Electric Winch

(Portable Boat Trailer Winch)

Rated Load Capacities: Pulling 3500lbs
Marine 8750lbs
Rolling 10500lbs
Rated Load Capacities: Pulling 5000lbs
Marine 12500lbs
Rolling 15000lbs

Assembly & Operation Manual Instructions
Easy Life Starts from Our Winch Series.

Thank you for purchasing 3500lbs/5000lbs electric winch from us. Please read and understand this winch manual instruction before installing and using your winch.

General Description

Each winch is equipped with a permanent magnet motor and is designed for intermittent duty general use. Please be noted your winch are not designing to be used in industrial or hoisting applications, winch manufacturer goes not warrant it to be suitable for such usage. It is ideal for pulling boat trailers, vehicles and stumps. You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, spare parts list and assembly diagram. Keep your invoice with this manual, write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

General Safety Warnings and Precautions

1. Never lift people or hoist loads over people. Do not lift items vertically. The winch was designed for horizontal only.
2. Keep children away from work area. Do not allow children to handle this product.
3. Do not attempt to prolonged pulls at heavy loads. This electric winch is designed for intermittent use only, and should not be used in a constant duty application. The duration of pulling job should be kept as short as possible. If the winch motor gets to be very hot, stop the winching operation and let it cool down for moments. Never pulling for more than one minute at or near to rated load.
4. Avoid continuous pulling from extreme angles as this will cause the steel cable to pile up on one end of the drum. This can jam the steel cable in the winch, cause damage to the steel cable or the winch.
5. Be sure the input voltage between the terminals of motor is always DC 12V in order to reach the max rated line pull drum the operation. Please note that it only could reach the max rated line pull by first layer of cable around the drum when pulling the loads.
6. Never hook the steel cable back to itself as it may damage your steel cable. You would better use a nylon sling.
7. Be sure the winch was mounted on the vehicle or other objective before operation.
8. When moving a load, take up the steel cable slack until it becomes taut. Be sure the hook is properly seated. If a nylon sling is used, check the attachment to the load.
9. It is a good idea to lay a heavy blanket or jacket over the steel cable near the hook end when pulling heavy loads. If the steel cable failure occurs, the cloth will act as a damper and help prevent the rope from whipping.
10. Do not move your vehicle to assist the winch together could overload the steel cable and the winch.
11. Never work on or around the winch drum when winch is under load. (Keep away the winch at least 1.5m during the operation).
12. Do not across over or under the steel cable when the winch is under load.
13. When using your winch to move a load, place the vehicle transmission in neutral, set vehicle brake, and chock all wheels. The vehicle engine should be running during winch operation. If considerable winching is performed with the engine off, the battery may be too weak to restart the engine.
14. Never release free spool clutch when there is a load on the winch.

For further information please contact the nearest winch distributor.

WINCH SPARE PARTS LIST

Part#	Description	Part#	Description
1	Screw M5X8	39	Left Shell
2	Right Shell	40	Seat
3	Nut M12	40-1	Stun Screw ST2.9*8
4	Washer	40-2	Cover Shaft
5	Taper Washer	40-3	Spring Washer
6	Washer	40-4	Cover
7	Clutch Plate	40-5	Washer
8	Red Steel Cardboard	41	Nut M16
9	Clutch Gear 55T	42	Spring Washer
10	Bearing(1)	43	Winch Gear 55T
11	Thrust Washer	44	Washer
12	Washer	45	Washer
13	Spacer(1)	46	Spell Plank(1)
14	Drive Gear 55T	47	Spell Plank(2)
15	Thrust Washer	48	Winch Shaft
16	Bearing(2)	49	Shaft
17	Gear 12T	50	Thrust Washer
18	Bearing(3)	51	Frame Assembly
19	Connecting Gear 126T, 12T	52	Spell Plank(3)
20	Connecting Gear Shaft	53	Spring Washer
21	Circuit Breaker	54	Nut M14
22	Lock Washer	55	Screw M10
23	Main Shaft	56	Spring Washer
24	Stun Screw ST3.5*20	57	Nut M10
25	Frame Assembly	58	Motherboard
26	Frame Assembly	59	Flange Drum
27	Frame Assembly	60	Hand Crank Plank
28	Handle	61	Hand Crank Shaft
29	Relay	62	Hand Crank
30	Decorate the Plank	63	Thrust Washer
31	Shaft Spacer		
32	Pinion Gear 12T		
33	Lock Nut		
34	Spring Washer		
35	Motor		
36	Bearing(4)		
37	Thrust Washer		
38	Gear 23T		

