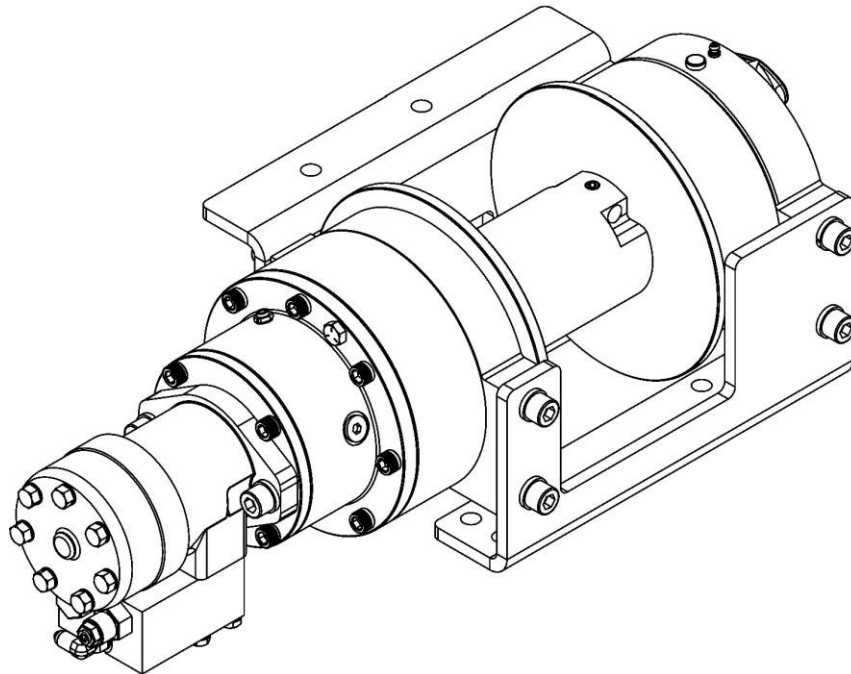


**OPERATING, SERVICE AND
MAINTENANCE MANUAL**



**TERRAIN 4000
PLANETARY WINCH**



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



TABLE OF CONTENTS

INTRODUCTIONS.....	1
WARRANTY INFORMATION	1
SPECIFICATIONS	1
WARNINGS	2
WINCH MOUNTING	3
ROPE INSTALLATION	4
ADJUSTABLE DRAG BRAKE.....	5
HYDRAULIC SYSTEM REQUIREMENTS	6
PERFORMANCE CHARTS.....	6
TYPICAL LAYOUT	6
OPERATION	7
MAINTENANCE	7
TROUBLESHOOTING GUIDE	8
OVERHAUL INSTRUCTIONS	9-15
DIMENSIONAL DRAWINGS	16-17
PARTS LIST AND PARTS DRAWINGS	18-20
LIMITED WARRANTY	21-22



1. INTRODUCTIONS

PLEASE READ THIS MANUAL CAREFULLY

This manual contains useful information 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 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

Short and Standard Drums										
Diameter of Rope 5/16"	Layer of Rope	Unit	1	2	3	4	5	6	7	
	Short / Standard Drums Rated Line Pull	lb		4551	3910	3427	3050	2748	2501	2017
		kg		2064	1774	1554	1383	1246	1134	915
	Short Drum Rope Capacity	ft								224
		m								68
	Standard Drum Rope Capacity	ft								336
m									102	

Diameter of Rope 3/8"	Layer of Rope	Unit	1	2	3	4	5	6	
	Short / Standard Drums Rated Line Pull	lb		4477	3751	3228	2832	2523	2276
		kg		2031	1701	1464	1285	1144	1032
	Short Drum Rope Capacity	ft							156
		m							48
	Standard Drum Rope Capacity	ft							233
m								71	

Diameter of Rope 7/16"	Layer of Rope	Unit	1	2	3	4	5	
	Short / Standard Drums Rated Line Pull	lb		4406	3605	3050	2644	2333
		kg		1999	1635	1383	1199	1058
	Short Drum Rope Capacity	ft						114
		m						35
	Standard Drum Rope Capacity	ft						172
m							52	

Terrain 4000 lbs	
Rated Line Pull (Low Speed)	4,000 lb (1814 kg)
Gear Reduction	5.07:1
Motor	6.0 cu in
Pressure	2500 psi
Flow	10.0 gpm
Weight (Without Cable)	126 lb (57 kg) Standard Drum 116 lb (53 kg) Short Drum

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

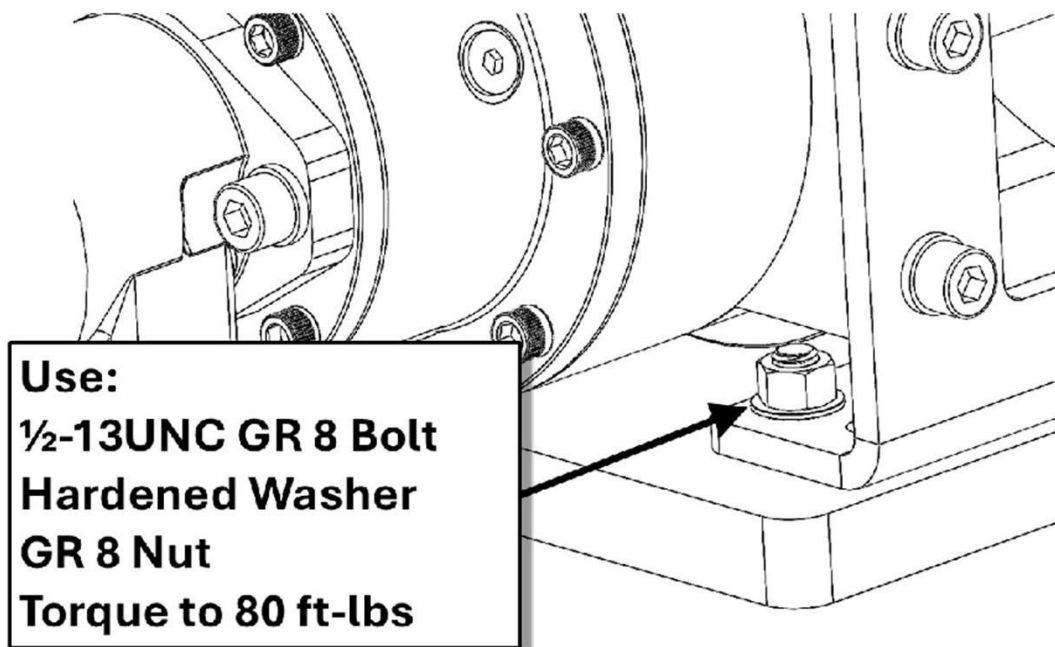
⚠ WARNING

- **A MOTOR SPOOL (OPEN CENTER) DIRECTIONAL CONTROL VALVE IS REQUIRED FOR BRAKE OPERATION.**
- **CLUTCH MUST BE FULLY ENGAGED BEFORE STARTING THE WINCH.**
- **DO NOT DISENGAGE CLUTCH UNDER LOAD.**
- **DO NOT LEAVE CLUTCH DISENGAGED WHEN WINCH IS NOT IN USE.**
- **STAY OUT FROM UNDER AND AWAY FROM RAISED LOADS.**
- **STAND CLEAR OF ROPE WHILE PULLING. DO NOT TRY TO GUIDE ROPE .**
- **DO NOT EXCEED MAXIMUM LINE PULL RATINGS SHOWN IN TABLE.**
- **DO NOT USE WINCH TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.**
- **A MINIMUM OF 8 WRAPS OF SYNTHETIC ROPE AROUND THE DRUM BARREL IS NECESSARY TO HOLD THE LOAD (MINIMUM 5 WRAPS IF WIRE CABLE). CABLE CLAMP (SETSCREW) IS NOT DESIGNED TO HOLD LOAD.**
- **WHEN PULLING A HEAVY LOAD PLACE A BLANKET, JACKET OR TARPAULIN OVER THE ROPE FIVE OR SIX FEET FROM THE HOOK.**
- **AVOID CONDITIONS WHERE LOAD SHIFTS OR JERKS OCCUR, AS THEY MAY CREATE 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 clutch housing end) are properly aligned. Excessive bushing wear and difficulty in free spooling are usually symptoms of misalignment.



An A36 steel plate is recommended for foot mounting and should be .750 inch thick with a flatness of ± 0.030 ".

For this mounting application use 1/2-13NC x 1-1/2" long grade 8 capscrews.

