ROTM March 2013
ROTM: "Is That a Ladder Coming at Us?"
(13-290)
(Topical Relations: Equipment Dropped from Ladders, Communication)

The ladder is an invaluable piece of firefighting equipment. It provides us with access to heights, provides a means to get below grade and can be used to bridge chasms. There are any number of hazards associated with using ladders, as with all actions we undertake in this industry. This month's focus spotlights two hazards we encounter: 1) equipment that is supposed to be (emphasis on *supposed to be*) mounted to the ladder; and 2) the associated effect of distraction. The narrative is presented in its entirety due to the significant inter-relationship between the near miss occurring and the various actions and omissions leading up to the near miss.

"My department was conducting a roof ventilation, saw, and chimney fire training at one of our stations on the night of the near-miss. We had three evolutions set up. One evolution utilized the roof of our BBQ pavilion for an exercise on making ingress to a roof via our tower ladder and deploying a roof ladder for roof operations. Another used our shed roof for training on chimney fires. They were using a corrugated pipe as a prop to practice lowering the chains and review department procedure. The third station was on the ground using our roof simulator to cut vent holes. We conducted each evolution separately, completed it, and then moved on to the next. We started with the roof ingress drill, then the chimney fire simulation and finally the roof simulator.

During the first evolution a problem was found with the pins that secure the 14' roof ladder to the inside fly of the tower ladder; because it was a low angle evolution, the ladder was left in place but unsecured between groups; the evolution was completed with no issues. However, after completing the evolution, the ladder was not removed from the unsecured mount on the tower ladder fly with the intent of securing it upon completion of the drill. That information remained between the two officers involved in that evolution. We then proceeded to the other evolutions. As groups began to complete the drill, a request was made to do additional tower ladder operations while we waited for the remaining groups. The two officers previously assigned to the ladder were now doing other tasks and asked if I could supervise the tower ladder crew.

There were two firefighters in the bucket and myself and a third on the turntable. While attempting to ladder an adjacent roof, the incline reached a sufficient level for the previously unsecured roof ladder to slide out of its mount and begin coming down the tower ladder flies towards the turntable. Both a member in the bucket and I saw it, and instructed everyone to stay away. The ladder then proceeded to slide all the way

down the fly, over the turntable and launch out of the rear; landing approximately 20' away on the blacktop behind the apparatus.
There was no damage to any apparatus (other than minor scratches on the turntable diamond plating); the roof ladder, which sustained a broken foot from the impact, was taken out of service."

Where to begin? Due to the exceptionally descriptive account, 13-290 provides us with a wealth of material to make our next multi-evolution drill safer, our next equipment check safer, and our next interaction with our fellow firefighters more complete. Reread the narrative and then, after reviewing the related reports below, answer the following:

1. How many events can you recall where you noted something amiss and overlooked it and nothing went wrong?
2. How do those incidents differ from the events in 13-290? What factors can you identify that actively prevented something from going wrong?
3. If you cannot identify specific actions/interventions that prevented a mishap, what is the quantity of your department's "luck" factor?
4. List four points in this near miss that could have had an intervention introduced to prevent the near miss?
5. What role and responsibility rests with the officers in this near miss?

There is no turning back the clock for this incident. There are two significant positives that emerge. The first is no one was injured. A 14' roof ladder weighs approximately 30 lbs. Falling at a rate of 32 ft/s^2, if it was to strike anyone, the damage would be severe. The second positive is having the report itself. Armed with the lessons from this report, we can all conduct our future multi-station drills with an elevated attention to detail. The result will be a learning opportunity that doesn't involve pain and suffering.

Related Reports – Topical Relation: Equipment Falling from Ladders, Communication

05-342	07-1016	09-097	09-728
09-902	10-331		

Related Media
http://www.youtube.com/watch?v=bvB1uhd78Wk
(Firefighter on extension ladder struck by thrown object)

http://www.youtube.com/watch?v=VEJVwfkWjlY
(Firefighter on aerial struck by heavy snow)

What's your near miss? Do the firefighters in the next department, the next county, the next state, know of your incident? Submit your near miss to www.firefighternearmiss.com today because we know it gets others home tomorrow.

National Fire Fighter Near-Miss Report

Report Number: 13-0000290
Report Date: 01/08/2013 07:24

Synopsis
Unsecured roof ladder mount threatens crew.

Demographics
Department type: Volunteer
Job or rank: Lieutenant
Department shift: Respond from home
Age: 25 - 33
Years of fire service experience: 4 - 6
Region: FEMA Region II
Service Area: Rural

Event Information
Event type: Training activities: formal training classes, in-station drills, multi-company drills, etc.
Event date and time: 01/08/2013 20:00
Hours into the shift:
Event participation: Involved in the event
Weather at time of event: Clear and Dry
Do you think this will happen again?
What were the contributing factors?

- Human Error
- Equipment
- Decision Making
- Accountability

What do you believe is the loss potential?

- Lost time injury
- Minor injury
- Life threatening injury
- Property damage

Event Description
My department was conducting a roof ventilation, saw, and chimney fire training at one of our stations on the night of the near-miss. We had three evolutions set up. One evolution utilized the roof of our BBQ pavilion for an exercise on making ingress to a roof via our tower ladder and deploying a roof ladder for roof operations. Another used our shed roof for training on chimney fires. They were using a corrugated pipe as a prop to practice lowering the chains and review department procedure. The third station was

on the ground using our roof simulator to cut vent holes. We conducted each evolution separately, completed it, and then moved on to the next. We started with the roof ingress drill, then the chimney fire simulation and finally the roof simulator.
During the first evolution a problem was found with the pins that secure the 14' roof ladder to the inside fly of the tower ladder; because it was a low angle evolution, the ladder was left in place but unsecured between groups; the evolution was completed with no issues. However, after completing the evolution, the ladder was not removed from the unsecured mount on the tower ladder fly with the intent of securing it upon completion of the drill. That information remained between the two officers involved in that evolution. We then proceeded to the other evolutions. As groups began to complete the drill, a request was made to do additional tower ladder operations while we waited for the remaining groups. The two officers previously assigned to the ladder were now doing other tasks and asked if I could supervise the tower ladder crew.
There were two firefighters in the bucket and myself and a third on the turntable. While attempting to ladder an adjacent roof, the incline reached a sufficient level for the previously unsecured roof ladder to slide out of its mount and begin coming down the tower ladder flies towards the turntable. Both a member in the bucket and I saw it, and instructed everyone to stay away. The ladder then proceeded to slide all the way down the fly, over the turntable and launch out of the rear; landing approximately 20' away on the blacktop behind the apparatus.
There was no damage to any apparatus (other than minor scratches on the turntable diamond plating); the roof ladder, which sustained a broken foot from the impact, was taken out of service.

Lessons Learned
This incident represents a minor lapse in judgment and communications that, while it had a minor outcome, had the potential to cause severe damage or injury to apparatus or firefighters. In looking back, the roof ladder should have been removed from the tower ladder mounts immediately after the evolution where it was found to be broken and all the officers notified. This would prevent anyone with no knowledge of the malfunction from operating the ladder with the faulty mount in place.

Note: The questions posed by the reviewers are designed to generate discussion and thought in the name of promoting firefighter safety. They are not intended to pass judgment on the actions and performance of individuals in the reports.

National Fire Fighter Near-Miss Reporting System
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