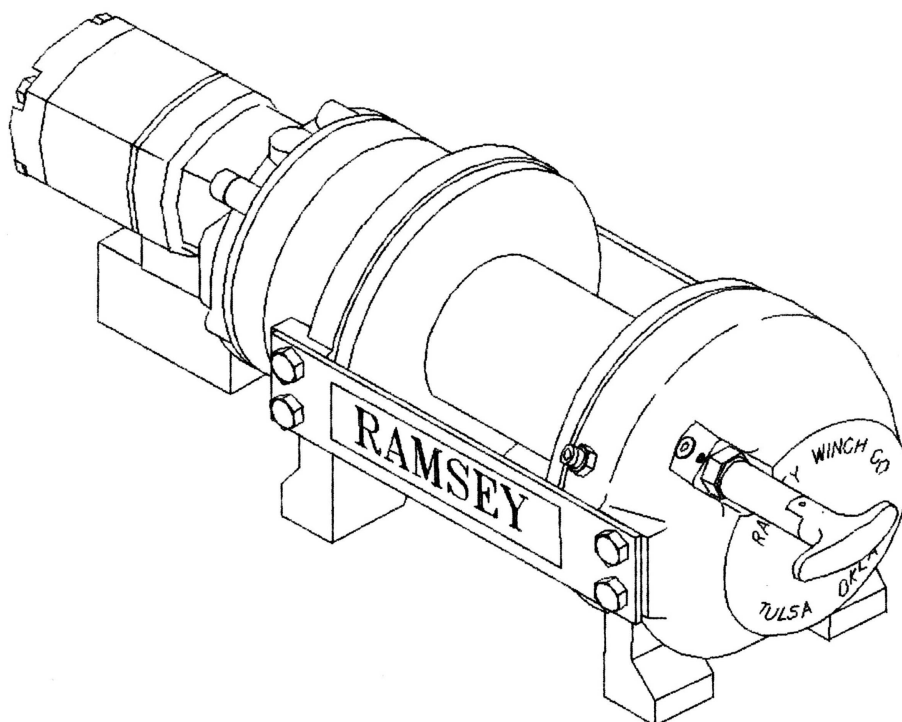




OPERATING, SERVICE AND MAINTENANCE MANUAL



MODEL RPH 15,000 PLANETARY WINCH



**CAUTION: READ AND UNDERSTAND THIS MANUAL BEFORE INSTALLATION AND
OPERATION OF WINCH. SEE SAFEGUARDS AND WARNINGS!**

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RAMSEY HYDRAULIC PLANETARY WINCH MODEL RPH 15,000

PLEASE READ THIS MANUAL CAREFULLY

This manual contains useful ideas for obtaining the most efficient operation from your Ramsey Winch, and safety procedures one needs to know before operating a Ramsey Winch. Do not operate this winch until you have carefully read and understand the "WARNING" and "OPERATION" sections of this manual.

WARRANTY INFORMATION

Ramsey Winches are designed and built to exacting specifications. Great 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. Refer to back page for limited warranty.

SPECIFICATIONS*

Rated Line Pull (lbs.).....		15,000					
(kgs.).....		6,800					
Gear Reduction.....		7.7:1					
Weight (without cable).....		300 lbs. (136 kgs.)					
LAYER OF CABLE		1	2	3	4	5	6**
*Rated line pull per layer	Lbs. Kg.	15,000 6,800	12,600 5,710	10,800 4,890	9,500 4,300	8,500 3,850	7,600 3,440
Cable capacity	Ft. M.	35 10	75 22	125 38	180 54	240 73	310 94
Line speed (at 15 GPM)	FPM MPM	25 7,6	29 8,8	34 10,3	39 11,8	44 13,4	48 14,6
*These specifications are based on recommended 1/2" (13 mm) EIPS wire rope and a 24.9 Cu. In./Rev. motor.							
**Last layer does not comply with SAE J-706							

NOTE: The rated line pulls shown are for the winch only. Consult the wire rope manufacturer for wire rope ratings.

WARNINGS:

CLUTCH MUST BE FULLY ENGAGED BEFORE STARTING THE WINCH.

DO NOT DISENGAGE CLUTCH UNDER LOAD.

DO NOT LEAVE CLUTCH ENGAGED WHEN WINCH IS NOT IN USE.

STAY OUT FROM UNDER AND AWAY FROM RAISED LOADS.

STAND CLEAR OF CABLE WHILE PULLING. DO NOT TRY TO GUIDE CABLE.

DO NOT EXCEED MAXIMUM LINE PULL RATINGS SHOWN IN TABLE.

DO NOT USE WINCH TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.

A MINIMUM OF 5 WRAPS OF CABLE AROUND THE DRUM BARREL IS NECESSARY TO HOLD THE LOAD. CABLE CLAMP (SETSCREW) IS NOT DESIGNED TO HOLD LOAD.

IN CAR CARRIER APPLICATIONS, AFTER PULLING VEHICLE ON CARRIER, BE SURE TO SECURE VEHICLE TO CARRIER BED. DO NOT MAINTAIN LOAD ON WINCH CABLE WHILE TRANSPORTING VEHICLE. DO NOT USE WINCH AS A TIE DOWN.

WHEN PULLING A HEAVY LOAD PLACE A BLANKET, JACKET, OR TARPAULIN OVER THE CABLE FIVE OR SIX FEET FROM THE HOOK.

