

**Sherpa4x4**  
**haulin'ass**



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## **SHERPA BOAT WINCH OWNER'S MANUAL**

# PLEASE READ

## WARNING!

Despite including the winch and wiring in a kit format, we highly recommend the installation of the winches wiring by an experienced Automotive Electrician.

Every vehicle, boat and installation is different and whilst we endeavour to provide a 'one solution fits all', in some cases alterations will be required and the involvement of a experienced professional is invaluable in this situation.

## 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.

- 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.
- Avoid sudden direction changes of the winch rotation whilst winching. Allow the winch to come to a stop before changing from 'winch out' to 'winch in' and vice versa.
- 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 webbing is not piling up on one end of the winch.
- When extending the winch webbing, ensure that at least three (3) wraps of webbing remain on the drum at all times. Failure to do this could result in the webbing parting from the drum under load. Serious personal injury or property damage may result.

**WARNING!** If replacing the factory webbing with any kind of steel cable, make sure the cable can withstand the maximum capacity of your winch.

## **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 Webbing Strap:**

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

The life of the webbing is directly related to the use and care it receives. Following its first and subsequent uses, a webbing must be wound on to the drum under a load of at least 500lbs (230kgs) otherwise slippage can occur. The first winch use should be a familiarisation run while in a relaxed, non recovery situation where possible.

- **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 webbing 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 webbing.
- 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.

# 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, 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 winch should be secured to the mounting plate with the steel bolts and spring washers provided.

Your winch should only ever be installed with the webbing winding onto the drum on the lower side, closest to the mounting bolts. Your winch is not designed or rated for the webbing winding onto the top of the drum near the cross member supports.

## 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.

A small amount of lubricating oil can be applied to the engagement lever if stiffness or engagement difficulties occur.

## Mount the Solenoid Box

**NOTE:** The Solenoid Box can be attached to the winch or the winch post. The control box should be mounted such that it does not get submersed in salt water each time the boat is launched.

The outer enclosure of your control box is not waterproof and is only designed to keep the bulk of the water and dirt off the internals. The internal solenoid is IP68 rated.

Find a suitable location for your control box to sit within cable distance from your winch motor.

Open the control box and drill holes through the lower section into the post.

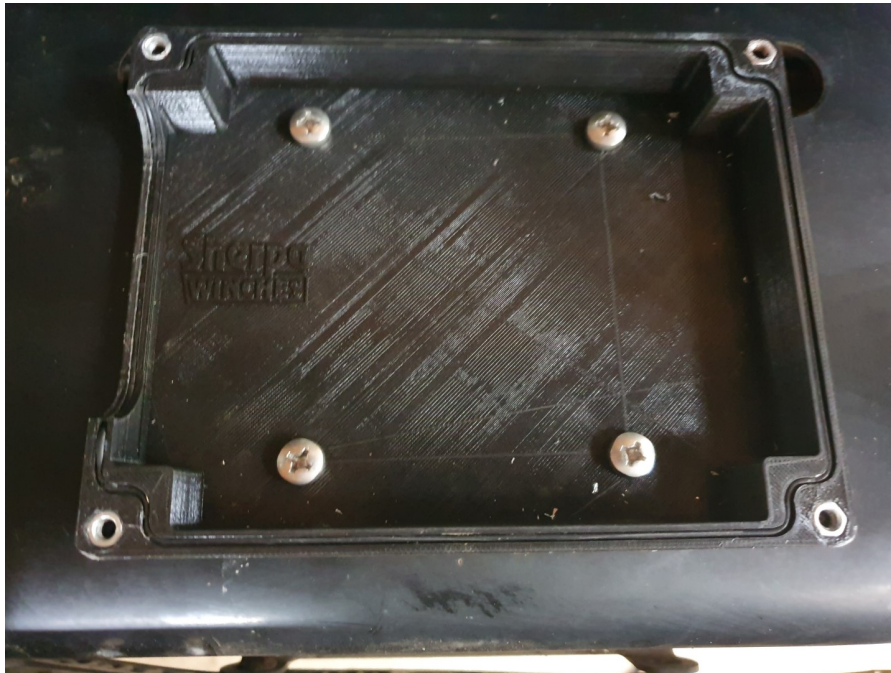
If you own a nutsert or rivnut tool, it can be a great way to quickly and simply add threaded mounting holes to your existing post.



Add a silicon sealant at all holes to limit corrosion at the mount and also stop water ingress into the control box.



Mount the lower section of the control box to your bar.



Fit upper section of the control box to the lower mount. Ensure the seal is in place during assembly.

## **Electrical Connection - Read this section carefully !!**

Your winch is capable of pulling loads up to 8,000lb however this rating reduces as the webbing builds up layers on the drum. The final wrap on the drum will see a maximum rating of 3,520lb noting this is a vertical lift rating.

