

Sherpa4x4

haulin' ass



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SHERPA 4x4 OWNER'S MANUAL



PLEASE READ

WARNING!

Your winch has a duty cycle and cannot be run continuously or for long periods without time to cool down. The higher the load, the higher the current and heat produced. Remember to monitor the temperature of the winch motors and cabling. As a rule of thumb, when winching at high loads, do not winch for longer than 60 seconds, then follow by a 10 minute cool down period. This will also allow your battery to rest. Overheating your winch will reduce its pulling power and lead to product failure.

OPERATION WARNINGS

WARNING! Please read and abide by the Operation Warnings to ensure personal safety and the safety of others. Improper operation may lead to personal injury and equipment damage. Read the following carefully before you attempt to operate your winch and please retain for future reference.

- Uneven spooling of cable/rope while pulling a load can cause problems. If this happens, reverse the winch to relieve the load and move your anchor point further to the centre of the vehicle. After the recovery is complete, you can un-spool the cable/rope and rewind for a neat layer of cable.
- Store the winch hand controller inside your vehicle where it will not be damaged or wet. Inspect it before use.
- Always connect the controller with the clutch disengaged. **DO NOT** engage the clutch with the motor running or under load.
- Never loop the hook back onto the cable or rope. This will cause kinking or fraying. Always use a sling, tree trunk protector or chain of suitable strength.
- Observe your winch at all times when performing a winch recovery and stand at a safe distance. Stop the recovery every few meters to assure the cable/rope is not piling up in one corner. Jamming the cable/rope can damage your winch and cable.
- **DO NOT** attach tow or recovery hooks to winch mounting apparatus. They must be attached to your vehicle frame.
- When performing a recovery with a snatch block, always maintain a direct line pull to the centre of the winch. Ensure the hook is attached to the chassis of the vehicle.
- Ensure rated "D" or Bow shackles are used in conjunction with an approved tree trunk protector to provide a safe anchor point.
- When extending the winch cable, ensure that at least five (5) wraps of cable/rope remain on the drum at all times. Failure to do this could result in the cable/rope parting from the drum under load. Serious personal injury or property damage may result.

WARNING! If replacing steel wire rope with any kind of synthetic rope, make sure the rope can withstand the maximum capacity of your winch.

- Cable winches are provided with a red marking to identify that five (5) cable wraps remain on the winch drum. No recovery should be attempted beyond this marking.
- Winch dampeners should always be used while winching.
- Apply blocks behind the wheels when winching vehicles on an incline.

Battery:

- Be sure that the battery is in good condition.
- Always wear eye protection when working around a battery.
- Ensure the engine is running when using the winch to avoid flattening the battery.

Winch Cable:

- Be sure that the cable is in good condition and is attached to the winch properly.
- **DO NOT** use the winch if the cable is frayed.
- **DO NOT** move the vehicle to pull a load.
- **DO NOT** replace the cable with a cable of lower strength.

The life of the cable is directly related to the use and care it receives. Following its first and subsequent uses, a cable must be wound on to the drum under a load of at least 500lbs (230kgs) otherwise the outer wraps will draw into the inner wraps and severely damage the cable during winching. The first winch use should be a familiarisation run while in a relaxed, non recovery situation. Spool out the cable until the red cable mark appears (around five wraps on the drum), and then rewind the cable onto the drum under a load of 500lbs (230kgs). This will slightly tension and stretch the cable and create a tight cable wrap around the drum. Failure to do so may result in cable damage and reduction in cable life.

- **DO NOT** attempt to exceed the pulling limits of this winch.
- **DO NOT** drive your vehicle to assist the winch in any way. Vehicle movement in combination with winch operation may overload the cable/rope or winch by causing damaging shock loads.
- Shock loads when winching are dangerous. A shock load occurs when an increased force is suddenly applied to the cable. A vehicle rolling back on a slack cable may induce a damaging shock load.
- These winches are for recovery use in vehicle, boat and non industrial applications.
- **NEVER** use the winch in hoisting applications.
- **DO NOT** use the winch to lift, support or transport personnel.
- **DO NOT** attempt to move the winch by lifting the clutch handle.

If experiencing difficulty engaging the gears when shifting the clutch lever, press the button "IN" and "OUT" on the remote control and move the clutch lever until the gears are fully engaged.

NOTE: The operations stated above should only be made without load on the winch.

