



When ordering parts, please provide:

1. Complete nameplate readings. Serial number is the most accurate method of identifying replacement parts.
2. Name and quantity of parts required.
3. Complete motor nameplate readings (for motor parts)

Email or Fax orders to:

David Round and Son, Inc.
Attn: Parts Department
32405 Aurora Rd.
Solon, Ohio 44139

Email: info@davidround.com
Fax: 440-248-8544
Tele: 440-248-4700



DAVID ROUND
ROCKET 51 WINCH

Model: R5/R10
Electrically Powered Winch

NOTE: This manual covers both the R5 and R10 series winches. Verify the model number before use.



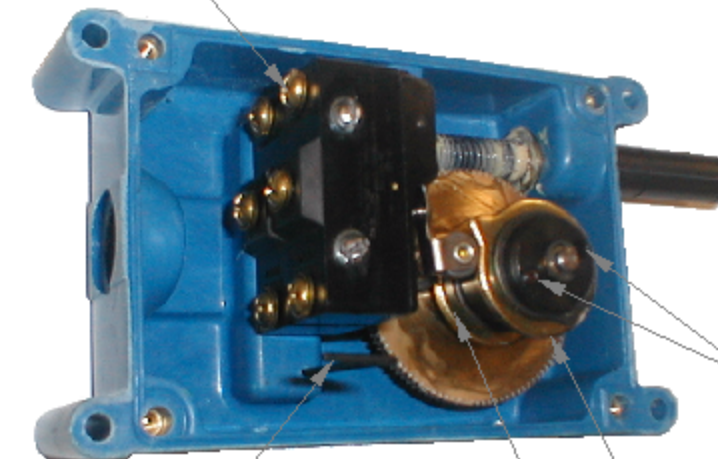
All products sold by David Round and Son, Inc. are warranted to be free from defects in material and workmanship, under normal use and service, for a period of 1 year from date of shipment by David Round.

The product must be used in accordance with manufacturer's recommendations and must not have been subject to abuse, lack of maintenance, misuse, negligence, or unauthorized repairs or alterations.

Should any defect in material or workmanship occur during the above time period in any product, as determined by David Round's inspection of the product, David Round agrees, at its discretion, to remedy the defect by either replacing (not including installation) or repairing the part. No unauthorized returns will be accepted at David Round. Customer must obtain a Return Goods Authorization (RGA) as directed by David Round prior to shipping product for warranty evaluation. A written explanation of the complaint must accompany the product. Product must be returned freight prepaid. Upon repair, the product will be covered for the remainder of the original warranty period. If it is determined that there is no defect, or that the defect resulted from causes not within the scope of David Round's warranty, the customer will be responsible for the costs of inspection and return of the product. This warranty covers only repairs made necessary due to defects in material or workmanship.

David Round and Son, Inc. makes no other warranty, and any implied warranties of merchantability or fitness for a particular purpose are limited to the duration of the expressed warranty period as set forth above. DAVID ROUND AND SON, INC.'S MAXIMUM LIABILITY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT AND IN NO EVENT SHALL DAVID ROUND AND SON, INC. BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, OR SPECIAL DAMAGES OR INJURIES OF ANY NATURE ARISING FROM THE SALE OR USE OF THE PRODUCT, WHETHER BASED ON CONTRACT, TORT, OR OTHERWISE INCLUDING LOSS OF PROFITS OR REVENUE, RENTAL OF SUBSTITUTE EQUIPMENT OR OTHER COMMERCIAL LOSS.

LIMIT SWITCHES



ADJUSTMENT WRENCH

INNER CAM

OUTER CAM

ALLEN SCREWS

Note: Rotary limit switches are installed as a factory option. Standard units are not equipped with this device.

CAUTION: A *minimum* of 3 wraps of wire rope is required on drum at all times. Do not adjust limit switch to allow drum to rotate beyond this point.

Use the following adjustment procedure after wire rope has been reeved onto drum.

