



# Installation Manual

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PARTS INCLUDED	QTY	PARTS INCLUDED	QTY
Winch	1	Roller Fairlead	1
Solenoid Box	1	Clevis Hook	1
Hardware Bag	1	Remote Control	1

## **SAFETY PRECAUTIONS**

**Warning!** Observe safety precautions for personal safety and the safety of others. Improper equipment operation may cause personal injury and equipment damage.

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

### **1. Dress Properly:**

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

### **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 center as you can. Walk up keeping load on the cable as the winch is powered in.
- Do not allow the cable to slip through your hand and do not approach the winch too closely.
- Turn off the winch and repeat the procedure until all the cable except 1m is 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.



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

## 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 center 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 it before you plug it in.
3. When ready to begin spooling in, plug in remote control switch with clutch disengaged, do not engage clutch with motor running.
4. Never connect the hook back to the cable. This causes cable damage. Always use a sling or chain of suitable strength.
5. Observe your winch while winching, if possible while standing at a safe distance. Stop the winching process every meter or so to assure the cable is not 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 center 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.
15. Battery:
  - Be sure that the battery is in good condition. Avoid contact with battery acid or other containments.
  - 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.

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



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- 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 the cable is replaced, be sure to apply locktite, or the cable clamp thread. Tighten the clamp screw properly but do not over-tighten. The locktite will prevent loosening of the screw in arduous conditions. Locktite 7471 primer and 222 Thread Locker are recommended.
- 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. Do not move your winch by lifting the cable leads or the clutch handle lever.



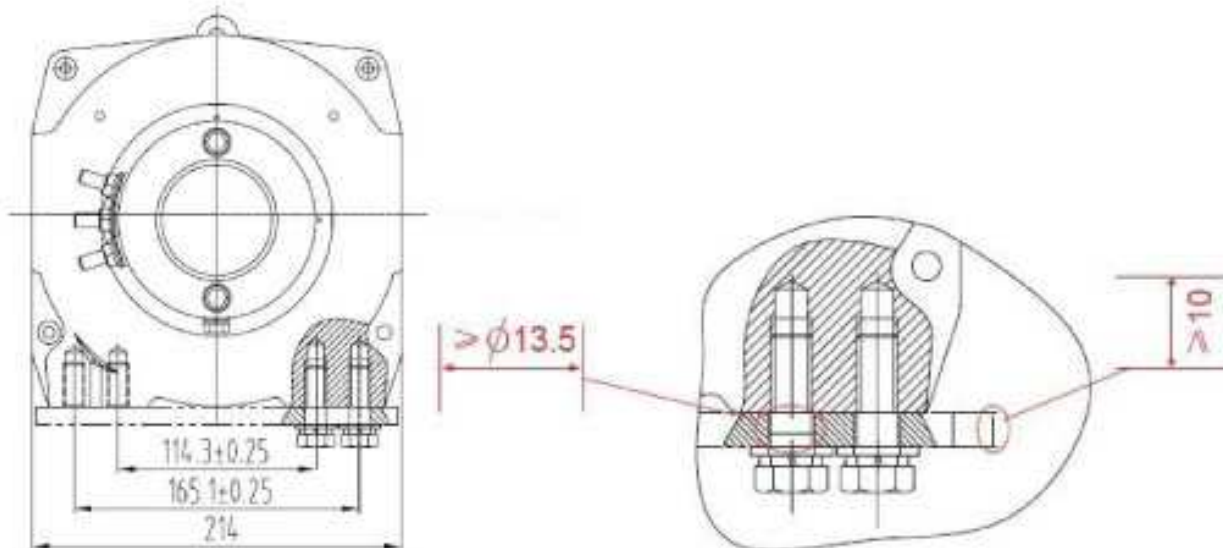
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## INSTALLATION

### **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 withstanding 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. Smittybilt manufactures winch mounting frames and / or Frontal Protection Systems to suit most popular vehicles. Winch frames are packaged with detailed instructions.
  3. Should you wish to manufacture your own mounting plate the dimensions below will assist. A steel mount plate of 6mm thickness is recommended. Fasteners should be steel high tensile grade 5 or better. A poorly designed mount may void warranty.
  4. The winch should be secured to the mounting with 3/8" UNC\* 1-1/4" steel bolts and spring washers provided.
  5. The roller fairlead is to be mounted so as to guide the rope onto the drum evenly.
  6. Special mounting requirements for XRC15.
    - a) XRC15 is to be mounted into a suitable steel mounting frame using the 8 point foot mounting system in either a horizontal or vertical plane.
    - b) A steel mount plate of 10 to 12mm thickness is recommended. Fasteners should be steel high tensile grade 8.8 or better (8 pieces grade 8.8 M12X40 fasteners are provided with the XRC15winch).