WINCH INSTALLATION

Mounting Your Winch

The winch is to be mounted into a suitable steel mounting frame using the 4 point foot mounting system in either a horizontal or vertical plane. It is very important that the winch is mounted on a flat surface so that the three sections (motor, cable drum and gear housing) are properly aligned. Before commencing installation, ensure the mounting facility being used is capable of withstanding the winches maximum rated capacity. The fitment of winches and / or a frontal protection systems may affect the triggering of SRS air bags. Check that the mounting system has been tested and approved for winch fitment in air bag equipped vehicles.

Sherpa 4x4 does not warrant the use of winches with self fabricated mounting plates.

The winch should be secured to the mounting bolt with the steel bolts and spring washers provided. The fairlead or hawse is to be mounted so as to guide the rope onto the drum evenly.

Lubrication

All moving parts in the winch are permanently lubricated with high temperature lithium grease at the time of assembly. Under normal conditions, factory lubrication will suffice.

Lubricate the steel cable periodically using light penetrating oil. Inspect for broken strands and replace the cable as necessary.

Cable Replacement

Unwind the new cable by rolling it along the ground, to prevent kinking. Remove old cable and observe the manner in which it is attached to the cable drum flange. Spool the new cable with a load of approximately 240kg.

Mount the Solenoid Box

NOTE: The Solenoid Box can be attached to the winch, or the vehicle in various ways depending on your vehicle type, configuration and winch mounting point. Keep in mind the outer enclosure is not waterproof, however the internals such as the solenoid are water proof but should not be left submersed in water. Consider how the control box will drain when installing.

Step 1. Attach the solenoid box mount bracket to the desirable place on the winch tie rods.

Step 2. Attach the solenoid box to the solenoid box Mount Bracket by the bolts offered.

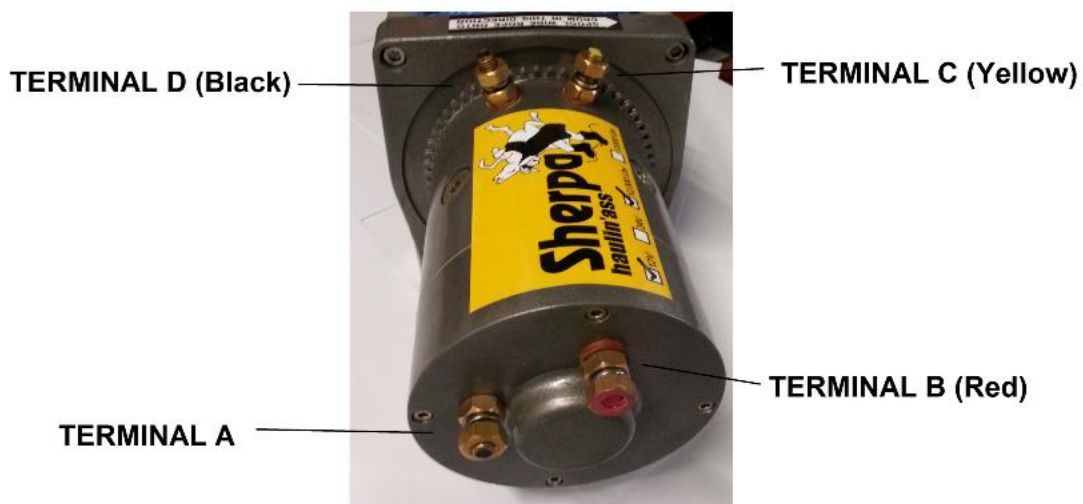
Electrical Connection – Single Motor Winches (Please refer to below diagrams)

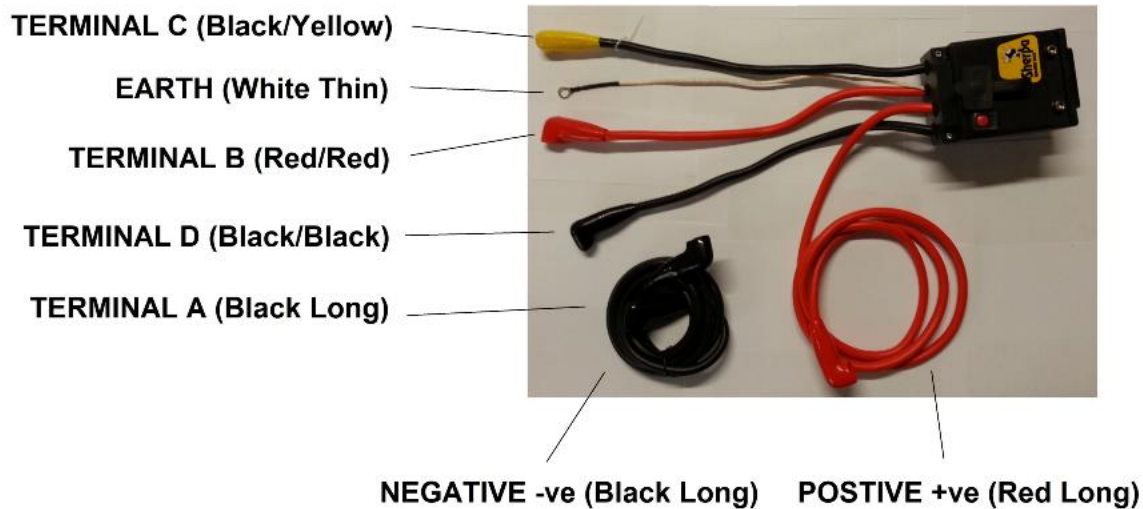
NOTE: It is recommended to always install a battery isolator switch in series with your winch. Single motor winches can draw ~450 Amp and isolator switches should be rated for this at a minimum.

