

# **ELECTRIC WINCH**

**12 / 24 VOLT DC**

**DW2000 (2000LBs/909Kg)**

**DW2500 (2500LBs/1136Kg)**

**DW3000 (3000LBs/1363Kg)**

## **ASSEMBLY & OPERATING INSTRUCTIONS**

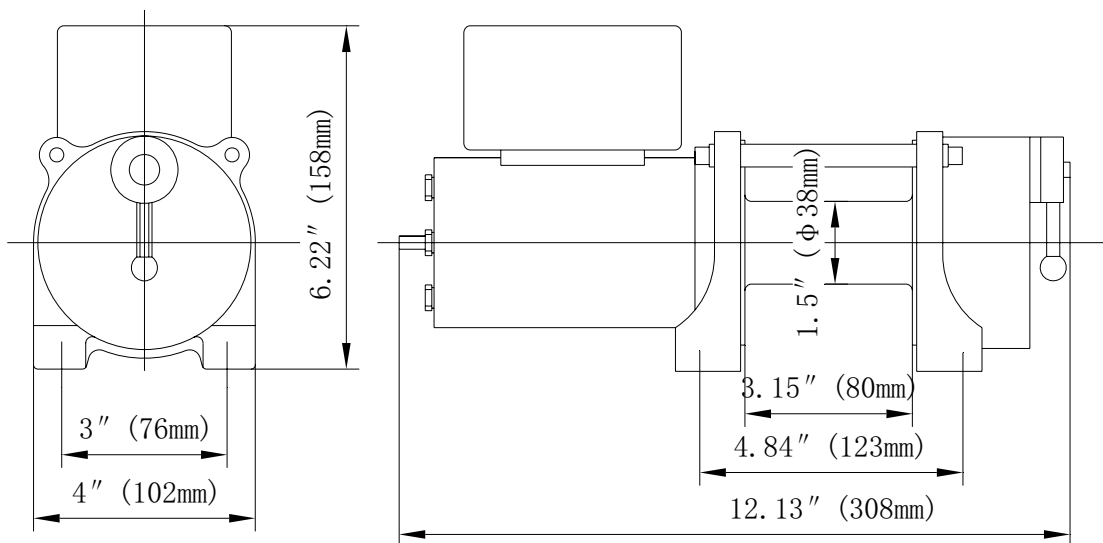


## DW2000

Specification	
Rated line pull	2000 lbs (909kgs)
Motor data	12V DC 0.7KW/0.9HP 24V DC 0.8KW/1.1HP
Gear reduction ratio	253: 1
Cable (Dia.×L)	φ0.2"×46' (φ5.1mm×14m)
Drum size (Dia.×L)	φ1.5"×3.15" (φ38mm×80mm)
Mounting bolt pattern	4.84"×3" (123mm×76mm) 4-M8

Line Pull And Rope Capacity Inlayer		
Layer	Rated Line Pull lbs (kgs)	Total Rope On Drum ft (m)
1	2000 (909)	6.56 (2)
2	1617 (735)	14.76 (4.5)
3	1357 (617)	24.6 (7.5)
4	1169 (531)	36 (11)
5	1027 (467)	46 (14)

Pull, Speed, Amperes, Volts (First layer)				
Line Pull lbs (kgs)	Line speed Ft/min(m/min)		Current A	
	12V DC	24V DC	12V DC	24V DC
0	9 (2.74)	10 (3.05)	15	6
500 (227)	7.5 (2.28)	8.2 (2.5)	50	20
1000 (454)	5.9 (1.8)	6.5 (1.98)	80	45
2000 (909)	2 (0.6)	2.2 (0.67)	120	70