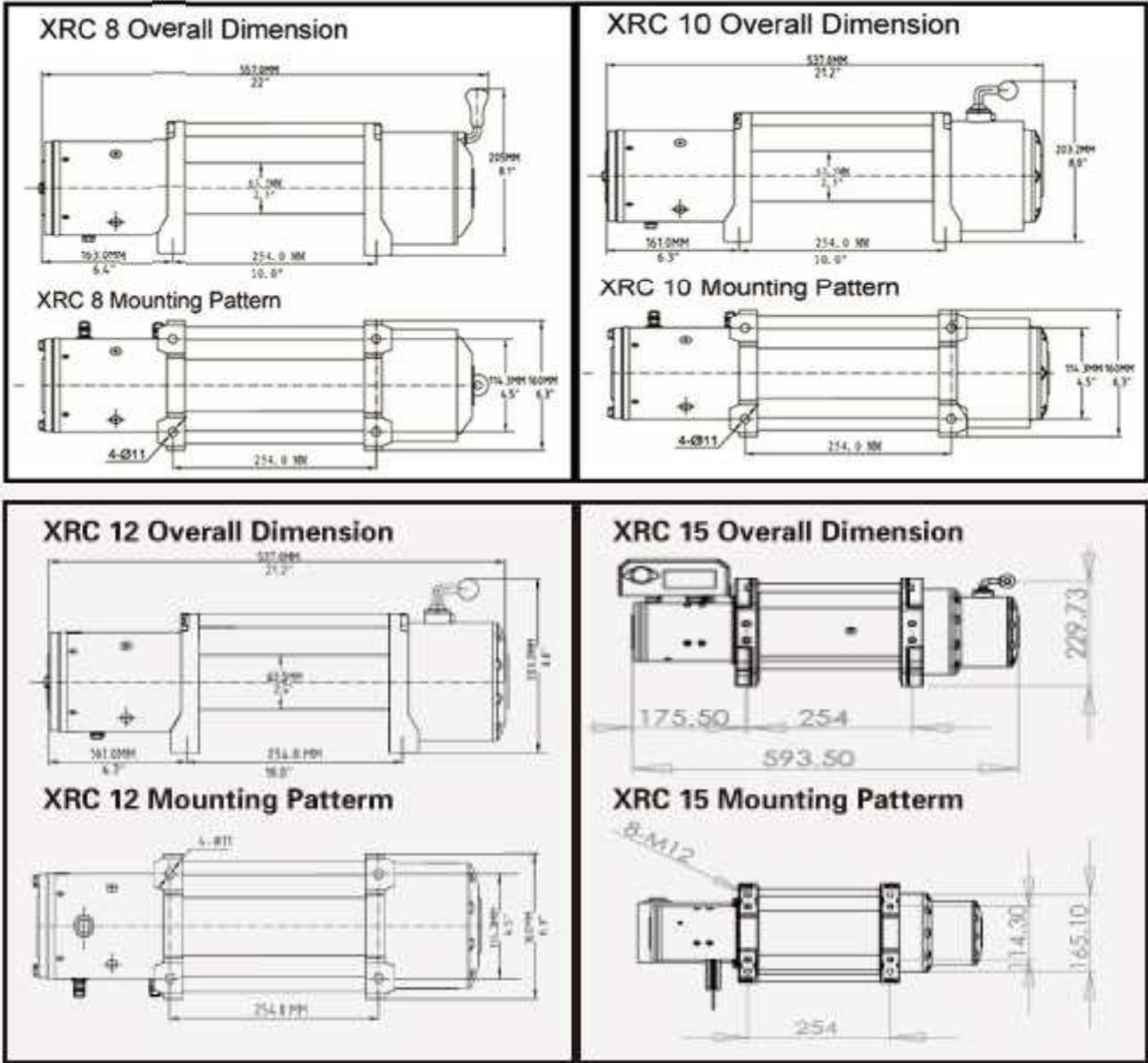


**Mounting Figure for XRC15**



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## 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.

## CABLE INSTALLATION

Unwind the new cable by rolling it along the ground, to prevent kinking. Remove old cable and observe the manner in which it is attached to the drum flange.

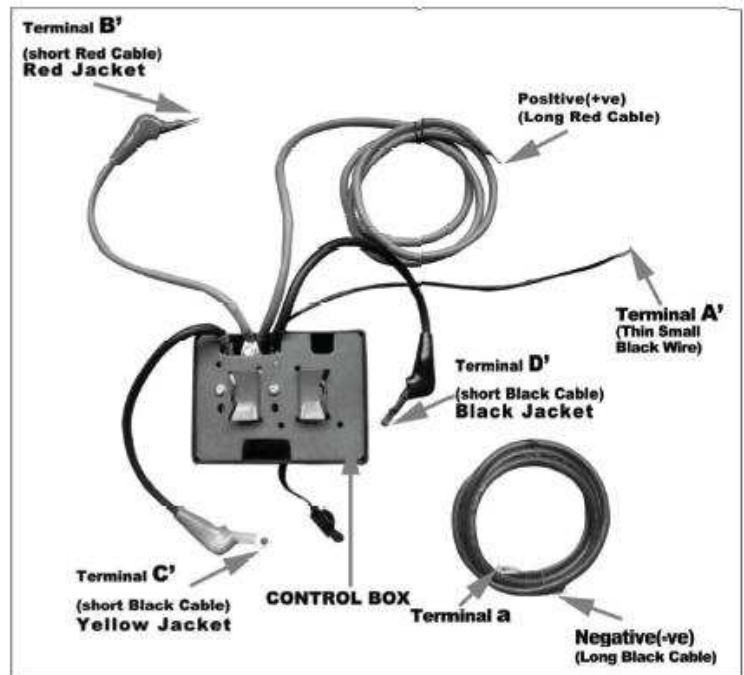
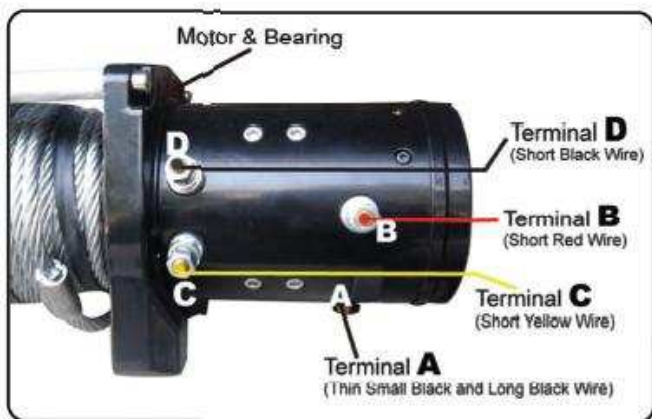
## ELECTRICAL CONNECTION

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

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

Be sure to observe the following steps for a correct and safe electrical connection:

