



# XRC WINCH

## INSTRUCTION MANUAL

### CONTENTS

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



### WINCHES:

XRC 9,500LB, XRC 12,000LB,  
XRC 15,000LB, XRC 17,500LB



# Installation Manual

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## GENERAL SAFETY PRECAUTIONS

### 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 jewellery. 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.
- Protective hair covering to contain long hair.

#### 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 to 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 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 stop 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 left.
- 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.

**Warning:** The use of any other accessory or attachment other than those recommended in the Fitting Instructions may present a risk of personal injury.

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## WINCH OPERATION WARNINGS

Read the following carefully before attempting to operate your winch and keep the instructions for future reference.

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 un-spool 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 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 metre or so to assure the cable is not piling up in one corner. Jamming the cable can break your winch.
6. Do not attach tow hooks to winch mounting apparatus. 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.
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 (5) 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 5 cable wraps 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 5 wraps minimum on the drum-red cable). 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 blinding, 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 load, free by hand.
14. Apply blocks to wheels when vehicles are on an incline.

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## 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 cable is directly related to the use and care it receives. Following its first and subsequent uses, a cable must be wound onto the drum under a load of at least 500lbs (230kg) or the outer wraps will draw into the inner wraps and severely damage the cable during winching. The first winch use should be a familiar run while in a relaxed, non-recovery situation. Spool out the cable until the red cable mark appears (about five wraps on the drum), when rewind the cable onto the drum under a load of 500lbs (230kg) 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 replacing the steel wire rope or the fiber rope, be sure to disconnect the winch cable to "+" (positive) of the battery, and disengage the clutch by move the clutch handle to the "OUT" position.

**Should you choose fiber rope to take place of the winch steel wire rope,**

- **Please make sure this fiber rope preferred can with stands the maximum capacity of your winch. Always bear in mind the working load limitation of this fiber rope, and never exceed the working load limitation or shock load of your rope.**
- **Fiber rope should be attached to winch drum properly, always remain enough wraps on the winch drum when extending rope. Failure to do this could result in rope parting from the drum. Serious personal injury or property damage may result.**
- **Please make sure the fiber rope in good condition, without cuts or pulled strands. Fiber rope will fail in case worn, damaged, overloaded, or not properly maintained.**
- **Do not stand within the lash-back area.**
- **Do not use over rough surfaces without chafe protection.**
- **Do not bend around unprotected, sharp corners.**

## 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 increased 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 mount, 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.

23. Never operation your electric winch in gas (petrol) station, or any place has explosive gas.

24. Power out only enough to relive slack, excessive powering out can cause damage to internal parts.

25. Do not use to hold loads...yes, see page 4 top side.

26. Do not use to drop loads (example-unloading vehicles).

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27. Only DC power can be applied to the winch stated in this Fitting Instructions.

|  |  |   |  |
|--|--|---|--|
|   | 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.                    |  |   |  |
|  |  |  |  |

## INSTALLATION

### MOUNTING YOUR WINCH

1. a) 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.
- b) It is 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.
- c) Before commencing installation, ensure the mounting facility being used is capable of with standing the rated capacity of the winch.
- d) 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 air bag equipped vehicle.
2. Should you wish to manufacture your own mounting plate the dimensions below will assist. A steel mount plate of at least 6mm thickness is recommended. Fasteners should be steel high tensile grade 8.8 or better. A poorly designed mount may void warranty.
3. When installing the winch the tightening torque of 4pcs mounting bolt M10\*32 (8.8 grade) should not be less than 60Nm and have loose prevention measures. And the thickness of steel mounting plate should be 4-6mm.
4. The roller fairlead is to be mounted so as to guide the rope onto the drum evenly.
5. Winch dimensions and mounting patterns are provided together with the winch specification.

### LUBRICATION INSTALLATION

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



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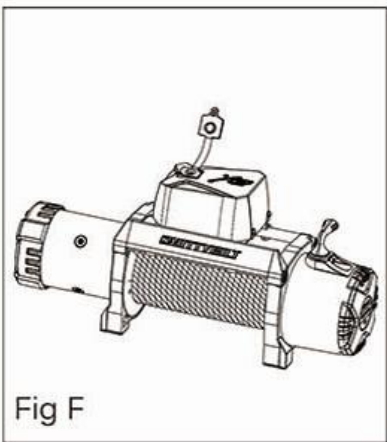
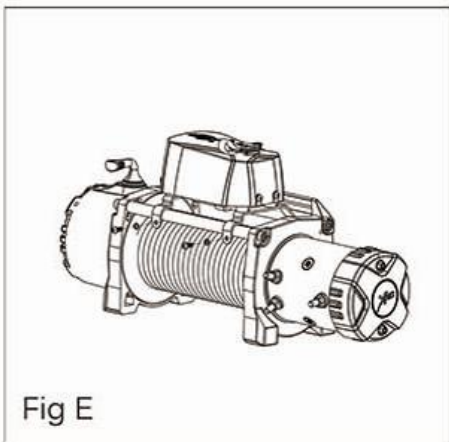
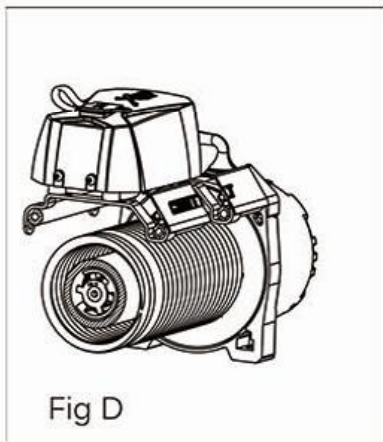
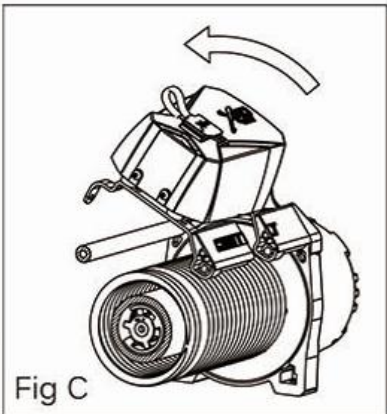
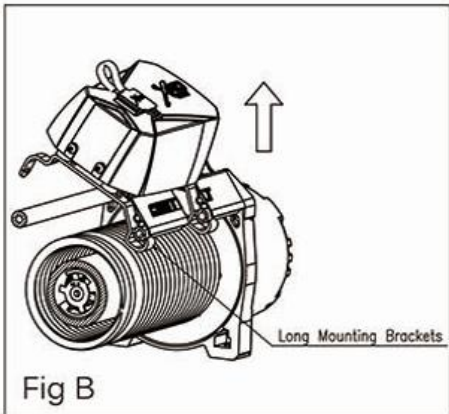
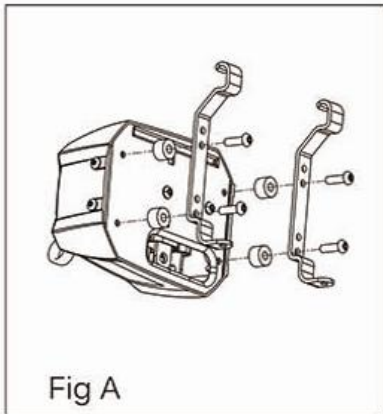
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## 97495/97412/97415/97417 SOLENOID MOUNTING SUPPLEMENT

### Tie Rod Over Cable Mounting Instruction – Horizontal

**Step 1:** Install the long mounting brackets with spacers (hook facing forward) on the solenoid box and tighten the bolt. (Fig A)

**Step 2:** Place solenoid on top of tie-rods with hooks facing forward in desired location Secure by tightening the screws in the rear. (Fig B,C,D,E,F) Installation is now complete. Use the wiring diagram in instruction manual for further assembly.





