

INSTRUCTION MANUAL

—— *EW6500/EW9500/EW12500* ——



M732007A

Installation Manual

GENERAL SAFETY PRECAUTIONS

NEVER operate winch with less than 10 wraps of synthetic rope or 6 wraps of steel cable around the drum. The terminal end is to prevent the rope from unraveling, it is NOT a load bearing attachment point. Improper installation and/or spooling out to last layer will put a load on the terminal end and the rope will release from the terminal.

Always re-spool winch rope under a minimum 1000 lb. load before each use.

For more information see owners manual

To keep your winch in working order please:

Once a month cycle the winch by:

1. Power out steel cable/synthetic rope 15ft. Then free spool out another 50+ ft of steel cable/synthetic rope.

Always

make sure you have at least 6 wraps of steel cable or 10 wraps of synthetic rope around winch drum.

2. Put winch into gear and re-spool the winch line. Inspect winch line as you re-spool winch line. It is recommended that you have at least 1000 lbs. of tension when re-spooling cable. This prevents the rope from pinching itself during recovery.

*Keep tag in glove box for reference.

***Winching is dangerous and potentially fatal. ***

***Use Caution when winching. ***

Pre/post op check list.

Check fasteners for torque before each outing.

Inspect wiring and make sure connections are tight before each outing. Verify there is no chafing or cutting of wires.

Inspect rope for damage before and after each use.

Inspect remote for damage and function. Check range on wireless remote, if applicable, replace battery if necessary.

Keep winch clean, remote socket covered and steel cable lightly lubricated. Synthetic rope needs to be kept clean and free from any chemicals or dirt.

Refer to owners manual for more information.

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GENERAL SAFETY PRECAUTIONS

SAFETY PRECAUTIONS

Warning! Observe safety precautions for personal safety and the safety of others. Improper equipment operation may cause personal injury and equipment damage. Read the following carefully before attempting to operate your winch and keep the instructions for future reference.

1. Dress Properly:

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

2. Keep a Safe Distance:

- Ensure that all persons stand well clear of winch cable and load during winch operation, 1.5 times the cable length recommended. If a cable pulls loose or breaks under load it can lash back and cause serious personal injury or death.
- Don't step over the cable.
- All visitors and onlookers should be kept away from the work area.
- Keep proper footing and balance at all times.

3. Don't Abuse the Cord:

- Never carry your winch by the cord or yank it to disconnect it from the receptacle.
- Keep cord from heat, oil and sharp edges.

4. Don't Overwork the winch:

- If the motor becomes uncomfortably hot to touch, stop and let it cool for a few minutes.
- Don't maintain power to the winch if the motor stalls.
- Don't exceed maximum line pull ratings shown in tables. Shock loads must not exceed these ratings.

5. Avoid Unintentional Starting:

- Winch clutch should be disengaged when not in use and fully engaged when in use.

6. Check Damaged Parts:

- Before using, you should check your winch carefully. Any part that is damaged should be properly repaired or replaced by an authorized service centre.

7. Repair Your Winch:

- When repairing, use only identical replacement parts or it may cause considerable danger to the user.

8. Re-spool the cable:

- Leather gloves must be worn while re-spooling. To re-spool correctly, it is necessary to keep a slight load on the cable. Hold the cable with one hand and the remote control switch with the other. Start as far back and in the centre as you can. Walk up keeping load on the cable as the winch is powered in.
- Do not allow the cable to stop through your hand and do not approach the winch too closely.
- Turn off the winch and repeat the procedure until all the cable except 1m is left.
- Disconnect the remote control switch and finish spooling in cable by rotating the drum by hand with clutch disengaged.
- On hidden winches, spool in cable under power but keep hands clear.

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

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WINCH OPERATION WARNINGS

NEVER operate winch with less than 10 wraps of synthetic rope or 6 wraps of steel cable around the drum. The terminal end is to prevent the rope from unraveling, it is NOT a load bearing attachment point. Improper installation and/or spooling out to last layer will put a load on the terminal end and the rope will release from the terminal.

Always re-spool winch rope under a minimum 1000 lb. load before each use.

For more information see owners manual

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

1. The uneven spooling of cable, while pulling a load, is not a problem, unless there is a cable pile up on one end of the drum. If this happens reverse the winch to relieve the load and move your anchor point further to the centre of the vehicle. After the job is done, you can un-spool and rewind for a neat lay of the cable.
2. Store the remote control switch inside your vehicle where it will not become damaged, inspect before you plug it in.
3. When ready to begin spooling in, plug in remote control switch with clutch disengaged, do not engage clutch with motor running.
4. Never connect the hook back to the cable. This causes cable damage. Always use a sling or chain of suitable strength.
5. Observe your winch while winching, if possible while standing at a safe distance. Stop the winching process every metre or so to assure the cable is not piling up in one corner. Jamming the cable can break your winch.
6. Do not attach tow hooks to winch mounting apparatus. They must be attached to vehicle frame.
7. The use of a snatch block will aid recovery operations by providing a doubling of the winch capacity and a halving of the winching speed, and the means to maintain a direct line pull to the centre of the rollers. When double loading during stationary winching, the winch hook should be attached to the chassis of the vehicle.
8. Ensure rated "D" or bow shackles are used in conjunction with an approved tree trunk protector to provide a safe anchor point.
9. When extending winch cable, ensure that at least SIX (6) wraps of steel cable or 10 wraps of synthetic rope 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 (steel cable only) 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 6 wraps of steel cable or 10 wraps of synthetic rope minimum on the drum-red cable). If this is not practical use a snatch block and double line arrangement.

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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 contaminants.
 - Always wear eye protection when working around a battery.
 - Have the engine running when using the winch, to avoid flattening the battery.

16. Winch cable:

NEVER operate winch with less than 10 wraps of synthetic rope or 6 wraps of steel cable around the drum. The terminal end is to prevent the rope from unraveling, it is NOT a load bearing attachment point. Improper installation and/or spooling out to last layer will put a load on the terminal end and the rope will release from the terminal.

Always re-spool winch rope under a minimum 1000 lb. load before each use.

To keep your winch in working order please:

Once a month cycle the winch by:

1. Power out steel cable/synthetic rope 15ft. Then free spool out another 50+ ft of steel cable/synthetic rope. Always make sure you have at least 6 wraps of steel cable or 10 wraps of synthetic rope around winch drum.
2. Put winch into gear and re-spool the winch line. Inspect winch line as you re-spool winch line. It is recommended that you have at least 1000 lbs. of tension when re-spooling cable. This prevents the rope from pinching itself during recovery.

*Keep tag in glove box for reference.

***Winching is dangerous and potentially fatal. ***










***Use Caution when winching. ***

- Be sure that the cable is in good condition and is attached properly.
- Do not use the winch if cable is frayed.
- Do not move the vehicle to pull a load.
- Do not replace the cable with a cable of lesser strength.
- The life of cable is directly related to the use and care it receives. Following its first and subsequent uses, a cable must be wound onto the drum under a load of at least 1000 lbs 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 1000 lbs or more. This will slightly tension and stretch the new cable and create a tight cable wrap around the drum. Failure to do so may result in cable damage and reduced cable life.
- When replacing the steel wire rope or the fiber rope, be sure to disconnect the winch cable to "+" (positive) of the battery, and disengage the clutch by move the clutch handle to the "OUT" position.

