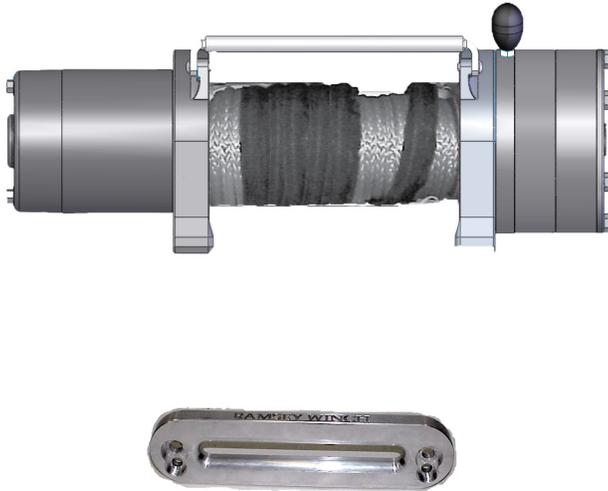




Ramsey Winch Company Owner's Manual Front Mount Electric Winch Patriot Profile 9500 with synthetic rope 12 volt



Layer of Cable	1	2	3	4	5	
Rated Line Pull Per Layer (lbs)	9,500	7,700	6,500	5,700	4,900	
(kg)	4,309	3,480	2,940	2,580	2,210	
Cumulative Capacity Per Layer (3/8" x 100')	(ft)*	15	34	58	86	100
Synthetic Rope	(m)*	4	10	17.5	26	30.5

Line Pull First Layer (lbs)	NO LOAD	2,000	4,000	6,000	8,000	9,500
(kg)		900	1,810	2,720	3,620	4,309
(FPM)						
12V	35.4	16.7	12.7	10.6	9	7.8
24V	29	16	13	10	9	8
Line Speed First Layer (MPM)						
12V	10.7	5.1	3.8	3.2	2.7	2.3
24V	8.8	4.9	4	3	2.7	2.4
Amp Draw						
12V	97	180	260	335	395	430
24V	45	95	128	165	192	212

Congratulations

You have purchased the finest winch available in its service class. It features a highly efficient 3 stage planetary gear set which transmits torque from a series wound DC motor. A semi-automatic clutch allows free spooling for quick cable deployment and eliminates unnecessary trips back to the winch. A wireless remote allows the winch to be operated while standing up to 50 feet away. An automatic load holding brake is designed to hold the full rated capacity of the winch. It 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 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.

Contents

Performance Specifications	Front Cover
Safety Precautions	2
Tips for Safe Operation	2
Techniques of Operation	3
Installation	4
Electrical Connections and Operation	6
Rope Installation	7
Troubleshooting Guide	9
Solenoid Assembly/ Parts List	10
Winch Parts List	12-14
Warranty	Back Cover

Please note: Ramsey Patriot series winches are designed for front mount vehicle use. The winches are not designed for and should not be used in industrial applications (car haulers/carriers, wreckers, hoisting, etc.), and Ramsey does not warrant them 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 AND TIPS



Safety Precautions

To Guard against Possible Injury...

A minimum of eight wraps of rope around the drum barrel is necessary to hold the rated load. Rope anchor is not designed to hold the load.

- A. Keep yourself and others a safe distance to the side of the rope when pulling under load.
- B. Do not step over the rope or near the rope under load.
- C. Use supplied hook strap when handling hook for spooling rope.
- D. Do not move the vehicle to pull a load on the winch rope. This could result in rope breakage and/or winch damage.
- E. Apply blocks to wheels when vehicle is on an incline.
- 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. Disconnect the remote control switch from the winch when not in use. A Ramsey Part No. 282053 safety on-off switch in your vehicle is recommended.
- 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. Shock loads must not exceed these ratings.
- L. To respool correctly, it is necessary to keep a slight load on the rope. This can be accomplished by holding the rope 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 rope as the winch is powered in. Do not allow the rope to slip through your hand and do not approach the winch too closely. Turn off the winch and repeat the procedure until all the rope except a few feet is in. Disconnect the remote control switch and finish spooling in rope by rotating the drum by hand with clutch disengaged. On hidden winches, spool in rope under power using supplied hook strap.
- M. Avoid pulling rope over rough surfaces or sharp edges. Slide the protective sleeve along the length of the rope to place it at a location where the rope would encounter rough surfaces such as a rock or tree branches.



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.

Observe the spooling of rope onto drum. Side pulls can cause rope to pileup at one end of the drum. To correct uneven stacking, spool out that section of the rope and move it to the other end of the drum and continue winching. Uneven spooling which causes rope pileup can interfere with the solenoid housing causing damage to the winch.

Store the remote control switch inside your vehicle 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 rope. This can cause rope damage. Always use a sling or chain of suitable strength, as shown in the illustration.

Observe your winch while winching, if possible, while standing at a safe distance. If you use vehicle drive to assist, stop and get out every few feet to assure the rope is not piling up in one corner. Jamming rope can break your winch.

Do not attach tow hooks to winch mounting apparatus. They must attach to vehicle frame.