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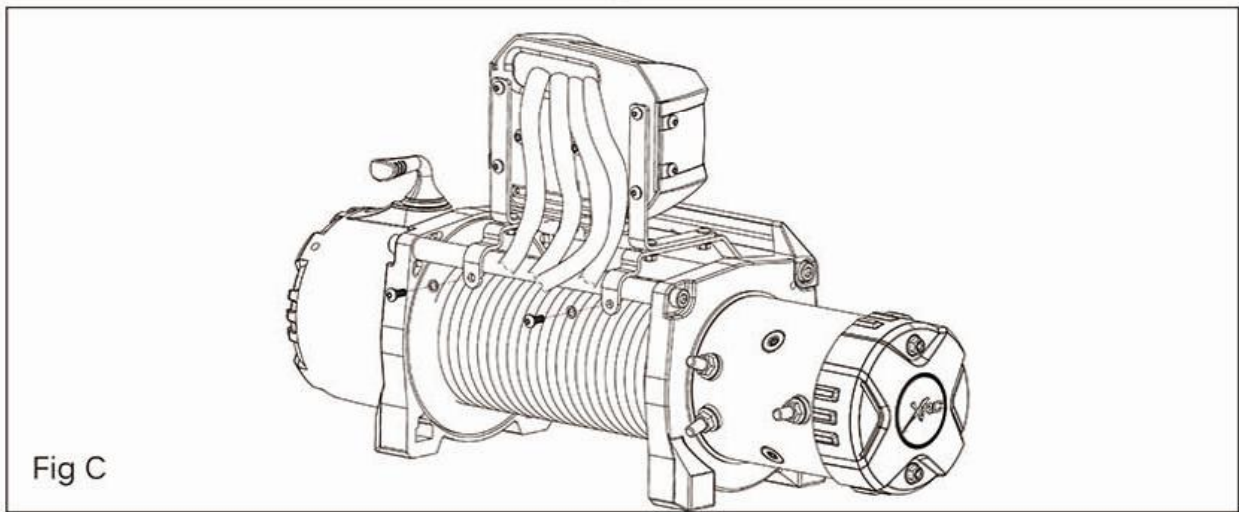
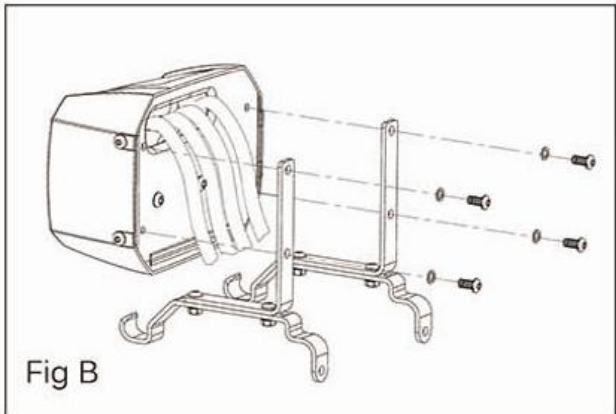
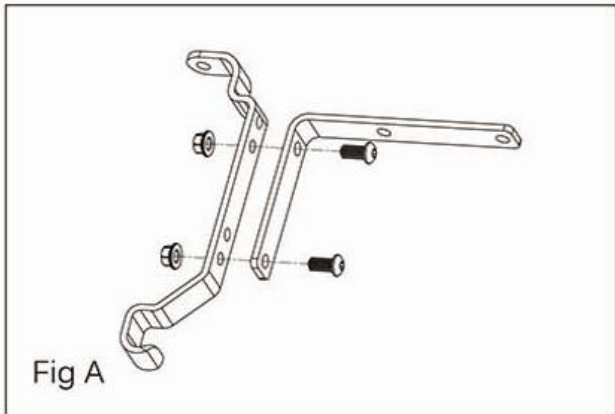
## 97495/97412/97415/97417 SOLENOID MOUNTING SUPPLEMENT

### Tie Rod Over Cable Mounting Instruction - Vertical

**Step 1:** Connect the long mounting bracket and L mounting bracket by bolt (Fig A) .

**Step 2:** Install the whole mounting bracket (hook facing forward) on the solenoid box and tighten the bolt (Fig B) .

**Step 3:** Place solenoid on top of tie-rods with hooks facing forward in desired location. Secure by tightnrning the screws in the rear. (Fig C) Installation is now complete. Use the wiring diagram in instruction manual for further assembly.





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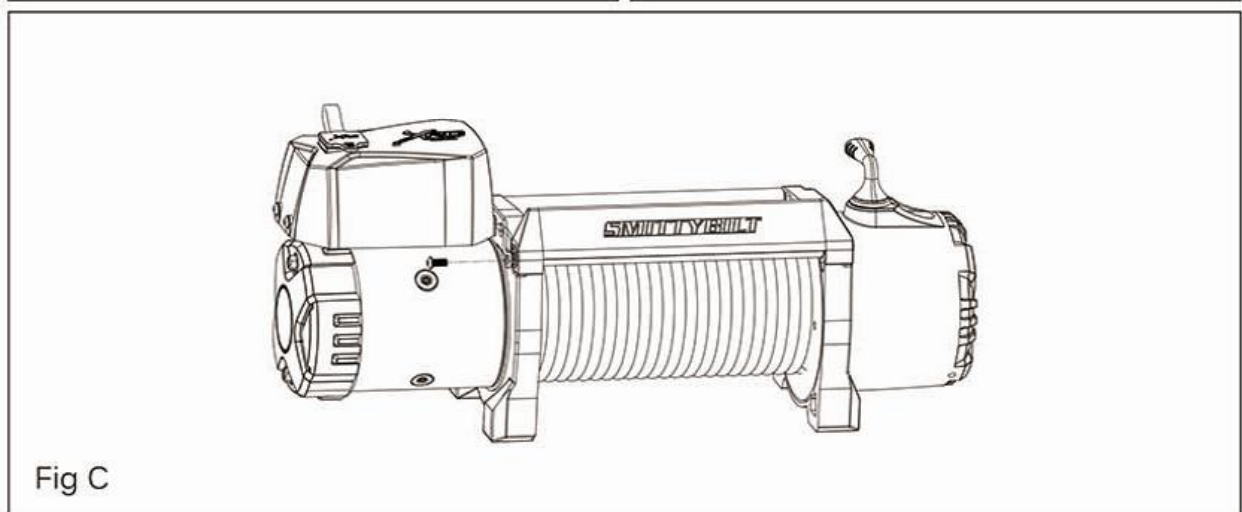
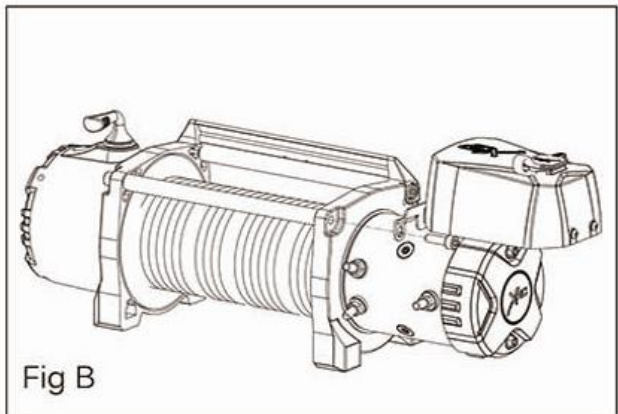
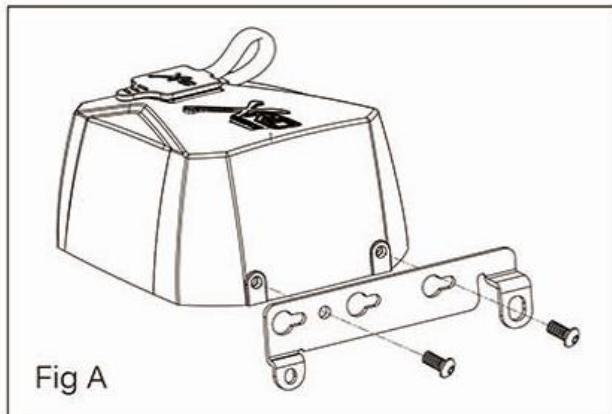
## 97495/97412/97415/97417 SOLENOID MOUNTING SUPPLEMENT

### Over Motor Mounting Instruction

**Step 1:** Loosen the bolt on the side of solenoid box and place the small mounting bracket at the side of solenoid box , tighten the bolt.(Fig A)

**Step 2:** Loosen the tie rod bolt at the motor side, and place the control box in the desired location, and then tighten the bolt. (Fig B)

**Step 3:** Tighten the logo bar bolt at the motor side. Installation is complete. Use the wire diagram in the instruction manual for further assembly. (Fig C)







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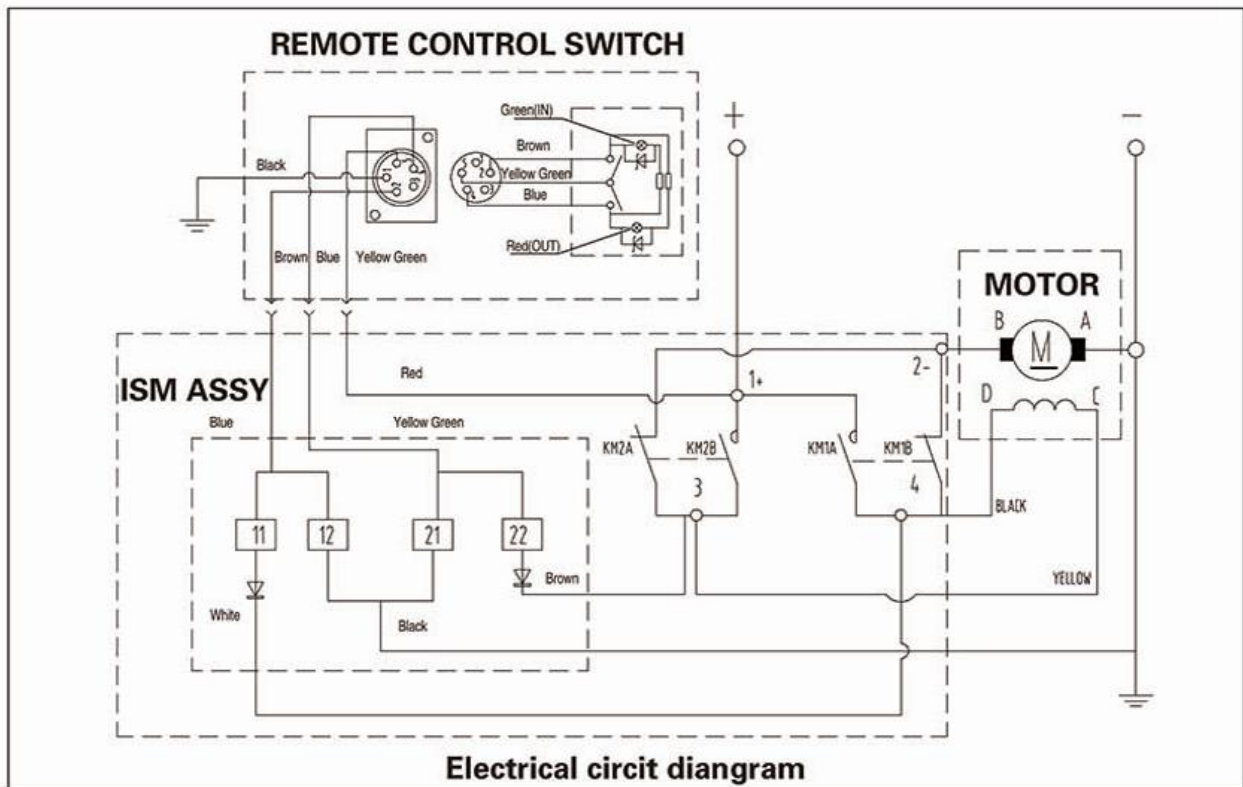
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## ELECTRICAL CONNECTION