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- Should you choose fiber rope to take place of the winch steel wire rope,
- Please make sure this fiber rope preferred can with stands the maximum capacity of your winch. Always bear in mind the working load limitation of this fiber rope, and never exceed the working load limitation or shock load of your rope.
 - Fiber rope should be attached to winch drum properly, always remain enough wraps on the winch drum when extending rope. Failure to do this could result in rope parting from the drum. Serious personal injury or property damage may result.
 - Please make sure the fiber rope in good condition, without cuts or pulled strands. Fiber rope will fail in case worn, damaged, overloaded, or not properly maintained.
 - Do not stand within the lash-back area.
 - Do not use over rough surfaces without chafe protection.
 - Do not bend around unprotected, sharp corners.
17. Do not attempt to exceed the pulling limits of this winch.
18. Do not drive your vehicle to assist the winch in any way. Vehicle movement in combination with winch operation may overload the cable, the winch itself or cause damaging shock loads.
19. Shock loads when winching are dangerous! A shock load occurs when an increased force is suddenly applied to the cable. A vehicle rolling back on a slack cable may induce a damaging shock load.
20. The winches shown in this manual are solely for vehicle and boat mount, non-industrial applications.
21. Do not use winch in hoisting applications due to required hoist safety factors and features.
22. Do not use the winch to lift, support or otherwise transport personnel.
23. Never operation your electric winch in gas (petrol) station, or any place has explosive gas.
24. Power out only enough to relive slack, excessive powering out can cause damage to internal parts.
25. Do not use to hold loads...yes, see page 4 top side.
26. Do not use to drop loads (example-unloading vehicles).
27. Only DC power can be applied to the winch stated in this Fitting Instructions.

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	Read the instructions before use.		Always keep hands clear of wire rope, hook loop.
	Always use supplied hook strap whenever spooling wire rope in or out.		Never use to lift.
	Never use to move persons.		Don't make wire rope out on the drum.
Wire rope can not be used if damaged. Please replace a new one.			
			

INSTALLATION

MOUNTING YOUR WINCH

- 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.
 - 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.
 - Before commencing installation, ensure the mounting facility being used is capable of with standing the rated capacity of the winch.
 - 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.
- Should you wish to manufacture your own mounting plate the dimensions below will assist. A steel mount plate of at least 6mm thickness is recommended. Fasteners should be steel high tensile grade 8.8 or better. A poorly designed mount may void warranty.
- When installing the winch the tightening torque of 4pcs mounting bolt M10*32 (10.9 grade) should not be less than 60Nm and have loose prevention measures. And the thickness of steel mounting plate should be 4-6mm.
- The roller fairlead is to be mounted so as to guide the rope onto the drum evenly.
- Winch dimensions and mounting patterns are provided together with the winch specification.

LUBRICATION INSTALLATION

All moving parts in the winch are permanently lubricated with high temperature lithium grease at the time of assembly. Under normal conditions factory lubrication will suffice. Lubricate cable periodically using light penetrating oil. Inspect for broken strands and replace if necessary. If the cable becomes worn or damaged, it must be replaced.

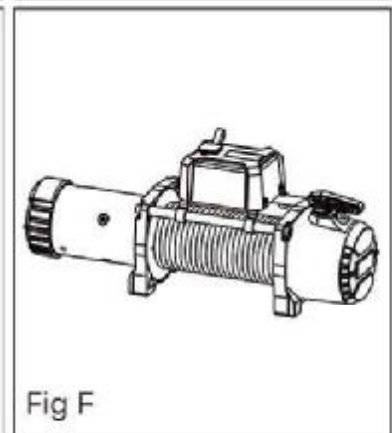
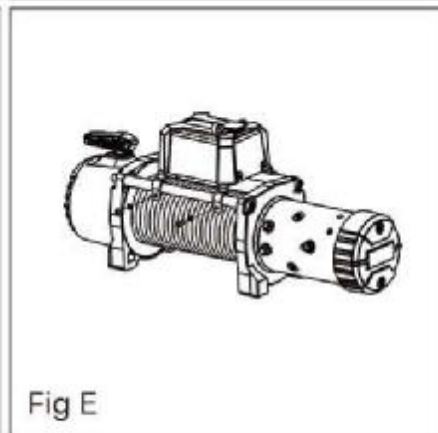
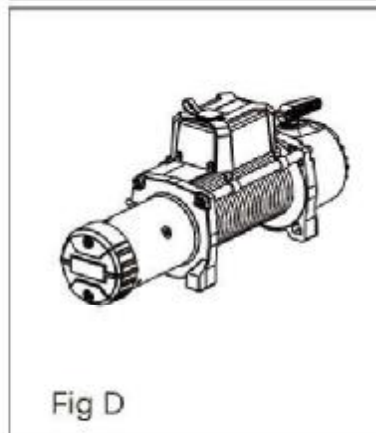
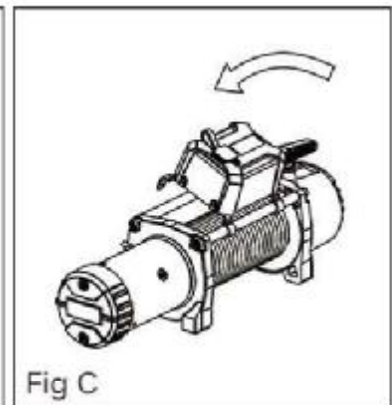
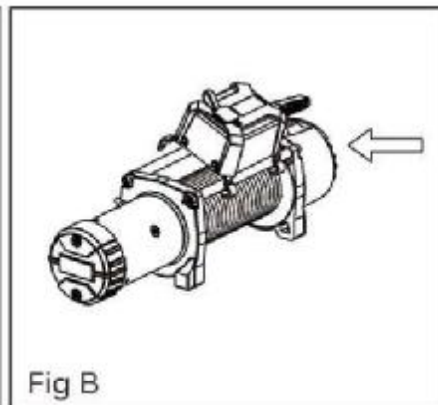
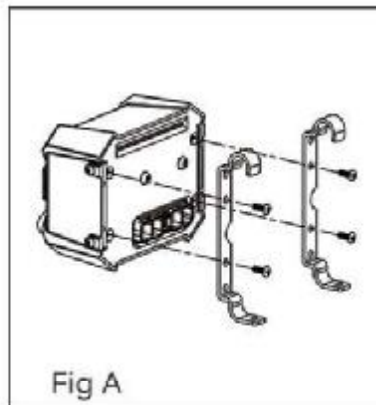
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SOLENOID MOUNTING SUPPLEMENT

Tie Rod Over Cable Mounting Instruction – Horizontal

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

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



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SOLENOID MOUNTING SUPPLEMENT

