



**SB**  
SMITTYBILT



**X20**  
WINCH  
GEN3

**INSTRUCTION MANUAL**



400 W. ARTESIA BLVD., COMPTON, CA 90220  
888.717.5797 • SMITTYBILT.COM

**10K** LBS  
**12K** LBS

**7HP**  
AMPHIBIOUS  
TECHNOLOGY



**WATERPROOF  
IP68 RATED**



**RECHARGEABLE  
WIRELESS REMOTE**





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**Installation Instructions**  
**X20 Gen 3 Winches**

**SMITYBILT ADVANTAGE WARRANTY**

**LIMITED LIFETIME WARRANTY FOR MECHANICAL COMPONENTS**  
**LIMITED 5-YEAR WARRANTY FOR ELECTRICAL COMPONENTS**

Smittybilt Automotive Products, LLC (SAP) warrants to the original purchaser that (a) the mechanical components (e.g., gears, clutch, spool, etc.) of any SAP winch will be free of defects in material and workmanship for the lifetime of the winch, and (b) the electrical components (e.g., electric motor, wires, solenoid, etc.) will be free of defects in material and workmanship for a period of 5-years from the original date of purchase. This warranty applies only to the original purchase of the winch and is non-transferable. To obtain any warranty service, you must provide SAP with a proof of purchase and date of purchase that is acceptable to SAP, such as a copy of your purchase receipt.

This warranty does not cover the removal or reinstallation of the winch and/or labor. SAP will, at its sole discretion, provide replacement part(s) for a defective winch or component, provided this is done within the warranty period. To request assistance under warranty, one must call or email using the phone number or email at the bottom of this page. This warranty does not apply (1) to finish, paint, or synthetic rope; (2) if the winch has been damaged by accident, abuse, misuse, collision, overloading, modification, misapplication, improper installation, or improper service; or (3) any normally wearable part such as, but not limited to, the brake assembly. This warranty is void if any SAP serial number has been removed or defaced; or if the winch is used for any commercial, industrial, or rental applications. This warranty only applies to winches bought, sold, and used within the United States unless otherwise specifically agreed in writing by SAP.

THE WARRANTY SET FORTH ABOVE IS THE ONLY WARRANTY. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTY WHICH BY LAW MAY NOT BE EXCLUDED IS LIMITED TO A DURATION OF ONE (1) YEAR FROM THE DATE OF ORIGINAL RETAIL PURCHASE OF THE PRODUCT. No SAP dealer, agent, or employee is authorized to make any modification, extension or addition to this warranty. SAP SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, DOWN TIME OR LOSS OF USE) UNDER ANY LEGAL THEORY, EVEN IF SAP WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Some states do not allow the exclusion of implied warranties or the exclusion or limitation of liability for incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights. You may also have other rights that vary from state to state. SAP reserves the right to change product design without notice. In situations in which SAP has changed a product design, SAP shall have no obligation to upgrade or otherwise modify previously manufactured products. For warranty inquiries contact SAP at:

Smittybilt Automotive Products, LLC  
Customer Service Department

Call 1-800-776-0767 or Email [info@smittybilt.com](mailto:info@smittybilt.com)

**For Technical Support/Warranty Information please call 1-800-776-0767**  
Smittybilt, 400 W. Artesia Blvd Compton, CA 90220



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**Installation Instructions**  
**X20 Gen 3 Winches**

**NOTE:** Carefully read entire instruction manual thoroughly before attempting to operate this winch.

**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:**

- Do not wear loose clothing or jewelry, as it can be caught in moving parts.
- Wear gloves when handling the winch rope.
- Non-skid footwear is recommended.

**2. Keep a safe distance:**

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

**3. Do not overwork the winch:**

- If the motor becomes uncomfortably hot to touch, stop and let the winch rest for a few minutes.
- Do not maintain power to the winch motor if it stalls.
- Do not exceed the maximum line pull rating, specified in the tables, for your winch.

**4. Avoid unintentional starting:**

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

**5. Check for damaged parts:**

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

**6. Repairing your winch:**

- If repairs are necessary, use only identical replacement parts or it may cause damage to the winch and/or danger to the user.

**7. Re-spooling the synthetic rope:**

- Gloves should be worn to protect the user. To re-spool your winch line, it is necessary to keep a slight load (1000lbs) on the synthetic rope. Hold the rope with one hand and the remote-control with the other. Start as far back and in the center as you can. Walk up keeping load on the cable as the winch is powered in.
- Do not allow the rope to slop through your hand and do not approach the winch too closely.
- Perform this procedure until all the cable except 1 meter is in.

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**Installation Instructions**  
**X20 Gen 3 Winches**

**NOTE:** Carefully read entire instructions thoroughly before attempting to install this part. Photos are for illustration purposes and actual product may vary. The installation process will remain the same.

**SAFETY PRECAUTIONS (Continued)**

- Disconnect the remote-control switch and finish spooling in the rope by rotating the drum by hand with the clutch disengaged.
- On hidden winches, spool in the rope under power, but keep hands clear.
- Never operate the 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 past the last layer will put a load on the terminal end and the rope will release from the terminal.
- Always re-spool winch rope with at least 1000lbs of resistance to prevent damage to the winch line during the next recovery.

**WINCH OPERATION WARNINGS**

Read the following carefully before attempting to operate your winch and keep these instructions for future reference. **Smittybilt electric winches are intended for recreational self-recovery usage only. Not designed for industrial or commercial use. Not recommended for trailer use.**

1. The uneven spooling of rope, 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 center of the vehicle. After the job is done, you can unspool and rewind the rope for a neat lay of cable.
2. Store the remote-control switch inside your vehicle where it will not be lost or damaged. Inspect the remote before each use.
3. When ready to begin spooling in, plug in the remote-control switch with the clutch disengaged. Do not engage the clutch while the motor is turning.
4. Never connect the clevis hook back to the synthetic rope, this will cause damage to the rope. Always use a strap or chain of a 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 rope is not stacking up in one corner. Stacking the rope can break your winch.
6. Do not attach tow hook to winch mounting plate, they must be attached to the vehicles frame
7. The use of a snatch block will aid recovery operations by doubling the winch capacity and reducing the winching speed by half. This will also provide the means to maintain a direct line pull to the center of the fairlead.