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.

Pay close attention to proper electrical cable connection as follows (refer to Diagram 1)

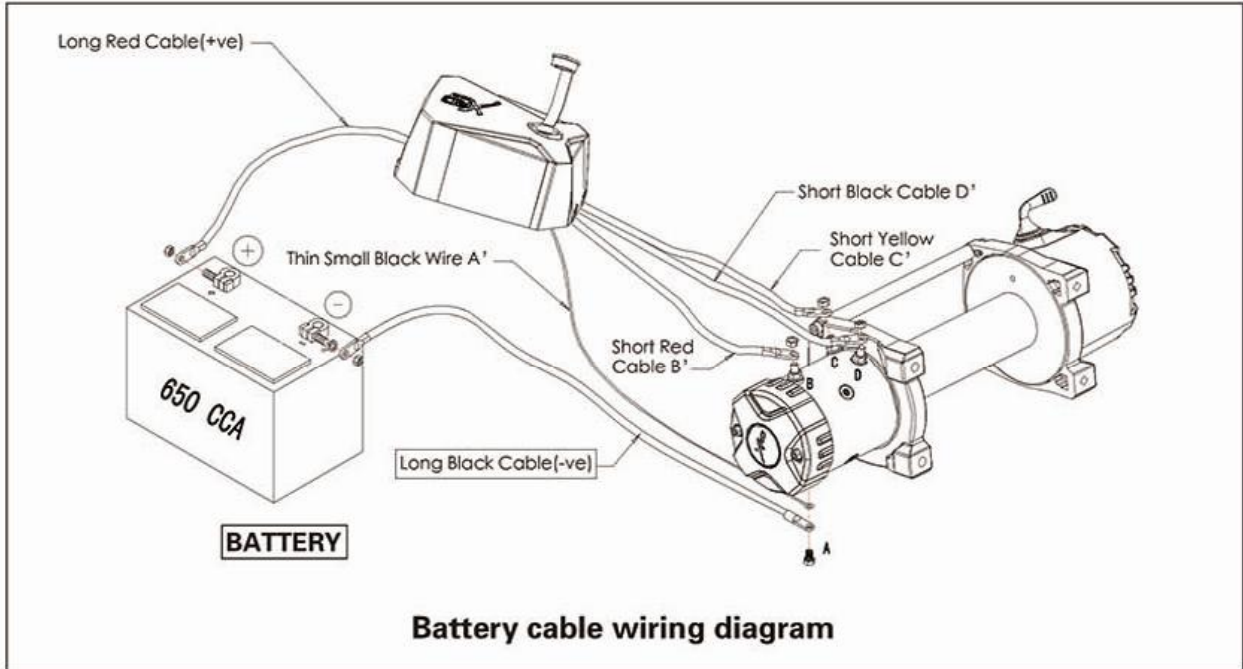
1. Short Red cable (B') connecting to the red terminal (B) of the motor.
2. Short black cable with yellow jacket (C') connecting to the yellow terminal (C) of the motor.
3. Short black cable with black jacket (D') connecting to the black terminal (D) of the motor
4. Thin black cable (E) connecting to bottom terminal (A) of the motor.
5. Long Black Cable (1.8m), one terminal (A') connecting to the bottom terminal (A) of the motor, and the other terminal negative (-) connecting to negative (-) terminal of battery.
6. Long red cable positive (+) connecting to positive (+) terminal of battery.





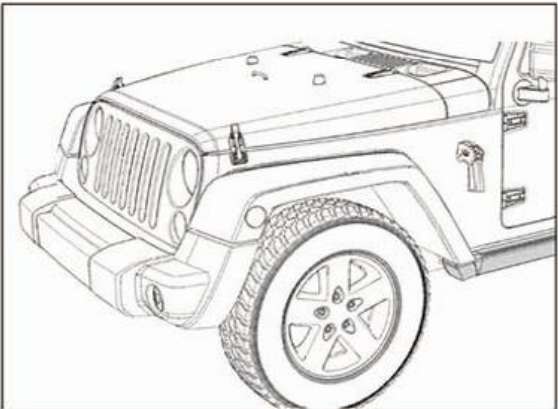
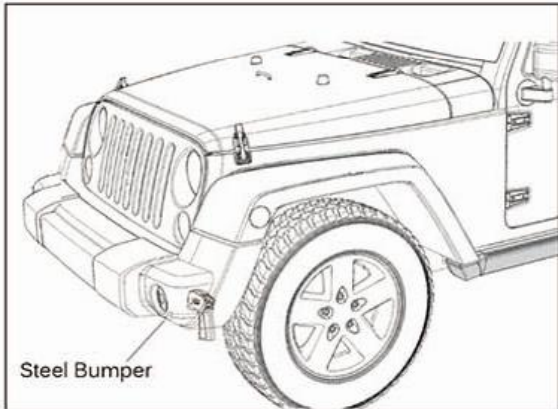
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**NOTE:**

- 1. Your battery must be kept in good condition.
- 2. Be sure battery cables are not drawn taut 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.
- 6. Index the heads of the plate studs into the keyhole slots on the back of the winch.



Remote has handy magnet to attach to vehicle or bumper when needed



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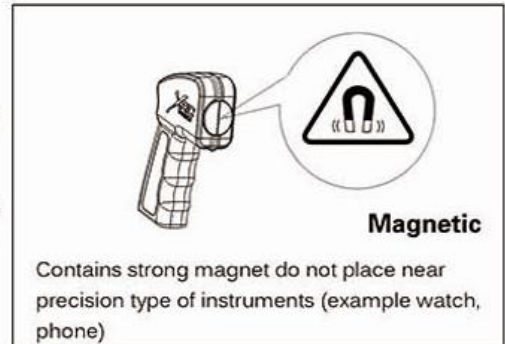
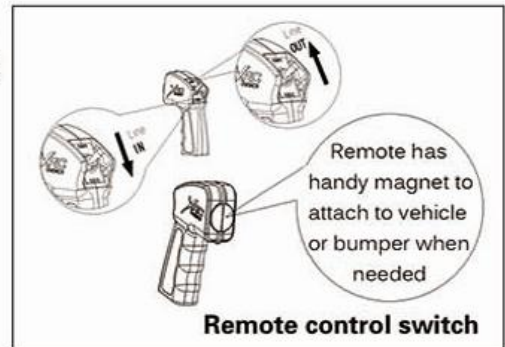
## WINCH OPERATION

### SUGGESTION:

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 secured 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 to the "OUT" position. Cable may 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. Operate 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.



### Note:

1. Never winch with your vehicle in gear or in park, which would damage your vehicle's transmission.
2. Never wrap the cable around the object and hook onto the cable when winching.
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 winch is not in use.
7. Do not use as a hoist
8. Power out only to relieve slack on cable or rope. Excessive powering out can cause damage to internal components.
9. Do not use to hold loads.
10. Do not use to drop loads (example-unloading vehicles).

### CHECK THE WINCH CAREFULLY AND THOROUGHLY BEFORE OPERATING!

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## 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.

### SPARE PARTS:

A comprehensive range of spare parts is available. For further information please contact the distributors from whom you get your winch.

### NOTE:

The safety precautions and instructions discussed in this manual can't 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.



