OPERATOR'S MANUAL

MODEL: KDS-8.0
KDS-9.0
KDS-10.0(C)(i)
KDS-12.0(C)(i)

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KINGONE INDUSTRIAL CO.,LTD

CE

Ⅰ General Introduction

Thank you for purchasing our **KINGONE** winch**.** We hope you are pleased with its performance. We also hope it can bring you a convenient and cozy work. Please do read this manual and understand it before installing and operating. This manual covers all the instruction of installation, operation and maintenance of the winch. If you need other information, please contact us by: +86 574 88168988 or you could log on our website: www.kingonewinch.com.

Ⅱ Notice of Taking Delivery of Goods

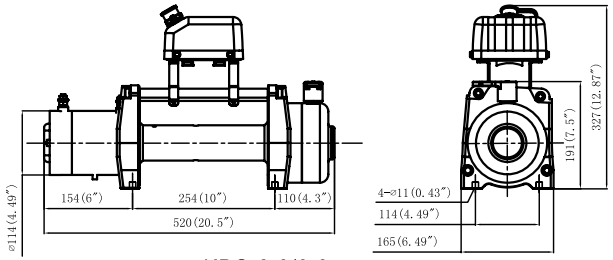
This winch carton contains the following items

Contents	Quantity
Winch and wire rope	1
Controller	1
Hook, roller fairlead	1
Handsaver	1
Owner's manual	1

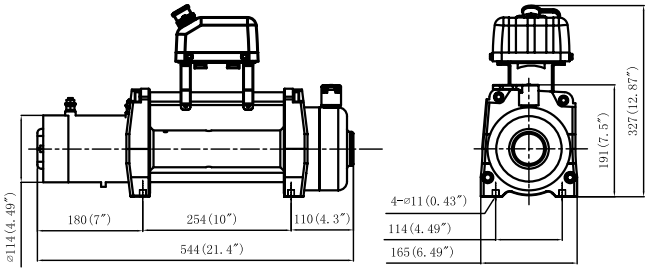
Main Components and Features of the Winch

1. Electric Motor 12 Voltage and 24 Voltage.
2. Braking Automatic load-holding brake.
3. Drum Made of steel.
4. Freespool Clutch-Lift a pin by the rotating control of handle. It is easy to separate the joggle and the gear,and to pull out the wire rope when there is no electric power.
5. Remote control-15′hand control rope-release switch equipment.

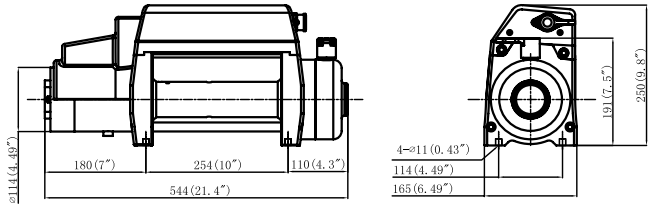
Dimension of the Winch (See the following figures)



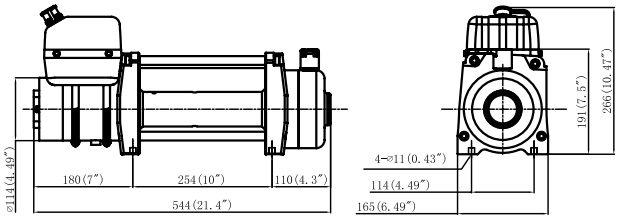
KDS-8.0/9.0



KDS-10.0/12.0



KDS-10.0i/12.0i



KDS-10.0C/12.0C

Performance Data of the Winch

Performance

KDS-8.0			KDS-9.0		
Wire rope layer	Max pulling force		Wire rope layer	Max pulling force	
	lb	kg		lb	kg
1	8,000	3,629	1	9,000	4,083
2	6,557	2,974	2	7,370	3,342
3	5,510	2,499	3	6,230	2,825
4	4,790	2,173	4	5,390	2,445

Line speed and Amp Draw									
		KDS-8.0				KDS-9.0			
Load		Line speed		Amp Draw		Line speed		Amp Draw	
lb	kg	fpm	mpm	12V	24V	fpm	mpm	12V	24V
No Load		46	14	70	45	34	10.3	70	45
2,000	907	14.8	4.5	138	85	20	6.1	120	95
4,000	1,814	11.5	3.5	270	148	17	5.2	200	114
6,000	2,722	6.5	2	360	197	13	4.0	280	148
8,000	3,629	5.9	1.8	430	250	8	2.4	350	195
9,000	4,083					6.5	2.0	380	230

