



X20 WINCH

CONTENTS

- Safety Precautions
- Warnings
- Installation
- Operation
- Maintenance
- Specifications
- Parts List



WINCHES:
X20 10,000LB, X20 12,000LB,
X20 15,500LB, X20 17,500LB



Installation Instructions

[X2O Winches](#)

NOTE: Read entire manual thoroughly before installing and using this product. Keep manual with winch for reference, warranty and future use.

SAFETY PRECAUTIONS

Warning! Observe safety precautions for personal safety and the safety of others. Improper equipment operation may cause personal injury and equipment damage. Read the following carefully before attempting to operate your winch and keep the instructions for future reference.

1. Dress properly:

- Don't wear loose clothing or jewelry. They can be caught in moving parts.
- Wear leather gloves when handling winch cable. Do not handle cable with bare hands as broken wires can cause injuries.
- Non-skid footwear is recommended

2. Keep a safe distance:

- Ensure that all persons stand well clear of winch cable and load during winch operation, 1.5 times the cable length recommended. If a cable pulls loose or breaks under load, it can lash back and cause serious personal injury or death.
- Don't step over the cable.
- All visitors and onlookers should be kept away from the work area.
- Keep proper footing and balance at all times.

3. Don't abuse the cord:

- Never carry your winch by the cord or yank it to disconnect it from the receptacle.
- Keep cord from heat, oil and sharp edges.

4. Don't overwork the winch:

- If the motor becomes uncomfortably hot to touch, stop and let it cool for a few minutes.
- Don't maintain power to the winch if the motor stalls.
- Don't exceed maximum line pull ratings shown in tables. Shock loads must not exceed these ratings.

5. Avoid unintentional starting:

- Winch clutch should be disengaged when not in use and fully engaged when in use.

6. Check damaged parts:

- Before using, you should check your winch carefully. Any part that is damaged should be properly repaired or replaced by an authorized service centre.

7. Repair your winch:

- When repairing, use only identical replacement parts or it may cause considerable danger for the user.

8. Re-spool the cable:

- Leather gloves must be worn while re-spooling. To re-spool correctly, it is necessary to keep a slight load on the cable. Hold the cable with one hand and the remote control switch with the



Installation Instructions

X2O Winches

other. Start as far back and in the centre as you can. Walk up keeping load on the cable as the winch is powered in.

- Do not allow the cable to slip through your hand and do not approach the winch too closely.
- Turn off the winch and repeat the procedure until all the cable except 1m is in.
- Disconnect the remote control switch and finish spooling in cable by rotating the drum by hand with clutch disengaged.
- On hidden winches, spool in cable under power but keep hands clear.
- NEVER operate winch with less than 10 wraps of rope around the drum. The terminal end is to prevent the rope from unraveling, it is NOT a load bearing attachment point. Improper installation and / or spooling out to last layer will put a load on the terminal end and the rope will release from the terminal. Always re-spool winch rope under a minimum 1000 lb. load before each use.
- Prior to your next pull, re-spool winch line under at least 1000lbs of resistance to prevent damage to winch line during next recovery.

WINCH OPERATION WARNINGS

Read the following carefully before attempting to operate your winch and keep the instructions for future reference. *Smittybilt electric winches are intended for recreational self-recovery usage only.*

1. The uneven spooling of cable, while pulling a load, is not a problem, unless there is a cable pile up on one end of the drum. If this happens reverse the winch to relieve the load and move your anchor point further to the centre of the vehicle. After the job is done, you can unspool and rewind for a neat lay of the cable.
2. Store the remote control switch inside your vehicle where it will not become damaged, inspect it before you plug it in.
3. When ready to begin spooling in, plug in remote control switch with clutch disengaged, do not engage clutch with motor running.
4. Never connect the hook back to the cable, this causes cable damage. Always use a sling or chain of suitable strength.
5. Observe your winch while winching, if possible while standing at a safe distance. Stop the winching process every meter or so to assure the cable is not pulling up in one corner. Jamming the cable can break your winch.
6. Do not attach tow hook to winch mounting plate, they must be attached to vehicle frame.
7. The use of a snatch block will aid recovery operations by providing a doubling of the winch capacity and a halving of the winching speed, and the means to maintain a direct line pull to the centre of the rollers. When double loading during stationary winching, the winch hook should be attached to the chassis of the vehicle.



Installation Instructions

X2O Winches

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8. Ensure rated “D” or bow shackles are used in conjunction with an approved tree trunk protector to provide a safe anchor point.
 9. When extending winch cable, ensure that at least five wraps of cable remain on drum at all times. Failure to do this could result in the cable parting from the drum under load. Serious personal injury or property damage may result.
 10. All winches are provided with a red cable marking to identify that 6 wraps of steel cable or 10 wraps of synthetic rope remain on the winch drum when this mark appears at the rollers. No recovery should be attempted beyond this marking.
 11. Since the greatest pulling power is achieved on the innermost layer of your winch, it is desirable to pull off as much line as you can for heavy pulls (you must leave at least 6 wraps of steel cable or 10 wraps of synthetic rope minimum on the drum. If this is not practical use a snatch block and double line arrangement.
 12. Draping a heavy blanket or similar object over the extended winch cable is recommended as it will dampen any back lash should a failure occur.
 13. Neat, tight spooling avoids cable binding, which is caused when a load is applied and the cable is pinched between the others. If this happens, alternatively power the winch in and out. Do not attempt to work a bound cable under a load, free by hand.
 14. Apply blocks to wheels when vehicles are on an incline.
 15. Battery:
 - Be sure that the battery is in good condition. Avoid contact with battery acid or other contaminants.
 - Always wear eye protection when working around a battery.
 - Have the engine running when using the winch, to avoid flattening the battery.
 16. Winch cable:
 - Be sure that the cable is in good condition and is attached properly.
 - Do not use the winch if cable is frayed.
 - Do not move the vehicle to pull a load.
 - Do not replace the cable with a cable of lesser 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 1000lbs(460kgs) or the outer wraps will draw into the inner wraps and severely damage the cable during winching. The first winch use should be a familiarization run while in a relaxed, non-recovery situation. Spool out the cable until the red cable mark appears (about 5 wraps on the drum), then rewind the cable on the drum under a load of 1000lbs(460kgs) or more. This will slightly tension and stretch the new cable and create a tight cable wrap around the drum. Failure to do so may result in cable damage and reduced cable life.
 - When the cable is replaced, be sure to apply loctite, or an equal compound, to the cable clamp thread. Tighten the clamp screw properly but do not over tighten. The loctite will prevent loosening of the screw in arduous conditions. Loctite 7471 primer and 222 threadlocker are recommended.