1. Manually actuate both limit switches to verify correct connections.
2. Identify which of the two switches interrupts the circuit requiring adjustment.
3. Using supplied adjustment wrench loosen the appropriate Allen screw to adjust the actuating cam. The exposed Allen screw allows movement of the outer cam. The inner cam can be adjusted by loosening the recessed Allen screw.
4. Turn appropriate cam to the desired position and tighten corresponding Allen screw.
5. Test unit for proper operation prior to operating the unit under load.



The Free-Wheeling option is not provided on standard units.



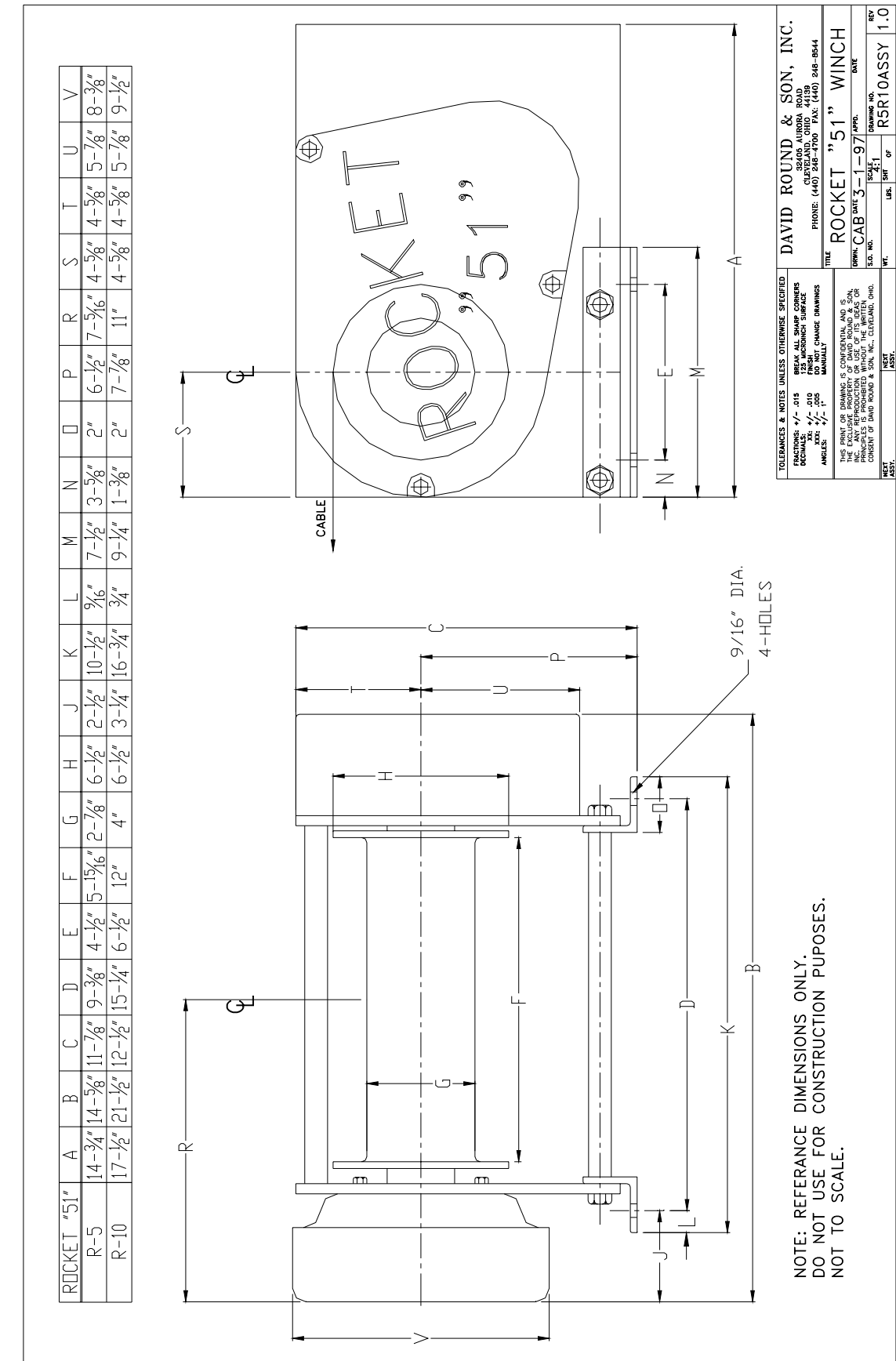
<u>Section</u>	<u>Page</u>
Safety Precautions	3
Specifications	4
Mounting and Installation	5
Wire Rope Installation	6
Parts Breakdown	7-8
Motor Brake Option	9
Inspection	10
Routine Maintenance	11
Dimensional Drawing	12
Free Wheeling Option	13
Rotary Limit Switch Option	14
Ordering Parts	15