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**IF YOU'RE MISSING  
HARDWARE OR  
COMPONENTS OR IN  
NEED OF TECHNICAL  
ASSISTANCE CONTACT  
SMITYBILT  
DIRECTLY AT**

**1-800-776-0767**  
info@smittybilt.com

**Warning**

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

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**Installation Instructions**  
X20 Gen 3 Winches

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



**Winch Premium Winch Accessory Bag (S/B2725)**



**Winch Cradle (S/B2811)**



**Aluminum Winch Shackle (S/B2820)**



**Logo Winch Cover (S/B97281-89)**



**Recoil Shackle Rope 1"x6" (S/B13051-B)**



**Delta D-Ring 4.75 Ton (S/B99047)**

**⚠ WARNING: Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**

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**Installation Instructions**  
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**WINCH OPERATION WARNINGS (Continued)**

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 the winch line, ensure that at least ten wraps of rope always remains on the drum. Failure to do so can cause the rope to detach from the drum. Serious personal injury and/or property damage may result.
10. Draping a heavy blanket or similar item over the extended winch rope is recommended as it will dampen any back lash should a failure occur.
11. Neat and tight spooling will help avoid cable binding, which is caused when a load is applied, and the rope is pinched between the others. If this happens, alternatively power the winch in and out. Do not attempt to work out a bound rope under load, free by hand.
12. Apply blocks to wheels when vehicles are on an incline.
13. 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.**
  - Do not use on a stand-alone battery. This winch requires a constant charge from a vehicles charging system.
  - Failure to do so will cause damage to the winch.
  - Be sure your battery is rated for at least 650 CCA
  - Do not use this winch on a trailer unless wired directly to a vehicle. (No stand-alone batteries)
14. Winch Rope:
  - Be sure that the synthetic rope is in good condition and is properly attached.
  - Do not use the winch if the rope is frayed.
  - Do not move the vehicle to pull a load.
  - Do not replace the rope with a rope of lesser strength.
  - The life of the rope is directly related to the use and care it receives. Following its first and subsequent uses, the rope 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 rope during winching. The first use of the winch should be a familiarization run while in a relaxed, non-recovery situation. Spool out the rope until there are between 10-12 wraps around the drum (No less than 10). Then rewind the rope while under a load of 1000lbs or more. This will slightly tension and stretch the new rope and create a tight wrap around the drum. Failure to follow this process may result in damage to the synthetic rope and reduce its lifespan.
15. Do not attempt to exceed the pulling limits of this winch
16. Do not drive your vehicle to assist the winch in any way. Vehicle movement in combination with winch operation may overload the rope or the winch itself. Doing so may cause damage.

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**WINCH OPERATION WARNINGS (Continued)**

- 18. This winch is designed solely for vehicle and boat applications, non-industrial applications only
- 19. Do not use in hoisting applications due to required hoist safety factors and features.
- 20. Do not use the winch to lift, support, or otherwise transport personnel.
- 21. Winch is not designed to hold or lower loads. Not recommended for trailer use
- 22. Winch must be connected directly to a battery and the battery must be under a constant charge when operating the winch. A battery with a minimum of 650 CCA is required to run this winch. Inadequate, weak battery, and/or charging system may cause damage to the winch and/or to the vehicle. Many OEM batteries do not have enough capacity for winch use and will need to be upgraded. Check your battery, if inadequate, find the highest CCA and MRC (minute reserve capacity) battery you can fit. Higher MRC ratings mean that your battery can power the winch for longer periods without losing performance.
- 23. Winch amp draw can deplete a fully charged battery rapidly if not connected to an adequate source of charge. This may cause reduced performance and/or winch failure.
- 24. If power leads need to be extended, 0 gauge or thicker must be used. If winch is used in a remote location, battery must be as close to the winch as possible. Battery must receive a 90 amp or higher charge when winching.
- 25. Winch in small increments to allow battery amperage to recover. When winching, the battery discharges faster than your alternator can charge it. Take a break every minute to reduce the load on the battery and keep up the charge. Low battery voltage will damage the winch and may damage the electrical system and battery.
- 26. **Failure to comply will not only void the warranty on your winch but can also cause serious property damage or personal harm. Follow all installation instructions and obey all warnings.**



**Installation Instructions**  
X20 Gen 3 Winches

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- 1. Never winch with your vehicle in gear or in park, this may cause damage to your vehicle's transmission.
- 2. Never wrap the rope around an object and hook the clevis hook back to the rope. This can severely damage the synthetic rope.
- 3. Keep hands, clothing, hair, and jewelry clear of the drum area and rope when winching.
- 4. Never allow anyone to stand near or in line with the rope, especially while under load or while winching.
- 5. Never use the winch if the synthetic rope is damaged. Always inspect the rope before use.
- 6. Do not leave the remote plugged in or the wireless switch on when the winch is not in use.

TROUBLESHOOTING GUIDE		
SYMPTOM	POSSIBLE CAUSE	SUGGESTED REMEDY
Motor does not turn on or Motor runs in one direction only	Loose connection	Check and tighten all connections
	Remote connection issues	Confirm that the remote is plugged into the connector firmly. If using in wireless, confirm the battery is sufficiently charged and the wireless switch is in the on position.
	Solenoid malfunction	Remove the control box cover and tap on the top of the solenoid with a rubber mallet. As you are doing this attempt to use the winch with the remote. If the winch begins to function. Replace the solenoid.
	Motor malfunction	Run a motor test to confirm motor function. This motor test is available on our website under Gen3 User Guide.
Motor runs too hot	Long period of operation	Let the winch motor cool down periodically.
Motor runs slowly or without normal power	Battery running down	Always keep the vehicle running while operating the winch. Do not use this winch with a stand-alone battery.
Motor runs, but cable does not turn	Clutch not engaged	Be sure the clutch is in the engaged position. If that does not work, please contact tech support.