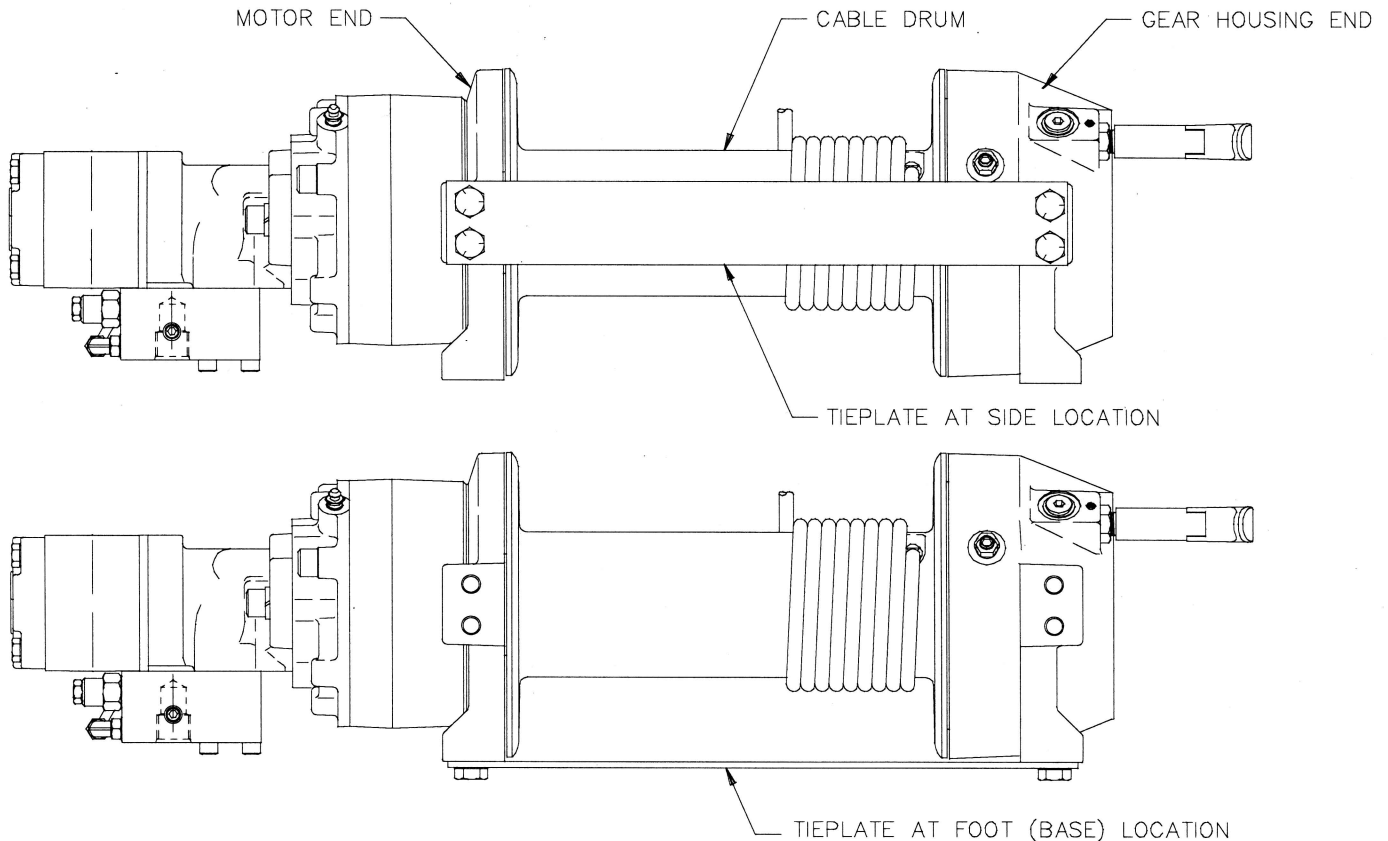
AVOID CONDITIONS WHERE LOAD SHIFTS OR JERKS OCCUR, AS THEY MAY INDICATE A DANGEROUS SITUATION.

WINCH MOUNTING

ESSENTIAL MOUNTING INSTRUCTIONS TO MAINTAIN ALIGNMENT OF PLANETARY WINCH COMPONENTS

It is most important that this winch be mounted securely so that the three major sections (the motor end, the cable drum and the gear housing end) are properly aligned. Excessive bushing wear and difficulty in freespooling are usually symptoms of misalignment.

In the as-installed condition, if the winch is mid mounted at least one tie plate must be attached to the mounting feet at the bottom of the winch to maintain alignment. **NOTE:** If the winch is foot mounted at least one tie plate must remain mounted at mid point of winch to maintain alignment. It is always desirable to use both tie plates in the final installed configuration.



Angle Mounting Kit, #251173, is recommended for maximum ease in mounting the winch. The angle kit will allow the winch to be mounted in upright or midmount applications and will meet the criteria of serving as a solid and true mounting surface.

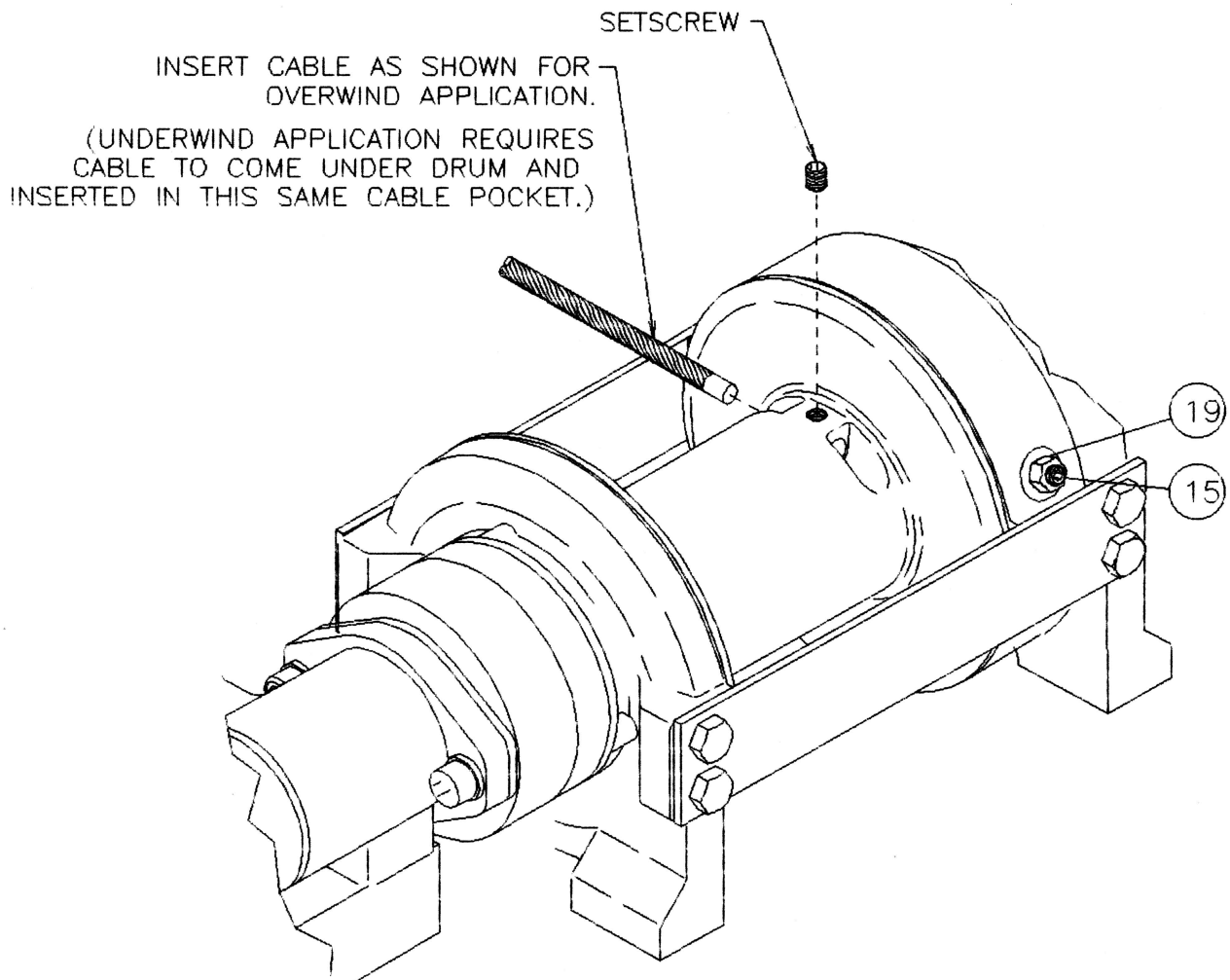
When mounting the winch with other than the recommended Ramsey Angle Kit, the mounting hole patterns described on page 12 must be used. The mounting surface must be flat within .015 inch and sufficiently stiff to resist flexing. If a steel plate is used for foot mounting it should be .750 inch thick. For this mounting application eight (8) 5/8-11NC x 1-1/2 Lg. Gr. 5 capscrews with lockwashers will be needed to mount winch. Capscrews should be torqued to 173 ft. lb. (235 Nm.).