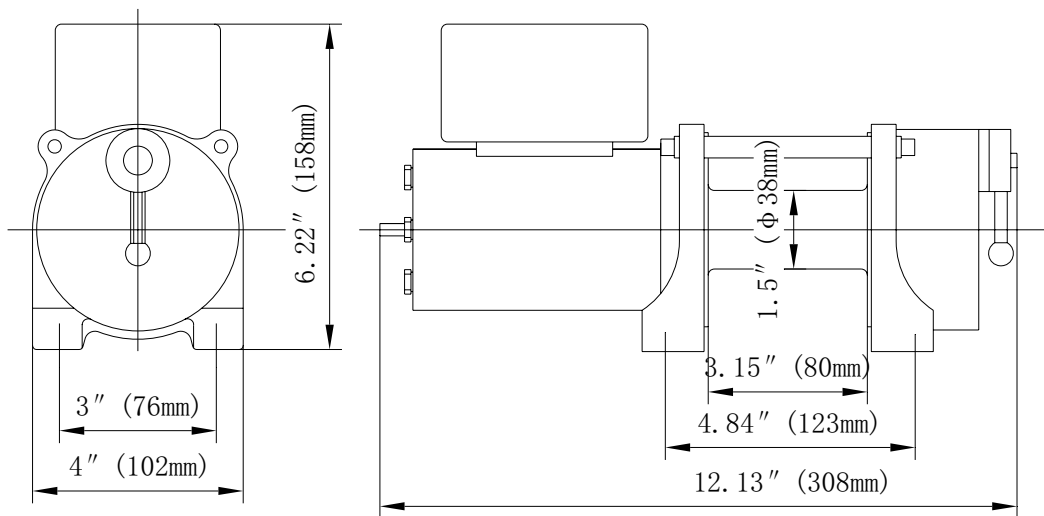


## DW2500

Specification	
Rated line pull	2500 lbs (1136kgs)
Motor data	12V DC 0.75KW/1HP 24V DC 0.85KW/1.13HP
Gear reduction ratio	253: 1
Cable (Dia.×L)	φ0.2"×46' (φ5.1mm×14m)
Drum size (Dia.×L)	φ1.5"×3.15" (φ38mm×80mm)
Mounting bolt pattern	4.84"×3" (123mm×76mm) 4-M8

Line Pull And Rope Capacity Inlayer		
Layer	Rated Line Pull lbs (kgs)	Total Rope On Drum ft (m)
1	2500 (1136)	6.56 (2)
2	2021 (918)	14.76 (4.5)
3	1696 (771)	24.6 (7.5)
4	1462 (664)	36 (11)
5	1284 (583)	46 (14)

Pull, Speed, Amperes, Volts (First layer)				
Line Pull lbs (kgs)	Line speed Ft/min(m/min)		Current A	
	12V DC	24V DC	12V DC	24V DC
0	9 (2.74)	10 (3.05)	15	6
500 (227)	7.5 (2.28)	8.2 (2.5)	40	20
1000 (454)	5.9 (1.8)	6.5 (1.98)	75	45
2000 (909)	2 (0.6)	2.2 (0.67)	110	70
2500 (1136)	1 (0.3)	1.2 (0.36)	160	90