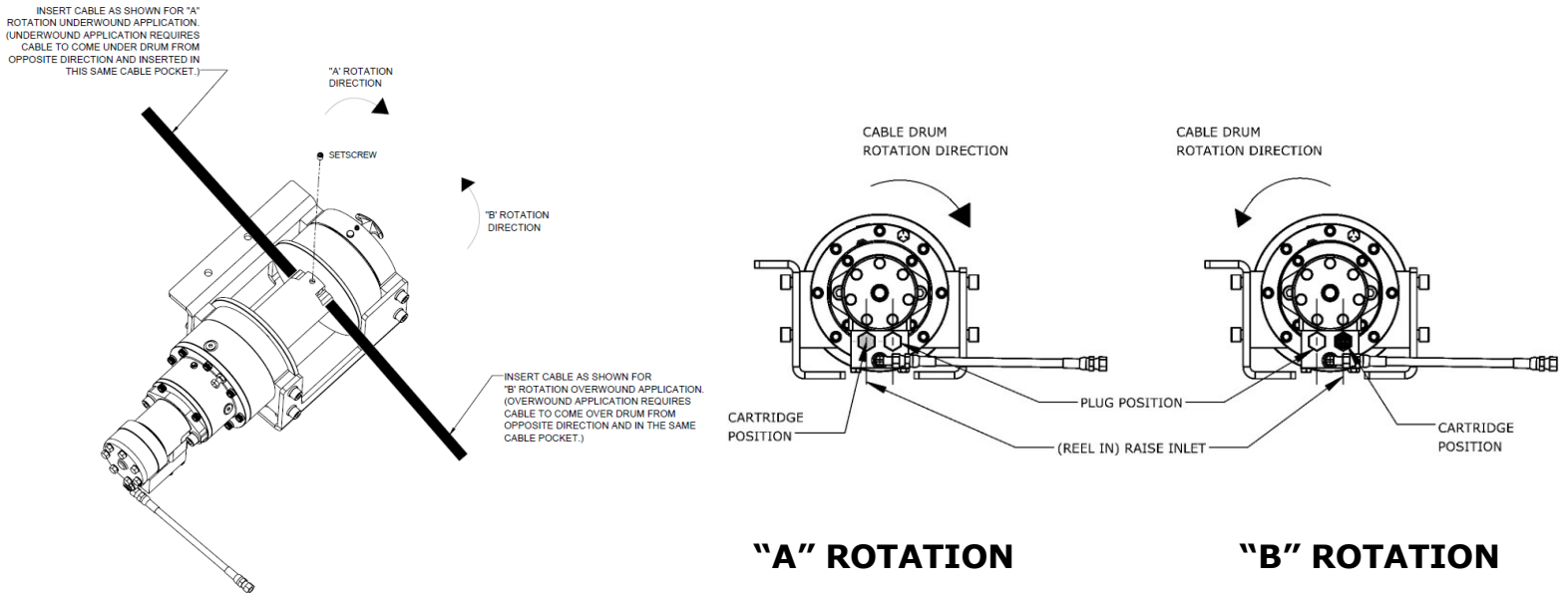
Additionally, hardened washers will be needed to mount winch. Capscrews should be tightened to 80 ft-lb (144 Nm) torque.

3. ROPE INSTALLATION

ROPE INSTALLATION

An "A" or "B" decal on the clutch end bearing indicates the spooling direction of the rope. If the decal is damaged or unreadable, contact Customer Service for additional instructions to determine proper direction. **To reverse the rotation direction, exchange positions of the cartridge and plug shown below.**

1. Unwind rope by rolling it out along the ground to prevent kinking. Securely wrap end of rope, opposite hook end, with plastic or similar tape to prevent fraying.
2. Place taped end of rope into hole in rope drum as shown below. Use the 3/8-16NC x 1/2" long hex socket drive setscrew (included with drum assembly item #1) to secure rope to drum.
3. Carefully run winch in the "pay-in" direction. Keeping tension on end of rope, spool all the rope onto the rope drum, taking care to form neatly wrapped layers.



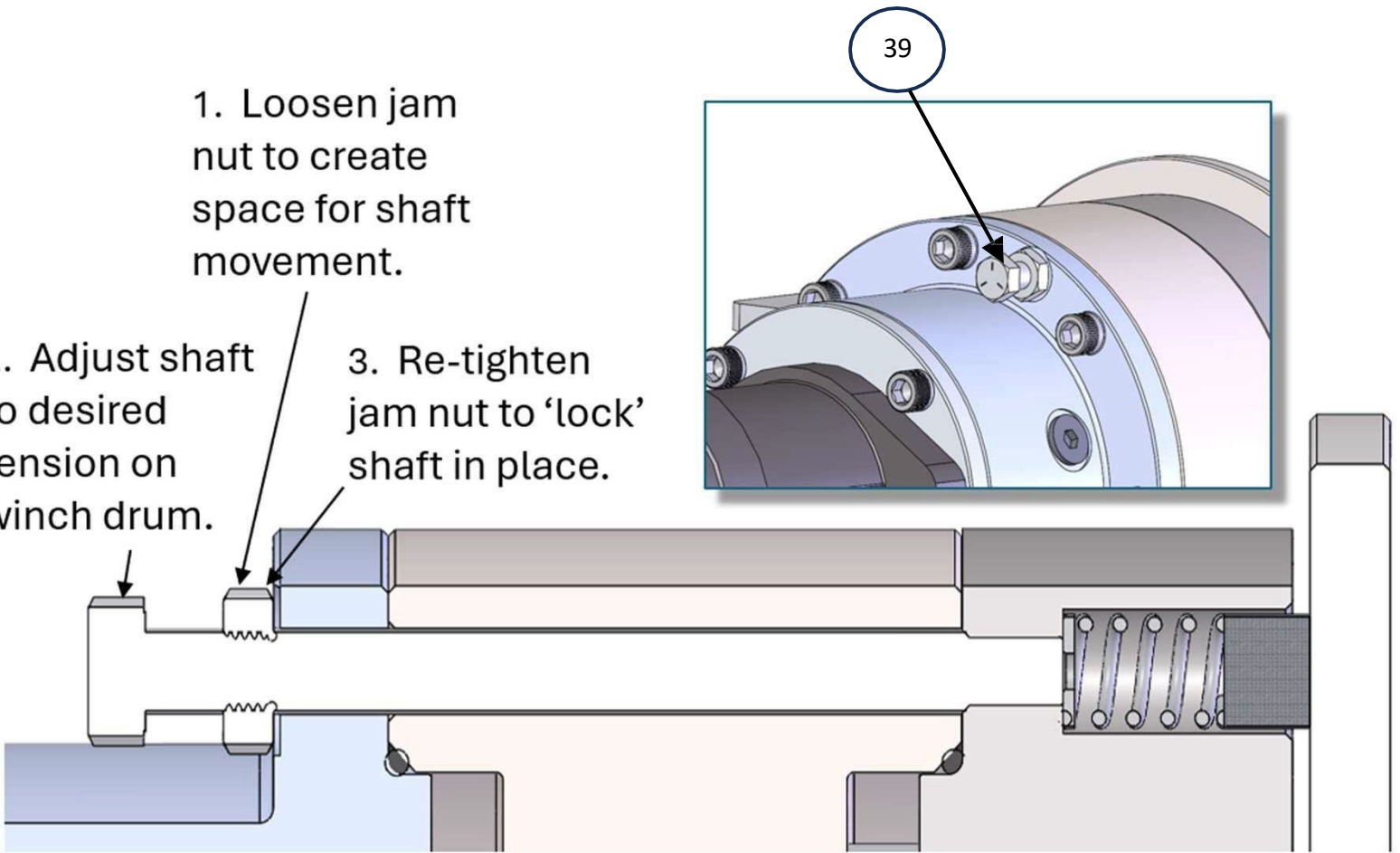
ADJUSTABLE DRAG BRAKE

After installing rope, check free spool operation. Disengage clutch and pull on rope at a walking speed. If rope "birdnests", loosen jam nut and turn adjustable brake (item #39) clockwise to increase drag on drum (see illustration below). If rope pull is excessive, loosen adjustable brake by turning counter clockwise. Tighten jam nut when proper setting is obtained.

1. Loosen jam nut to create space for shaft movement.

2. Adjust shaft to desired tension on winch drum.

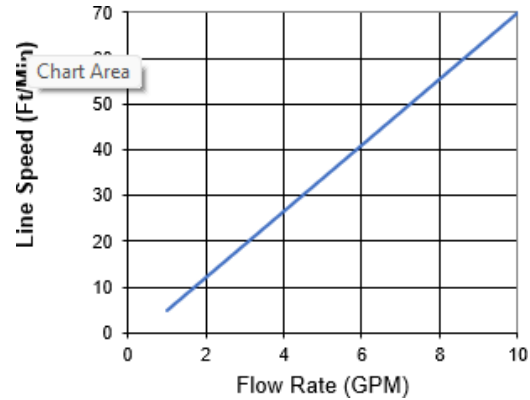
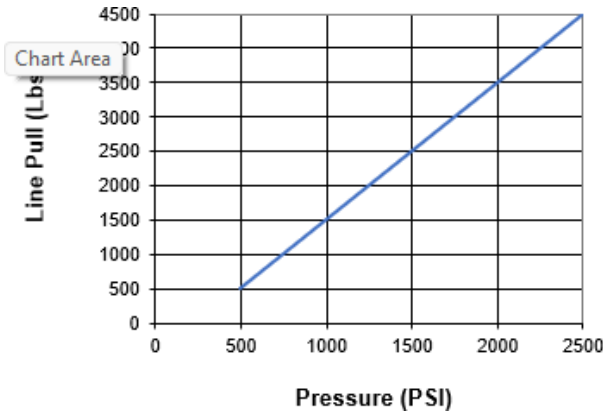
3. Re-tighten jam nut to 'lock' shaft in place.