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## Part Number: 97495 XRC 9,500 LBS WINCH

|                        |                                  |
|------------------------|----------------------------------|
| Rated Line Pull:       | 9,500Lbs (4,305kgs) single-line  |
| Motor:                 | 6.6hp Series Wound               |
| Control:               | Remote Switch, 12' (3.7m) lead   |
| Gear Train:            | 3-Stage Planetary                |
| Gear Ratio:            | 161.28:1                         |
| Clutch:                | Sliding Ring Gear                |
| Brake:                 | Automatic In The Drum            |
| Drum Size:             | Diameter 2.5"(63.5mm)            |
| Waterproof:            | IP67 Rating                      |
| Fairlead:              | 4-Way Roller                     |
| Remote Control:        | Included                         |
| Cable:                 | 94' 5/16" Diameter               |
| Battery Leads:         | 72"(1.83m)                       |
| Finish:                | Textured Black                   |
| Weight:                | 77Lbs (35Kgs)                    |
| Overall Dimension:     | (L x W x H) 20.80" x 6.3" x 7.8" |
| Mounting Bolt Pattern: | 10.0" x 4.50"                    |
| Recommended:           | 650CCA Minimum for Winching      |

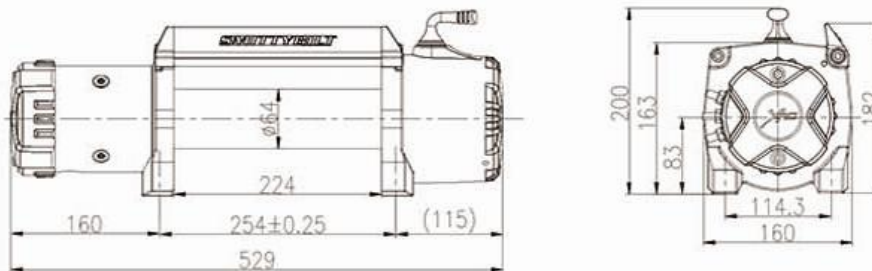
### 9500LBS Line Pull & Capacity

| Layers Of Cable           |     | 1    | 2    | 3    | 4    |
|---------------------------|-----|------|------|------|------|
| Rated Line pull per layer | lbs | 9500 | 8435 | 7640 | 7086 |
|                           | kg  | 4305 | 3822 | 3460 | 3212 |
| Cumulative cable capacity | ft  | 16   | 42   | 72   | 94   |
|                           | m   | 5    | 12   | 21   | 28   |

### 9500LBS Line Speed & Amp Draw-First Layer

| Line Pull  | lbs    | No Load | 2000  | 4000  | 6000  | 8000 | 9500 |
|------------|--------|---------|-------|-------|-------|------|------|
|            | kg     | No Load | 907   | 1814  | 2721  | 3625 | 4305 |
| Line Speed | ft/min | 32.34   | 19.68 | 14.76 | 10.82 | 9.35 | 6.23 |
|            | m/min  | 9.86    | 6     | 4.5   | 3.3   | 2.85 | 1.9  |
| Motor      | Amps   | 80      | 165   | 240   | 320   | 380  | 435  |

### DIMENSION OF THE WINCH



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## Part Number: 97412 XRC 12,000 LBS WINCH

|                        |                                  |
|------------------------|----------------------------------|
| Rated Line Pull:       | 12,000Lbs (5,440kgs) single-line |
| Motor:                 | 6.6hp Series Wound               |
| Control:               | Remote Switch, 12' (3.7m) lead   |
| Gear Train:            | 3-Stage Planetary                |
| Gear Ratio:            | 193.2:1                          |
| Clutch:                | Sliding Ring Gear                |
| Brake:                 | Automatic In The Drum            |
| Drum Size:             | Diameter 2.5"(63.5mm)            |
| Waterproof:            | IP67 Rating                      |
| Fairlead:              | 4-Way Roller                     |
| Remote Control:        | Included                         |
| Cable:                 | 94' 3/8" Diameter                |
| Battery Leads:         | 72"(1.83m)                       |
| Finish:                | Textured Black                   |
| Weight:                | 85Lbs (39Kgs)                    |
| Overall Dimension:     | (L x W x H) 21.2" x 6.3" x 7.8"  |
| Mounting Bolt Pattern: | 10.0" x 4.50"                    |
| Recommended:           | 650CCA Minimum for Winching      |

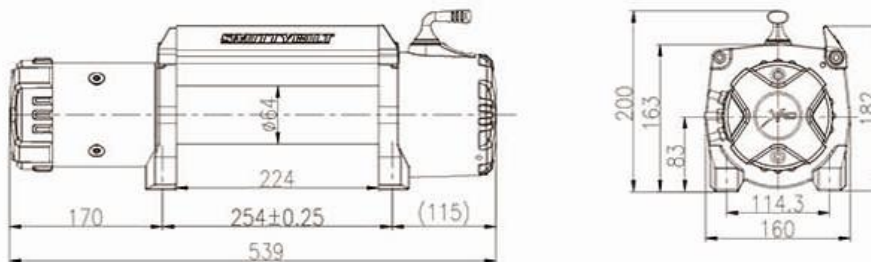
### 12000LBS Line Pull & Capacity

| Layers Of Cable           |     | 1     | 2     | 3    | 4    |
|---------------------------|-----|-------|-------|------|------|
| Rated Line pull per layer | lbs | 12000 | 10270 | 9200 | 8500 |
|                           | kg  | 5440  | 4654  | 4169 | 3852 |
| Cumulative cable capacity | ft  | 16    | 42    | 72   | 94   |
|                           | m   | 5     | 12    | 21   | 28   |

### 12000LBS Line Speed & Amp Draw-First Layer

| Line Pull  | lbs    | No Load | 3000   | 6000  | 9000  | 12000 |
|------------|--------|---------|--------|-------|-------|-------|
|            | kg     | No Load | 1360   | 2720  | 4080  | 5440  |
| Line Speed | ft/min | 28.208  | 11.152 | 7.872 | 6.232 | 5.248 |
|            | m/min  | 8.6     | 3.4    | 2.4   | 1.9   | 1.6   |
| Motor      | Amps   | 75      | 163    | 244   | 315   | 400   |

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## Part Number: 97415 XRC 15,500 LBS WINCH

|                        |                                  |
|------------------------|----------------------------------|
| Rated Line Pull:       | 15,500Lbs (7,025kgs) single-line |
| Motor:                 | 6.6hp Series Wound               |
| Control:               | Remote Switch, 12' (3.7m) lead   |
| Gear Train:            | 4-Stage Planetary                |
| Gear Ratio:            | 330:1                            |
| Clutch:                | Sliding Ring Gear                |
| Brake:                 | Automatic In The Drum            |
| Drum Size:             | Diameter 3.70"(94mm)             |
| Waterproof:            | IP67 Rating                      |
| Fairlead:              | 4-Way Roller                     |
| Remote Control:        | Included                         |
| Cable:                 | 94' 25/64" Diameter              |
| Battery Leads:         | 72"(1.83m)                       |
| Finish:                | Textured Black                   |
| Weight:                | 132Lbs (60Kgs)                   |
| Overall Dimension:     | (L x W x H) 24.1" x 8.4" x8.86"  |
| Mounting Bolt Pattern: | 10.0" x 4.50" AND10.0" x 6.50"   |
| Recommended:           | 650CCA Minimum for Winching      |

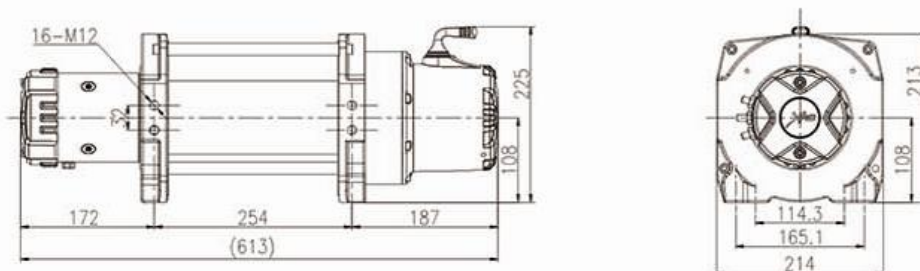
### 15500LBS Line Pull & Capacity

| Layers Of Cable           |     | 1     | 2     | 3     | 4    |
|---------------------------|-----|-------|-------|-------|------|
| Rated Line pull per layer | lbs | 15500 | 12968 | 10992 | 9630 |
|                           | kg  | 7024  | 5877  | 4982  | 4364 |
| Cumulative cable capacity | ft  | 20.4  | 46    | 75    | 92   |
|                           | m   | 6.2   | 14    | 23    | 28   |

### 15500LBS Line Speed & Amp Draw-First Layer

| Line Pull  | lbs    | 0     | 3000  | 6000 | 9000  | 12000 | 15500 |
|------------|--------|-------|-------|------|-------|-------|-------|
|            | kg     | 0     | 1360  | 2722 | 4080  | 5440  | 5440  |
| Line Speed | ft/min | 24.11 | 11.15 | 8.7  | 7.544 | 5.7   | 4.3   |
|            | m/min  | 7.35  | 3.4   | 2.65 | 2.3   | 1.74  | 1.4   |
| Motor      | Amps   | 70    | 165   | 240  | 310   | 375   | 445   |

