



Ramsey Winch Company  
 OWNER'S MANUAL Front  
 Mount Electric Winches  
 Model RE 8,000  
 Model RE 10,000  
 Model RE 12,000  
 Model RE 12,000X



RE8000



RE1000



RE12000

RE 8000						
LAYER OF CABLE		1	2	3	4	5
RATED LINE PULL PER LAYER (LBS) (KGS)		8,000 3,620	6,800 3,080	6,000 2,710	5,300 2,400	4,800 2,170
CABLE CAPACITY PER LAYER (FT)* (3/8" DIA. (M)*)		20 6	50 15	80 24	120 36	150 45
LINE PULL (LBS) (KGS)		0 0	2,000 900	4,000 1,810	6,000 2,710	8,000 3,620
12V-LINE SPEED (FPM) (MPM)		20 6.1	9.5 2.9	7 2.1	5.3 1.6	4.3 1.3
AMP DRAW 12V		90	170	235	305	370
24V-LINE SPEED (FPM) (MPM)		15 4.5	7.5 2.2	5.5 1.6	4 1.2	3 0.9
AMP DRAW 24V		36	75	105	140	170

RE 10,000						
LAYER OF CABLE		1	2	3	4	5
RATED LINE PULL PER LAYER (LBS) (KGS)		10,000 4,530	8,300 3,750	7,200 3,260	6,300 2,850	5,400 2,430
CABLE CAPACITY PER LAYER (FT)* (3/8" DIA. (M)*)		20 6	40 12	70 21	100 30	130 39
LINE PULL (LBS) (KGS)		0 0	2,000 900	4,000 1,810	6,000 2,710	8,000 3,620
12V-LINE SPEED (FPM) (MPM)		16 4.9	8.6 2.6	6.5 2.0	5.3 1.6	4.4 1.3
AMP DRAW 12V		80	150	200	250	290
24V-LINE SPEED (FPM) (MPM)		14 4.2	7 2.1	5 1.5	4 1.2	3.5 1
AMP DRAW 24V		30	50	85	110	135

RE 12,000/12,000X						
LAYER OF CABLE		1	2	3	4	5
RATED LINE PULL PER LAYER (LBS) (KGS)		12,000 5,430	10,000 4,530	8,600 3,890	7,500 3,390	6,600 2,980
CUMULATIVE CABLE (L)* CAPACITY PER LAYER (M)* (3/8" DIA. WIRE ROPE)		20 6	40 12	70 21	100 30	130 39
CUMULATIVE CABLE (L)* CAPACITY PER LAYER (M)* (3/8" DIA. WIRE ROPE)		25 7	60 18	95 28	125 38	160 47
LINE PULL (LBS) (KGS)		0 0	2,000 900	4,000 1,810	6,000 2,710	8,000 3,620
12V-LINE SPEED (FPM) (MPM)		16 4.9	8.6 2.6	6.5 2.0	5.3 1.6	4.4 1.3
AMP DRAW 12V		80	150	200	250	290
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AMP DRAW 24V		30	50	85	110	135

**CONGRATULATIONS**

You have purchased the finest winch available in its service class. It features a strong worm and gear drive to provide load-reversing protection. An exclusive semi-automatic RAM-LOK clutch disengages for free spooling and is spring loaded for positive engagement. 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 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.

**Please Note:** Ramsey RE 8000, RE 10,000 and RE 12,000 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.

## TABLE OF CONTENTS

Safety Precautions .....	1
Tips For Safe Operation .....	2
Techniques of Operation .....	3
Cable Installation .....	4
Operating Instructions .....	5
Electrical Connections and Operations .....	6
Lubrication/ .....	6
Troubleshooting Guide .....	7
Winch Exploded Views and Parts List	
RE 8,000 .....	8-9
RE 10,000 .....	10-11
RE 12,000/12,000X .....	12-13
Solenoid Parts LisVFairleads & Switch .....	14
Accessory Information .....	15

## 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 clamp 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 move the 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. Apply blocks to wheels when vehicle is on an incline.
- G. Winch clutch should be disengaged when winch is not in use and fully engaged when in use.
- H. Modification, alteration, or deviation to the winch should only be made by Ramsey Winch Company.
- I. 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 the 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.
- J. Disconnect the remote control switch from the winch when not in use. A Ramsey Part No. 282053 battery disconnect switch in your vehicle is recommended.
- K. Do Not use winch in hoisting applications due to required hoist safety factors and features.
- L. Do not exceed maximum line pull ratings shown in tables. Shock loads must not exceed these ratings.
- M. 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 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. On hidden winches, spool in cable under power using supplied hook strap.

## SAFE OPERATION TIPS



### Tips for Safe Operation

Do not 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 a 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 vehicle. After the job is done you can unspool and rewind for a neat lay of the cable.

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 cable. This causes cable damage. Always use a sling or chain of suitable strength as shown in the illustration, page 3.

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 cable is not piling up in one corner. Jamming cable 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. Remember, a minimum of 5 wraps of cable around the drum barrel is necessary to hold the rated load.

If this is not practical, use a snatch block and double line arrangement as shown in the illustration, page 3. Neat, tight spooling avoids cable binding. Cable binding occurs when a cable under load pulls down into the layer below, becoming pinched between two other wraps of cable. 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.

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# TECHNIQUES OF OPERATION

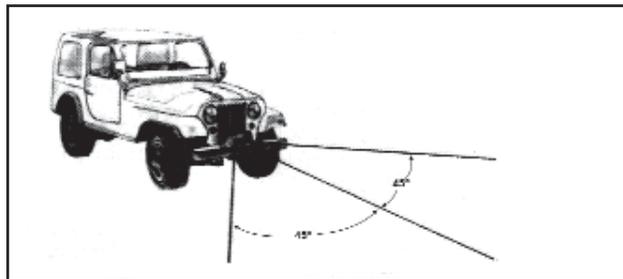
## Techniques of Operation

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.

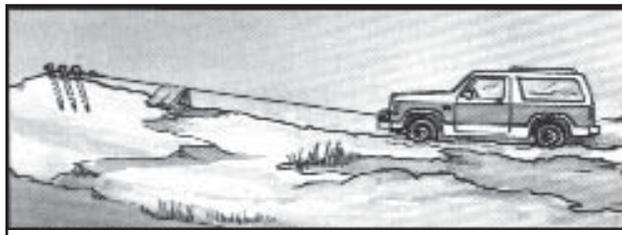
Your winch will not only pull you up or ease you down a steep grade, it will also pull another vehicle or a load while your vehicle is anchored in a stationary position. The following illustrations show a few basic winching techniques.