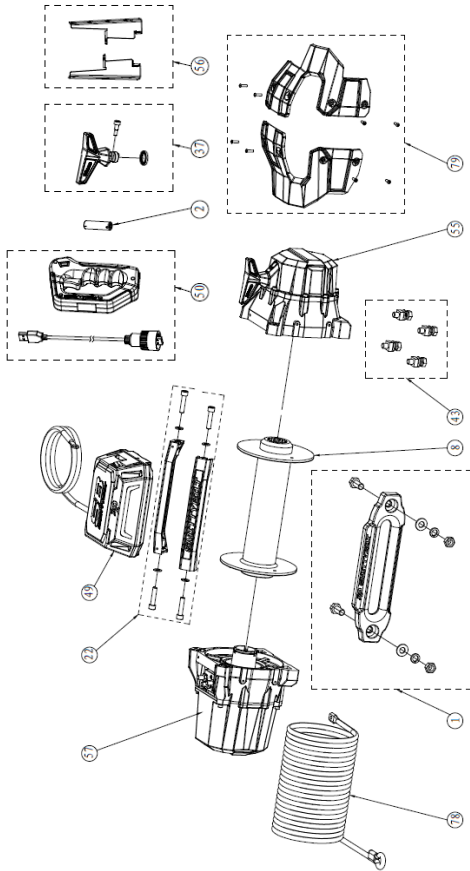
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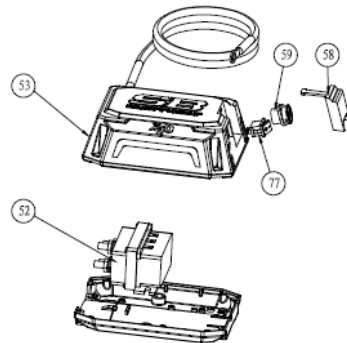
### 10-12K Breakdown



## Installation Instructions X20 Gen 3 Winches

### 10-12k Parts List

98810-01	Hawse fairlead with HDW
98810-02	Replacement battery
98810-08	Drum
98810-22	Tie Bar Kit with HDW
98810-37	Free spool handle
98810-42	Rope fix bolt
98810-43	Mount Hardware
98810-49	Control Box
98810-50	Remote WITH USB Cable and Transmitter
98810-52	ISM
98810-53	Control Box Cover
98810-55	10K Complete Gear Box
98810-56	Control Box Mounting Bracket WITH Hardware
98810-57	10K Complete Motor Housing
98810-58	Socket Cover
98810-59	Remote/USB Socket
98810-77	On/Off Switch
98810-78	10K Replacement Rope
98810-79	10K Armor Set WITH Hardware
98812-55	12K Complete Gear Box
98812-57	12K Complete Motor Housing
98812-78	12K Replacement Rope



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## Installation Instructions X20 Gen 3 Winches

### Installation Mounting your winch

1. The winch is to be mounted in 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 be mounted on a flat surface so that the three sections (motor, drum, and gearbox) are properly aligned. -- The fitment of winches and/or a front protection system may affect the triggering of the SRS airbags. Check the mounting system has been tested and approved for winch fitment in an 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 mounting plate 6mm thick is required. Fasteners should be steel high tensile grade 5 or better. A poorly designed mount may void your warranty.
4. The winch should be secured to the mounting plate with 3/8" UNC x 1.25" stainless steel bolts and lock washers provided.
5. The aluminum fairlead is to be mounted to guide the rope onto the drum evenly.
6. The mounting bolt pattern of this winch is: 10" x 4.5"
7. Be sure to torque all hardware to the correct torque specification for the size of the bolt. For example: the winch mounting hardware should be torqued to 45-55 ft/lbs. Be sure to periodically check all hardware and tighten, as necessary.

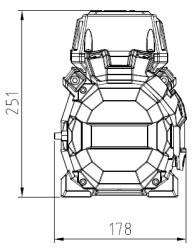
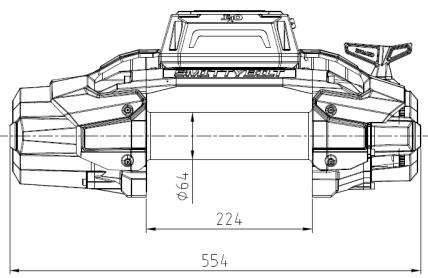
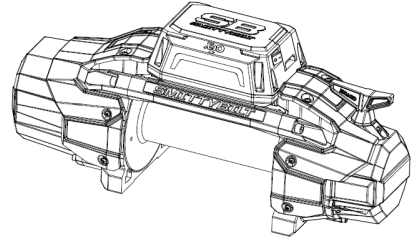
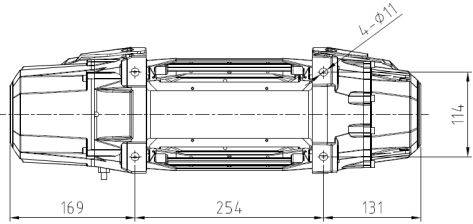
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**Installation Instructions**  
X20 Gen 3 Winches



**X20 10,000 & 12,000**

**Lubrication**

All moving parts in the winch are permanently lubricated with high temperature lithium grease at the time of assembly. Do not use any chemicals on the synthetic rope.

**Rope Installation**

Synthetic ropes do not come attached to the drum. Be sure to read instructions thoroughly for proper installation of the synthetic rope.

**Electrical Connection**

Be sure to check the electrical system of your vehicle prior to use. The use of di-electric grease can be used on all connection points to prevent corrosion. Always run the vehicle while the winch is in use. Check that all electrical connections are tight before going out.

