

Egg Harbor Fire Department and First Responders Standard Operating Guidelines

SUBJECT: WINCH OPERATIONS

SOG 320

PURPOSE: To establish safe working conditions and practices in the use of a winch.

SCOPE: This policy shall apply to all members of the Egg Harbor Fire Department.

SAFETY ISSUES:

All devices that use steel cable as a component have the hostile ability to store enormous amounts of energy. When the cable or one of its anchor points break, the cable will snap back in an uncontrollable fashion. This recoil has the capability to sever limbs as well as decapitate people.

GUIDELINE:

1. Never touch the cable or the hook while they are in tension or under load.
2. Always stand clear of the wire rope and the load during the winching operation to avoid the possibility of recoil, should the cable/hook break.
3. Before attaching the remote control lead to the winch, inspect the cable to make sure the cable has not been pinched, frayed, or damaged in any way. A shorted cable could cause the winch to start operating as soon as it is plugged in.
4. NEVER WINCH WITH LESS THAN 5 WRAPS OF CABLE STILL ON THE SPOOL. If less than 5 wraps of cable remain on the spool, you will need to relocate the vehicle or establish a closer anchor point to allow for a shorter pulling distance.
5. Never go around an anchor point and place the hook onto the cable itself. Use an anchor strap around the anchor point and use the hook to attach to the anchor strap.
6. Never exceed the rated capacity for the winch. Using a snatch block will cut the winching load to almost half that of a straight load.
7. Use the switch intermittently to take up slack in the rigging. This will avoid shock loading the winch or the cable and causing failure.
8. Always pull in as straight as possible to avoid loading only one end of the spool.
9. Always handle the cable with gloved hands.
10. At the mid- point of the winch cable, a coat or a blanket may be laid across the cable prior to the winching operation, to absorb some of the energy should a break in the line occur.

OPERATIONAL SCENARIO:

1. When it is determined that the winch is to be used the cable should be fed out using the remote hand control. Do not place the spool in free spool.
2. Make the necessary attachments and when the operation is complete, rewind the cable carefully.
3. Upon your return to station, all of the cable should be let off of the winch spool by means of the remote winch control and use the following procedure to feed the cable back onto the spool and return winch to service.

WINCHING HAND SIGNALS:

In some situations, recovery could involve two people. One drives and controls the winch, while the other provides navigation instructions and ensures the wire rope is winding properly. You and your helper must establish clear and precise hand signals and review so everyone clearly understands. It should also be understood that if the driver controlling the winch cannot see both hands of the assistant; the winch should not be activated. Suggested signals:

1. **Direction of steering.** Hold your arms out with thumbs up and tilt your hands in the direction you advise the driver to steer.
2. **Power in the wire rope.** Hold your forefinger in the air above your shoulder height and draw small circles in the air to indicate to wind the winch.
3. **Power out the wire rope.** Hold your forefinger pointing down and draw circles in the air at about waist height to indicate feeding more wire from the winch.
4. **Pulse wind the wire rope.** Tells the driver to wind the winch in short, quick bursts. Open and close the two fingertips until you want the winch to stop.
5. **Stop the winch.** Clinch fist, palm to driver, held high enough for driver to see and other arm straight out at shoulder height is the sign to stop the winch.
6. **Braking.** Cross your palms together to tell the driver to apply the foot brake.
7. **Drive assist.** Tells driver to give the tires more drive force to assist the winching process.

INSTALLING, REPLACING, OR RETURNING CABLE TO WINCH SPOOLS:

1. The cable is to be installed onto the winch spool under 500 pound load. To accomplish this, a truck should be used as a load while the cable is winched onto the spool.
2. The parking brake on the truck should be engaged slowly until the drop of the cable between the truck and winch does not touch the ground. At this point the cable is winched onto the spool and is continually checked to make sure that all wraps of the cable were tight against the previous wrap and tight on the spool.

MAINTENANCE

1. Inspect the wire rope before and after each winching operation. If the wire rope has become kinked or frayed, the wire rope needs to be replaced.
2. Be sure to also inspect the winch hook and hook pin for signs of wear or damage. Replace if necessary.
3. Keep winch, wire rope, and switch control free from contaminants. Use a clean rag or towel to remove any dirt and debris. If necessary, unwind winch completely (leaving a minimum of 5 wraps on spooling drum), wipe clean, and rewind properly before storage. Using a light oil on the wire rope and winch hook can keep rust and corrosion from forming.
4. Operating your winch for a long period of time places an extra burden on your vehicle's battery. Be sure to check and maintain your battery and battery cables according to manufacturer guidelines. Also inspect switch control and all electrical connections to be certain they are clean and tight fitting.
5. Inspect the remote control for damage, if so equipped. Be sure to cap the remote socket to prevent dirt and debris from entering the connections. Store remote control in a protected, clean, dry area.
6. No lubrication is required for the life of the winch.