### DIMENSION OF THE WINCH



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## Part Number: 97417 XRC 17,500 LBS WINCH

|                        |                                  |
|------------------------|----------------------------------|
| Rated Line Pull:       | 17,500Lbs (7,931kgs) single-line |
| Motor:                 | 6.6hp Series Wound               |
| Control:               | Remote Switch, 12' (3.7m) lead   |
| Gear Train:            | 4-Stage Planetary                |
| Gear Ratio:            | 330:1                            |
| Clutch:                | Sliding Ring Gear                |
| Brake:                 | Automatic In The Drum            |
| Drum Size:             | Diameter 3.78"(94mm)             |
| Waterproof:            | IP67 Rating                      |
| Fairlead:              | 4-Way Roller                     |
| Remote Control:        | Included                         |
| Cable:                 | 94' 7/16" Diameter               |
| Battery Leads:         | 72"(1.83m)                       |
| Finish:                | Textured Black                   |
| Weight:                | 141Lbs (64Kgs)                   |
| Overall Dimension:     | (L x W x H) 24.8" x 8.4" x 8.86" |
| Mounting Bolt Pattern: | 10.0" x 4.50" AND 10.0" x 6.50"  |
| Recommended:           | 650CCA Minimum for Winching      |

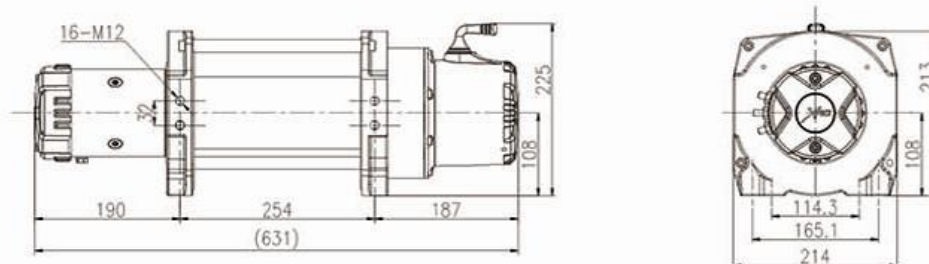
### 17500LBS Line Pull & Capacity

| Layers Of Cable           |     | 1     | 2     | 3     | 4     |
|---------------------------|-----|-------|-------|-------|-------|
| Rated Line pull per layer | lbs | 17500 | 14583 | 12411 | 10822 |
|                           | kg  | 7931  | 6609  | 5625  | 4905  |
| Cumulative cable capacity | ft  | 19.68 | 45.92 | 75.44 | 93.48 |
|                           | m   | 6     | 14    | 23    | 28.5  |

### 17500LBS Line Speed & Amp Draw-First Layer

| Line Pull  | lbs    | 0      | 3000   | 6000  | 9000  | 12000 | 15500 | 17500  |
|------------|--------|--------|--------|-------|-------|-------|-------|--------|
|            | kg     | 0      | 1360   | 2720  | 4080  | 5440  | 6800  | 7931   |
| Line Speed | ft/min | 22.632 | 10.824 | 7.872 | 6.232 | 5.248 | 3.936 | 3.2472 |
|            | m/min  | 6.9    | 3.3    | 2.4   | 1.9   | 1.6   | 1.2   | 0.99   |
| Motor      | Amps   | 75     | 140    | 210   | 270   | 330   | 390   | 435    |

### DIMENSION OF THE WINCH



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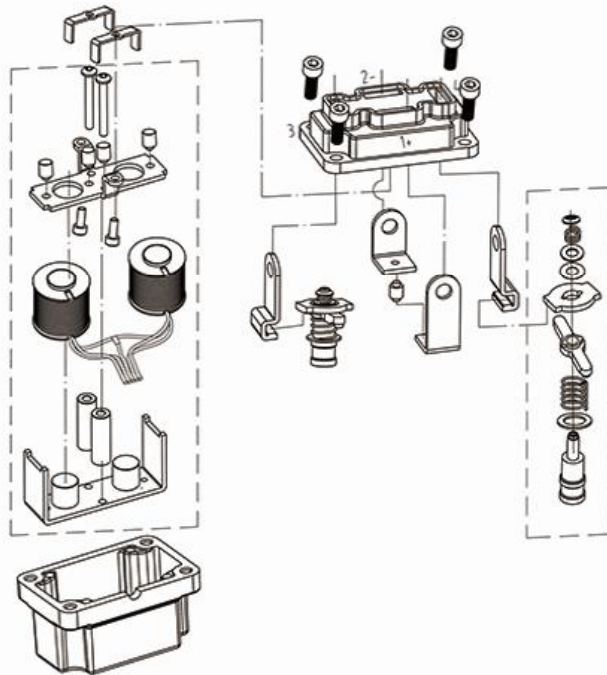
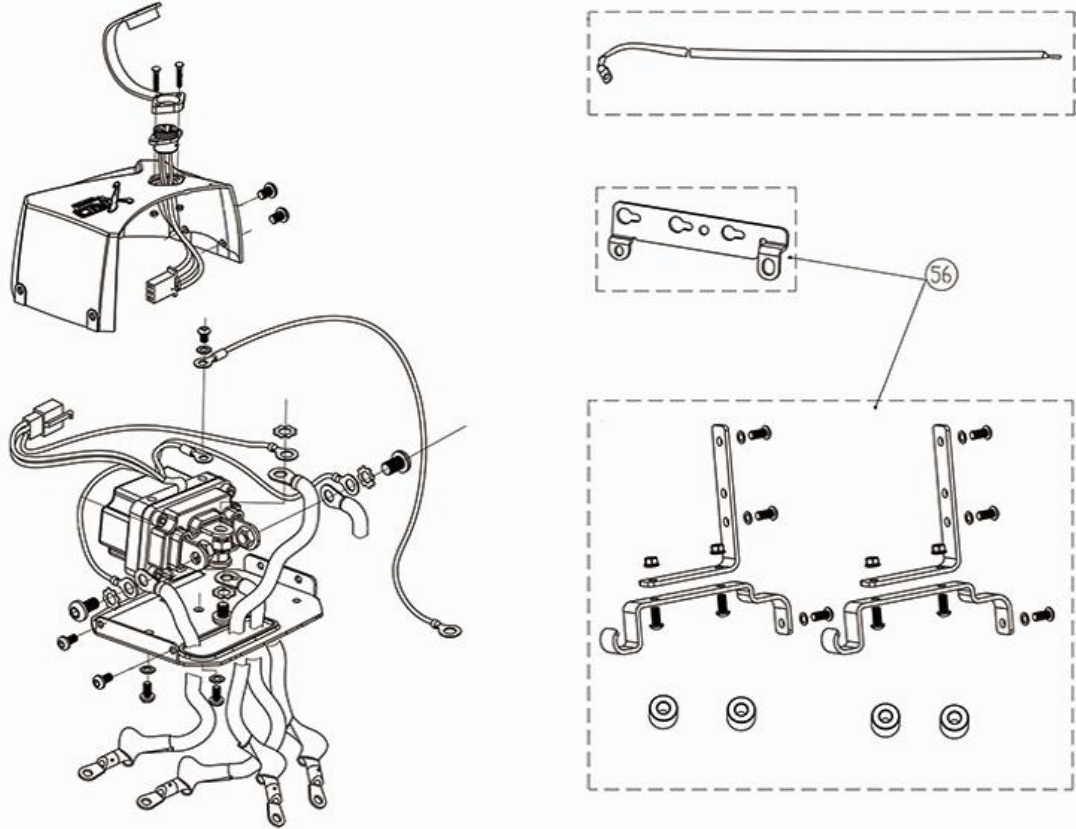
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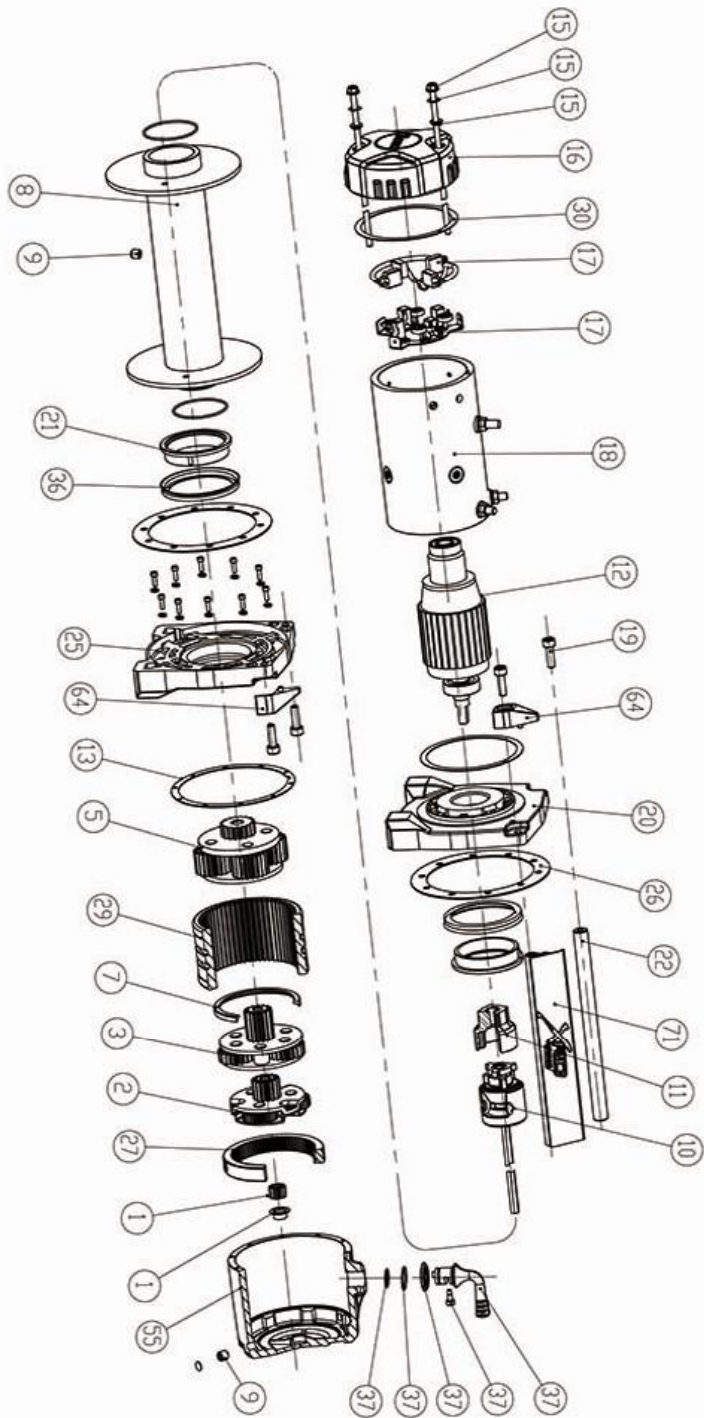
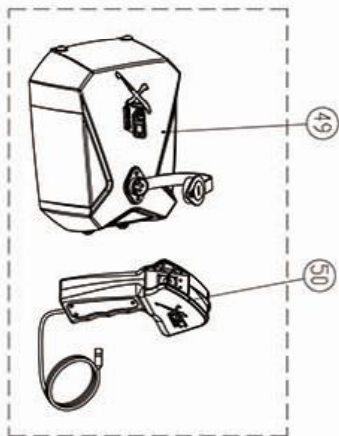
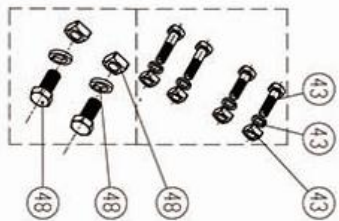
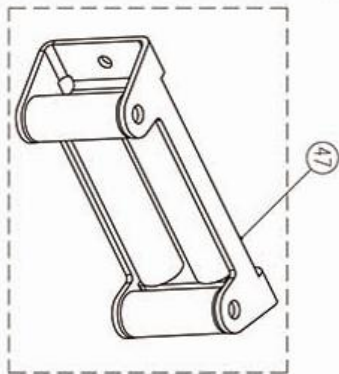
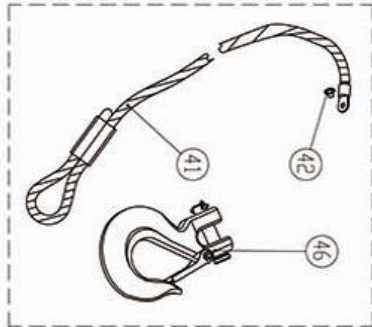


