



Ramsey Winch Company OWNER'S MANUAL

Electric Winch Model TR5000
12 Volt



Layer of Cable		1	2	3	4
Rated Line Pull Per Layer	(lbs)	5,000	4,200	3,600	3,200
	(kg)	2,260	1,900	1,630	1,450
Cumulative Cable Capacity Per Layer 1/4" (6mm) dia. Cable	(ft)*	10	20	35	50
	(m)*	3	6.1	10.7	15.2

First Layer Line Pull	(lbs)	NO	1,000	3,000	5,000	
	(kg)	LOAD	450	1,350	2,260	
Line Speed	(FPM)	12V	15	11	8	5
First Layer	(MPM)	12V	4.5	3.3	2.4	1.5
Amp Draw		12V	45	100	155	230

* Depends on cable being uniformly wound onto drum. Ramsey performance data is compiled from actual winch testing.

Congratulations

You have purchased the finest winch available in its service class. The TR5000 features a highly efficient 3 stage planetary gear set. The TR5000 transmits torque from a permanent magnet D.C. motor. A safe positive clutch allows free spooling for quick cable deployment. An automatic load holding brake is designed to hold the full rated capacity of the winch.

This winch was designed and manufactured to provide you with the utmost in utility. As with any device that combines power and movement in its use, there are dangers if improperly used. At the same time, there are easier and faster ways for getting the job done if certain precautions are taken first.

Please read this manual carefully. It contains useful ideas in obtaining the most efficient operation from your Ramsey Winch and safety procedures you need to know before beginning use. When you follow our guidelines for operation, your Ramsey Winch will give you many years of satisfying service. Thank you for choosing Ramsey. You will be glad you have one working for you.

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Please Note: Ramsey TR5000 model winch is designed for general use. It is not designed for and should not be used in industrial applications (car haulers/carriers, wreckers, hoisting, etc.), and Ramsey does not warrant it to be suitable for such use. Ramsey makes a separate, complete line of winches for industrial/commercial use. Please contact the factory for further information.



CAUTION: Read and understand this manual before installation and operation of winch. See Safety Precautions.

Safety Precautions To Guard Against Possible Injury...



A minimum of five wraps of cable around the drum barrel is necessary to hold the rated load. Cable anchor is not designed to hold the load.

- A. Keep yourself and others a safe distance to the side of the cable when pulling under load.
- B. Do not step over a cable, or near a cable under load.
- C. Use supplied hook strap when handling hook for spooling wire rope.
- D. Do not use a vehicle to pull a load on the winch cable. This could result in cable breakage and/or winch damage.
- E. Use a heavy rag or gloves to protect hands from burrs when handling winch cable.
- F. Winch clutch should be disengaged when winch is not in use and fully engaged when in use.
- G. Modification, alteration or deviation to the winch should only be made by Ramsey Winch Company.
- H. Keep the duration of your pulls as short as possible. If the motor becomes uncomfortably hot to the touch, stop and let it cool for a few minutes. Do not pull more than one minute at or near rated load. Do not maintain power to the winch if the motor stalls. Electric winches are for intermittent usage and should not be used in constant duty applications.
- I. Unplug the remote control switch from the winch when not in use. A Ramsey Part No. 282053 Safety On/Off Switch is recommended to disconnect power to the winch when not in use.
- J. **Note:** Do not use winch in hoisting applications due to required hoist safety factors and features.
- K. Do not exceed maximum line pull ratings shown in tables on Front Cover. Shock loads must not exceed these ratings.



- L. To respool correctly, it is necessary to keep a slight load on the cable. This is accomplished by (wearing gloves) holding the cable with one hand and the remote control switch with the other, starting as far back and in the center as you can, walking up keeping load on the cable as the winch is powered in. Do not allow the cable to slip through your hand and do not approach the winch too closely. Turn off the winch and repeat the procedure until all the cable except a few feet is in. Disconnect the remote control switch and finish spooling in cable by rotating the drum by hand with clutch disengaged.