1. Short black cable with YELLOW sleeve (C) connecting to Terminal C (YELLOW) of the motor;
2. Short black cable with BLACK sleeve (D) connecting to Terminal D (BLACK) of the motor;
3. Short red cable with RED sleeve (B) connecting to Terminal B (RED) of the motor;
4. Earth thin cable (Terminal a) connecting to Terminal A of the motor;
5. Terminal A (BLACK long cable) connecting to Terminal A of the motor;
6. Negative “-” (BLACK long cable) connecting to the negative (“-”) terminal of battery;
7. Positive “+” (RED long cable) connecting to the positive (“+”) terminal of battery.

WARNING! Ensure all electrical connections are tight prior to use. Loose electrical connections may result in sparks, poor winch performance and damage to the solenoid.

Winch Motor





Rotating the Winch Gearbox

If the gearbox handle is not in an accessible location the gearbox can be rotated to 6 positions. Follow these instructions and be certain that the drive rod locates correctly into the gearbox and drive otherwise damage can occur to gears and winch drive.

- 1) Undo the two Allen key bolts in the cross members at the gearbox end.
- 2) Remove the gearbox and undo the six smaller black Allen key bolts on the gearbox.
- 3) Rotate the gearbox as required, six positions are available.
- 4) Tighten the six black Allen key bolts.
- 5) Refit the gearbox to the cross members, at this stage do not worry about locating the drive rod correctly.
- 6) Remove the winch drive by undoing the two Allen key bolts in the cross members at the drive end.
- 7) With the gearbox on a flat surface push the drive rod into the gears and ensure it locates correctly, you will feel it drop roughly half an inch into the gearbox.
- 8) Place the drive coupling onto the other end of the drive rod.
- 9) Carefully lower the winch drive onto the coupling and ensure it locates correctly.
- 10) Tighten the two Allen key bolts on the cross members to attach the winch drive.
- 11) Check everything is straight and fits properly. Check the Allen key bolts are done up firmly. Check the winch barrel sits properly into the drive and gearbox. There should be an even gap around the ends of the winch barrel.

NOTE:

- For reliable winch performance, your battery must be kept in good condition.
- Be sure battery cables are not drawn taught across any surfaces, consider cable abrasion during installation.
- Corrosion on electrical connections will reduce performance or may cause a short. Maintain as necessary.
- In salty environments use a silicon sealer to protect electrical connections from corrosion.

Electrical Connection – Dual Motor Winches (Please refer to below diagrams.)

NOTE: It is recommended to always install battery isolator switches in series with your winch. Dual motor winches can draw ~450 Amp per motor and isolator switches should be rated for this at a minimum. Dual isolators are recommended, one per battery.

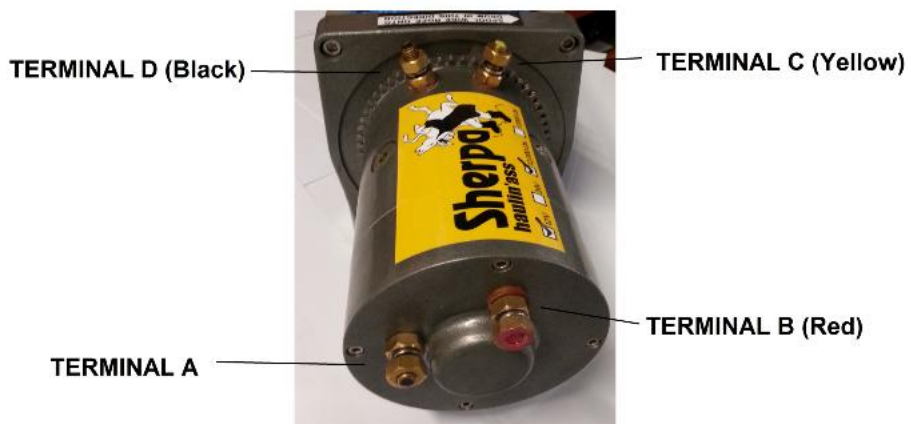
Wire the primary winch motor (non gearbox end) as per the single motor winch wiring instructions included above.