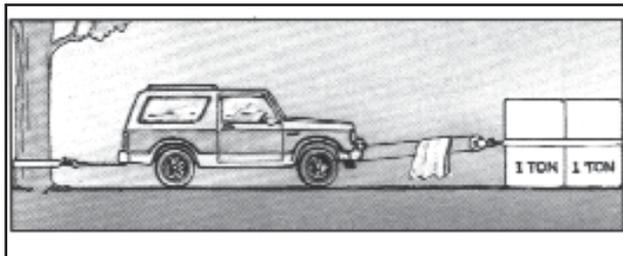
For basic self recovery, anchor to a tree or heavy rock. When anchoring to a tree, always use a tree trunk protector.



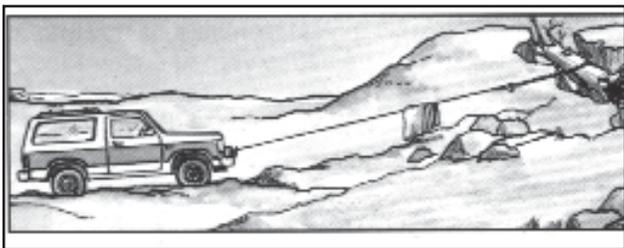
Winches equipped with cable guide fairleads can pull from several directions. Pull from an angle only to straighten out the vehicle—otherwise you can damage structural members or other parts of your vehicle and cause excess cable buildup on one end of the winch drum.



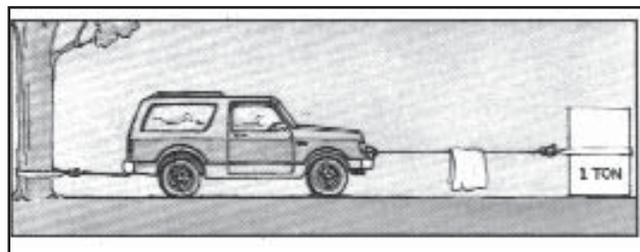
Stakes driven in solid earth and chained together make a good anchor point for self-recovery when no solid anchor point is available.



To double the pull, use 2-part line with snatch block and tie off to chassis. Take out of gear.



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



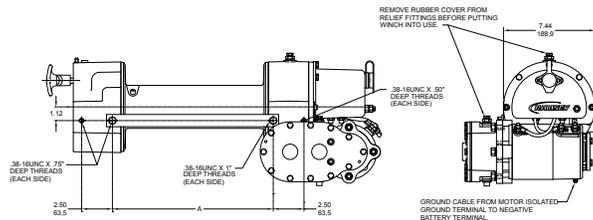
For a direct pull of 2,000 lbs., hitch truck to a tree or solid anchor, and take out of gear.

# WINCH INSTALLATION / ELECTRICAL CONNECTIONS

## Installation

Winches shown in this owner's manual are solely and exclusively designed for vehicle mounted, non-industrial applications. Use in other applications will void warranty. It is recommended that Ramsey Mounting Kits be used to mount the winch. They are designed to align the winch and distribute up to the full rated load correctly to avoid possible damage to the winch or vehicle.

**NOTE: If Ramsey Kits are not used, the winch must be mounted to angles (3/8" x 2 1/2" x 3" min) or in a frame with both sides of the clutch housing and gear housing bolted to the angles or frame. See diagram below for recommended mounting dimensions. Note various thread depths of mounting holes and use correspondingly different bolt lengths for proper mounting.**



DIMENSIONS SHOWN ARE INCHES OVER MILLIMETERS

Model	"A" Dimension	
	In. ± .15	MM ± .4
RE 8/10/12	10.12	257.2
RE 12,000X	13.12	333.3

Substitution of attaching hardware items (bolts, nuts, or washers) different from those supplied with your winch mounting kit can lead to failure causing damage or serious injury. Use a socket head mounting bolt on side with Spur Gear Housing (see diagram) to prevent clearance problems.

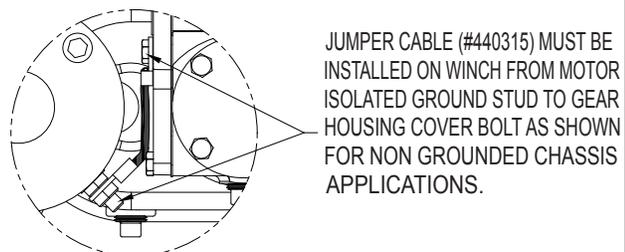
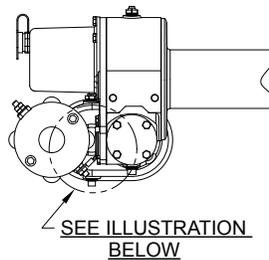
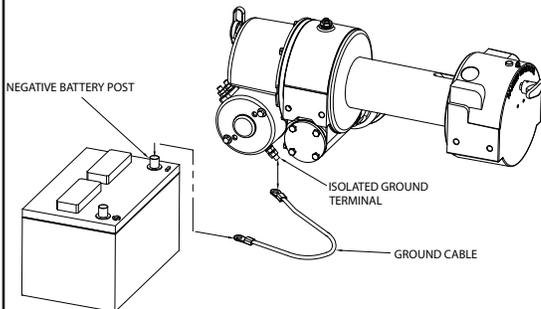
Use SAE grade 5 bolts or better.

## 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 operation to keep battery charged. Connect red cable from stud on plastic solenoid cover on winch to positive battery terminal. **Important: Hold inner nut with end wrench while tightening outer nut.**

Connect black cable from negative battery terminal to the motor isolated ground terminal. In applications where the chassis is non-grounded, a jumper wire (#440315) will be required between the winch and the motor isolated ground terminal. (See illustration below.)

WINCH WILL NOT OPERATE UNLESS GROUND CABLE IS INSTALLED FROM THE ISOLATED GROUND TERMINAL TO THE NEGATIVE BATTERY POST. (SEE DIAGRAM BELOW)



## CABLE INSTALLATION / OPERATING / MAINTENANCE

This ground is required to insure a sufficient ground to operate the solenoid assembly (see diagram below). A good electrical ground is required for proper performance. The remote control switch is water proof and has push button stations on either side. It is designed this way to prevent quick winch reversals which lead to solenoid failure. Make sure the winch motor has stopped fully before reversing.

When first setting up your winch, follow the directions for inserting the proper "IN" or "OUT" label in the thumb button. The switch is also color coded to aid you in not having to guess at the direction your winch will run.