When double lining during stationary winching, the winch hook should be attached to the chassis of the vehicle.

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. If this is not practical, use a snatch block and double the arrangement (see illustration).

Neat, tight spooling avoids rope binding which is caused when a load is applied and the rope 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 rope under load free by hand.

Do not expose the rope to chemicals or heat sources.

Avoid prolonged exposure of synthetic rope to ultraviolet rays from sunlight which can degrade rope strength over time. Use a winch cover over winch and rope when not in use.

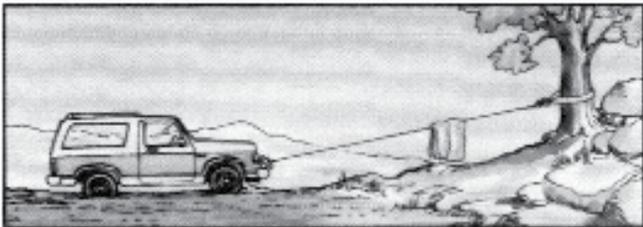
Any sharp bend in the rope under load decreases its strength substantially and may cause permanent damage or failure. Sheave diameters on rotating snatch blocks should be at least eight times the rope diameter (3" for 3/8" rope).

TECHNIQUES OF OPERATION

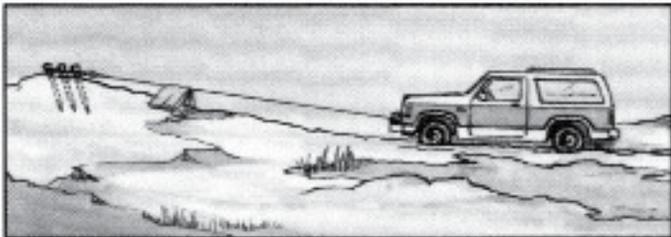
Techniques of Operation

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 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 with you.

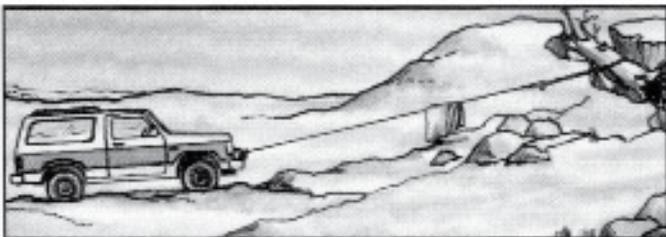
Your winch will not only pull your vehicle up or ease your vehicle down a steep grade, it will also pull another vehicle or a load while your vehicle is anchored in a stationary position. The sketches on this page show you a



For basic self-recovery, anchor to a tree or heavy rock. When anchoring to a tree, always use a tree trunk protector.



Stakes driven in solid earth and chained together make a good anchor point for self-recovery when no solid anchor point is available.

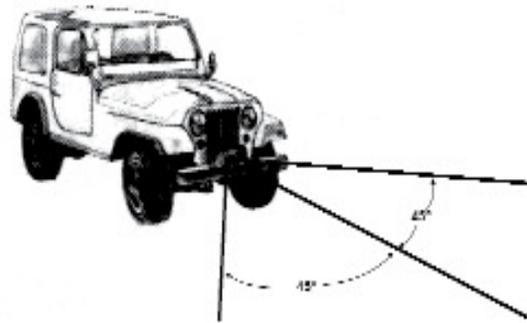


For a solid anchor, bury a log with earth or sand or place it in a deep ravine.

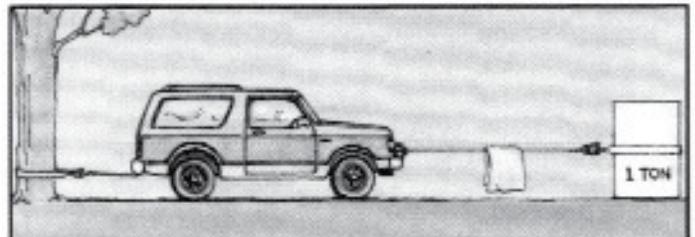
few techniques.

When pulling a heavy load, place a blanket, jacket or tarpaulin over the rope five or six feet from the hook. It will slow the snap back in the event of a broken rope. Also, open the vehicle hood for additional protection.

Use the vehicle wheel power to help the winch, but don't overtake the winch line. Plan your pull. You can't always hook up and pull out in one step. Examine all the areas for anchoring possibilities as well as leverage situations, direction, and goal.

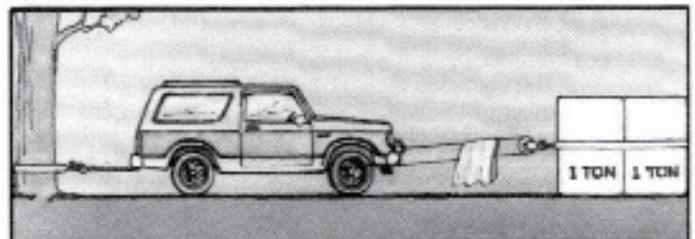


Winches equipped with fairleads can pull from several directions. Pull from an angle only to straighten up the vehicle—otherwise you can damage structural members or other parts of your vehicle and cause excess rope buildup on one end of the winch drum.



