

Winch – Operation Check

Description

Winch Operation should be checked as part of the “A” Service.
Winch Operation should also be checked before using the Winch.

Tools and Supplies

Winch Controller
Wood Block
Protective Gloves (leather)

Fasteners

Fastener	Wrench Size	Loctite	Torque	Notes / Special Tools
Winch Line Anchor	5/16” Hex Key	-	-	

Notes / Special Instructions

- Refer to the Owners Manual for safe and correct operating procedure.
- Winch Motor Operation should always be checked before unspooling Winch Line.
- While most Winches are similar in layout and operation, this procedure is specific to the factory Warn winch.
- Late Model (2000 and later) Winch Motors are not sealed, and are not connected to the central vent system.

Procedure

Winch Motor Operation

1. Set the Winch Clutch to “Free”. (Illustration 1)
 - Refer to diagram on Winch (Illustrations 2 and 3).
2. Connect Winch Controller. (Illustrations 4 and 5)
 - Remove protective cap on top of Winch and connect the Controller. (Illustration 6) Refer to Owners Manual.
 - It may be necessary to partially lower the brush guard in order to connect the Winch Controller.
3. Secure Winch Spool.
 - The Winch Spool should be secured using the Wood Block. Press and hold the Wood Block against the Line on the Spool to prevent the Spool from turning. This is done to prevent the cable from becoming loose on the Spool.
 - DO NOT hold the Spool by hand. If the Winch Clutch is not fully disengaged, the Spool will turn and injury may result.
4. Activate Winch Motor.
 - Briefly run Winch Motor in the “Spool Out” mode.
 - Winch Motor should run, but Spool should not turn.
 - If Spool turns, double check that the Winch Clutch is fully disengaged.
 - If Spool does not turn, run the Winch Motor for several seconds in each direction.
 - If Winch Motor will run in “Spool Out”, but not in “Spool In”, run in “Spool Out” for about 20 to 30 seconds and try again.
 - If Winch Motor will not run in the Spool In direction, DO NOT unspool any cable – you will not be able to get it re-spooled.



Illustration 1 – Winch Clutch Lever



Illustration 2 – Winch Operation Diagram



Illustration 3 – Winch Operation Decals



Late-model Winch Controller

Illustration 4 – Late Model Winch Controller



Early-model Winch Controller

Illustration 5 – Early Model Winch Controller



Illustration 6 – Winch Controller Receptacle

Winch Operation

Notes:

- Perform Winch Motor Test before testing Winch Operation.
 - Always use Protective Gloves when handling Winch Line.
 - Winch Operation and Winch Line Inspection can usually be combined.
1. Spool out at least 30 feet of Winch Line.
 - Set Winch Clutch to “Free”. Refer to diagram on Winch (Illustration 1).
 - Pull Line out by pulling on the Hook or Line.
 - DO NOT power out the Winch Line. If the line will not pull out, attach the Hook to something and slowly back the truck away.
 - When rewinding the Winch Line, it must be wound onto the Spool smoothly and evenly. It may be necessary to spool out more than 30 feet if the Line is loose or unevenly wound on the Spool.
 2. Engage Winch Clutch.
 - Refer to diagram on Winch (Illustration 1).
 3. Rewind Winch Line.
 - Apply tension to the Winch Line. Hand Tension Only until at least 3 wraps are on the Spool.
 - DO NOT let the line slide through your hands, even when using Protective Gloves. Use a hand-over-hand technique or a helper holding onto the Hook to maintain tension.
 - Activate the Winch Controller in the “Spool In” mode.
 - Line should wind onto Spool tightly and evenly with no gaps.
 - Stop when the Hook is about 3 feet away from the winch.
 4. Stow the Winch Line.
 - Maintain Tension on the Winch Line at all times.
 - Attach the Hook to one of the front D-rings.
 - Loop something around the Winch Line in order to maintain tension. Use a rope, strap, piece of wire, or Protective Glove (remove hand first). DO NOT put anything around the Winch Line that should not be pinched or crushed. (Remove when finished.)
 - Slowly Spool-In the Line. Activate the Winch Motor for brief periods until the line is taught. Do not over-tension the Line.
 5. Remove and Stow Winch Controller.
 - Remove the Winch Controller and stow it in the vehicle.
 - Replace the protective cover over the controller connector on the Winch.
 - Raise and secure the Brush Guard, if needed.

Winch Line Inspection

Note: It may be necessary to unspool most or all of the Winch Line to inspect it.

1. Winch Line should not have any kinks. DO NOT attempt to straighten out kinks – it will weaken the cable even more.
2. Winch Line should not be broken or frayed.
3. Winch Line should be securely attached to the Spool.
4. Hook should be securely attached and in good condition.
5. When Spooled, Line should be tightly and evenly wrapped with no gaps.

Tips on Winch Line Replacement

The set screw that holds the Winch Line onto the Spool does not have to hold any of the Winch load. All it does is hold the cable end while spooling the Line. Always make sure there are 3 full wraps on the Spool before pulling any load with the Winch.

As a field repair, the end of the Winch Line can be held in place using duct tape or almost anything. Be sure to get at least 6 full wraps before using the Winch for heavy pulling.

To evenly cut a cable without fraying, bind it tightly with tape where the cut will be made and then cut it using a hack saw or cable cutter.

Winch Controller Wiring Diagrams

Diagrams 1 and 2 show the Early Model Winch Controller Plug and Receptacle wiring (1999 and earlier).

- For Power In, Controller connects terminals A and B.
- For Power Out, Controller connects terminals B and C.

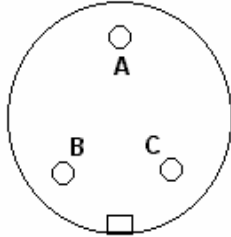


Diagram 1 – Early Winch Controller Plug Diagram

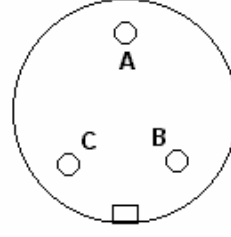


Diagram 2 – Early Winch Controller Receptacle Diagram

Diagrams 3 and 4 show the Late Model Winch Controller Plug and Receptacle Wiring (2000 and later).

- For Power In, Controller connects terminals A and C.
- For Power Out, Controller connects terminals A and B.

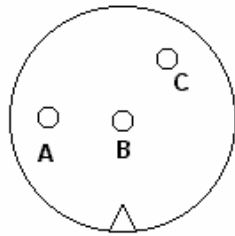


Diagram 3 – Late Winch Controller Plug Diagram

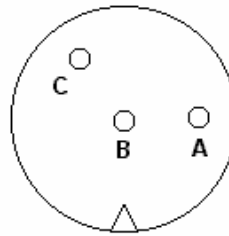


Diagram 4 – Late Winch Controller Receptacle Diagram