Note: Please be noted that some winch spare parts are listed here for illustration purposes only, and are not available individually as replacement parts.

15. After operation, please release the load. Do not allow the cable tight any more.
16. Always stand clear of steel cable, hook and winch.
17. Inspect steel cable and equipment frequently. A frayed steel cable with broken strands should be replaced immediately. Use only factory approved switches, remote controls and accessories. Use heavy leather gloves when handling steel cable. Do not let steel cable slide through your hands.
18. Keep clear of winch, taut steel cable and hook when operating winch. Never put your finger through the hook. If your finger should become trapped in the hook, you would lose your finger. Always use the hand saver bar when guiding the steel cable in or out.
19. Do not operate winch when under the influence of drugs, alcohol or medication. Be sure to stay alert during the operation.
20. Use eye and ear protection. Always wear impact safety goggles. Wear a full face shield you are producing metal filings or wood chips. Wear a dust mask or respirator when working around metal, wood, and chemical dusts and mists.
21. Do not machine or weld any part of the winch. Such alternations may weaken the structural integrity of the winch and could void your warranty.
22. Make some maintenance frequently for the winch.
23. WARNING: The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

Specific Product Warnings and Precautions

Do not exceed the maximum rated load capacity for this winch. For our winch 3500lbs, max. pulling capacity is 3500lbs, max. marine pulling capacity is 8750lbs, max. rolling pulling capacity is10500lbs; For our winch 5000lbs, max. pulling capacity is 5000lbs, max. marine pulling capacity is 12500lbs, max. rolling pulling capacity is 15000lbs. Never use the hand crank(part#28) to “assist” the winch. Overloading the winch could cause serious personal injury or property damage.

The winch is designed for intermittent use only. Do not use the winch in a constant duty application. The duration of the pulling job should be kept as short as possible. If the winch becomes too hot to 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 capacities. Do not maintain power to the winch if the motor (part#35) stalls.

Make sure to read and understand all instructions and safety precautions as outlined in the manufacturer’s manual for the vehicle/trailer to which the winch will be attached.

Make sure to read and understand all instructions and safety precautions as outlined in the manufacturer’s manual for the object you will winch. Make sure to attach the winch cable hook of the winch to the manufacturer’s recommended pulling point.

1. Always examine the winch for structural cracks, bends, damage, frayed cable and any other
2. conditions that may affect the safe operation of the winch. Do not use the winch even if minor damage appears.

Maintain a safe working environment. Keep the work area well lit. Make sure there is

3. adequate surrounding workplace. Always keep the work area free of obstructions, grease, oil and other debris.

Always keep hands and fingers away from the gears of the winch when applying or releasing a load. Remain clear of the winch cable hook when pulling a load. Do not stand line with the

