



4500lb. Winch User Manual & Operating Instructions

Performance Specifications

Max Line Pull

4500lbs.(2041kgs)

Gear reduction ratio

166:1

Motor

Permanent magnet DC12V motor with 1.3hp output

Overall Dimensions

15.5in.(393mm) L x 5in.(127mm) W x 5.1in.(129mm) H

Drum size

1.97in.(50mm) D x 5.4in.(138mm) L

Remote Controller

Max control distance 100ft.(30m)

Rope

49.2ft.(15m) L of 0.236in.(6mm) D

Net weight

28.2lbs.(12.8kgs)

Product Overview

This winch is equipped with a permanent magnet motor and is designed for intermittent duty general use. This winch is not to be used for industrial lifting or moving people. Improper operation could damage the winch and void the warranty. Free spool clutch is operated by a turn knob, which disengages the gearbox, allowing the cable to be released.

INSTALLATION

Correct installation of the winch is required for proper operation.

- Mount the winch on the vehicle or other fixed installation by using a screw(M8×1.25×25mm), M8 nut, Φ8 flat washer and Φ8 spring washer(four sets).

WARNING: This winch must be mounted with the cable in an under wound direction. Improper mounting could damage the winch and void the warranty.

Connect the red wire to the positive terminal and the black wire to the negative terminal of the battery.(See Fig. 1).

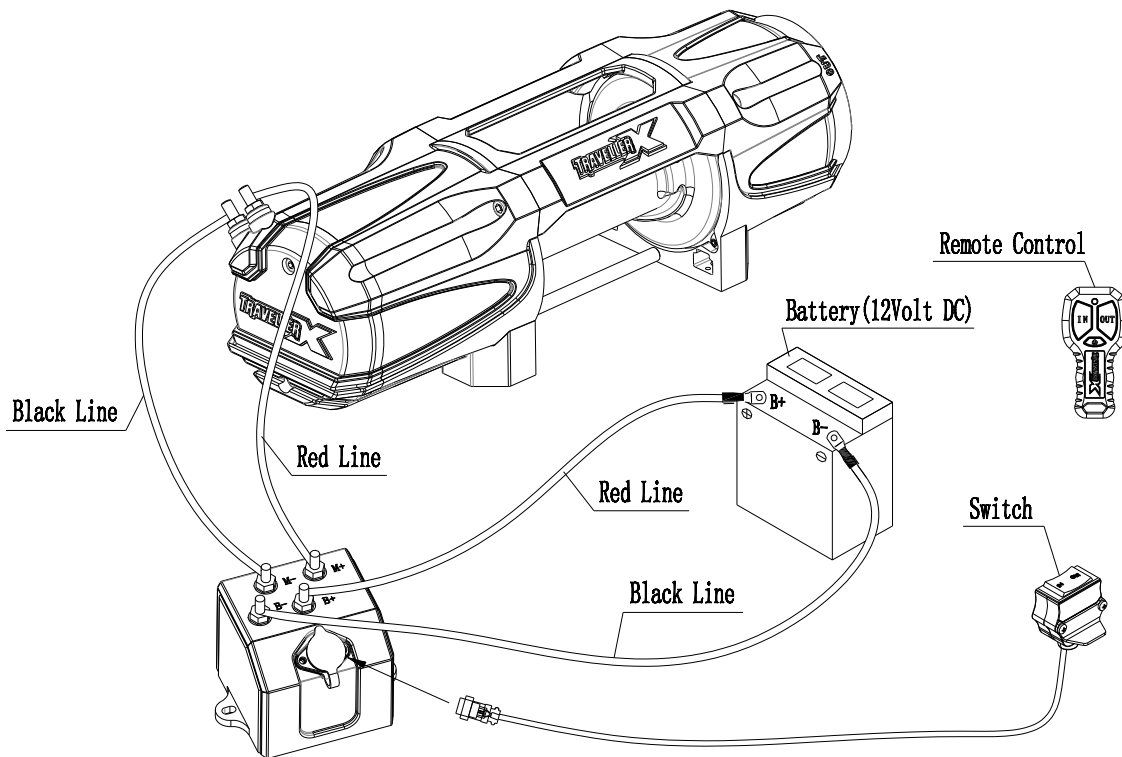


Fig. 1

- Check the rotation direction of the drum. Pull and turn the clutch knob to the “OUT” position (drum should turn freely by hand). Pull out some cable from the drum, and then turn the clutch knob to the “IN” position. Press the “OUT” button on the switch; if the cable is releasing then it is properly connected. Otherwise reverse the wire connections to the motor, and repeat the above-mentioned operation.