Installation Instructions

X2O Winches

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17. Do not attempt to exceed the pulling limits of this winch.
 18. Do not drive your vehicle to assist the winch in any way. Vehicle movement in combination with winch operation may overload the cable, the winch itself or cause damaging shock loads.
 19. Shock loads when winching are dangerous! A shock load occurs when an increase force is suddenly applied to the cable. A vehicle rolling back on a slack cable may induce a damaging shock load.
 20. The winches shown in this manual are solely for vehicle and boat mounted, non-industrial applications.
 21. Do not use winch in hoisting applications due to required hoist safety factors and features.
 22. Do not use the winch to lift, support or otherwise transport personnel.

INSTALLATION

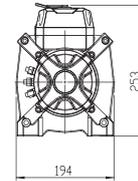
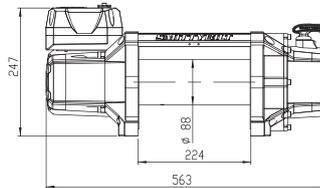
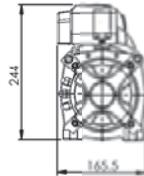
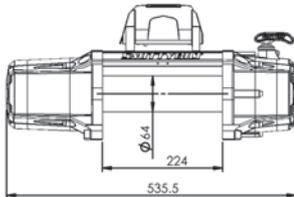
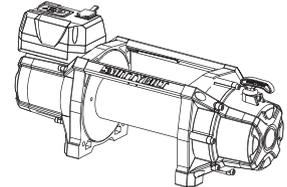
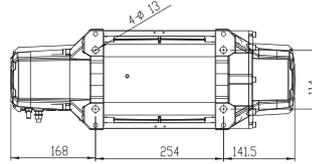
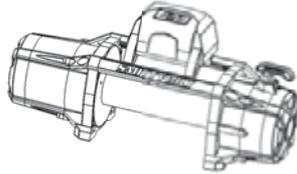
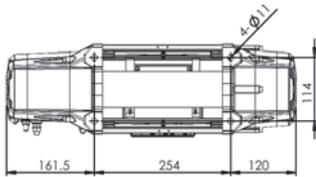
Mounting your winch

1. 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's very important that the winch be mounted on a flat surface so that the three sections (motor, cable drum and gear housing) are properly aligned.
--The fitment of winches and / or a frontal protection system may affect the triggering of SRS air bags. Check that the mounting system has been tested and approved for winch fitment in the airbag equipped vehicle.
2. Winch mounting frames and / or frontal protection systems are suggested to suit most popular vehicles. Winch frames are packaged with detailed fitting instructions.
3. Should you wish to manufacture your own mounting plate the dimensions below will assist. A steel mount plate 6mm thick is recommended. Fasteners should be steel high tensile grade 5 or better. A poorly designed mount may void warranty.
4. The winch should be secured to the mounting with 3/8" UNC x 1-1/4" stainless steel bolts and spring washers provided.
5. The roller fairlead is to be mounted so as to guide the rope onto the drum evenly.



Installation Instructions

X2O Winches



X20-10,000, 12,000

X20-15,500, 17,500

Lubrication installation

All moving parts in the winch are permanently lubricated with high temperature lithium grease at the time of assembly. Lubricate cable periodically using light penetrating oil. Inspect for broken strands and replace if necessary. If the cable becomes worn or damaged it must be replaced.

Cable installation

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.

Electrical Connection

For normal self-recovery work, your existing electrical system is adequate. A fully charged battery and proper connections are essential. Run the vehicle engine during winching operations to keep battery charged.



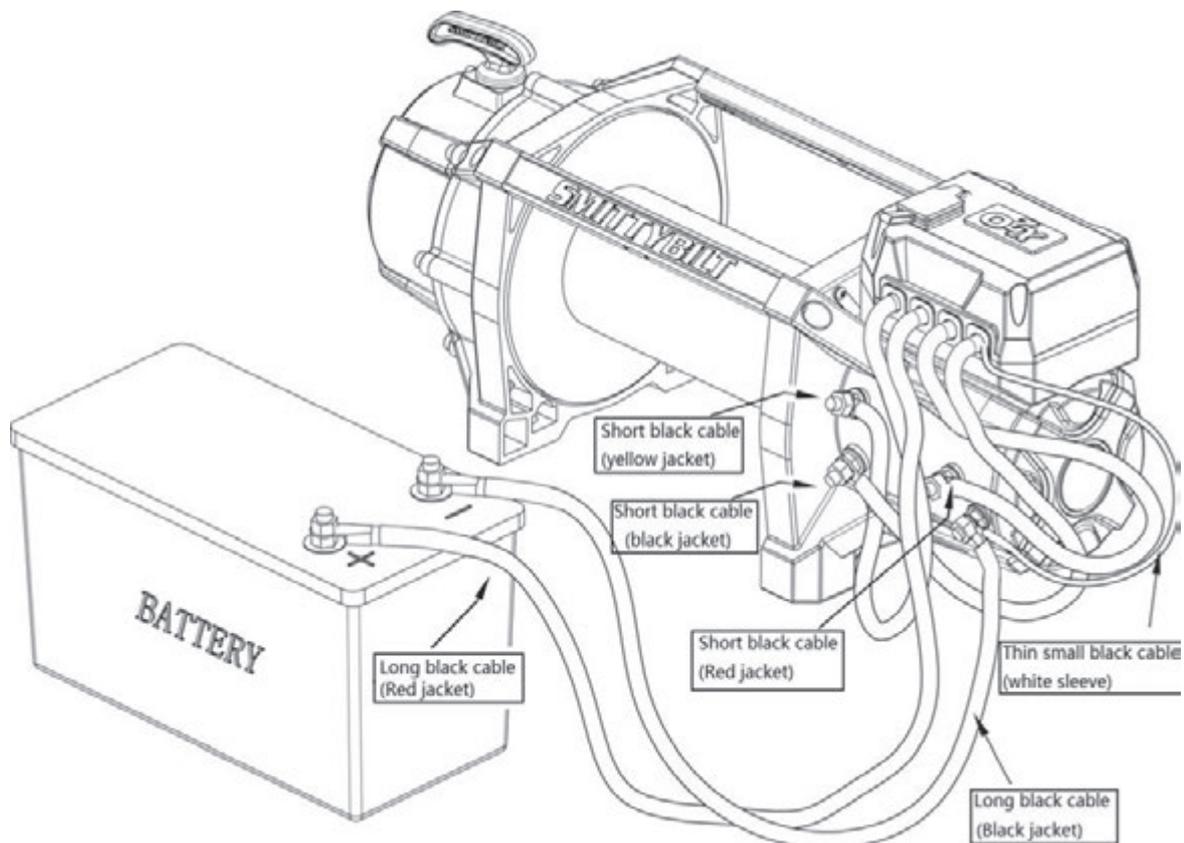
Installation Instructions

X2O Winches

Pay close attention to proper electrical cable connection as follows (Refer to diagram 1)

1. Short black cable with red jacket (B') connecting to the red terminal (B) of the motor.
2. Short black cable with yellow jacket (C') connecting to the yellow terminal (C) of the motor.
3. Short black cable with black jacket (D') connecting to the black terminal (D) of the motor.
The thin black cable with white sleeve (A') connecting to bottom terminal (A) of the motor
4. Long black cable (1.8m), with black jacket one terminal (A') connecting to the bottom terminal (A) of the motor, and the other terminal negative (-) connecting to negative (-) terminal of battery.
5. Long black cable positive (+) with red jacket connecting to positive (+) terminal of battery.