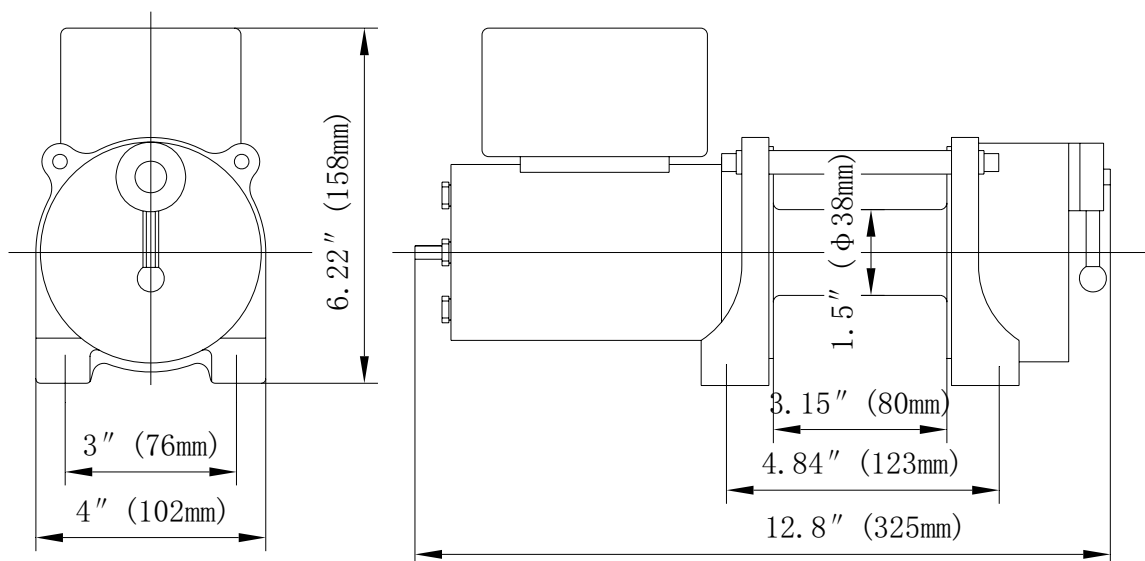


## DW3000

Specification	
Rated line pull	3000 lbs (1363kgs)
Motor data	12V DC 0.8KW/1.1HP 24V DC 0.9KW/1.2HP
Gear reduction ratio	253: 1
Cable (Dia.×L)	φ0.22"×46' (φ5.6mm×14m)
Drum size (Dia.×L)	φ1.5"×3.15" (φ38mm×80mm)
Mounting bolt pattern	4.84"×3" (123mm×76mm) 4-M8

Line Pull And Rope Capacity Inlayer		
Layer	Rated Line Pull lbs (kgs)	Total Rope On Drum ft (m)
1	3000 (1363)	6.07 (1.85)
2	2386 (1084)	13.68 (4.17)
3	1981 (900)	22.96 (7)
4	1694 (770)	33.8 (10.3)
5	1479 (672)	46 (14)

Pull, Speed, Amperes, Volts (First layer)				
Line Pull lbs (kgs)	Line speed Ft/min(m/min)		Current A	
	12V DC	24V DC	12V DC	24V DC
0	9 (2.74)	10 (3.05)	20	8
500 (227)	7.5 (2.28)	8.2 (2.5)	50	30
2000 (909)	5.9 (1.8)	6.5 (1.98)	100	55
3000 (1363)	2 (0.6)	2.2 (0.67)	160	95



## Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

## Safety Warnings and Precautions

**WARNING:** When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

### **Read all instructions before using this tool!**

1. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
2. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
3. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
4. **Do not force tool.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.
5. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a large industrial tool. Do not use a tool for a purpose for which it was not intended.
6. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
7. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear and ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.

8. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
9. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
10. **Disconnect Switch.** Unplug Switch when not in use.
11. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before operating.
12. **Avoid unintentional starting.** Be sure the switch is in the Off positions when not in use.
13. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tools when you are tired.
14. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn on On and Off properly.
15. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from the original manufacturer.
16. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt. Do not operate the tool.

## **Winch Warnings and Precautions**

1. Keeps hands and body away from Fairlead (cable intake slot) when operating.
2. Secure vehicle in position before using winch.

3. Do not exceed winch load weight capacity. (see Specifications on page 2)
4. Be certain winch is properly bolted to a structure (or vehicle) that can hold the winch load.
5. Always use proper couplings when connecting winch cable hook to load.
6. Do not lift items vertically. The winch was designed for horizontal use only.
7. Do not overload the winch (see Specification on page 2). It will do the job better at the load it was intended.
8. Do not use inappropriate attachments to extend the length of the winch cable.
9. Never lift people or hoists loads over people.
10. Never come in between the winch and the load when operating.
11. Do not apply load to winch when cable is fully extended. Keep at least 4 full turns of cable on the reel.
12. After moving an item with the winch, secure the item. Do not rely on the winch to hold it for an extended period.
13. Examine winch before using. Components may be affected by exposure to chemicals salts, and rust.
14. Never fully extend cable while under load. Keep 4 complete turns of cable around the winch drum.
15. When loading a boat into a trailer without keel or side hull rollers, make sure the trailer is submerged in the water when the boat is loaded by the winch. Attempting to drag the boat on to the trailer while on land can cause winch failure and possible injury.
16. Never operate winch if cable shows any signs of weakening, is knotted or kinked.
17. Winch does not have a locking mechanism. Secure load after moving.
18. Do not cross over or under cable under load.
19. Do not move vehicle with cable extended and attached to load to pull it. The cable could snap.

20. Use gloves while handling cable.
21. Apply blocks to vehicle when parked on an incline.
22. Re-spool cable properly.

**Warning:**

The electric winch is designed for intermittent use only, and should not be used in a constant duty application. The duration of the pulling job should be kept as short as possible. If the winch motor becomes very hot to the touch, stop the winch and let it cool down for several minutes. Never pull for more than one minute at or near the rated load. Do not maintain power to the winch if it stalls.