Many companies already have safety programs in place. In the event that a conflict exists between a safety guideline in this manual and an existing guideline set forth in an existing safety program, the more stringent of the two guidelines should be followed.

Safe operating instructions are provided as a reference for winch operators in order to avoid some common unsafe winch operating practices. These instructions are only a summary. Safe winch operating practice is not limited to the guidelines introduced in this manual.

1. Only allow personnel trained in safety and operation on this winch to operate and maintain this winch.
2. Only operate this winch if you are physically fit to do so.
3. When this winch has been locked / tagged-out or a "Do Not Operate" sign is placed on the winch, do not operate the winch until the sign, lock or tag has been removed by designated and qualified personnel.
4. Before each shift, the operator should inspect the winch for signs of wear or damage.
5. Never use a worn or damaged winch.
6. Do not use winch if hook safety latch has been sprung, damaged or is found to be missing.
7. Only pull or lift loads less than or equal to the rated winch capacity. Load capacity refers to the total load being pulled or lifted by the winch including all live loads, friction, rope, fittings and additional equipment.
8. Check that the hook latch has been re-engaged after loading cables, slings, clamps and eyes prior to use.
9. When using two winches on one load, ensure that each winch has a rated capacity equal to or more than the total load.

10. Never place your hand in the throat area of a hook or in the vicinity of the wire rope as the rope spools onto the drum.
11. Position load correctly. Do not attach load on hook except in a straight pulling line. Do not side load winch.
12. Keep hands, clothing, etc. clear of moving parts.
13. Replace any removed guards prior to operation.
14. Do not operate the winch with the electrical enclosure open.
15. Do not force the hook into place by hammering.
16. Be certain the load (slings, cables, eyes, etc.) are properly seated in the saddle of the hook prior to operation.
17. Do not pull or lift a load with the load supported on the tip of the hook.
18. Never run the wire rope over a sharp edge - use a sheave instead.
19. Pay attention to the load at all times when operating the winch.
20. Make sure that people and debris are clear from path of load travel.
21. Never allow anyone to stand, sit or rest on a moving load.
22. Ease the slack out of the wire rope when starting operation.
23. Never cut or weld on a load held in position by the winch.
24. Do not operate the winch if jamming, overloading or binding occurs.
25. Secure the winch after use.
26. Follow established rigging procedures.





Inspection and General Maintenance

Periodic inspection, cleaning and service of this unit is crucial for safe and reliable operation. Material handling equipment is often subject to damaging factors such as vibration and destructive environments. Routine general maintenance should ensure that the unit is kept clean and free of corrosion. All accessible fasteners should be periodically checked for security.

At regular intervals, inspect/repair the drivetrain components for general serviceability paying special attention to the following:

- Excessive gear backlash
- Loose chain
- Worn, cracked or pitted gears.
- Worn, cracked sprocket teeth.
- Worn wire rope
- Damage or corrosion of mounting hardware.

Lubrication Schedule

100 hour intervals:

-- Remove the large nameplate cover (item #49). Lubricate pawl stud (item #35) and pawl spring (item #24) and roller chain using a light grade machine oil.

500 hour (or six month intervals for light duty usage):

-- Remove back cover (item #22). Brush a liberal amount of Dow Corning 1122 (or equivalent) open gear grease to all accessible gear surfaces including drive pinion, pinion gear and internal gear.