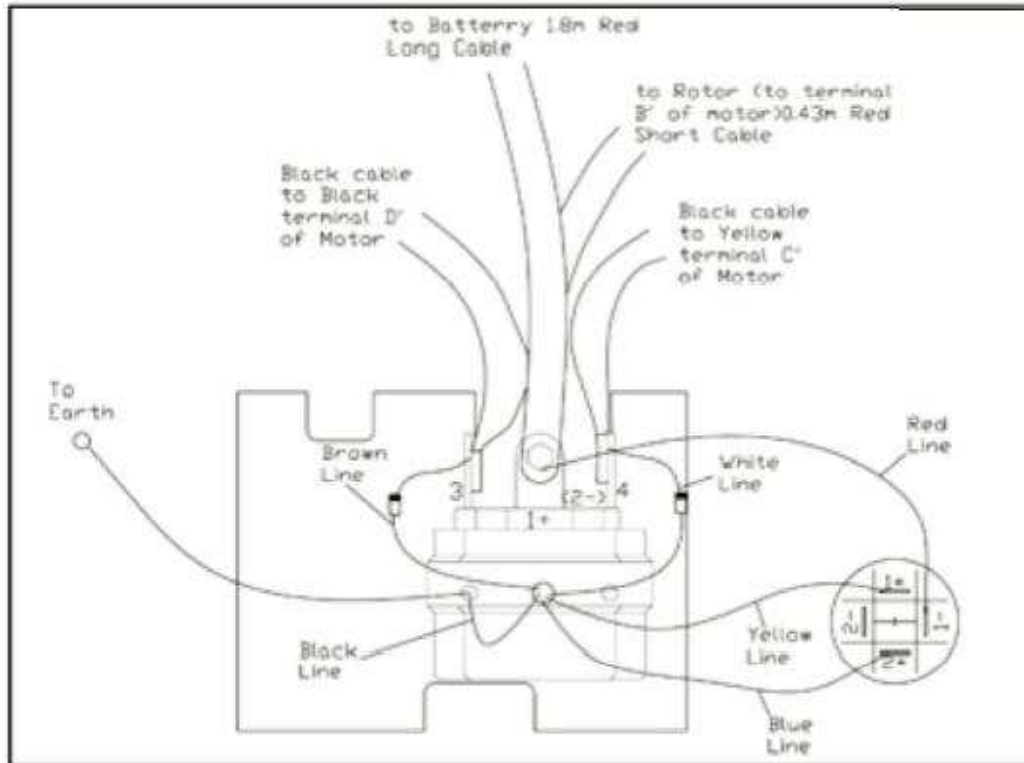
1. Short Red cable (B') connecting to the red terminal (B) of winch motor.
2. Short black cable with yellow jacket (C') connecting to the yellow terminal (C) of the motor.
3. Short black cable with black jacket (D') connecting to the black terminal (D) of the motor.
4. Thin black cable (A') connecting 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 (+) of battery.





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## NOTE:

1. Your battery must be kept in good condition.
2. Be sure battery cables are not drawn taught across any surfaces, which could possibly damage them.
3. Corrosion on electrical connections will reduce performance or may cause a short.
4. Clean all connections especially in remote control switch and receptacle.
5. In salty environments use a silicone sealer to protect from corrosion.
6. Index the heads of the plate studs into the keyhole slots on the back of the winch.
7. Attached the winch/Adaptor plate assembly to your trailer hitch, by inserting the trailer hitch ball through the shaped hole in the Adaptor plate.



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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. **Turn control base clockwise until it locks into place.**
5. To commence winching operation, start vehicle engine, select 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 itself, this can cause damage to the object being pulled, and kink or fray the cable.
3. Keep hands, clothing, hair and jewelry 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.

**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 Smittybilt Automotive Products.

### **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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## **XRC 8 Specifications**

Rated Line Pull: 8000Lbs (3630kgs) single-line  
 Motor: 5.5hp /12V, Series Wound  
 Control: Remote Switch, 12' (3.7m) lead  
 Gear Train: 3-Stage Planetary  
 Gear Ratio: 172.8:1  
 Clutch: Rotating Ring Gear  
 Brake: Automatic In-The-Drum  
 Drum Size: (Diameter x Length) 2.5" x 8.82" (63.5mm x 224mm)  
 Wire Rope: (Diameter x Length) 21/64" x 94' (8.2mm x 28.5m)  
 Fairlead: 4-Way Roller  
 Remote Control: Included  
 Recommended Battery: 650CCA Minimum for Winching  
 Battery Leads: 25mm<sup>2</sup> , 72" (1.8m)  
 Finish: Black  
 Gross Weight: 94.0lbs (42.5Kgs)  
 Mounting Bolt Pattern: 10.0" x 4.50"

### **Line speed and amp draw (first layer)**

Line Pull	Lbs	NO LOAD	2000	4000	6000	8000
	Kgs		910	1814	2720	3630
Line Speed	Fpm	37.2	18	13.1	10.2	8.2
	Mpm	11.4	5.5	4.1	3.2	2.6
Motor Current	Amps	75	195	260	335	410

### **Line pull and cable capacity**

Layer of cable		1	2	3	4
Rated line pull per layer	Lbs	8000	6900	5850	5100
	Kgs	3630	3130	2650	2310
Cable capacity per layer	Ft	16	42	72	94
	Mpm	5	12	21	28



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## **XRC 8 WINCH PARTS LIST**