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**Installation Instructions**  
X20 Gen 3 Winches

**12,000lbs Features and Specifications**

<b>Waterproof:</b>	IP68 Rating	<b>Drum Length:</b>	8.82" (224mm)
<b>Rated Line Pull:</b>	12,000lbs (5443kgs) single-line	<b>Fairlead:</b>	Aluminum Hawse
<b>Motor:</b>	7HP Series Wound	<b>Remote Control:</b>	Included
<b>Control:</b>	Wireless Remote Switch with 12' lead	<b>Battery Leads:</b>	25mm 2.72' (1.83m)
<b>Gear Train:</b>	3-Stage Planetary	<b>Finish:</b>	Textured Black
<b>Gear Ratio:</b>	216:1	<b>Weight:</b>	76lbs
<b>Clutch:</b>	Sliding Ring Gear	<b>Mounting Bolt Pattern:</b>	10" x 4.5"
<b>Brake:</b>	Automatic Out-of-Drum	<b>Overall Dimensions:</b>	(L x W x H) 22.3" x 5.4" x 9.4"
<b>Drum Size:</b>	2.5" Diameter	<b>Rope:</b>	98.5' 3/8" Diameter

Line Pull	lbs	0	3000	6000	9000	12000
	kg	0	1363	2727	4090	5454
Line Speed	ft/min	36.4	13.1	9.2	7.2	5.9
	m/min	11.1	4.0	2.8	2.2	1.8
Motor	Amps	65	157	242	340	400

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

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**Installation Instructions**  
**X20 Gen 3 Winches**

**10,000lbs Features and Specifications**

<b>Waterproof:</b>	IP68 Rating	<b>Drum Length:</b>	8.82" (224mm)
<b>Rated Line Pull:</b>	10,000lbs (4545kgs) single-line	<b>Fairlead:</b>	Aluminum Hawse
<b>Motor:</b>	7HP Series Wound	<b>Remote Control:</b>	Included
<b>Control:</b>	Wireless Remote Switch with 12' lead	<b>Battery Leads:</b>	25mm 2.72' (1.83m)
<b>Gear Train:</b>	3-Stage Planetary	<b>Finish:</b>	Textured Black
<b>Gear Ratio:</b>	185:1	<b>Weight:</b>	76lbs
<b>Clutch:</b>	Sliding Ring Gear	<b>Mounting Bolt Pattern:</b>	10" x 4.5"
<b>Brake:</b>	Automatic Out-of-Drum	<b>Overall Dimensions:</b>	(L x W x H) 22.3" x 5.4" x 9.4"
<b>Drum Size:</b>	2.5" Diameter	<b>Rope:</b>	98.5' 3/8" Diameter

Line Pull	lbs	0	2000	4000	6000	8000	10000
	kg	0	907	1814	2721	3628	4545
Line Speed	ft/min	39	15.7	13.1	11.1	8.8	7.2
	m/min	11.9	4.8	4.0	3.4	2.7	2.2
Motor	Amps	65	150	200	272	324	389

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
	m	6	13	22	30



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**Installation Instructions**  
**X20 Gen 3 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, such as, but not limited to, unloading vehicles from a trailer.
- 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 see it operate. Be able to recognize the sound of a light steady pull, a heavy pull, and sounds cause by load jerking or shifting. Soon you will gain confidence in operating your winch and its use will become second nature to you.

**PRE/POST OP CHECK LIST**

1. Periodically check the torque of all winch hardware, this should be done every time before expected use or every 3-6 months.
2. Inspect wiring and make sure connections are tight before each outing. Verify the wires are not damaged or cut.
3. Inspect rope for damage before and after each use.
4. Inspect remote for damage and test function before going out. On X20 model winches, check the range on the wireless remote, replace the battery if necessary.
5. Keep winch clean and keep the remote socket covered. Synthetic ropes need to be kept clean and must be free from any chemicals or dirt.
6. A winch cover can help keep winches clean when not in use.

**OPERATING**

1. Ensure the vehicle is secure by applying the parking brake or chocking the wheels.
2. Pull out the winch cable to the desired length and connect to an anchor point. Remember not to power out the rope. To disengage the gearbox from the motor, turn the shift lever to 'Free spool'. Once ready to winch in, shift the lever back to engaged. The winch is now ready to pull.
3. Recheck everything is setup correctly before proceeding.
4. Plug in the remote-control or turn on the wireless on/off switch and activate the wireless mode on the remote.
5. It is recommended that the user operating the winch be seated in the driver's seat of the vehicle when operating the winch.
6. To commence winching operation, start the vehicles engine, put the vehicle in neutral.
7. Use the IN function on the remote to begin the recovery process. Be sure to refer to the Winch Operation Warnings section of this manual for proper procedure during the winching process.

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## Installation Instructions X20 Gen 3 Winches

### MAINTENANCE

Once a month, cycle the winch by:

1. Powering out synthetic rope 15 feet. Then free spool out another 50+ feet of rope. Always make sure you have at least 10 wraps of rope around the winch drum.
2. Put winch into gear and re-spool the winch line. Inspect the synthetic rope while you are re-spooling. Remember to have at least 1000lbs of resistance on the rope during this process. This will prevent damage to the rope.
3. Refer to the Keep Your Winch Happy guide included with your winch.

	Read the instructions before use.		Always keep hands clear of wire rope, hook loop.
	Always use supplied hook strap whenever spooling wire rope in or out.		Never use to lift.
	Never use to move persons.		Don't make wire rope out on the drum.
	Strong Magnet do not place near precision type of instruments(example watch,phone)		
Wire rope can not be used if damaged. Please replace a new one.			

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## Installation Instructions X20 Gen 3 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 effects.	Test duration: 5 minutes Water volume: 0/7 liters per minute Pressure: 80-100 kN/m <sup>2</sup>
4	Splashing water	Water splashing against the enclosure from any direction shall have no harmful effects.	Test duration: 5 minutes Water volume: 10 liters per minute Pressure: 80/100 kN/m <sup>2</sup>
5	Water jets	Water projected by a nozzle (6.3mm) against enclosure from any direction shall have no harmful effects.	Test duration: >3 minutes Water volume: 12.5 liters per minute Pressure: 30 kN/m <sup>2</sup> at a distance of 3 meters
6	Powerful water jets	Water projected in powerful jets (12.5mm nozzle) against the enclosure shall have no harmful effects.	Test duration >3 minutes Water volume: 100 liters per minute Pressure: 100 kN/m <sup>2</sup> at a distance of 3 meters
7	Immersion up to 1 meter	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 1m of submersion)	Test duration: 30 minutes Immersion at depth of 1 meter.
8	Immersion beyond 1 meter	The equipment is suitable for continuous immersion in water under conditions specified by the manufacturer.	Test duration: continuous immersion in water

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# Installation Instructions X20 Gen 3 Winches