Specifications

Model	Working load	Wire rope	Motor Output	Gear Ratio
KDS8.0	8,000 lb (3,629kg)	5/16″×80′	4.6 HP	173:1
KDS9.0	9,000 lb (4,083kg)	5/16″×100′	4.8HP	254:1

Performance Data of the Winch

Performance

KDS-10.0/i/C			KDS-12.0/i/C		
Wire rope layer	Max pulling force		Wire rope layer	Max pulling force	
	lb	kg		lb	kg
1	10,000	4,536	1	12,000	5,442
2	8.196	3,718	2	9,789	4,445
3	6,888	3,124	3	8,273	3,760
4	5,990	2,717	4	7,199	3,255

Line speed and Amp Draw									
		KDS-10.0/i/C				KDS-12.0/i/C			
Load		Line speed		Amp Draw		Line speed		Amp Draw	
lb	kg	fpm	mpm	12V	24V	fpm	mpm	12V	24V
No Load		48	14.5	60	40	29.3	9	60	40
2,000	907	14	4.3	150	110	14	4	116	87
4,000	1,814	12	3.6	181	158	9.8	3	141	110
6,000	2,722	10	3	250	190	7.9	2.4	178	129
8,000	3,629	8.2	2.5	300	230	6.9	2.1	224	165
10,000	4,536	7	2.1	350	270	6.2	1.9	245	200
11,000	5,000					4.9	1.5	270	214
12,000	5,442					4.5	1.4	285	217

Specifications

Model	Working load	Wire rope	Motor Output	Gear Ratio
KDS-10.0/i/C	10,000 lb (4,536kg)	11/32″×100′	5.0 HP	173:1
KDS-12.0/i/C	12,000 lb (5,442kg)	3/8″×90′	6.0HP	254:1

The above performance is based on the first Wire rope layer (See figure 1)

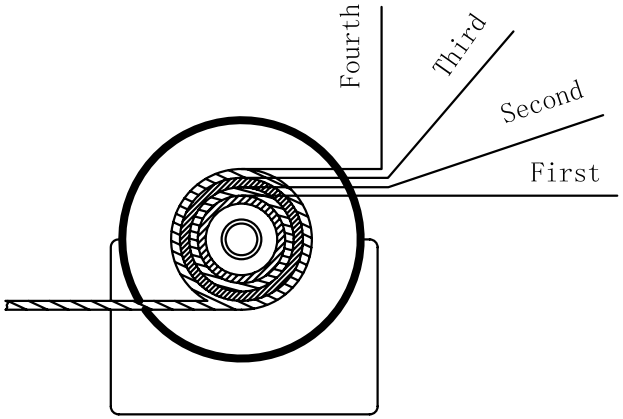


Figure1

Ⅲ Safety Precautions

Electrical winch is a machine with great pulling force. Please do follow the following instructions and be cautious when using it.

1. Stop the winch when motor does not rotate. Overload will damage the electrical winch and the wire rope and cause other unsafety. (See figure2)

Figure2

2. Under any abnormal phenomena, stop the winch immediately and check whether the operating procedure is right, or repair it soon.

3. Never exceed the winch rated capacity while operating it. Over loading may damage the relevant parts of the electric winch or cause other unsafety.

4. Do not use your vehicle to assist the winch while pulling a load. It will give the wire rope extra burden.

5. The pulling force of the winch should be powerful enough to overcome all the resistance caused by any vehicle.

6. Keep the winch and its surroundings clean and stay away from any barrier. Not allow other people to stay in the winching area. Wire ropes and hooks should always be kept clean too. The best way to exclude dangers is to keep people in safety area.

7. Check wire rope and equipment frequently, change the wearing wire rope and replaced it immediately when it is broken. Normally, the wire rope should be replaced by the original manufacturer. (See Replacement Parts List). Regularly check the winch installation to ensure that all bolts are tight.

8. Wear qualified leather working glovers when handling wire rope in case of the slippery.

9. The first layer of wire rope should never be less than 5 circles, or the root of the wire rope can't withstand the load.