Electrical connection (15,500 17,500)





Installation Instructions

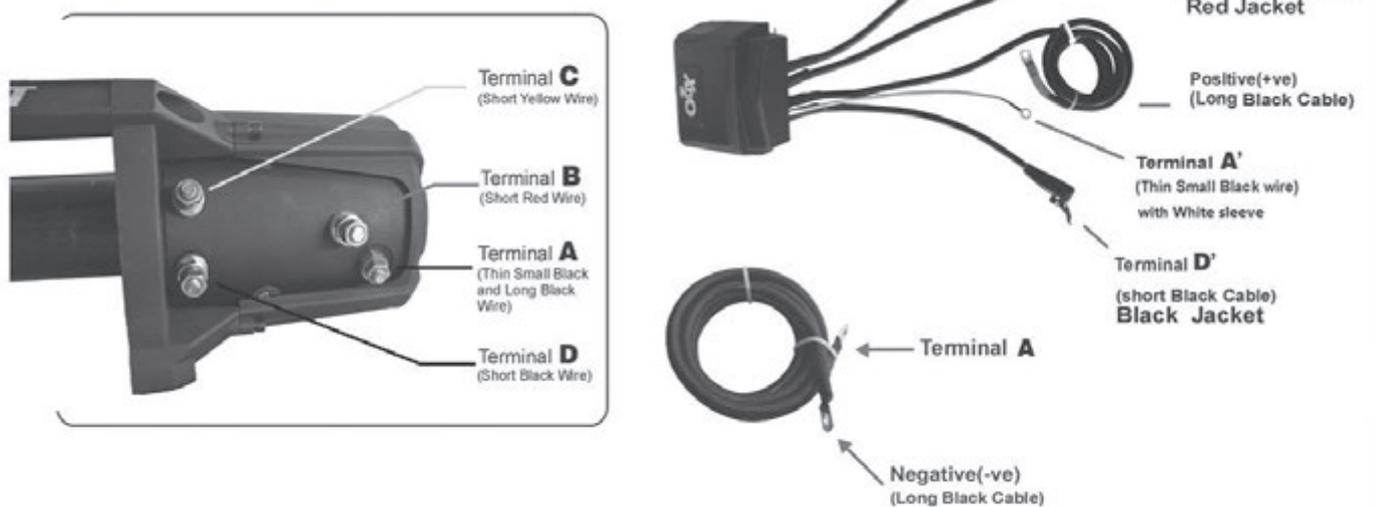
X2O Winches



Wiring Attention

Wiring Instructions (refer to Diagram)

1. A to A' & a
2. B to B'
3. C to C'
4. D to D'



For Technical Support/Warranty Information please call 310-762-9944
Smittybilt, 400 West Arden Blvd., Compton, CA 90220

(Diagram 1)

Note:

1. Your battery must be kept in good condition.
2. Be sure battery cables are not drawn taught across any surfaces, which could possibly damage them.
3. Corrosion on electrical connections will reduce performance or may cause a short.
4. Clean all connections especially in remote control switch and receptacle.
5. In salty environments use a silicone sealer to protect from corrosion.



Installation Instructions

X2O Winches

Installing the control box

- It is recommended to install you winch control box prior to installing your winch.
- You may install the control box in a separate location using 3-4 AWG marine cable (not included)
- Determine if you want your control box located over the motor (side) or the drum (Center)
- Control box can sit anywhere over the drum, determine best location for you.(left, center, right)

DRUM (Center Mount)

Step 1: Install the two included aluminum brackets on the bottom of the control box by removing the four nuts on the bottom of the box, then placing the brackets over the bolts and then secure brackets by re-installing the nut. (Fig A) (Note: The hooks on the brackets go towards the front of the winch.) Use caution when installing brackets in order not to push the bolts up into the control box. To help prevent this, install brackets with the control box on its side instead of laying it flat on a table.

Secure by tightening the screw on the rear of each bracket and add lock nut

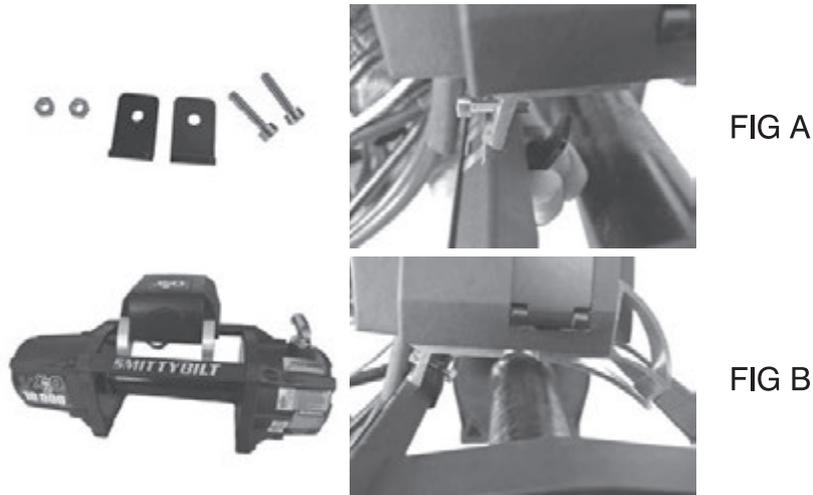


FIG A

FIG B

Step 2: Determine where you want control box over the drum (left, center, right), then secure using the included screw, L bracket, nut on the rear. The screw goes through the aluminum bracket and into the L bracket with the bottom of the L bracket placed into the slot of the rear tie-bar and finally secured more with included lock nut. (Fig A,B)

MOTOR (Side Mount)

Step 1: Install the two black motor mount brackets on the bottom of the control box by removing the four nuts on the bottom of the box, then placing the brackets over the bolts and then secure brackets by re-installing the nut. **Note:** The end of the brackets point outward. (Fig D) Use caution when installing brackets in order not to push the bolts up into the control box. To help prevent this, install brackets with the control box on its side instead of laying it flat on a table.



Installation Instructions

X2O Winches

Step 2: Install the control box by lining it up with the two holes on the motor side upright, then Secure with the included hardware.



FIG D

Remote Control

Note: Wireless remote will automatically turn "OFF" after two minutes of non-operation.

