# FIRST AID
# RESCUE OF EMPLOYEE FROM POLE

## 1. GENERAL

1.01 This practice specifies methods of rescuing an employee working aloft when (on account of electric shock or for any other reason) help is required to lower him to the ground.

1.02 In an electric shock accident, quick rescue and prompt artificial respiration if normal breathing has stopped are extremely important. In some cases, the injured person may remain in contact with the wire because of his inability to let go of the live conductor or due to his being unconscious.

1.03 Unless it is definitely known that the cause of the disability is not electric shock or that the contact with the electric supply conductors has been broken, it should be assumed that all of the wires on the pole are energized with dangerous voltages. In this event, the rescuer should take precautions as specified in this practice to protect himself and his assistants from injury due to electric shock.

1.04 In all cases where the employee has received a severe electric shock or is unconscious, have someone call a physician to the location as soon as possible without delaying the rescue. (If the victim is conscious and can safely be moved after receiving first aid, he should be taken where he may receive the services of a physician.) In administering first aid and transporting the victim, follow the recommendations covered in the American Red Cross First Aid Text Book and outlined in CTSP 400-405-001.

1.05 Send someone to get the truck as soon as possible if it is not near the scene of the accident, as it may contain useful equipment or it may be needed as an insulated platform to effect the rescue and to transport the injured employee.

1.06 In electric shock cases, notify the serving power company which operates the equipment involved in the accident as soon as possible.

1.07 If the cause of the disability is not electric shock, the rescue work may be conducted more deliberately and without the necessary speed which is essential in electric shock cases.

1.08 Review this practice and also the Red Cross First Aid Text Book at intervals so that if an accident on a pole should occur, the rescue work would be handled effectively.

## 2. PLANNING THE RESCUE

2.01 Before starting the rescue, plan quickly but carefully how the operation can best be carried out. The most important details to be considered are the following:

a. Probable cause of the disability (electric shock, sickness, fainting, etc.). In an electric shock case, determine if possible the source of the shock and whether or not the contact has been cleared. If the source is not apparent or if the nature of the disability cannot be determined from the ground, assume that the injured person has been shocked and that the contact still exists, and use the protective measures applicable to such cases.

b. Rescue materials should be available for use such as rope, rubber gloves, pliers, tree pruner, climbers, body belt, safety strap, ladder. (An extension ladder may be used, under some conditions, to facilitate the removal of the victim.)

c. Assistants to help handle the rope in lowering him from the pole.

d. Position of the victim in respect to wires and other attachments on the pole.

e. Method to be used in clearing contact between the victim and the source of shock. (Lifting him clear, opening switch, cutting wires, etc. If wires are to be cut, consider the possibility of unsound pole falling due to an unbalanced load effect on the pole.)

f. Side of the pole to be climbed and the position from which rescue work will be done.

g. Point of attachment for the rope to be used in lowering the employee.

h. Need for cutting wires below the victim which might interfere with rescue work and the lowering operations.

i. Protection of the rescuer from electric shock (if pole, rope or other equipment is wet).

j. Availability of the truck to be used (with necessary precautions) as an insulated platform, particularly under wet conditions.

2.02 Employees should become generally familiar with the types of construction used by the electric companies that operate in the areas where rescue work may be necessary so that they are able to recognize the different types of circuit voltages to be encountered.

## 3. REMOVING AN EMPLOYEE FROM CONTACT WITH LIVE CIRCUIT OF LESS THAN 15000 VOLTS

3.01 In electric shock cases, the rescuer should wear rubber gloves throughout operations when he will be exposed to possible shock. If rubber gloves are not available, rescue work may be undertaken *only* if the contact can first be cleared by available safe means, such as the use of a dry rope, dry board, dry tree pruner, dry ladder, or opening a switch. Men conducting the rescue must remain calm, think clearly, and avoid impulsive and unsafe operations. Keep in mind the fact that wet ropes, wet wood and wet clothing are not safe insulators, and severe shock can be transmitted by them.

3.02 When handling wires that may be "hot", use only one hand if practicable and keep the other hand and other parts of the body clear of wires, guys, suspension strand, cable terminals, or other grounded structures.

3.03 If the reason for the high voltage being on the plant is evident, the contact should be removed (where practicable to do so) without handling the supply conductors. In some cases it may be possible to clear the contact by throwing a dry hand line over the telephone or supply wires and pulling them apart or by pushing them apart with a ladder or long dry stick, such as a tree pruner handle or pike pole. Do not use green wood or damp sticks in attempting to separate the wires and avoid standing on wet ground and in water.