For a direct pull of 2000 lbs., hitch truck to a tree or solid anchor, and take out of gear.

To double the pull, use 2-part line and tie off to chassis.



Take out of gear.

INSTALLATION NOTES

Installation

The winch shown in this owner's manual is solely and exclusively designed for vehicle mounted, non-industrial applications. All other applications will void warranty.

It is very important that the winch be mounted on a flat surface so that the three major sections (the motor end, the drum, and the gear housing end) are properly aligned. It is recommended that Ramsey kits be used to mount the winch. They are designed to align the winch and distribute up to the full rated load evenly, to avoid possible damage to the winch or vehicle.

The Aluminum Hawse Fairlead included with the winch is required for use with the synthetic rope.

NOTE: If recommended mounting is not used, a kit of equal design must be used.

Also available for mounting the Patriot 9500 are the following winch mounting channels:

- #251126 short length (23.63") black
- #251127 medium length (30.00") black
- #251128 long length (36.00") black

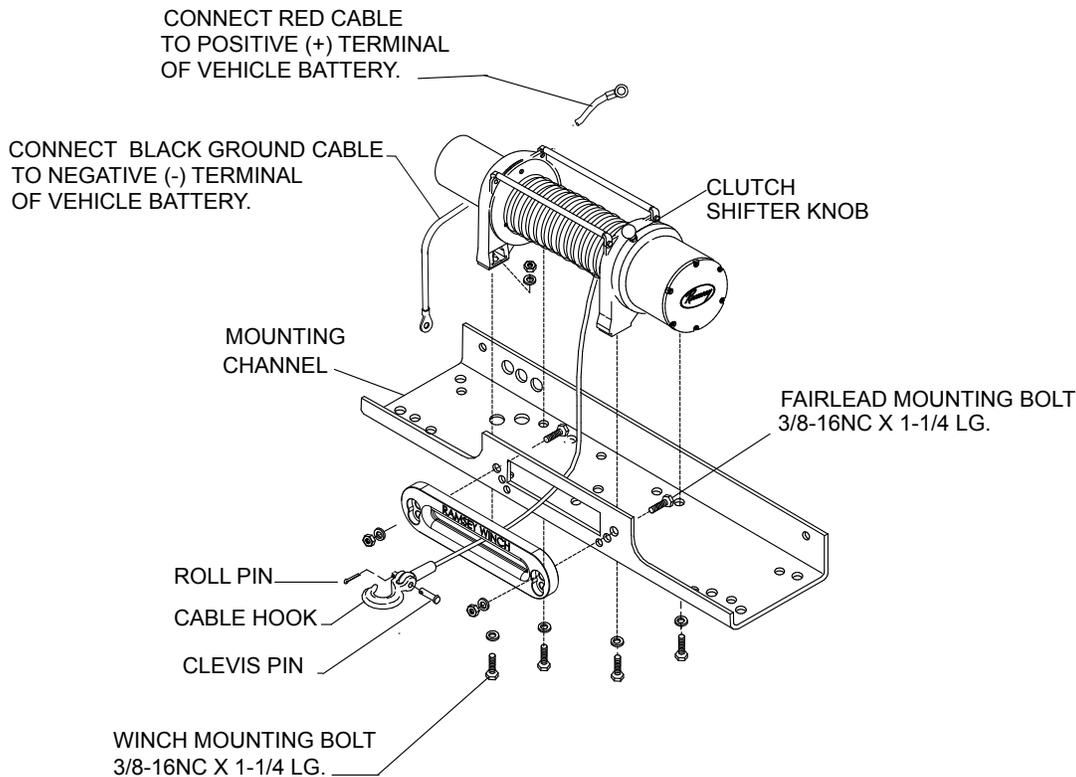
It is recommended that Ramsey mounting channels be used with all non-Ramsey mounting.

Attach aluminum hawse fairlead to channel using hardware furnished with winch. Attach winch to channel. Thread capscrews with lockwashers through mounting holes in channel and into winch feet (see figure below).