OPERATION

- Pull and turn the clutch knob, so the drum can turn freely by hand.
- Use hand saver strap to attach the hook of the cable assembly and pull cable to the load. Attach the cable hook to the load.

WARNING: Check that there are at least five turns of cable remaining on the drum before operation. Ensure the clutch knob is in the engaged position.

CAUTION: Clutch must be fully engaged before winching.

Never operate the clutch while drum is turning. Do not readjust clutch knob as it has been adjusted and permanently locked in place with a thread-locking compound in the factory.

- Press the “IN” button on the switch to re-spool the cable. Press the “OUT” button to reverse directions. Wait until the motor stops before reversing directions.
- Re-spool the cable after completing the operation.

REPLACING THE CABLE

- Engage the clutch by turning the clutch knob to the “IN” position.
- When inserting the cable into the drum, insert it into the correct end of the hole provided. Tighten the screws.
- Operate the winch and re-spool the cable around the drum tightly.

CAUTION: To keep the proper tension, be sure the cable is wrapped on the drum tightly.

WARNING: Always replace damaged cable with manufacturer’s identical replacement part.

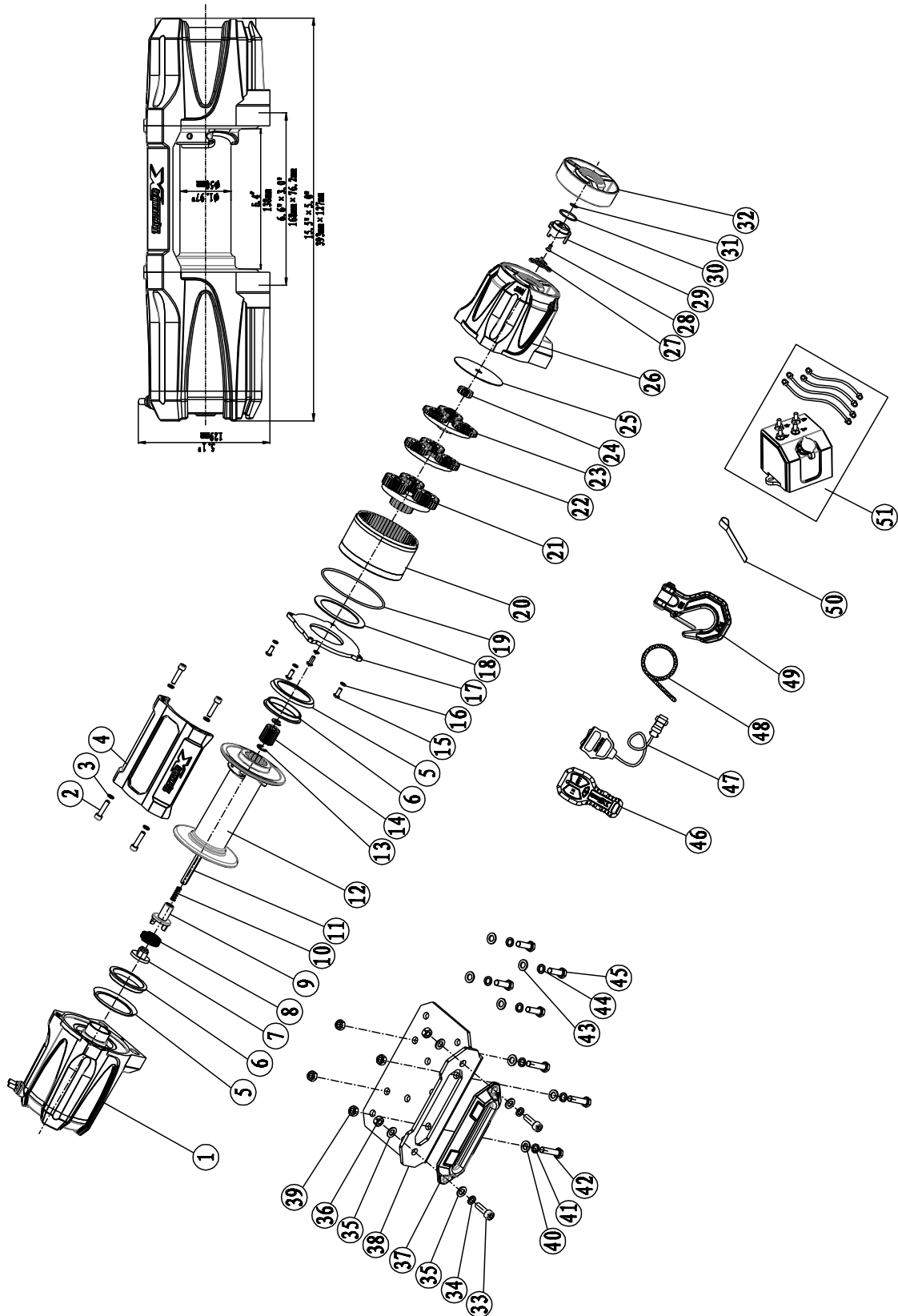
MAINTENANCE

- Periodically check tightness of mounting bolts and electrical connections. Remove all the dirt or corrosion and always keep clean.
- Do not attempt to disassemble the gearbox. Repairs should be done by the manufacturer or authorized repair center.
- The gearbox has been lubricated using high temperature lithium grease in the factory. No internal lubrication is required except when being repaired.
- When the transmitter is replaced, the same type of transmitter is required for pairing. The pairing method is as follows:
Press the power button → Press IN and OUT button at the same time (the red light will flash) → Turn on receiver for 1-2s (A click sound from the relay will be heard when pairing is successful)

TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	SUGGESTED ACTION
Motor does not turn on	-Switch Assembly not connected properly	-Insert switch assembly all the way into the connector.
	-Loose battery cable connections	-Tighten nuts on all cable connections.
	-Defective switch assembly	-Replace switch assembly.
	-Defective motor	-Check voltage at armature port while switch pressed. If voltage is normal, replace motor.