- Do not force end of remote plug into the plug on the control box.
- Remote cannot be submerged
- Line the tab on the inside of the remote socket end with the groove on the remote plug on the control box. (Fig G,H)
- Push the toggle switch leftward to operate the winch "Outward" .**Note:** You should always "Free Spool" the winch outward.
- Push the toggle switch rightward to operate the winch "Inward"



FIG G



FIG H



- It is recommended that for the initial set-up of the winch (prior to applying any load) that the winch be operated in the WIRED mode.
- Once the winch has been set-up then the remote hand control can be operated either in the WIRED OR WIRELESS mode.
- To use the remote hand controller in the WIRELESS mode remove the control cable from the control box, unplug the remote hand controller from the control cable and press the MODE button on the remote hand controller until the green light marked WIRELESS is illuminated.
- Wireless working distance: MIN 10M, MAX 50M.
- Make sure winch remote indicator light is in correct mode before using.



Installation Instructions

X20 Winches

Winch Operation

- A.** Do not use as a hoist
- B.** Power out only to relieve slack on cable or rope. Excessive powering out can cause damage to internal components.
- C.** Do not use to hold loads
- D.** Do not use to drop loads (example-unloading vehicles)

The best way to get 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 you can see it operate. Get to recognize the sound of a light steady pull, a heavy pull, and sounds caused by load jerking or shifting. Soon you will gain confidence in operating your winch and its use will become second nature to you.

Operating

1. Ensure the vehicle is secure by applying the parking brake or chocking the wheels.
2. Pull out the winch cable the desired length and connect to an anchor point. The winch clutch allows rapid uncoiling of the cable for hooking onto the load or anchor point. The shifter tab located on the gear housing of the winch operates the clutch as follows:
 - a) To disengage the clutch, move the clutch shifter tab into the "OUT" position. Cable may not be free spooled off the drum.
 - b) To engage the clutch, move the clutch shifter tab into the "IN" position. The winch is now ready for pulling.
3. Recheck all cable rigging before proceeding.
4. Plug in the winch hand control. It is recommended that the winching operation takes place from the driver's position to ensure safe operation.
5. To commence winching operation, start vehicle engine, select neutral in transmission, maintain engine speed at idle.
6. Operated the remote control switch to IN or OUT until the vehicle has been retrieved. Regularly check the winch to ensure cable is winding onto the drum evenly.

MAINTENANCE

It is highly recommended that the winch be used regularly (once a month). Simply power the cable out 15m, free spool 5m and then power back in. this will keep all components in good working condition so that the winch can be relied on when needed. Contact your authorized outlet for technical assistance and repairs.



Installation Instructions

X2O Winches



1. Never winch with your vehicle in gear or in part, which would damage your vehicle's transmission.
2. Never wrap the cable around the object and hook onto the cable itself. This can cause damage to the object being pulled, and kink or fray the cable
3. Keep hands, clothing, hair and jewellery clear of the drum area and cable when winching.
4. Never use the winch if the cable is frayed, kinked or damaged.
5. Never allow anyone to stand near the cable or in line with the cable behind the winch while it is under power. If the cable should slip or brake, it can suddenly whip back towards the winch, causing a hazard for anyone in the area. Always stand well to the side while winding
6. Don't leave the switch plugged in when is not in use.

TROUBLE SHOOTING

| Symptom | Possible cause | Suggested remedy |
|---|------------------------------------|--|
| Motor does not turn on | Safety switch is off | Turn safety switch to ON position |
| | Switch Assy not connected properly | Insert switch Assy firmly to the connector |
| | Loose battery cable | Tighten nuts on cable connectors |
| | Solenoid malfunctioning | Tap solenoid to free contact, applying 12 volts to coil terminal directly. The solenoid will make an audible clicking sound when activating. |
| | Defective switch Assy | Replace switch Assy |
| | Defective motor | Check for voltage at armature port with switch pressed. If voltage is present, replace motor. |
| | Water has entered motor | Drain and dry. Run in short bursts without load until completely dry. |
| Motor runs too hot | Long period of operation | Let winch cool down periodically. |
| Motor runs slowly or without normal power | Battery runs down | Recharge battery by running vehicle |
| | Insufficient current or voltage | Clean, tighten or replace the connector. |
| Motor runs but cable drum does not turn | Clutch not engaged | Turn clutch into IN position, if that does not work, ask a qualified technician to check and repair. |
| Motor runs in one direction only | Defective or stuck solenoid | Tap solenoid to free contacts. Repair or replace solenoid. |



Installation Instructions

X2O Winches

Understanding IP Ratings

- The first digit indicates the level of protection that the enclosure provides against access to hazardous parts (e.g., electrical conductors, moving parts) and the ingress of solid foreign objects.
- The second digit indicates protection of the equipment inside the enclosure against harmful ingress of water.



| Level | Object size protected against | Effective against |
|--------------|--------------------------------------|--|
| 0 | — | No protection against contact and ingress of objects |
| 1 | >50 mm | Any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part |
| 2 | >12.5 mm | Fingers or similar objects |
| 3 | >2.5 mm | Tools, thick wires, etc. |
| 4 | >1 mm | Most wires, screws, etc. |
| 5 | Dust protected | Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact |
| 6 | Dust tight | No ingress of dust; complete protection against contact |



Installation Instructions

X2O Winches

| Level | Protected against | Testing for | Details |
|-------|--------------------------------------|---|---|
| 0 | Not protected | — | — |
| 1 | Dripping water | Dripping water (vertically falling drops) shall have no harmful effect. | Test duration: 10 minutes Water equivalent to 1mm rainfall per minute |
| 2 | Dripping water when tilted up to 15° | Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position. | Test duration: 10 minutes Water equivalent to 3mm rainfall per minute |
| 3 | Spraying water | Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect. | Test duration: 5 minutes Water volume: 0.7 litres per minute Pressure: 80–100 kN/m ² |
| 4 | Splashing water | Water splashing against the enclosure from any direction shall have no harmful effect. | Test duration: 5 minutes Water volume: 10 litres per minute Pressure: 80–100 kN/m ² |
| 5 | Water jets | Water projected by a nozzle (6.3mm) against enclosure from any direction shall have no harmful effects. | Test duration: at least 3 minutes Water volume: 12.5 litres per minute Pressure: 30 kN/m ² at distance of 3m |
| 6 | Powerful water jets | Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction shall have no harmful effects. | Test duration: at least 3 minutes Water volume: 100 litres per minute Pressure: 100 kN/m ² at distance of 3m |
| 7 | Immersion up to 1 m | Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion). | Test duration: 30 minutes Immersion at depth of 1m |
| 8 | Immersion beyond 1 m | The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer. Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that it produces no harmful effects. | Test duration: continuous immersion in water |



Installation Instructions

X2O Winches

Gear Housing “Clocking”

In some situations you may need to “Clock” (turn) your Gear Housing in order to gain access to them.

To clock the Gear Box



Step 1: Loosen and remove the two tie rod bolts on the gear box side.



Step 2: Rotate the gear box to the optimal position needed. Then re-install the retaining bolts and re connect gear box to the tie-rod bars.

