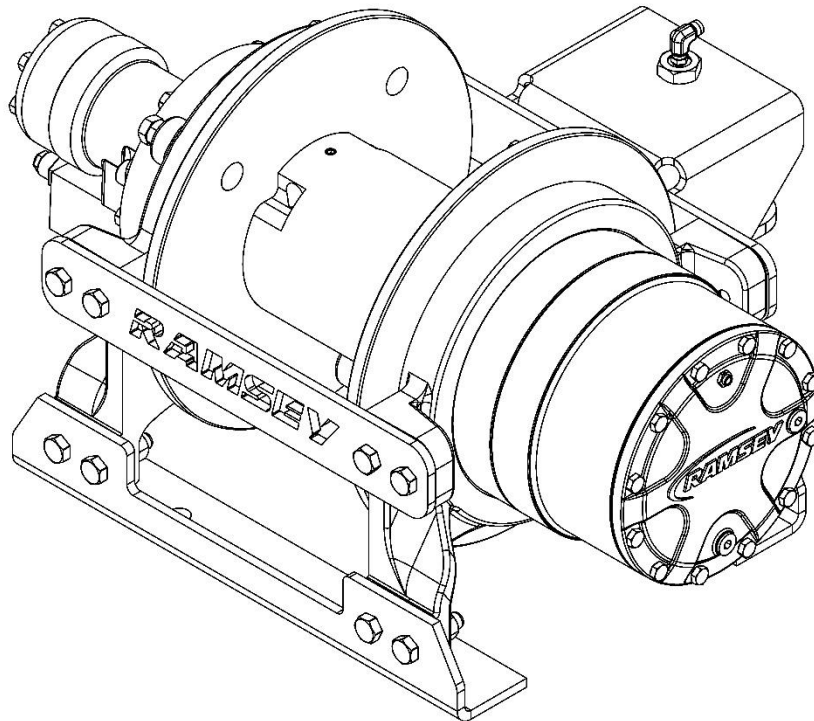




Operating/Service/Maintenance Manual

Hercules 15K

OM 914328-0226-B



READ AND UNDERSTAND THIS MANUAL BEFORE INSTALLATION AND OPERATION OF WINCH. SEE WARNINGS.

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PLEASE READ THIS MANUAL CAREFULLY

This manual contains useful ideas in 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 "WARNINGS" 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 our winch, please follow instructions for prompt service on all warranty claims. Refer to back page for limited warranty.

WINCH DRUM WIDTH:	(in.)	.....				7.75	
RATED LINE PULL	(lbs.)	.....				15,000	
	(kg.)	.....				6,804	
GEAR REDUCTION		.....				25.529 : 1	
WEIGHT (WITHOUT CABLE)	(lbs.)	.....				110	
	(kg.)	.....				50	
LAYER OF CABLE			1	2	3	4	5
RATED LINE PULL PER LAYER	(lbs.)		15,000	12,712	11,029	9,740	8,721
	(kg.)		6,804	5,766	5,003	4,418	3,956
CABLE CAPACITY	ft.		20	44	72	103	138
	m.		6	13	22	31	42
LINE SPEED	fpm.		44	52	59	66	73
	mpm		13.5	15.7	17.9	20.1	22.3
Winch and Specifications conform to SAE J706							
Specification Conditions:							
Hydraulic Pressure and Flow:	2708 psi. and 20 gpm.						
Motor Displacement:	6 cu.in./rev						
Wire Rope Diameter:	9/16 in. EIPS or equivalent						