3.04 If methods mentioned above cannot be employed and if rubber gloves are worn, the contact between the supply wires and telephone conductors may be opened by cutting the telephone wires with pliers. For this purpose a tree pruner with a dry pull rope may also be used, preferably with rubber gloves.

3.05 Under extreme conditions, secondary electric circuits may be cut, provided that rubber gloves are worn while the wires are being cut. Do not attempt to cut a primary wire.

3.06 In cutting supply wires or telephone wires that are crossed with electric supply wires, take a position so that the cut wires will not fly back or fall and injure the rescuer or other person. Turn the face away or close your eyes while cutting the wire to protect the eyes from the electric flash that may follow.

## 4. REMOVING AN EMPLOYEE FROM CONTACT WITH LIVE CIRCUIT OF MORE THAN 15000 VOLTS

4.01 In electric shock cases, if the injured employee remains in contact with either charged telephone or power wires and, in the best judgment of the rescuer, the voltage involved is greater than 15000 volts, the rescuer should, for his own protection, secure the assistance of a qualified employee of the power company to break the contact or open the switch before proceeding with the rescue. This precaution is necessary since rubber gloves are not designed to withstand higher voltages and the rescuer cannot be sure that ropes, tree pruner handles, ladders and such equipment that might be used with rubber gloves are always dry enough to provide the degree of protection required.

## 5. ASCENDING THE POLE

5.01 Keeping in mind the rescue plan as developed in accordance with paragraph 2, proceed with the rescue.

5.02 The rescue rope should be a rope in good condition, not less than 3/8" in size, and long enough to permit any available assistants on the ground to lower the victim. (A larger rope is preferable.)

5.03 Push a loop formed near the end of the rescue rope under the body belt at the back so that it can be conveniently carried up the pole and removed when needed.

5.04 Climb the pole on the selected side and get into proper position for rescue.

5.05 While aloft, exercise every precaution to avoid contact with telephone wires, suspension strand, cable guys and other equipment, as well as contact with the victim unless it is clearly evident that the contact with the "hot" wire has been broken.

5.06 If necessary, in order to facilitate lowering the victim, cut those telephone wires which would interfere. (It is assumed that no wires will be cut which, in the planning of the rescue, it was concluded would be likely to cause the pole to fall.) In cutting the telephone wires, exercise care to avoid dropping them on persons below. Be careful also that no projecting ends are left which might injure the victim while he is being lowered.

## 6. REMOVING EMPLOYEE FROM CONTACT WITH WIRES AND LOWERING HIM

6.01 Pass the rescue rope over a crossarm or other suitable strong attachment located above the employee. If working alone, take one complete turn of the rope around the crossarm or other fixture so as to provide some snubbing action to assist in holding the victim's weight.

6.02 Avoid direct contact with the victim until he is clear of the wires or other equipment that may be charged. When practicable, double back the end of the rope on itself and place the double rope end around the victim's body under the arms, and tie it either at the front or back with a bowline knot. However, time should not be taken to double the end of the rope if it delays the rescue.

6.03 If it will facilitate the rescue, pass the rope through the D rings of the victim's body belt and tie the rope securely, preferably in front. If the rope is attached to his belt, take care in handling him so that the belt will not slip over his shoulders or down over his hips and cause him to fall. If necessary to move the employee to facilitate attaching the rope, this may be done by pulling on his safety strap.

6.04 After the rope has been secured to the victim by either of the methods described in paragraphs 6.02 and 6.03, pull the victim toward the pole by means of the rope or both the rope and the safety strap. If help is available on the ground, these assistants should be guided by the rescuer on the pole.

6.05 When the preparations for lowering have been completed, unsnap or cut the employee's safety strap and lower him to the ground, guiding him when necessary so that he will clear attachments on the way down.

## 7. ARTIFICIAL RESPIRATION AND OTHER FIRST AID

7.01 When the victim reaches the ground, immediately remove the rope or body belt from his chest so that it will not interfere with his breathing.

7.02 If normal breathing has stopped, start artificial respiration immediately and other first aid procedures that may be necessary in accordance with the recommendations of the American Red Cross First Aid Text Book and CTSP 400-405-001, paragraphs 7.02 and 7.07.