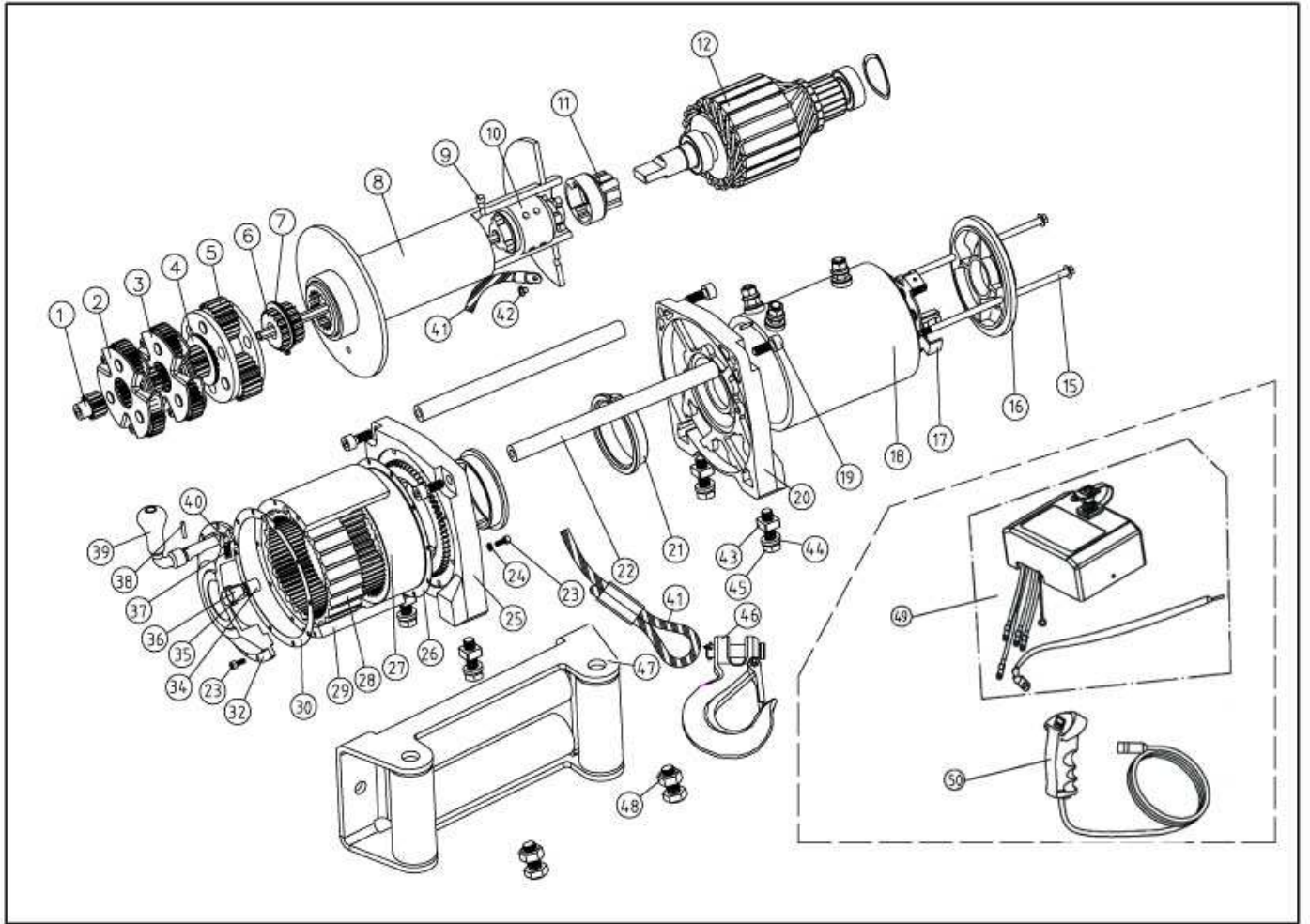
No.	Parts No.	Description	Qty	No.	Part No.	Description	Qty
01	97281-01	Sun Gear-Input	1	27	97281-27	Inner Gear	1
02	97281-02	Gear Carrier-Input	1	28	97281-28	Clutch Gear	1
03	97281-03	Gear Carrier-Intermediate	1	29	97281-29	Gear Box Tube	1
04	97281-04	Washer-1.2mm thickness	2	30	97281-30	Gasket	1
05	97281-05	Gear Carrier-Output	1	32	97281-32	Gear Box End Cover	1
06	97281-06	Outer Spline	1	33	97281-33	Bolt + Spring Washer	10
07	97281-07	Spline Positioning Bolt	1	34	97281-34	Shaft Sleeve	1
08	97281-08	Drum	1	35	97281-35	Washer	1
09	97281-09	Brake Positioning Bolt	1	36	97281-36	Bearing	1
10	97281-10	Brake System	1	37	97281-37	Clutch Spring	1
11	97281-11	Coupling Joint	1	38	97281-38	Locking Pin	1
12	97281-12	Rotor	1	39	97281-39	Clutch Lever	1
15	97281-15	Motor Long Bolts	2	40	97281-40	Clutch Steel Ball	1
16	97281-16	Motor End Cover	1	41	97281-41	Wire Rope	1
17	97281-17	Carbon Frame & Brush Assy	1	42	97281-42	Wire Rope Fix Bolt	1
18	97281-18	Stator	1	43	97281-43	Screw	4
19	97281-19	Tie Rod Bolt	4	44	97281-44	Spring Washer	4
20	97281-20	Motor Base	1	45	97281-45	Winch Mount Bolt	4
21	97281-21	Nylon Bearing	2	46	97281-46	Clevis Hook	1
22	97281-22	Tie Rod	2	47	97281-47	Roller Fairlead	1
23	97281-23	Bolt	10	48	97281-48	Fairlead Mount Bolt/Nut	2
24	97281-24	Spring Washer	10	49	97281-49	Control Box	1
25	97281-25	Gear Box Base	1	50	97281-50	Remote Control	1
26	97281-26	Gasket	1				



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## XRC 8 DRAWING





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## **XRC 10 Specifications**

Rated Line Pull: 10000Lbs (4532kgs) single-line  
 Motor: 5.5hp/12V, Series Wound  
 Control: Remote Switch, 12' (3.7m) lead  
 Gear Train: 3-Stage Planetary  
 Gear Ratio: 218:1  
 Clutch: Rotating Ring Gear  
 Brake: Automatic In-The-Drum  
 Drum Size: (Diameter x Length) 2.5" x 8.82" (63.5mm x 224mm)  
 Wire Rope: (Diameter x Length) 23/64" x 94' (9.2mm x 28.5m)  
 Fairlead: 4-Way Roller  
 Remote Control: Included  
 Recommended Battery: 650CCA Minimum for Winching  
 Battery Leads: 25mm<sup>2</sup>, 72" (1.8m)  
 Finish: Black  
 Weight: 99.0lbs (42.5Kgs)  
 Mounting Bolt Pattern: 10.0" x 4.50"

### **Line speed and amp draw (first layer)**

Line Pull	Lbs	NO LOAD	2000	4000	6000	8000	10000
	Kgs		910	1814	2720	3630	4535
Line Speed	Fpm	29.53	14.44	12.14	10.17	8.86	7.38
	Mpm	9	4.4	3.7	3.1	2.7	2.25
Motor Current	Amps	70	170	240	310	380	425

### **Line pull and cable capacity**

Layer of cable		1	2	3	4
Rated line pull per layer	Lbs	10000	8633	7716	7089
	Kgs	4535	3915	3499	3215
Cable capacity per layer	Ft	16	42	72	94
	Mpm	4.88	12.8	21.95	28.5





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## **XRC 10 WINCH PARTS LIST**

No.	Parts No.	Description	Qty	No.	Part No.	Description	Qty
01	97210-01	Gear Box End Cover	1	17	97210-17	Remote Control	1
02	97210-02	Gasket	1	18	97210-18	Control Box Assy	1
03	97210-03	Bearing	1	19	97210-19	Nylon Bearing	2
04	97210-04	Sun Gear-Input	1	20	97210-22	Tie Rod	2
05	97210-05	Inner Gear	1	21	97210-21	Drum	1
06	97210-06	Gasket	2	22	97210-22	Brake System	1
07	97210-07	Gear Carrier-Input	1	23	97210-23	Coupling Joint	1
08	97210-08	Gear Carrier-Intermediate	1	24	97210-24	Winch Mount Bolt	4
09	97210-09	Washer-1.2mm thickness	2	25	97210-25	Motor Base	1
10	97210-10	Clutch Gear	1	26	97210-26	Rotor	1
11	97210-11	Gear Carrier-Output	1	27	97210-27	Stator	1
12	97210-12	Gear Box Tube	1	28	97210-28	Carbon Frame & Brush Assy	1
13	97210-13	Clutch Handle Assy	1	29	97210-29	Motor End Cover	1
14	97210-05	Outer Spline	1	30	97210-30	Roller Fairlead	4
15	97210-15	Tie Rod Bolt	4	31	97210-31	Clevis Hook	1
16	97210-16	Gear Box Base	1	32	97210-32	Wire Rope	1