10. After the operation, clean the wire rope and the hook. It is forbidden to put fingers on the hook, for fear of causing injury. It is also forbidden to guide the wire rope to the drum by hand. When the hook comes near to the roller fairlead, you should use the handsaver to guide the wire rope. (See figure 3)

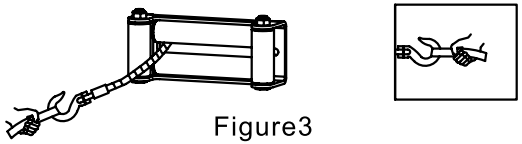


Figure3

11. Never turn over the wire rope to hook the wire rope. Or, it will damage the wire rope. You should use a nylon belt (See figure 4)

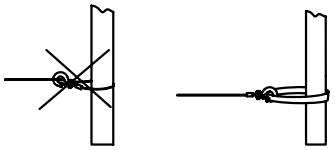


Figure4

12. Lay a blanket or a big towel near the hook on the wire rope when pulling heavy load, so that it can prevent the rebound of the wire rope when taken off the hook. Meanwhile, raise the lid of the vehicle for protection.(See figure 5)

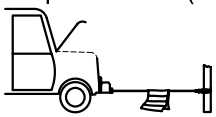


Figure5

13. Never use winch to carry people. Never lift heavy stuffs to pass over people's head. (See figure 6)

Figure6

14. It is forbidden to operate the winch when taken drugs, alcohol or medicine.

15. Avoid pulling things from the limitary angles. Or else the wire rope will cause damage to one end of the drum. (See figure 7) this will cause the tangling of wire rope on the winch and bring damage to the wire rope and the winch.

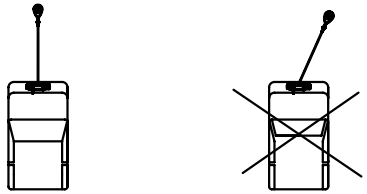


Figure7

16. Equipment such as roller fairlead, hooks, strap, etc. should be periodically checked for damage and replaced.

17. Never release clutch when the winch is under working.

18. When dragging an object, the wire rope condition should be from loose to tight slowly. Then stop, recheck if all the component of the winch are correctly used.

19. Never use the winch to load or unload cargoes.

20. Never add shock loads to the winch or wire rope.

21. Never dismantle or assemble other unrelated parts to the winch. Use matched parts that produced by the original manufacturer(refer to replacement part list), to maximize its capacity. Any replacement or alteration will void the guarantee.

22. Never submerge the winch into water.

23. Never use the cable of the winch randomly. Do not try to pull the cable to move the winch, or pull hard the cable from the socket. The cable should be kept away from high temperature, grease and sharp objects.

24. The winch must be connected to DC according to relevant regulations. Never connect winch to the AC directly, otherwise the winch will burn or cause people's electric shock.

Ⅳ Installation

Safety for Installation

1. Choose a location for installation that can endure the max. pulling force.
2. Do use the switches, spare parts and installation components offered by the manufacturer.
3. Always use the bolts no lower than ISO grade10.9 and never change the bolts randomly.
4. While assembling, always complete the mounting of winch onto the base first, then the hook and staple, finally the wire rope.
5. Wrap the wire rope on the drum according to circumrotate direct of the drum indicated at the label. If it needs the cooperation of the auto clutch, you can adjust its direction according to the actual situation.
6. Always tighten the wire rope and rewrap it under the loading condition before working, in case of the loose of the wire rope. Otherwise, when under working, the wire rope will stuck in the loose layer and wore. This will cause damage to the wire rope.
7. When boring is needed, always make warning marks, such as fuel lines, fuel tank, brake lines, electrical wires, and etc.
8. Automobile storage batteries contain gas, which flames and explores easily. During installation, remove all valuable objects and protect your eyes. Do not lean over to storage battery while installing.