Note: Dual motor winches have a massive 12.6hp of power. Under high load operations, the dual motors can pull up to 890 Amps. Due to the high amperage, Sherpa 4x4 recommends wiring to dual batteries to spread the current draw.

Wiring in the second winch motor

Note, the second winch motor is wired to be energised only when winching 'in'. There is no need to operate the second motor whilst winching 'out'.

1. Connect Terminal D (Black) to Terminal B (Red) using the short Red cable.
2. Connect the medium Red cable from the winch solenoid to Terminal C (Yellow)
3. Connect the long Black cable from Terminal A to the second battery -ve terminal.
4. Connect the long Active Red cable from the second battery +ve terminal to the extra winch solenoid.



WINCH OPERATION

Suggestions

The best way to become acquainted with how your winch operates is to make a few test runs before you actually need to use it. Plan your test in advance. Remember you can hear your winch as well as see it operating. Get to recognise the sound of a light steady pull, a heavy pull, and sounds caused by load jerking or shifting.

Operating

1. Ensure the vehicle is secured by applying the parking brake or chocking the wheels.
2. Pull out a desirable length of winch cable/rope and connect to an anchor point. Warning! You must leave at least five (5) wraps minimum on the drum.

Operate the clutch as follows:

- a) To disengage the clutch, move the clutch lever to the “Disengaged” position. Cable/rope can be pulled off the drum by hand.
- b) To engage the clutch, move the clutch lever to the “Engaged” position. The winch is now ready for pulling.

WARNING! The clutch must be engaged fully for pulling. If not engaged correctly the gears can be stripped.

3. Re-check all cable rigging before proceeding.
4. Plug in the winch hand held remote switch. It's recommended that the winching operation takes place from the driver's position to ensure safe operation.
5. To commence the recovery start the vehicle engine, select neutral in transmission, maintain engine speed at idle.
6. Operate the handheld remote switch to IN or OUT to retrieve the vehicle. Regularly check the winch to ensure cable is winding onto the drum evenly.

Note: Due to the high amperage draw during winching, continuous high load winching should be avoided. Winching for 30-60 seconds (depending on load) should be followed by a 5-10 minute period of cool down. It is recommended the operator monitors the winch motor temperature to avoid overheating and damage.

WARNING!

ALWAYS USE A WINCH DAMPER

A safe distance must be kept during winch operation for your safety.

Never winch your vehicle in gear or in park as this will damage your vehicle's transmission.

Never wrap the cable around the anchor or hook it back onto the cable/rope.

Keep hands, clothing, hair and jewellery clear of the drum area and cable when winching.

Never allow anyone to stand near the cable/rope, or in line with the cable behind the winch while it is under load. If the cable should slip or brake, it can suddenly whip back towards the winch, causing a hazard to anyone in the area. Always stand well to the side while winching.

DO NOT leave the controller plugged in when the winch is not in use. Keep the battery isolation switch off when not in use.

MAINTENANCE

It is highly recommended that the winch be used regularly (around once a month). Simply power the cable out 15m, freely spool 5m and then power back in. This will keep all components lubricated and in good working condition so that the winch can be relied on when needed.

Scheduled maintenance should be performed as per the requirements set out in the Warranty and Returns policy included with your winch or available at www.sherpa4x4.com.au

Contact the agent/distributor from whom you purchased your winch for technical assistance and repairs.

A comprehensive range of spare parts are available. For further information, please contact the agent/distributor from whom you purchased your winch.

WARNING!

The safety precautions and instructions discussed in these instructions cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors, which cannot be built into this product, but must be applied by the operator.