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## XRC 10 DRAWING





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## **XRC 12 Specifications**

Rated Line Pull: 12000Lbs (5440kgs) single-line  
 Motor: 6.6hp/12V, Series Wound  
 Control: Remote Switch, 12' (3.7m) lead  
 Gear Train: 3-Stage Planetary  
 Gear Ratio: 265:1  
 Clutch: Rotating Ring Gear  
 Brake: Automatic In-The-Drum  
 Drum Size: (Diameter x Length) 2.5" x 8.82" (63.5mm x 224mm)  
 Wire Rope: (Diameter x Length) 23/64" x 94' (9.2mm x 28.5m)  
 Fairlead: 4-Way Roller  
 Remote Control: Included  
 Recommended Battery: 650CCA Minimum for Winching  
 Battery Leads: 25mm<sup>2</sup>, 72" (1.8m)  
 Finish: Black  
 Weight: 99.0lbs (45.0Kgs)  
 Mounting Bolt Pattern: 10.0" x 4.50"

### **Line speed and amp draw (first layer)**

Line Pull	Lbs	NO LOAD	2000	4000	6000	8000	10000	12000
	Kgs		907	1814	2722	3630	4532	5440
Line Speed	Fpm	23.5	12.8	10.5	9.4	7.4	6.3	5
	Mpm	7.2	3.9	3.2	2.9	2.3	1.9	1.5
Motor Current	Amps	65	120	165	215	270	320	370

### **Line pull and cable capacity**

Layer of cable		1	2	3	4
Rated line pull per layer	Lbs	12000	10270	9200	8500
	Kgs	5440	4654	4169	3852
Cable capacity per layer	Ft	16	42	72	94
	Mpm	5	12	21	28



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## XRC 12 WINCH PARTS LIST

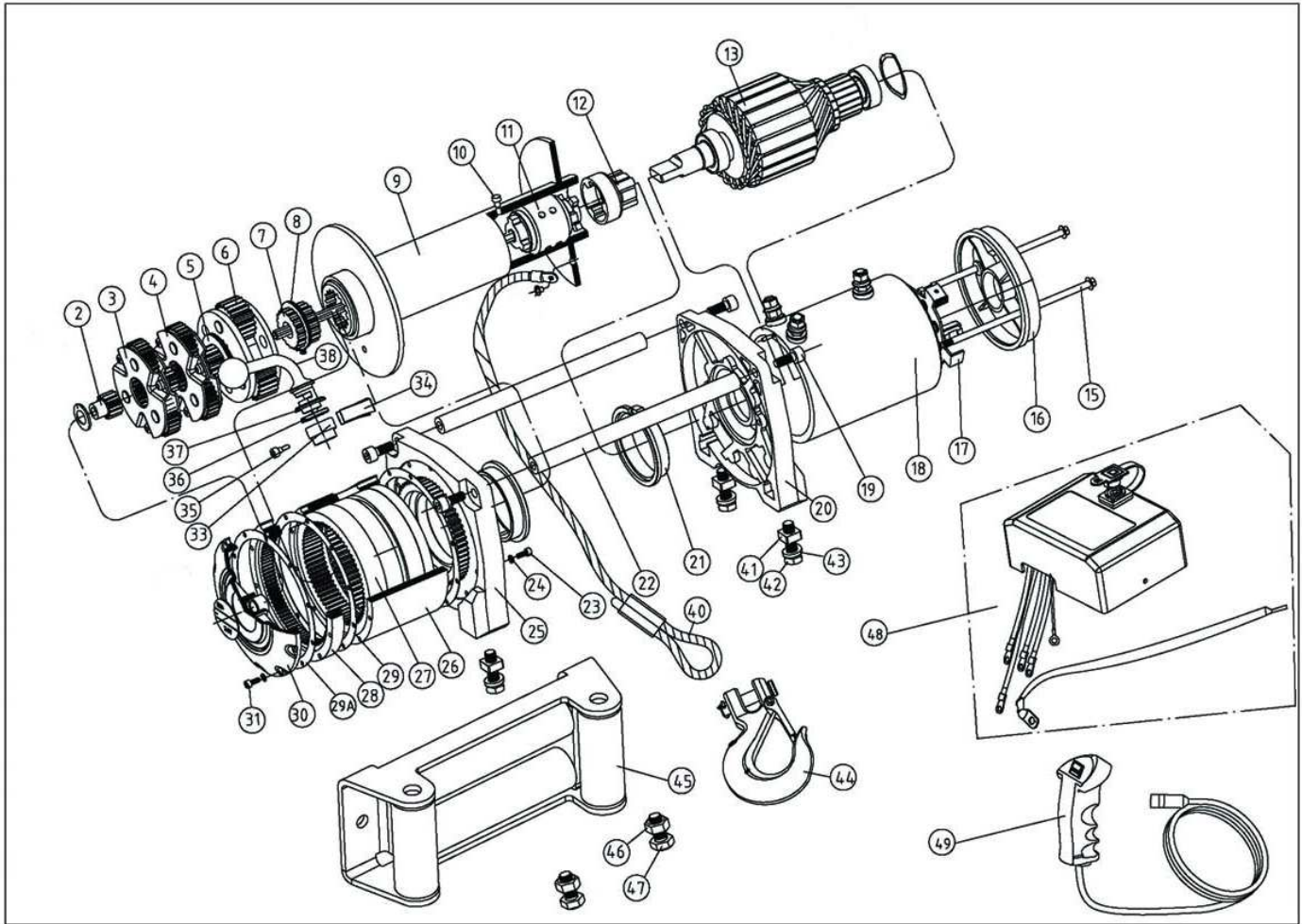
No.	Parts No.	Description	Qty	No.	Part No.	Description	Qty
02	97212-02	Sun Gear-Input	1	26	97212-26	Gear Box Tube	1
03	97212-03	Gear Carrie-Input	1	27	97212-27	Clutch Gear	1
04	97212-04	Gear Carrier-Intermediate	1	28	97212-28	Inner Gear	1
05	97212-05	Washer-1.2mm thickness	2	29	97212-29	Gasket 9500	3
06	97212-06	Gear Carrier-Output	1	30	97212-30	Gear Box End Cover	1
07	97212-06	Outer Spline	1	31	97212-31	Bolt	10
08	97212-08	Spline Positioning Ring	1	33	97212-33	Shaft Sleeve	1
09	97212-09	Drum	1	34	97212-34	Clutch Spring	1
10	97212-10	Bolt	1	35	97212-35	Washer	1
11	97212-11	Brake Assy	1	36	97212-36	Washer	1
12	97212-12	Coupling Joint	1	37	97212-37	Clutch Steel Ball	1
13	97212-13	Rotor	1	38	97212-38	Connection of Clutch Handle	1
15	97212-15	Motor Long Bolt	2	40	97212-40	Wire Rope	1
16	97212-16	Motor End Cover	1	41	97212-41	Screw	4
17	97212-17	Carbon Assy	1	42	97212-42	Lock Washer	4
18	97212-18	Stator	1	43	97212-43	Mounting Bolt	4
19	97212-19	Tie Rod Bolt	4	44	97212-44	Clevis Hook	1
20	97212-20	Motor Base	1	45	97212-45	Roller Fairlead	1
21	97212-21	Nylon Bearing	2	46	97212-46	Fairlead Mount Nut	2
22	97212-22	Tie Bar	2	47	97212-47	Fairlead Mount Bolt	2
23	97212-23	Bolt	9	48	97212-48	Control Box Assy	1
24	97212-24	Lock Washer	19	49	97212-49	Handle Remote Control	1
25	97212-25	Gear Box Base	1				