Minimum Electrical Requirements

1. For 12 or 24V Voltage winches, to choose suitable generator and storage battery with 440 CCA capacity is recommended. If the winch is dragging a heavy object, an auxiliary storage battery is recommended. (See figure8)

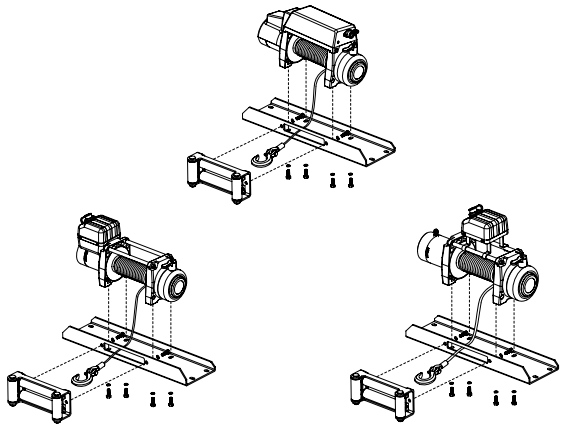
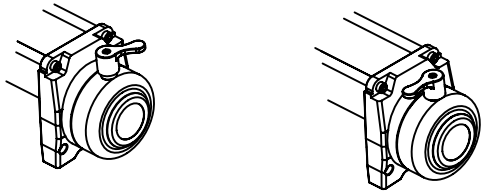


Figure8

Methods of Installation

1. Use bolt to install the support of the winch.
2. Use bolt to install the winch to a base plate.
3. Connect the red and black leading wire to the storage battery. In order to prevent the wear, tear and the cut to the insulation, it offers many layers of insulated zones to avoid any sharp end of the vehicle. The red leading wire connects to the positive terminal of the battery, while the black leading wire connects to the negative terminal of the battery.

4. Turn the rotary clutch to the position of **DISENGAGED** and pull out several feet of wire rope from the wheel. Then turn clutch to the position of **ENGAGED**. Plug in the controller of rope release. Press the button to check the rotation direction of wire rope and recheck the connection of the wire. (See figure 9)



DISENGAGED **ENGAGE**

Figure9

Caution: The automatic wire rope release controller must be kept in the clean and dry place.

Ⅴ Operation Guide

Precautions before use:

1. Check the safety of the surroundings.
2. Check if there is over abrasion, break, rust or other defects on the wire rope.
3. Ensure the winch is correctly connected: **12v DC** or **24v DC** only.
4. Ensure that the handle of the clutch is in the state of **ENGAGE**.
5. Ensure that the wire rope does not twist and knotted.
6. Ensure the button of the switch is clear and easily recognized.

7. When power in on, the LED on the controller shows RED. When press **IN** or **OUT**, LED light shows GREEN. (See figure 10)

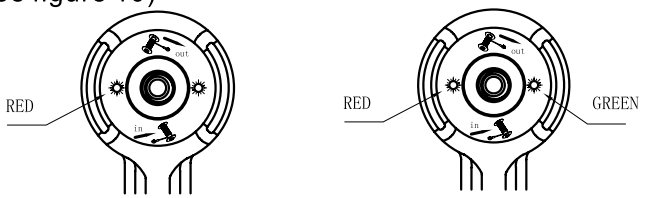


Figure10

8. If the noise is abnormal or the winch vibrates, stop working immediately and check it.

Wire Rope

1. When wire rope comes out, the switch trigger is in the position of **OUT**.
2. When wire rope goes in, the switch trigger is in the position of **IN** (See figure 11 and figure 12)

Out In

Figure11 Figure12

Caution: The controller should be kept clean and located in a dry place.

Caution: The handle of the clutch should be in the position of **ENGAGE** (If it is not in the state of working, then it should be locked) (See figure 13)

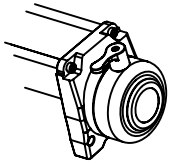


Figure13

Cautions & service regulation

1. Keep the wire ropes roll tidy. A better choice is to draw back the ropes after use.

2. Don't make the winch work in a state of heat since it should be working in an intermittent way. Try to stop it and cool the motor temperately. At this period make the engine running, so that the battery can get recharged.

3. To maximize the operation life of wire ropes, when loading heavier loads, double line pulley set should be used.

4. The pulling force is stronger at the beginning of starting, so it is better to avoid frequent start or stop.

5. Change the wire rope when twisted.

6. Equip the winch with a roller fairlead to reduce abrasion of wire rope towed in different directions.

Ⅵ Maintenance

1. Check regularly whether the bolts are well tightened and the connection condition of power. Clean the dust, rust etc on the connection section of power.

2. The repairs can only be done by Maintenance Centers authorized by the company. The company is not responsible for any problems caused by users disassembling the transmission gear by themselves.

Wire Rope Replacement

1. To disassemble the wire rope from the drum, pull the wire rope out, using controller switches or clutches.

2. Neither replace the damaged wire rope with lighter or heavier ones, nor ropes made of other materials, but the wire rope made by the same producer, which is suitable for the replacement (see the replacement parts list).

