

# **ELECTRIC WINCH**

**12 / 24 VOLT DC**

**DW5000 (5000LBs/2272Kg)**

**DW6000 (6500LBs/2727Kg)**

**DW8000 (8000LBs/3663Kg)**

**DW8500 (8500LBs/3863Kg)**

**DW9000 (9000LBs/4091Kg)**

**ASSEMBLY & OPERATING  
INSTRUCTIONS**

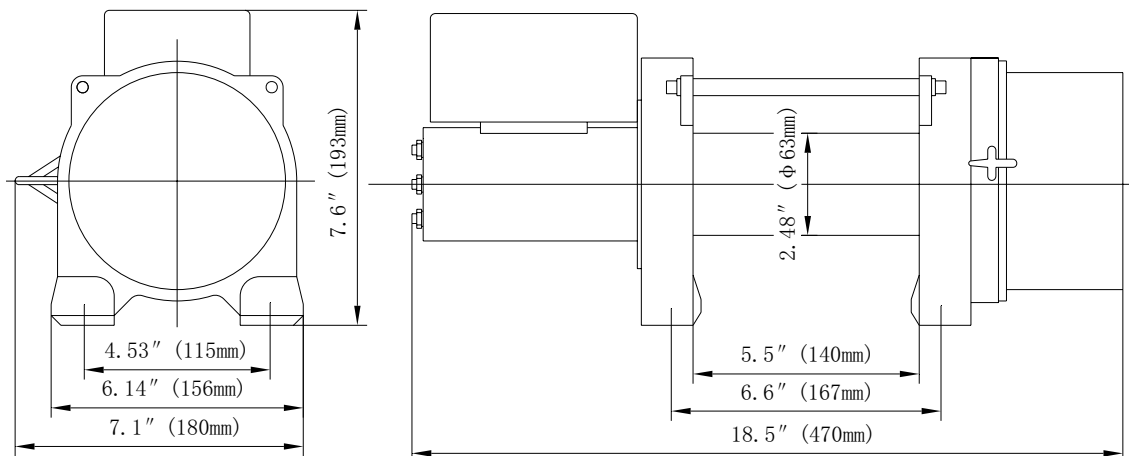


## DW5000

Specification	
Rated line pull	5000 lbs (2272kgs)
Motor data	12V DC 1.3KW/1.8HP    24V DC 1.5KW/2HP
Gear reduction ratio	294: 1
Cable (Dia.×L)	φ0.24"×79' (φ6mm×24m)
Drum size (Dia.×L)	φ2.48"×5.5" (φ63mm×140mm)
Mounting bolt pattern	6.6"×4.53" (167mm×115mm) 4-M10

Line Pull And Rope Capacity Inlayer		
Layer	Rated Line Pull lbs (kgs)	Total Rope On Drum ft (m)
1	5000 (2272)	15.98 (4.87)
2	4259 (1936)	34.78 (10.6)
3	3709 (1686)	56.43 (17.2)
4	3285 (1493)	79 (24)

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	15 (4.57)	17 (5.18)	40	20
1000 (454)	11 (3.35)	13 (3.96)	100	55
3000 (1363)	8 (2.44)	10 (3.05)	200	110
5000 (2272)	5 (1.52)	6 (1.83)	260	145