Note: “Clocking” must be done in 90 degree intervals due to the position of the retaining bolt holes.



Installation Instructions

X2O Winches

Motor Housing “Clocking”

In some situations you may need to “Clock” (turn) your Gear Housing in order to gain access to them.

To clock the Motor Housing



Step 1: Loosen and remove the 4 motor bracket bolts



Step 4: Rotate the motor to the optimal position needed.



Step 2: Remove the motor cover



Step 5: Re-install the 2 long bolt on the motor end cap



Step 3: Loosen and remove the 2 long bolts on the motor end cap



Step 6: Re-install the 4 motor bracket bolts.



Installation Instructions

X2O Winches

Remote battery replacement

- It is recommended that for the initial set-up of the winch (prior to applying any load) that the winch be operated in the WIRED mode
- Once the winch has been set-up then the remote hand control can be operated either in the WIRED or WIRELESS mode
- To use the remote hand controller in the WIRELESS mode remove the control cable from the control box, unplug the remote hand controller from the control cable and press the MODE button on the remote hand controller until the LED light marked WIRELESS is illuminated

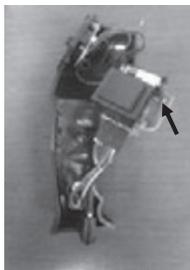
Step 1: Remove 4 small Phillips head screws. (Fig A) Note: their location because of the different lengths.

Step 2: With care, pull out circuit board with battery housing attached (Fig B)
Remove battery and replace with new one (type 23A)

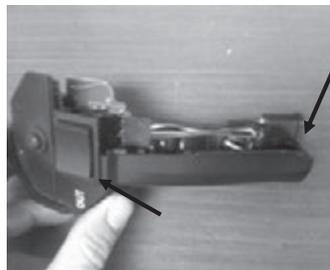
Step 3: Carefully reassemble the remote. Make sure the plug and switch are in the correct placement before tightening screws. (Fig C)



(Fig A)



(Fig B)



(Fig C)

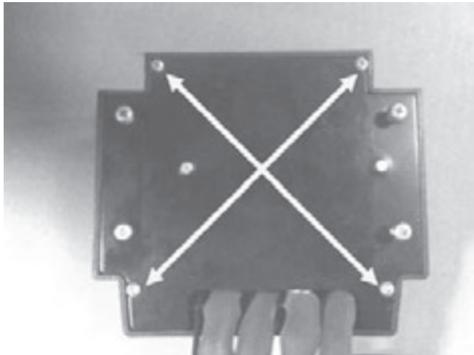


X20 Wireless Receiver Installation

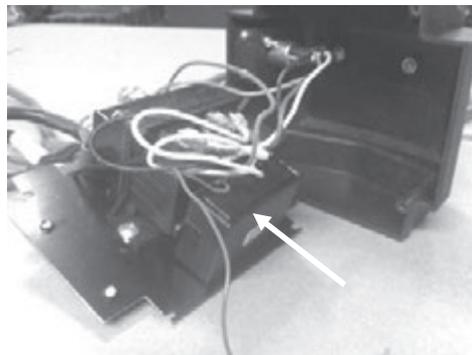
Wireless Receiver Replacement

Step 1: Remove the control box mount brackets (if attached) then remove the four small phillips screws in order to remove the box cover. (Fig A2) remove cover carefully.

Step 2: With care pull receiver off of base. (Fig B2)



(Fig A2)



(Fig B2)

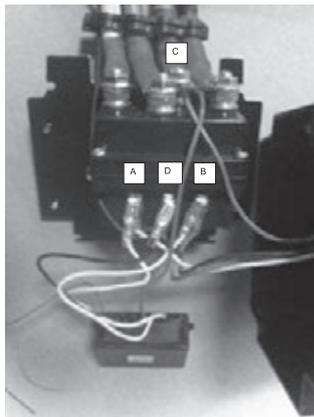
Step 3: It is recommended to make some notes and or take a picture to ensure proper placement of wires.

Step 4: Disconnect wires that come from your current receiver.

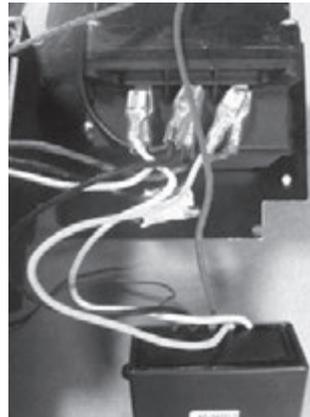
Step 5: Connect the new receiver wires to the same mounting points as the previous. (Fig C2,D2)

- A. White wire goes to the left on the ISM above the other White wire
- B. Yellow wire goes to the right on the ISM above the Blue wire
- C. Red wire goes to the front of the ISM where the long battery Red wire is connected
- D. Black wire goes in the center of the ISM above the other Black wire.
- E. The Green wire is the antenna (leave loose)

Step 6: Re-install the control box cover with previously removed screws.



(Fig C2)



(Fig D2)



Installation Instructions

X2O Winches

10,000lbs Features and Specifications

| | | | |
|------------------|----------------------------------|------------------------|---------------------------------|
| Waterproof: | IP68 Rating | Fairlead: | 4-Way Roller |
| Rated Line Pull: | 10,000Lbs (4,545kgs) single-line | Remote Control: | Included |
| Motor: | 6.6hp Series Wound | Recommended Battery: | 650CCA Minimum for Winching |
| Control: | Remote Switch, 12' (3.7m) lead | Battery Leads: | 25mm2, 72"(1.83m)1 |
| Gear Train: | 3-Stage Planetary | Finish: | Textured Black |
| Gear Ratio: | 218:1 | Weight: | 99.0Lbs (45.0Kgs) |
| Clutch: | Sliding Ring Gear | Mounting Bolt Pattern: | 10.0" x 4.50" |
| Brake: | Automatic Out-Of-Drum | Overall Dimension | (L x W x H) 22.3" x 5.4" x 9.4" |
| Drum Size: | Diameter 2.5" | | |
| Length: | 10.0" (254mm) | | |
| Cable: | 98.5' 3/8" Diameter | | |

| X2O 10,000LBS | |
|-----------------------------|-------|
| DESCRIPTION | PART# |
| X2O 10,000 LBS WINCH SYSTEM | 97510 |
| X2O 10,000 LBS WINCH COMP | 98510 |

| | | | | | | | |
|------------|--------|------|------|------|-------|------|-------|
| Line Pull | lbs | 0 | 2000 | 4000 | 6000 | 8000 | 10000 |
| | kg | 0 | 907 | 1814 | 2721 | 3628 | 4545 |
| Line Speed | ft/min | 31.1 | 14.3 | 11.7 | 10.17 | 8.8 | 7.38 |
| | m/min | 9.5 | 4.3 | 3.5 | 3.2 | 2.7 | 2.25 |
| Motor | Amps | 76 | 150 | 220 | 270 | 320 | 380 |

| Layers Of Cable | | 1 | 2 | 3 | 4 |
|---------------------------|-----|-------|------|------|------|
| Rated Line pull per layer | lbs | 10000 | 9100 | 8570 | 7950 |
| | kg | 4545 | 3915 | 3499 | 3215 |
| Cumulative cable capacity | ft | 19.6 | 44.2 | 73.8 | 98.4 |
| | m | 6 | 13 | 22 | 30 |