M. **Note:** Do not use the winch to hold a load on a trailer while towing. Secure the load to the trailer with straps or tie-downs. The winch is designed to hold the load only while winching.

Tips for Safe Operation

Don't underestimate the potential danger in winching operations. Neither should you fear them. Do learn the basic dangers and avoid them.

The uneven spooling of cable, while pulling a load, is not a problem, unless there is cable pileup on one end of drum. If this happens, reverse the winch to relieve the load and move your anchor point further to the center of the winch. After the job is done you can unspool and rewind for a neat lay of the cable.

Store the remote control switch where it will not become damaged. Inspect it before you plug it in. When ready to begin spooling in, plug in remote control switch with clutch disengaged. Do not engage clutch with motor running.

Never connect the hook back to the cable. This can cause cable damage. Always use a sling or chain of suitable strength. When double lining during stationary winching, do not attach hook to winch mounting plate.

Observe your winch while winching, if possible, while standing at a safe distance. Make sure cable does not jam.

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 (remember, you must leave 5 wraps minimum on the drum). If this is not practical, use a snatch block and double line arrangement.

Neat, tight spooling avoids cable binding, which is caused when a load is applied and the cable is pinched between two others. If this happens, alternately power the winch in and out a few inches. Do not attempt to work a bound cable under load; free by hand.

Installation

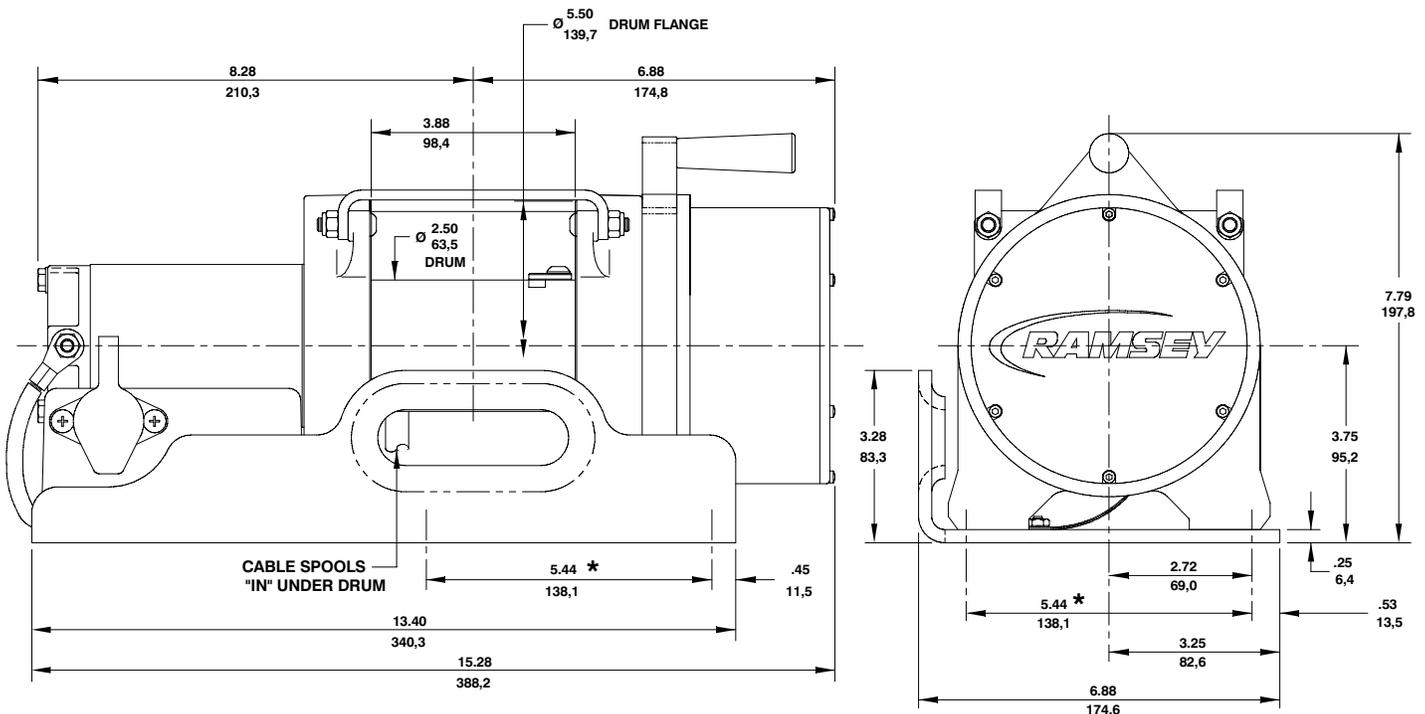
The TR5000 winch must be mounted on a level surface, with the cable underwound as shown in the drawing below. Use the dimensional drawing below to determine a mounting location. Use (4) 3/8-16NC SAE Grade 5 or better bolts to mount the mounting plate to the surface where the TR5000 will be installed. Tighten these bolts to 23 ft-lbs (17 Nm) torque.