Standard Electrically Operated R5 /R10 Winches

First Layer Max. Load Capacity	R5: 750 lb R10: 1500 lb
Layers 2-3 Max. Load Capacity	R5: 500 lb R10: 1000 lb
Max. Wire Rope Storage	R5: 125ft 1/4in dia. R10: 170ft 1/4in dia.
Speed (Single Line)	R5: 40 fpm R10: 40 fpm
Power Requirements	(Consult factory with serial number)
Motor Size	R5: Consult factory R10: Consult factory
Geartrain Lubrication	Brush-Applied Dow 1122
Mechanical Brake	Weston Style
Motor Brake	Not Supplied as Standard
Free-Spooling	Not Supplied as Standard
Factory Supplied Controls	Consult Factory
Rotary Limit Switch	Not Supplied as Standard
Shipping Weight	R5: 175LB R10: 225LB

IMPORTANT!

Read all instructions prior to installing or operating any material handling product. Injury and damage may occur if your recently purchased David Round product is not installed or operated properly. Please contact David Round, your David Round equipment dealer or your local sales representative to discuss any questions that you may have.

Caution should be taken before modifying this: Call factory before making any adjustments not covered in this manual.

Note: For safe operation and to maintain factory warranty, the installer is responsible for properly mounting the winch. This includes accounting for fastener grade, thread engagement, load tightening torque and means of torque retention. Inadequate or insufficient mounting can cause premature failure of mechanical components.

This product is not for lifting people or for lifting items over people. Do not install this product if application involves transporting people.

Mounting:

WARNING: The Weston style mechanical load brake prevents over-speed when lowering and will hold a suspended load only when the pawl is engaged. **This winch must be installed, reeved and wired so that when the load is lowered, the brake pawl is engaged.**

Four 9/16" mounting holes are provided. The use of 1/2" diameter grade 5 or better fasteners is recommended. Both the R5 and the R10 winches can be mounted either vertically or horizontally.

Installation and Initial Operational Check:

R5 & R10 Series winches are typically factory configured with a 2 position reversible pendant. Various electrical options including emergency stop, brakes and limit switches are available. A detailed, order-specific electrical drawing is shipped inside the front cover of the electrical enclosure. A qualified electrician should use this drawing to connect line voltage. Standard industrial electrical practices as well as conformance to all applicable codes and standards is required to ensure safe operation.

After initial electrical connection and prior to use in other than jogging mode, it is the installer's responsibility to set and check any installed limit switches (see optional rotary limit switch adjustment procedure on page 14 of this manual.) Ensure both upper and lower limit switches are correctly adjusted and that the direction of travel corresponds to the pendant button selected. Note: "FWD" or "UP" are used to denote the direction of travel that winds the rope onto the drum. If drum direction is opposite of the pendant button selected, reverse two MOTOR lead connections. Do not change pendant wiring as this would disable limit switches.

Individuals responsible for installation and operational checks should conduct a thorough training session with all personnel responsible for operating this equipment. Operation, maximum capacities, features and safety considerations should be fully understood before the unit is certified for on-site use.

INSPECTION

Regular inspections, testing and maintenance of material handling equipment is important to ensure safety and reliability.

The following guidelines are useful in developing an inspection program to suit the application:

1. All parts subject to wear should be inspected at regular intervals. Unsafe conditions should be corrected immediately. Inspection intervals are dependant on frequency of use, typical working load and environmental conditions. Intervals between inspections should be short enough to ensure that the equipment will never be operated when in an unsafe condition.
2. To ensure proper and safe operation all replacement parts should be obtained from David Round. Include serial number on all parts requests.
3. Optional limit switches should be tested without a load. Extreme care should be exercised, and where possible, the limit should be actuated manually for testing. When it is not possible to actuate the limit switch manually, the unit should be "inched" into the limit.

4. Optional motor brake(s) installed on this unit are self adjusting. Brake(s) should be inspected by noting any decrease in typical stopping time. As soon as the brake begins to "drift" the unit should be locked-out and the brake condition should be examined and repaired.

5. Part of every good inspection routine includes periodic cleaning with particular attention to wire rope, sheaves and other moving parts.

6. Wire rope should be inspected regularly (once each day if equipment is in continuous use). Inspect for signs of wear or damage such as broken strands, abrasion, flatness, reduction in diameter, kinks, corrosion, etc. Less frequent, but equally rigorous inspection should be made on dead-end and drum fittings of wire rope.