NOTE: If angles or a steel plate are used in mounting winch, tie plates provided with winch are to be attached to the remaining mounting pads, whether they be side or foot.

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. Place taped end of cable into hole in cable drum, as shown below. Use 3/8-16NC x 1/2 lg. Hx. Soc. drive setscrew (part of 234173 drum assembly) to secure cable to drum.
3. Carefully run winch in the "reel-in" direction. Keeping tension on end of cable, spool all the cable onto the cable drum, taking care to form neatly wrapped layers.

After installing cable, check freespool operation. Disengage clutch and pull on cable at a walking speed. If cable "Birdnests", loosen jam nut (item #19) and turn nylon screw (item #15) clockwise to increase drag on drum. If cable pull is excessive loosen nylon setscrew by turning counterclockwise. Tighten jam nut when proper setting is obtained. **CAUTION: Over-tightening of jam nut may strip nylon setscrew.**



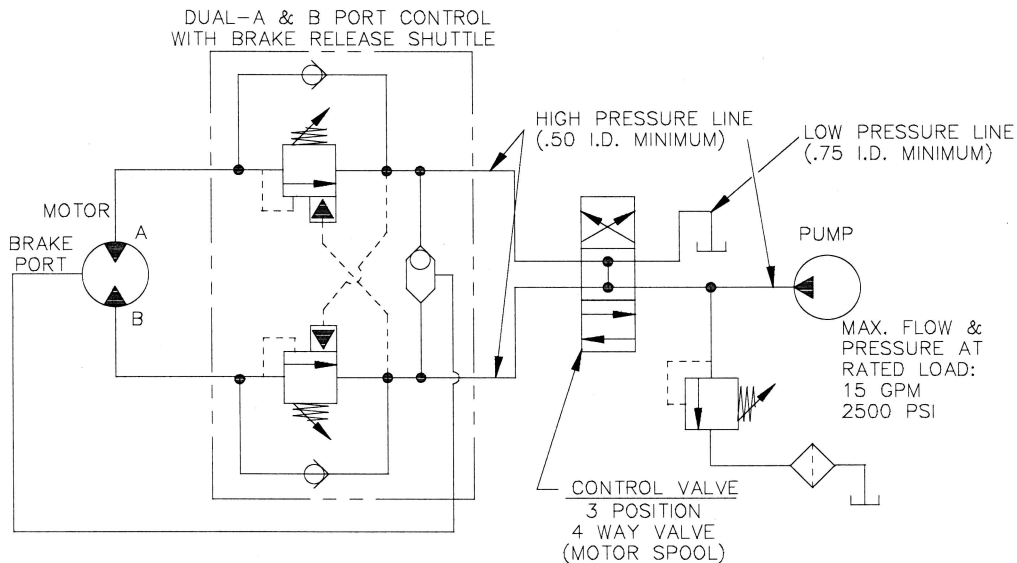
HYDRAULIC SYSTEM REQUIREMENTS

Refer to the performance charts below to properly match your hydraulic system to the winch performance. The charts consist of: (1) line pull (LB) first layer vs. working pressure (PSI); (2) line speed, first layer (FPM) vs. flow (GPM). A motor spool directional control valve is recommended.

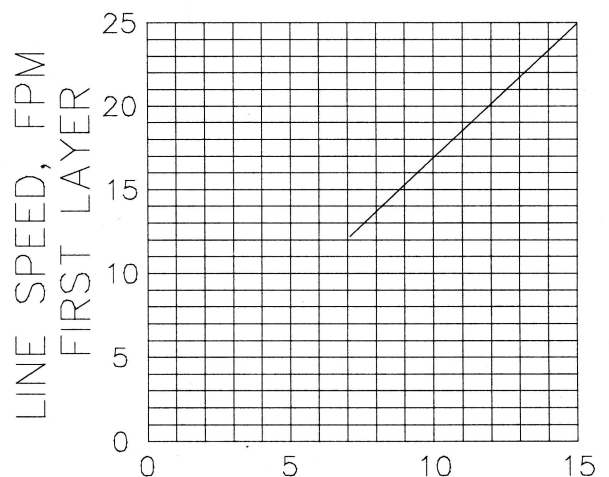
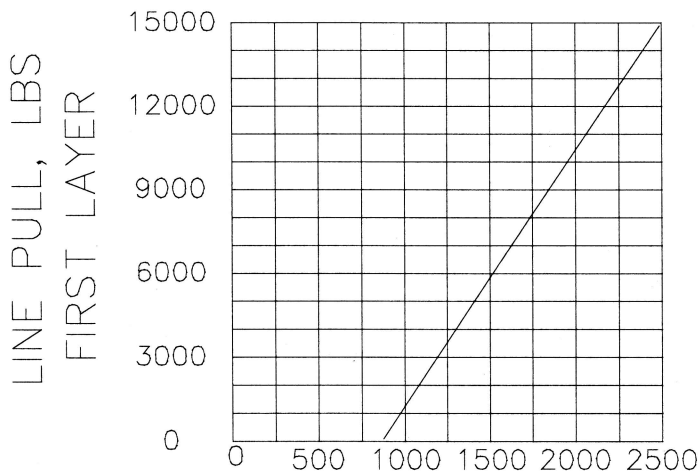
SYSTEMS REQUIREMENTS:
2400 PSI RELIEF VALVE SETTING
15 G.P.M. FLOW RATE*
10 MICRON NORMAL FILTRATION

***CAUTION: DO NOT EXCEED 20 G.P.M. IF EXCEEDED, MOTOR AND WINCH MAY BE DAMAGED.**

TYPICAL LAYOUT



PERFORMANCE CHARTS



PERFORMANCE WITH 24.9 CU. IN. HYDRAULIC MOTOR:

OPERATION

The best way to get acquainted with how your winch operates is to make test runs before you actually use it. Plan your test in advance. Remember, you hear your winch, as well as see it operate. Get to recognize the sounds of a light steady pull, a heavy pull, and sounds caused by load jerking or shifting. Avoid conditions where load shifts or jerks occur, as they may indicate a dangerous situation.

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.

When pulling a heavy load place a blanket, jacket or tarpaulin over the cable about five or six feet behind the hook. In the event of a broken cable, this will slow the snap back of the cable and could prevent serious injury.

The winch clutch allows rapid unspooling of the cable from the cable drum for hooking onto the load. The clutch is operated by the clutch shifter lever or air shifter.

WARNING: DO NOT DISENGAGE CLUTCH UNDER LOAD.

MANUAL CLUTCH SHIFTER (Refer to page 12)

TO DISENGAGE CLUTCH: Run the winch in the reverse (reel out) direction until load is off the cable. Pull handle out and rotate 90°. With handle in the "DISENGAGED" position, cable may now be free-spoiled from drum.