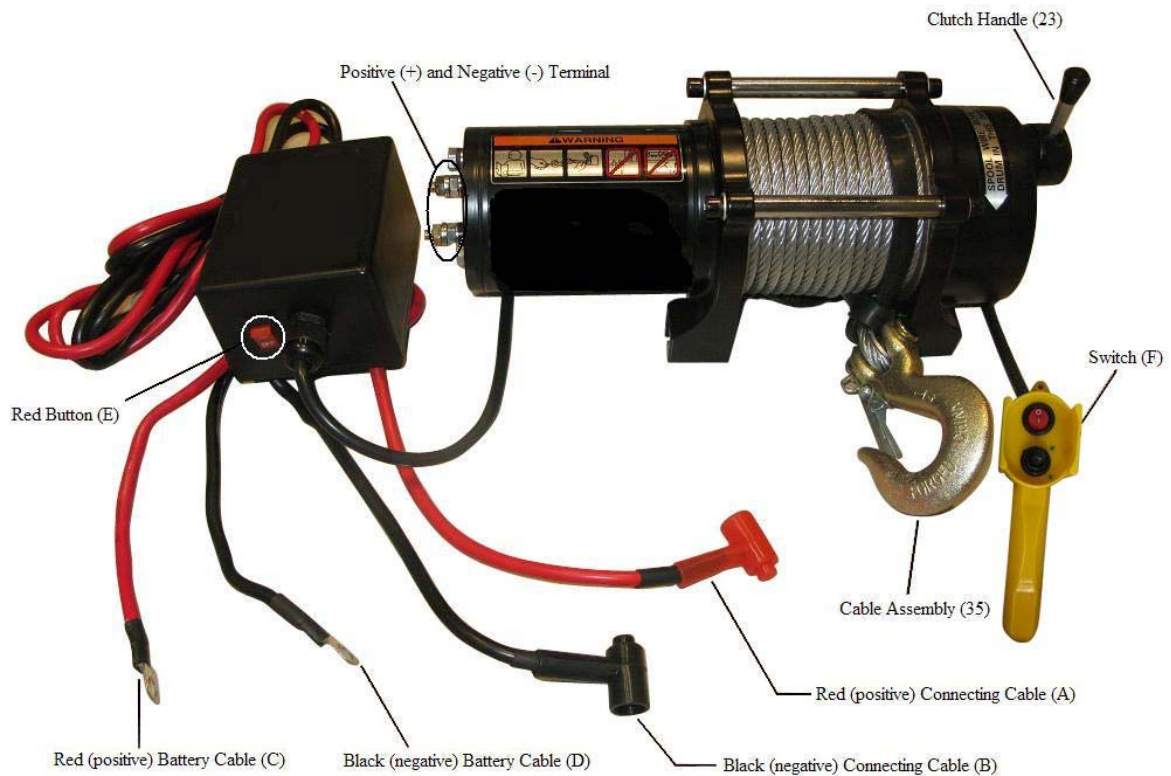
## **Unpacking**

When unpacking, check to make sure that all parts are included. Refer to Assembly Drawings and Parts Lists (both with like item numbers) at the end of this manual. If any parts are missing or broken, please contact your local distributor as soon as possible.

## **Installation**

1. Mount electric winch via the Mounting plate assembly (36) to the vehicle by using Screw (28), Nut (30), and Flat Washer (29), all provided.  
It should be aligned and secured to a solid part of the vehicle (front or rear) where the full rated load will be evenly distributed. Also remember that the winch is designed for horizontal pull, not vertical.
2. Fix the Switch controlling assembly (34) on the Switch fixing plate (3).
3. Connect the red (positive) Connecting Cable (A) from the Switch controlling assembly (34) to the closest screw-down positive (+) terminal of the winch motor.
4. Connect the black (negative) Connecting Cable (B) from the Switch controlling assembly (34) to the closest screw-down negative (-) terminal of the winch motor.





5. Connect the red (positive) Battery Cable (C) from the Switch controlling assembly (34) to the positive (+) terminal of the 12 volt battery.
6. Connect the black (negative) Battery Cable (D) from the Switch controlling assembly (34) to the negative (-) terminal to the 12 volt battery.
7. Switch on the Switch controlling assembly (34) by pressing the red button (E)
8. Test electric winch for proper operation. Refer to the operation section, below.