4. cable assembly, as it could whip violently should it break, People and animals should be kept at a safe distance when using the winch.
5. Use extreme caution when applying or releasing a load. Never allow the load to suddenly release. Slowly and carefully apply and release the load.
1. Never winch a boat or other object with anyone in it. Use a spotter to assist you in assuring that it is safe to operate the winch. Make sure this position is out of the way of the vehicle and the steel cable before activating the winch.
2. When mounting the winch on a vehicle or trailer, make sure to allow sufficient space for the winch's hand crank (part#28) to be turned a full 360 degrees.
3. The winch is designed for mounting on square or rectangular surfaces only. Do not attempt to mount the winch on a rounded surface.
   The winch is not designed to accommodate ropes or fiberglass straps. Do not replace the steel cable with a cable of lesser strength.
   The steel cable must be pulled straight in. Keep the load in line with the winch. Pulling at angle (off to the side) may cause excessive stress on the winch.
1. Always leave at least four turns of steel cable on the cable assembly shaft to prevent pulling the steel cable completely out of the winch.
2. Do not leave the winch unattended while it is under a load.
3. Warning. People with pacemakers should consult their physician before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

Note: When steel cable turns to be rusty, we hereby suggest you stop using that, when one of the steel cables is broken, we also advise you quit that one.

Assembly Instructions

Note: For a additional reference to the parts listed below, refer to the assembly diagram (last page).

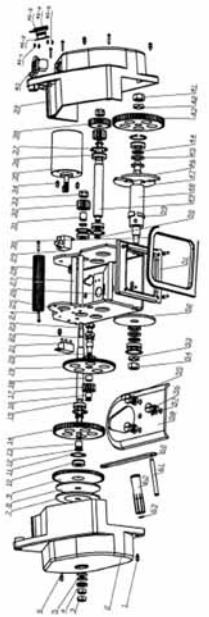
Permanent Mounting of the Winch:

1. Select a mounting site on the bed of truck, or other suitable location.
   Caution: This winch can generate 10500lbs rolling, 8750lbs marine and 3500lbs pulling force; 15000lbs rolling, 12500lbs marine and 5000lbs pulling force; Make sure the location selected can withstand this much force. It may be required to use steel reinforcement plate (not included), and to weld on additional bracing (not included), depending on the desired mounting location.
2. Align the base of winch with the desired location, and mark for drilling the three mounting holes required to attach the winch to the desired location. Then, drill these three mounting holes on vehicle / trailer. (See Figure A)
3. Use three hardened steel bolts at least 3/8" in diameter, three lock washers, and three nuts(all not included), to securely attach the winch to the desired location. (See Figure A)

Please Read the Following Information Carefully

The manufacturer or distributor has provided the winch spare parts list and assembly diagram in this manual as a reference tool only. Neither the manufacturer nor distributor makes any representation or warranty of any kind to the buyer that he or she is qualified to make any repairs to the product, or that he or she is qualified to replace any spare parts of the product. In fact, the manufacturer or distributor expressly states that all repairs and spare parts replacements should be undertaken by certified and licensed technicians, and not by the buyer. The buyer assumes all risk and liability arising out of his or her repairs to the original product or replacement parts thereto, or arising out of his or her installation of replacement parts thereto.

EXPLODED WINCH ASSEMBLY DIAGRAM



3500LBS Boat Trailer Electric Cable Winch

Performance Voltage	12V DC
Rated Line Pull (Single Line)	3500lbs(1588kgs)
Winch Motor	400W
Gearing	Gear Gearshift
Drawing Speed	1.2m/min
Drum Diameter & Length	¢33mm*90mm
Gear Reduction Ratio	717:1
Steel Cable	¢5.5mm*10m
Remote Switch Cable Length	3m
Electric Cable Length	3m
Shipping Carton Package Size	64*44*27.5cm(2PCS/CTN)
NW/GW	32/34kgs(2PCS/CTN)

5000LBS Boat Trailer Electric Cable Winch

Performance Voltage	12V DC
Rated Line Pull (Single Line)	5000lbs(2268kgs)
Winch Motor	450W
Gearing	Gear Gearshift
Drumming Speed	1.2m/min
Drum Diameter & Length	¢33mm*90mm
Gear Reduction Ratio	717:1
Steel Cable	¢7.2mm*10m
Remote Switch Cable Length	3m
Electric Cable Length	3m
Shipping Carton Package Size	64*44*27.5cm(2PCS/CTN)
NW/GW	33/35kgs(2PCS/CTN)

For further information please contact the nearest winch distributor.