7. Hooks, sheaves, and drum require careful inspection. When the groove of a sheave becomes worn excessively over the nominal rope diameter the sheave should be replaced. Sheaves or drums having scored, crushed or worn surfaces should be replaced. Sheaves or drums having cracked or broken flanges, rims, spokes or hubs should be replaced.

8. Inspection and repair of electrical components should be done only by qualified electricians.

Remove (3)
Plastic Caps
for Air-Gap
adjustment.



Standard Dodge D-Series Brake.
(Consult factory for non-standard brakes)

Warning! Any mechanism or load held in position by the brake should be secured to prevent possible injury to personnel or damage to equipment before any disassembly of the brake is attempted or the manual release lever is operated on the brake.

To prevent an electrical hazard, disconnect power source before working on the brake. If power disconnect point is out of sight, lock disconnect in the off position and tag to prevent accidental application of power.

Brake Servicing

Note: This information is for use with standard R5/R10 motors. These instructions are based on Dodge model# 56/DBSC/DBEC brakes. Winches with non-standard motors may use alternate brakes. Verify brake model number (located on brake label) before any maintenance is performed. Call the factory if you have any questions.

New units do not need adjustment. Depending on the frequency of use, the brake provided on this unit may require periodic adjustment. As the friction disc wears, the friction disc air gap will increase. Adjustment of the air gap is necessary whenever there is a decrease in braking torque. Investigate and adjust when there is any noticeable increase in stopping time.

See below for adjustment procedure. Note: If adjusting air gap does not correct braking problem, request complete brake service instructions (ref Dodge 4/02-7M-K). Do not attempt any adjustments other than air gap correction without complete brake servicing instructions.

Wear Adjustment Procedure

- Step 1: Ensure power is removed from winch and local lockout/tagout procedures are followed.
- Step 2: Remove the three plastic caps (see picture above) (**Caution: These plastic caps must be re-installed after brake adjustment is complete.**)
- Step 3: Using torque-wrench, turn the 3 socket head cap screws clockwise (CW) progressively to 50 lb-in. **DO NOT OVERTIGHTEN.** Then turn each of the bolts back counter clockwise (CCW) 1/2 of a full turn (180 degrees) This resets the air gap to the proper amount. Turn power back on and check for normal operation.
- Step 4: Reinstall plastic caps and place unit back into service. Load test to ensure brake is stopping the load correctly.

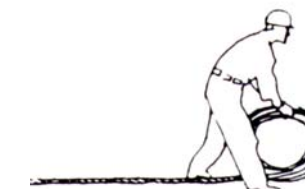
CAUTION: Proper selection, installation and care of wire rope is essential for safe operation of this unit. The person installing the wire rope is responsible for ensuring that the rope provides an adequate design factor to handle the actual working load, and meets all applicable industry, trade association, federal, state and local regulations. When considering wire rope requirements the actual working load must include not only the static or dead load but also loads resulting from acceleration, retardation and shock loading.

Note: A minimum of three wraps of wire rope is required on the drum at all times.

Unloading, Unreeling and Uncoiling

Suitable precautions should be taken to prevent dropping of reels or coils during unloading and moving. If the reel should collapse, it may be impossible to remove the rope without serious damage.

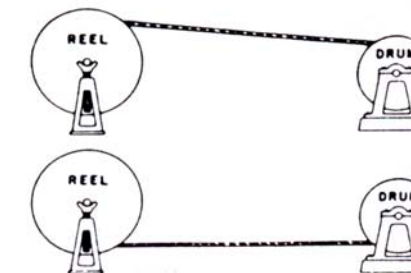
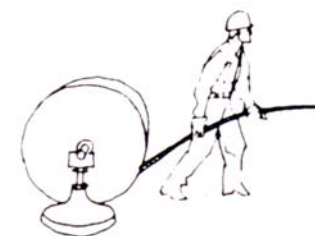
A coil without a reel should never be laid flat and the free end pulled out. Coils should be unwound by rolling along the floor like a hoop.



Proper practices for transferring wire rope from reel to drum:

- The reel should be placed as far from the drum as possible in order to avoid putting any turn into the rope.
- Rope should be wound from top-to-top or bottom-to-bottom to avoid reverse bends, which tend to make a rope harder to handle.
- Use enough tension to avoid kinking.