TO ENGAGE CLUTCH: Pull handle out, rotate 90° and release handle. Run the winch in reverse until the clutch handle snaps fully into the "ENGAGED" position. **DO NOT** attempt to pull a load unless the handle is fully at the "ENGAGED" position. If manual shift indicator light is present, the green light is lit when clutch is fully "ENGAGED". **DO NOT** attempt to pull a load unless the green light is lit. To hookup light to the vehicle electrical system refer to the Electrical Schematic on page 13.

AIR CYLINDER CLUTCH SHIFTER (Refer to page 13)

TO DISENGAGE CLUTCH: Run the winch in the reverse (reel out) direction until load is off the cable. Apply air pressure to the .125-27 NPT port: 80 PSI (min.), 150 PSI (max.). **CAUTION: Pressure must not exceed 150 PSI.**

TO ENGAGE CLUTCH: Remove air pressure from the cylinder (a return spring engages the plunger). Run winch in reverse until the clutch engagement indicator light (green light) is lit. **DO NOT** attempt to pull a load unless the green light is lit. To connect light to the vehicle electrical system refer to the Electrical Schematic on page 13.

MAINTENANCE

1. Inspect the cable for damage and lubricate frequently. If the cable becomes frayed with broken strands, replace immediately.
2. Check that the clutch is fully engaging. See OPERATION instructions, above, for the appropriate clutch shifter.
FOR MANUAL CLUTCH ONLY: Monthly disengage clutch, put several drops of oil on the shaft and work clutch IN and OUT several times to lubricate inside of clutch cylinder.
3. Check to see that drum cable does not overrun (BIRDNEST) when freespooling. Refer to page 3.
4. Replace drum bushings and seals if seals begin to seep grease. Refer to OVERHAUL INSTRUCTIONS, page 8.
8. Add additional lubricant, Mobilith SHC 007, to gears if required.

TROUBLE SHOOTING GUIDE

CONDITIONS	POSSIBLE CAUSE	CORRECTION
DRUM WILL NOT ROTATE AT NO LOAD	Winch not mounted squarely, causing end bearings to bind up drum.	Check mounting. Refer to WINCH MOUNTING page 2.
	Brake damaged.	Inspect and replace brake.
	Gears damaged.	Inspect and replace damaged gears.
DRUM WILL NOT ROTATE UNDER LOAD	Load greater than rated capacity of winch.	Refer to Specifications pg. 1 for line pull rating.
	Low hydraulic system pressure.	Check pressure. Refer to HYDRAULIC SYSTEMS performance charts pg. 4.
	Winch not mounted squarely, causing end bearing to bind up drum.	Check mounting. Refer to WINCH MOUNTING pg. 2.
WINCH RUNS TOO SLOW	Low hydraulic system flow rate.	Check flow rate. Refer to HYDRAULIC SYSTEMS flow chart page 4.
	Motor worn out.	Replace motor.
DRUM WILL NOT FREESPOOL	Clutch not disengaged.	Check OPERATION. Refer to page 5. Check ADJUSTMENT. Refer to page 12.
	Winch not mounted squarely, causing end bearings to bind drum.	Check mounting. Refer to WINCH MOUNTING pg. 2
BRAKE WILL NOT RELEASE	Air in hydraulic system	Bleed air from brake. Refer to page 12.
CABLE BIRDNESTS WHEN CLUTCH IS DISENGAGED	Drag screw improperly adjusted.	Adjust nylon drag screw. Refer to pg. 3.
EXCESSIVE NOISE	Hydraulic system flow too high	Check flow rate. Refer to HYDRAULIC SYSTEMS flow chart pg. 4.
	Drum in bind, winch not mounted squarely.	Check mounting. Refer to WINCH MOUNTING pg. 2
DRUM CHATTERS, in "REEL IN" direction	Low hydraulic system flow.	Check flow rate. Refer to HYDRAULIC SYSTEMS flow chart pg. 4.
	Low hydraulic system relief pressure setting.	Check relief valve setting. Refer to HYDRAULIC SYSTEMS pg. 4.
BRAKE WILL NOT RELEASE	Air in hydraulic system	Bleed air from brake. Refer to page 11.