3. Insert one end of the wire rope into the end of the drum with hole(s). Tighten the wire rope with screw.

Notice: It is extremely important to tighten the wire rope with screws. (See figure 14)

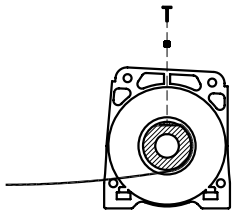


Figure14

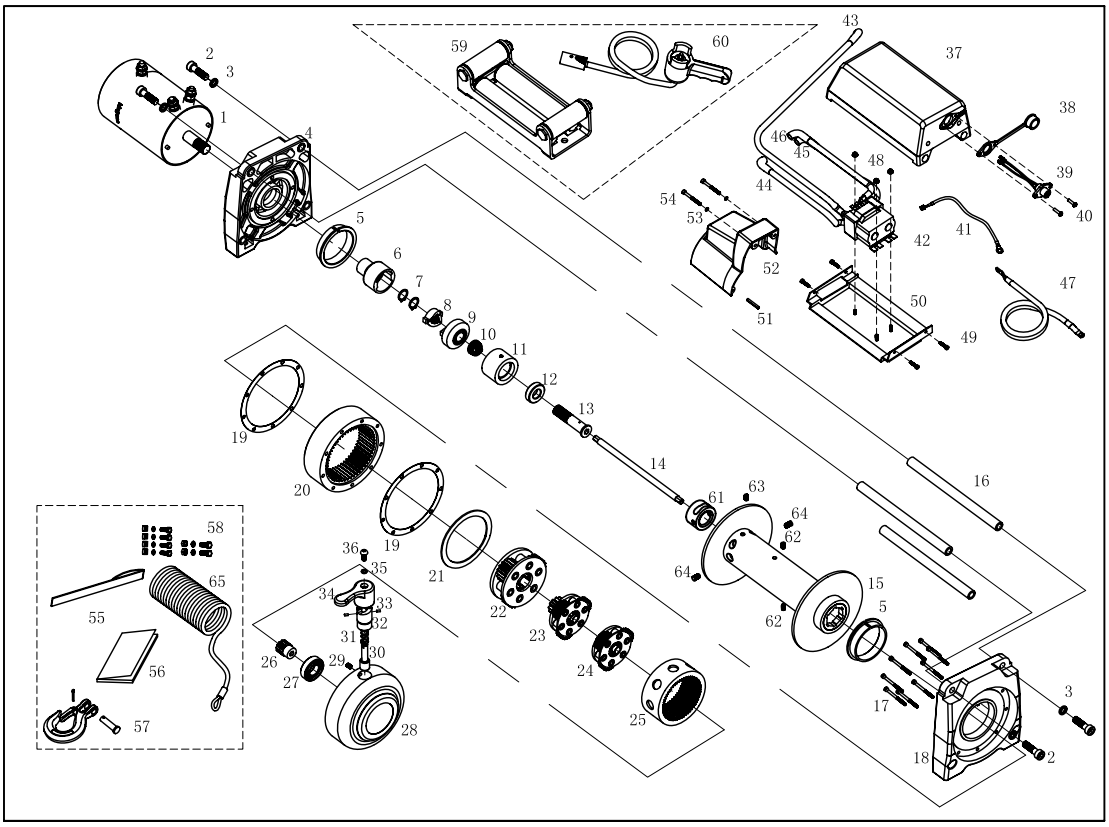
Ⅶ Malfunction Analysis

If malfunction happens, please contact the nearest retailers of the manufacturer or repairing centers authorized by the manufacturer.