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## XRC 12 DRAWING







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## **XRC 15 Specifications**

Rated Line Pull: 15000Lbs (6800kgs) single-line  
 Motor: 6.6hp/12V, Series Wound  
 Control: Remote Switch, 12' (3.7m) lead  
 Gear Train: 4-Stage Planetary  
 Gear Ratio: 395:1  
 Clutch: Rotating Ring Gear  
 Brake: Automatic In-The-Drum  
 Drum Size: (Diameter x Length) 3.7" x 8.54" (94mm x 217mm)  
 Wire Rope: (Diameter x Length) 25/64" x 94' (10.0mm x 28.5m)  
 Fairlead: 4-Way Roller  
 Remote Control: Included  
 Recommended Battery: 650CCA Minimum for Winching  
 Battery Leads: 25mm<sup>2</sup>, 72" (1.8m)  
 Finish: Black  
 Weight: 143.0lbs (65.0Kgs)  
 Mounting Bolt Pattern: 10.0" x 4.50"; 10.0" x 6.50"

### **Line speed and amp draw (first layer)**

Line Pull	Lbs	NO LOAD	3000	6000	9000	12000	15000
	Kgs		1360	2720	4080	5440	6800
Line Speed	Fpm	21.3	11.5	7.2	5.6	4.9	3.6
	Mpm	6.5	3.5	2.2	1.7	1.5	1.1
Motor Current	Amps	65	140	270	295	360	420

### **Line pull and cable capacity**

Layer of cable		1	2	3	4
Rated line pull per layer	Lbs	15000	12550	10638	9320
	Kgs	6800	5688	4820	4200
Cable capacity per layer	Ft	19.7	46.0	75.5	91.8
	Mpm	6	14	23	28



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## **XRC 15 WINCH PARTS LIST**

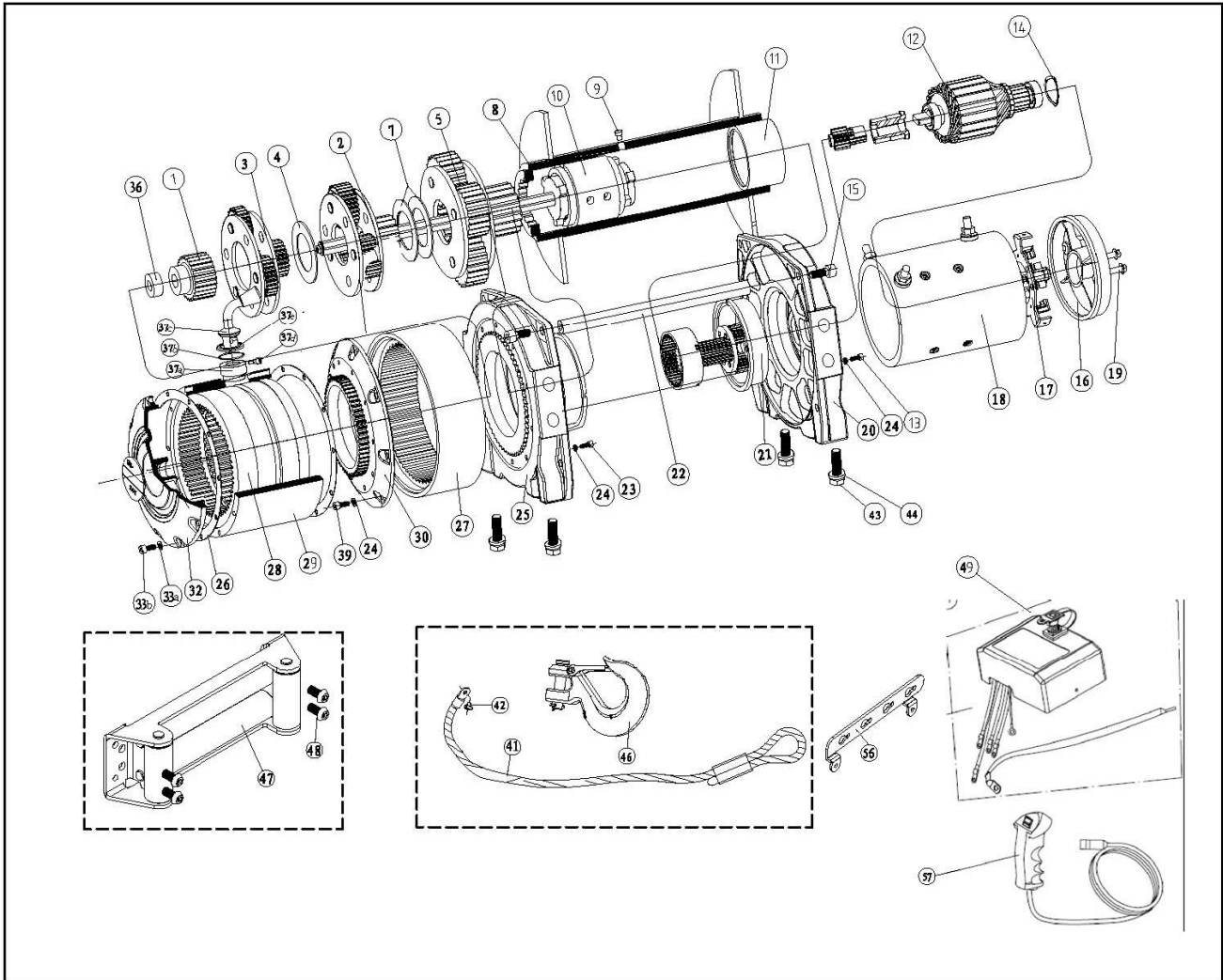
No.	Parts No.	Description	Qty	No.	Part No.	Description	Qty
01	97215-01	Sun Gear - Output	1	26	97215-26	Gasket	2
02	97215-02	Gear Carrier Assy - Output	1	27	97215-27	Inner Gear	1
03	97215-03	Gear Carrier Assy - Intermediate	1	28	97215-28	Clutch Gear	1
04	97215-04	Washer	1	29	97215-29	Gear Box Tube	1
05	97215-05	Planet Gears - Output	1	30	97215-30	Gear Box Graft Stan	1
07	97215-07	Washer	1	32	97212-32	Gear Box End Cover	1
08	97215-08	Drum Assy	1	33a	97215-33a	Washer 4	20
09	97215-09	Bolt for Brake	1	33b	97215-33b	Bolt M4*25	20
10	97215-10	Brake Assy	1	36	97215-36	Bearing	1
11	97215-11	fixing sleeve	1	37a	97215-37a	Shaft Sleeve	1
12	97215-12	Rotor (12V)	1	37b	97215-37b	Washer	1
13	97215-13	Bolt M5*20	4	37c	97215-37c	Clutch	1
14	97212-14	Washer 18	2	37d	97215-37d	Clutch Bolt	1
15	97215-15	Tie Rod Bolt	6	37e	97215-37e	Clutch Spring	1
16	97215-16	Motor End Cover	1	39	97215-39	Bolt	8
17	97215-17	4.5"Carbon Assy	1	41	97215-41	Wire Rope	1
18	97215-18	Stator (12V)	1	42	97215-42	Wire Rope Mount Bolt M6*8	1
19	97215-19	Long Bolt	1	43	97215-43	Bolt M12*40	8
20	97215-20	Motor Base	1	44	97215-44	Washer 12	10
21	97215-21	Nylon Bearing	2	46	97215-46	Clevis Hook	1
22	97215-22	Tie Rod	2	47	97215-47	Roller Fairlead	1
23	97215-23	Bolt M5*20	10	48	97215-48	Bolt M12*25	2
24	97215-24	Washer 5	2	49	97215-49	Control Box Assy (12V)	1
25	97215-25	Gear Box Base	1	53	97215-50	Remote Control	1