### Cable Installation

1. Unwind cable by rolling it out along the ground to prevent kinking. Securely wrap end of cable, opposite hook, with plastic or similar tape to prevent fraying.
2. Insert the end of the cable, opposite hook end, under drum and into the 7/16" dia. hole in drum barrel. Secure cable to drum barrel, using setscrew furnished with winch. Tighten setscrew securely.
3. Carefully run winch in the "reel-in" direction. Keeping tension on end of cable, spool all the cable onto drum, taking care to form neatly wrapped layers.

Inspect the cable frequently. If the cable becomes frayed with broken strands, replace immediately. Cable and hook assemblies may be purchased from a Ramsey distributor.

The RAM-LOK™ semi-automatic clutch provides free spooling and clutch engagement with the cable drum. With the clutch disengaged, the cable can be pulled off the drum by hand. For winching in the load, the clutch must be fully engaged with the drum.

To disengage the clutch, run the winch in the reverse ("reel out") direction until the load is off the cable and the cable drum stops turning. Pull outward on the clutch handle, rotate it counterclockwise 90° and release. The clutch is now locked out and the cable may be pulled by hand. (NOTE: if the clutch handle can not be pulled out, again run the winch momentarily in reverse to relieve pressure on the clutch jaws.)

**WARNING: DO NOT ATTEMPT TO DISENGAGE THE CABLE DRUM WHEN THERE IS A LOAD ON THE CABLE.**

### Operating Instructions

To engage the clutch, pull outward on the handle, rotate it clockwise 90° and release. Run the winch in reverse until the clutch handle snaps fully in or until the cable drum starts turning. At this point make sure the clutch handle is all the way in. The plastic plug in top of clutch housing may be removed, for inspection of clutch to assure total engagement. After the clutch is fully engaged, the winch is ready for winching in the cable.

### Maintenance

Check monthly the action of the sliding clutch, making sure it is fully engaging and disengaging with the cable drum. With the clutch in the engaged position, remove the plastic plug in top of the housing and observe if the clutch is fully engaging. If clutch is not fully engaging, inspect the clutch shifter assembly parts, check for damage or excessive wear and replace as necessary.

Observe the jaws on both the clutch and cable drum, checking for rounding of the driving faces. If rounding has occurred they should be replaced immediately.

## **MAINTENANCE** (continued)

Spool the cable properly on the drum when storing between each usage. Check the oil level in the gear boxes every six months. At the same time, check electrical connections and mounting bolts - tighten if necessary.

Corrosion on electrical connections will reduce performance or may cause a short.

Clean all connections, especially in remote switch receptacle. In salty environments use a silicone sealer to protect from corrosion.

Be sure the winch has plenty of battery power available.

Use 1/2 pint of SAE 20 for spur gear box. Apply cup grease to lube fitting at top of clutch housing. Should winch be submerged for a brief period, drain oil, flush and replace oil in gear boxes, and grease all fittings (see Troubleshooting Guide on page 7).

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 dissipate any moisture buildup in the motor. This should be performed at periodic intervals (such as with each oil change to your vehicle).

Lubricate cable periodically using light penetrating oil.

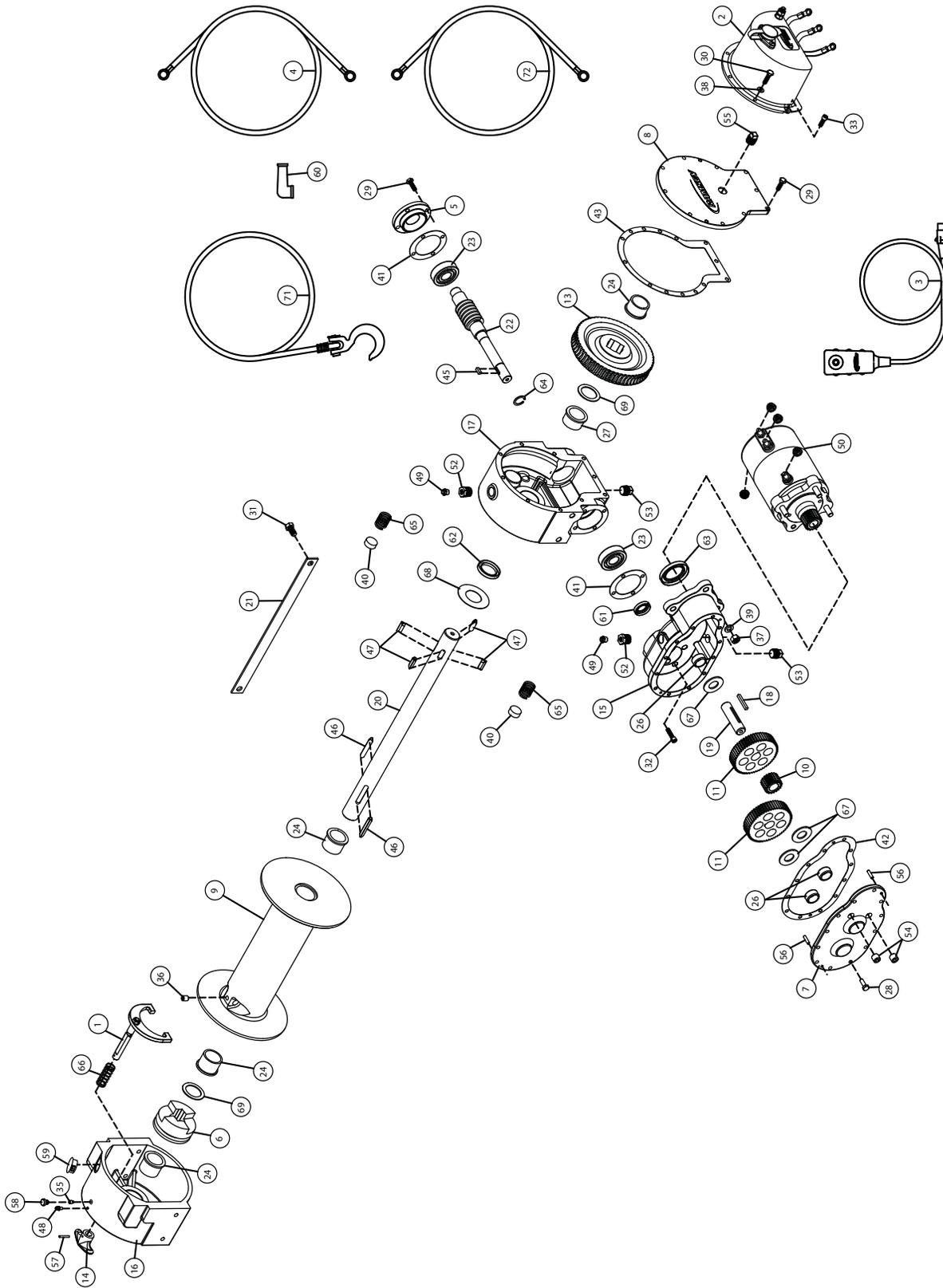
Inspect for broken strands and replace if necessary with Ramsey part number listed in Parts List.