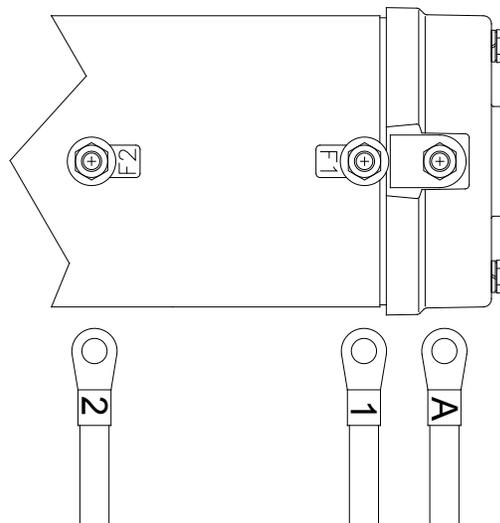
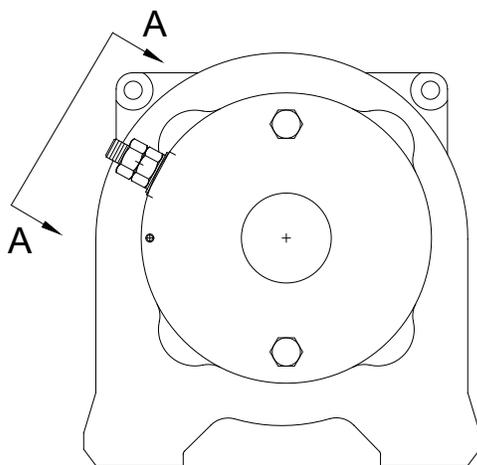
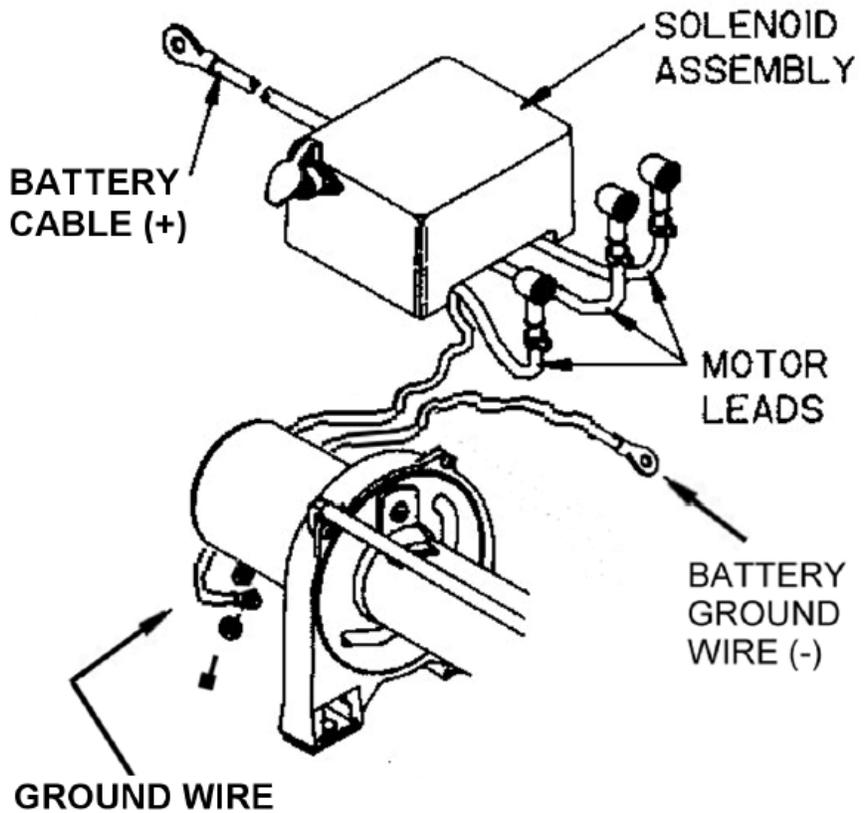
Substitution of attaching hardware items (bolts, nuts or washers) different from those supplied with your winch and mounting kit can lead to failure causing damage or serious injury (use SAE grade 5 bolts or better and torque to 34 ft-lbs.).

Place end of rope through fairlead and attach hook. Use clevis pin and cotter pin (see figure below).

The 10' protective sleeve can be cut into two 5' lengths for greater flexibility in protecting the synthetic rope. Remove the protective sleeve from the rope before cutting into two lengths, use a cigarette lighter to fuse the cut ends so they will not unravel, and then slide the two pieces back on the rope.



To mount Solenoid Assembly, use included Solenoid mounting Bracket. Mount bracket to tie bar using (1) ¼-20NC x 1" capscrew in place of ¾" tie bar capscrew. Install bracket to back of solenoid using included nuts and lockwashers. When mounting winch, connect labeled motor leads coming from solenoid assembly to appropriately marked motor terminals as shown lower right. **Tighten nuts on motor terminals securely.** Attach solenoid ground wire to ground bolt located on bottom of motor (Battery ground wire is already installed to grounding bolt on motor)



View A-A

ELECTRICAL AND OPERATING INSTRUCTIONS

Operating Instructions

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

1. To disengage the clutch, move the clutch shifter lever to the “DISENGAGED” position. Wire rope may now be freespoiled off the drum.
2. To engage the clutch, power winch motor to reel in cable. The clutch will automatically engage and the clutch shifter lever will automatically move to the “ENGAGED” position.

Note: Slight tension on the cable may be necessary to fully engage the clutch.

Note: Clutch may be manually engaged by manually moving the clutch lever to the “ENGAGED” position. Rotation of the drum may be necessary to fully engage the clutch manually.

Caution: Insure the clutch fully engages by observing clutch shifter lever position before winching.

Caution: Stay clear of clutch lever while clutch is being automatically engaged. Disconnect the remote from the winch before operating the clutch manually.

Electrical Connections and Operations

For normal self-recovery work, your existing electrical system is adequate. Your battery must be kept in good condition. A fully charged battery and proper connections are essential. Run the vehicle engine during winching operations to keep battery charged. Route battery cables up to battery.

Caution: Be sure battery cables are not drawn taut across any surfaces which could possibly damage them.