SHERPA 4x4 WINCH SERVICE RECORD

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* Please complete this form each time the winch is serviced. Service schedule is every 12 months. New forms available at www.sherpa4x4.com.au

Winch Purchase Date:

Date of last service:

Date of this service:

Business / Company Performing Service:

Business / Company Address:

Business / Company Contact number:

Person performing Service:

Service Requirements

1) General Description of winch prior to service:

2) Remove Rope/Cable, inspect general condition, comments:

3) Remove electric drive from winch. Inspect motor internals for signs of moisture and dirt, clean as appropriate with circuit cleaner. Inspect motor brushes and armature for cleanliness. Report on condition, adjustments, work completed:

4) Loosen tie rods and remove gear box from winch. Clean and grease drum internals and centre shaft. Report on condition, adjustments, work completed:

NOTE: The winch gearbox generally should not require disassembly unless winch shows signs of water and mud ingress. Disassembly of gear box should only be performed by confident persons. If gearbox is disassembled ensure care is taken to not damage or accidentally discard seals or gaskets. Winch gears should be cleaned as appropriate and re-greased with an appropriate high temperature gear grease. Report on any work completed:

5) Inspect electrical cables and report on condition including effectiveness of cable sheathing. Also report any adjustment or work completed:

6) Inspect control box general condition and cleanliness. Report on adjustments, work completed:

7) Inspect hand controller and report on general condition and function:

8) Please list any additional notes or work performed:

Notes:

Your Sherpa 4x4 winch should only be serviced by persons considered appropriate. If unsure give us a call or email.

Examples include, qualified mechanics, autoelectricians, engineers, 4x4 shops.

The winch shall be removed from vehicle prior to beginning service. Genuine Sherpa4x4 parts must be used for any spare parts that may be required during the service. Contact Sherpa 4x4 as necessary to obtain parts under warranty. Photographs of faulty parts are recommended to support warranty claims.

Sherpa 4x4 Product Warranty

The Sherpa Product Warranty only covers against faulty parts and workmanship, not general wear and tear from normal use.

Warranty Length:

Sherpa 12,000Lb Steel Cable Winches	5 Years*
Sherpa 12,000Lb Synthetic Rope Winches	5 Years*
Sherpa 17,000Lb Steel Cable Winches	5 Years*
Sherpa 17,000Lb Synthetic Rope Winches	5 Years*
Control Boxes, Solenoids and Hand Remotes	5 Years*
Synthetic Ropes	12 Months*
Steel Cables	12 Months*
Fairlead and Hawse	12 Months*
Snatch Blocks	12 Months*
Wireless Remote Kits	12 Months*
Universal Winch Plates	12 Months*
Winch Hooks	12 Months*
Tree Trunk Protectors	12 Months*
Ground Anchors	12 Months*
Winch Dampers	12 Months*
Spot Lights	12 Months*

***Warranty Terms & Conditions:**

- Products must be returned to the place of purchase at the buyer's expense for warranty assessment.
- Returned products must have a completed Warranty & Returns Form accompanied by **proof of purchase**.
- Sherpa 4x4 is not liable for items lost or damaged during return freight.
- If the returned product is not covered under warranty the buyer is liable for the shipping costs to return the product to the buyer.
- Warranty and Returns are processed as fast as possible but can be up to 21 days depending on availability of parts and service technicians.
- The warranty starts from the date of purchase.
- Products showing corrosion or water damage are not covered under warranty.
- Synthetic rope is not covered under warranty if damage is due to neglect or general wear and tear. This will be at the discretion of Sherpa 4x4.
- Steel cables which are kinked or frayed due to improper operation are not covered under warranty.
- Wireless remotes are supplied on request only and have no warranty. An isolation switch must be used with wireless remotes to prevent unwanted starting of the winch.
- The Sherpa 4x4 Product Warranty does not include any defect caused by abuse, accident, improper installation or operation, lack of reasonable care, loss of parts, unauthorised modifications, tampering or attempted repair by an unauthorised person.
- If any object comes into contact with the winch causing damage, it is **NOT** covered by warranty.
- Damage due to lightning strikes, indirect or direct is **NOT** covered by warranty.
- This warranty does not cover general wear and tear incurred by normal use of the product.
- Any modifications to the winch, control box or wiring will void this warranty.

Additional Conditions For Sherpa 4x4 Winches

- Your Sherpa 4x4 Winch should be serviced every 12 Months by a suitably qualified professional.
- A copy of service receipts must be presented for a warranty claim.
- The winch must be used with a minimum 650 Cold Cranking Amps battery
- The winch **MUST** have at least 1 complete layer of cable/rope on the drum at all times, the cable has a red mark which identifies the minimum that must remain on the drum.
- The winch **MUST** be mounted to a suitable steel winch compatible bull bar only.
- The winch **MUST** be used as per the instruction manual.
- **Do Not** use the winch for industrial or commercial applications
- **Do Not** hook the winch cable / rope onto itself
- **Do Not** exceed the pulling limits of the winch
- **Do Not** shock load the winch
- **Do Not** overwork the winch. The drives have a duty cycle and should not be overheated.