# Installation Manual

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97495/97412

XRC9500LB/12000LB WINCH





# Installation Manual

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## 97495/97412      XRC9500LB/12000LB WINCH

| Item No. | Part No.      |              | Description                        |
|----------|---------------|--------------|------------------------------------|
|          | XRC2 9.5K lbs | XRC2 12k lbs |                                    |
| 01       | 97495-01      | 97495-01     | Sun gear assembly                  |
| 02       | 97495-02      | 97412-02     | Gear Carrier Assy-input            |
| 03       | 97495-03      | 97412-03     | Gear Carrier Assy-Intermediate     |
| 05       | 97495-05      | 97412-05     | Gear Carrier Assy-Output           |
| 07       | 97495-07      | 97495-07     | Gear Carrier Anti Friction Cushion |
| 08       | 97495-08      | 97495-08     | Drum Assy                          |
| 09       | 97495-09      | 97495-09     | brake positioning bolt             |
| 10       | 97495-10      | 97495-10     | Brake Assy                         |
| 11       | 97495-11      | 97495-11     | Coupling Joint                     |
| 12       | 97495-12      | 97412-12     | Rotor                              |
| 13       | 97495-13      | 97495-13     | X Gear Box Seal Ring               |
| 15       | 97495-15      | 97412-15     | Long bolt hardware set             |
|          | 97495-15      | 97495-15     | Long bolt hardware set             |
| 16       | 97495-16      | 97495-16     | Motor cover                        |
| 17       | 97495-17      | 97495-17     | Carbon assy                        |
| 18       | 97495-18      | 97412-18     | Stator                             |
| 19       | 97495-19      | 97495-19     | Long Screw M8*25                   |
| 20       | 97495-20      | 97495-20     | Motor Base                         |
| 21       | 97495-21      | 97495-21     | Nylong Bearing                     |
| 22       | 97495-22      | 97495-22     | Tie Bar                            |
| 25       | 97495-25      | 97495-25     | Gear Box Base                      |
| 26       | 97495-26      | 97495-26     | Drum Anti Friction Sheet           |
| 27       | 97495-27      | 97495-27     | Inner Gear                         |
| 29       | 97495-29      | 97495-29     | Clutch Gear                        |
| 30       | 97495-30      | 97495-30     | Motor Seal Ring                    |
| 36       | 97495-36      | 97495-36     | Dust Ring                          |
| 37       | 97495-37      | 97495-37     | Clutch handle assy                 |
| 41       | 97495-41      | 97412-41     | Wire rope with fix bolt            |
| 42       | 97495-42      | 97495-42     | Wire rope fix bolt                 |
| 43       | 97495-43      | 97495-43     | Winch mounting hardware            |
| 46       | 97495-46      | 97495-46     | Clevis hook                        |
| 47       | 97495-47      | 97495-47     | Roller Fairlead                    |
| 48       | 97495-48      | 97495-48     | Fairlead Mounting hardware         |
| 49       | 97495-49      | 97495-49     | Control box assy                   |
| 50       | 97495-50      | 97495-50     | Remote contorl                     |
| 52       | 97495-52      | 97495-52     | ISM                                |
| 53       | 97495-53      | 97495-53     | Control box cover                  |
| 55       | 97495-55      | 97495-55     | Gear box Assy                      |
| 56       | 97495-56      | 97495-56     | Control box mounting hardware      |
| 57       | 97495-57      | 97412-57     | Motor Assy                         |
| 58       | 97495-58      | 97495-58     | Socket cover                       |

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|    |          |          |                       |
|----|----------|----------|-----------------------|
| 59 | 97495-59 | 97495-59 | Socket Connector assy |
| 64 | 97495-64 | 97495-64 | XRC logo tie bar bolt |
| 68 | 97495-68 | 97412-68 | Decal set             |
| 71 | 97495-71 | 97495-71 | XRC logo tie bar      |