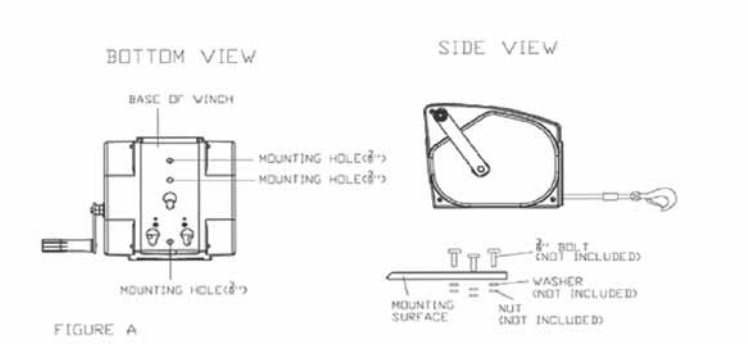


FIGURE A

Temporary Mounting of the Winch:

1. Insert three screws (part#55) into the three mounting holes in the adapter plate, and secure the screws to the adapter plate, using three washers (part#56), and three nuts (part#57). (See Figure B)
2. Insert the heads of the three screws (part#74) into the three keyhole slots on the base of the winch. (See Figure B)
3. Attach the winch with its plate (part#58) to the vehicle's hitch ball (not included) by inserting the hitch ball through the teardrop-shaped hole in the adapter plate. (See Figure B)

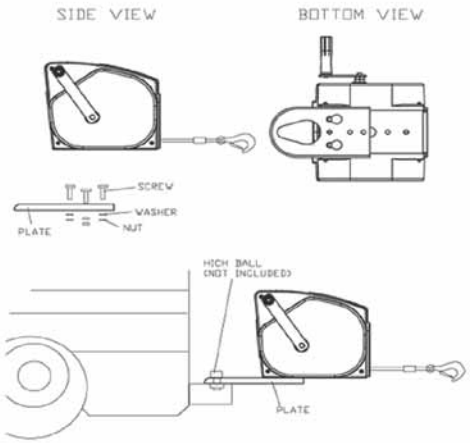


FIGURE B

For further information please contact the nearest winch distributor.

To Connect the Electrical Wiring:

1. Note: Depending on your level of knowledge regarding electrical wiring, you may wish to have this procedure performance by a qualified technician.
2. Caution： Prior to performing this procedure, make sure the vehicle engine is turned off. Make sure the vehicle transmission is its “Park” position and emergency brake is on. Also, make sure the engine, transmission, and exhaust system is cool to the touch.
3. To connect the wiring, plan a route for the wire harness assembly from the point of where the winch will be mounted on the vehicle to the vehicle’s 12V DC battery. The route should be secure, out of the way of moving parts, road debris, or any possibility of being damaged by operation or maintenance of the vehicle. For example, the power cord may be routed under the vehicle, attaching it to the frame using suitable fasteners (not included). Do not attach the power cord to the exhaust system, drive shaft, emergency brake cable, fuel line or any other components which may create damage to the power cord through heat or motion, or create a fire hazard. If a hole is drilled through the bumper or any other part of the vehicle, make sure to install a rubber grommet (not included) in the hole to prevent fraying of the wires at that point.
4. Route the wire harness assembly, following the precautions discussed in step#3. Once the wire harness assembly is routed to the battery, attach the RED color cord, ring electrical connector to the POSITIVE （+） terminal of the battery. (See Figure C)
5. Attach the BLACK color cord, ring electrical connector to the NEGATIVE (--) terminal of the battery. (See Figure C)
6. Warning： Never continue using the winch until the vehicle’s 12 Volt DC battery is running down. You may wish to keep the engine running while using the winch to continually recharge the battery. However, make sure the vehicle is in “neutral”, the vehicle’s emergency brake has been set whenever possible, and the vehicle’s wheels have been chocked. Do not use a dirty, corroded or leaking battery to avoid injury from possible acid burns. Always wear ANSI approved safety goggles when working with or around a battery.
7. Caution: Carbon monoxide is a colorless, odorless, vapor emitted from the engine’s exhaust and may kill or injure when inhaled. Do not run the engine in an enclosed area.