## Operation

1. Disengage the clutch by moving the Clutch handle (23) to the Out position.
2. Grab the Cable Assembly (35) hook and pull the cable to the desired length, then attach to item being pulled.

**Caution:** always leave at least four turns of cable on the drum. Review Winch Safety Warnings and Precaution on page 3 before continuing.

3. Reengage the clutch by moving the Clutch handle (23) to the In position.
4. While standing aside of the tow path, press (and hold) the pushbutton on the Switch (F).  
Press (and hold) the opposite pushbutton to reverse directions. Wait until the motor stop before reversing directions.

## **Maintenance**

### **Lubrication**

1. All moving parts within the electric winch having been lubricated using high temperature lithium grease at the factory. No internal lubrication is required.
2. Lubricate Cable Assembly (35) periodically using a light penetrating oil.

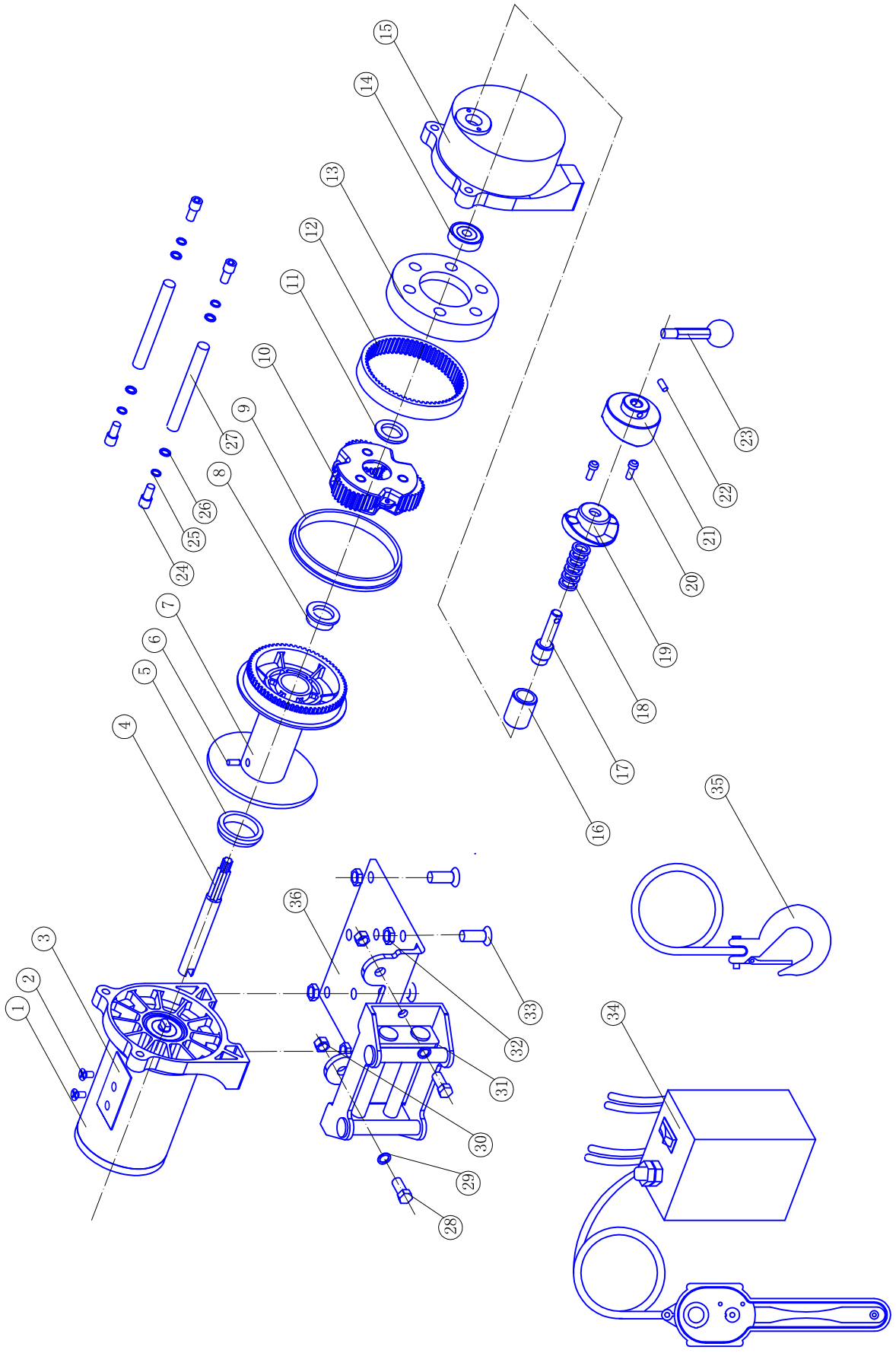
### **Cable Assembly Replacement**

1. Move Cam Ring to the Out position.
2. Extend Cable Assembly to its full length.  
Note how the existing cable is connected to the inside of the drum.
3. Remove old Cable Assembly and attach new one.
4. Retract Cable Assembly onto cable drum being careful not to allow kinking.

## Troubleshooting

SYMPTOM	POSSIBLE CAUSE	SUGGESTED ACTION
Motor does not turn on	<ul style="list-style-type: none"> <li>-Switch Assy not connected properly</li> <li>-Loose battery cable connections</li> <li>-Solenoid malfunctioning</li> <li>-Defective Switch Assy</li> <li>-Defective motor</li> <li>-Water has entered motor</li> </ul>	<ul style="list-style-type: none"> <li>-Insert Switch Assy all the way into connector</li> <li>-Tighten nuts on all cable connections</li> <li>-Tap solenoid to loosen contacts. Apply 12 volts to coil terminals directly. A clicking indicates proper activation</li> <li>-Replace Switch Assy.</li> <li>-Check for voltage at armature port with Switch pressed. If voltage is present, replace motor.</li> <li>-Allow to drain and dry. Run in short bursts without load until completely dry.</li> </ul>