Considering recommend boat sizes and weights, we do not envisage this winch drawing as much as 300 amps and the wiring kit has been provided under this assumption. However, it is possible for the winch to draw up to 400 amps without risk of damage to the motor.

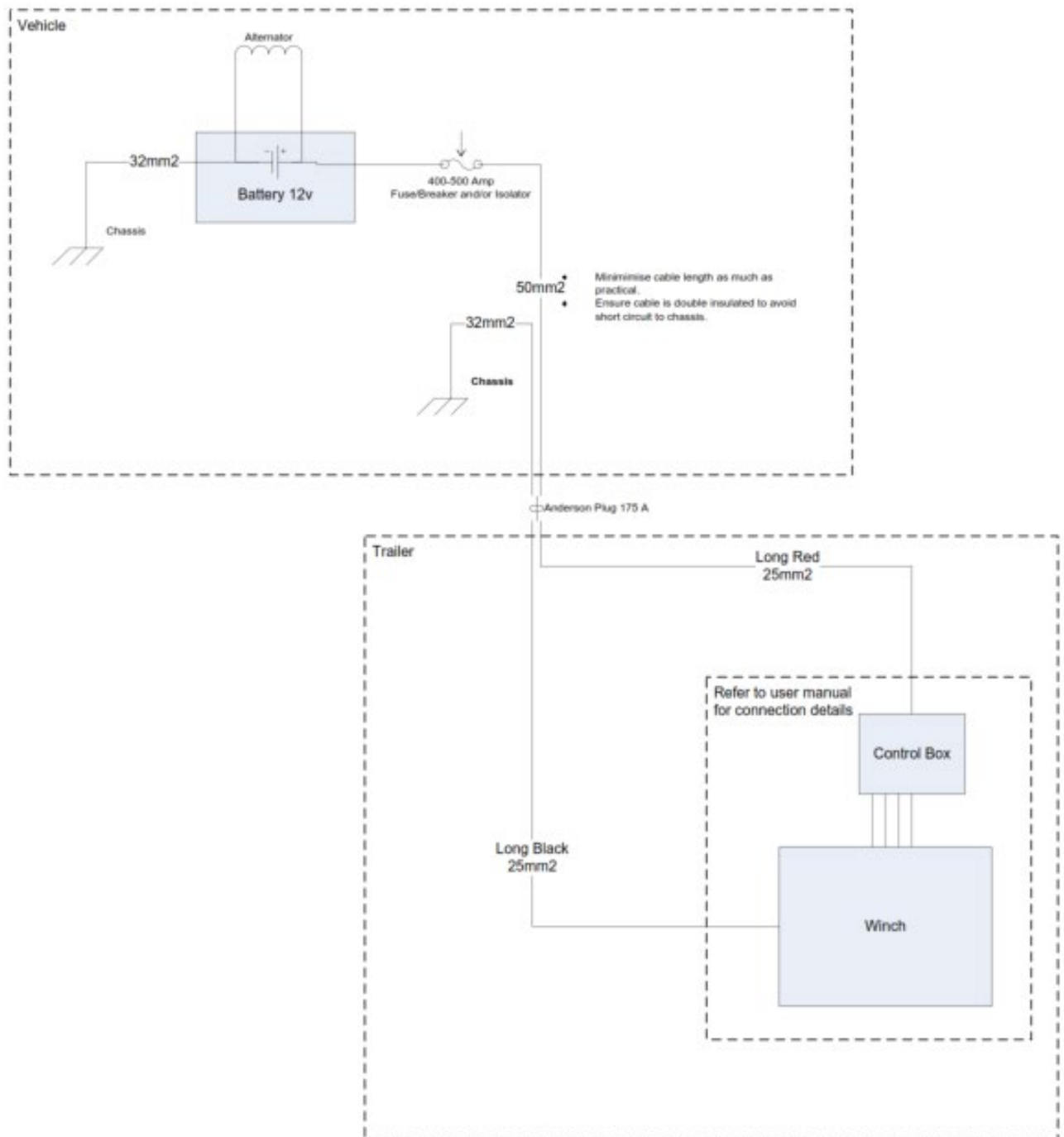
The cable supplied with your winch has a continuous amp rating of ~245 amps. Whilst this appears low, the average winch recovery with this winch should be under 1 minute which the peak rating of the cable is capable of handling.