	-Water has entered motor	-Allow to drain and dry. Run in short bursts without load until completely dry.
Motor runs but cable drum does not turn	-Clutch not engaged	-Turn clutch to the "In" position. If problem remains, a qualified technician needs to check and repair.
Motor runs slowly or without normal power	-Insufficient current or voltage	-Run winch with vehicle motor running. -Clean, tighten, or replace battery cable connections.
Motor overheating	-Winch running time too long	-Allow winch to cool down periodically.
Motor runs in one direction only	-Loose or corroded battery cable or motor cable connections. -Defective relay/switch/remote controller assembly.	-Clean, tighten, or replace battery cable connections. -Repair or Replace relay/switch/remote controller assembly.
Winch braking malfunction.	-Cable works in wrong direction.	-Adjust the cable working direction to ensure clockwise from motor end.
	-Defective brake coupling or spring.	-Replace brake coupling or spring.

WINCH ASSEMBLY



WINCH PART LIST

No.	Part #	Qty	Description
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1	V4500100	1	Motor Assembly
2	V4500001	4	Screw M6 x 20
3	V4500002	4	Locking Washer Φ 6
4	V4500003	1	Tie bar
5	V4500004	2	Ring Seals
6	V4500005	2	Bushing—Drum
7	V4500006	1	Coupling I
8	V4500007	1	Spring
9	V4500008	1	Coupling II
10	V4500009	1	Spring
11	V4500010	1	Six Angle Bar
12	V4500200	1	Drum Assembly
13	V4500011	2	"E" Rings
14	V4500012	1	Gear—Output Sun
15	V4500013	4	Screw M5 x 12
16	V4500014	4	Locking Washer Φ 5
17	V4500015	1	Cover Plate
18	V4500016	1	Trust Washer
19	V4500017	1	"O" Rings
20	V4500018	1	Gear-Ring
21	V4500300	1	Gear Carrier Assembly(Output)
22	V4500400	1	Gear Carrier Assembly(Intermediate)
23	V4500500	1	Gear Carrier Assembly(Input)
24	V4500019	1	Gear—Input Sun
25	V4500020	1	Trust Washer
26	V4500021	1	Gear—Housing
27	V4500022	1	Clutch Slider
28	V4500023	1	Screw M4 x10
29	V4500024	1	Clutch Cam
30	V4500025	1	"O" Rings
31	V4500026	1	Ring Seals
32	V4500027	1	Clutch Knob
33	V4500028	2	Screw M10 x 25
34	V4500029	2	Locking Washer Φ 10
35	V4500030	4	Thick Flat Washer Φ 10
36	V4500031	2	Nut M10
37	V4500032	1	Aluminum Fairlead
38	V4500033	1	Mounting Panel
39	V4500034	4	Nut M8
40	V4500035	4	Thick Flat Washer Φ 8
41	V4500036	4	Locking Washer Φ 8
42	V4500037	4	Screw M8 x 35
43	V4500038	4	Thick Flat Washer Φ 8
44	V4500039	4	Locking Washer Φ 8
45	V4500040	4	Screw M8 x 25
46	V4500600	1	Remote Control
47	V4500700	1	Switch
48	V4500800	1	Cable Assembly
49	V4500900	1	Hook
50	V4500041	1	hand saver strap
51	V4501000	1	Control Assembly