### Understanding IP Ratings

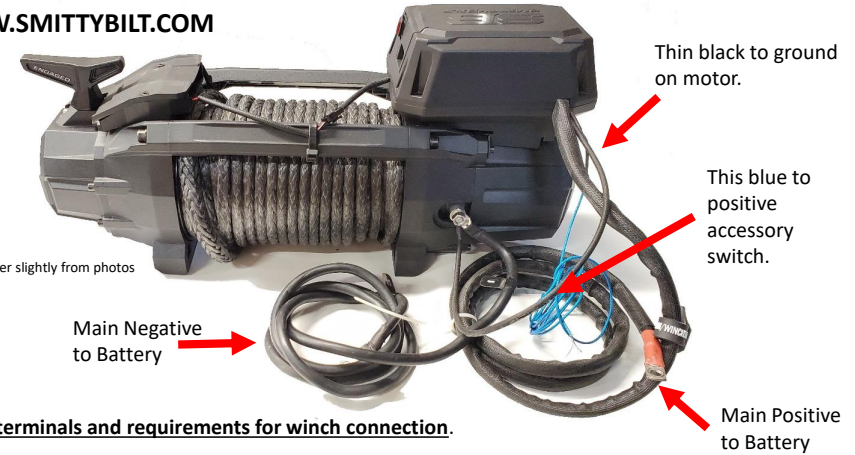
- The first digit indicates the level of protection that the enclosure provides against access to hazardous parts (e.g., electrical conductors, moving parts) and the ingress of solid foreign objects.
- The second digit indicates protection of the equipment inside the enclosure against harmful ingress of water.
- This winch is IP68 rated.

Level	Object Size	Effective Against
0	-	No protection against contact and ingress of objects
1	>50mm	Any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part
2	>12.5mm	Fingers or similar objects
3	>2.5mm	Tools, thick wires, etc.
4	>1mm	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



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# Installation Instructions X20 Gen 3 Winches



\*actual winch may differ slightly from photos

### Proper battery terminals and requirements for winch connection.

1. Never use the auxiliary battery post. Those are used for low amp draw only. If you connect the winch power wires there, you will overheat the terminals, which may cause melting of terminal or damage/explosion of battery.
2. Wire terminal must be attached with appropriate size mounting hardware. 5/16" is normal size. Do not under size, this will provide a poor connection and will result in excessive resistance and may cause failure of battery terminal.
3. Always ground the winch directly to the battery and NEVER the chassis or body. Factory ground straps are not designed to handle the high amperage draw the winch produces which may lead to wires melting and/or vehicle fire.
4. Do not connect winch to a side terminal battery. If vehicle has side terminal battery its recommended to get a dual terminal battery and use the top post for winch connection.
5. Always make sure your battery terminals and connections are clean.
6. Always make sure your battery terminals are securely tightened.
7. Keep wires away from heat.
8. Do not bundle wires and always route away from sharp edges and moving parts.
9. **Always make sure all wires on the winch motor are tight, secure and protected. A loose connection may think you to believe you have a bad motor or solenoid. It also puts more stress on the solenoid and motor and may cause them to fail or overheating of connection wires.**
10. Battery must have a minimum of 650CCA rating and in good condition. Aged or weak batteries may cause erratic or no operation.
11. Battery must be charged by vehicles charging system during use. A recommended 100 amp or higher alternator is required to charge battery during use. Vehicle must be running during use.
12. Use of a stand-alone battery is prohibited.

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**Installation Instructions**  
X20 Gen 3 Winches

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**Step 1.** Connect the black main ground wire along with the small black ground wire coming out of the control box to the ground stud on the backside of the motor.



**Step 2.** Connect the main ground wire directly to the negative terminal on the battery.

**Note:** Battery terminal should have a 5/16" or 8mm fastener for proper mounting. Smaller diameter fasteners will not provide an adequate connection and may fail under load.



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**Installation Instructions**  
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**Step 12.** RE-install control box cover using previously removed hardware. Ensure all wires are in place and none are pinched between the control box cover and the control box base.

**Note:** The green wire in the control box is the receiver antenna, it is not attached to anything and will lay loose inside the control box.

**Step 13.** Re-install gear box armor using previously removed hardware. Ensure the wiring passes through the slot and does not get pinched when installing the cover.



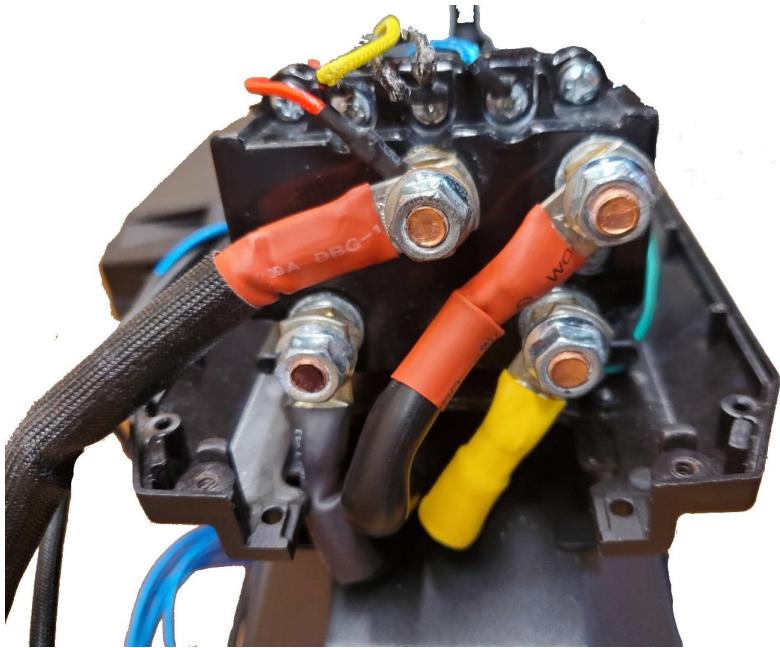
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**Installation Instructions**  
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**Step 11.** Attach the power wires on to the solenoid. Take note the orientation of the wires. Use previously removed hardware to secure wires to solenoid. Wires are move flexible when warm, you may use a hair dryer to heat them up if desired. Get all wires in place and loosely held on with hardware before fully tightening all the nuts. **Note:** If using in wet environments, it is suggested to coat terminals and studs in no-ox-id. You may now fully tighten the motor cover bolts to secure the control box in place.