Connect red cable to positive (+) battery terminal. Connect black ground cable to negative (-) terminal of battery (See Figure 1).

Models Equipped with Push Button Remote Control Switch

The remote control switch is water proof. It has push buttons on either side. Make sure the motor has

stopped fully before reversing. To actuate winch simply plug remote control switch into receptacle in cover of winch. Run winch forward and reverse to check directions. Snap appropriate “IN” and “OUT” disc into proper thumb cavity. **Do not leave switch plugged in when winch is not in use.**

Models Equipped with Wireless Remote Control

See Installation and Operating Instructions for Ramsey Universal Remote Control (OM-914057) included with the wireless remote.

Maintenance

All moving parts 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 the cable for broken strands and replace if necessary. 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 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 of your vehicle). **Note:** Refer to the Troubleshooting Guide if the motor has been submerged.

Rope Maintenance

The most important part of maintenance of the synthetic rope is to inspect it regularly. Any time the winch is used, the synthetic rope should be inspected thoroughly as described on page 7.

Likewise, inspect the protective sleeve and replace if it becomes torn, fused, or threadbare.

Keep the rope and protective sleeve free of moisture, grease, dirt or other debris. If necessary, clean with a damp cloth.

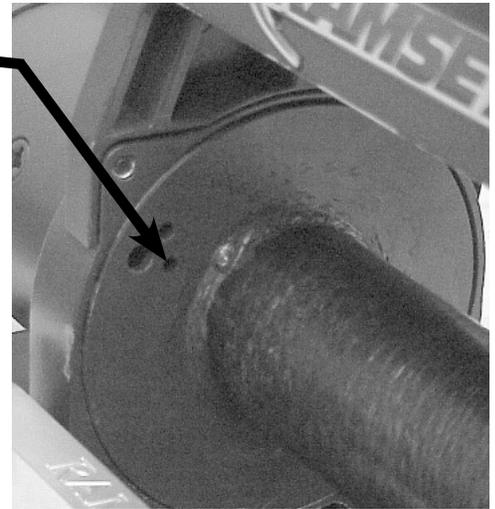
REPLACEMENT ROPE INSTALLATION/ INSPECTION

Replacement Rope Installation

Notes:

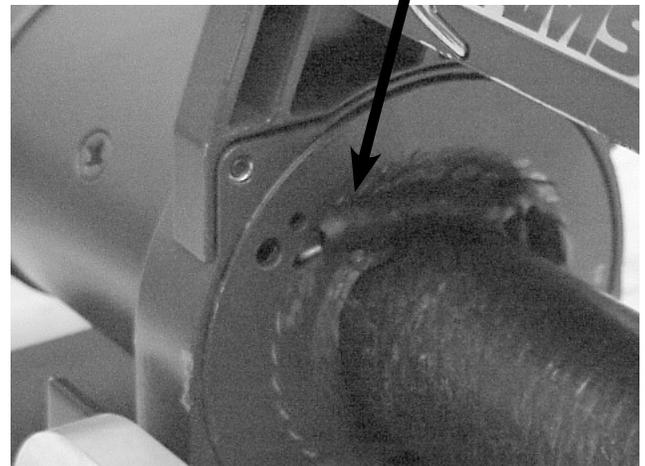
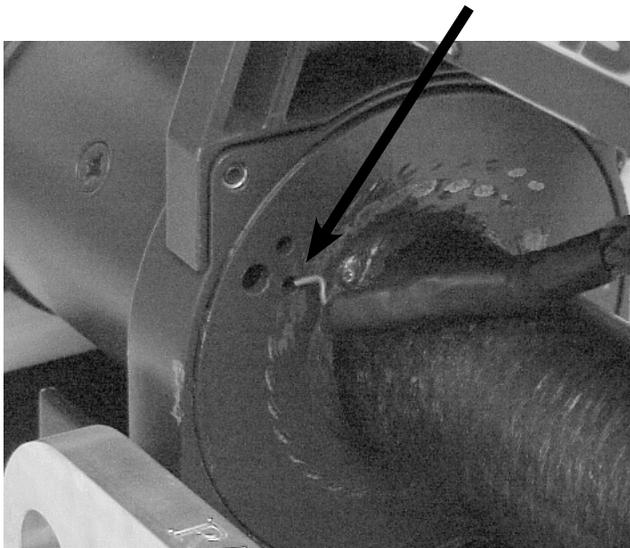
- **Rope should be installed so that it feeds from the bottom of the drum.**
- **An Aluminum Hawse Fairlead, P/N 251266 (included with winch), is required for use with the Ramsey Synthetic Rope.**
- **Before installing synthetic rope, inspect winch drum and fairlead and smooth any sharp edges on drum barrel, flanges and other winch accessories that may contact the rope.**

1. Unwind new rope by rolling it out along the ground.
2. Remove existing rope, noting how it is installed in the drum.
3. Rotate drum to locate existing hole in flange that is closest to the drum barrel.



4. Feed synthetic rope through aluminum hawse fairlead and under drum. See figure page 4.

Pull synthetic rope tight to seat anchor in hole.