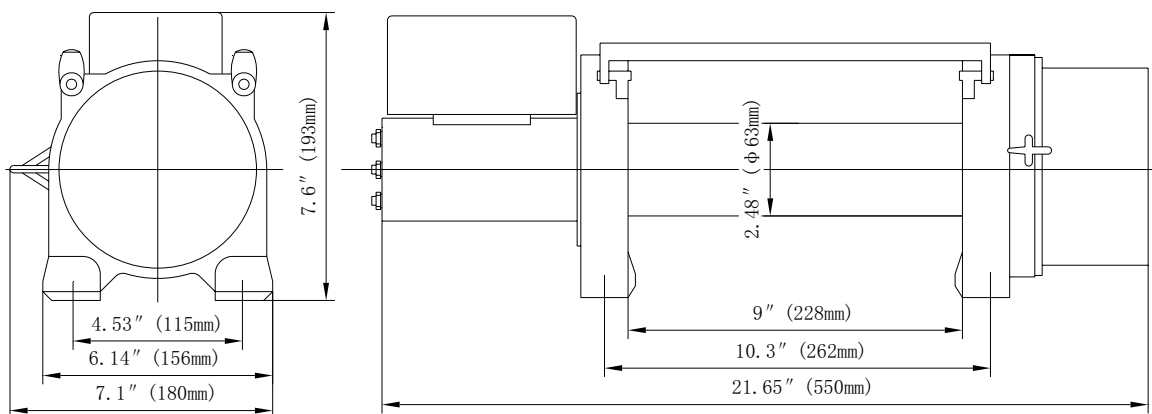


## DW6000

Specification	
Rated line pull	6000 lbs (2727kgs)
Motor data	12V DC 1.5KW/2.0HP 24V DC 1.7KW/2.26HP
Gear reduction ratio	294: 1
Cable (Dia.×L)	φ0.24"×92' (φ6mm×28m)
Drum size (Dia.×L)	φ2.48"×8.98" (φ63mm×228mm)
Mounting bolt pattern	10.3"×4.53" (262mm×115mm) 4-M10

Line Pull And Rope Capacity Inlayer		
Layer	Rated Line Pull lbs (kgs)	Total Rope On Drum ft (m)
1	6000 (2727)	26.67 (8.13)
2	5111 (2323)	57.97 (17.67)
3	4451 (2023)	92 (28)

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	13 (3.96)	17 (5.18)	40	20
2000 (909)	11 (3.35)	13 (3.96)	160	85
4000 (1818)	9 (2.74)	10 (3.05)	220	120
6000 (2727)	6 (1.83)	7 (2.13)	320	175

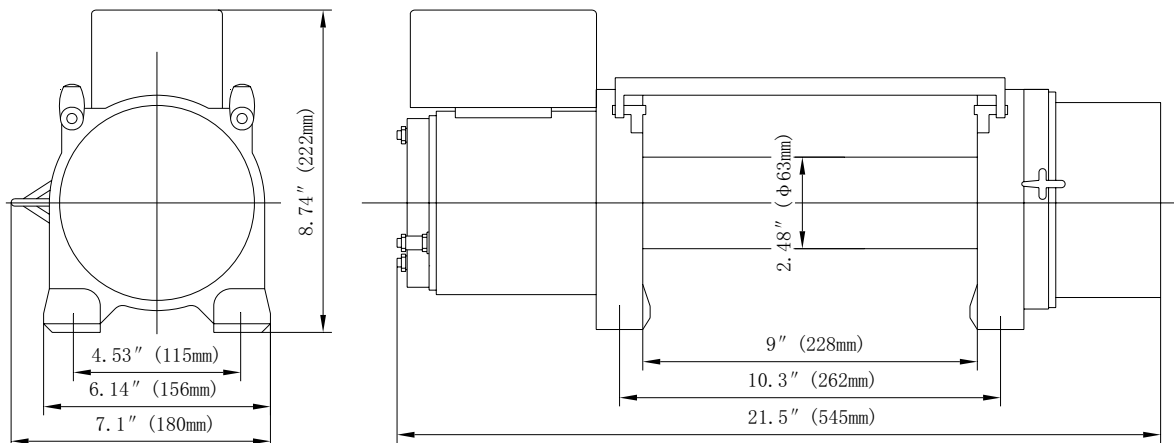


## DW8000

Specification	
Rated line pull	8000 lbs (3636kgs)
Motor data	12V DC 2.6KW/3.5HP 24V DC 2.8KW/3.7HP
Gear reduction ratio	294: 1
Cable (Dia.×L)	φ0.32"×95' (φ8mm×29m)
Drum size (Dia.×L)	φ2.48"×8.98" (φ63mm×228mm)
Mounting bolt pattern	10.3"×4.53" (262mm×115mm) 4-M10