The following items are **STRONGLY** recommended when electrically installing this winch;

1. Cabling from the battery to the rear of the vehicle should be double insulated and well secured to prevent pinching or chaffing. Corrugated insulation or similar should be used in addition to the standard cable insulation.
2. Incorporation of an isolation switch or fuse as close as possible to the supply battery is recommended.
3. It is recommended to provide a dedicated earth tie from the battery to the vehicle chassis. Many modern vehicles do not provide an adequately sized earth tie and without this, the winch could damage critical electrical components during operation.
4. Excess cable is provided in the winch kit. Where-ever possible, cables should be shortened to minimise cable lengths rather than coiling up excess cable. Excess cable will increase voltage drop along the cable and reduce the performance of your winch.
5. An experienced automotive electrician should be engaged to run wires and check the installation based on the intended operating conditions. In some cases, the electrician may choose to increase cable sizes to increase operating safety margin on the cables.
6. After installation, closely monitor cable temperatures during initial trials, especially if your boat is large, your ramp is especially steep or your trailer uses skids rather than rollers and has greater resistance.



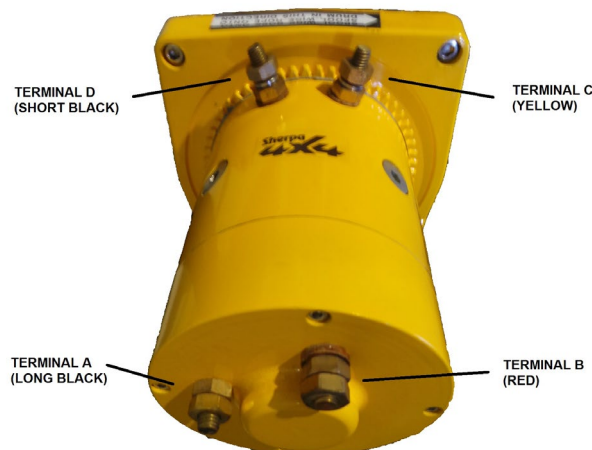
# Sherpa Boat Winch Wiring Diagram



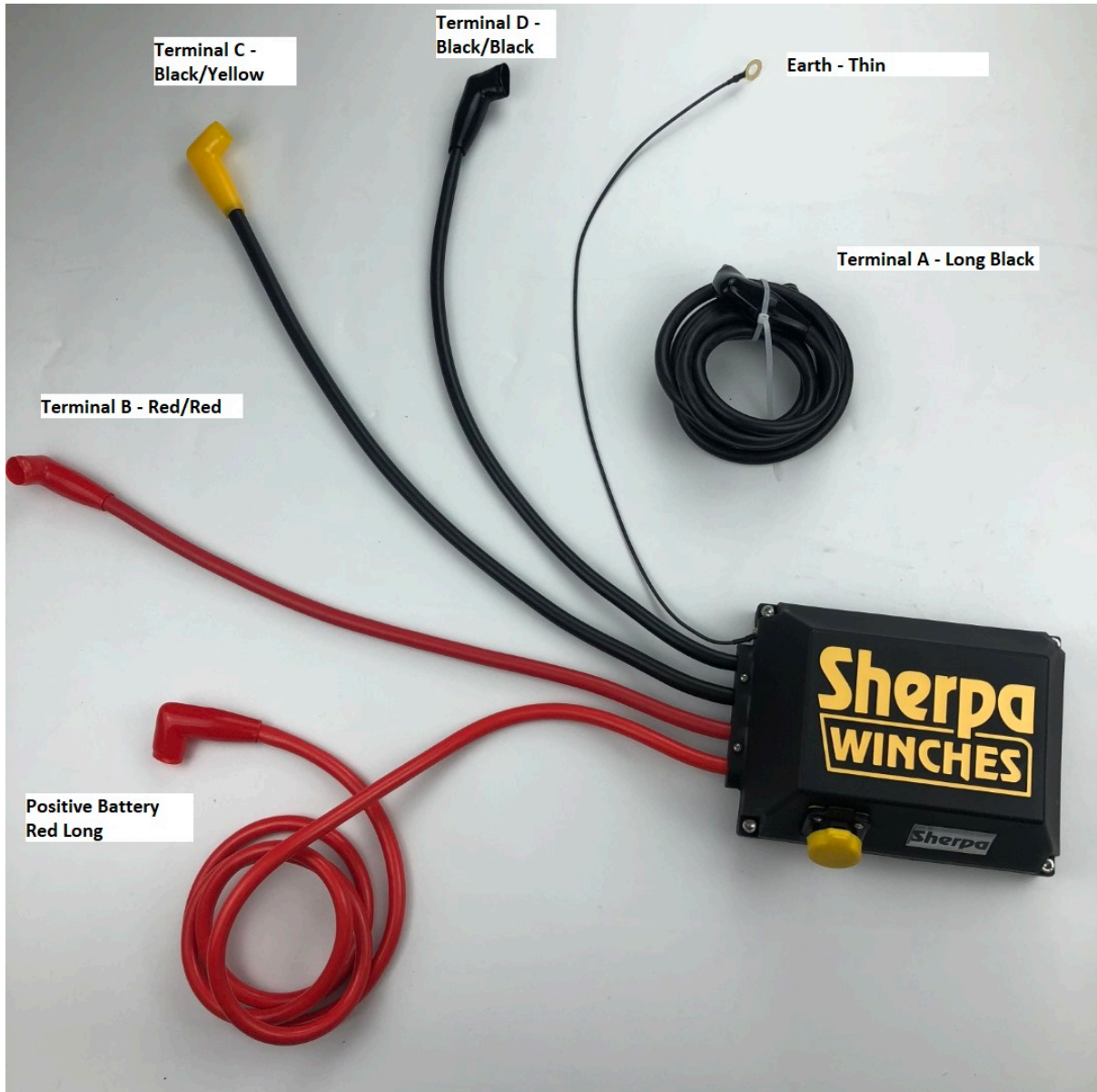
## Connecting your control box to the winch