Tie Rod Over Cable Mounting Instruction - Vertical

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

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

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

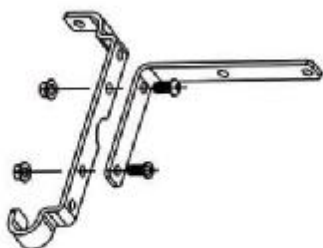


Fig A

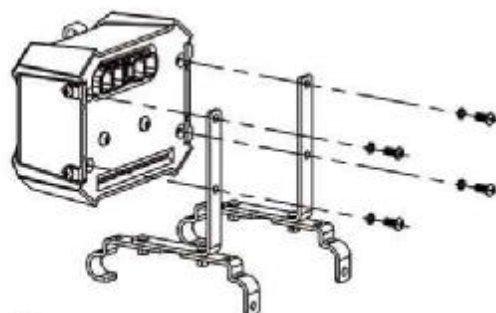


Fig B

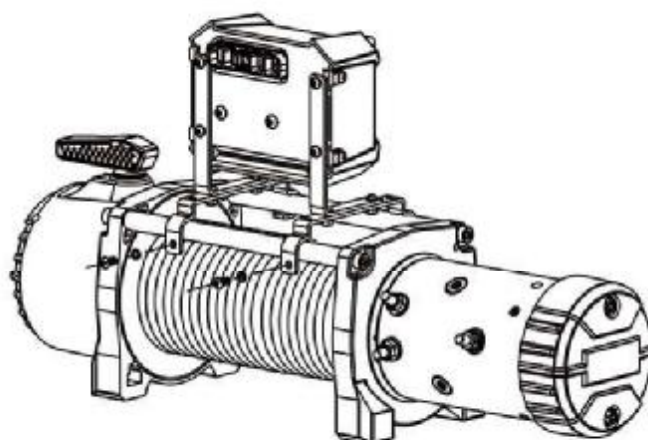


Fig C

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SOLENOID MOUNTING SUPPLEMENT

Over Motor Mounting Instruction

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

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

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

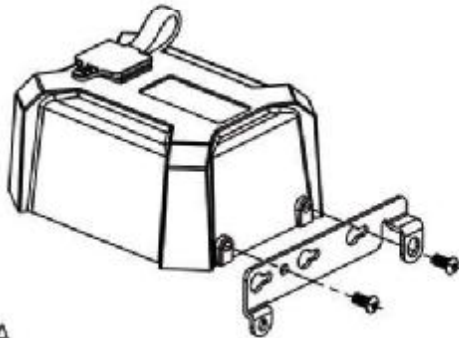


Fig A

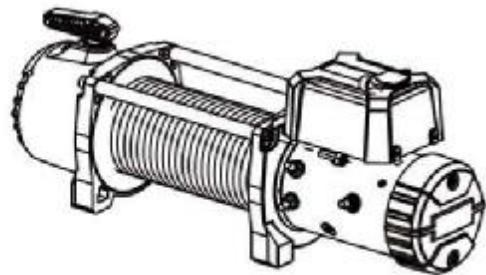


Fig B

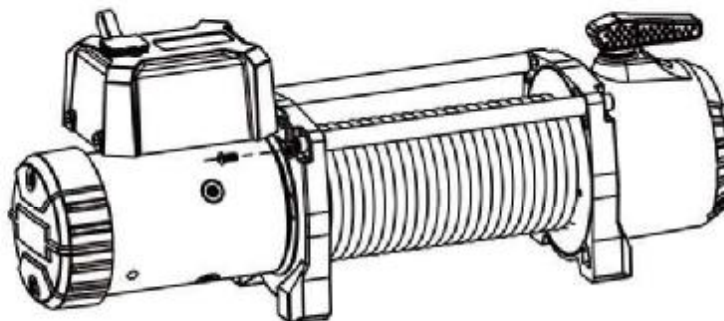


Fig C

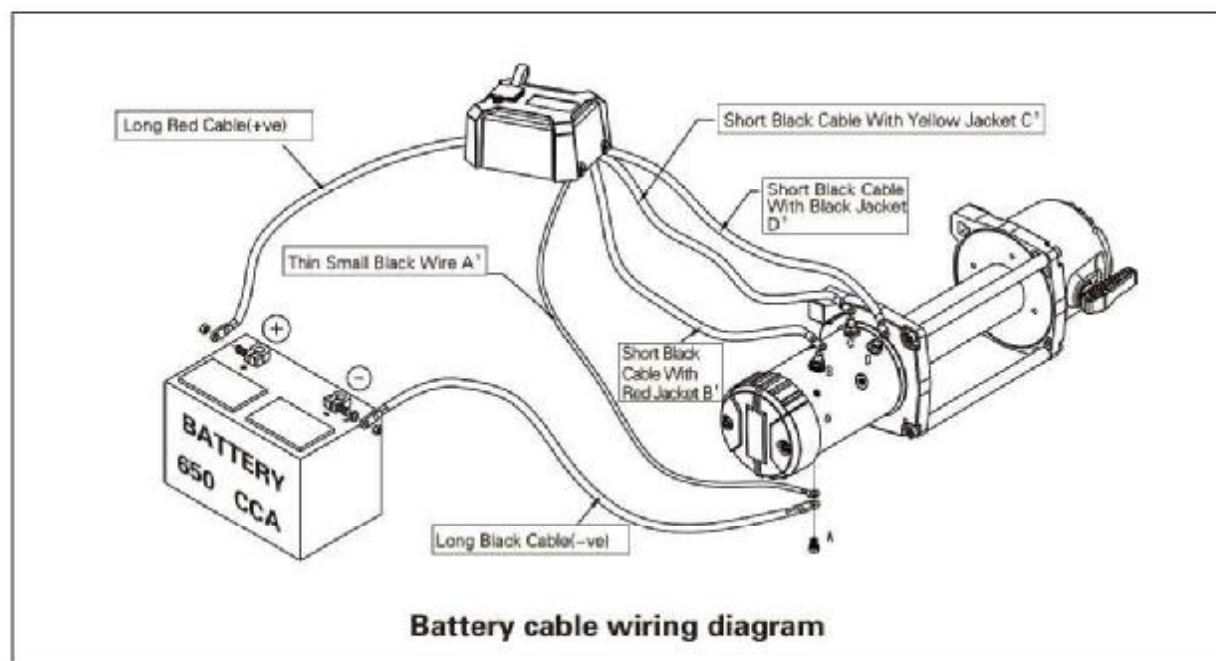
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ELECTRICAL CONNECTION

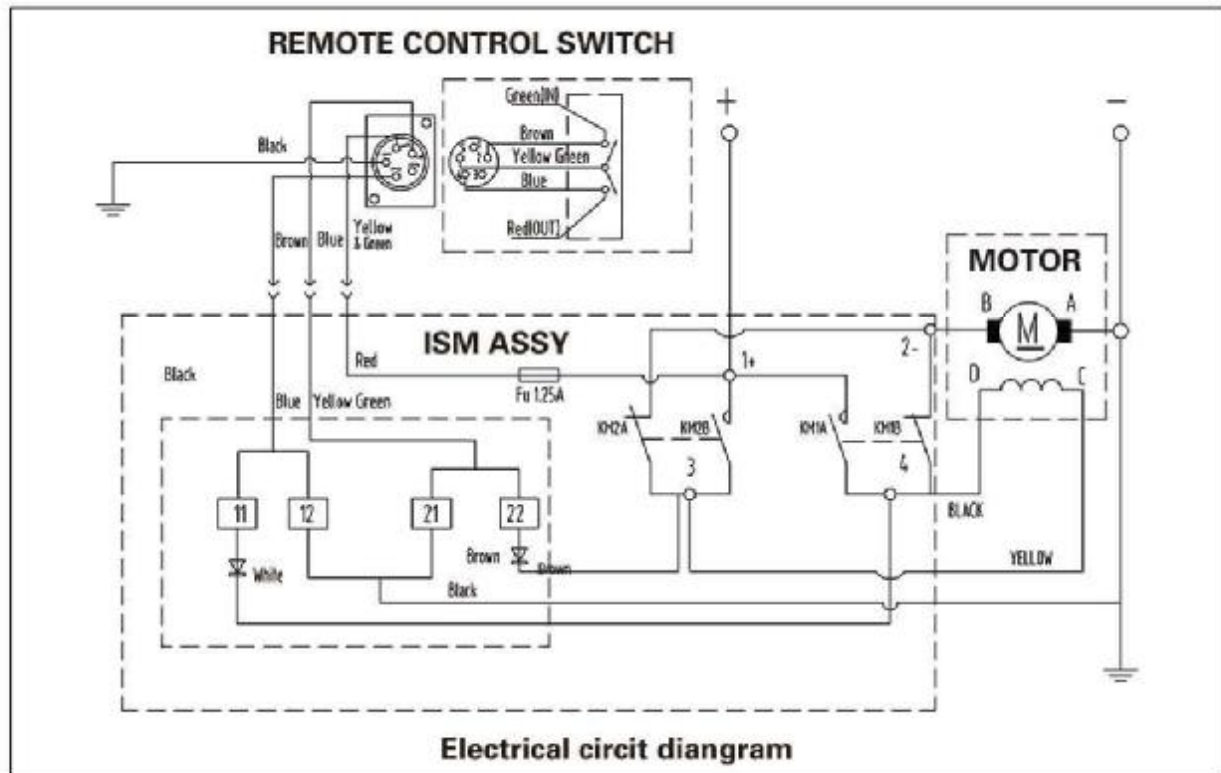
For normal self-recovery work, your existing electrical system is adequate. A fully charged battery and proper connections are essential. Run the vehicle engine during winching operations to keep battery charged.