Line Pull And Rope Capacity Inlayer		
Layer	Rated Line Pull lbs (kgs)	Total Rope On Drum ft (m)
1	8000 (3636)	20.87 (6.36)
2	6528 (2967)	46.42 (14.15)
3	5514 (2506)	76.67 (23.37)
4	4773 (2169)	95 (29)

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	13 (3.96)	15 (4.57)	40	20
2000 (909)	11 (3.35)	13 (3.96)	120	60
4000 (1818)	9 (2.74)	10.5 (3.2)	180	95
6000 (2727)	6 (1.83)	7 (2.13)	240	125
8000 (3636)	4.5 (1.37)	5 (1.52)	320	175

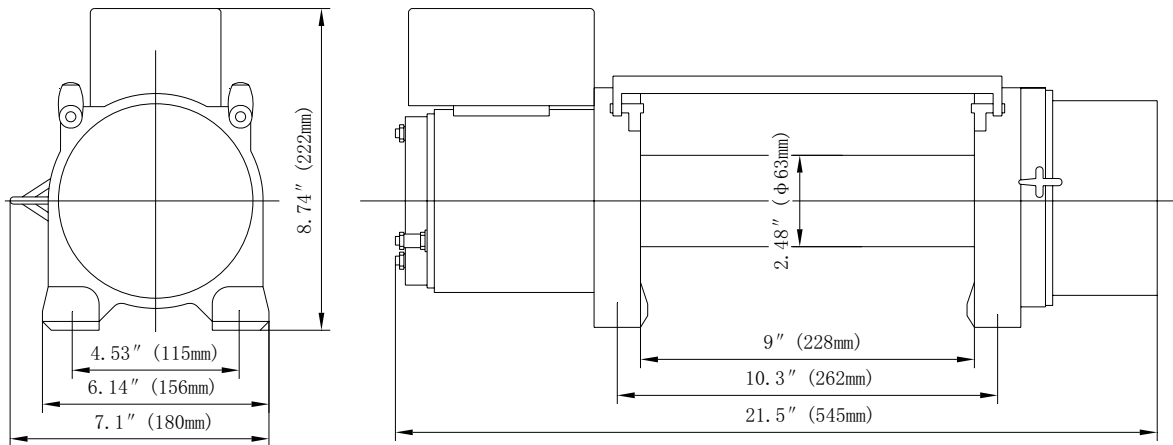


## DW8500

Specification	
Rated line pull	8500 lbs (3863kgs)
Motor data	12V DC 2.8KW/3.8HP 24V DC 3.0KW/4.0HP
Gear reduction ratio	294: 1
Cable (Dia.×L)	φ0.36"×92' (φ9.2mm×28m)
Drum size (Dia.×L)	φ2.48"×8.98" (φ63mm×228mm)
Mounting bolt pattern	10.3"×4.53" (262mm×115mm) 4-M10

Line Pull And Rope Capacity Inlayer		
Layer	Rated Line Pull lbs (kgs)	Total Rope On Drum ft (m)
1	8500 (3863)	18.24 (5.56)
2	6773 (3078)	41.11 (12.53)
3	5630 (2559)	68.63 (20.92)
4	4817 (2189)	92 (28)

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	13 (3.96)	15 (4.57)	30	20
2000 (909)	11 (3.35)	13 (3.96)	120	60
4000 (1818)	9 (2.74)	10.5 (3.2)	180	95
6000 (2727)	6 (1.83)	7 (2.13)	230	125
8500 (3863)	5 (1.52)	6 (1.83)	350	185