Installation Instructions

X2O Winches

12000lbs Features and Specifications

| | | | |
|------------------|----------------------------------|------------------------|---------------------------------|
| Waterproof: | IP68 Rating | Fairlead: | 4-Way Roller |
| Rated Line Pull: | 12,000Lbs (5,454kgs) single-line | Remote Control: | Included |
| Motor: | 6.6hp Series Wound | Recommended Battery: | 650CCA Minimum for Winching |
| Control: | Remote Switch, 12' (3.7m) lead | Battery Leads: | 25mm2, 72"(1.83m)1 |
| Gear Train: | 3-Stage Planetary | Finish: | Textured Black |
| Gear Ratio: | 265:1 | Weight: | 99.0Lbs (45.0Kgs) |
| Clutch: | Sliding Ring Gear | Mounting Bolt Pattern: | 10.0" x 4.50" |
| Brake: | Automatic Out-Of-Drum | Overall Dimension | (L x W x H) 22.3" x 5.4" x 9.4" |
| Drum Size: | Diameter 2.5" | | |
| Length: | 10.0" (254mm) | | |
| Cable: | 98.5' 3/8" Diameter | | |

| X2O 12,000LBS | |
|-----------------------------|-------|
| DESCRIPTION | PART# |
| X2O 12,000 LBS WINCH SYSTEM | 97512 |
| X2O 12,000 LBS WINCH COMP | 98512 |

| | | | | | | |
|------------|--------|-------|-------|------|------|-------|
| Line Pull | lbs | 0 | 3000 | 6000 | 9000 | 12000 |
| | kg | 0 | 1363 | 2727 | 4090 | 5454 |
| Line Speed | ft/min | 24.60 | 11.48 | 8.86 | 7.22 | 5.58 |
| | m/min | 7.5 | 3.5 | 2.7 | 2.2 | 1.7 |
| Motor | Amps | 70 | 138 | 218 | 260 | 330 |

| Layers Of Cable | | 1 | 2 | 3 | 4 |
|---------------------------|-----|-------|------|------|------|
| Rated Line pull per layer | lbs | 12000 | 9530 | 7929 | 6770 |
| | kg | 5455 | 4332 | 3604 | 3077 |
| Cumulative cable capacity | ft | 18 | 37 | 64 | 98 |
| | m | 5.4 | 11.4 | 19.4 | 30 |



Installation Instructions

X2O Winches

15500+17500lbs Features and Specifications

| | | | |
|------------------|----------------------------------|------------------------|----------------------------------|
| Waterproof: | IP68 Rating | Fairlead: | 4-Way Roller |
| Rated Line Pull: | 15,500Lbs (7,045kgs) single-line | Remote Control: | Included |
| Motor: | 6.6hp Series Wound | Recommended Battery: | 650CCA Minimum for Winching |
| Control: | Remote Switch, 12' (3.7m) lead | Battery Leads: | 25mm2, 72'(1.83m) ¹ |
| Gear Train: | 3-Stage Planetary | Finish: | Textured Black |
| Gear Ratio: | 430:1 | Weight: | 150.0Lbs (68.0Kgs) |
| Clutch: | Sliding Ring Gear | Mounting Bolt Pattern: | 10.0" x 4.50" |
| Brake: | Automatic Out-Of-Drum | Overall Dimension | (L x W x H) 22.3" x 7.5" x 10.7" |
| Drum Size: | Diameter 3.45"(88.0mm) | | |
| Length: | 10.0" (254mm) | | |
| Cable: | 98.5' 7/16" Diameter | | |

| | | | |
|------------------|----------------------------------|------------------------|----------------------------------|
| Waterproof: | IP68 Rating | Fairlead: | 4-Way Roller |
| Rated Line Pull: | 17,500Lbs (7,954kgs) single-line | Remote Control: | Included |
| Motor: | 6.6hp Series Wound | Recommended Battery: | 650CCA Minimum for Winching |
| Control: | Remote Switch, 12' (3.7m) lead | Battery Leads: | 25mm2, 72'(1.83m) |
| Gear Train: | 3-Stage Planetary | Finish: | Textured Black |
| Gear Ratio: | 430:1 | Weight: | 150.0Lbs (68.0Kgs) |
| Clutch: | Sliding Ring Gear | Mounting Bolt Pattern: | 10.0" x 4.50" |
| Brake: | Automatic Out-Of-Drum | Overall Dimension | (L x W x H) 22.3" x 7.5" x 10.7" |
| Drum Size: | Diameter 3.45"(88.0mm) | | |
| Length: | 10.0" (254mm) | | |
| Cable: | 98.5' 1/2" Diameter | | |

| X2O 15,500LBS | |
|-----------------------------|-------|
| DESCRIPTION | PART# |
| X2O 15,500 LBS WINCH SYSTEM | 97515 |

| X2O 17,500LBS | |
|-----------------------------|-------|
| DESCRIPTION | PART# |
| X2O 17,500 LBS WINCH SYSTEM | 97517 |

| | | | | | | |
|------------|--------|---------|-------|------|-------|-------|
| Line Pull | lbs | No Load | 4000 | 7500 | 11250 | 15500 |
| | kg | No Load | 1814 | 3409 | 5113 | 7045 |
| Line Speed | ft/min | 23.62 | 10.50 | 8.20 | 5.25 | 3.94 |
| | m/min | 7.2 | 3.2 | 2.5 | 1.6 | 1.2 |
| Motor | Amps | 71 | 152 | 239 | 332 | 422 |

| | | | | | | | |
|------------|--------|---------|------|-------|-------|-------|-------|
| Line Pull | lbs | No Load | 6000 | 10000 | 12000 | 14000 | 17500 |
| | kg | No Load | 2721 | 4536 | 5454 | 6363 | 7937 |
| Line Speed | ft/min | 23.62 | 9.18 | 5.90 | 4.92 | 4.26 | 2.95 |
| | m/min | 7.2 | 2.8 | 1.8 | 1.5 | 1.3 | 0.9 |
| Motor | Amps | 71 | 200 | 300 | 350 | 395 | 450 |

| Layers Of Cable | | 1 | 2 | 3 | 4 |
|---------------------------|-----|-------|-------|-------|-------|
| Rated Line pull per layer | lbs | 15500 | 12060 | 10082 | 8662 |
| | kg | 7045 | 5482 | 4583 | 3937 |
| Cumulative cable capacity | ft | 19.68 | 45.92 | 75.44 | 85.28 |
| | m | 6 | 14 | 23 | 26 |

| Layers Of Cable | | 1 | 2 | 3 | 4 |
|---------------------------|-----|-------|-------|-------|-------|
| Rated Line pull per layer | lbs | 17500 | 15225 | 13246 | 11524 |
| | kg | 7955 | 6920 | 6021 | 5238 |
| Cumulative cable capacity | ft | 19.68 | 45.92 | 75.44 | 85.28 |
| | m | 6 | 14 | 23 | 26 |