Pay close attention to proper electrical cable connection as follows(refer to Diagram1)

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



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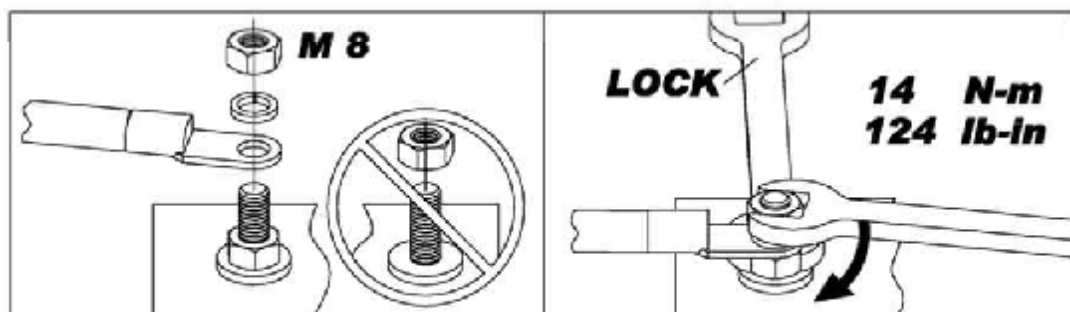
NOTE:

1. Your battery must be kept in good condition.
2. Be sure battery cables are not drawn 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.

Motor Wire Nuts Mounting Instruction

Step 1: Do Not screw wire nuts too tight.

Step 2: Put a wrench on bottom nut when installing wire nuts to prevent movement of terminal stud and hold down nut. It's helpful to avoid bolt broken during installation. See pictures below.



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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:

Pre/post op check list.

Check fasteners for torque before each outing.

Inspect wiring and make sure connections are tight before each outing. Verify there is no chafing or cutting of wires.

Inspect rope for damage before and after each use.

Inspect remote for damage and function. Check range on wireless remote, if applicable, replace battery if necessary.

Keep winch clean, remote socket covered and steel cable lightly lubricated.

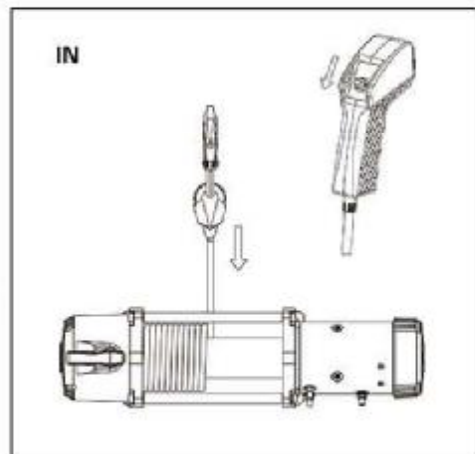
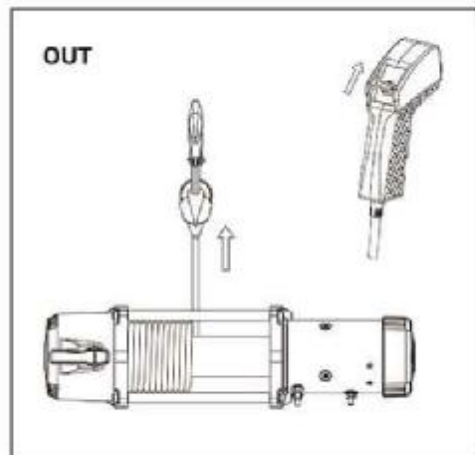
Synthetic rope needs to be kept clean and free from any chemicals or dirt.

Refer to owners manual for more information.

NEVER operate winch with less than 10 wraps of synthetic rope or 6 wraps of steel cable around the drum. The terminal end is to prevent the rope from unraveling, it is NOT a load bearing attachment point. Improper installation and/or spooling out to last layer will put a load on the terminal end and the rope will release from the terminal.

Always re-spool winch rope under a minimum 1000 lb. load before each use.

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.



Remote control switch

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4. Plug in the winch hand control. It is recommended that the winching operation takes place from the driver's position to ensure safe operation.
5. To commence winching operation, start vehicle engine, select neutral in transmission, maintain engine speed at idle.
6. Operate the remote control switch to IN or OUT until the vehicle has been retrieved. Regularly check the winch to ensure cable is winding onto the drum evenly.

Note:

1. Never winch with your vehicle in gear or in park, which would damage your vehicle's transmission.
2. Never wrap the cable around the object and hook onto the cable when winching.
3. Keep hands, clothing, hair and jewellery clear of the drum area and cable when winching.
4. Never use the winch if the cable is frayed, kinked or damaged.
5. Never allow anyone to stand near the cable, or in line with the cable behind the winch while it is under power. If the cable should slip or brake, it can suddenly whip back towards the winch, causing a hazard for anyone in the area. Always stand well to the side while winding.
6. Don't leave the switch plugged in when winch is not in use.
7. Do not use as a hoist
8. Power out only to relieve slack on cable or rope. Excessive powering out can cause damage to internal components.
9. Do not use to hold loads.
10. Do not use to drop loads (example-unloading vehicles).

CHECK THE WINCH CAREFULLY AND THOROUGHLY BEFORE OPERATING!

MAINTENANCE

It is highly recommended that the winch be used regularly (once a month). Simply power the cable out 15 feet, free spool 50 feet 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.

To keep your winch in working order please:

Once a month cycle the winch by:

1. Power out steel cable/synthetic rope 15ft. Then free spool out another 50+ ft of steel cable/synthetic rope. Always make sure you have at least 6 wraps of steel cable or 10 wraps of synthetic rope around winch drum.
2. Put winch into gear and re-spool the winch line. Inspect winch line as you re-spool winch line. It is recommended that you have at least 1000 lbs. of tension when re-spooling cable. This prevents the rope from pinching itself during recovery.

*Keep tag in glove box for reference.

***Winching is dangerous and potentially fatal. ***

***Use Caution when winching. ***

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SPARE PARTS:

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

NOTE:

The safety precautions and instructions discussed in this manual can't cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors, which cannot be built into this product, but must be applied by the operator.