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 first layer (lbs) vs. Working Pressure (PSI)
- (2) Line Speed, first layer (FPM) vs. flow (GPM)



SYSTEM REQUIREMENTS

MOTOR SPOOL (OPEN CENTER) CONTROL VALVE REQUIRED

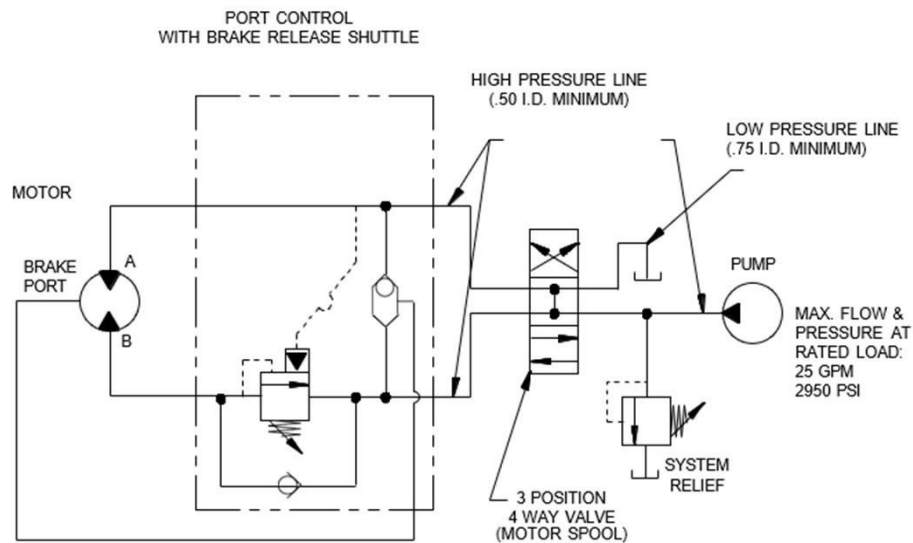
2500 PSI RELIEF VALVE SETTING

10 GPM FLOW RATE

DO NOT EXCEED 15-GPM -- MOTOR AND WINCH MAY BE DAMAGED

10 MICRON NOMINAL FILTRATION

TYPICAL LAYOUT





5. OPERATION

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, to listen to 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 imply a dangerous situation. When pulling a heavy load place a blanket, jacket or tarpaulin over the rope five (5) or six (6) feet from the hook.

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

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

WARNING: DO NOT DISENGAGE CLUTCH UNDER LOAD!

MANUAL CLUTCH SHIFTER (Refer to dimensional drawing page 16 & 17):

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

MAINTENANCE:

1. Inspect the rope for damage frequently. If the rope 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: Monthly, disengage clutch, grease the grease zerk on the clutch handle shaft and work clutch handle IN and OUT several times to lubricate inside the shifter assembly.

3. Check to see that the rope drum does not overrun ("birdnest") when free spooling. Refer to page 4, ROPE INSTALLATIONS INSTRUCTIONS.
4. Replace drum bushings and seals if seals begin to seep grease. Refer to the Overhaul Instructions, pages 8-15. Add additional lubricant, Mobilith SHC 007, to drum bearings if required.



6. TROUBLESHOOTING GUIDE

TROUBLE SHOOTING GUIDE		
CONDITIONS	POSSIBLE CAUSE	CORRECTION/ACTION
DRUM WILL NOT OPERATE WITH NO LOAD	Winch not mounted squarely, causing end bearing to bind up. Verify clutch is engaged. Gears damaged.	Check mounting. Refer to Winch Mounting, page 3. Inspect and replace damaged gears.
DRUM WILL NOT ROTATE UNDER LOAD	Winch not mounted squarely, causing end bearing to bind up. Load greater than rated capacity of winch. Low hydraulic system pressure.	Refer to Specifications page 1 for line pull rating. Check pressure. Refer to Hydraulic Systems performance charts page 6.
WINCH RUNS TOO SLOW	Low hydraulic system flow rate. Motor worn out.	Check flow rate. Refer to System Requirements and Typical Layout page 6. Replace motor
DRUM WILL NOT FREESPOOL	Clutch not disengaged. See: MANUAL CLUTCH SHIFTER, PAGE 7 Winch not mounted squarely, causing end bearing to bind up.	Check Operation, page 7. Check mounting. Refer to Winch Mounting, page 3.
BRAKE WILL NOT HOLD	Incorrect directional control valve (cylinder spool-closed center)	Use only a motor spool (open center) control valve. Refer to page 19 parts list.
LOAD DRIFTS	Excessive Back pressure (100 PSI Max.)	Check for restrictions in hydraulic system. Refer to System Requirements and Typical Layout page 6.
ROPE BIRDNESTS WHEN CLUTCH IS DISENGAGED	Drag brake improperly adjusted	Adjust drag brake. Refer to page 5. Refer to ROPE INSTALLATION, page 4.
EXCESSIVE NOISE	Hydraulic system flow too high. Drum in bind, winch not mounted squarely.	Check flow rate. Refer to Typical Layout page 6. Check mounting. Refer to Winch Mounting, page 3.
DRUM CHATTERS IN REEL IN DIRECTION	Low hydraulic system flow rate Low hydraulic system relief pressure setting	Check flow rate. Refer to Typical Layout page 6. Check relief valve setting.
OIL LEAKS FROM BREATHER VENT UNDER MOTOR END BEARING	Damaged brake o-rings, backup rings, or sealing surfaces	Disassemble brake and inspect. See Overhaul Instructions, pg. 9.

INSTRUCTIONS FOR OVERHAUL TERRAIN 4000 SERIES WINCH

Take note of mounting configurations for proper mounting of parts during re-assembly. Replace all gaskets, O-rings, and seals during re-assembly.

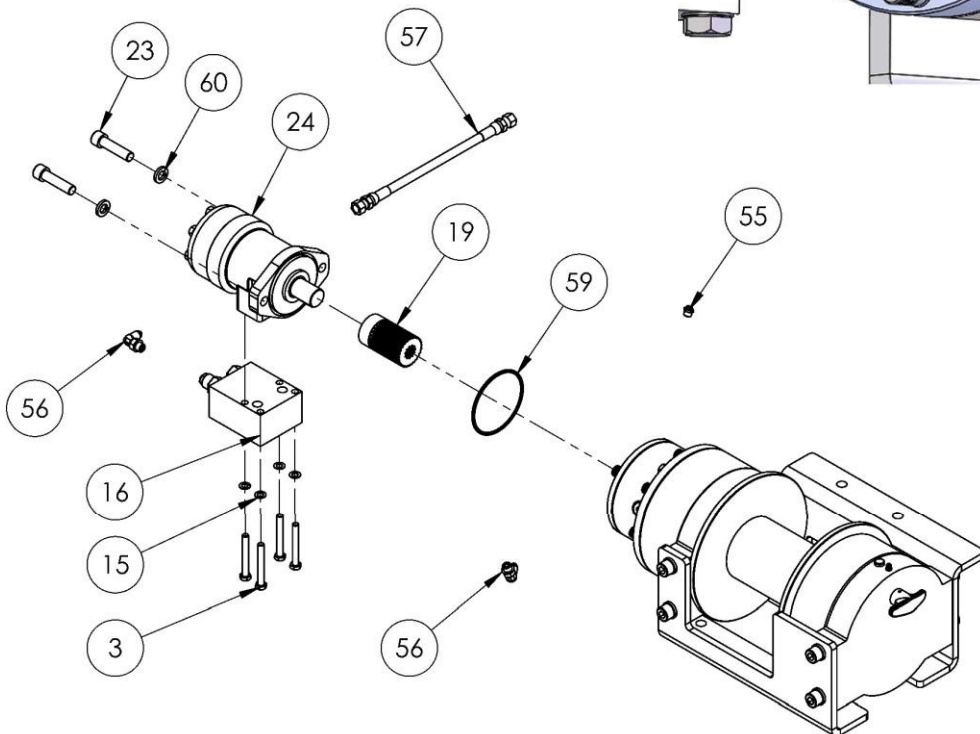
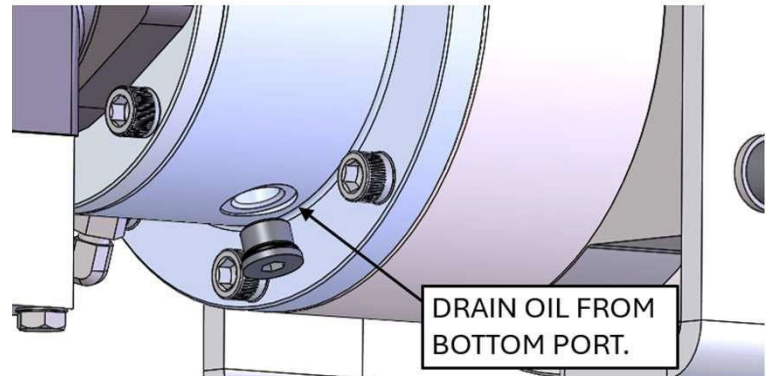
Drain oil from bottom port as shown below. Disconnect tube (item #57) from elbow fittings (items #56) on bottom of end bearing and counterbalance valve (item #16). Remove motor (item #24) from end bearing by slowly unscrewing capscrews & washers (items #23 & items #60).

Check breather vent (item #55). Make sure it is not clogged. If oil is leaking from vent, check brake O-rings, backup rings and sealing surfaces.

Replace O-ring (item #59).

Remove coupling (item #19) from end bearing. Examine coupling for signs of wear, replace if necessary.

If necessary, remove counterbalance valve from motor by removing capscrews & washer (items #3 & items #15).