Install new cable per "Cable Installation" page 5.

# Ramsey Electric Winches Troubleshooting Guide

CONDITION	POSSIBLE CAUSE	CORRECTION
MOTOR RUNS IN ONE DIRECTION ONLY	(1) Inoperative solenoid or stuck solenoid (2) Inoperative remote control switch	(1) Jar solenoid to free contacts. Check by applying 12 volts to coil terminal (it should make an audible click when energized). (2) 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  MOTOR RUNS, BUT WITH INSUFFICIENT POWER, OR WITH LOW LINE SPEED	(1) Long period of operation (2) Insufficient battery  (3) Electrical cable from battery to winch or ground strap from engine block to vehicle chassis too small. (4) Bad electrical connections (5) Insufficient charging system	(1) Cooling-off periods are essential to prevent overheating. (2) Check battery terminal voltage under load. If 10 volts or less, replace or parallel another battery to it. (3) Must be No.2 equivalent (or larger if longer than 15ft.).  (4) Check all connections for looseness or corrosion; tighten, clean and grease. (5) Replace with larger capacity charging system.
MOTOR RUNS, BUT DRUM DOES NOT TURN	(1) Clutch not engaged (2) Sheared drum shaft key (3) Stripped bronze gear (4) Parted shaft	(1-4) If clutch engaged but symptom still exists, it will be necessary to disassemble winch to determine cause and repair.
MOTOR WILL NOT OPERATE	(1) Inoperative solenoid or stuck solenoid (2) Inoperative remote control switch  (3) Inoperative motor (4) Loose connections	(1) Jar solenoid to free contacts. Check by applying 12 volts to coil terminal (it should make an audible click when energized). (2) 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. (3) If solenoids operate, check for voltage at armature post; replace motor. (4) Tighten connections on bottom side of hood and on motor.
MOTOR WATER DAMAGED	(1) Submerged in water or water from high pressure car wash	(1) Allow to drain and dry thoroughly, then run motor without load in short bursts to dry windings
CLUTCH INOPERATIVE OR BINDS UP	(1) Dry or rusted shaft (2) Dog point setscrew too tight  (3) Bent yoke (4) Keys pulled out of shape by overload	(1) Clean and lubricate (2) Remove rubber plug from clutch housing and rotate setscrew outward until clutch operates smoothly. Replace rubber plug. (3) Replace yoke or shifter assembly (4) If drum shaft keyways are rounded or damaged replace shaft and keys. If not, file off burrs and replace keys.
CLUTCH SPRING DOES NOT OPERATE	(1) Broken spring	(1) Replace
CLUTCH DOES NOT LOCK AT DISENGAGED POSITION	(1) Setscrew loose or worn	(1) Remove rubber plug from clutch housing, tighten setscrew or replace. Replace plug.
OIL LEAKS FROM HOUSING	(1) New seal (2) Seal damaged or worn (3) Too much oil (4) Damaged gasket	(1) New seals sometimes leak until seated to shaft. (2) Replace. (3) Drain excess oil per lubrication instructions. (4) Replace.