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## Troubleshooting

SYMPTOM	POSSIBLE CAUSE	SUGGESTED REMEDY
Motor does not turn on	Switch Assy not connected properly Loose battery cable Solenoid malfunctioning Defective Switch Assembly Defective Motor Water has entered motor	Insert Switch Assy firmly to the connector. Tighten units on cable connectors  Tap solenoid to free contact, applying 12 volts to coil terminal directly.  Makes an audible clicking when activating. Replace Switch Assy  Check for voltage at armature port with switch pressed. If voltage is present, replace motor. Drain and dry. Run in short bursts without load until completely dry.
Motor runs too hot	Long period of operation	Let winch cool down periodically.
Motor runs slowly or without normal power	Battery runs down Insufficient current or voltage	Recharge battery by running vehicle's engine. Clean, tighten or replace the connector.
Motor runs but cable drum does not turn	Clutch not engaged	Ensure lever is completely in "engaged" position. If that does not work, contact qualified technician to check and repair.
Motor runs in one direction only	Defective or stuck solenoid Defective Switch Assy	Tap solenoid to free contacts. Repair or replace solenoid, Replace Switch Assy



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## SMITTYBILT ADVANTAGE WARRANTY

### **LIMITED LIFETIME WARRANTY FOR MECHANICAL COMPONENTS LIMITED ONE (1) 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 one (1) year 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 also voids warranty.**

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. To submit a warranty claim contact:

**Smittybilt  
400 West Artesia Blvd  
Compton, CA 90220  
1-8888-717-5795**

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





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To assure product quality, Smittybilt reserves the right to change product design, material, specification and finishes without prior notice to customers. This limited warranty gives you specific legal rights and you may also have other rights, which may vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply as to you. Also, some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Smittybilt reserves the right to discontinue product lines and substitute products, or provide other remedies than those listed in this limited warranty for those discontinued products.



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## Warning

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

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



Winch Access. Bag (#2726)



Black Box (#2805)



Winch Cradle (#2811)



Winch Pull Strap (#769402)



Winch Quick Connect Cables



Winch Plates



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## 97281/97210/97212 SOLENOID MOUNTING SUPPLEMENT

### Tie-Rod (over cable) Mounting Instructions

**STEP 1:** Insert the small metal brackets on the bottom of the solenoid bracket. (Fig A)

**STEP 2:** Place long mounting brackets on top (hook facing forward) and secure with included bolts. (Fig B, C)

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



(Fig A)



(Fig B)



(Fig C)



(Fig D)



(Fig E)



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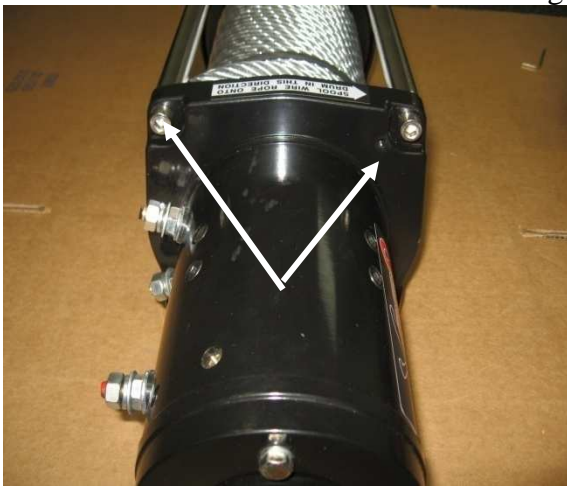
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## Over Motor Mounting Instructions

**STEP 1:** Locate and identify the location for the mounting bracket. (Fig A)

**STEP 2:** Attach the rear part of the bracket to the winch by removing the rear tie rod bolt. Place the bracket over the hole and re-install tie rod bolt. Do not tighten completely. (Fig B)

**STEP 3:** Loosen (Back-Out) the two screws on the side of the solenoid box and place bracket over the two bolts and slide the solenoid box back and tighten the bolts securely. (Fig C, D)



(Fig A)



(Fig B)



(Fig C)



(Fig D)

**STEP 4:** Lower down the solenoid box and attach the front of the bracket securely to the mounting location on the front of the winch with the included bolt. (Fig E)





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**STEP 5:** Tighten the rear tie rod bolt completely now. (Fig F, G) Installation is now complete. Use the wiring diagram in instruction manual for further assembly.