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Part Number: 7309104/9209104(12V);7310104/9210104(24v) EW-6500

Rated Line Pull:	6500Lbs (2948kgs) single-line
Motor:	5.6hp/12V Series Wound(3.25-42) 6hp/24V Series Wound(7.25-42)
Control:	Remote Switch, 12'(3.7m) lead
Gear Train:	3-Stage Planetary
Gear Ratio:	161:28
Clutch:	Sliding Ring Gear
Brake:	Automatic In The Drum
Drum Size:	Diameter 2.5"(63.5mm) Length 5.35"(135mm)
Wire Rope:	80' 9/32" Diameter(24m) 7.2mm Wire Rope / 49' 21/64"(Synthetic Rope)(15m) 8.1mm Synthetic Rope Ø18/151
Fairlead:	4-Way Roller (Wire Rope) / A.F.S. (Synthetic Rope)
Remote Control:	Included
Recommended Battery:	650CCA minimum for winching
Battery Leads:	25mm ² , 72"(1.83m)
Finish:	Black
Weight:	64Lbs (29Kg) (Wire Rope) / 49Lbs (22.35Kg) (Synthetic Rope)
Overall Dimension:	(L×W×H) 17.36"×6.3"×7.8" (441×160×196)
Mounting Bolt Pattern:	6.55±0.015IN×4.50±0.010IN(166.4×114.3mm)

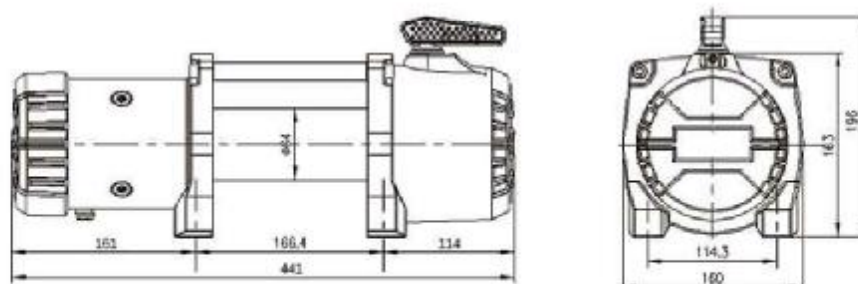
Line Pull & Cable Capacity

Layers Of Cable		1	2	3	4	5
Rated Line pull per layer	lbs	6500	5884	5406	5070	4790
	kg	2948	2666	2450	2300	2170
Cable capacity per Layer	ft	14	30	48	69	80
	mpm	4	9	14.5	21	24

Line Speed & Amp Draw-First Layer

Line Pull			No	1500	3000	4500	6000	6500
	lbs	kg	Load	680	1361	2041	2721	2948
Line Speed	ft/min	12V	41	20.66	17.71	14.10	11.15	9.84
		24V	45.26	22.96	20.34	17.71	13.12	12.46
	m/min	12V	12.5	6.3	5.4	4.3	3.4	3
		24V	13.8	7	6.2	5.4	4	3.8
Motor	Amps	12V	83	144	207	267	329	350
		24V	53	81	110	139	162	172

DIMENSION OF THE WINCH



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Part Number: 7329104/9229104(12V);7330104/9230104(24v) EW-9500

Rated Line Pull:	9500Lbs (4309kgs) single-line
Motor:	6.6hp/12V Series Wound(4.25-42)/ 6.6hp/24V Series Wound(8.25-42)
Control:	Remote Switch, 12'(3.7m) lead
Gear Train:	3-Stage Planetary
Gear Ratio:	161.28
Clutch:	Sliding Ring Gear
Brake:	Automatic In The Drum
Drum Size:	Diameter2.5"(63.5mm)Length8.75"(222mm)
Wire Rope:	94' 5/16" Diameter(28.5m,8mm Diameter)/94' 3/8" Diameter(28.5m,9.4mm) 9194281
Fairlead:	4-Way Roller (Wire Rope) /A.F.L. (Synthetic Rope)
Remote Control:	Included
Recommended Battery:	650CCA minimum for winching
Battery Leads:	25mm2, 72"(1.83m)
Finish:	Black
Weight:	77Lbs (35Kg) (Wire Rope) /57Lbs(26Kgs) (Synthetic Rope)
Overall Dimension:	(L×W×H)20.83"×6.3"×7.8"(529×160×196)
Mounting Bolt Pattern:	10.00±0.015IN×4.50±0.010IN(254.0×114.3mm)

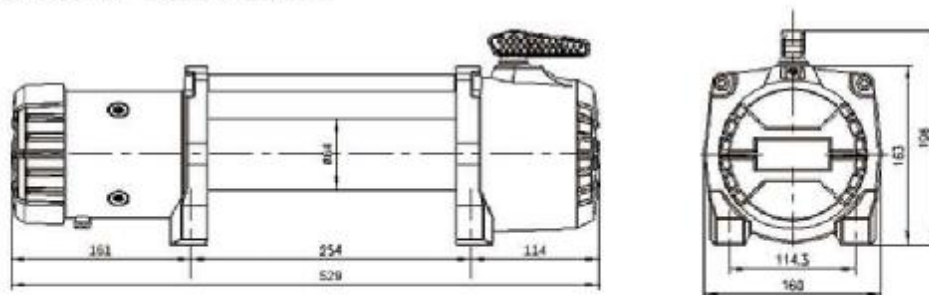
Line Pull & Cable Capacity

Layers Of Cable		1	2	3	4
Rated Line pull per layer	lbs	9500	8435	7640	7086
	kg	4309	3822	3460	3212
Cable capacity per Layer	ft	16	42	72	94
	mpm	5	12	21	28

Line Speed & Amp Draw-First Layer

Line Pull	lbs		No	2000	4000	6000	8000	9500
	kg		Load	907	1814	2721	3628	4309
Line Speed	ft/min	12V	35.42	20.34	15.09	11.15	9.68	6.89
		24V	41	21.32	19.02	14.10	12.63	11.81
	m/min	12V	10.8	6.2	4.6	3.4	2.95	2.1
		24V	12.5	6.5	5.8	4.3	3.85	3.6
Motor	Amps	12V	80	155	224	303	365	415
		24V	48	86	121	159	193	215

DIMENSION OF THE WINCH



Installation Manual

Part Number: 7345104/9245104(12V);7346104/9246104(24V) EW-12500

Rated Line Pull:	12500Lbs.(5670Kgs.)single-line
Motor:	6.6 hp/12V,High output parallel series wound Motor Series Wound(3.75-54) 6.6 hp/24V,High output parallel series wound Motor Series Wound(6.25-54)
Control:	Remote Switch, 12'(3.7m) lead
Gear Train:	3-Stage Planetary
Gear Ratio:	193.2
Clutch:	Sliding Ring Gear
Brake:	Automatic In The Drum
Drum Size:	Diameter2.5"(63.5mm)Length8.75"(222mm)
Wire Rope:	85'3/8" diameter(26m,9.2mm diameter) (Wire Rope) /88'7/16" Diameter(27m,11mm)9011271(Synthetic Rope)
Fairlead:	4-way roller fairlead (Wire Rope) /A. F. L. (Synthetic Rope)
Remote Control:	Included
Recommended Battery:	650CCA minimum for winching
Battery Leads:	25mm2, 72"(1.83m)
Finish:	Black
Weight:	83Lb(38Kg) (Wire Rope) /61Lbs (27.6Kgs) (Synthetic Rope)
Overall Dimension:	(L×W×H)21.2"×6.3"×7.8"(538×160×196)
Mounting Bolt Pattern:	10.00±0.015IN×4.50±0.010IN(254.0×114.3mm)