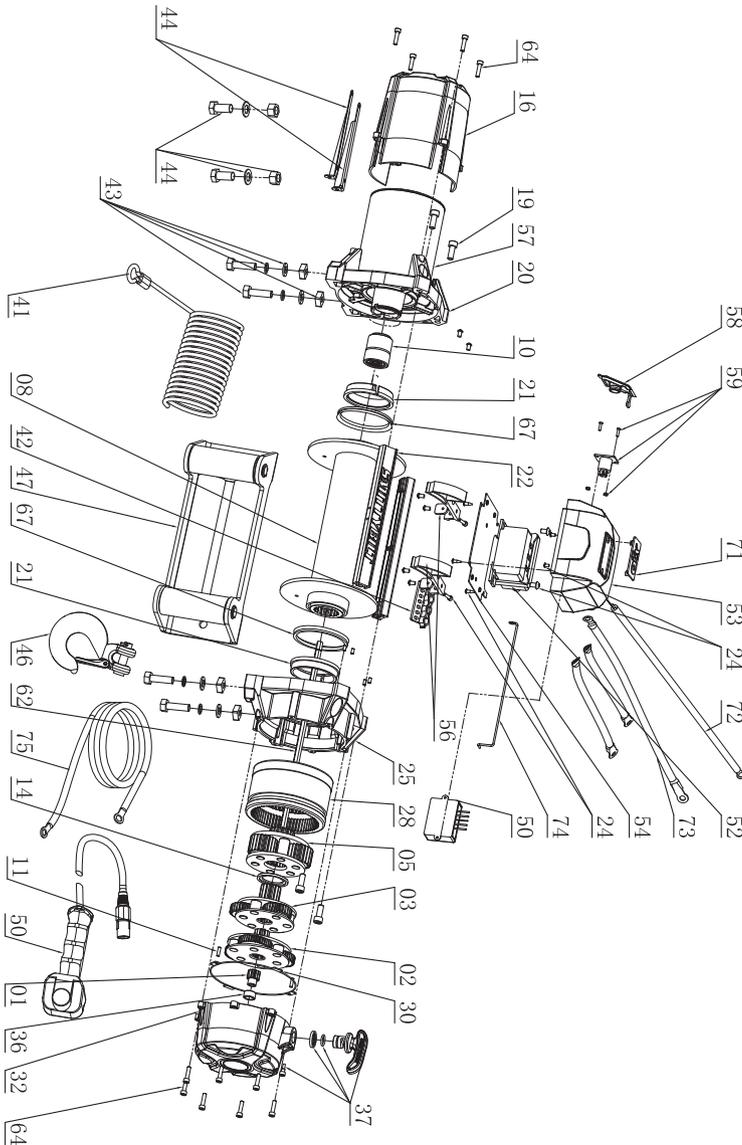


Installation Instructions

X2O Winches

10-12K Part drawing

10-12K Part list



| No | X2o - 10K lbs | X2o - 12K lbs | Desc |
|----|---------------|---------------|--|
| 01 | 97510-01 | 97510-01 | Sun Gear |
| 02 | 97510-02 | 97512-02 | Gear Carrier, Input |
| 03 | 97510-03 | 97512-03 | Gear Carrier, Intermediate |
| 05 | 97510-05 | 97512-05 | Gear Carrier, Output |
| 08 | 97510-08 | 97510-08 | Drum |
| 10 | 97510-10 | 97510-10 | Brake Assy |
| 11 | 97510-11 | 97510-11 | Pin M4 X 14 |
| 14 | 97510-14 | 97510-14 | Rubber Washer |
| 16 | 97510-16 | 97510-16 | Motor Cover |
| 19 | 97510-19 | 97510-19 | Tie Rod Screw |
| 20 | 97510-20 | 97510-20 | Motor Base |
| 21 | 97510-21 | 97510-21 | Sliding Bearing |
| 22 | 97510-22 | 97510-22 | Tie Bar |
| 24 | 97510-24 | 97510-24 | Control Box Mounting Brackets And Hardware |
| 25 | 97510-25 | 97510-25 | Gear Box Base |
| 28 | 97510-28 | 97512-28 | Clutch Gear |
| 30 | 97510-30 | 97510-30 | Rubber Seal |
| 32 | 97510-32 | 97510-32 | Gear Box Cover |
| 36 | 97510-36 | 97510-36 | Oil Bearing |
| 37 | 97510-37 | 97510-37 | Clutch Handle Assy |
| 41 | 97510-41 | 97510-41 | Wire Rope With Fix Bolt |
| 42 | 97510-42 | 97510-42 | Wire Rope Fix Bolt Only |
| 43 | 97510-43 | 97510-43 | Winch Mounting Hardware Set |
| 44 | 97510-44 | 97510-44 | Mounting Hardware |
| 46 | 97510-46 | 97510-46 | Clevis Hook |
| 47 | 97510-47 | 97510-47 | Roller Fairlead |
| 49 | 97510-49 | 97510-49 | Control Box Assy Without Transmitter |
| 50 | 97510-50 | 97510-50 | Remote Control With Transmitter |
| 52 | 97510-52 | 97510-52 | Solenoid Assy |
| 53 | 97510-53 | 97510-53 | Control Box Cover |
| 54 | 97510-54 | 97510-54 | Control Box Base |
| 55 | 97510-55 | 97512-55 | Complete Gear Assy |
| 56 | 97510-56 | 97510-56 | Control Box Mounting Hardware |
| 57 | 97510-57 | 97512-57 | Complete Motor Assy |
| 58 | 97510-58 | 97510-58 | Socket Cover |
| 59 | 97510-59 | 97510-59 | Socket Connector Assy |
| 62 | 97510-62 | 97510-62 | Drive Shaft |
| 64 | 97510-64 | 97510-64 | Haxagon Head Bolt M5 X 20 |
| 67 | 97510-67 | 97510-67 | Rubber Seal |
| 68 | 97510-68 | 97512-68 | Decal Set |
| 71 | 97510-71 | 97510-71 | Aluminum Smittybilt Badge |
| 72 | 97510-72 | 97510-72 | Cable Battery (+) |
| 73 | 97510-73 | 97510-73 | Cable Battery (-) |
| 74 | 97510-74 | 97510-74 | Ground Cable |
| 75 | 97510-75 | 97510-75 | Cable Motor |