5. Insert synthetic rope anchor into hole in flange closest to drum barrel.
6. Carefully run winch in the “reel-in” direction. Wear gloves and use the hook strap, keep tension on end of rope as you spool all the rope onto the drum, taking care to form neatly wrapped layers.

Rope Inspection

When rope is first used, the outer filaments of the rope will quickly fuzz up. This is the result of these filaments breaking and this roughened surface will actually protect the fibers underneath. The condition should stabilize, not progress. If the surface roughness increases, excessive abrasion is taking place and strength is being lost.

Look closely at both the inner and outer fibers. When either is worn the rope is obviously weakened. Open the strands and look for powdered fiber--this is a sign of internal wear.

Rope should be replaced when

- **Rope bulk anywhere along the length is reduced by 25% or more by abrasion**
- **Two or more adjacent strands are cut.**
- **Flat areas or lumps are found that are not eliminated by flexing rope.**
- **Excessive fused or melted fibers are found. Any such areas will be stiff and the rope will have a glazed appearance.**

Examples:



Rope with original bulk



Rope displaying 25% strand volume reduction from abrasion--**rope should be replaced.**



Rope strand showing full volume



Rope strand reduced by 25% abrasion--**rope should be replaced.**



Rope exhibits fiber-set from compression. A slight sheen is visible. This is not a permanent characteristic and can be eliminated by flexing the rope.



Rope displays two adjacent cut strands--**rope should be replaced.**

TROUBLE SHOOTING GUIDE

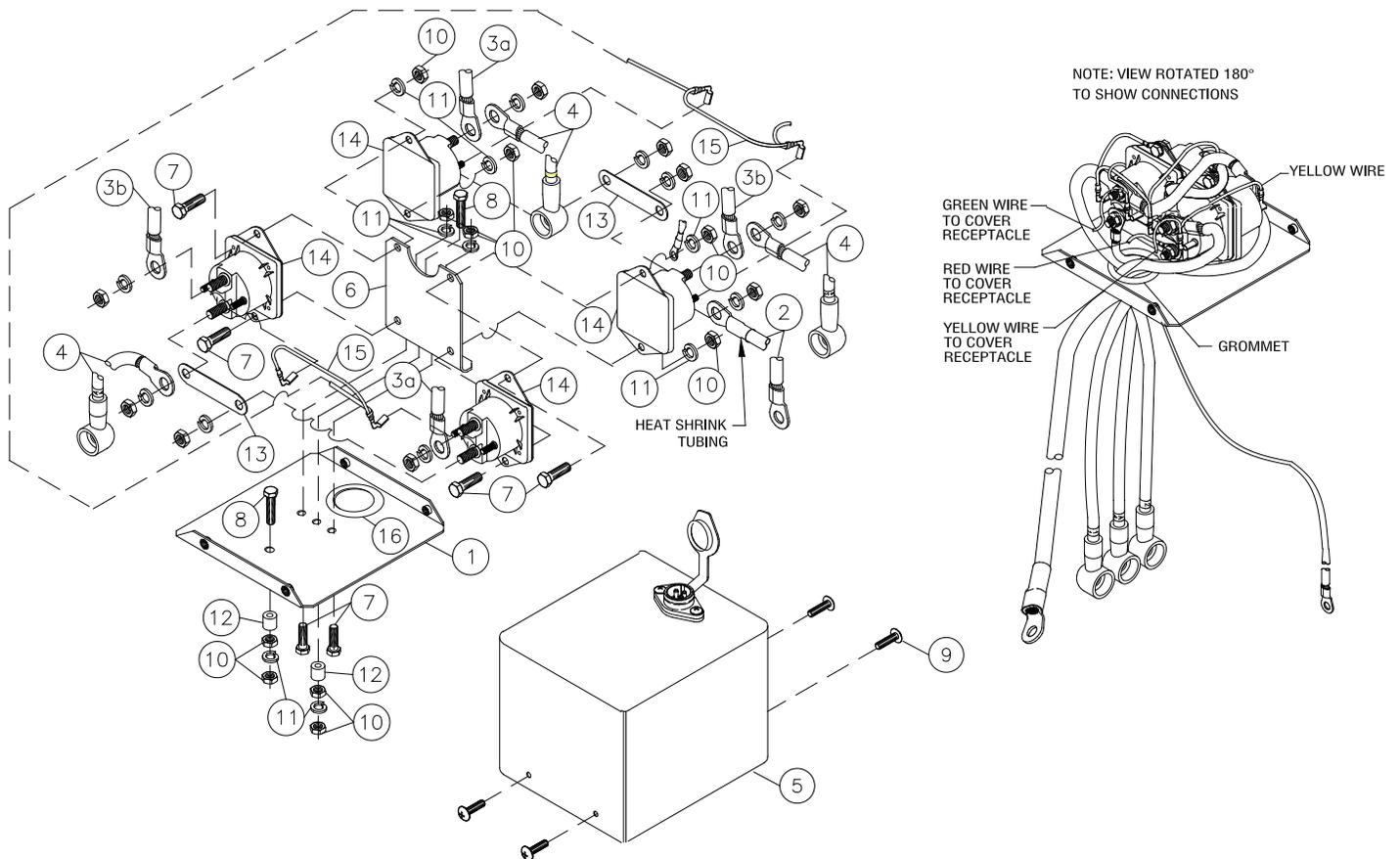
Condition	Possible Cause	Correction
MOTOR RUNS IN ONLY ONE DIRECTION	Defective or stuck solenoid	Jar each solenoid to free contacts. Check each solenoid by applying 12 volts to coil terminal (it should make an audible click when energized).
	Defective remote control switch	Disengage winch clutch, remove 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.
MOTOR RUNS EXTREMELY HOT	Long period of operation	Cooling off periods are essential to prevent overheating.
	Insufficient battery	Check battery terminal voltage under load. If 10 volts or less, replace or parallel another battery to it.
MOTOR RUNS, BUT WITH INSUFFICIENT POWER, OR WITH LOW LINE SPEED.	Bad connection	Check battery cable 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 or stuck solenoid	Jar each solenoid to free contacts. Check each 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.