Connect the Red battery lead from the solenoid to the Positive (+) terminal of a 12V battery or other 12V power source. Connect the Black battery lead to the Negative (-) terminal. The amp draw for the winch is shown in the table on the first page. Make sure that the battery or power source is sufficient to operate the winch.

Techniques of Operation

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 hear your winch as well as see it operate. Get to recognize the sound of 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 with you.

When pulling a heavy load, place a blanket, jacket or tarpaulin over the cable five or six feet from the hook. It will slow the snap back in the event of a broken cable.



*** MOUNTING BOLT PATTERN:
FOUR Ø.406 HOLES IN A 5.437±.015 x 5.437±.015
(138,1mm x 138,1mm) RECTANGULAR PATTERN.**

DIMENSIONS SHOWN ARE INCHES OVER MILLIMETERS

Operating Instructions

The winch clutch allows rapid unspooling of the wire rope for hooking onto the load or anchor point. The clutch shifter tab is located on the gear-housing end of the winch and operated as follows:

1. To disengage the clutch, move the clutch shifter tab to the "OUT" position. Wire rope may now be free-spoiled off the drum.
2. To engage the clutch, move the clutch shifter tab to the "IN" position. The winch is now ready for pulling.

Maintenance

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 with Ramsey part number listed in Parts List. If the cable becomes worn or damaged, it must be replaced.

Corrosion on electrical connections will reduce performance or may cause a short. Clean all connections especially in the remote control switch and receptacle. In salty environments use a silicone sealer to protect from corrosion.

To minimize corrosion of the internal motor components that may occur due to condensation, power the winch in or out periodically. Energizing the motor will generate heat, which will help dissipate any moisture buildup in the motor. This should be performed at periodic intervals (such as with each oil change to your vehicle). **Note:** Refer to the Troubleshooting Guide if the motor has been submerged.

Cable Installation

It is not necessary to disassemble the winch or remove it from where it is mounted to replace the cable.

Disengage the clutch. Remove the old cable and observe the manner in which it is attached to the cable drum. Loosen but do not remove the cable anchor.

Unwind the new cable by rolling it out along the ground, to prevent kinking.

Before installing the new cable assembly, make sure the end of the cable is squarely cut and wrapped with tape to prevent fraying.

Feed the taped end of the cable through the fairlead and under the drum. The cable should go between the drum and the spring tensioner.

Slide the cable to the end of the slot on the drum under the cable anchor.