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**Installation Instructions**  
X20 Gen 3 Winches

The thin blue wire coming out of the control box allows you to power the Day- Time Running light featured on the control box. You may connect them any positive accessory switch on your vehicle or tap into an ignition controlled positive source. You may need to extend the wire to reach your vehicles power source.



\*actual winch may differ slightly from photos

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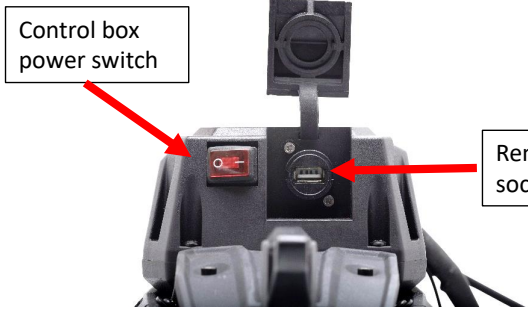


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# Installation Instructions X20 Gen 3 Winches



Magnetic mounting pad



Power IN switch



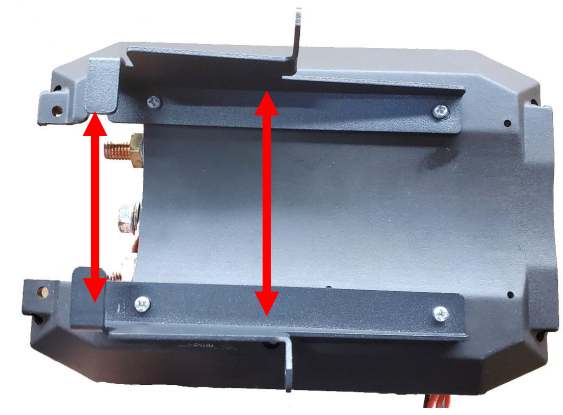
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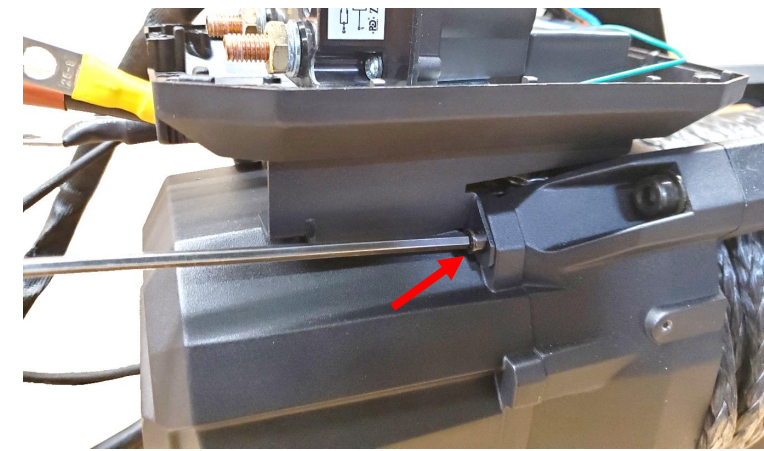
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# Installation Instructions X20 Gen 3 Winches

**Step 9.** Attach the over the motor control box mounts using previously removed Philips screws. Do not over tighten and strip out the screws. Note orientation of the tabs.



**Step 10.** Remove the top two motor cover screws. Then align control box with the holes and secure control box to the motor cover using the motor cover screws. Only start the screws so that the control box can be moved slightly.



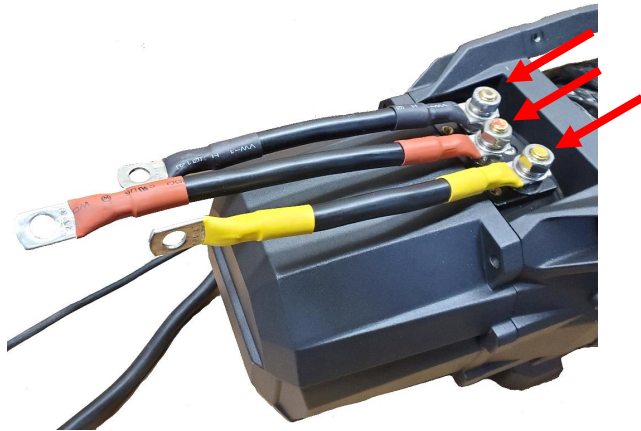
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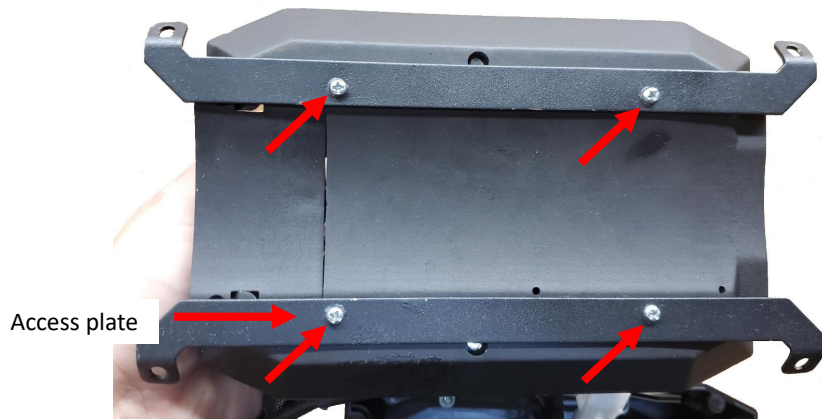
**Installation Instructions**  
X20 Gen 3 Winches

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**Step 7.** Attach the longer motor power wires to the corresponding poles on the motor using previously removed hardware. **Note:** If using in wet environments, it is suggested to coat terminals and studs in no-ox-id.



**Step 8.** Remove control box mounts from the control box base by removing the four Philips head screws. Then remove the access plate.