Solenoid Assembly Parts List

278189 12V (Patriot Profile 9500 UT)

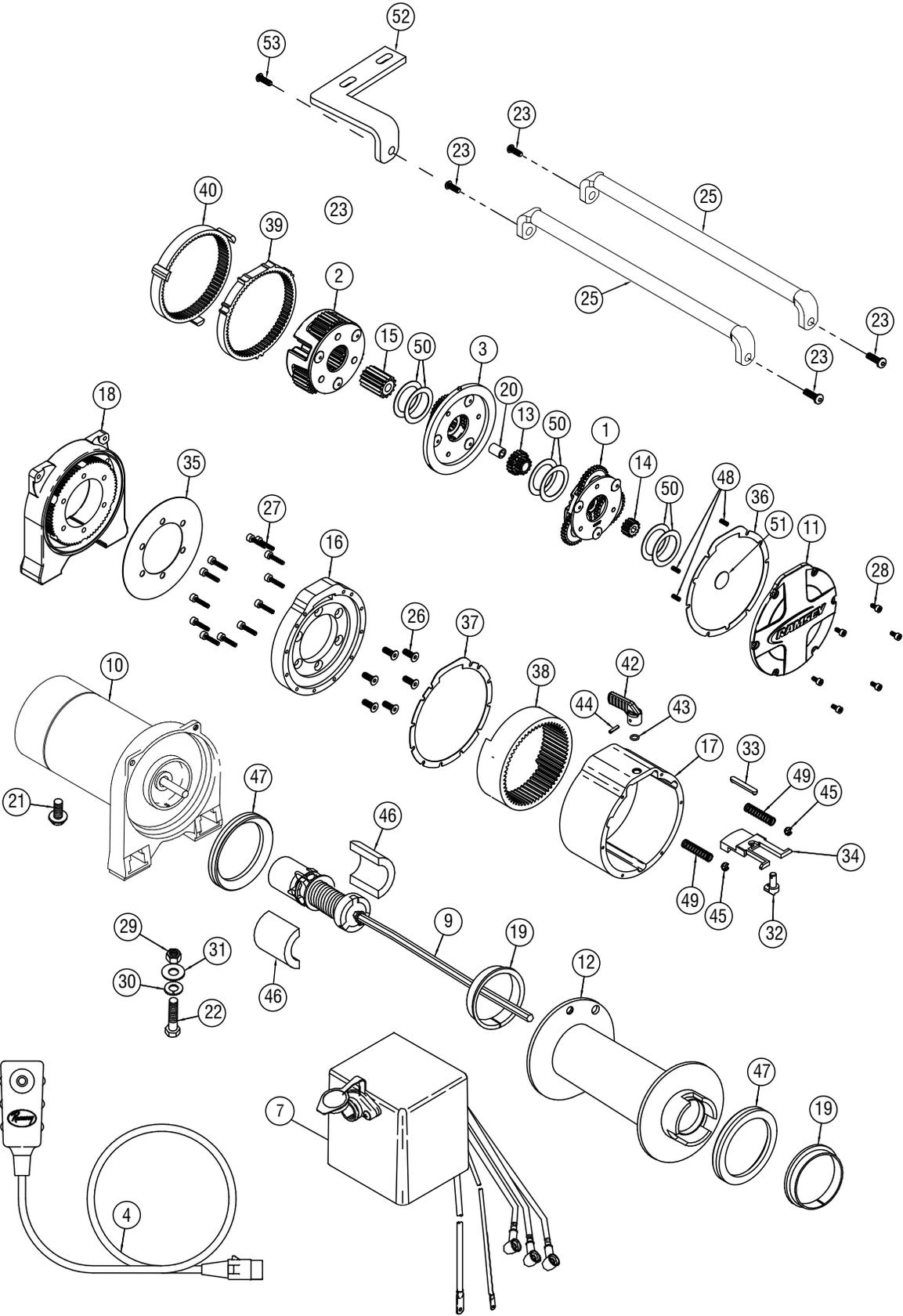
Item No.	Qty.	Part No.	Description
1	1	204281	ASSEMBLY – SOLENOID BRACKET
2	1	289015	ASSEMBLY – WIRE BATTERY CABLE 72" LG
3	2	289077	ASSEMBLY – WIRE #6 GA X 4.5" BLACK
4	3	289170	ASSEMBLY – WIRE #2 GA X 29" MTR LEAD
5	1	296594	COVER ASSEMBLY
6	1	408271	BRACKET – SOLENOID MOUNTING
7	6	414042	CAPSCREW 1/4-20NC X 5/8" HX HD
8	2	414062	CAPSCREW 1/4-20NC X 1-1/2" GR5 Z/P

