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Winch Maintenance & Operation Instructions

Maintenance of Winches

- Winches shall be inspected before each use to insure that the winch is undamaged and in proper working order. Winches that are damaged or inoperable should be removed from service and replaced by a new winch.
- Winches shall be cleaned and lubricated to insure the winch pawl will drop freely into the sprocket teeth under the influence of gravity and the sprocket will rotate freely. Dirt, mud, ice, road salt, etc. can prevent the pawl, the sprocket, or both from moving freely. See Fig. 1.
- Portable winches should be stored in a dry location when not in use. Dirty winches should be cleaned before storage to reduce the chance of corrosion.

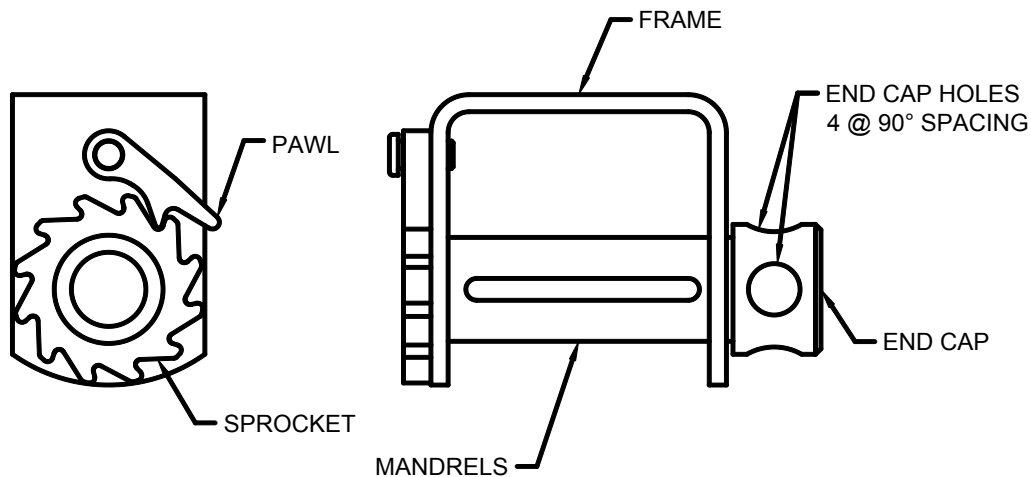
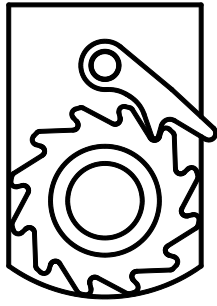


Figure 1
Typical Winch Nomenclature

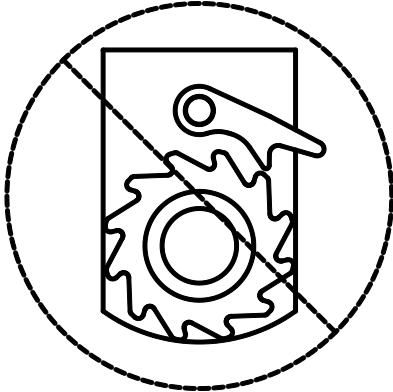
Operation of Winches

- Before tensioning, pull excess webbing through mandrel slot. When the tie down is fully tensioned, two (2) to four (4) wraps of webbing shall be on the mandrel (4 to 8 layers of webbing). Additional wraps can cause damage to the winch due to excessive torque, or make it difficult to apply or release tension.
- When tensioning or releasing the winch in rain, snow, or other slippery conditions, carefully position your feet and body to prevent a fall.
- Use only winch bars that have been designed to tension and release winch tie downs. A slip resistant handle is recommended. Never use a bar or tube as an improvised winch bar as they can slip out of the end cap holes and cause injury.
- The winch bar shall be inserted through both sides of the winch end cap. Using only one (1) hole in the end cap can damage the winch and the bar tip, causing them to fail and cause injury.
- An extender (“cheater bar”) shall never be used to apply tension to a winch tie down assembly. Extenders can overload the assembly or slip off, and can cause injury in either case.
- When tensioning or releasing the tie down assembly, always stand to one side of the winch bar in case it slips. Maintain a firm grip on the winch bar at all times, and check to see that the pawl is properly and completely engaged in the sprocket teeth before releasing the bar. See Fig. 2.
- Winches shall not be positioned between the tire and the bed of the vehicle as this creates a potentially hazardous condition.
- The set screws on portable winches are designed to hold the winch in position while the tiedown is being tensioned. They shall only be “snug” tight as overtightening may damage the winch or winch track and cause a failure in service.
- Winches shall never be loaded in excess of their working load limit (WLL).
- Winches shall be used in accordance with all applicable federal, state, local, and industry regulations applicable to cargo securement.
- A training program for truck drivers is recommended for the correct and safe use of cargo securement systems.

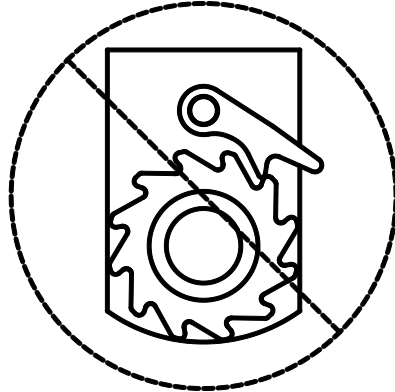
NOTE: This document lists the most commonly encountered considerations for the proper maintenance and operation of winch tie-down assemblies, but it is not an all-inclusive list.



CORRECT ENGAGEMENT



WRONG!
PAWL DISENGAGED



WRONG!
PAWL NOT FULLY ENGAGED

Figure 2
Pawl Engagement