# RE 8000 EXPLODED VIEW

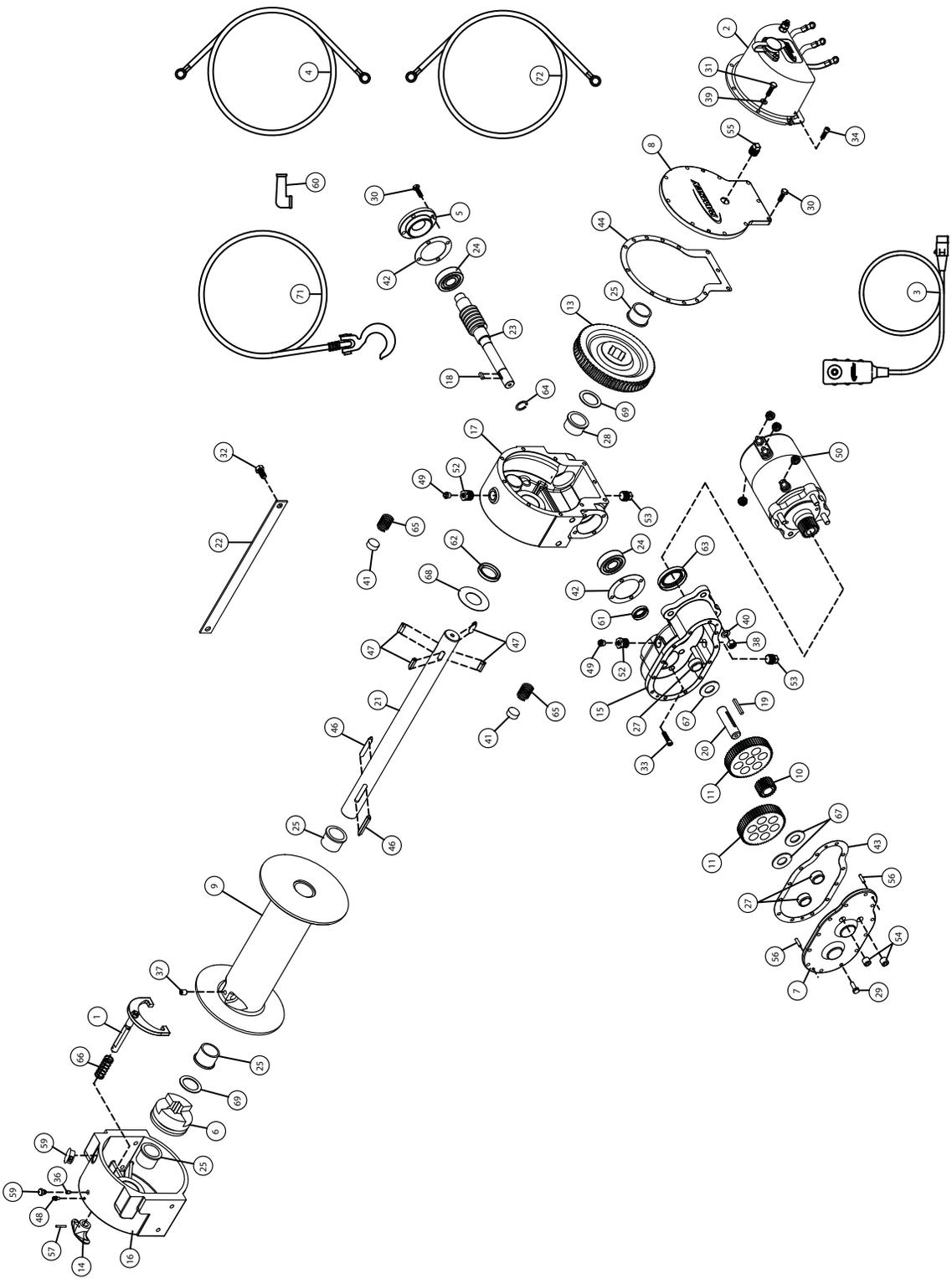


# RE 8000 PARTS LIST

Item No.	Qty. Req'd	Part No.	Description
37	3	418040	Nut-3/8-24NF Hex Reg Zinc Plated
38	3	418154	Washer-1/4 Flat Alum.
39	3	418177	Lockwasher-3/8 Med Sect, Zinc Plated
40	2	330010	Drag Brake
41	2	442184	Gasket
42	1	442185	Gasket
43	1	442205	Gasket
44			
45	1	450005	Key
46	2	450006	Key (Barth)
47	4	450016	Key (Barth)
48	1	456001	Lube Fitting
49	2	456008	Relief Fitting
50	1	262035	Motor-12V
		262036	Motor-24V
51			
52	2	468002	Reducer
53	2	468011	Pipe Plug Sq. Hd.
54	2	468017	Pipe Plug Soc. Hd.
55	1	468018	Pipe Plug Soc. Hd.
56	2	470001	Pin
57	1	470033	Spiral Pin
58	1	472012	Plug
59	1	472013	Plug
60	1	482013	Rubber Boot
61	1	486009	Oil Seal
62	1	486017	Oil Seal
63	1	486023	Oil Seal
64	1	490003	Snap Ring
65	2	494002	Spring
66	1	494053	Spring
67	3	518002	Thrust Washer
68	1	518014	Thrust Washer
69	2	518015	Thrust Washer
70			
71	1	251122	Cable & Hook-150' x 5/16" dia.
72	1	289141	Ground Wire-Black

Item No.	Qty. Req'd	Part No.	Description
1	1	276056	Shifter Assembly
2	1	278170	Solenoid Assembly
3	1	282001	Switch Assembly
4	1	289015	Battery Cable-Red
5	1	316083	Bearing Cap
6	1	324137	Jaw Clutch
7	1	328106	Cover-Spur Gear Hsg.
8	1	328134	Cover-Worm Gear Hsg.
9	1	332136	Cable Drum
10	1	334001	Idler Gear
11	2	334003	Spur Gear
12			
13	1	334163	Gear R.H.-46:1
14	1	336010	Handle
15	1	338203	Spur Gear Housing
16	1	338208	Clutch Housing
17	1	338273	Gear Housing
18	1	342033	Key
19	1	356901	Shaft-Spur
20	1	357484	Shaft-Drum
21	1	364029	Strap
22	1	368162	Worm-R.H.-46:1
23	2	402002	Bearing-Ball
24	4	412003	Bushing
25			
26	3	412038	Bushing
27	1	412045	Bushing
28	12	414038	Capscrew 1/4-20NCx3/4Lg. Hx.Gr.5
29	9	414045	Capscrew-1/4-20NCx7/8 Lg. HxHd. Gr. 5, Z/P
30	3	414059	Capscrew-1/4-20NCx1 Lg.Gr.5 HxHd.Z/P
31	2	414279	Capscrew-3/8-16NCx3/4 Lg. HxHd.Gr.5
32	4	414845	Capscrew-1/4-20NCx1 Lg. HxSocHd, Nylok
33	2	414856	Capscrew-1/4-20NCx3/4 Lg. HxSocHd. Z/P
34			
35	1	416030	Setscrew-1/4-20NCx3/8 Lg. HxSoc.(Full Dog Pt.), NYL,Z/P
36	1	416059	Setscrew3/8-16NCx1/2 HxSockHd Cup