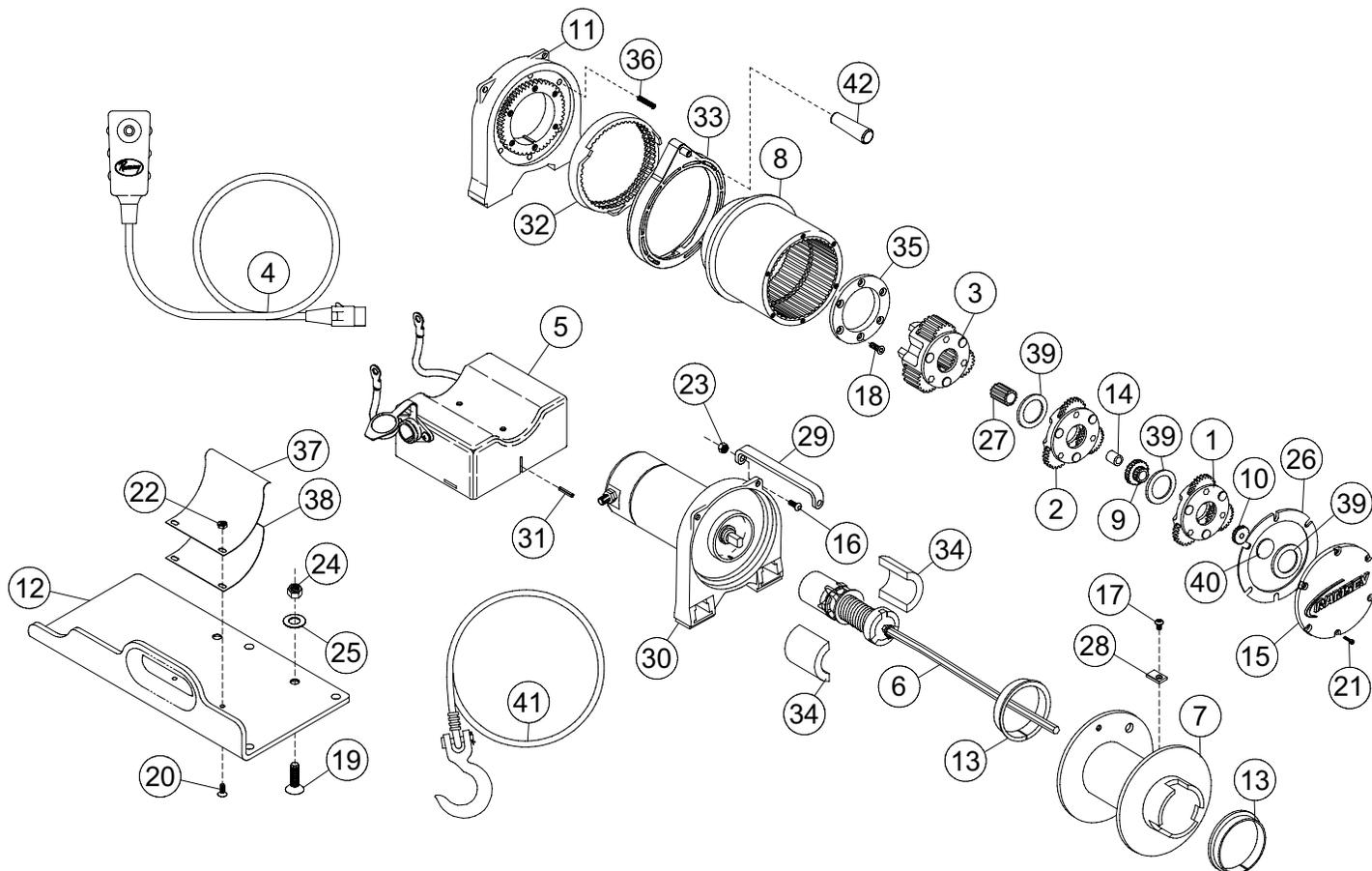
Tighten the cable anchor securely to the drum so that the cable is held securely.

Wind 5 wraps of cable onto the drum by rotating the drum. Wind on the rest of the cable by pulling in a light load to keep the tension constant. Allow the cable to swivel by using a length of chain or a block between the cable hook and the load.