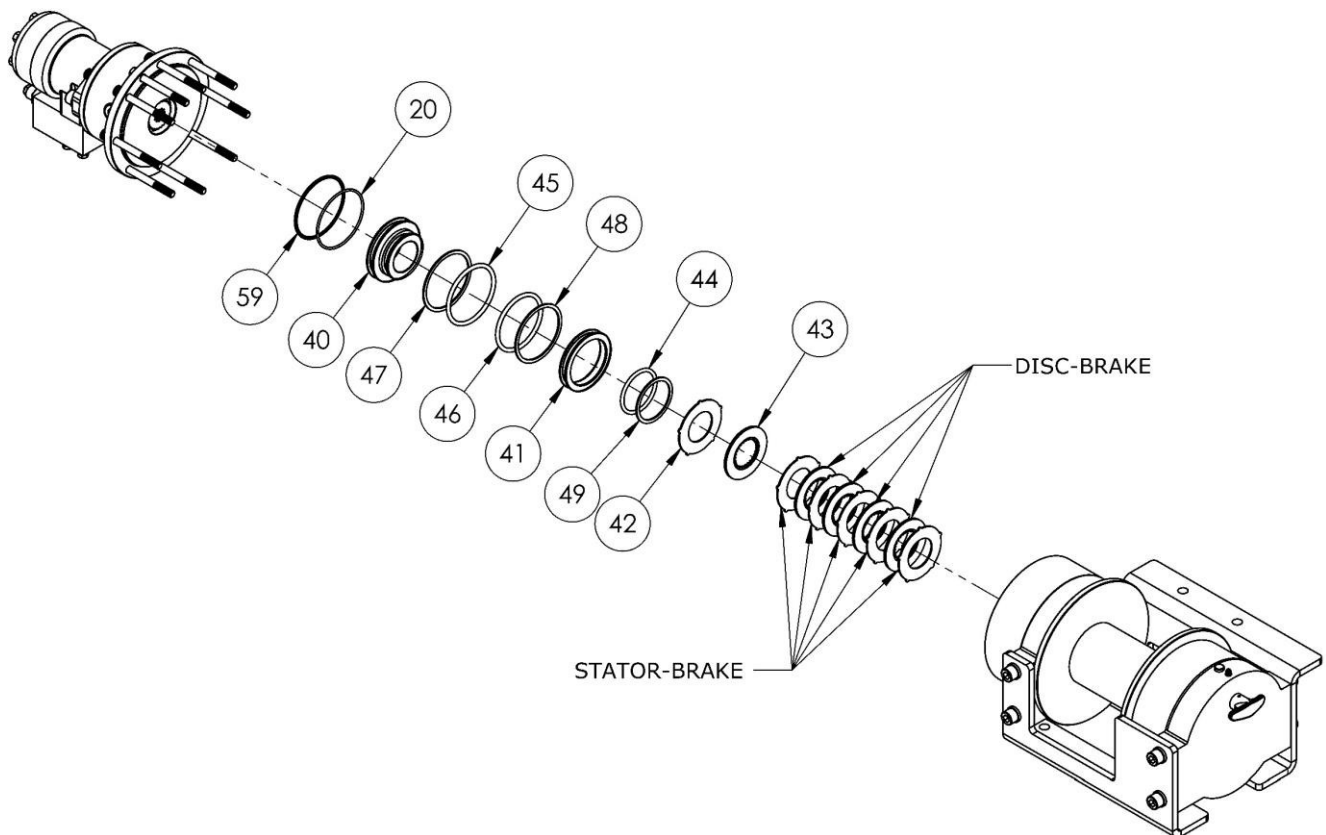
Remove O-rings (items #20 & 59) with screw driver. Remove brake parts from end bearing.

NOTE POSITION OF O-RINGS AND BACKUP RINGS BEFORE REMOVAL.

Examine brake discs (items #43) and stators (items #42) for signs of wear, and replace if necessary.

Examine O-rings (items #45 and 46) and backup rings (items #47 and 48) in brake piston (item #40), as well as O-ring (item #44) and backup ring (item #49) in backup brake piston (item #41) for signs of wear.

Remove O-rings and backup rings from grooves in brake piston or backup brake piston and replace if necessary.

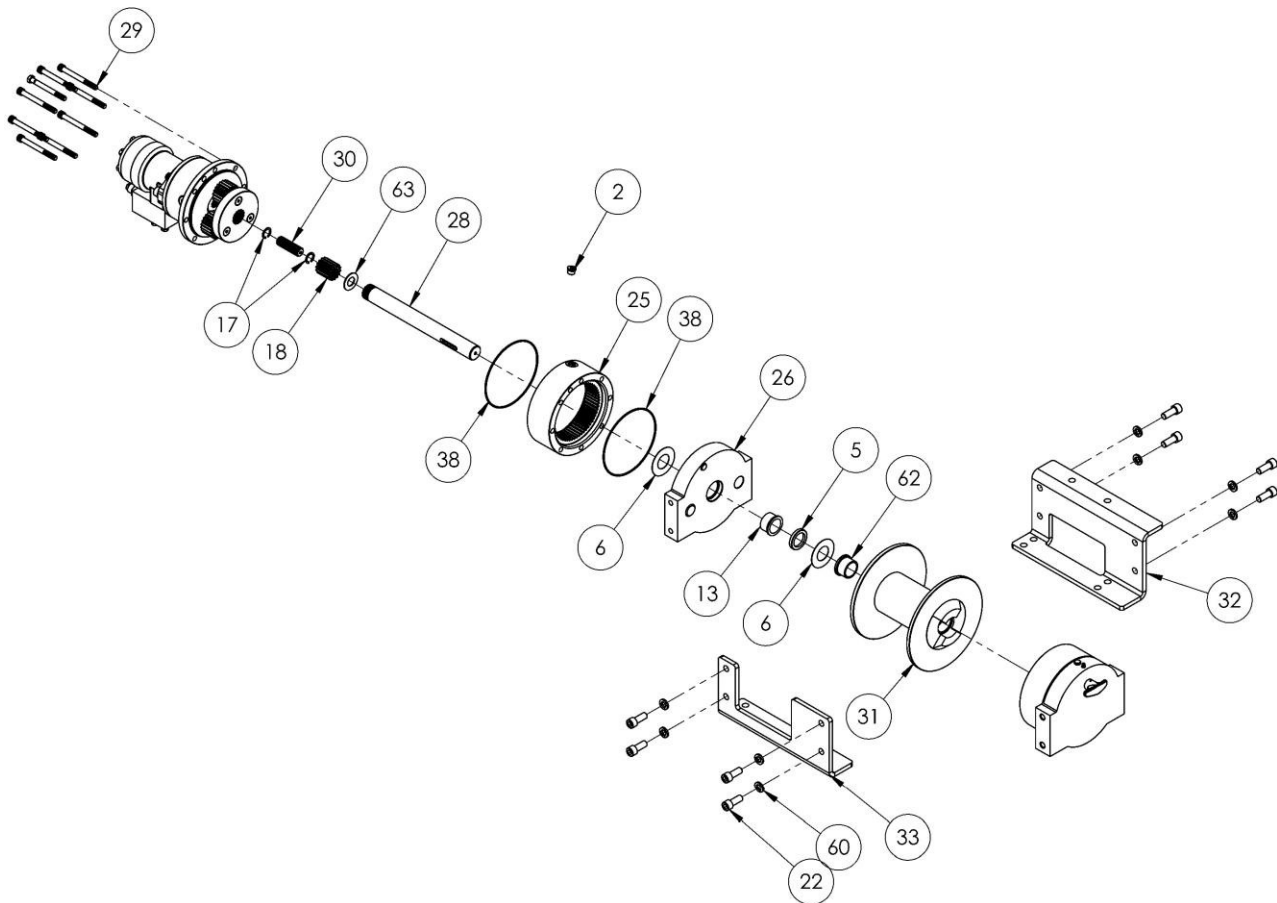


Remove bracket mounting (items #32 & item # 33) from end bearings by unscrewing capscrews (items #22). Slide motor end bearing (item #26) and drum (item #31) from clutch housing end bearing. Remove input shaft (item #28) from end bearing. Inspect shaft, output sun gear & shaft input stub (item #18 & item #30) for damage and replace if necessary. To remove the output sun gear, remove the snap rings (items #17) from shaft input stub and thrust washer (item#63) and pull off the end of the shaft.

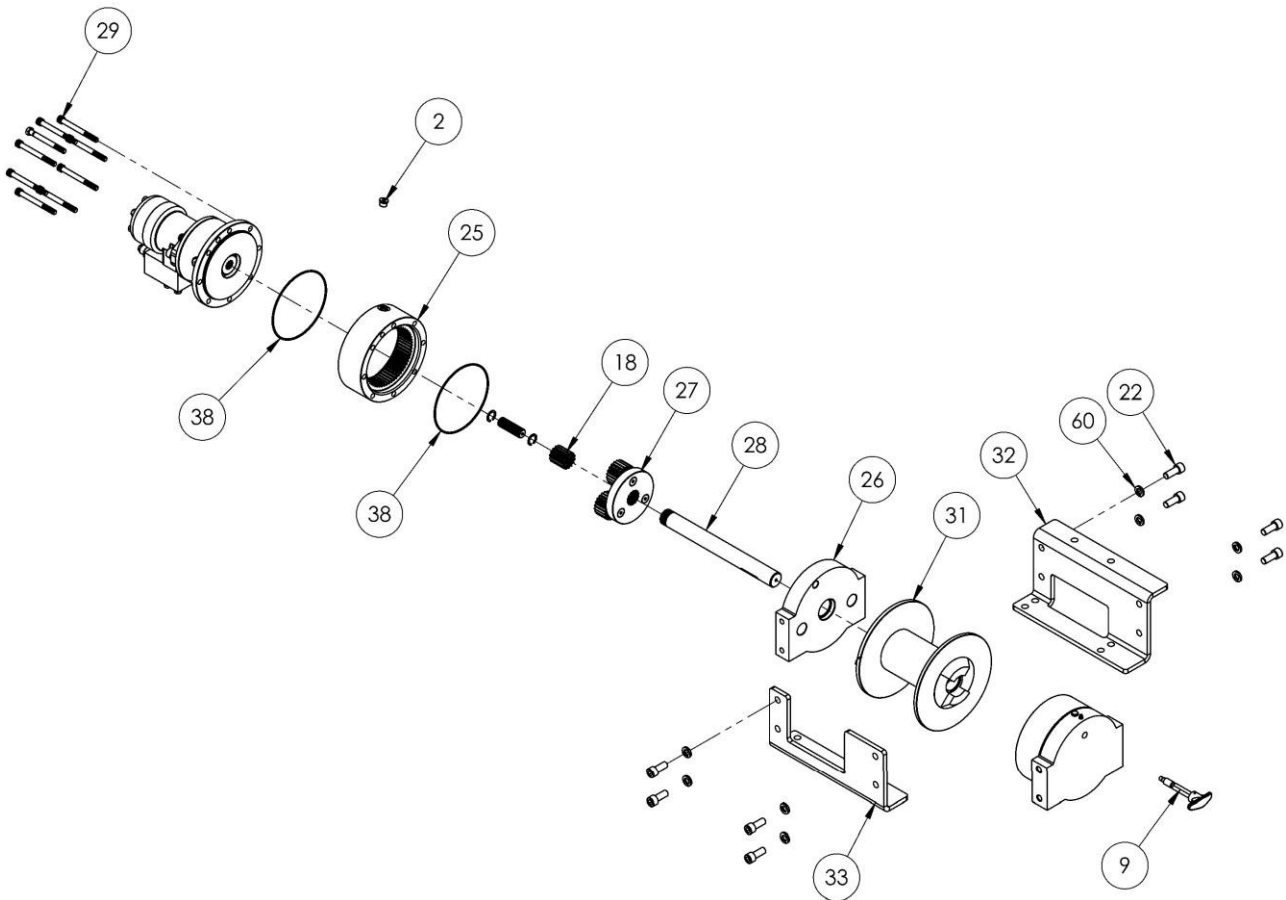
Remove bushing (item #13) and O-ring (item #38) from motor end bearing. Place new, well-oiled O-ring into groove inside of end bearing and press new bushing onto end bearing.