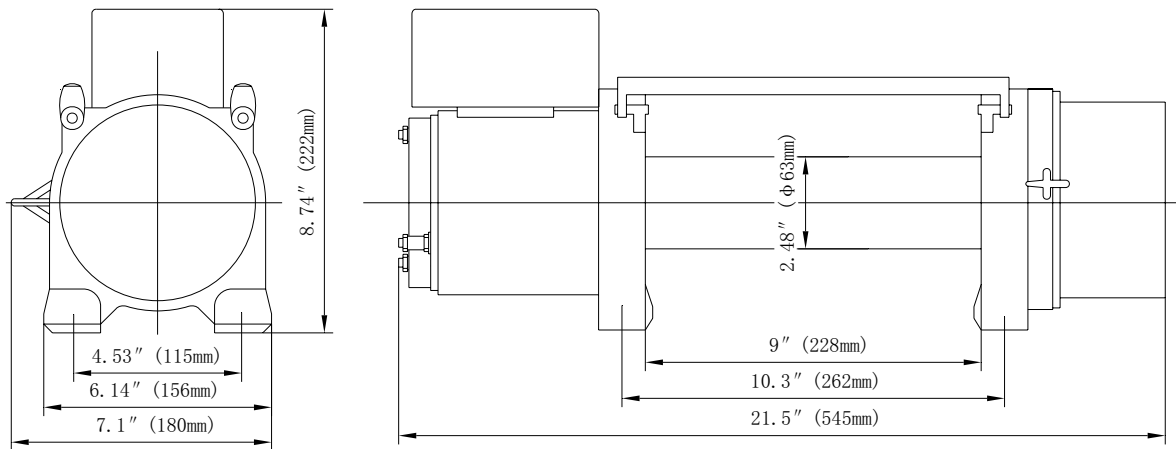


## DW9000

Specification	
Rated line pull	9000 lbs (4091kgs)
Motor data	12V DC 3.0KW/4.0HP 24V DC 3.2KW/4.25HP
Gear reduction ratio	294: 1
Cable (Dia.×L)	φ0.36"×92' (φ9.2mm×28m)
Drum size (Dia.×L)	φ2.48"×8.98" (φ63mm×228mm)
Mounting bolt pattern	10.3"×4.53" (262mm×115mm) 4-M10

Line Pull And Rope Capacity Inlayer		
Layer	Rated Line Pull lbs (kgs)	Total Rope On Drum ft (m)
1	9000 (4091)	18.24 (5.56)
2	7172 (3260)	41.11 (12.53)
3	5961 (2709)	68.63 (20.92)
4	5100 (2318)	92 (28)

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	13 (3.96)	15 (4.57)	30	20
2000 (909)	11 (3.35)	13 (3.96)	120	60
4000 (1818)	9 (2.74)	10.5 (3.2)	180	95
6000 (2727)	6 (1.83)	7 (2.13)	230	125
9000 (4091)	4.5 (1.37)	5 (1.52)	380	205