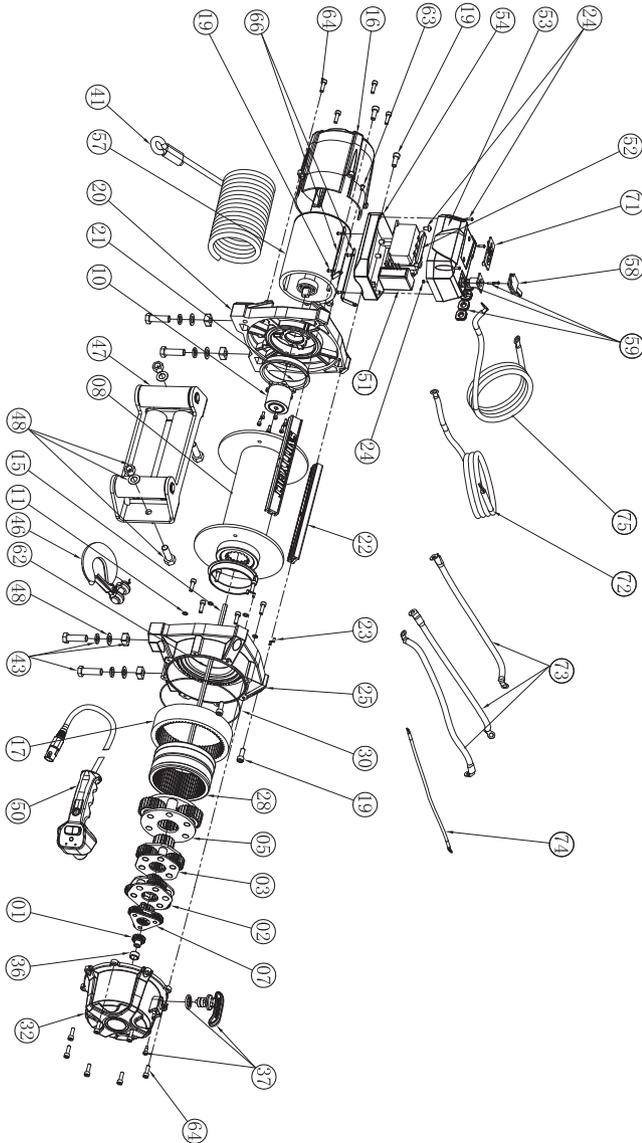


Installation Instructions

X2O Winches

15-17k part drawing

15-17k part list



| No | X2o-15000 | X2o-17500 | Description |
|----|-----------|-----------|--|
| 01 | 97515-01 | 97515-01 | Sun Gear |
| 02 | 97515-02 | 97517-02 | Gear Carrier, Input |
| 03 | 97515-03 | 97517-03 | Gear Carrier, Intermediate |
| 05 | 97515-05 | 97517-05 | Gear Carrier, Output |
| 07 | 97515-07 | 97517-07 | Gear Carrier |
| 08 | 97515-08 | 97515-08 | Drum |
| 10 | 97515-10 | 97515-10 | Brake Assy |
| 11 | 97515-11 | 97515-11 | Washer |
| 15 | 97515-15 | 97515-15 | Circlip |
| 16 | 97515-16 | 97515-16 | Motor Cover |
| 17 | 97515-17 | 97515-17 | Ring Gear |
| 19 | 97515-19 | 97515-19 | Tie Rod Screw |
| 20 | 97515-20 | 97515-20 | Motor Base |
| 21 | 97515-21 | 97515-21 | Axle Sleeve |
| 22 | 97515-22 | 97515-22 | Tie Bar |
| 23 | 97515-23 | 97515-23 | Pin M4 X 8 |
| 24 | 97515-24 | 97515-24 | Control Box Mounting Brackets And Hardware |
| 25 | 97515-25 | 97515-25 | Gear Box Base |
| 28 | 97515-28 | 97515-28 | Clutch Gear |
| 30 | 97515-30 | 97515-30 | Rubber Seal |
| 32 | 97515-32 | 97515-32 | Gear Box Cover |
| 36 | 97515-36 | 97515-36 | Oil Bearing |
| 37 | 97515-37 | 97515-37 | Clutch Handle Assy |
| 41 | 97515-41 | 97515-41 | Wire Rope With Fix Bolt |
| 43 | 97515-43 | 97515-43 | Winch Mounting Hardware Set |
| 46 | 97515-46 | 97515-46 | Clevis Hook |
| 47 | 97515-47 | 97515-47 | Roller Fairlead |
| 48 | 97515-48 | 97515-48 | Roller Fairlead Mounting Hardware |
| 49 | 97515-49 | 97515-49 | Control Box Assy W/O Transmitter |
| 50 | 97515-50 | 97515-50 | Remote Control W/ Transmitter |
| 52 | 97515-52 | 97515-52 | Solenoid Assy |
| 53 | 97515-53 | 97515-53 | Control Box Cover |
| 54 | 97515-54 | 97515-54 | Control Box Base |
| 55 | 97515-55 | 97517-55 | Complete Gear Assy |
| 57 | 97515-57 | 97515-57 | Complete Motor Assy |
| 58 | 97515-58 | 97515-58 | Socket Cover |
| 59 | 97515-59 | 97515-59 | Socket Connector Assy |
| 62 | 97515-62 | 97515-62 | Drive Shaft |
| 63 | 97515-63 | 97515-63 | Bolt M5 X 8 |
| 64 | 97515-64 | 97517-64 | Hexagon Head Bolt M6 X 20 |
| 66 | 97515-66 | 97515-66 | Motor Gear |
| 68 | 97515-68 | 97517-68 | Decal Set |
| 71 | 97515-71 | 97515-71 | Aluminum Smittybilt Badge |
| 72 | 97515-72 | 97515-72 | Cable Battery (+) |
| 73 | 97515-73 | 97515-73 | Cable Battery (-) |
| 74 | 97515-74 | 97515-74 | Ground Cable |
| 75 | 97515-75 | 97515-75 | Cable Motor |



Installation Instructions

X2O Winches

Compliment your new Winch with a Smittybilt Winch Cover or other Smittybilt products



Winch Access. Bag (#2726)



Black Box (#2805)



Winch Cradle (#2811)



Winch Pull Strap (#769402)



Winch Quick Connect Cables



Winch Plates

Warning

Rollover and other types of vehicle accidents may result in serious injury or death to you, your passengers and others sharing the road. Smittybilt accessories are decorative and are not intended to reduce or avoid injury or damage in the event of an accident. The weight and location of Smittybilt accessories may affect your vehicles' handling, stability and performance, creating an increased risk of accident or rollover. Before installing any accessory, check state laws and assure that the accessory will not obscure any lights or interfere with proper operation on your vehicle's safety equipment. Consult your owner's manual and the Smittybilt instructions, or additional safety information. Smittybilt products, nor the warnings contained herein, are not a substitute for your safe driving. Don't drink and drive, always use seat belts and don't drive faster than conditions permit.