Motor runs but cable drum does not turn	<ul style="list-style-type: none"> <li>-Clutch handle not engaged</li> </ul>	<ul style="list-style-type: none"> <li>-Move the clutch handle to the In position. If problem still persists, a qualified technician needs to check to repair</li> </ul>
Motor runs but slowly or without normal power	<ul style="list-style-type: none"> <li>-Insufficient current or voltage</li> </ul>	<ul style="list-style-type: none"> <li>-Battery weak, recharge. Run winch with vehicle motor running</li> <li>-Loose or corroded battery cable connections. Clean, tighten, or replace</li> </ul>
Motor overheating	<ul style="list-style-type: none"> <li>-Winch running time too long</li> </ul>	<ul style="list-style-type: none"> <li>-allow winch to cool down periodically</li> </ul>
Motor runs in one direction only	<ul style="list-style-type: none"> <li>-Defective or stuck solenoid</li> <li>-Defective Switch Assy</li> </ul>	<ul style="list-style-type: none"> <li>-Tap solenoid to loosen contacts. Repair or replace solenoid</li> <li>-Replace Switch Assy</li> </ul>

# winch Assembly Drawing



## Winch Parts List

Part No.	Quantity	Description
1	1	Motor assembly
2	2	Sunk screw M5*6
3	1	Switch fixing plate
4	1	Shaft
5	1	Front supporting sleeve
6	1	Socket head cap sunk screw M5*8
7	1	Rope drum
8	1	Sleeve gasket
9	1	Rear supporting sleeve
10	1	Planetary gear assembly
11	1	Washer
12	1	Rotor gear ring
13	1	Stator gear ring
14	1	Bearing 638-2RS
15	1	Gear box
16	1	Clutch sleeve
17	1	Clutch coupling
18	1	Spring
19	1	Clutch cam A
20	2	Cup head screw M4*12
21	1	Clutch cam B
22	1	Pin
23	1	Clutch handle
24	4	Socket head cap screw M6*20
25	4	Spring washerφ6
26	4	Flat washerφ6
27	2	Connecting bar
28	6	Hexagonal head screw
29	6	Flat washerφ8
30	6	Self-locking nut
31	1	Roller fairlead assembly
32	4	Nut M8
33	4	Socket head cap sunk screw M8*20
34	1	Switch controlling assembly
35	1	Cable assembly
36	1	Mounting Plate Assembly