# RE 10000 EXPLODED VIEW

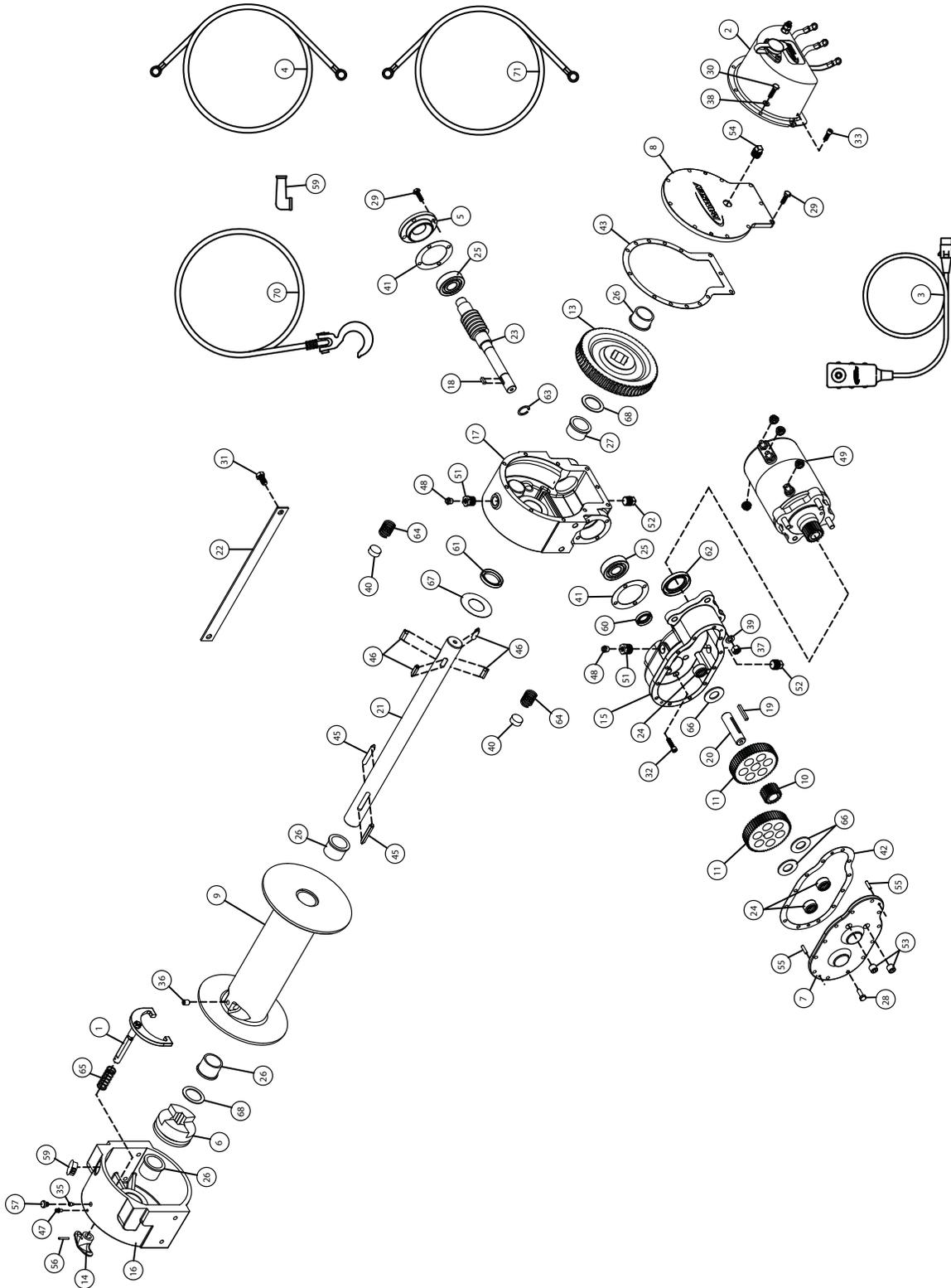


# RE 1000 PARTS LIST

Item No.	Qty. Req'd	Part No.	Description
37	1	416059	Setscrew3/8-16NCx1/2 Hx SockHd Cup
38	3	418040	Nut-3/8-24NF Hex Reg Zinc Plated
39	3	418154	Washer-1/4 Flat Alum.
40	3	418177	Lockwasher-3/8 Med Sect,Zinc Plated
41	2	330010	Drag Brake
42	2	442184	Gasket
43	1	442185	Gasket
44	1	442205	Gasket
45			
46	2	450006	Key (Barth)
47	4	450016	Key (Barth)
48	1	456001	Lube Fitting
49	2	456008	Relief Fitting
50	1	262035	Motor-12V
	1	262036	Motor-24V
51			
52	2	468002	Reducer
53	2	468011	Pipe Plug Sq.Hd.
54	2	468017	Pipe Plug Soc.Hd.
55	1	468018	Pipe Plug Soc.Hd.
56	2	470001	Pin
57	1	470002	Spiral Pin
58	1	472012	Plug
59	1	472013	Plug
60	1	482013	Rubber Boot
61	1	486009	Oil Seal
62	1	486017	Oil Seal
63	1	486023	Oil Seal
64	1	490003	Snap Ring
65	2	494002	Spring
66	1	494053	Spring
67	3	518002	Thrust Washer
68	1	518014	Thrust Washer
69	2	518015	Thrust Washer
70			
71	1	251123	Cable & Hook-100' x 3/8" dia.
72	1	289141	Ground Wire-Black

Item No.	Qty. Req'd	Part No.	Description
1	1	276056	Shifter Assembly
2	1	278170	Solenoid Assembly
3	1	282001	Switch Assembly
4	1	289015	Battery Cable- Red
5	1	316083	Bearing Cap
6	1	324137	Jaw Clutch
7	1	328106	Cover-Spur Gear Hsg.
8	1	328134	Cover-Worm Gear Hsg.
9	1	332136	Cable Drum
10	1	334001	Idler Gear
11	2	334003	Spur Gear
12			
13	1	334161	Gear R.H.-60:1
14	1	336010	Handle
15	1	338203	Spur Gear Housing
16	1	338208	Clutch Housing
17	1	338273	Gear Housing
18	1	342023	Key
19	1	342033	Key
20	1	356901	Shaft-Spur
21	1	357484	Shaft-Drum
22	1	364029	Strap
23	1	368001	Worm-R.H.-60:1
24	2	402002	Bearing-Ball
25	4	412003	Bushing
26			
27	3	412038	Bushing
28	1	412045	Bushing
29	12	414038	Capscrew 1/4-20NCx3/4Lg. Hx.Gr.5
30	9	414045	Capscrew-1/4-20NCx7/8 Lg. HxHd. Gr. 5, Z/P
31	3	414059	Capscrew-1/4-20NCx1 Lg.Gr.5 HxHd.Z/P
32	2	414279	Capscrew-3/8-16NCx3/4 Lg. HxHd.Gr.5
33	4	414845	Capscrew-1/4-20NCx1 Lg. HxSocHd,Nylok
34	2	414856	Capscrew-1/4-20NCx3/4 Lg. HxSocHd.Z/P
35			
36	1	416030	Setscrew-1/4-20NCx3/8 Lg. HxSoc.(Full Dog Pt.),NYL,Z/P

# RE 120000 EXPLODED VIEW



# RE 120000 PARTS LIST

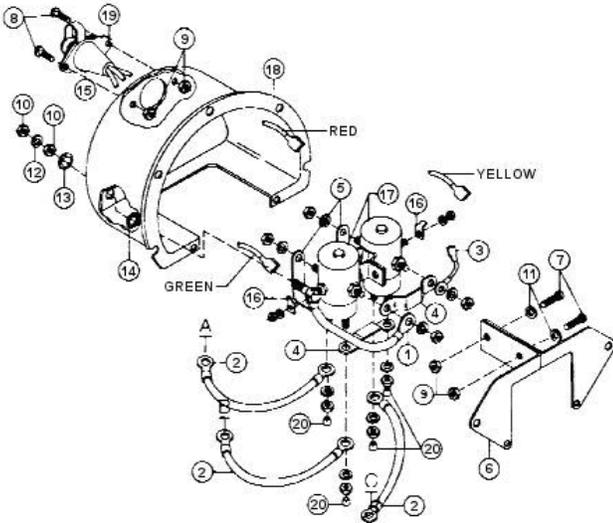
Item No.	Qty. Req'd	Part No.	Description
36	1	416059	Setscrew 3/8-16NCx1/2 HxSocket Cup
37	3	418040	Nut-3/8-24NF Hex Reg Zinc Plated
38	3	418154	Washer-1/4 Flat Alum.
39	3	418177	Lockwasher-3/8 Med Sect,Zinc Plated
40	2	330010	Drag Brake
41	2	442184	Gasket
42	1	442185	Gasket
43	1	442205	Gasket
44			
45	2	450006	Key (Barth)
46	4	450016	Key (Barth)
47	1	456001	Lube Fitting
48	2	456008	Relief Fitting
49	1	262035	Motor-12V
		262036	Motor-24V
50			
51	2	468002	Reducer
52	2	468011	Pipe Plug Sq.Hd.
53	2	468017	Pipe Plug Soc.Hd.
54	1	468018	Pipe Plug Soc.Hd.
55	2	470001	Pin
56	1	470033	Spiral Pin
57	1	472012	Plug
58	1	472013	Plug
59	1	482013	Rubber Boot
60	1	486009	Oil Seal
61	1	486017	Oil Seal
62	1	486023	Oil Seal
63	1	490003	Snap Ring
64	2	494002	Spring
65	1	494053	Spring
66	3	518002	Thrust Washer
67	1	518014	Thrust Washer
68	2	518015	Thrust Washer
69			
70	1	251123	Cable & Hook-100' x 3/8" dia.
	1	251124	Cable & Hook (RE 12,000X)-125' x 3/8" dia.
71	1	289141	Ground Wire-Black