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 Anderson plug;
7. Positive “+” (RED long cable) connecting to Anderson Plug.

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



Note: When testing, if your winch hand controller is opposite to the labels, eg, 'Winch in' functions as 'Winch out', connections at terminals C and D can be swapped.



# 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 and a heavy pull.

Your winch incorporates an electric brake into the motor. The brake will release at voltages of ~7V and over. If you attempt to operate your winch with a flat battery and the voltage at the winch motor drops to ~7 volt or below, your winch brake will apply and winch performance will drop significantly and damage may eventually be done.

Note: Your winch motor and gearbox may feel hot to touch after use, this is normal. Some purple smoke may appear from the winch motor during initial uses, this is normal and a result of the brake bedding in.

## Operating

1. Ensure the vehicle is secured by applying the parking brake, ideally putting your vehicle in park and/or chocking the wheels.

Ideally the vehicle should be kept with the engine running when operating your winch and this will help to maintain battery voltage and charge.

### Winch Clutch/Gearbox engagement:

Your winch has a clutch or engagement pin to be more accurate. You will be able to manually strip webbing from the drum with the gearbox disengaged.

In most cases we recommend leaving the gearbox in the engaged position and powering the webbing on and off the drum for simplicity.

- a) To disengage the clutch, move the clutch lever to the “Disengaged” position. Webbing 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 recovery.

**WARNING!** The clutch must be engaged fully for pulling. If not engaged completely, damage may occur.

- 2. Plug in the winch hand held remote at the control box.
- 3. Operate the handheld remote switch to IN or OUT to retrieve the vessel. Regularly check the winch to ensure webbing 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 short period of cool down. It is recommended the operator monitors the winch motor temperature and electrical cable temperatures to avoid overheating and damage. If the motor is too hot to touch, let it cool down.

## **WARNING**

Consider what would happen if your winch hook or webbing broke. Never stand behind a load being winched. Keep a safe distance during winch operation for your safety.

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

Never allow anyone to stand near the webbing strap, or in line with the strap behind the winch while it is under load. If the webbing or hook 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 recommended that the winch be used regularly to help keep the internal gears lubricated. Simply power the webbing out 5m and then power back in every ~3 months.

Maintenance should be performed every 25hrs of use, for many people this will be years of reliable operation. If you are exposing your winch to extreme service such as regular river crossings and exceptionally muddy environments, increased maintenance frequency is recommended.

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 BOAT WINCH SERVICE RECORD

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\* Please complete this form each time the winch is serviced. New forms available at [www.sherpa4x4.com.au](http://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 Webbing, inspect general condition, comments:**

**3) Loosen tie rods and 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) 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.

Lay parts out on a clean surface in the order they are removed taking note of which surface was facing out of the gearbox.

If gearbox is disassembled, care is required not to damage or accidentally discard seals or gaskets. Winch gears should be cleaned and re-greased with an 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. Inspect solenoid internals and check on signs of seal failure and water entry. 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 Boat Winch should only be serviced by persons considered appropriate. If unsure give us a call or email.

Examples include, qualified mechanics, auto electricians, engineers, 4x4 shops.

Genuine Sherpa parts must be used for any spare parts that may be required during the service. Contact Sherpa 4x4 as necessary to obtain parts.

## 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 Boat Trailer Winch	5 Years*
Control Boxes, Solenoids and Hand Remotes	5 Years*
Webbing Strap	12 Months*
Wireless Remote Kits	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.
- Excessive corrosion is not covered under warranty. Corrosion cases will be at the discretion of Sherpa 4x4. Ingress of water, mud and dust will not void your winches warranty however users should be able to show proof they have made efforts to maintain their winch if they are operating in environments which result in this type of ingress.
- Webbing strap 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.
- 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.
- This warranty does not cover general wear and tear incurred by normal use of the product.
- Modifications to the winch, control box or wiring may void this warranty and will be at the discretion of Sherpa 4x4.