Item No.	Qty.	Part No.	Description
9	4	416216	SCREW – #10-24NC X 1/2 LG
10	10	418014	NUT – HX 1/4-20NC REG Z/P
11	8	418149	LOCKWASHER – 1/4 MED SECT Z/P
12	2	418514	SPACER – SOLENOID BRACKET
13	2	440260	STRAP – COPPER
14	4	440262	SOLENOID – 12V
15	1	440281	ASSEMBLY – WIRE GROUND
16	1	472069	GROMMET



NOTES

EXPLODED VIEW



PARTS LIST

Item No.	Qty.	Part No.	Description
1	1	247009	GEAR CARRIER ASSEMBLY – INPUT
2	1	247023	GEAR CARRIER ASSEMBLY – OUTPUT
3	1	247037	GEAR CARRIER ASSY – INTERMEDIATE
4	1	251110	SWITCH ASSEMBLY
5	1	251266	ALUMINUM HAWSE FAIRLEAD
6	1	251262	ROPES ASSEMBLY
7	1	278189	SOLENOID ASSEMBLY – 12V
8	1	289141	CABLE ASSEMBLY - GROUND
9	1	296181	BRAKE/INPUT SHAFT ASSEMBLY
10	1	297040	MOTOR 12V
11	1	328163	COVER-GEAR HOUSING
12	1	332219	DRUM – CABLE
13	1	334147	GEAR – INTERMEDIATE SUN
14	1	334154	GEAR – INPUT SUN
15	1	334197	GEAR – OUTPUT SUN
16	1	338361	GEAR HOUSING – OUTPUT
17	1	338362	GEAR HOUSING – INPUT
18	1	338364	END BEARING – GEAR HOUSING
19	2	412056	BUSHING – DRUM
20	1	412061	BUSHING – SHAFT
21	1	414092	CAPSCREW 5/16-18UNC X 3/8 LG HX
22	6	414316	CAPSCREW 3/8-16NC X 1-1/4 HX HD
23	4	414823	BOLT-1/4-20NC X 3/4 LG BUTTON HD
24			NOT USED
25	2	448049	TIE BAR
26	6	414861	BOLT-1/4-20NC X 3/4 LG FLAT SOC HD
27	12	414960	BOLT-#8-32NC X 7/8 LG. SOC HD

PARTS LIST (Continued)

Item No.	Qty.	Part No.	Description
28	6	416208	BOLT-#8-32NC X 1/2 LG. SOCKET HD
29	6	418035	NUT 3/8-16NC HEX REG PLATED
30	6	418177	LOCKWASHER – 3/8 ID MED SECT
31	4	418181	WASHER-FLAT 3/8 ID SAE PLATED
32	1	426052	ACTUATOR
33	1	426053	LINK – CLUTCH
34	1	426056	PLUNGER – LOCKING
35	1	442227	GASKET – GEAR HSG/END BEARING
36	1	442228	GASKET – GEAR HSG/COVER
37	1	442229	GASKET – GEAR HSG/GEAR HSG
38	1	444110	GEAR – OUTPUT RING
39	1	444111	GEAR – INPUT RING
40	1	444112	GEAR – INTERMEDIATE RING
			NOT USED
42	1	452007	HANDLE – CLUTCH
43	1	462064	O-RING – 5/16 ID X 1/16 THICK
44	1	470050	ROLL PIN – 1/8 DIA X 5/8 LG
45	2	472080	SPRING GUIDE
46	2	477004	RING – HALF
47	2	486082	SEAL – DRUM
48	3	494077	SPRING – DRAG
49	2	494104	SPRING – CLUTCH
50	6	518020	THRUST WASHER
51	1	518027	THRUST DISC
52	1	408315	SOLENOID MOUNTING BRACKET
53	1	414829	BOLT 1/4-20NC X 1” BUTTON HD

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 problems with your winch, please follow instructions for proper service on all warranty claims.

Limited Lifetime Warranty

Ramsey Winch offers a limited lifetime warranty for each new Ramsey consumer/RV winch against manufacturing defects in workmanship and materials on all mechanical 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 purchase of the winch and installed on the vehicles with which they were originally registered.

New synthetic rope 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 material 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 1-year limited 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 manufacturer's factory, or at a point designated by 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 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 for only 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 improve any product through changes in design and 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 cost 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.



Ramsey Winch Company

P.O. Box 581510 - Tulsa, OK 74158-1510 USA - Phone:

(918) 438-2760 - Fax (918) 438-6688

Visit us at <http://www.ramsey.com>