SAFETY PRECAUTIONS

- Never lift people or hoist loads over people. Do not lift items vertically, this winch is designed for horizontal use only.
- Never overload. Be sure all equipment used meets the winch's maximum line pull rating. When double-lining, pulley blocks should be rated for a minimum of two times the winch's line pull rating.
- Do not attempt prolonged pulls with heavy loads. The electric winch is designed for intermittent use only, and should not be used in a constant duty application. Never pull for more than one minute or exceed the rated load. If the winch motor becomes hot to the touch, stop the winch and allow it to cool down for several minutes.
- Never operate winch with less than 5 turns of cable around the winch drum since the cable end may not withstand full load.
- Avoid continuous pulls from extreme angles because this will cause the cable to gather on one end of the drum and damage the cable. Be aware that the winch's line pull capacity is the max line pull of the first layer. Never operate winch pulling a load that exceeds the rated capacity.
- Never hook the cable back to itself because it could damage the cable.
- Be sure the winch is mounted securely on the vehicle or bracket before operation.
- Before moving a load, inspect the cable. Prevent kinks and uneven cable layer before they occur. Apply proper tension to loads under 100lbs.
- Do not move your vehicle to assist the winch in pulling the load. It will be easy to overload, and cause cable damage. Be aware of the danger zone. Keep away from the danger zone during the operation. The danger zone is the area of the winch drum, the fairlead (if fitted), the cable, the pulley block (if used), the hook, and the motor.
- Never approach or span the cable when the winch is under load.
- When using the 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 so that battery has fully electricity. Never use the winch when there is a lack of voltage.
- Never disconnect free spool clutch when there is a load on the winch.
- Always stand clear of the cable, hook and winch. You should disconnect the clutch first, then use the hand saver strap to hitch the hook to pull the cable.
- Inspect winch, cable, hooks and other accessories frequently. A frayed cable with broken strands should be replaced immediately. Use heavy leather gloves when handling the cable. Do not let the cable slide through your hands. Inspect the cable before use. Mashed, pinched, frayed or kinked areas severely reduce the load-carrying capability. Replacement cables must be re-spooled under 100lbs.
- To keep stated tensile, re-spool the cable around the drum tightly after operation.
- Do not operate winch when under the influence of drugs, alcohol or medication. Always stay alert during operation.
- Wear eye protection and personal protective equipment while operating winch.
- For loads over 50% of rated line pull, the use of the pulley block/snatch block to double the cable is recommended.
- Do not operate around potentially flammable liquids, gases, or debris. Sparks may occur, resulting in the ignition of fire.

Line speed and Motor current(First layer)

Line Pull	Line Speed ft./min (m/min)	Motor Current Amps
lbs (kgs)	12V DC	12V DC
0	17 (5.2)	25
1000(453)	15.4 (4.7)	50
2500(1134)	12.5 (3.8)	110
4500(2041)	8.2 (2.5)	210

Line Pull And Cable Capacity

Layer	Rated line pull lbs (kgs)	Total rope on the drum ft (m)
1	4500(2041)	11.5(3.5)
2	3700(1678)	26.2(8)
3	3150(1428)	42.6(13)
4	2740(1242)	49.2(15)

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