Ramsey Electric Winches Troubleshooting Guide

MOTOR RUNS IN ONLY ONE DIRECTION	Defective solenoid or stuck solenoid	Jar solenoid to free contacts. Check by applying 12 volts to coil terminal (it should make an audible click when energized)
	Defective remote control switch	Disengage winch clutch, remove remote control switch plug from the socket and jump pins at 8 and 4 o'clock. Motor should run. Jump pins at 8 and 10 o'clock. Motor should run.
MOTOR RUNS EXTREMELY HOT	Long period of operation	Cooling-off periods are essential to prevent overheating
MOTOR RUNS, BUT WITH INSUFFICIENT POWER, OR WITH LOW LINE SPEED	Insufficient battery	Check battery terminal voltage under load. If 10 volts or less, replace or parallel another battery to it
	Bad connection	Check battery cables for corrosion; clean and grease
	Insufficient charging system	Replace with larger capacity charging system
MOTOR RUNS, BUT DRUM DOES NOT TURN	Clutch not engaged	If clutch engaged but symptom still exists, it will be necessary to disassemble winch to determine cause and repair
MOTOR WILL NOT OPERATE	Defective solenoid or stuck solenoid	Jar solenoid to free contacts. Check solenoid by applying 12 volts to coil terminal (it should make an audible click when energized)
	Defective remote control switch	Disengage winch clutch, remove remote control switch plug from the socket and jump pins at 8 and 4 o'clock. Motor should run. Jump pins at 8 and 10 o'clock. Motor should run.
	Defective motor	If solenoids operate, check for voltage at armature post; replace motor
	Loose connections	Tighten connections on bottom side of hood and on motor
MOTOR WATER DAMAGED	Submerged in water or water from high pressure car wash	Allow to drain and dry thoroughly, then run motor without load in short bursts to dry windings.
CABLE DRUM WILL NOT FREESPOOL OR IS DIFFICULT TO FREESPOOL	Clutch not disengaged	Check clutch operation according to nameplate. Make sure clutch shifter knob is fully at "OUT" position.
	Winch not mounted squarely causing end bearing to bind drum	Check mounting to see that installation instructions on page 4 have been followed.
	Some or all of the (6) 414861 flat head capscrews attaching the 479007 ring gear retainer are too tight	Remove the gear housing cover, 413018, and all gears from inside the gear housing. Disengage the clutch and check to see that the ring gear will rotate by hand. If it will not, using a hex (allen) wrench, slightly loosen all the capscrews and then snugly re-tighten them in criss-cross pattern, but do not over-tighten. The ring gear must rotate by hand. Re-assemble the winch.