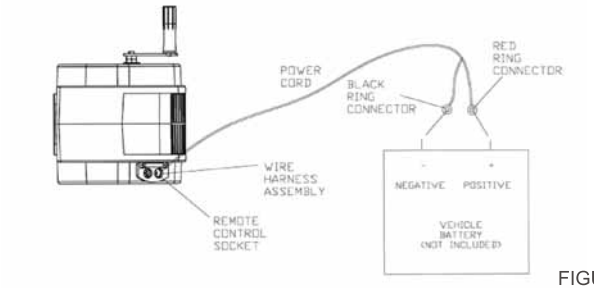


FIGURE C

To Connect the Remote Control:

1. Lift rubber seal on the left side of the winch, and insert the cord plug into the remote control socket. Then, set the remote control housing in a safe place until ready for use. (See Figure D)

For further information please contact the nearest winch distributor.

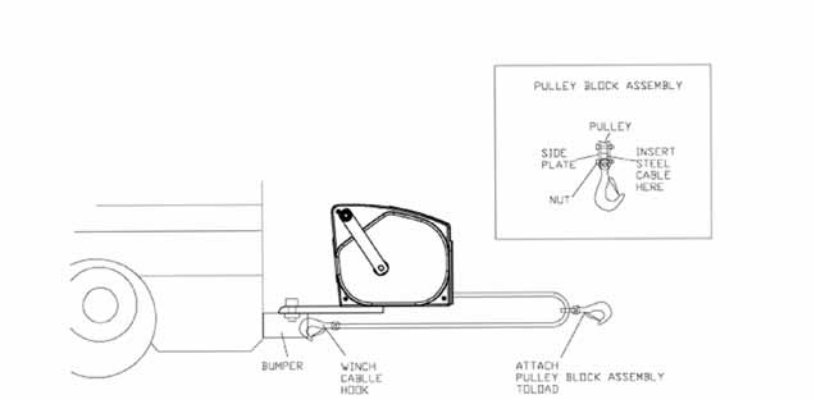


FIGURE H

Inspection, Maintenance and Cleaning

1. Caution: Always release a load from the winch, and disconnect the winch from its 12 Volt DC electrical supply source, before performing any inspection, maintenance or cleaning.
2. Before using the winch, inspect the general condition of it. Check for loose screws, misalignment or binding of moving parts, cracked, bent or broken parts, frayed steel cable and any other condition that may affect its safe operation. Inspect the entire unit for corrosion that may be caused by exposure to salt that water or weather. If abnormal noise or vibration occurs, have the problems well solved before further use. Do not use damaged equipment.
3. Periodically, use a premium quality, light weight oil to lubricate the steel cable.
4. Every six months, separate the left and right shells to grease the gears (part#14, #17, #49, #9). Use any good quality, waterproof, gear grease.
5. To clean, wipe with a clean damp cloth. If necessary, a mild detergent may be used.

For further information please contact the nearest winch distributor.