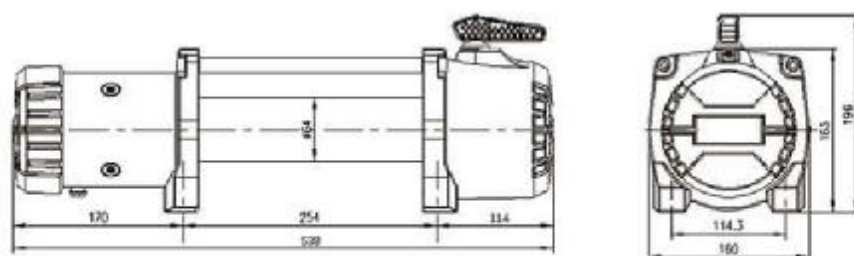
Line Pull & Cable Capacity

Layers Of Cable		1	2	3	4
Rated Line pull per layer	lbs	12500	10700	9575	8800
	kg	5670	4853	4343	3991
Cable capacity per Layer	ft	17.1	36.7	60.6	85
	mpm	5.27	11.2	18.5	26

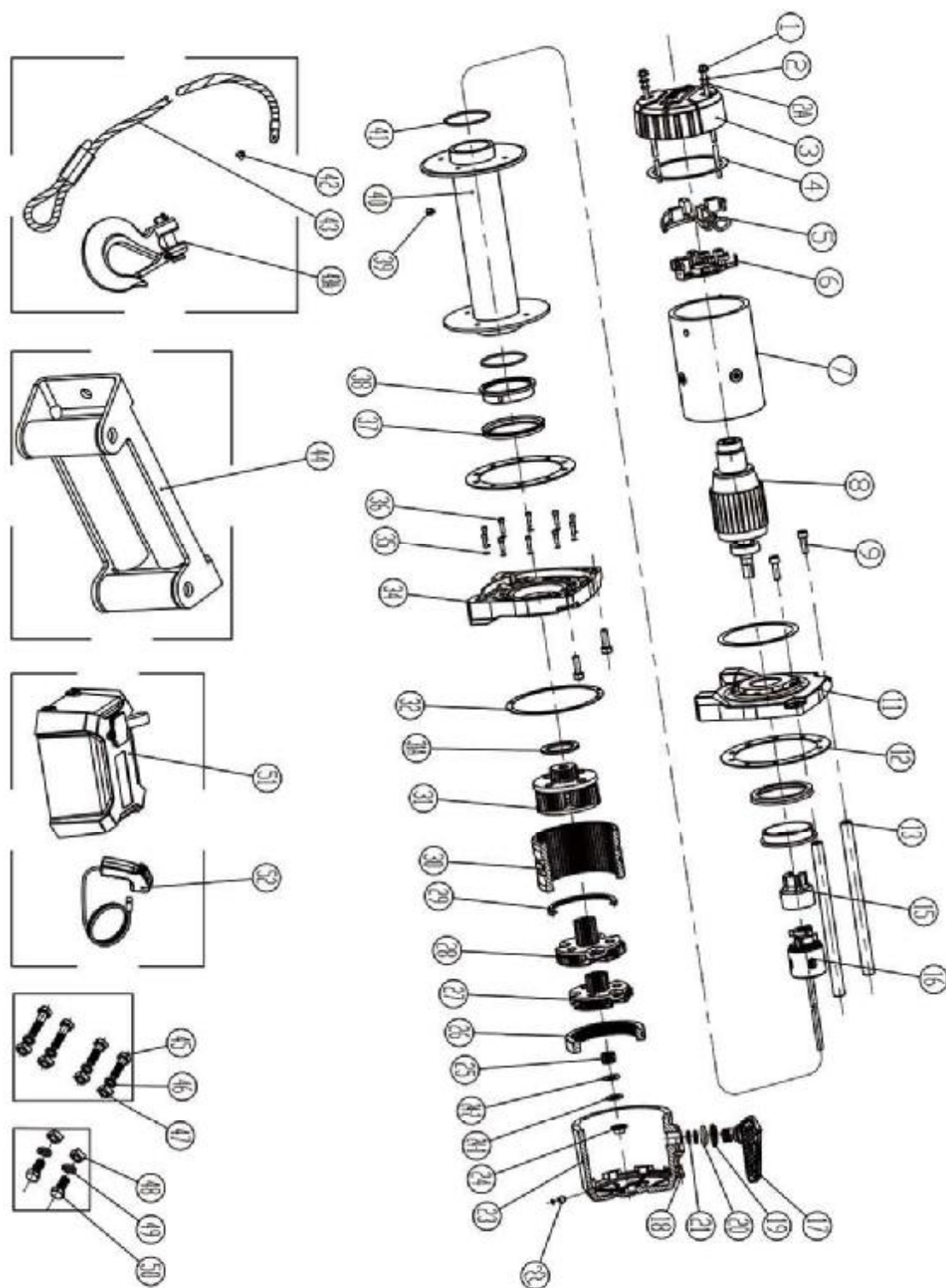
Line Speed & Amp Draw-First Layer

Line Pull			No	2000	4000	6000	8000	10000	12000	12500
	lbs	kg	Load	907	1814	2721	3629	4536	5443	5670
Line Speed	ft/min	12V	28.208	13.45	9.84	8.856	7.872	6.888	5.904	5.412
		24V	33.456	17.06	14.43	12.14	10.82	9.02	8.2	8.036
	m/min	12V	8.6	4.1	3.0	2.7	2.4	2.1	1.8	1.65
		24V	10.2	5.2	4.4	3.7	3.3	2.75	2.5	2.45
Motor	Amps	12V	68	122	174	226	278	330	385	395
		24V	38	70	94	122	151	178	203	206

DIMENSION OF THE WINCH



Installation Manual



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Part List:

Item No.	Part No.	Description	Qty	Remark
01	GB/T 5789-86	Long Bolt M6*150	2	NEW6500/9500
01	GB/T 5789-86	Long Bolt M6*160	2	NEW12500
02	7329103.1-4	Motor Fixed Bolt Seals Ring	2	
2A	GB/T 3452.1-2005	Seals Ring	2	
03	7329104.1-3	NEW Motor End Cover	1	
04	7329103S.1-2	Motor Seal Ring	2	
05	7329200.1.3.1	4.5"Carbon Bracket	1	
06	7329200.1.3.2	4.5"Carbon	1	
07	7309103.1.1	Stator Ass'y 12V	1	12V NEW6500
	7329103S.1.1	Stator Ass'y 12V	1	12V NEW9500
	7341103S.1.1	Stator Ass'y 12V	1	12V NEW12500
	7322103.1.1	Stator Ass'y 24V	1	24V NEW6500
	7330104.1.1	Stator Ass'y 24V	1	24V NEW9500
	7346104.1.1	Stator Ass'y 24V	1	24V NEW12500
08	7329200.1.2A	Rotor Ass'y 12V	1	12V,NEW6500/9500
	7341103S.1.2	Rotor Ass'y 12V	1	12V NEW12500
	7330100.1.2A	Rotor Ass'y 24V	1	24V NEW6500/9500
	7342103S.1.2	Rotor Ass'y 24V	1	24V NEW12500
09	GB/T 70.1-2000	Link Screw M8*25	4	
11	7329103.1-1A	Waterproof Motor Base	1	
12	7329103.0-6	Drum Anti Friction Sheet	2	
13	7309200.0-2A	6500 Tie Bar	2	NEW6500
13	7329200.0-2A	Tie Bar	2	NEW9500/12500
15	7329100.4-1	Coupling Joint	1	
16	7309103.4B	Brake Ass'y	1	NEW6500
16	7329103.4B	Brake Ass'y	1	NEW9500/12500
17	7329104.3-7	Clutch Handle	1	
18	7329104.3-8	Clutch Pin	1	
19	7329200.3-6	Clutch Handle Cover	1	
20	GB/T 3452.1-2005	O Ring	1	
21	GB/T 3452.1-2005	O Ring	2	
22	GB/T 79-2000	Bolt M10*12	1	
23	7329104.3-2	Gear Box	1	
24-1	7329103.3-10	Sun Gear-Input Washer	1	
24-2	7329103.3-11	Sun Gear-Input Washer	1	
24		φ20/φ14.5*φ12.5*6 Flanged Bush	1	
25	7329103.3-6A	Sun Gear-Input	1	
26	7329103.3-4B	Inner Gear 1	1	
27	7329103.3.1A	Gear Carrier Ass'y-Input	1	NEW6500/9500
	7345103.3.1A	Gear Carrier Ass'y-Input	1	NEW12500
28	7329103.3.2A	Gear Carrier Ass'y-Intermediate	1	NEW6500/9500
	7345103.3.2A	Gear Carrier Ass'y-Intermediate	1	NEW12500

Installation Manual

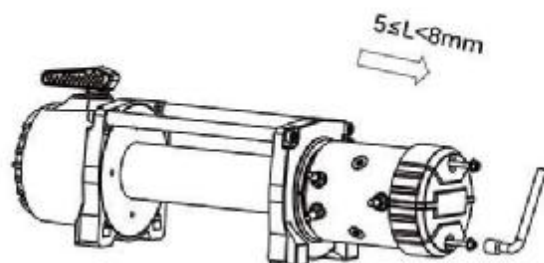
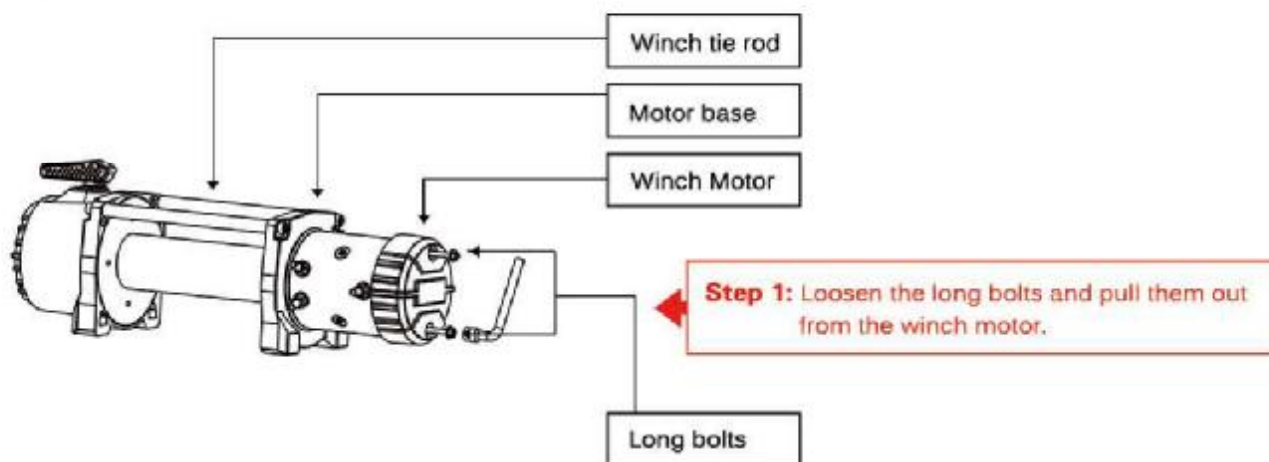
Part List:

Item No.	Part No.	Description	Qty	Remark
29	8553601.3.2-3	Planet Carrier Cushion	1	NEW9500/12500
30	7329104.3-3	Inner Gear II	1	
31	7309103.3.3	Gear Carrier Ass'y-Output	1	NEW6500
	7329103.3.3	Gear Carrier Ass'y-Output	1	NEW9500
	7345103.3.3	Gear Carrier Ass'y-Output	1	NEW12500
31A	7329103.3.3-8	Spline Cushion	1	
32	7329103.3-5	Gear Box Seals Ring	1	
34	7329103.3-1	Waterproof Gear Box Base	1	
35	GB/T 93-1987	Spring Washer 4	10	
36	GB/T 70.1-2000	Bolt M4*16	10	
37	7329103.0-4	Dust Ring	2	
38	7330103.0.5	Nylon bearing	1	
39	GB/T 79-2000	Bolt M8*10	1	
40	7309100.2	Drum Ass'y (short)	1	NEW6500
	7329100.2	Drum Ass'y	1	NEW9500/12500
41	GB/T 3452.1-2005	Seals Ring	2	
42	GB/T 70.2 -2000	Hexagon Socket Cap Screws M6*8	1	
43	7309200.5	7.2*24 Wire Rope Ass'y	1	NEW6500
	7329103.5	8*28.5 Wire Rope Ass'y	1	NEW9500
	7345104.5	9.2*26 Wire Rope Ass'y	1	NEW12500
43A	7309103S.0-4A	5/16"Hook	1	NEW6500
	7329103S.0-4A	3/8"Hook	1	NEW9500/12500
44	7309200.7	6500 Fairlead Ass'y	1	NEW6500
	7329103S.7	Fairlead Ass'y	1	NEW9500/12500
45	GB/T1228-1991	High-Strength Bolt M10*32 10.9	4	
46	GB/T7244-1987	Heavy Type Spring Washer 10	4	
47	GB/T 39-1988	Square Nut 10	4	
48	GB/T 41-2000	Hexagon Nut 12	2	
49	GB/T7244-1987	Heavy Type Spring Washer 12	2	
50	GB/T1228-1991	High-Strength Bolt M12*25	2	
51	7329104.6.1	Control Box Ass'y (12V)	1	12V
	7330104.6.1	Control Box Ass'y (24V)	1	24V
52	7329104.6.2	Handle Control Ass'y	1	

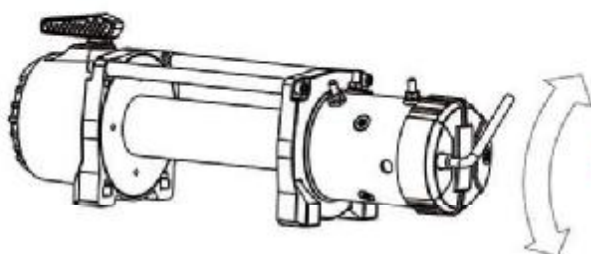
Installation Manual

Winch Motor Clocking

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



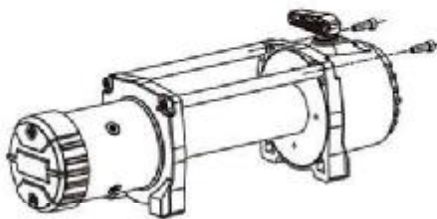
Note: The rotation of winch motor must be 90 degree, 180 degree, and or 270 degree clockwise or anti-clockwise, only because of the fixed holes on motor base.



