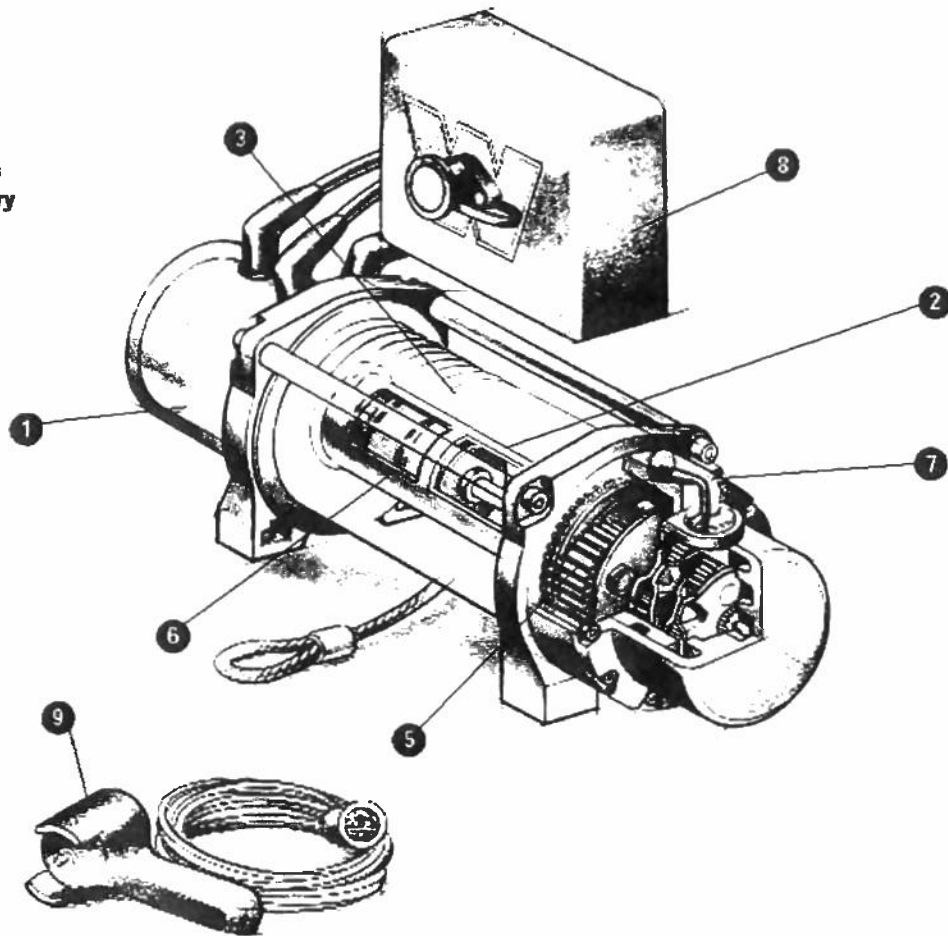


Winching Techniques

Structural components of a planetary gear winch



Safe Winching Operations

1. As the brush truck operator, it is imperative that you familiarize yourself with the type, model, and characteristics of the winch you will be using. This should be done during training and not on an incident. The operation of winches varies from one model to another. What may be a standard procedure on one model can be an unsafe action on a different winch.

2. Winching should be done with a two person crew, spotter and winch operator. This will allow both to evaluate the hazards and success of the operation from different view points. Both should be wearing leather gloves and eye protection.

3. Know the rated capacity for the winch and do not exceed it. Maximum pulling capacity of a winch is accomplished at the first layer of cable on the drum. Each additional layer of cable on the winch drum reduces the capacity by 10-12%. For that reason, it is best to un-spool as much cable as possible, always leaving at least 5 wraps of cable on the drum.

4. Select an anchor that is capable of withstanding the load.

5. Using a pulley attached to the load/anchor can almost double the capacity of the winch or make up for pull lost by having multiple layers of cable on the winch.

6. Cable failure during a winching operation can whip in any direction in a sudden, violent reaction. The following will reduce the possibility of cable failure:

Never connect the hook back onto the cable. Always use a sling or chain to attach the hook to the load/anchor.

Use a pulley and attach the hook to the frame of the brush truck not the winch mounting hardware.

Do not attempt to pull a load with the brush truck using the winch cable. This can cause cable failure.

Always leave at least 5 cable wraps on the winch drum.

7. When pulling a load, set the parking brake and chock the rear wheels. Place the transmission in neutral to prevent damage to the transmission. When using the winch for self recovery, place the transmission in neutral and allow the winch to work.

8. The maximum angle that the winch can be used is 45 degrees in any direction. A change of direction pulley may be used if needed to keep the angle under 45 degrees.

9. Placing a tarp or turnout coat on the cable will reduce the whipping action of the cable should cable failure occur.

10. Never leave the remote control plugged into the winch while free spooling, rigging, or sitting idle. Have the remote control plugged in only during the actual winching operation.

11. Never engage or disengage clutch if the winch is under load, cable is tensioned, or cable drum is moving.

12. As a precaution for cable failure, keep all people a safe distance away when pulling the load. If the remote control is not long enough to have the winch operator a safe distance away, he should sit in the cab of the brush truck. The hood may be raised for additional protection.

13. Run the winch for no more than two minutes at maximum capacity. Allow the winch to cool down if it becomes hot to the touch.

14. When spooling the cable, distribute it evenly and tightly on the drum. This will prevent it from creating a bind.