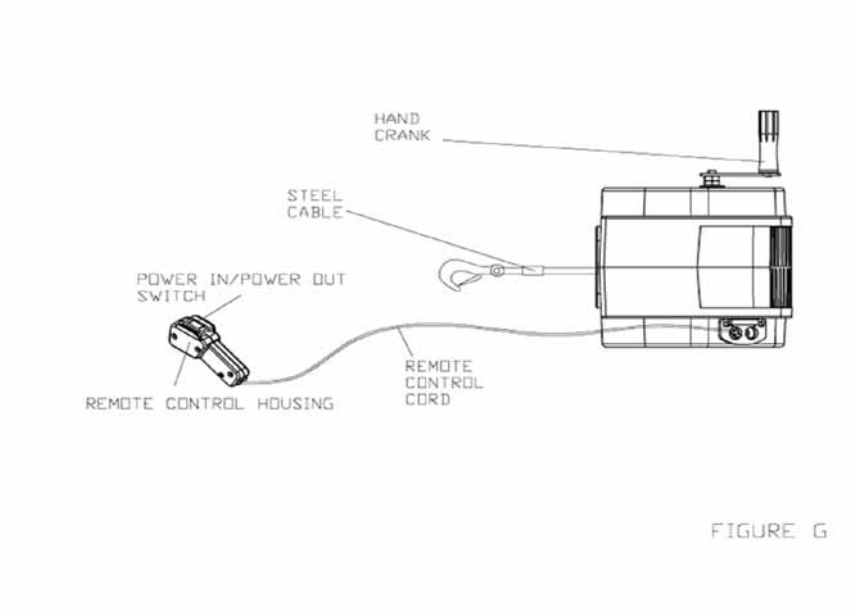


FIGURE G

To Use the Pulley Hook (Optional)

1. With the winch cable hook and the accessory pulley block assembly attached to the steel cable, the pulley block assembly allows you to offset the winch but retain a straight short. The pulley block assembly can also be used to nearly double the winch's capacity by simply attaching the pulley block assembly directly to the load and the winch cable hook to a sturdy mount near the winch (such as the rear bumper). (See Figure H)
2. To attach the pulley block assembly (part#56) to the steel cable, remove the two nuts on the pulley hook. Then, remove one side plate on the pulley hook. (See Figure H)
3. Insert the steel cable beneath the pulley. Then, reattach the side plate and the two nuts. (See Figure H)

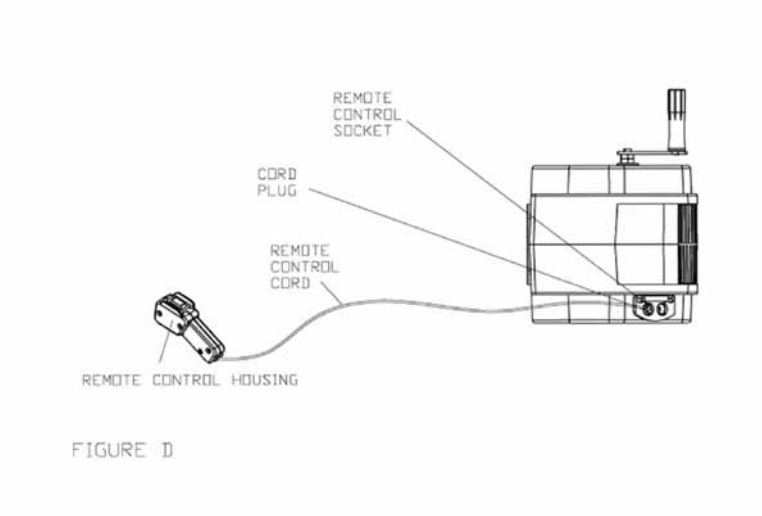


FIGURE D

To Attach the Hand Crank:

1. Insert mounting hole of the hand crank (part#60) onto the shaft. Then secure the hand crank to the shaft, using one nut. (See Figure E)
2. Warning: Do not use the hand crank (part#60) to assist a powered winch. This will damage the winch, and may cause personal injury. (See Figure E)
3. Place the vehicle's transmission in "park" turn off the engine. Set the emergency brake, and block the wheels from rolling, using suitable chocks (not included)
4. To operate the hand crank (part#61), turn the knob clockwise until hand tight. Do not force it or over tighten. (See Figure E)
5. Rotate the hand crank (part#60) clockwise to tighten the steel cable, continue turning the hand crank clockwise until the steel cable has been completely retracted. (See Figure E)