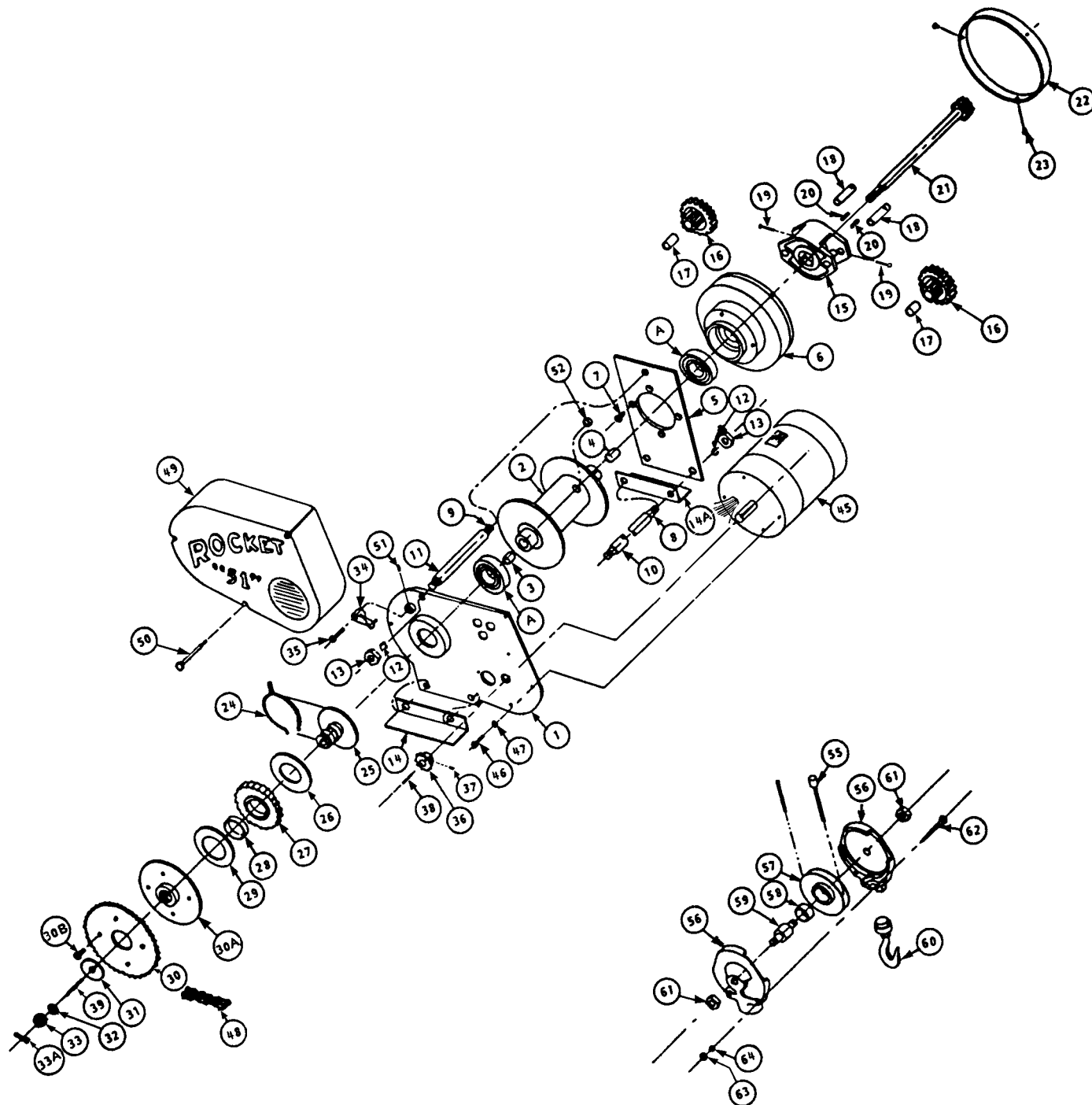
Special care should be taken in unreeling wire rope to avoid kinking, which can result in permanent damage to the rope. The reel should be mounted on jacks or a turntable so that it will move freely. It should be unreeled straight and under enough tension to keep it from starting a loop.