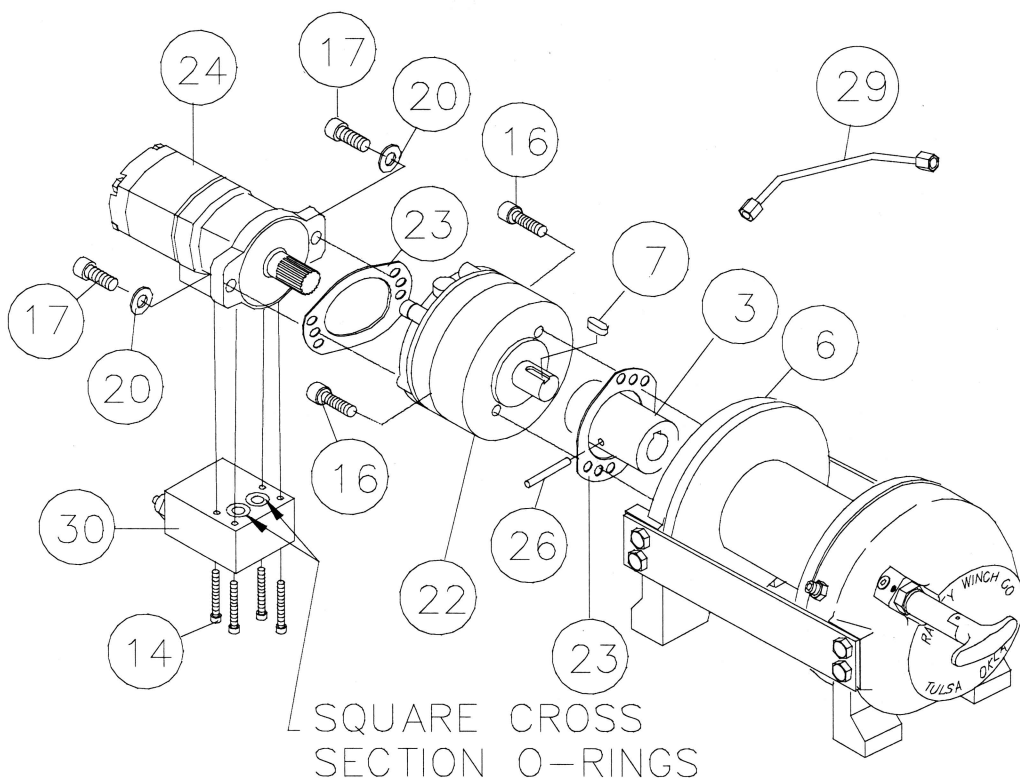
INSTRUCTIONS FOR OVERHAUL OF RAMSEY WINCH
MODEL RPH 15,000

DISASSEMBLY

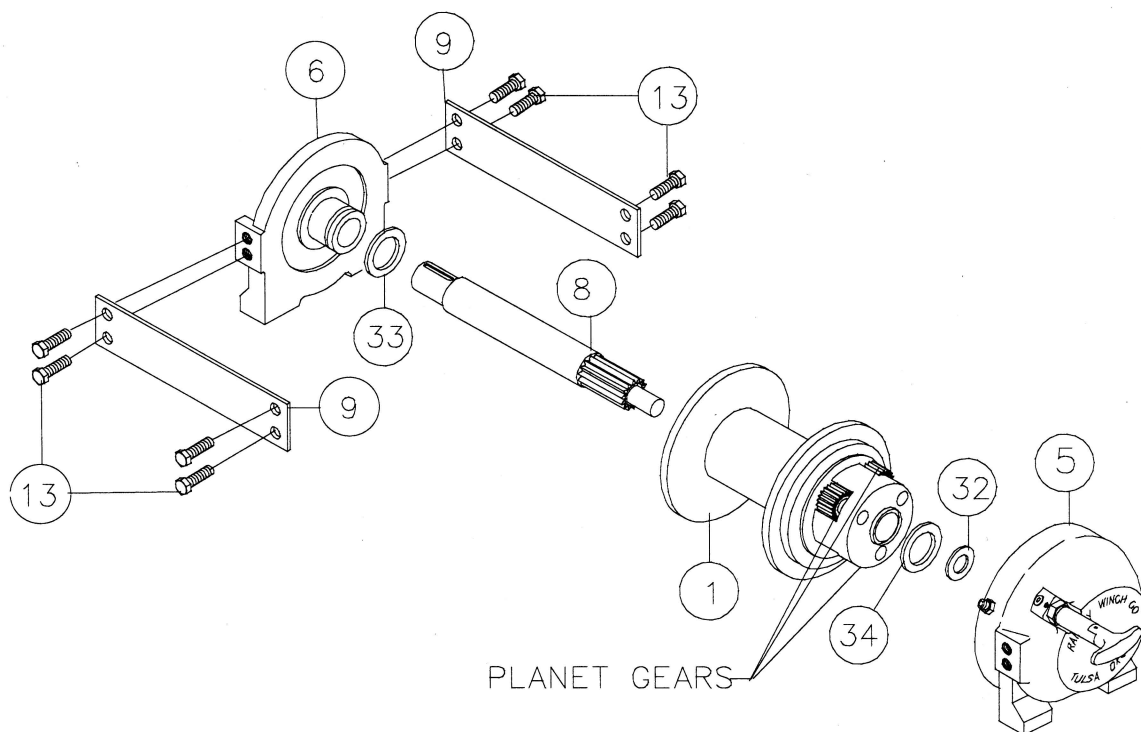
Take note of mounting configuration for proper mounting of parts during re-assembly.

Disconnect tube (item #29) from elbows on bottom of brake (item #22) and valve (item #30). Remove motor (item #24) from brake (item #22) by unscrewing capscrews (item #17). Tap motor lightly to disengage.

Remove brake assembly screws from brake (item #22) to access (2) mounting screws (item #16) attaching brake to end bearing (item #6). Remove coupling (item #3) and gasket (item #23) from end bearing. If coupling is being replaced, be sure pin (item #26) is removed from old coupling and installed into new coupling. If necessary, remove valve (item #31) from motor by removing capscrews (item #14). If valve is removed, make sure two square cross section o-rings remain seated in their counter bores in valve.

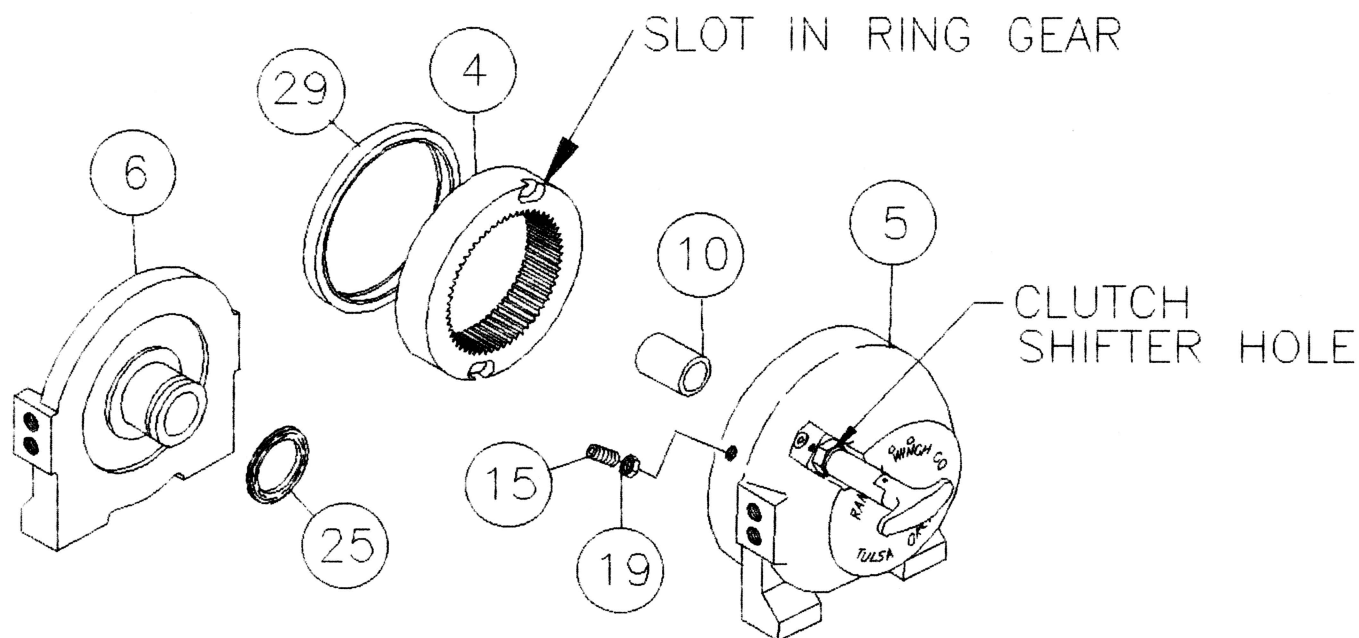


Remove tie plates (item #9) from end bearings (items #5 & #6) by unscrewing capscrews (item #13), as shown. Slide motor end bearing (item #6) from drum (item #1) and drum from gear housing end bearing (item #5). Remove input shaft (item #8) and thrust washers (items #32, #33 & #34) from end bearings. Inspect gear teeth of shaft (item #8) and key (item #7) for signs of wear. If necessary replace shaft and/or key.



Remove o-ring (item #25) from motor end bearing (item #6). Dip new o-ring in oil and seat into groove of end bearing.

Remove seal (item #29) from gear housing end bearing (item #5). Loosen nut (item #19) and remove nylon setscrew (item #15) and remove ring gear (item #4) from gear housing end bearing. Install ring gear and nylon setscrew and nut. Ring gear must be fully seated in gear housing end bearing (item #5) and slot in ring gear must be aligned with clutch shifter hole. Dip new seal in oil and install in gear housing end bearing, with sharp edge of seal outward.