Remove oil-embedded flanged bushing (item #62) from drum and remove thrust washer (item #6).

Inspect oil seal (item #5) for damage and replace if necessary.



Remove capscrews (item #29) from gear housing end bearing.
Remove O-rings (item #38) from the ring gear. Remove ring gear (item #25) from gear housing end bearing (item #26).
Ring gear must be fully seated with assembly carrier (item #27).



Place end of shaft with output sun gear on it into drum (item #31). Rotate shaft to engage planet gears with output sun gear. Place Gear End Bearing on Drum and engage planet gears with ring gear.
Assemble motor end bearing (item #26) to drum assembly and use mounting plates (items #32 & 33) and capscrews (items #22) to hold both end bearings together. Tighten capscrews to 55 ft-lbs (75 Nm).
If necessary, remove and replace the manual shifter assembly (item #9)

MANUAL CLUTCH SHIFTER ASSEMBLY

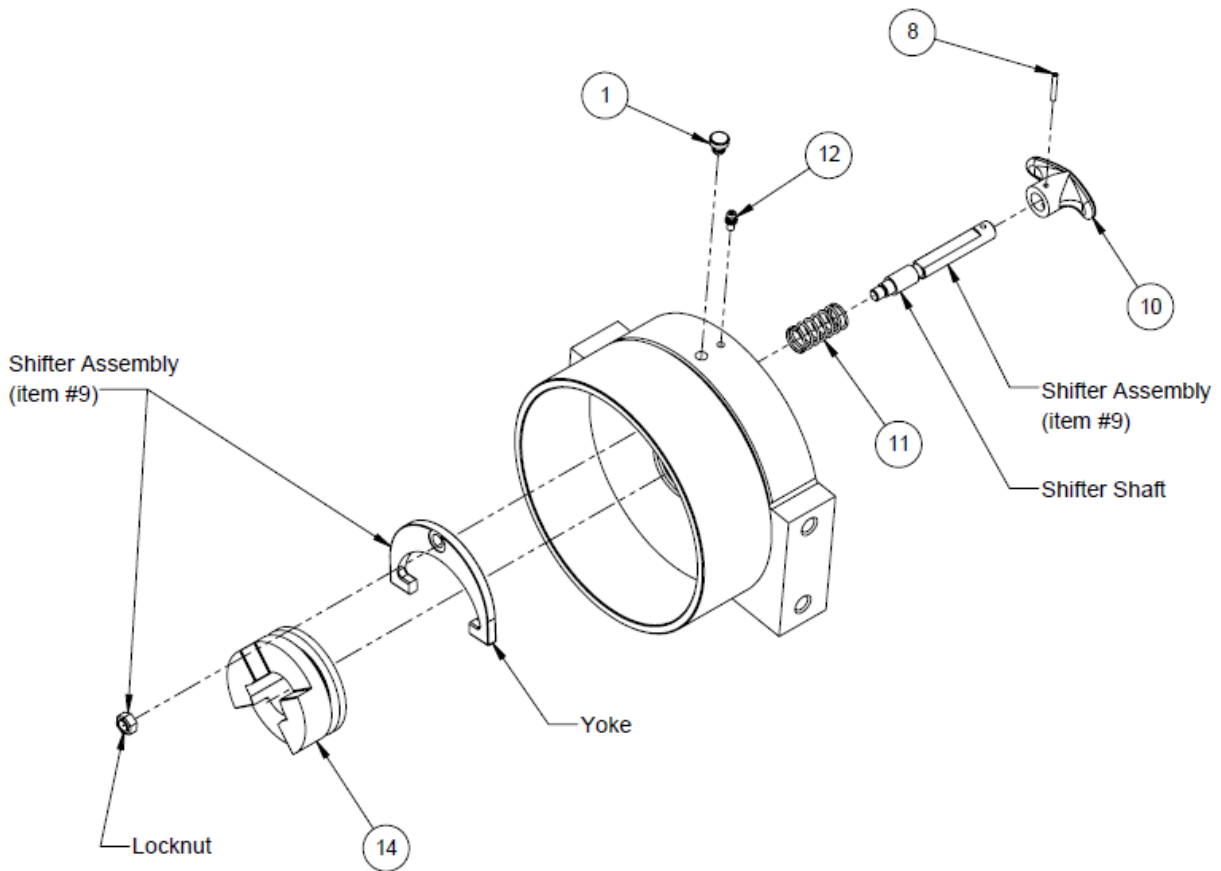
Loosen OR unscrew shifter assembly (item #9).

Remove handle and spirol pin (item #10 & item #8) from shifter assembly.

Reinstall shifter assembly with shifter shaft, locknut, jam nut, spring and handle(items #8,9,10,11) positioned in gear housing as shown below.

Lightly tighten jam nut. After bolting clutch end housing back onto winch, rotate drum until handle snaps fully into the engaged

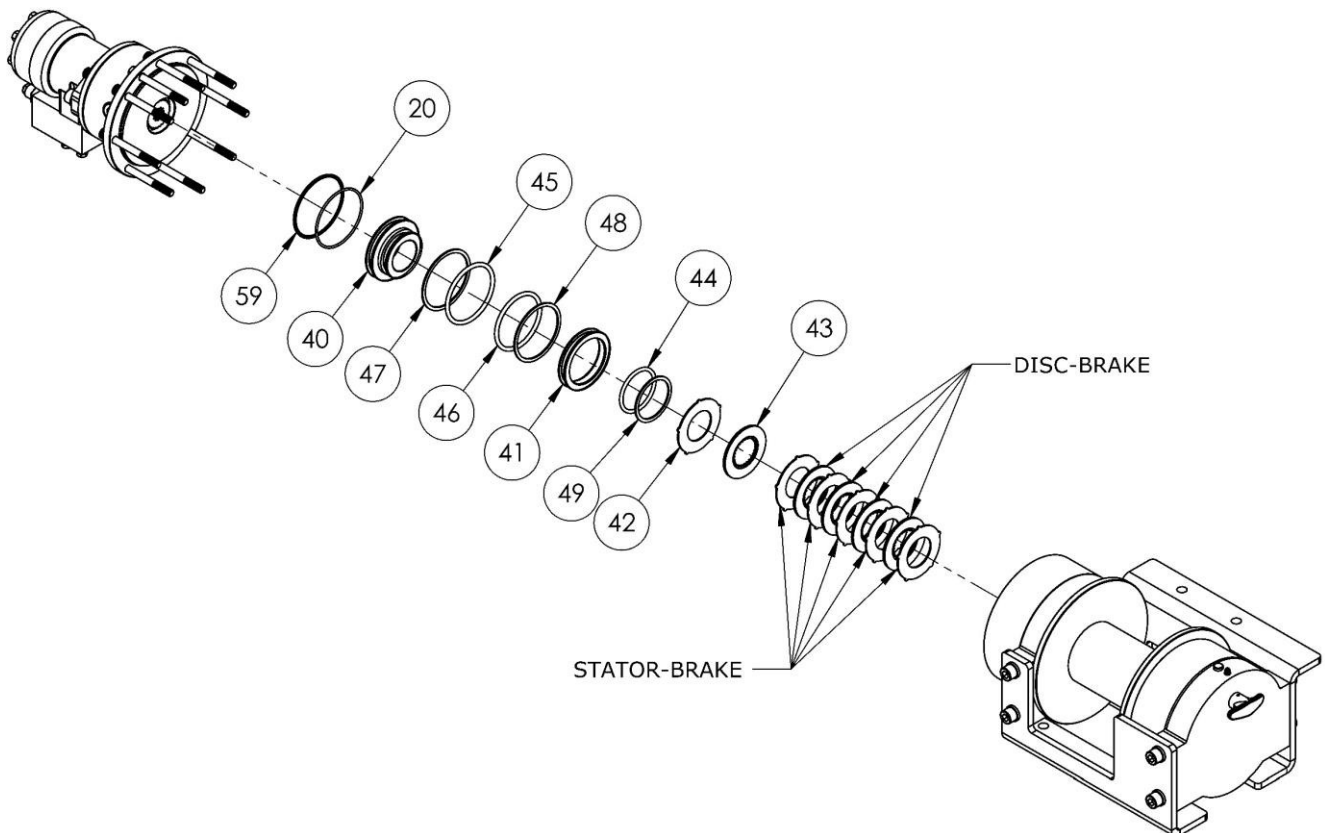
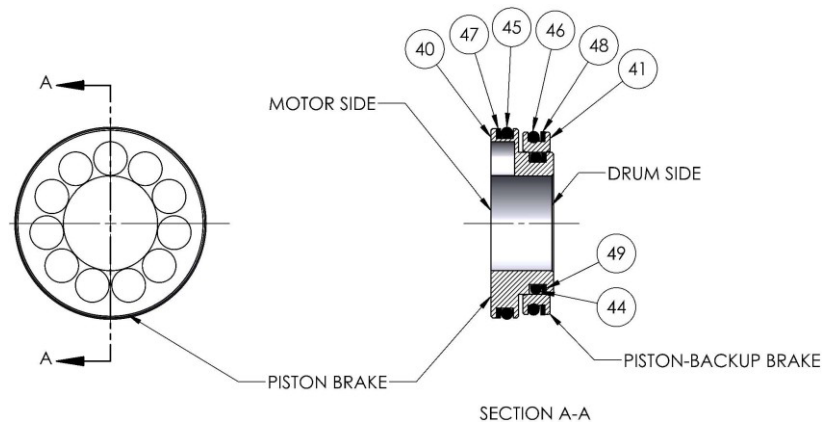
position. Pull handle out and rotate 90°. Verify that drum can be rotated freely (at least one full revolution) with clutch shifter at the DISENGAGED position. Securely tighten jam nut while holding the handle.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
9	370058	YOKE	1
	418461	LOCKNUT	1
	489022	SHIFTER SHAFT	1