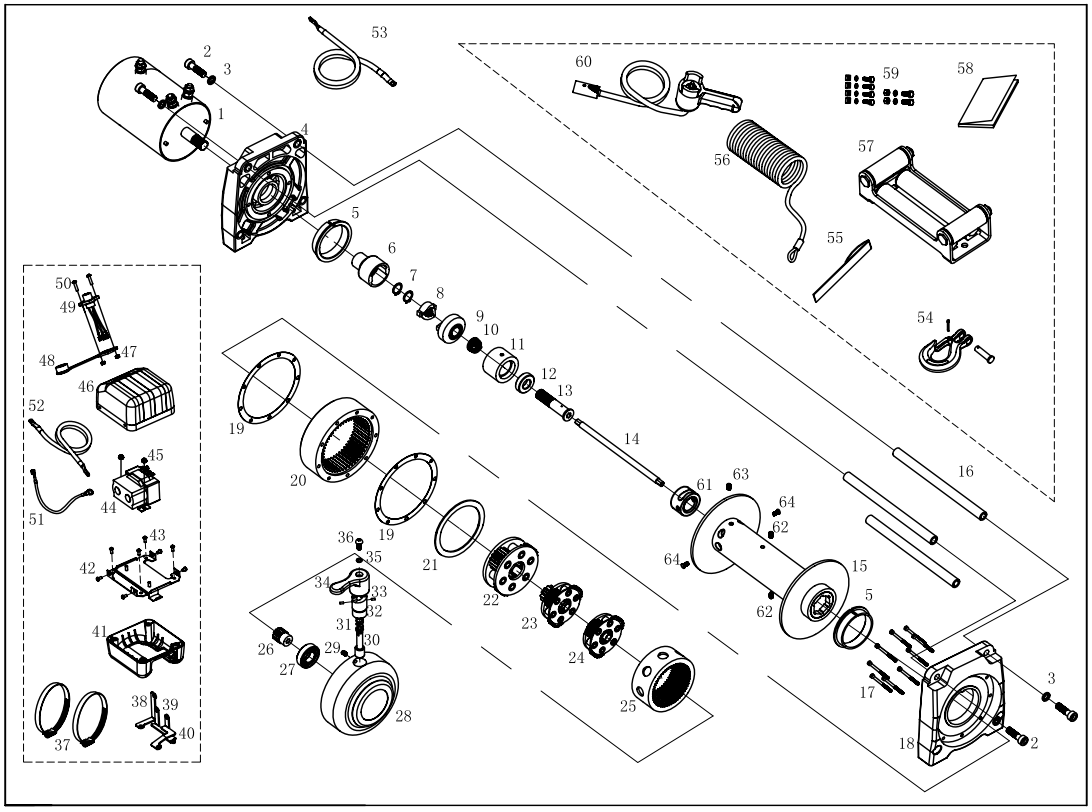
Malfunction description	Possible causes	Solutions
The motor failed to run or only run in one direction.	1. The electromagnetic unit is damaged or blocked, which is likely caused by the fact that the terminal nut is not tight. 2. The switch problem. 3. The leading wire is disconnected or not well connected.	1. Notice: Release the clutch, prevent the wire rope and drum from bearing force until the inspection is over.Change the electromagnetic unit once it is found blocked, for it will likely block again. The sound "ka ka" will be heard when the electromagnetic unit is connected the first time. 2. Change the switch. 3. Find the poor contact. (Notice: often use two Wrenches).
The winch is unable to stop.	1.The electromagnetic unit is in a closed condition with the contacts bonded.	1.Change the magnetic switch.
The motor is overheated.	1. Long-time working. 2. The motor is damaged.	1. Stop and cool the motor. 2. Repair or replace the motor.

Malfunction description	Possible causes	Solutions
The motor is working with lack of strength or linear velocity.	1. The battery is low. 2. The leading wire connecting the battery and the winch is too long. 3. Poor connection of the battery.	1. Charge or replace the battery. Check the charging system. 2. Use standard and high quality leading wire. 3. Check whether the two ends of the battery are corrosive. Clean the ends when necessary, or check the connection.
The motor is running, but the drum is unable to run.	1.The clutch is off working.	1.Close the clutch.
The winch is running in the opposite direction.	1. The motor leading wire is connected in the opposite direction. 2. Wrong wire connection of the electromagnetic unit.	1. Check the wire connection. 2. Check the wire connection.
Unable to tow cargoes.	1. Over load. 2. The clutch is damaged.	1. Reduce the loading weights or use the bifilar set. 2. Replace the clutch.