Item No.	Qty. Req'd	Part No.	Description
1	1	276056	Shifter Assembly
2	1	278170	Solenoid Assembly
3	1	282001	Switch Assembly
4	1	289015	Battery Cable-Red
5	1	316083	Bearing Cap
6	1	324137	Jaw Clutch
7	1	328106	Cover-Spur Gear Hsg.
8	1	328134	Cover-Worm Gear Hsg.
9	1	332136	Cable Drum
10	1	332105	Cable Drum (RE 12,000X)
11	1	334001	Idler Gear
11	2	334003	Spur Gear
12			
13	1	334161	Gear R.H.-60:1
14	1	336010	Handle
15	1	338203	Spur Gear Housing
16	1	338208	Clutch Housing
17	1	338273	Gear Housing
18	1	342023	Key
19	1	342033	Key
20	1	356901	Shaft-Spur
21	1	357480	Shaft-Drum
21	1	357479	Shaft-Drum (RE 12,000X)
22	1	364029	Strap
	1	364017	Strap (RE 12,000X)
23	1	368001	Worm-R.H.-60:1
24	3	402001	Bearing-Needle
25	2	402002	Bearing-Ball
26	4	412003	Bushing
27	1	412045	Bushing
28	12	414038	Capscrew 1/4-20NCx3/4Lg. Hx.Gr.5
29	9	414045	Capscrew-1/4-20NCx7/8 Lg. HxHd. Gr. 5, Z/P
30	3	414059	Capscrew-1/4-20NCx1 Lg.Gr.5 HxHd.Z/P
31	2	414279	Capscrew-3/8-16NCx3/4 Lg. HxHd.Gr.5
32	4	414845	Capscrew-1/4-20NCx1 Lg. HxSochd,Nylok
33	2	414856	Capscrew-1/4-20NCx3/4 Lg. HxSochd. Z/P
34	1	416029	
35	1	416030	Setscrew-1/4-20NCx3/8 Lg. HxSoc.(Full Dog Pt.),NYL,Z/P

# SOLENOID ASSEMBLY AND PARTS LIST

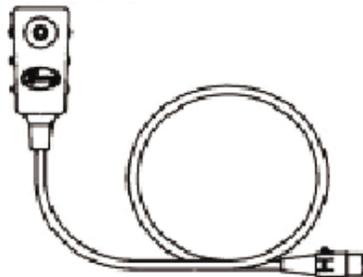
## Solenoid Assembly Parts

278027 - 12V  
278028 - 24V



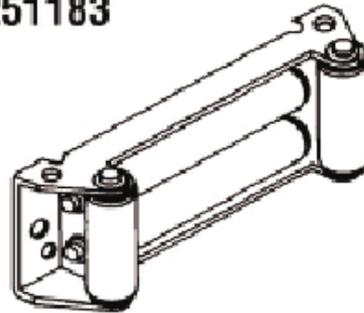
Item No.	Qty. Req'd	Part No.	Description
1	1	280009	Cable-Bolt Ass'y.-24V
	1	280013	Cable-Bolt Ass'y.-12V
2	3	289077	Wire Ass'y.-24V
	3	289169	Wire Ass'y.-12V
3	1	289091	Wire Ass'y.
4	2	364001	Strap
5	2	364002	Strap
6	1	408035	Solenoid Bracket
7	2	416216	Screw
8	2	416227	Screw
9	4	418004	Nut
10	2	418022	Nut 5/16-18NC Hx. Reg.
11	2	418140	Flat Washer #10
12	1	418163	Lockwasher 5/16 Med. Sect.
13	1	418164	Lockwasher 5/16 Internal
14	1	418165	Lockwasher 5/16 External
15	1	430013	Female Connector
16	2	440071	Terminal-Tab
17	2	440110	Solenoid-12V
	2	440114	Solenoid-24V
18	1	472071	Cover
19	1	482029	Cover-Connector
20	4	530106	Cover-Terminal

### Remote Control Switch #251110



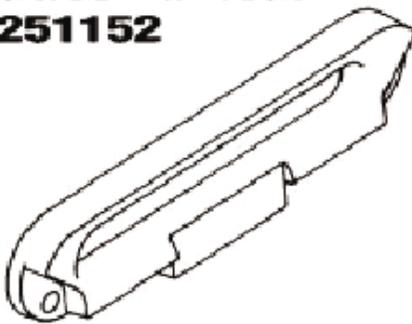
Included with: RE 8000 /RE 10,000 /RE 12,000

### Roller Fairlead #251183



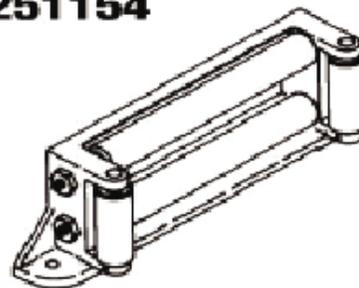
Mounting hardware included with mounting kits

### Hawse Fairlead #251152



Mounting hardware included with mounting kits

### Roller Fairlead #251154



for RE 12,000 XR only

Mounting hardware included with mounting kits

# SOLENOID TEST PROCEDURE

Steps to follow when testing current flow through DC solenoids. It should be noted that when testing a 12 volt or 24 volt solenoid, the DC motor and battery must be of the same voltage.

To test the solenoids: (See Figure 1).