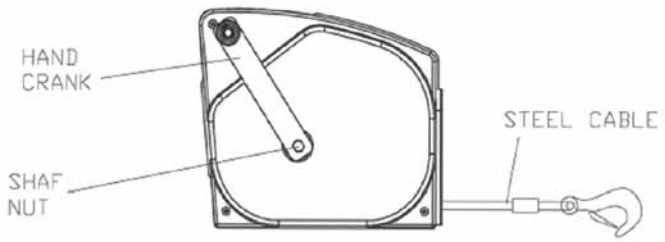


FIGURE E

To Estimate Pulling Capacity:

1. The winch has a pulling capacity of 3500lbs/5000lbs. Applying this measurement to practical applications, you can use the winch to move the following:
   a.Move load from a dead stop of up to 3500lbs/5000lbs on ground.
   b.Move a water brume marine craft of up to 8750lbs/12500lbs.
   c.Maintain a movement of a wheeled vehicle of up to 10500lbs/15000lbs.
2. Note: The winch's pulling capacity is reduced as inclines increase. For example, rolling capacity is reduced from 10500lbs/15000lbs on flat ground to approximately 3000lbs/4000lbs on a 45 degree incline. Refer to the chart for estimated pulling capacity (rolling weight) on various inclines. (See Figure F)

For further information please contact the nearest winch distributor.

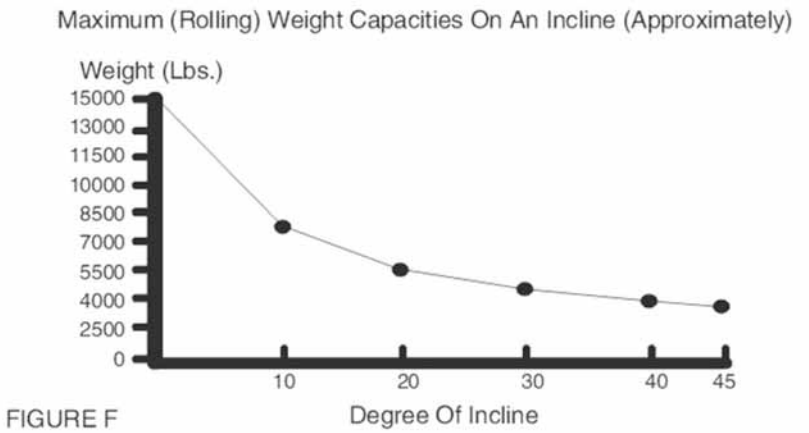


FIGURE F

To Use the Electrically Powered Winch:

1. Place the vehicle's transmission in "Park" set the emergency brake, and block the wheels from rolling, using suitable chocks (not included).
2. Note: You may wish to keep the vehicle's engine running while using the winch to continually recharge the battery. However, use extreme caution when working around a vehicle with its engine running.
3. Pull out steel cable to the desired length, using the "Park Out" feature located on the switch. Always leave at least four turns of steel cable on the spool of the cable assembly to prevent pulling the steel cable completely out of the winch. (See Figure G)
4. Hook onto the object using a pulling point, tow strap, or chain (all not included). Never wrap the steel cable around the object or hook onto the object itself. This can cause damage to the object being pulled, and kink or fray the steel cable (See Figure G).
5. Caution: Never allow anyone to stand near the steel cable, or in line with the steel cable behind the winch while it is under power. Should the steel cable slip or break it can suddenly whip back towards the winch, causing a hazard for anyone in the area. Always stand to well to the side while winching.
6. Stand clear, when it is safe to do so, use the "power in" feature on the switch to retract the steel cable and winch the object as desired. (See Figure G)

For further information please contact the nearest winch distributor.