## 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 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

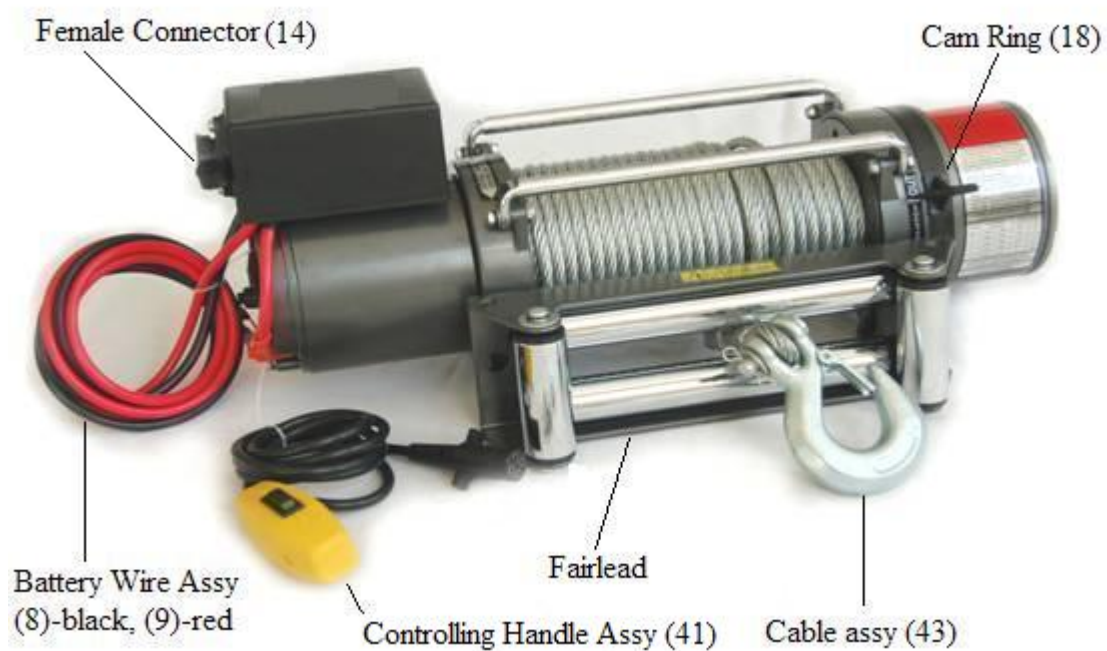
1. Mount electric winch to the vehicle using Cap Screw (4), Nut (5), Flat Washer, and Lock Washer, all provided.  
If the provided hardware does not accommodate the installation, use SAE grade 5 bolts or higher with torque to 35 feet-lbs. It should be aligned and secured to a solid part of the vehicle (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. Connect the red (positive) Battery Cable (9) from the Solenoid Assembly to the closest screw-down positive (+) terminal to the 12 volt battery.  
**Caution:** Battery cables should not be drawn taut. Leave slack for some cable movement.
3. Connect the black (negative) Battery Cable (8) from the Solenoid Assembly to the closest screw-down negative (-) terminal to the 12 volt battery.

4. Test electric winch for proper operation. Refer to the operation section, below.

## Operation

1. Disengage the clutch by moving the Cam Ring (18) to the Out position.
2. Grab the Cable Assy (43) 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 Cam Ring (18) to the In position.
4. Lift the Female Connector Cover exposing the electrical switch connector (14).
5. Insert the Controlling Handle Assy (41) connector onto the Female Connector (14).
6. While standing aside of the tow path, press (and hold) the pushbutton on the Controlling Handle Assy. (41).  
Press (and hold) the opposite pushbutton to reverse directions. Wait until the motor stop before reversing directions.
7. When the towing is complete, remove the Switch Assy. From the Female

Connector (14) and replace the Female Connector Cover.