1. Securely clamp a motor to a bench or work surface.
2. Attach a jumper wire from (A) terminal on the motor to one of the field terminals on the motor, (F-2).
3. Attach the other motor field terminal (F-1) to one of the side terminals of the solenoid.
4. Ground the solenoid to the motor with a wire as shown.
5. Attach positive (+) battery wire to the opposite side terminal of the solenoid. Ground the negative(-) battery wire to the motor isolated ground terminal.
6. Touch "hot" wire, from the positive battery terminal, to small terminal of the solenoid.
7. The motor should now be running if the solenoid is good. If not, make sure the motor will run directly from the battery.
8. To test the upper contacts use the same hookup except use the top terminals. (See Figure 2).

When the "hot" wire is touched to the small terminal the motor will stop operating. The top terminals are normally closed; ie: connected, and the side terminals open, or not connected. When the solenoid operates, the top terminals are disconnected and the side terminals are connected. Take care not to bring hot wires into contact with ground in order to prevent electrical arcing.

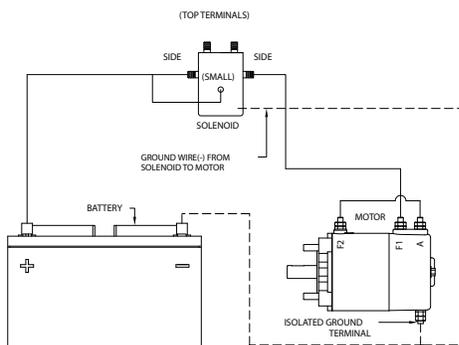
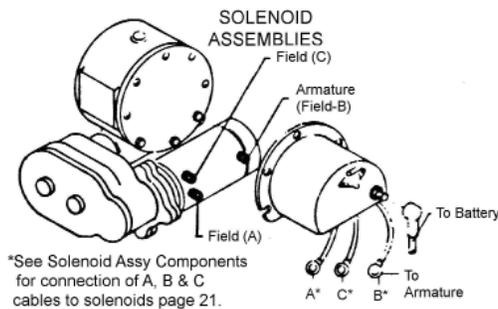


FIGURE-1

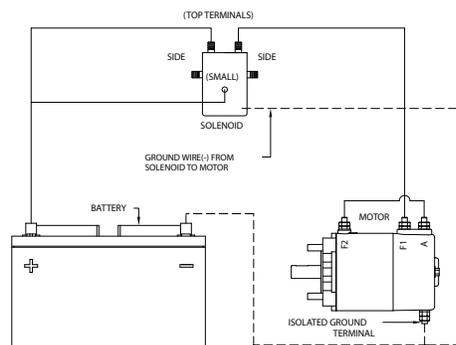


FIGURE-2

# TEST PROCEDURE for MOTOR

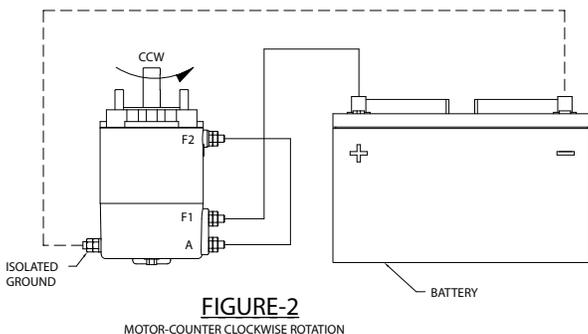
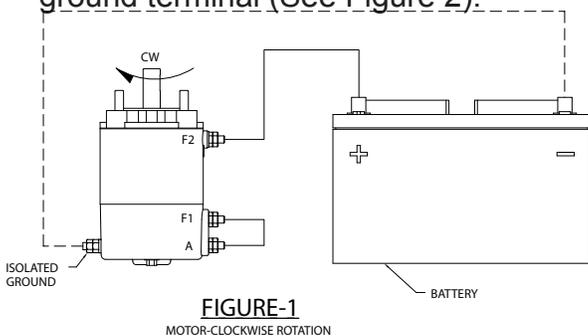
The Ramsey Winch motor is a 4 pole, 4 coil series wound 12 volt or 24 volt DC motor. The 4 pole, 4 coil feature provides high torque at low speeds.

To test the motor to determine if it is functioning properly, first securely fasten the motor to a bench or work surface so it will not jump or move around during test procedure (the starting torque of motor is high).

1. Connect a jumper wire (at least a number 6 wire) from F-1 to A motor terminals (See Figure 1).
2. Attach a wire (at least a number 6 wire) from positive(+) battery terminal to F-2 motor terminal. Ground negative(-) battery terminal to motor isolated ground terminal (See Figure 1).  
Motor should now run.

To reverse the direction of rotation:

1. Attach jumper wire from F-2 to (A) motor terminals (See Figure 2).
2. Attach wire from positive(+) battery terminal to F-1 motor terminal. Ground negative(-) battery terminal to motor isolated ground terminal (See Figure 2).



**NOTE:** Always attach battery wire solidly to motor terminals. Make and break the connection of the negative (-) battery terminal at the motor isolated ground terminal. This avoids burning the motor terminals. **CAUTION:** Do not run the motor for a long period of time in fashioned above, because the motor could become damaged. The motor running idle on the bench will draw 55 amperes and must run free and easy. If the ampere draw is more than 60 amps and the motor runs rough or has a strange sound, it should be replaced.

With the motor attached in place on a winch (less cable on drum) the ampere draw should be approximately 65 to 70 amps. If after following the procedure outlined, the test on the winch significantly exceeds 70 amperes refer to your Owners Manual for troubleshooting suggestions on the mechanical portion of the winch.

See Figure 3 for the solenoids connection to the motor and battery.

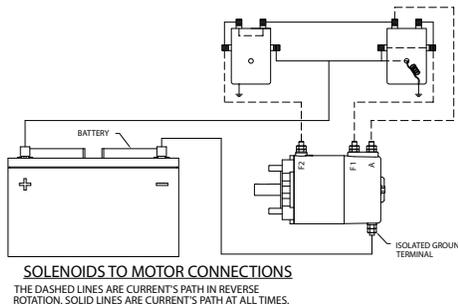
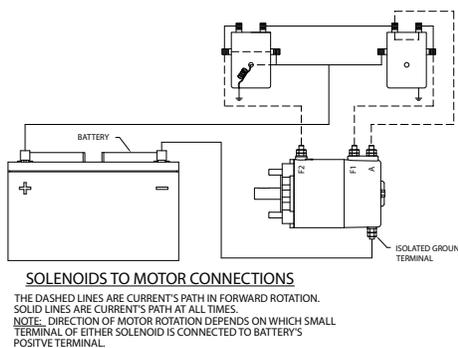


FIGURE-3