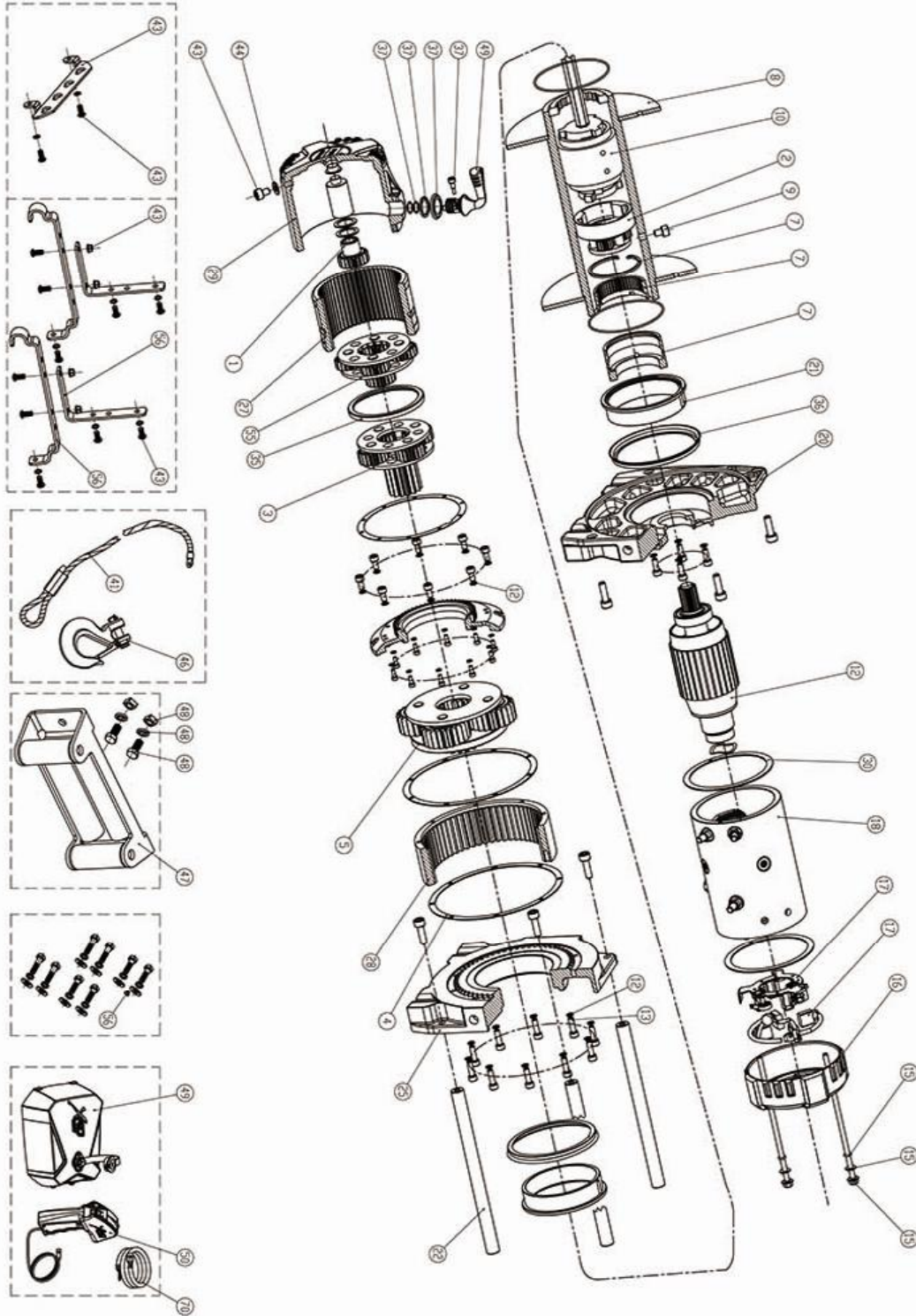


# Installation Manual

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97415/97417

XRC15500LB/17500LB WINCH





# Installation Manual

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## 97415/97417      XRC15500LB/17500LB WINCH

| Item No. | Part No.     |                | Description                              |
|----------|--------------|----------------|--|
|          | XRC2 15K lbs | XRC2 17.5k lbs |  |
| 01       | 97415-01     | 97417-01       | XRC15 15tooth Sun Gear II                |
| 02       | 97415-02     | 97415-02       | XRC 15 Gear Carrier Assy-input           |
| 03       | 97415-03     | 97415-03       | XRC15 Gear Carrier Assy -Intermediate II |
| 04       | 97415-04     | 97415-04       | Big Leak-Proof Washer                    |
| 05       | 97415-05     | 97415-05       | Gear Carrier Assy - Output               |
| 07       | 97415-07     | 97415-07       | Inner gear assy                          |
| 08       | 97415-08     | 97415-08       | XRC 15 Drum Assy                         |
| 09       | 97415-09     | 97415-09       | Brake positioning bolt                   |
| 11       | 97415-11     | 97415-11       | XRC 15 Big Brake Assy                    |
| 12       | 97415-12     | 97417-12       | 12V XRC 15000 Rotor                      |
| 15       | 97415-15     | 97415-15       | Long bolt hardware set                   |
|          | 97415-15     | 97417-15       | Long bolt hardware set                   |
| 16       | 97415-16     | 97415-16       | Motor cover                              |
| 17       | 97415-17     | 97415-17       | Carbon assy                              |
| 18       | 97415-18     | 97415-18       | Stator assy                              |
| 20       | 97415-20     | 97415-20       | XRC big Motor Base                       |
| 21       | 97415-21     | 97415-21       | Anti-Water Nylon Bearing                 |
| 22       | 97415-22     | 97415-22       | 15000 Tie Bar                            |
| 25       | 97415-25     | 97415-25       | Big Gear Box Base                        |
| 27       | 97415-27     | 97415-27       | HEW Inner Gear II                        |
| 28       | 97415-28     | 97415-28       | 58tooth Inner Gear                       |
| 29       | 97415-29     | 97415-29       | XRC17500 X- Gear Box Tube                |
| 30       | 97415-30     | 97415-30       | Motor Seal Ring                          |
| 35       | 97415-35     | 97415-35       | Gear Carrier Anti Friction Cushion       |
| 37       | 97415-37     | 97415-37       | HEW Anti-Dust Ring                       |
| 36       | 97415-36     | 97415-36       | Clutch handle assy                       |
| 41       | 97415-41     | 97417-41       | Wire rope with fix bolt                  |
| 43       | 97415-43     | 97415-43       | Winch mounting hardware                  |
| 46       | 97415-46     | 97415-46       | 7/16" Clevis Hook                        |
| 47       | 97415-47     | 97415-47       | Roller Fairlead                          |
| 48       | 97415-48     | 97415-48       | Fairlead Mounting hardware               |
| 49       | 97415-49     | 97415-49       | Control box assy                         |
| 50       | 97415-50     | 97415-50       | XRC 3 Handheld remote Control            |
| 55       | 97415-55     | 97417-55       | Complete Gear Assy                       |
| 56       | 97415-56     | 97415-56       | Mounting hardware                        |
| 57       | 97415-57     | 97415-57       | Complete Motor Assy                      |
| 68       | 97415-68     | 97417-68       | Decal Set                                |
| 70       | 97415-70     | 97415-70       | 1.83m Long Black Cable                   |



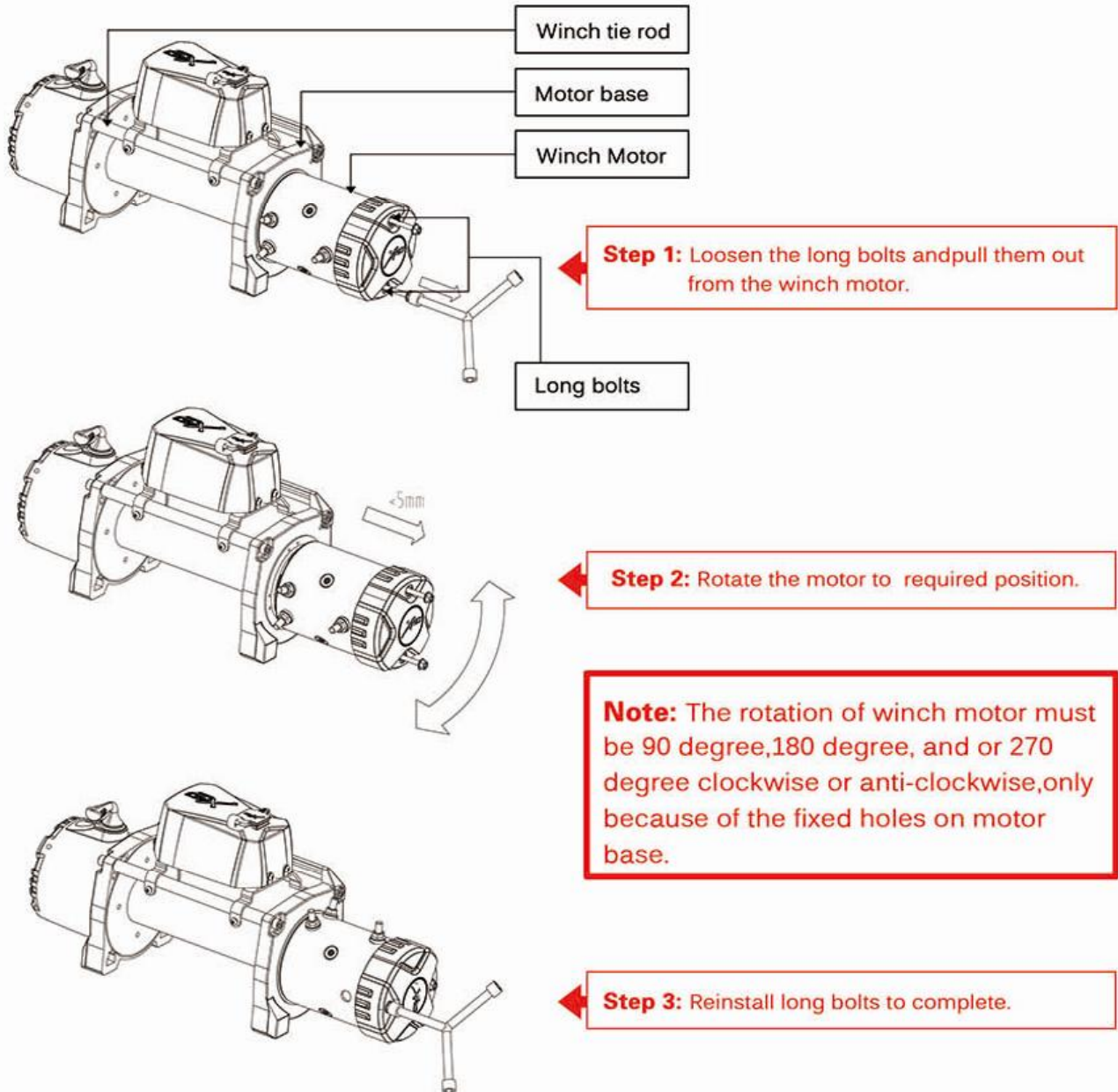
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## Winch Motor Clocking

(97495/97412/97415/97417)

Step 1: To clock the winch motor, which can be achieved without taking the



The winch is IP67, the waterproof maybe affected if disassemble the motor. It is best to operate by professionals, and also change the new sealing parts.