Wire Rope Installation

Note: Use 6 x 37 extra-flexible IPS IWRC (or better) wire rope to maintain the safest wire rope conditions. The rope used on the R5 must have a 1/2" swaged button on one end and plain end on other end. The rope used on the R10 must have a 5/8" swaged button on one end and plain on the other end.

- Step 1: Prepare wire rope using above guidelines. If wire rope cannot be wound from reel, rope must be unreeled or uncoiled and laid as straight as possible.
- Step 2: Remove the cable plug (item# 52) from drum.
- Step 3: Feed button end of wire rope into slot in drum.
- Step 4: Install cable screw flush with drum.
- Step 5: Facing winch from name cover side, begin winding cable with the drum rotating clockwise. **Note: If the wire rope is incorrectly spooled onto a counterclockwise rotating drum the mechanical brake will not function. Double check the rotation of the drum.**
- Step 6: Spool wire rope onto drum ensuring rope is under light tension and is tracking tightly along side of the preceding turn.



ITEM #	DESCRIPTION	QTY	R5	R10
1	Gear Side Assy.	1	51000	51008
2	Drum Assy.	1	51002	51045
3	Bushing	1	05000	05010
4	Bushing	1	05000	05010
5	Plain Side Plate	1	51014	51049
6	Internal Gear	1	51015	51050
7	Screw	4	00022	00074
8	Tie Rod	2	51016	51051
9	Tie Rod	1	51017	51052
10	Spacer	2	51018	51053
11	Spacer	1	51019	51054
12	Lock-washer	6	02016	02016
13	Nut	6	01013	01013
14	Foot (Gear Side)	1	51020	51020
14A	Foot (Plain Side)	1	51020	51020
15	Pinion Cage	1	51021	51055
16	Pinion Gear	2	51023	51057
17	Bushing	2	05000	05007
18	Pinion Pin	2	51024	51058
19	Cotter Pin	2	01071	01076
20	Locking Pin	2	04085	04088
21*	Drive Pinion & Shaft	1	51025	51076
22	Back Cover	1	51027	51074
23	Screw	3	00073	00073
24	Pawl Spring	1	51028	55325
25	Disc Hub	1	51029	55324
26	Fibre Disc	1	51030	55323
27	Ratchet	1	51031	55322
28	Bushing	1	05055	05056
29	Brass Disc	1	51032	55326
30	Sprocket	1	51033	51033
30A	Friction Nut	1	51034	51079
30B	Bolt	1	5/16-18X3/4"	5/16-18X3/4"
31	Check Washer	1	51035	55316
32	Washer	1	OBSOLETE	OBSOLETE
33	Nut	1	01012	01012
33A	Cotter Pin	1	01071	01076
34	Pawl	1	51036	55207
35	Pawl Stud	1	51037	---
36	Motor Sprocket	1	51038	51038
37	Set Screw	1	00050	00050
38	Key	1	04086	04086
39	Key	1	04087	04087
45	Motor	1	CONSULT FACTORY	CONSULT FACTORY
46	Bolt	4	3/8-16X1"	3/8-16X1"
47	Lock-washer	4	3/8"	3/8"
48	Roller Chain	1	06082	06082
49	Cover	1	51040	51040
50	Bolt	3	00011	00011
51	Set Screw	1	00002	00002
52	Cable Plug	1	51041	51061
A	Bearing	2	04009	04010

OPTIONAL 2-PART LINE BLOCK AND HOOK COMPONENTS

55	Wire Rope Assy.	1	CONSULT FACTORY	CONSULT FACTORY
56	Bottom Block Housing	2	55601	55601
57	Sheave	1	55603	55603
58	Bushing	1	05014	05014
59	Sheave Pin	1	55602	55602
60	Hook	1	55608	55608
61	Nut	2	01003	01003
62	Bolt	2	00035	00035
63	Nut	2	01003	01003
64	Lock-washer	2	02008	02008

* For Units with Free Spooling Refer to Drive Pinion & Shaft as 51125 on AR5 Models and as 51126 on R10