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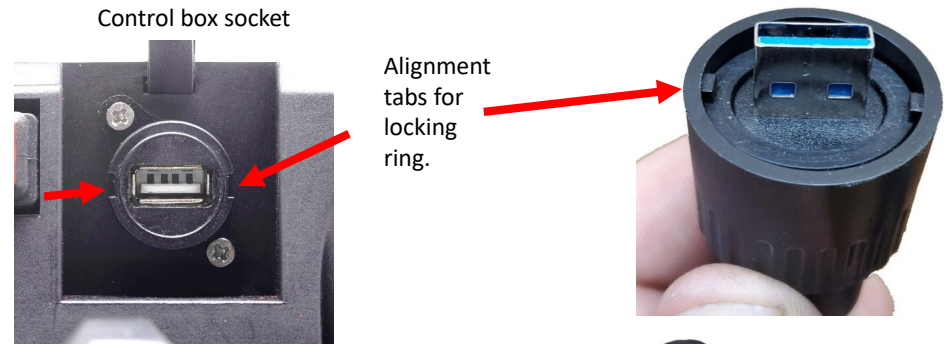


**Installation Instructions**  
X20 Gen 3 Winches

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To use wired: Connect remote to control box by lining up the USB port then push plug straight into socket, make sure alignment tabs on the locking ring are horizontal, then secure by turning locking ring about ¼ turn clockwise. Plug opposite end into winch remote. Winch remote will power on when wire is connected. Red light will flash on the remote main power button.

To remove winch remote, turn locking ring about ¼ turn counter-clockwise and pull plug straight out. **Control box rocker switch must be turned on in order to control the winch.**



**To use wireless:**  
Turn on remote by pressing and holding the main power button for two seconds till the blue indicator light turns on. To turn off, press and hold main power button for 2 seconds. If remote is left on, after 2 minutes of inactivity it will turn itself off.

Turn on wireless receiver on the winch via red rocker switch on the control box.



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# Installation Instructions X20 Gen 3 Winches

**To power IN:**  
Press the power IN switch. The switch cover will light up. Use the power trigger to control the winch.

**Note:** If you press the power IN switch a second time, the remote will go into neutral and will not power the winch.

**To power OUT:**  
Press the power OUT switch. The switch cover will light up. Use the power trigger to control the winch.

**Note:** If you press the power OUT switch a second time, the remote will go into neutral and will not power the winch.



To use LED light in the remote, ensure remote is plugged in and then press the LED light switch to power the light on and off.



LED light switch      LED light

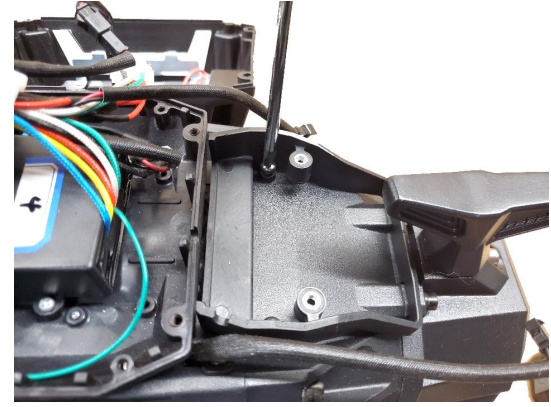
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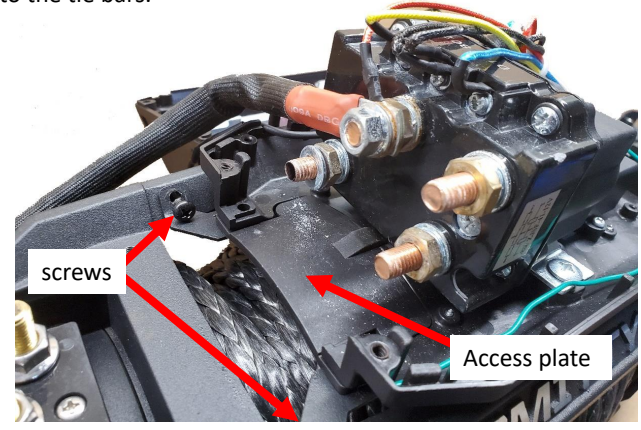
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# Installation Instructions X20 Gen 3 Winches

**Step 5.** Remove armor base plates on both the motor and gearbox side. Keep motor side armor, armor baseplate and hardware in case you want to mount control box over the drum in the future. Motor side will be secured with four Philips screws, gearbox side will be secured with two Philips head screws. Save hardware.



**Step 6.** Remove control box base from the winch by removing the four Philips head screws that secure it to the tie bars.



screws      Access plate

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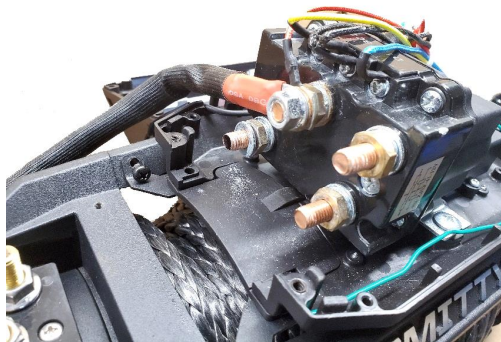
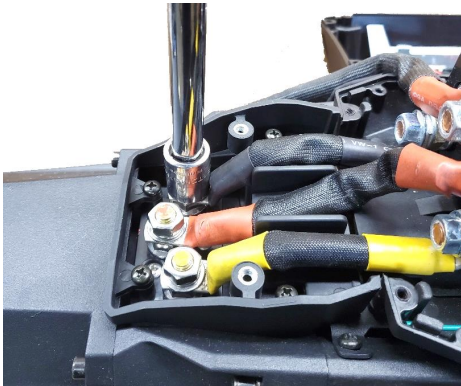
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### Installation Instructions X20 Gen 3 Winches

**Step 3.** Remove armor on both the motor and gearbox side. Notice long screws are in the top and short screws are in the front.



**Step 4.** Remove the nuts that attach the leads from the solenoid to the motor. Then remove three leads from solenoid. Take note of wire orientation.



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### Installation Instructions X20 Gen 3 Winches

**To charge remote:** Hook up USB cable to remote and hook the other end into any USB port that has a minimum of a amp output rating. Most vehicles with a USB port will support remote charging. The main power button will flash red indicating that the remote is charging. Light will stop flashing and turn solid red when charging is complete. If red light does not come on when USB cord is connected, click the trigger button.