Generously apply grease (MOBILITH SHC 007) to teeth of ring gear (item #4), teeth of planet gears in drum (item #1) and to bushing in end bearing (item #5). Apply grease to teeth of gear and short end of shaft (item #8). Place gear end of shaft through backside of drum (item #1) rotate shaft to mesh shaft gear with planet gear in drum. Apply grease to end of shaft and to I.D. and O.D. of bushing protruding from drum. Place thrust washer (item #32) over end of shaft and against gear teeth of shaft. Set thrust washer (item #34) over bushing and against drum. Place drum assembly into end bearing meshing planet gears with output gear on shaft and with ring gear in end bearing. End of drum shaft is placed into bearing pressed in end bearing (item #5).

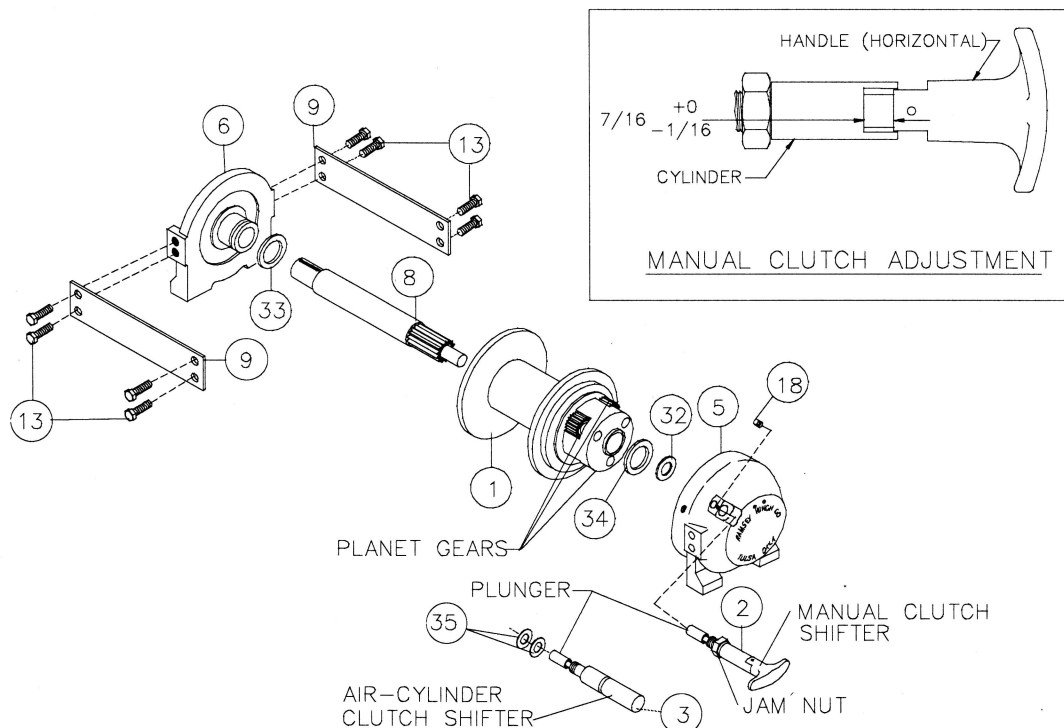
Apply grease to and O.D. of bushing protruding from drum. Set thrust washer (item #33) over bushing and against drum. Assemble motor end bearing (item #6) to drum assembly and use tie plates (item #9) and capscrews (item #13) to hold both end bearings together. Tighten capscrews to 173 Ft. Lbs. (235 Nm.). If necessary, remove and replace appropriate shifter assembly (item #2 or #3), as follows:

MANUAL CLUTCH SHIFTER ASSEMBLY

Remove by loosening setscrew (item #18), jam nut and unscrewing clutch shifter. Be sure slot in ring gear is not aligned with clutch shifter hole in end bearing. Rotate drum, if necessary, to insure hole and slot are not aligned. Reinstall clutch shifter with plunger, jam nut and handle positioned in cylinder housing, as shown. Thread assembly (with handle engaged in cylinder slot) into the end bearing. Pull drum toward the gear housing end bearing to remove play. Hold drum in this position and continue threading the shifter assembly in until the gap between the end of the handle and cylinder is $7/16^{+0}_{-1/16}$ inch and handle is in the horizontal position, as shown below. **NOTE:** This gap will vary with drum endplay. With the drum pulled against the gear housing, the gap should be $3/8$ inch. Lightly tighten jam nut. Rotate drum until handle snaps fully into the engaged position. Pull handle out and rotate 90°. Verify that drum can be rotated freely (at least one full revolution) with clutch shifter at DISENGAGED position. Securely tighten jam nut while holding the handle. Tighten setscrew securely. Re-check clutch operation as described on page 5.

AIR CYLINDER SHIFTER ASSEMBLY

Remove by loosening setscrew (item #18), jam nut and unscrewing clutch shifter. To reinstall, thread air cylinder into housing. Install one or two shims (item #35) under cylinder head, if needed, to orient air cylinder port for pneumatic connections. Tighten setscrew. Refer to page 5 and check for proper operation of the clutch.

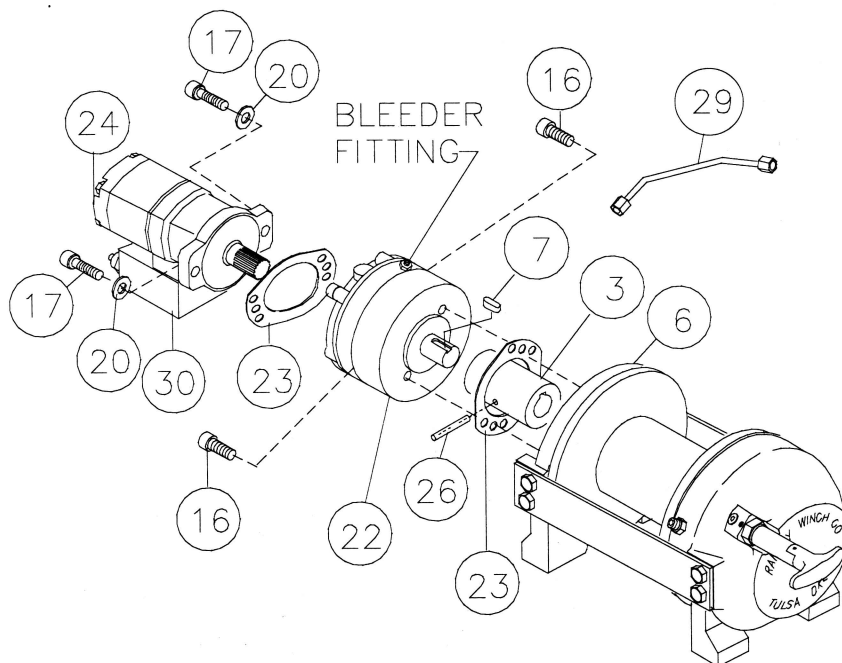


With pin (item #26) installed in coupling, align keyway of coupling (item #3) with key and end of input shaft below. Slide coupling over end of shaft (item #8). Place gasket (Item #23) into position on motor mounting surface of end bearing (item #6). Insert brake shaft (with key) into coupling. Use (2) screws (item #16) to attach brake cover/shaft assembly to motor end bearing. Torque capscrews to 85 ft lbs each. Re-attach brake module assembly to brake cover/shaft assembly using brake module assembly screws. Torque capscrews to 85 ft. lbs. each.