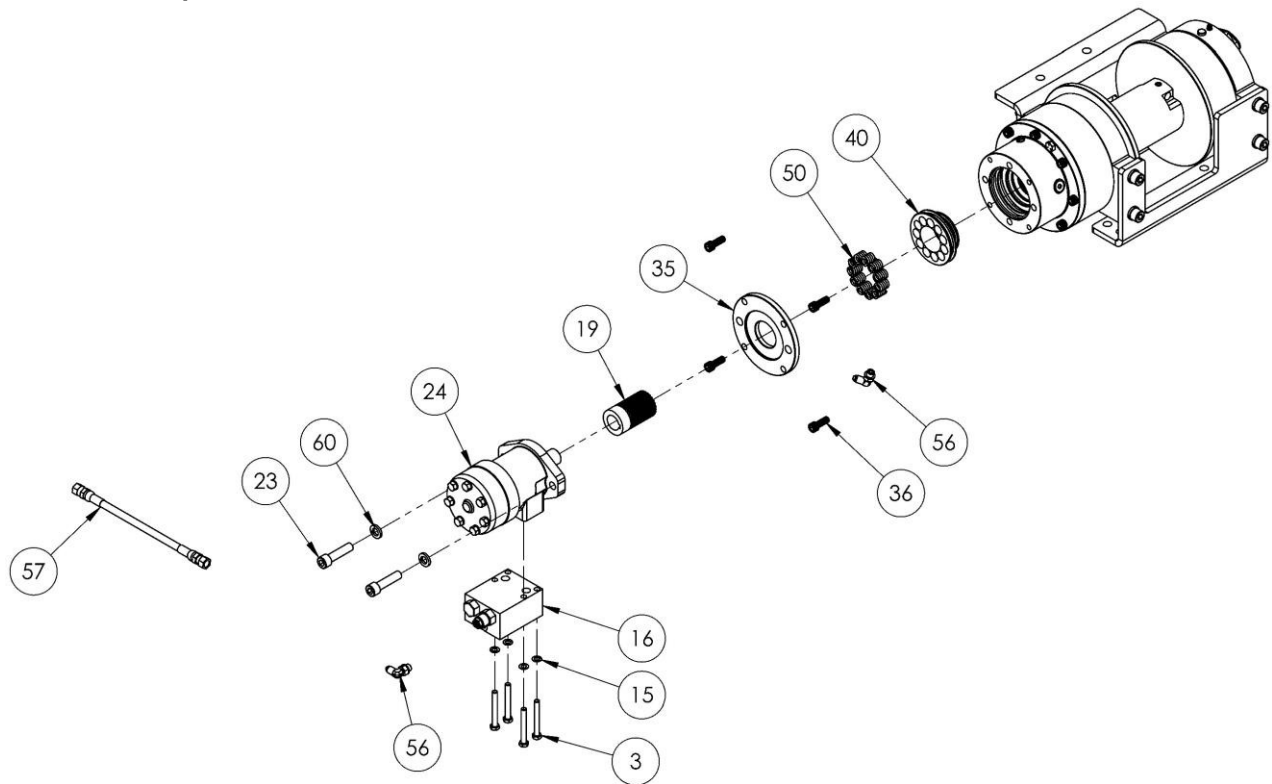
7. OVERHAUL INSTRUCTIONS

Set winch with gear housing end down on work surface. Install well-oiled O-rings and backup rings into grooves on outside of brake piston and backup brake piston as shown in cross-section A-A below. Piston, backup piston, brake discs and stators must be clean and free of grease and oil. Insert brake discs (item #43) and stators (item #42) into gear end alternating, with stators first and last. Insert backup brake piston (item #41) into motor end and insert brake piston (item #40) into it. **Apply even pressure on piston when installing.**

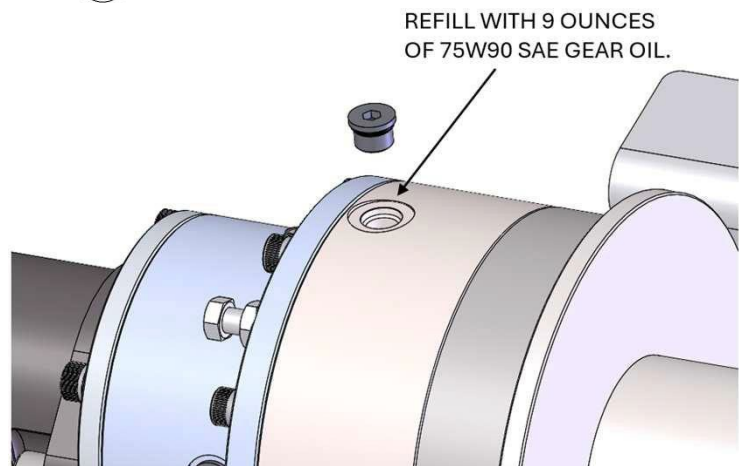


7. OVERHAUL INSTRUCTIONS

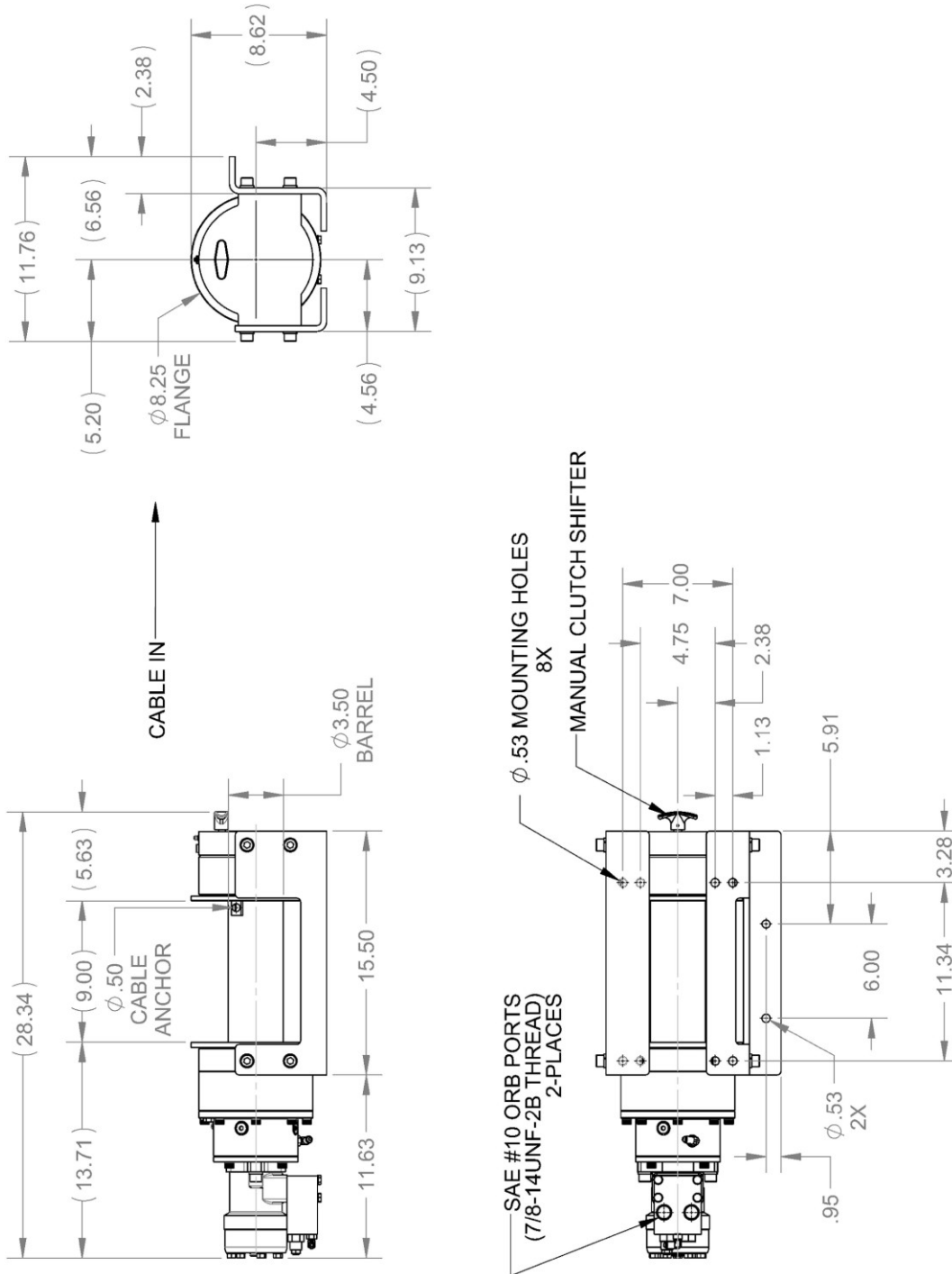
Insert springs (item #50) into pockets in back of brake piston (item #40). Slide brake piston towards gear housing and place the brake cover (item #35) securely tighten with (4) capscrews (item #36). Insert motor coupling (item #19), engaging it with the discs and the input shaft. Slide motor shaft into coupling. Attach motor to brake housing cover using (2) capscrews (item #23) and (2) lockwashers (item #60). Evenly tighten to 49 ft-lbs. (66 Nm) torque. Install the counterbalance valve (item #16) to the motor using (4) capscrews (item #3) and (4) lockwashers (item #15). Tighten to 17 ft-lbs (23 Nm). Securely connect fittings (item #56) to motor end housing and counterbalance valve, and connect tube assembly (item #57) to fittings. Apply at least 550 PSI hydraulic system pressure to brake and verify that brake releases (winch drum will rotate).