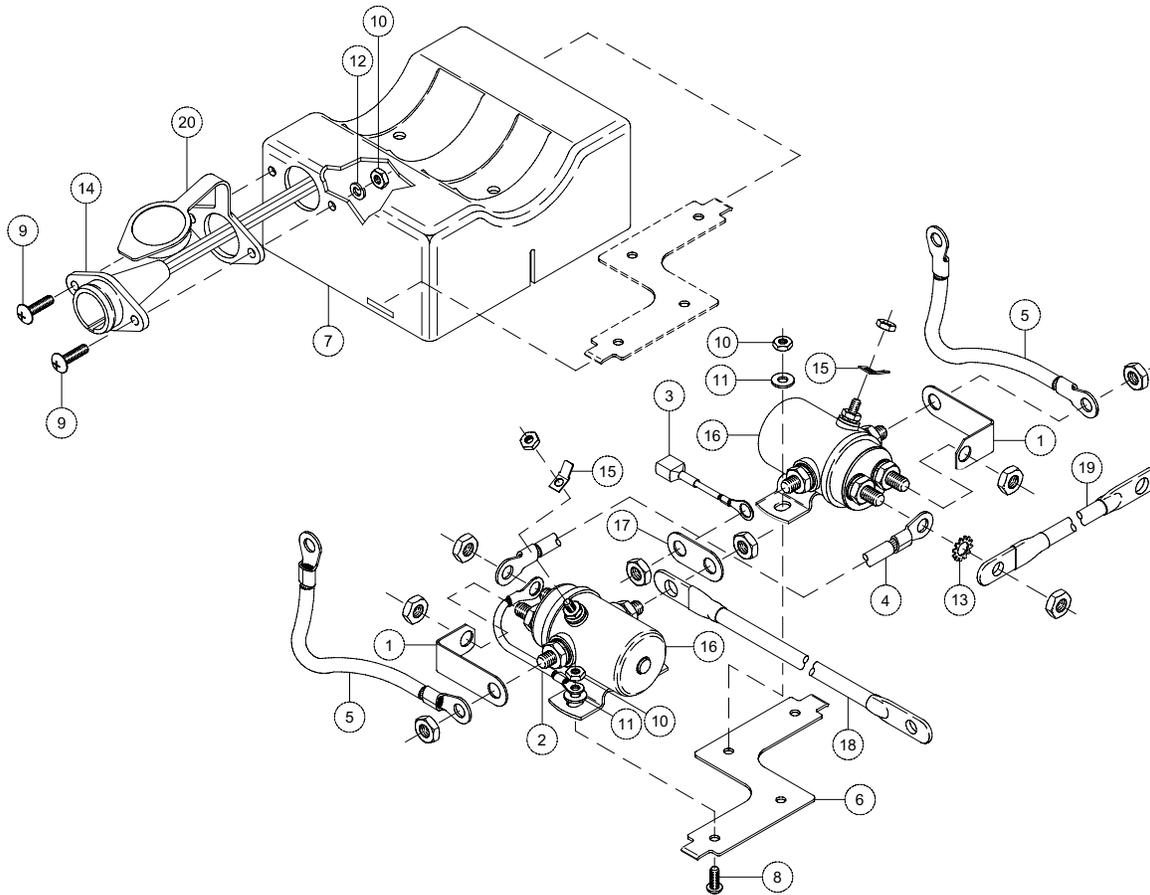
TR5000



TR5000 PARTS LIST

Item No.	Qty.	Part No.	Description	Item No.	Qty.	Part No.	Description
1	1	247004	Gear Carrier Assembly - Input	22	2	418001	Nut - #10-32 GR2 Z/P
2	1	247005	Gear Carrier Assembly - Intermediate	23	4	418018	Nut - 1/4-20NC Hx Elastic Stop
3	1	247006	Gear Carrier Assembly - Output	24	4	418035	Nut - 3/8-16NC Hx reg Z/P
4	1	251110	Switch Assembly - 12 ft	25	4	418181	Washer - 3/8 ID SAE Flat Z/P
5	1	278039	Solenoid Assembly	26	1	442207	Gasket - Gear Housing Cover
6	1	296612	Brake Assembly	27	1	444048	Gear - Output Sun
7	1	332201	Drum - Cable	28	1	448092	Cable Anchor
8	1	334143	Gear - Ring	29	2	448103	Tie Bar
9	1	334145	Gear - Intermediate Sun	30	1	256125	Motor/End Bearing Assembly
10	1	334153	Gear - Input Sun	31	1	470050	Roll Pin
11	1	338249	End Bearing	32	1	477002	Locking Ring
12	1	408331	Mounting Plate	33	1	477013	Cam Ring
13	2	412056	Bushing - Drum	34	2	477004	Ring - Half
14	1	412061	Bushing - Shaft	35	1	479007	Retainer - Ring Gear
15	1	413018	Cover - Gear Housing	36	6	494077	Spring
16	4	414829	Capscrew - 1/4-20NC x 1 Soc Button Hd F/B	37	1	494121	Spring Plate
17	1	414830	Capscrew - 1/4-20NC x 3/8 Button Hd	38	1	494122	Spring Plate
18	6	414861	Capscrew - 1/4-20NC x 3/4 Flat Soc Hd Nylok	39	3	518020	Thrust Washer
19	4	414923	Capscrew - 3/8-16NC x 1-1/4 Flat Hd Z/P	40	1	518027	Thrust Disc
20	2	416012	Screw - #10-32UNF x 1/2 Flat Hd Z/P	41	1	251274	Cable Assembly - 50' x 1/4" Dia.
21	6	416273	Screw - #6-32NC x 3/8	42	1	452005	Shifter Knob

Solenoid Assembly 278039 Parts List



Note: All unidentified hardware comes supplied with the solenoid.