Ⅷ Explosion Diagram of Parts List



NO	Name of parts	Qty	NO	Name of parts	Qty	NO	Name of parts	Qty
1	12V DC motor 24V DC motor	1	24	1st carrier	1set	48	Hexagon lock nut	2
2	Headed inner hexagon screw	4	25	1st & 2nd ring gear	1	49	Headed inner hexagon screw	4
3	Spring shim	4	26	1st pinion	1	50	Base plate	1
4	Motor support rack	1	27	Bearing	1	51	Spring pin	1
5	Drum bushing	2	28	Gear box	1	52	Motor cover	1
6	Braking clutch base	1	29	Grub inner hexagon screw	1	53	Spring shim	2
7	C-ring	2	30	Clutch lever	1	54	Headed inner hexagon screw	2
8	Wedge shape piece A	1	31	Pressed spring	1	55	Handsaver strap	1
9	Wedge shape piece B	1	32	Clutch sleeve	1	56	Manual	1
10	Spiral spring	1	33	Spring pin	2	57	Hook set	1
11	Braking base	1	34	Clutch knob	1	58	Screw package	1set
12	Bearing	1	35	Spring shim	1	59	Roller fairlead	1set
13	Connecting shaft	1	36	Round-headed inner hexagon screw	1	60	Controller	1set
14	1st shaft	1	37	Electric box	1	61	Wire rope fastener	1
15	Drum	1	38	Waterproof cover	1	62	Grub inner hexagon screw	2
16	Tie bar	3	39	Control wire set B	1	63	Grub inner hexagon screw	1
-1	Tie bar	2	40	Headed inner hexagon screw	2	64	Countersunk inner hexagon screw	2
17	Headed inner hexagon screw	9	41	Grounding wire	1	65	Wire rope	1set
18	Body support rack	1	42	Magnetic switch	1	66		
19	Anti-leak seal	1	43	Motor connection wire A	1	67		
20	3rd ring gear	1	44	Motor connection wire F1	1	68		
21	3rd washer	1	45	Motor connection wire F2	1	69		
22	3rd carrier	1set	46	Power wire +	1	70		
23	2nd carrier		47	Power wire -	1	71		



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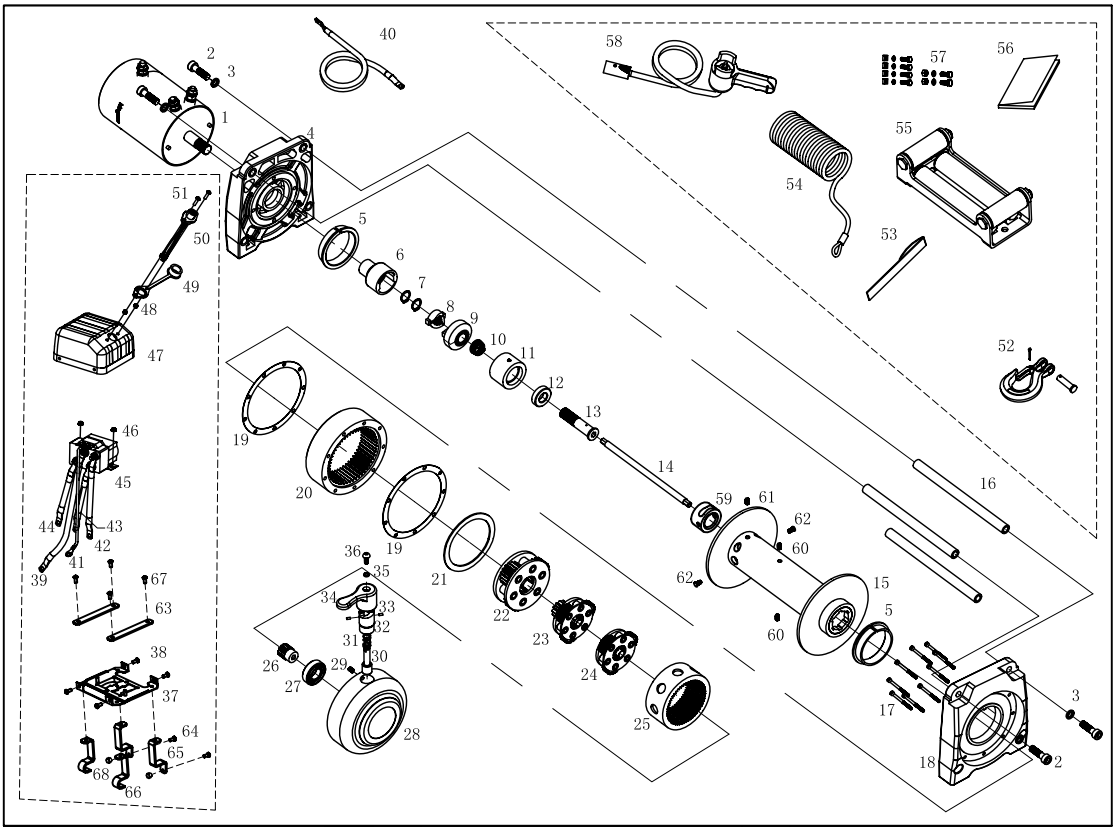
1	12V DC motor 24V DC motor	1	24	1st carrier	1set	48	Waterproof cover	1
2	Headed inner hexagon screw	4	25	1st & 2nd ring gear	1	49	Control wire set B	1
3	Spring shim	4	26	1st pinion	1	50	Round-headed inner hexagon screw	2
4	Motor support rack	1	27	Bearing	1	51	Grounding wire	1
5	Drum bushing	2	28	Gear box	1	52	Power wire +	1
6	Braking clutch base	1	29	Grub inner hexagon screw	1	53	Power wire -	1
7	C-ring	2	30	Clutch lever	1	54	Hook set	1
8	Wedge shape piece A	1	31	Pressed spring	1	55	Handsaver strap	1
9	Wedge shape piece B	1	32	Clutch sleeve	1	56	Wire rope	1set
10	Spiral spring	1	33	Spring pin	2	57	Roller fairlead	1set
11	Braking base	1	34	Clutch knob	1	58	Manual	1set
12	Bearing	1	35	Spring shim	1	59	Screw package	1
13	Connecting shaft	1	36	Round-headed inner hexagon screw	1	60	Controller	1set
14	1st shaft	1	37	Clamp	1	61	Wire rope fastener	1
15	Drum	1	38	Connecting plate A	1	62	Grub inner hexagon screw	2
16	Tie bar	3	39	Connecting plate F1	1	63	Grub inner hexagon screw	1
-1	Tie bar	2	40	Connecting plate F2	1	64	Countersunk inner hexagon screw	2
17	Headed inner hexagon screw	9	41	Lower solenoid box	1	65		
18	Body support rack	1	42	Connecting base plate	1	66		
19	Anti-leak seal	1	43	Round-headed inner hexagon screw	8	67		
20	3rd ring gear	1	44	Magnetic switch	1	68		
21	3rd washer	1	45	Hexagon lock nut	2	69		
22	3rd carrier	1set	46	Upper cover	1	70		
23	2nd carrier	1set	47	Hexagon nut	2	71		