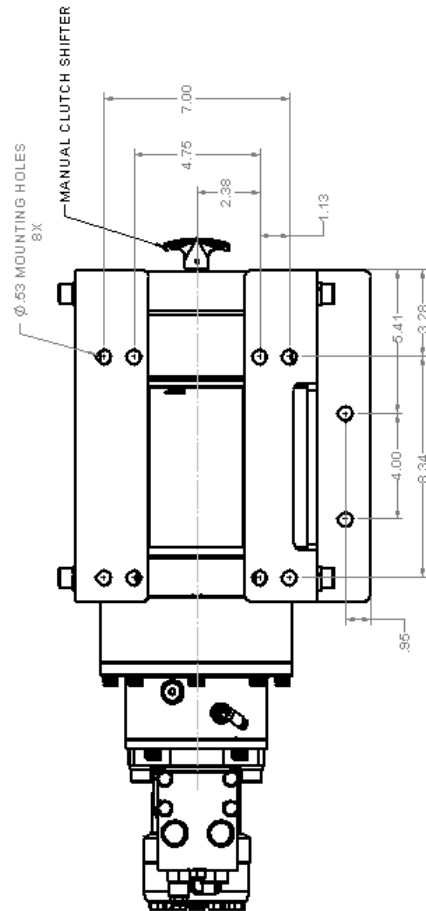
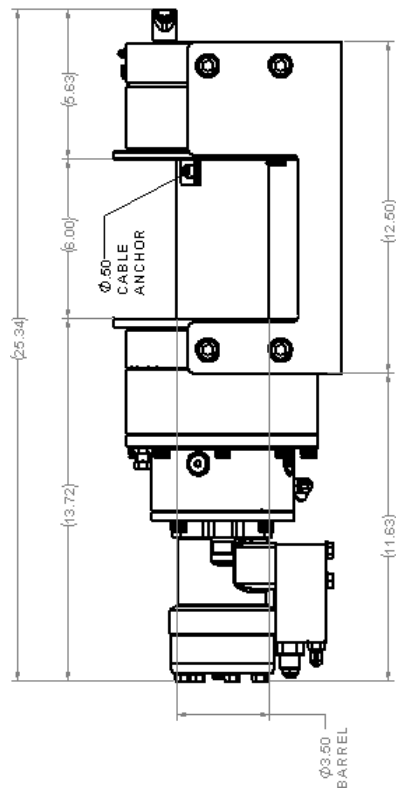
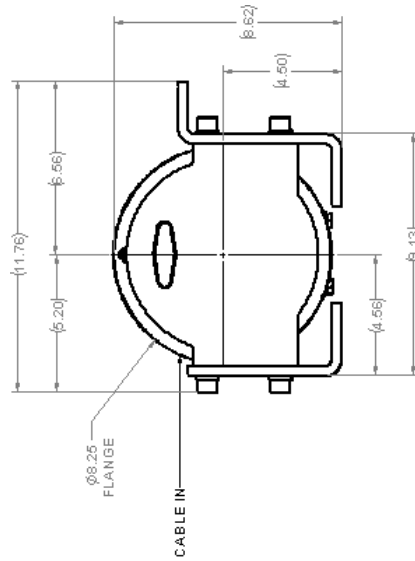
Once the winch is properly reassembled, refill ring gear port with 9 ounces of 75W90 SAE gear oil as shown.

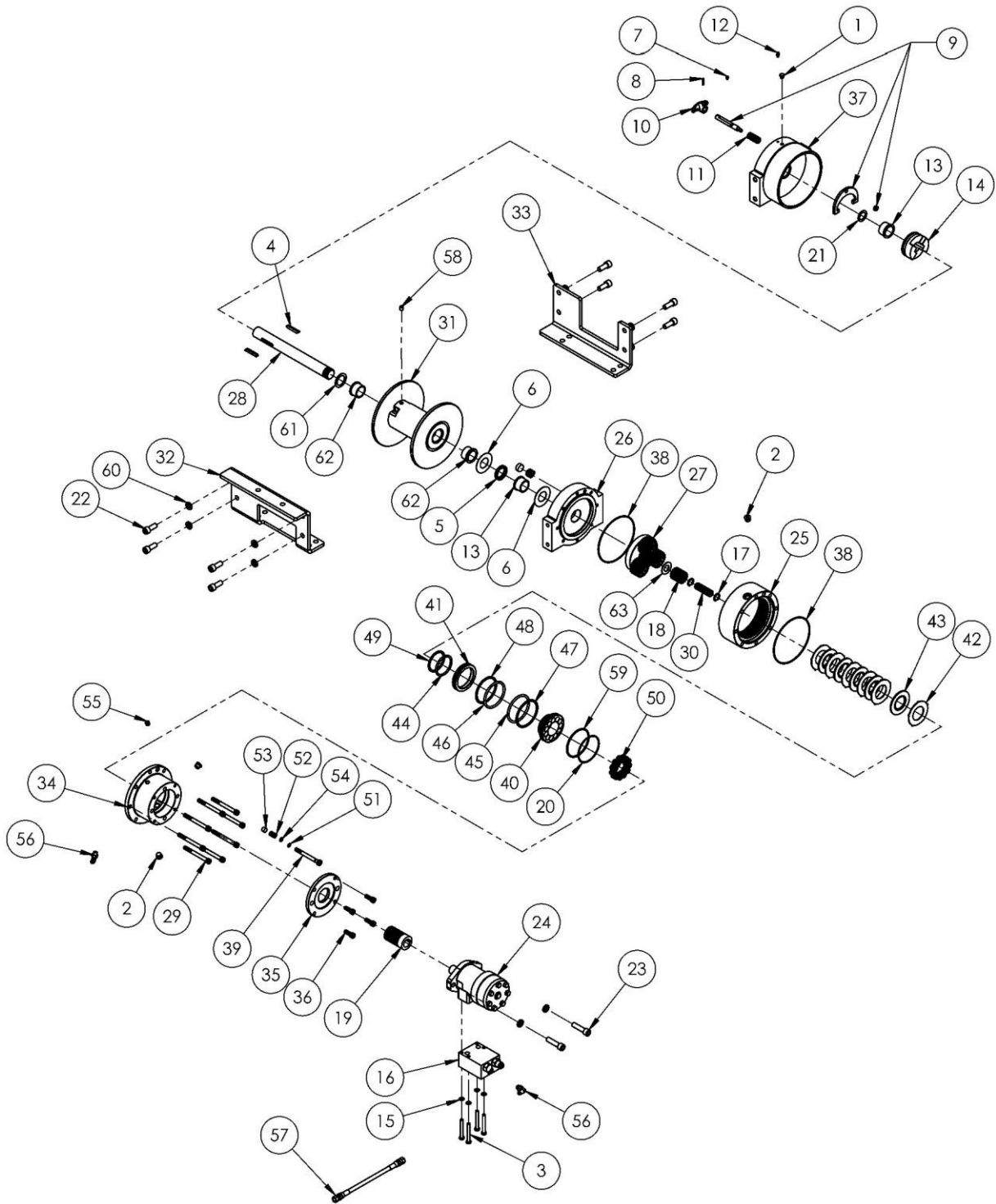


WINCH STANDARD DRUM



WINCH SHORT DRUM







PARTS LIST

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION	KITS					
				222053	207059	248076	283097	246087	207060
1	1	472012	PLUG-INSERT						
2	2	472052	PLUG-SAE O-RING,.562-18NF						
3	4	414159	CAPSCREW-5/16-18NC X 2.50 LG						
4	2	450006	KEY-BARTH,5/16X1 7/8LG	X					
5	1	486017	OIL SEAL					X	
6	2	518014	THRUST WASHER-1/32			X			
7	1	416030	SS-1/4-20NCX3/8,HXSOC	X					
8	2	470033	SPIROL PIN-1/8X7/8	X					
9	1	276056	SHIFTER ASSEMBLY						
	1	370058	YOKE	X					
	1	418461	LOCKNUT	X					
	1	489022	SHIFTER SHAFT	X					
10	1	336010	HANDLE-CLUTCH SHIFT	X					
11	1	494053	SPRING	X					
12	1	456001	FITTING-LUBE, 3/16 DRIVE FIT						
13	2	412045	BUSHING-GH			X			
14	1	324160	JAW CLUTCH	X					
15	4	418163	LOCKWASHER-5/16 MED SECT						
16	1	516042	VALVE-MOTOR CONTROL						
17	2	490003	SNAP RING		X				
18	1	334174	GEAR-OUTPUT SUN						
19	1	431019	BRAKE/MOTOR COUPLING				X		
20	1	462107	ORING 3.237 ID X 3.443 OD X .103 THK		X			X	
21	1	518052	WASHER-THRUST,1.37 O.D.			X			
22	8	414948	CAPSCREW-1/2-13NC X 1.25 LG SOC HD						
23	2	414511	CAPSCREW-1/2-13 X 2.0 LGSOC HD						
24	1	458195	MOTOR-HYDRAULIC.6.0 CU. IN.						
25	1	444151	GEAR-RING						
26	1	338521	END BEARING-GEAR END						
27	1	297149	ASSEMBLY-OUTPUT CARRIER						
28	1	357601 (OR)357603	SHAFT						
29	8	420062	CAPSCREW-3/8-16UNC X 3.75 LG, HEX SOC HD						
30	1	357602	SHAFT-INPUT, STUB						
31	1	234313 (OR)234314	DRUM						
32	1	408541 (OR) 408543	BRACKET-MOUNTING 1						
33	1	408542 (OR)408544	BRACKET-MOUNTING 2						