Item No.	Qty. Req'd	Part No.	Description
1	2	264002	Copper Strap
2	1	289090	Wire Assembly - #10 Ga. Black Ground
3	1	289091	Wire Assembly - Female Conn to Solenoid
4	1	289092	Wire Assembly - #6 Ga. Black 3-1/2"
5	2	289095	Wire Assembly - #6 Ga. Black 6"
6	1	408087	Solenoid Bracket
7	1	413019	Solenoid Cover
8	4	416216	Screw - #10-24NC x 1/2 Slot Z/P
9	2	416227	Screw - #10-24NC x 3/4 F/B
10	6	418004	Nut - #10-24NC Reg Z/P
11	4	418140	Washer - #10 Flat Z/P
12	2	418141	Lockwasher - #10 Med
13	1	418165	Washer - 5/16 Shake Proof
14	1	430013	Connector - Female Receptacle
15	2	440071	Terminal Tab
16	2	440110	Solenoid 12V
17	1	440111	Strap
18	1	440112	Wire Assembly - Battery #4 Ga. 60" Red
19	1	440113	Wire Assembly - Battery #4 Ga. 60" Black
20	1	482029	Cover - Female Receptacle

Warranty Information

Ramsey Winches are designed and built to exacting specifications. Care and skill go into every winch we make. If the need should arise, warranty procedure is outlined on the back of your self-addressed, postage paid warranty card. Please read and fill out the enclosed warranty card and send it to Ramsey Winch Company. If you have any problems with your winch, please follow instructions for prompt service on all warranty claims.

Limited Lifetime Warranty

Ramsey Winch offers a limited lifetime warranty for each new Ramsey winch against manufacturing defects in workmanship and materials on all manufactured components.

Warranty registration cards for each winch must be submitted at the time of purchase or within 30 days. Warranty will only be valid for the original purchaser of the winch and installed on the vehicles with which they were originally registered.

New cable assemblies are warranted against defects in workmanship and materials. No warranty applies after initial use.

All Ramsey mounting kits and other accessories carry a 1-year limited warranty against defects in materials and workmanship.

This warranty is void if winch is used in commercial/industrial applications other than front mount self recovery.

Electrical components consisting of motors, solenoids, wiring, wire connectors, and associated parts carry a limited 1-year warranty. Battery isolators carry a 90-day limited warranty.

The obligation under this warranty, statutory or otherwise, is limited to the replacement or repair at the manufacturers factory, or at a point designated by the manufacturer, of such part as shall appear to the manufacturer, upon inspection of such part, to have been defective in material or workmanship. This Warranty does not obligate Ramsey Winch Company to bear the cost of labor or transportation charges in connection with the replacement or repair of defective parts, nor shall it apply to a product upon which repairs or alterations have been made, unless authorized by the manufacturer, or for equipment misused, neglected or improperly installed.

Important notice: To the fullest extent permitted by applicable law, the following are hereby excluded and disclaimed: 1. All warranties of fitness for a particular purpose; 2. All warranties of merchantability; 3. All claims for consequential or incidental damages. There are no warranties that extend beyond the description that appears on the face hereof.

Some states do not allow the above exclusions or disclaimers in consumer transactions and as such this disclaimer/exclusion may not apply to your particular case.

To the extent such warranties of fitness for a particular purpose or merchantability are deemed to apply to this product, they exist only for so long as the express limited warranty elsewhere set forth is in existence.

Ramsey Winch Company makes no warranty in respect to accessories, same being subject to the warranties of their respective manufacturers.

Ramsey Winch Company, whose policy is one of continuous product improvement, reserves the right to improve any product through changes in design or materials as it may deem desirable without being obligated to incorporate such changes in products of previous manufacture.

If field service at the request of the buyer is rendered and the fault is found not to be with Ramsey Winch Company's product, the buyer shall pay the time and expense of the field representative. Bills for service, labor or other expenses which have been incurred by the buyer without express approval or authorization by Ramsey Winch Company will not be accepted.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.



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