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Report of the Week

Step one; fall two
11/13/08

Report Number: 08-314
Report Date: 06/28/2008 1142

Synopsis
Equipment storage should be reconfigured to avoid injuries.

Demographics
Department type: Industrial
Job or rank: Lieutenant
Department shift: 24 hours on - 48 hours off
Age: 25 - 33
Years of fire service experience: 11 - 13
Region: FEMA Region X
Service Area: Urban

Event Information
Event type: On-duty activities: apparatus and station maintenance, meetings, tours, etc.
Event date and time: 06/28/2008 0650
Hours into the shift:
Event participation: Witnessed event but not directly involved in the event
Weather at time of event: Clear and Dry
Do you think this will happen again?

What do you believe caused the event?
- Procedure
- Equipment
- Other

What do you believe is the loss potential?
- Minor injury
- Lost time injury
- Property damage

Event Description
We have a mid-ship pump and behind the pump panel and before the hose bed starts, there is a box that stores the chainsaw, circular saw, fuel, spare chains. There is no good access to this box. On the driver's side we have flip down steps you can use to climb up and retrieve the saws. The location of the tools puts you in an awkward position to safely retrieve them. The steps are only wide enough for one foot at a time and are not directly in front of the box you are reaching into. This forces you to lean to your left and forward to try and grab the saw you need. This causes your weight to be out in front of you. This is hard on your back and an awkward position. This morning, during our thorough weekly inspections, the firefighter stumbled and almost fell from this elevated position. It was noted that this was not the first time this has happened. A fall from this height could cause serious injury upon impact with the road.

Lessons Learned
We submitted a near-miss report to our internal reporting system so this can be addressed. We are looking at moving equipment on our apparatus so lighter, less used items can be placed in the location the saws are. The location is poor in design because of the steps not being directly in front of the box. It is suggested no heavy equipment is stored there or make retrieval a two person operation. Have one person climb completely on top and hand the item down to the second person standing on the pump panel step.

Discussion Questions
Fire apparatus manufacturers go to great lengths to design and build apparatus with the end users' needs in mind. However, there are times when those needs and the human interface are diametrically opposed. In this week's ROTW, heavy tools and equipment are stored in an overhead bin that has limited access. Personnel retrieving equipment from the driver's side of the rig place themselves in precarious positions to retrieve the equipment. The poor footing and reach have resulted in more than one near miss. As each near miss occurs, the members move closer to experiencing an injury causing event that, even at a lower step fall, could end in serious injury. One trap we fall into is a fixated mindset. As a class we are an expediency driven workforce. We see the fold down steps leading up the side of the pumper. That is the most direct route to the overhead bin, even though they are not the most sure-footed. Our mind registers that there are insufficient grab rails, know we will assume an off balance position to lift the tool, will be lifting tools that are heavy and awkward to carry, then have to negotiate the fold down steps back to the ground with only one free hand. But, the job must get done; or is there another way?

After you have read the entire account of **#08-314**, (you are encouraged to read the related reports as well) consider the following:

1. Does your department store heavy and awkward equipment in overhead areas?
2. What factors went into the decision to place the equipment where it is located?
3. How do you (or your department) react to statements like, "…this was not the first time this has happened?" Take immediate action to correct the problem (either through re-engineering or human factors) or shrug it off as nothing can be done to correct the problem at your level?
4. Given the situation described in **#08-314**, what recommendations would you make to correct the problem?
5. Where does the greatest potential for prevention lie in this instance: modifying human behaviors or engineering re-designs?

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.