PARTS LIST

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION	KITS					
				222053	207059	248076	283097	246087	207060
34	1	338522	HOUSING-BRAKE, HYD						
35	1	328212	COVER-BRAKE, HYD						
36	4	420063	STEEL SOCKET HEAD SCREW						
37	1	338520	CLUTCH HOUSING						
38	2	462140	ORING 5.737 ID X 5.943 OD X .103 THK					X	
39	4	489052	SHAFT, ADJUSTABLE BRAKE						
40	4	330013	PISTON-BRAKE						X
41	4	330014	PISTON-BACKUP BRAKE						X
42	6	330011	STATOR-BRAKE		X				
43	5	330012	DISC-BRAKE FRICTION		X				
44	1	462067	O-RING-2.225 ID X .210 THK, 2-331		X			X	
45	1	462068	O-RING-3.10 ID X .210 THK, 2-338		X			X	
46	1	462069	O-RING-2.975 ID X .210 THK, 2-337		X			X	
47	1	462070	RING-BACKUP, 3.143 ID X .076 THK, 8-338		X			X	
48	1	462071	BACK-UP		X			X	
49	1	462072	RING-BACKUP, 2.268 ID X .076 THK, 8-331		X			X	
50	11	494124	SPRING-BRAKE		X				
51	1	462064	O-RING					X	
52	1	494180	spring						
53	1	330515	PUCK-DRAG BRAKE						
54	1	418140	Zinc-Plated Steel SAE Washer						
55	1	456008	RELIEF VENT						
56	2	432018	FITTING, 7/16-20 90 degree						
57	1	509138	HOSE, HYD BRAKE RELEASE						
58	1	416059	SETSCREW 3/8-16NC X 1/2 HX SOCK HD CUP						
59	1	462142	O-RING					X	
60	10	418218	LOCKWASHER-1/2 ID MED SECT						
61	1	518015	THRUST WASHER-1/32			X			
62	2	308101	BUSHING OIL EMBEDDED FLANGE			X			
63	1	518047	WASHER-THRUST, .063 THK.X1.50 OD			X			
64	1	464004	GREASE TUBE-LUBRIPLATE 3000W - 14. 5oz (NS)	X					

NOTE: NS - NOT SHOWN

**RAMSEY WINCH INDUSTRIAL WINCH
LIMITED WARRANTY**

1.1 Scope of Warranty Coverage. Upon the terms and subject to the conditions set forth in this limited warranty:

- (a) RAMSEY WINCH (referred to herein as “**RAMSEY WINCH**” or the “**Manufacturer**”) warrants to each initial end user customer (a “**Purchaser**”) of a new industrial winch together with any accessories manufactured and sold directly from RAMSEY WINCH (the “**Product**”) that the Product shall be free from defects in material and workmanship, under normal working and service conditions, for a period of eighteen (18) months from the date the Product is shipped from RAMSEY WINCH. (the “**Warranty Term**”). A Purchaser shall be eligible for an additional eighteen (18) months of coverage in addition to the Warranty Term (also referred to as the “**Standard (+) PLUS benefit**”) only if the Purchaser (i) complies with Section 1.2(a) and (ii) registers the Product during the Warranty Term at myproduct.ramseywinch.com.
- (b) Notwithstanding the foregoing, this warranty does not cover components damaged by accident, abuse, misuse, neglect, untrained operators, collision, overloading, modification, disassembly, rework, misapplication, improper installation, lack of lubrication or maintenance, or improper service. This warranty does not cover the paint or material finish, rope (wire or synthetic), removal or reinstallation of the winch, or normal wear and tear and loss of functionality due to aging of the Product (which may include but is not limited to bearings, bushings, seals, O-rings, gaskets, brake material, motor brushes, electrical cables and more).

1.2 Eligibility of Warranty Coverage.

- (a) A Purchaser shall be eligible for warranty coverage under this Limited Warranty during the Warranty Term only if:
 - (i) Prior to placing a Product in service, and throughout use of the Product during the Warranty Term, the Purchaser provides (or causes to be provided) proper storage such that foreign objects (e.g. rain or debris) cannot enter any Product through entry ports which are normally closed during operation.; and
 - (ii) The Purchaser maintains, or causes to be maintained, the Product according to commercially reasonable standards and utilizes the Product for the purposes for which it was created; and
 - (iii) No repairs or alterations have been made by any party other than RAMSEY WINCH, including Purchaser, unless otherwise authorized in writing by RAMSEY WINCH.

1.3 Transferability of Warranty.

- (a) This warranty is transferable only from the Purchaser to the first subsequent transferee (the “**Transferee**”) of the Product from Purchaser upon (i) written notification to RAMSEY WINCH and (ii) registration of the transfer, both within 30 days of such Product transfer.
- (b) Upon satisfaction of transfer requirements set forth in Section 1.3(a), the Transferee shall succeed to all the rights and obligations of the Purchaser set forth in this Limited Warranty.

1.4 Certain Limitations on Scope of Warranty Service.

- (a) Any obligation of RAMSEY WINCH under this warranty, statutory or otherwise, is limited to the repair of the Product, at its factory or Authorized Service Centers. Notwithstanding the foregoing, if field service or repair is performed by RAMSEY WINCH at the request of the Purchaser and no defect is found with material or workmanship of the Product, the Purchaser shall compensate RAMSEY WINCH for its time and expenses within thirty (30) days of delivery of an invoice relating to the same. If repair is determined by RAMSEY WINCH in its sole, absolute and uncontrolled discretion to be impossible or impractical, then RAMSEY WINCH may satisfy this warranty by replacing the Product. RAMSEY WINCH will not provide any cash payment or credits for defective materials or workmanship.

- (b) Purchaser shall be responsible for any and all freight charges for any Product receiving warranty service under this limited warranty. Any travel time, transportation charges, freight charges, or similar costs incurred by RAMSEY WINCH in connection with the replacement or repair of defective parts, shall, be the responsibility of the Purchaser. If applicable, RAMSEY WINCH shall invoice Purchaser for the total amount of such charges within sixty (60) days of fulfilling its duties under this warranty, payable within thirty (30) days of delivery of such invoice. In no event shall RAMSEY WINCH be liable for bills for service, labor or other expenses that have been incurred by the Purchaser without approval or prior authorization by RAMSEY WINCH for inspection, maintenance, or repair of the Product.
- (c) If a Product is found to be operable upon inspection, the Product, at Purchaser's election, may be either (1) returned to the Purchaser with a service charge from RAMSEY WINCH for inspection, cleaning, and routine replacement of all rubber components and any other parts that show wear; or (2) RAMSEY WINCH can dispose of the product safely.

1.5 **Limitations of Liability.** RAMSEY WINCH shall in no event be liable for punitive, special or consequential damages relating to the Product or this Warranty. RAMSEY WINCH makes no warranty in respect to third-party accessories, upgrades, or additions to the Product.

1.6 **Improving Product.** RAMSEY WINCH reserves the right to improve the Product through changes in design or materials as it may deem desirable or necessary without being obligated to incorporate, upgrade, or otherwise modify previously manufactured products.

1.7 **Limitations of Warranty.**

- (a) THE WARRANTY SET FORTH ABOVE IS THE ONLY EXPRESS WARRANTY. RAMSEY WINCH HEREBY DISCLAIMS AND EXCLUDES ANY OTHER EXPRESS, IMPLIED, OR STATUTORY WARRANTIES, ARISING BY OPERATION OF LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE, OF TRADE, OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY , FITNESS FOR A PARTICULAR PURPOSE, AND INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY.
- (b) ANY IMPLIED WARRANTY WHICH BY LAW MAY NOT BE EXCLUDED IS LIMITED IN DURATION TO ONE (1) YEAR FROM THE DATE OF ORIGINAL RETAIL PURCHASE OF THE PRODUCT.
- (c) This warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.
- (d) This warranty is valid only in the U.S.A. and Canada. For warranty outside the U.S.A. and Canada contact your nearest Ramsey Winch Distributor.

1.8 **No Modifications to Warranty.** No RAMSEY WINCH dealer, distributor, agent or employee is authorized to make any modification, extension or addition to this warranty.

1.9 **How to Apply for Warranty Coverage.**

All claims are handled by contacting your nearest Ramsey Winch Distributor. For questions, please contact customer support: rwcustomersupport@ramseyindustries.com.

Visit [Dealer Locator - Ramsey Winch](#) for Ramsey Winch Distributor locations and contact information.

Additional warranty, service support, product information, and parts information can be found on www.ramseywinch.com.



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