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14	1st shaft	1	37	Base plate	1	61	Grub inner hexagon screw	1
15	Drum	1	38	Round-headed inner hexagon screw	4	62	Countersunk inner hexagon screw	2
16	Tie bar	3	39	Power wire +	1	63	Mounted plate	2
-1	Tie bar	2	40	Power wire -	1	64	Round-headed inner hexagon screw	4
17	Headed inner hexagon screw	9	41	Grounding wire	1	65	Mounted plate 1	2
18	Body support rack	1	42	Connecting connection wire A	1	66	Mounted plate 2	2
19	Anti-leak seal	1	43	Connecting connection wire F1	1	67	Round-headed inner hexagon screw	4
20	3rd ring gear	1	44	Connecting connection wireF2	1	68	Hexagon nut	2
21	3rd washer	1	45	Magnetic switch	1	69		
22	3rd carrier	1set	46	Hexagon lock nut	2	70		
23	2nd carrier		47	Upper cover	1	71		

Ⅸ Quality Warranty Declaration

1. This quality warranty applies only to the original purchaser of Kingone Winch. Kingone Industrial Co., Ltd. is responsible for the genuine winch which is installed and used by following the instructions of this manual correctly. The seller gives one year quality guarantee for all parts and components (except the wire rope).

2. Once defects are found, with this quality warranty declaration, the buyer can claim for repairs or replacement from the seller or the dealers authorized by Kingone. The buyer is required to show the following information: purchasing receipt, specifications, model, registered number, dates of purchase, name and address, vehicle number and description.

3. This quality warranty does not cover the failures caused by misuse, alteration, non-Kingone parts modification, damage results from abuse or accident, or exceed the quality guarantee period. In these cases, the buyers must pay for the transportation, material and labor, and Kingone is willing to supply parts, technique support and repairs for reasonable charge.

4. This winch is designed for vehicle recovery. Industrial application and people transportation voids this warranty.

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