
	Cincinnati Fire Department Fire Training Supplement DRILL BOOK	SECTION #7 RAT Skills & Evolutions
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TOPIC #14: CONFINED VERTICAL RESCUE - NANCE DRILL

Victim through floor:


- **NOTE RESCUER MUST KNOW “HANDCUFF KNOT” BEFORE ATTEMPTING THIS SKILL.**
- This evolution is for victims that have fallen through a hole or mantrap, this could be a ventilation hole cut in the floor or a precut hole used by the business for movement of equipment through the building. If the floor is weakened by fire or structural collapse it must be shored or the rescuers weight must be distributed to more secure areas of the structure. Ladders, backboards, doors or other devices to transfer load must be used. Remember to think about the combined load of the rescuers and the victim when the lift is made. Firefighter in full gear = 250 lbs x 4 = 1000, officer to coordinate the operation 250 lbs, plus the weight of the victim 250 lbs comes to a total of 1500 lbs of live load that you are adding to the area around the hole.
- When performing the rescue the goal is to divide the victims’ weight between the 4 rescuers performing the lift. With other single rope techniques it is almost impossible for one rescuer to perform the lift. The use of two handcuff knots provides 4 rope ends, 1 for each rescuer. It also provides a backup if one starts to slip.
- Send rescuer down the hole to the victim:
 1. This may require a ladder or some other method for getting to the bottom of the space.
 2. If this is an active fire area thought must be given to protecting the victim and the rescuer with a firefighter manning a hose line.
 3. If conditions are bad or smoky, the victim is large or will need to be found and or dragged to the recovery site then two rescuers will be needed in the hole.
- Top team should be pre tying the 2 handcuff knots in two sections of rope.

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- Bottom rescuer calls for rope one:
 1. The first rope with handcuff knot tied in the middle is lowered.
 2. The bottom rescuer slides the knot, one arm at a time, down to the elbow area of the victim.
 3. Once one arm is inserted into the loop and is in place that side of the knot is tightened to prevent slippage.
 4. The second arm is then inserted and both sides of the knot are tightened onto the victims' arms.



- Top team:
 1. When the first handcuff knot is in place two of the top rescuers each take one end of the rope and take up slack.
 2. These 2 pullers take positions at the corners of the hole.
 3. The second knot is now lowered to the bottom rescuer.
- Bottom rescuer calls for second rope:
 1. the second rope is applied the same way with the knot tightening on the wrists
 2. bottom rescuer calls for tension on line two

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- Top pulling team now positions themselves on the four corners of the hole:
 1. With the four ropes now coming off the victim the weight that each top rescuer must pull is one quarter of the total victim weight.
- Begin the lift:



1. Bottom rescuer lifts victim into a seated position.
2. The ready/ready/ go command is given to the rescue team.
3. The top rescuers start to pull.
4. The bottom rescuer lifts as much as possible to assist the top team.
5. If possible the bottom rescuer should work his way up the ladder pushing

the victim from the bottom as the top team pulls.

6. THIS WILL BE A VERY HARD PULL FOR THE TOP TEAM!! THE PULLERS MUST WORK TOGETHER TO MAKE THIS RESCUE SUCCESSFUL!!

- When the victim is up the hole the rescue team must not lose their focus. They must get the victim out of the building to safety and make sure that all the rescuers that entered the hole are removed from the danger zone.