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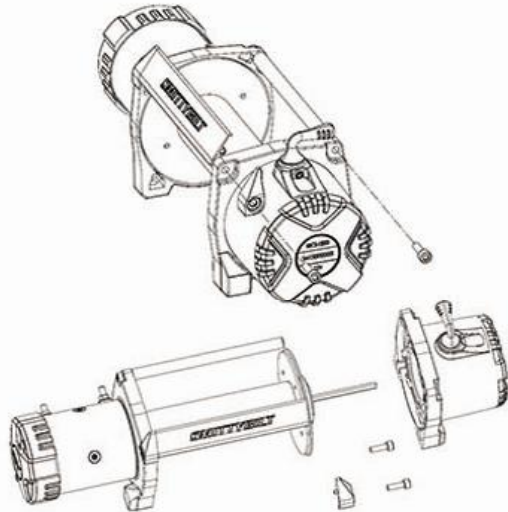


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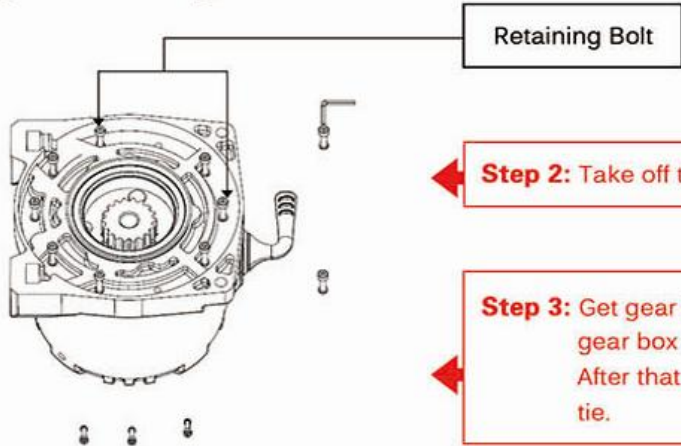
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## Gear Box Clocking Instructions

(97495/97412/97415/97417)

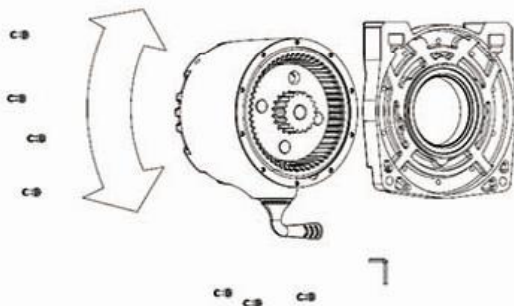


**Step 1:** Loosen the tie rods to take the gear box apart from them.



**Step 2:** Take off the retaining bolts (totally 10pcs)

**Step 3:** Get gear box rotated, then connect the gear box with the gear box base again. After that connect the gear box with the tie.



**No pls:** The rotation of gear box must be 36 degree, or a degree which is the multiple of 36 degree clock-wisely or anti-clock-wisely due to the fixed holes to receive the connection with the retaining Bolts.

The winch is IP67, the waterproof may be affected if disassemble the gear box. It is best to operate by professionals, and also change the new sealing parts.

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## Common faults and simple processing mode

| Description   | Possible reasons  | Measures  |
|---|---|---|
| Drum cannot rotate normally under no load   | <ol style="list-style-type: none"> <li>1. The winch is installed by wrong way so that the end bearing lock the drum.</li> <li>2. Brake damage</li> <li>3. Gear damage</li> <li>4. The clutch handle is on position "out".</li> </ol>  | <p>Refer to the "instructions " installation section to check if installation correct.</p> <p>Check and replace the brake; check and replace the damaged gear; Put the clutch handle on "in" position</p> |
| Drum cannot rotate normally under load  | <ol style="list-style-type: none"> <li>1. The winch overload</li> <li>2. Lower Voltage</li> <li>3. The winch is installed by wrong way so that the end bearing lock the drum</li> </ol>   | <p>Reference specified rated load.</p> <p>Reference the parameter table and ensure adequate power</p> <p>Refer to the "instructions " installation section to check if installation correct.</p>          |
| Winch speed is too slow or high temperature   | <ol style="list-style-type: none"> <li>1. Lower Voltage</li> <li>2. Motor damage</li> <li>3. The winch is operated for a long time</li> </ol>   | <p>Reference the parameter table and ensure adequate power</p> <p>Replace the Motor</p> <p>Waiting temperature drop</p>   |
| Drum cannot pull out the rope   | <ol style="list-style-type: none"> <li>1. The clutch does not disengage</li> <li>2. The winch is installed by wrong way so that the end bearing lock the drum</li> </ol>  | <p>Refer to operating instructions and check the clutch</p> <p>Refer to the "instructions " installation section to check if installation correct.</p>  |
| No brake  | Brake invalid   | Replace the brake   |
| Abnormal noise or drum vibrate on winding direction   | <ol style="list-style-type: none"> <li>1. Higher Voltage</li> <li>2. The winch is installed by wrong way so that the drum locked.</li> </ol>  | <p>Ensure the voltage is normal</p> <p>Refer to the "instructions " installation section to check if installation correct.</p>  |
| The clutch is difficult to rotate   | <ol style="list-style-type: none"> <li>1. The Winch don't be used for a long time so that the lubricating oil conglutinate to related parts;</li> <li>2. The gear box is vibrated for a long time so that the fluctuation gap deflects to one side.</li> <li>3. The gears locked when meshing.</li> </ol> | Rotate the drum by forward and reverse  |
| Winch cannot rotate or rotate by only a direction when press the button on handheld remote controller | <ol style="list-style-type: none"> <li>1. The control cable are not connected well.</li> <li>2. The electromagnetic switch is not flexible after long time unused.</li> </ol>   | <p>Connect the cable correctly</p> <p>Slap the control box</p>  |



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## **SMITTYBILT ADVANTAGE WARRANTY**

### **LIMITED LIFETIME WARRANTY FOR MECHANICAL COMPONENTS**

### **LIMITED THREE (3) YEAR WARRANTY FOR ELECTRICAL COMPONENTS**

Smittybilt Automotive Products, LLC (SAP) warrants to the original purchaser that (a) the mechanical components (e.g., gears, clutch, spools, 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 (3) years from the original date of purchase. This Warranty applies only to the original purchaser of the winch. To obtain any warranty service, you must provide SAP with proof of purchase and date of purchase acceptable to SAP, such as a copy of your purchase receipt.

This warranty does not cover the removal or reinstallation of the winch. SAP will, at its sole option, repair, replace or refund the purchase price of a defective winch or component, provided you return the defective winch or component during the warranty period, transportation charges prepaid, to SAP. Attach your name, address, telephone number, a brief description of the problem, and a copy of your receipt and original bill of sale bearing the SAP serial number of the defective winch and date of purchase.

This warranty does not apply (i) to finish, paint or the wire rope; (ii) if the winch has been damaged by accident, abuse, misuse, collision, overloading, modification, misapplication, improper installation, or improper service; or (iii) any normally wearable part such as the break mechanism. This Warranty is void if any SAP serial number has been removed or defaced. Commercial or industrial use or application, or any hoisting application of the winch voids the Warranty. This Warranty is good only for winches bought, sold and used in 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, EXPRESS 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 IN DURATION TO 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  
400 West Artesia Blvd.  
Compton, CA 90220  
1-888-717-5797

For Technical Support/Warranty Information please call 310-762-9944

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## 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     | >12.5mm                       | 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  |



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| 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<br>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<br>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<br>Water volume: 0.7 litres per minute<br>Pressure: 80–100 kN/m <sup>2</sup>                         |
| 4     | Splashing water                      | Water splashing against the enclosure from any direction shall have no harmful effect.  | Test duration: 5 minutes<br>Water volume: 10 litres per minute<br>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: at least 3 minutes<br>Water volume: 12.5 litres per minute<br>Pressure: 30 kN/m <sup>2</sup> 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<br>Water volume: 100 litres per minute<br>Pressure: 100 kN/m <sup>2</sup> 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<br>Immersion at depth of 1m   |



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## Warranty Information Card

First name: \_\_\_\_\_ Last name: \_\_\_\_\_

Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Marital Status: \_\_\_\_\_ Level of Education: \_\_\_\_\_

City/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_

Country: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

Which Smittybilt winch did you purchase? \_\_\_\_\_

Model Number: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Where did you purchase this product? \_\_\_\_\_

Store or catalog name: \_\_\_\_\_

Store Location: \_\_\_\_\_

How satisfied were you with the dealer and/or sales staff?

Who installed or will install your Smittybilt product?

Is this the first time you have purchase a winch?

If no, what brand have you brought before?

What type of vehicle will this Smittybilt winch be installed on?

Year: \_\_\_\_\_ Make: \_\_\_\_\_ Model: \_\_\_\_\_

2WD: \_\_\_\_\_ 4WD: \_\_\_\_\_

What is the vehicles main use?

What other accessories have you purchased for your vehicle?

To register your warranty, please fill out this information card and mail to:

Smittybilt

400 West Artesia Blvd

Compton, CA 90220

Make sure to keep a copy for yourself.

For Technical Support/Warranty Information please call 310-762-9944

Smittybilt, 400 West Artesia Blvd, Compton, CA 90220

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888-717-5797  
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