NOTE: Care must be taken to assure cover and brake module are seated properly prior to installing 1/2-13UNC assembly bolts. Damage will occur to rotor stack or shaft snap ring if not properly seated.

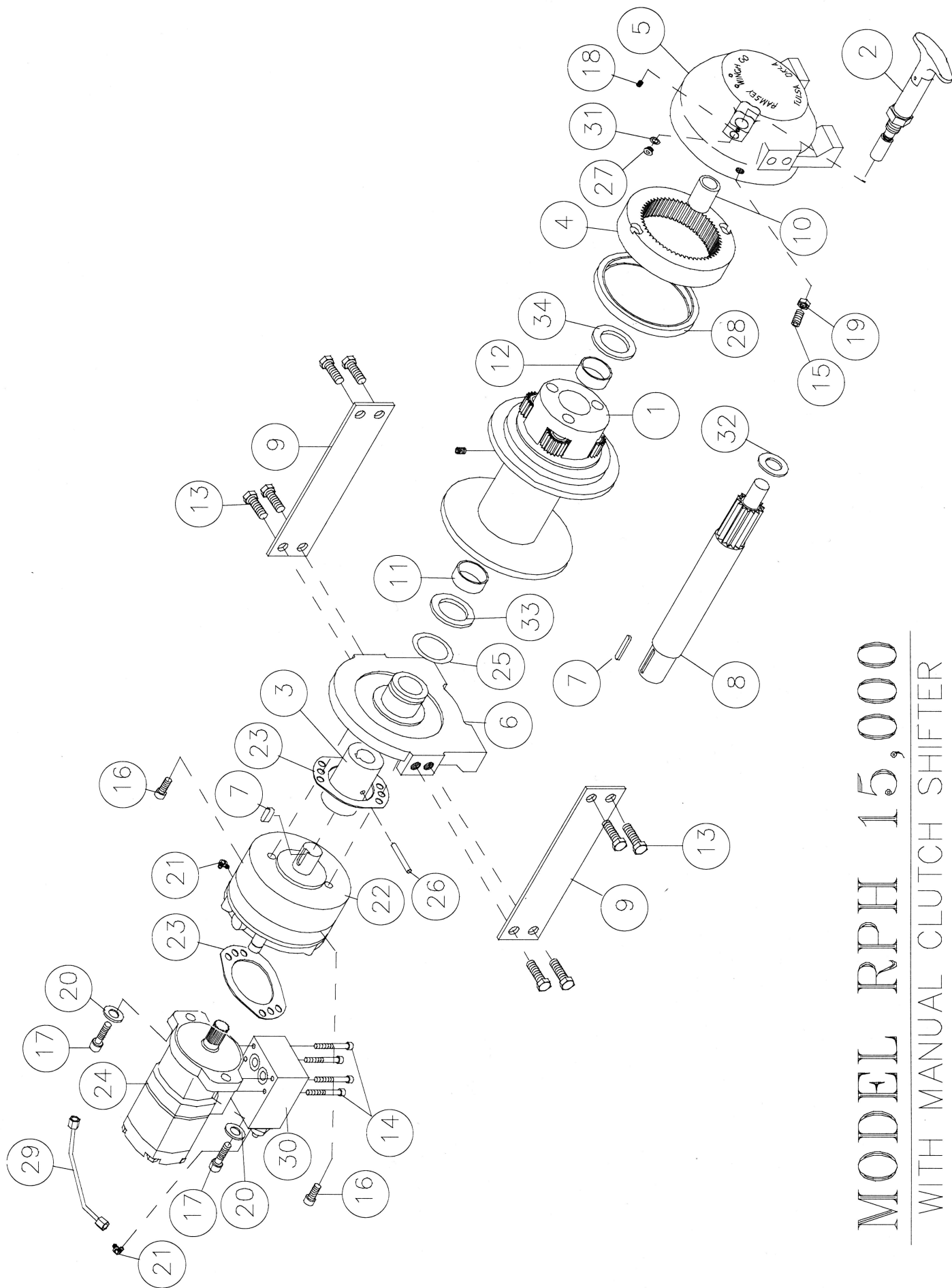
Attach motor (item #24) to brake (item #22). Use (2) capscrews (item #17) with lockwashers (item #20) and torque to 74 ft. lbs. each. Securely connect tube (item #29) to elbows (item #21) in bottom of valve (item #30) and in bottom of brake (item #22).

Bleed pressure release section of brake by loosening bleeder fitting on brake and allowing air to escape while slowly applying hydraulic system pressure to the winch. Apply at least 230 PSI pressure to release brake and verify that brake releases, by observing that the winch drum rotates.



PARTS LIST RPH 15,000 WITH MANUAL CLUTCH SHIFTER

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	234173	DRUM ASS'Y.
2	1	276052	SHIFTER ASS'Y.-MANUAL
3	1	324287	COUPLING-BRAKE
4	1	334177	GEAR-RING
5	1	338297	HOUSING-GEAR, END BEARING
6	1	338298	END BEARING-MOTOR
7	2	342081	KEY
8	1	357503	SHAFT-INPUT
9	2	395236	TIE PLATE
10	1	402120	BEARING
11	1	412095	BUSHING-DRUM (MTR. END)
12	1	412096	BUSHING-DRUM (G.HSG. END)
13	8	414664	CAPSCREW-5/8-11NC X 1 LG. HX. HD., GR. 5
14	4	415153	SCREW-M8-1.25 X 60MM LG., HX. SOC. HD.
15	1	414926	SETSCREW-3/8-16NC X 1 LG., SOCKET, NYLON
16	2	414947	CAPSCREW-1/2-13NC X 1 LG., SOC. HD.
17	2	414952	CAPSCREW-1/2-13NC X 1-1/2 LG., SOC. HD. PLTD.
18	1	416016	SETSCREW-1/4-20NC X 1/4 LG., HX. SOC. HD.
19	1	418036	NUT 3/8-16NC HEX. JAM
20	2	418218	LOCKWASHER-1/2 ID MED. SECT.
21	2	432018	FITTING-7/16 ELBOW
22	1	438021	BRAKE-"A" MOUNT
23	2	442215	GASKET
24	1	458088	MOTOR-HYDRAULIC
25	1	462061	O-RING (DRUM)
26	1	470089	ROLL PIN
27	1	472052	PLUG
28	1	486081	SEAL-GEAR HSG.
29	1	509008	TUBE ASSEMBLY
30	1	516013	VALVE-MOTOR CONTROL
31	1	518037	THRUST WASHER
32	1	518047	THRUST WASHER
33	1	518053	THRUST WASHER (MTR. END) 3.03 I.D. X 3.75 O.D. X .256 TK.
34	1	518054	THRUST WASHER (G. HSG. END) 2.76 I.D. X 3.87 O.D. X .250 TK.

