. It is best to remain on the truck until the power is cut; however, if personnel must get off the truck, they shall be advised to jump clear of it.

12. Aerial Operators shall remain close to the truck. If the aerial is in operation, the operator shall remain on the turntable.

13. Fire personnel shall exercise care when the ladder is coated with ice as this may cause an excessive load to be placed on the ladder and may exacerbate wear on ladder components. If using a ladder in freezing temperatures, ladder sections shall be periodically extended and retracted to keep them free of ice buildup.

14. Fire personnel shall exercise extreme caution and reduce the load when operating an aerial apparatus in strong, gusting winds.

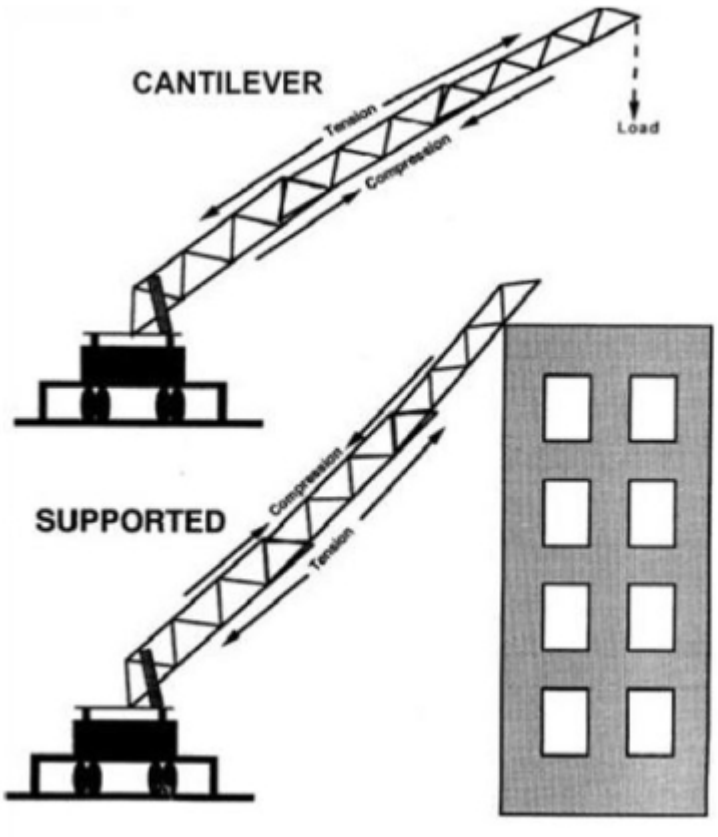
15. Fire personnel shall take special precautions to secure the vehicle and place the ladder while operating on steep hills. Extending the aerial uphill is the safest.

16. After fire personnel have climbed an aerial ladder into a building or onto a building’s roof, the ladder shall not be moved until the operator is certain the firefighters have another safe avenue down.

17. Aerial ladders shall not be utilized as a rigging point for any rope rescue operations. Only apparatus equipped with brackets on the top of the bucket rail can be utilized for stokes basket oerations. Any rescue operation beyond utilizing the stokes basket attached to the tower ladder bucket, necessitates a Technical Rescue Team response.

An aerial is to be used only in the **unsupported configuration**, it should never be rested upon another structure.

Though the design of **old aerials** required them to be supported against a building for maximum capacity, **modern aerial devices are designed to be used as a cantilevered truss (unsupported)**. This places the bottom chord of the aerial in compression and the top chord in tension. When allowed to contact a structure, these forces are reversed and can result in catastrophic failure of the aerial device. Multiple LODD's have occurred when an aerial been supported or has come into contact with a building. The picture below from USFA illustrates the forces in aerial ladders.



See Also:

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