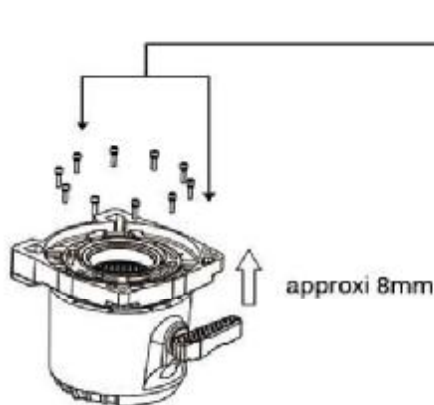
The winch is IP67, the waterproof may be affected if disassemble the motor. It is best to operate by professionals, and also change the new sealing parts.

Installation Manual

Gear Box Clocking Instructions



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



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



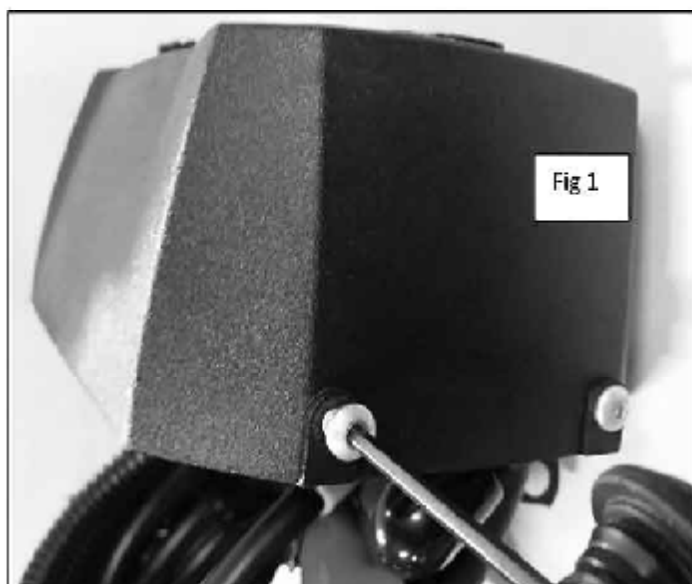
Step 3: Get gear box rotated, then connect the gear box with the gear box base again. After that connect the gear box with the tie.



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

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

Installation Manual

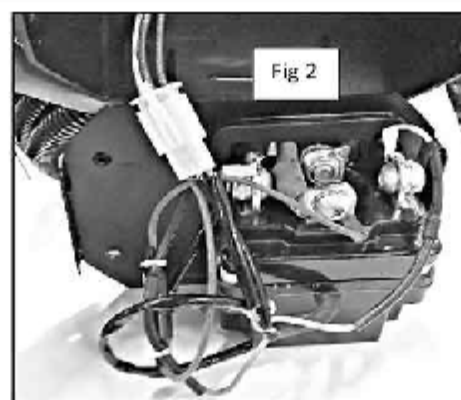


Musclelift control box fuse.

5mm diameter X 20mm length

2 Amp time-delay rating

WARNING: only replace fuse with the same amp rating.



Musclelift winches are equipped with a fuse inside the control box. This fuse provides protection in the case of an internal failure or overload.

If winch fails to function, you may need to inspect the fuse.

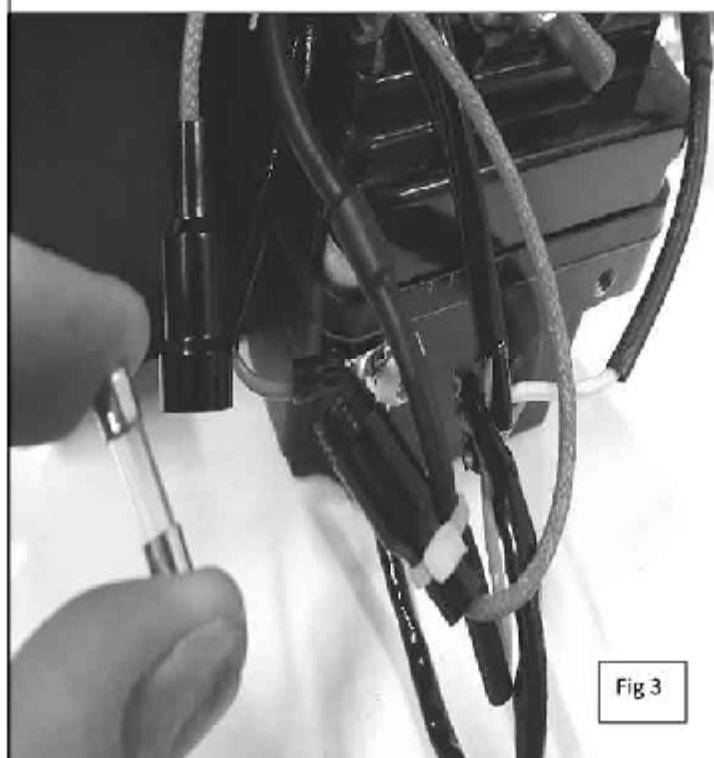
Step 1. Remove control box cover bolts. Carefully remove control box cover. There will be remote plug wires attached to the cover. Fig 1+2

Step 2. Unscrew fuse holder halves. Fig 3

Step 3. Remove fuse by unscrewing the fuse case halves and inspect for breakage, replace if necessary.

NOTE: If the replaced fuse blows immediately, please contact local distributor.

Step 4. Carefully re-assemble control box, taking care to avoid damage/pinching of wires.



Installation Manual

Common faults and simple processing mode

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

Installation Manual

Understanding IP Ratings

- The first digit indicates the level of protection that the enclosure provides against access to hazardous parts (e.g., electrical conductors, moving parts) and the ingress of solid foreign objects.
- The second digit indicates protection of the equipment inside the enclosure against harmful ingress of water.



Level	Object size protected against	Effective against
0	—	No protection against contact and ingress of objects
1	>50 mm	Any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part
2	>12.5mm	Fingers or similar objects
3	>2.5 mm	Tools, thick wires, etc.
4	>1 mm	Most wires, screws, etc.
5	Dust protected	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact
6	Dust tight	No ingress of dust; complete protection against contact

Installation Manual

Level	Protected against	Testing for	Details
0	Not protected		
1	Dripping water	Dripping water (vertically falling drops) shall have no harmful effect.	Test duration: 10 minutes Water equivalent to 1mm rainfall per minute
2	Dripping water when tilted up to 15°	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.	Test duration: 10 minutes Water equivalent to 3mm rainfall per minute
3	Spraying water	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect.	Test duration: 5 minutes Water volume: 0.7 litres per minute Pressure: 80–100 kN/m ²
4	Splashing water	Water splashing against the enclosure from any direction shall have no harmful effect.	Test duration: 5 minutes Water volume: 10 litres per minute Pressure: 80–100 kN/m ²
5	Water jets	Water projected by a nozzle (6.3mm) against enclosure from any direction shall have no harmful effects.	Test duration: at least 3 minutes Water volume: 12.5 litres per minute Pressure: 30 kN/m ² at distance of 3m
6	Powerful water jets	Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction shall have no harmful effects.	Test duration: at least 3 minutes Water volume: 100 litres per minute Pressure: 100 kN/m ² at distance of 3m
7	Immersion up to 1 m	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).	Test duration: 30 minutes Immersion at depth of 1m