## **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 (43) periodically using a light penetrating oil.

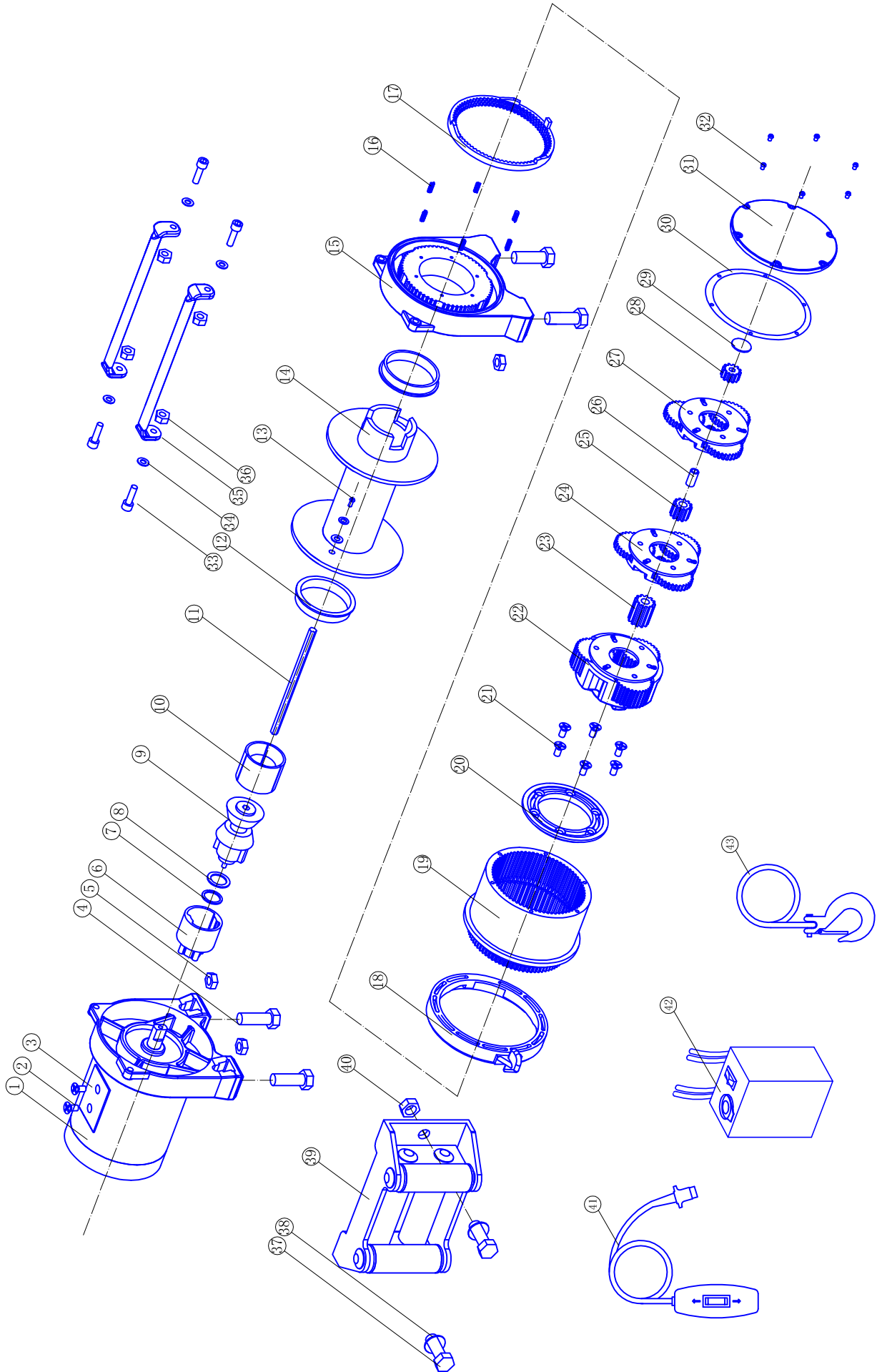
### **Cable Assembly Replacement**

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>-Cam Ring (clutch) not engaged</li> </ul>	<ul style="list-style-type: none"> <li>-Move the Cam Ring 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	4	Hexagonal head screw
5	4	Self-locking nut M10
6	1	Brake chuck
7	1	Check ring $\phi$ 19
8	1	Check ring $\phi$ 19
9	1	Braking shaft assembly
10	1	Friction plate
11	1	Hexagonal shaft
12	2	Drum sleeve
13	1	Half-round head screw M6*8
14	1	Drum assembly
15	1	Gear box base
16	6	Clutch spring
17	1	Clutch gear ring
18	1	Cam ring
19	1	Gear ring
20	1	Clutch clamp plate
21	6	Sunk screw M6*16
22	1	3-stage planetary gear assembly
23	1	3-stage central gear
24	1	2-stage planetary gear assembly
25	1	2-stage central gear
26	1	Sleeve of 2-stage central gear
27	1	1-stage planetary gear assembly
28	1	1-stage central gear
29	1	Cover
30	1	Sealing ring
31	1	Back cover
32	6	Half-round head screw M4*12
33	4	Socket head cap sunk screw M6*20
34	5	Spring washer
35	2	Connecting bar
36	4	Self-locking nut M6
37	2	Hexagonal head screw M12*35
38	2	Plain washer $\phi$ 19
39	1	Roller fairlead assembly
40	2	Self-locking nut M12

41	1	Controlling handle assembly
42	1	Switch box assembly
43	1	Cable assembly