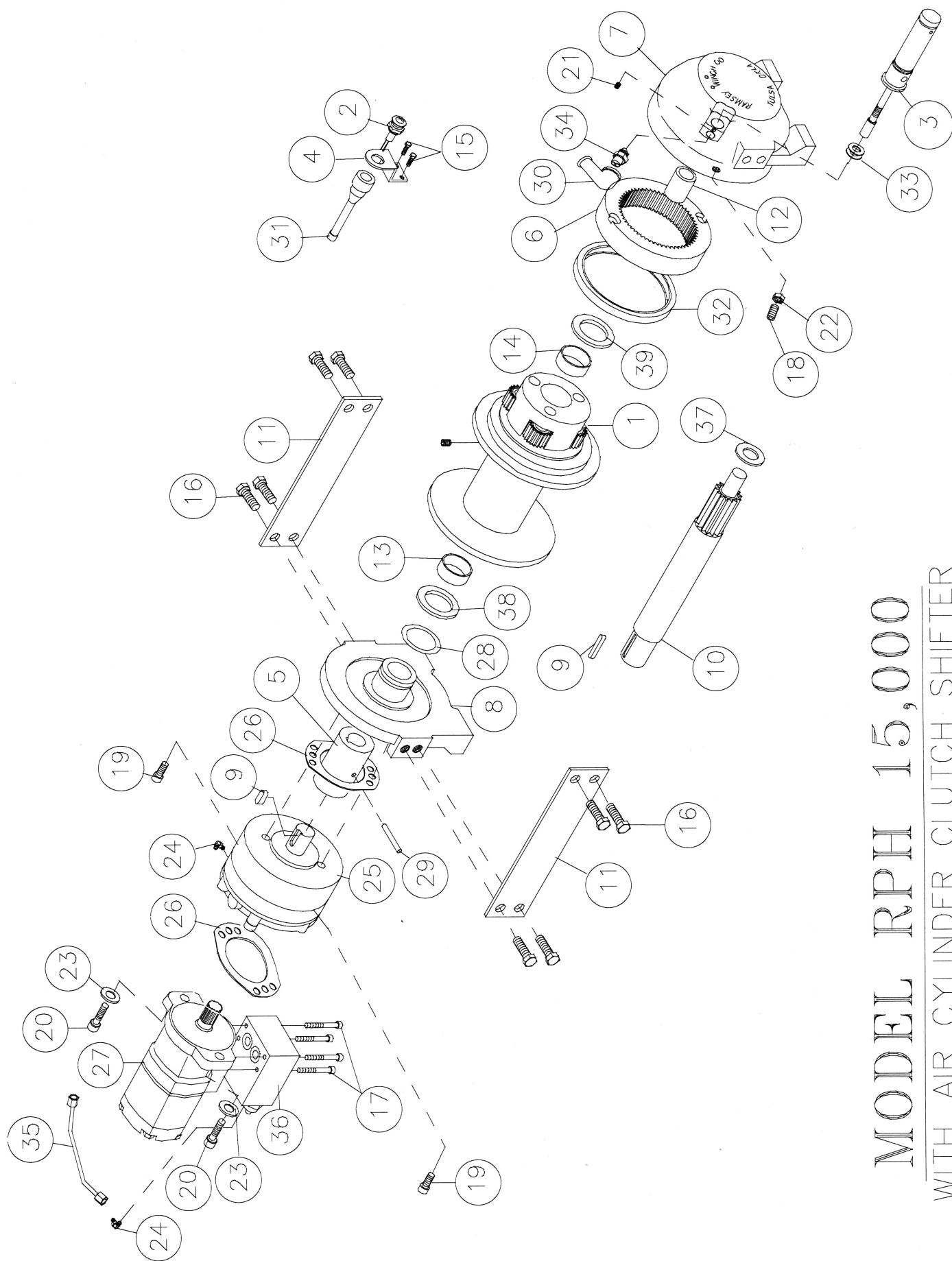


MODEL RPH 15,000

WITH MANUAL CLUTCH SHIFTER

PARTS LIST RPH 15,000 WITH AIR-CYLINDER CLUTCH SHIFTER

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	234173	DRUM ASS'Y.
2	1	236020	LIGHT ASS'Y.
3	1	276053	SHIFTER ASS'Y.-AIR
4	1	312526	BRACKET-LIGHT MTG.
5	1	324287	COUPLING-BRAKE
6	1	334177	GEAR-RING
7	1	338297	HOUSING-GEAR, END BEARING
8	1	338298	END BEARING-MOTOR
9	2	342081	KEY
10	1	357503	SHAFT-INPUT
11	2	395236	TIE PLATE
12	1	402120	BEARING
13	1	412095	BUSHING-DRUM (MTR. END)
14	1	412096	BUSHING-DRUM (G.HSG. END)
15	2	414036	CAPSCREW-1/4-20NC X 1/2, HX. HD., GR. 5, F/B
16	8	414664	CAPSCREW-5/8-11NC X 1 LG. HX. HD., GR. 5
17	4	415153	SCREW-M8-1.25 X 60MM LG., HX. SOC. HD.
18	1	414926	SETSCREW-3/8-16NC X 1, SOCKET, NYLON
19	2	414947	CAPSCREW-1/2-13NC X 1, SOC. HD.
20	2	414952	CAPSCREW-1/2-13NC X 1-1/2 LG., SOC. HD. PLTD.
21	1	416016	SETSCREW-1/4-20NC X 1/4 HX. SOC. HD.
22	1	418036	NUT 3/8-16NC HEX. JAM
23	2	418218	LOCKWASHER-1/2 ID MED. SECT.
24	2	432018	FITTING-7/16 ELBOW
25	1	438021	BRAKE-"A" MOUNT
26	2	442215	GASKET
27	1	458088	MOTOR-HYDRAULIC
28	1	462061	O-RING (DRUM)
29	1	470089	ROLL PIN
30	1	482013	GROMMET
31	1	482045	RUBBER BOOT
32	1	486081	SEAL-GEAR HSG.
33	2	488007	SHIM
34	1	504021	SWITCH ASS'Y.
35	1	509008	TUBE ASSEMBLY
36	1	516013	VALVE-MOTOR CONTROL
37	1	518047	THRUST WASHER
38	1	518053	THRUST WASHER (MTR. END) 3.03 I.D. X 3.75 O.D. X .256 TK.
39	1	518054	THRUST WASHER (G. HSG. END) 2.76 I.D. X 3.87 O.D. X .250 TK.



MODEL RPH 15,000

WITH AIR CYLINDER CLUTCH SHIFTER

LIMITED WARRANTY

RAMSEY WINCH warrants each new RAMSEY Winch to be free from defects in material and workmanship for a period of one (1) year from date of purchase.

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, of such part that 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 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 repair or alterations have been made, unless authorized by Manufacturer, or for equipment misused, neglected or which has not been installed correctly.

RAMSEY WINCH shall in no event be liable for special or consequential damages. RAMSEY WINCH makes no warranty in respect to accessories such as being subject to the warranties of their respective manufacturers.

RAMSEY WINCH, whose policy is one of continuous improvement, reserves the right to improve its products through changes in design or materials as it may deem desirable without being obligated to incorporate such changes in products of prior manufacture.

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



RAMSEY WINCH COMPANY

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OM-912471-0205-D