Remote contains a rechargeable battery. Battery must be kept charge. We recommend charging monthly and after every use. If battery is allowed to sit for long periods or if it gets fully discharged, irreversible damage to battery may occur.



Due to the high-power LED flashlight, recharge remote as soon as you see the light output diminish. A fully charged remote will allow about 15 minutes of continuous use of the flashlight.

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# Installation Instructions X20 Gen 3 Winches



Strong neodymium magnet enables the remote to be secured to any ferromagnetic material.

## CAUTION

- Magnets could affect the functioning of pacemakers, implanted heart defibrillators or other medical implants.
- A heart defibrillator may stop working.
- If you wear these devices keep sufficient distance to magnets.
- Warn others who wear these devices from getting too close to magnets.
- Keep away from electronics and magnetic storage media.
- Do not ingest magnets. If ingested immediately seek medical attention.

**WARNING**

**NEVER** operate winch with less than 10 wraps of Synthetic 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 minimum 1000lb. load before each use.

\*For more information see owners manual\*

- Inspect rope before each use
- Protect the rope from coming in contact with sharp or rough objects that may damage, cut or weaken the rope
- Never use rope over a rough surface without chafe protection
- Never shock load winch rope
- Never bend rope around unprotected, sharp corners
- Always use an aluminum hawse fairlead with synthetic ropes
- Never hook rope back onto itself
- Always wash rope after use
- Manufacturer is not responsible for the results of misuse, misapplications, faulty installation, abuse, vehicle condition or modification of the product in any way.

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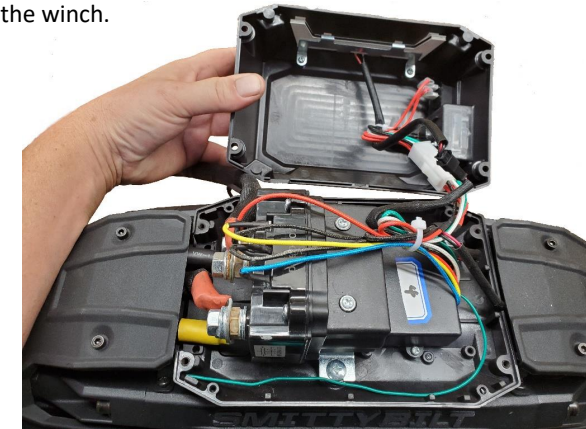
# Installation Instructions X20 Gen 3 Winches

**Disconnect winch from battery before attempting any repairs or modifications.**

**Step 1.** Remove control box cover by remove the four Philips head screws.



**Step 2.** Carefully lift the cover and set to the rear of the winch.



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# Installation Instructions X20 Gen 3 Winches



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# Installation Instructions X20 Gen 3 Winches

**Step 1:** Remove e-clip from the shear pin, then remove shear pin from winch hook. Fig 1.



Fig 1

**Step 2:** Insert winch rope/thimble into hook( fig 2) and secure with shear pin(fig 3) and e-clip. Ensure e-clip is fully seated in the groove on the shear pin. Fig 4.



Fig 2



Fig 3

**Note:** Periodically lube the latch pivot with Breakfree CLP to ensure smooth operation.



Fig 4

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**Installation Instructions**  
X2O Gen 3 Winches

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- Never side load winch hook.
- Inspect hook before and after each use. Do not use hook if damage is present.
- Never hook winch hook onto winch rope.
- DO NOT exceed winch hook's working load limit capacity.
- Only attach to rated recovery points.
- Never attach to suspension components for recovery.
- Always setup rigging so that the winch hook opening is facing up and towards the sky. In case of winch tackle failure, there is more of a chance the flying tackle is directed towards the ground instead of projecting upwards into harms way.
- When retracting winch rope always use a hook strap.
- NEVER put fingers inside the hook area as you are powering in the winch.
- It is advised that the winch hook is snugged up flat against the fairlead for storage.
- Avoid shock loads which may overload winch, winch hook, winch rope, or winch mounting points.



Discontinue use if throat opening has been overloaded / compromised when latch does not catch on the tip of the hook.

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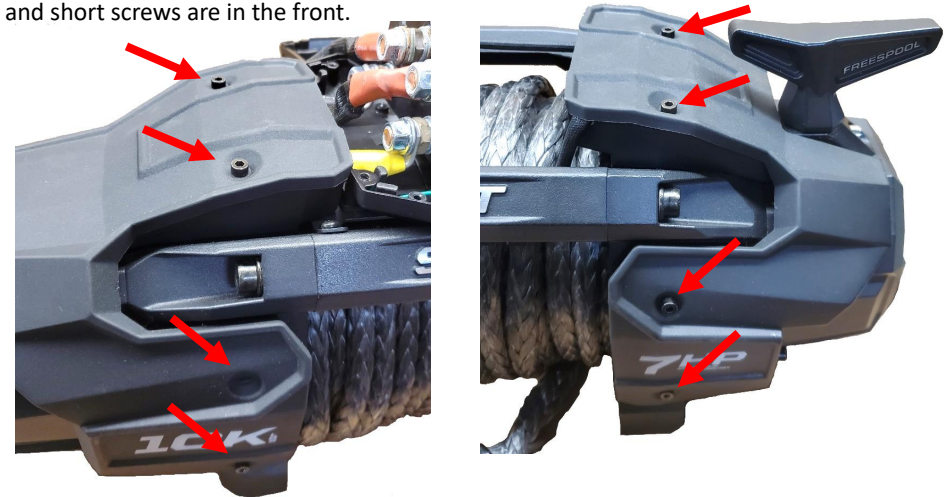
**Installation Instructions**  
X2O Gen 3 Winches

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The winches plastic armor may be removed for paint customization. The plastic armor is made of TPO (thermoplastic olefin). Special preparation is required for proper paint adhesion. Contact your local paint supplier for the recommended adhesion promoters, flex agents, primers, and paint.



**Step 1.** Remove armor on both the motor and gearbox side. Notice long screws are in the top and short screws are in the front.



**Step 2.** Re-install armor on both the motor and gearbox side. Notice long screws are in the top and short screws are in the front. Do not over tighten screws.

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