(Fig E)



(Fig F)



(Fig G)





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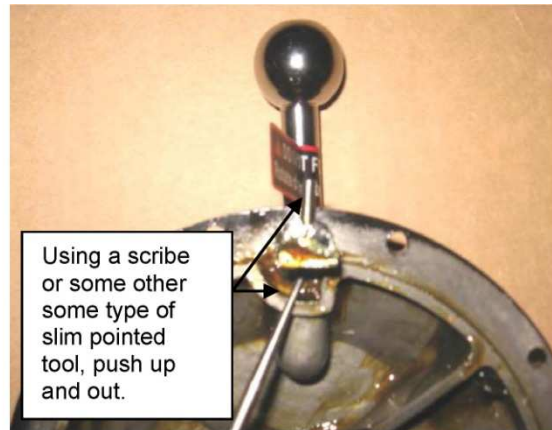
## Installation Instructions XRC8 Gear Lever

**Note:** Please read instructions entirely before installing this part.

- Step1:** Remove the 10 allen head bolts around the outside of the gear housing end cap using a 3mm allen tool. (Fig A) Carefully remove end cap from housing. Use care in order not to damage the gasket.
- Step2:** Using a scribe or some other type of slim pointed tool, push up and out the small holding rod/pin. (Fig B)
- Step3:** Slowly pull out the clutch lever from the end cap. Do this slowly and on a flat clean surface. Use caution when doing so; there is a spring and ball bearing that will be revealed. (Fig C)



(Fig A)



(Fig B)



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(Fig C)



(Fig D)

**Step 4:** Insert new handle upside down through hole in end cap while compressing down the spring and ball bearing. Use care when doing so the ball bearing does not pop out. (Fig D)

**Step 5:** Push the lever all the way in so it's flush with the end cover, you will hear the bearing click into its place in the cavity hole on the clutch lever. Then turn lever clockwise until it is sticking straight up. (Fig E, F)



(Fig E)



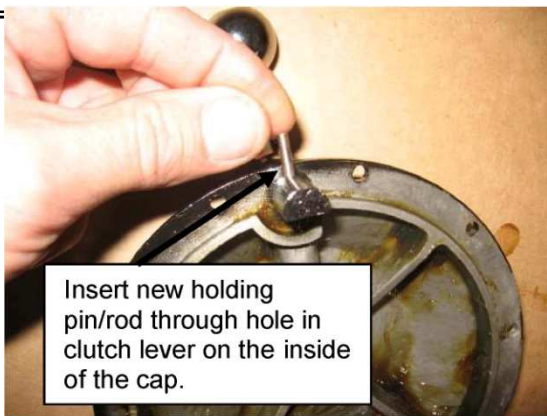
(Fig F)

**Step 6:** Now insert new holding pin/rod through hole in clutch lever on the inside of the cap. Push it down all the way until it is flush with the top of the lever. (Fig G,H)

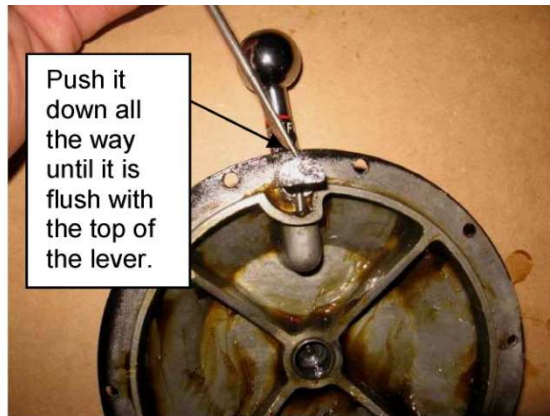


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(Fig G)



(Fig H)

**Step 7:** Re-install gasket on cover. (If it was removed) (Fig I)

**Step 8:** Re-install gear cover back onto winch using the previously removed bolts. (Fig J)



(Fig I)



(Fig J)

**Step 9:** Once all bolts are tightened check operation of new clutch lever by turning between engaged mode and free spool mode. You should feel the “click” and feel it lock into position. Installation is now complete.



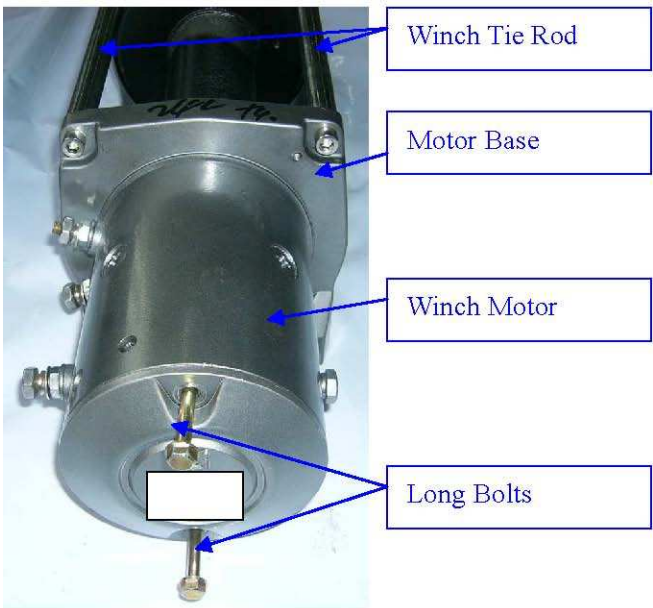


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## Winch Motor Clocking (97281/97210)

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



**Step 1:** Loosen the Long Bolts and pull them out from the winch motor.



**Step 2:** Rotate the motor to required position.

**Note:** The rotation of winch motor must be 90 degree, 180 degree, and or 270 degrees clockwise or anti-clockwise, only because of the fixed holes on motor base.



**Step 3:** Reinstall Long Bolts to complete.



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

Retaining Bolt

**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

**Note 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.



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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.