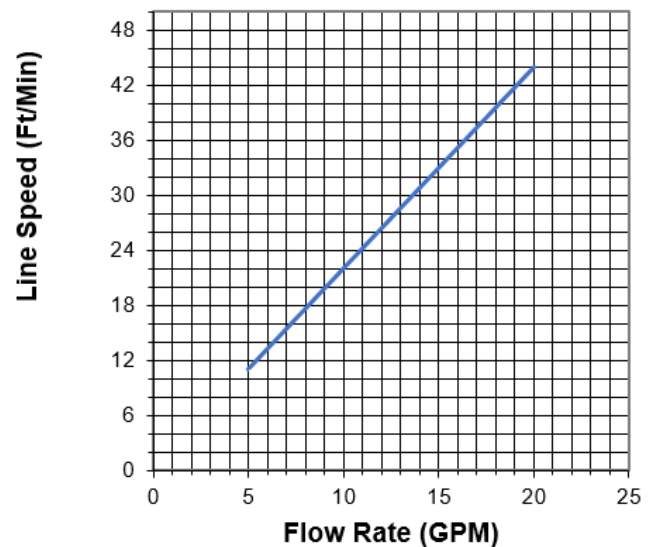
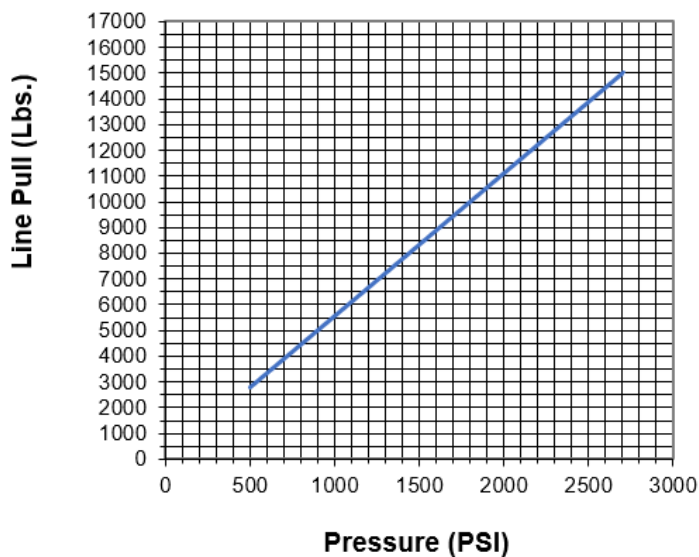
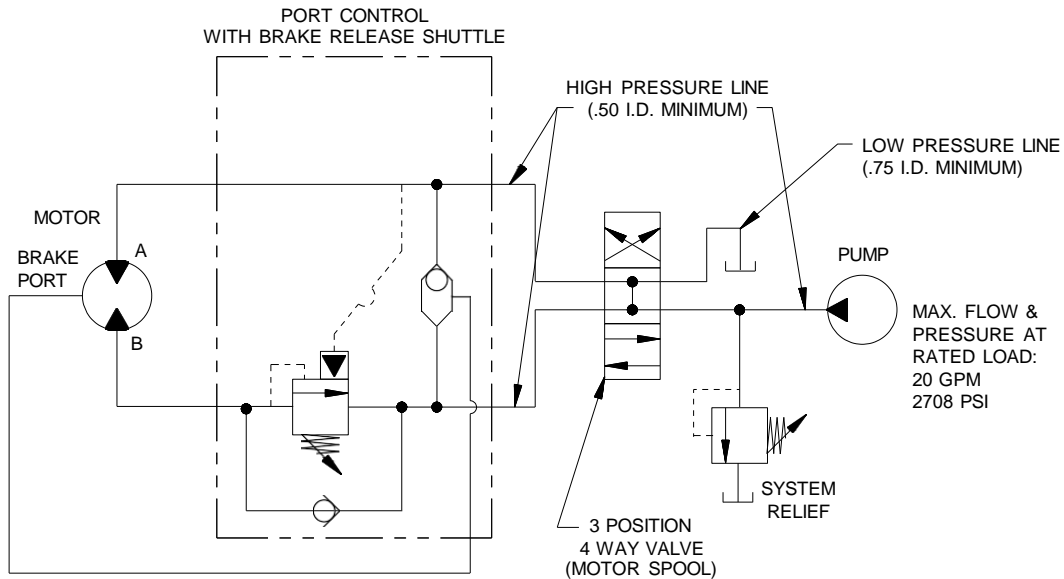
 **WARNING** Clutch must be totally engaged before starting the winching operation.
 Do not disengage clutch under load.
 Do not leave clutch disengaged when winch is not in use.
 Stay out from under and away from raised loads.
 Stand clear of cable while pulling. Do not try to guide cable.
 Do not exceed maximum line pull ratings shown in table.
 Do not use winch to lift, support or otherwise transport people.
 A minimum of 5 wraps of cable is necessary to hold the load. Cable clamp is not designed to hold load.
 Use only Ramsey Winch recommended 9/16" synthetic rope.
 Cable anchor is not designed to hold load.

2 Hydraulic System Requirements

Refer to the performance charts to properly match your hydraulic system to Hercules 25K winch performance.

(1) Line pull (lbs.) first layer vs. working pressure (PSI) and (2) line speed (FPM) first layer vs. flow (GPM). Performance is based on a motor displacement of 6.0 cubic inches with 20 GPM maximum flow rate.

TYPICAL LAYOUT



Winch Operation 3


The best way to get acquainted with how your winch operates is to make test runs before you use it. Plan your test in advance. Remember, you hear your winch, as well as see it operate. Learn to recognize the sounds of a light steady pull, a heavy pull, and sounds caused by load jerking or shifting. Gain confidence in operating your winch and its use will become second nature with you.

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.

CLUTCH OPERATION

To engage clutch:

1. Move the clutch control valve to the "clutch engaged" position.
2. Anytime the temperature is below freezing, run the motor in the "cable out" direction only until the drum starts to turn. In extreme cold temperatures (below 0° F/-18° C), pull out on the cable by hand only until the drum starts to turn.
3. Wait at least 3 seconds for the clutch to fully engage, after which the winch is ready to winch in the cable.

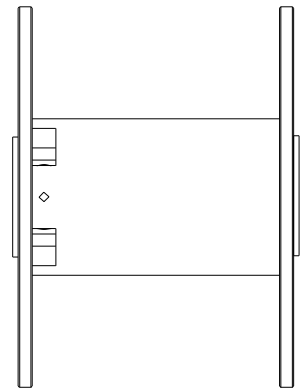
 **WARNING** Do not attempt to engage the clutch by first running the winch motor and then moving the clutch control valve to the "clutch-engaged" position while the motor is running. Do not start picking up the load at the same time the clutch is being engaged.

To disengage clutch: Run the winch in the "cable out" direction until the load is off the cable.

4. Move the clutch control valve to the "clutch-disengaged" position.
5. The cable may now be pulled off by hand.

CABLE INSTALLATION

1. Unwind cable by rolling it out along the ground to prevent kinking. Securely wrap end of wire rope opposite hook, with plastic or similar tape to prevent fraying.
2. Insert the end of cable, opposite hook end, into the hole in drum barrel. Secure cable to drum barrel, using setscrew furnished with winch. **TIGHTEN SETSCREW SECURELY.**
3. Carefully run the 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.



4 Maintenance

Adhering to the following maintenance schedule will keep your winch in top condition and performing as it should with a minimum of repair.

Weekly

1. Check the oil level and maintain it to the oil level plug. If oil is leaking out, determine location and repair.
2. Check the pressure relief plug in the gear housing cover. Be sure that it is not plugged.
3. Lubricate cable with light oil.

Monthly

1. Check the winch mounting bolts. If any are missing, replace them and securely tighten any that are loose. Use grade 5 or better bolts.
2. Inspect the cable. If the cable has become frayed with broken strands, replace immediately.
3. Inspect synthetic rope and follow inspection criteria.

Annually

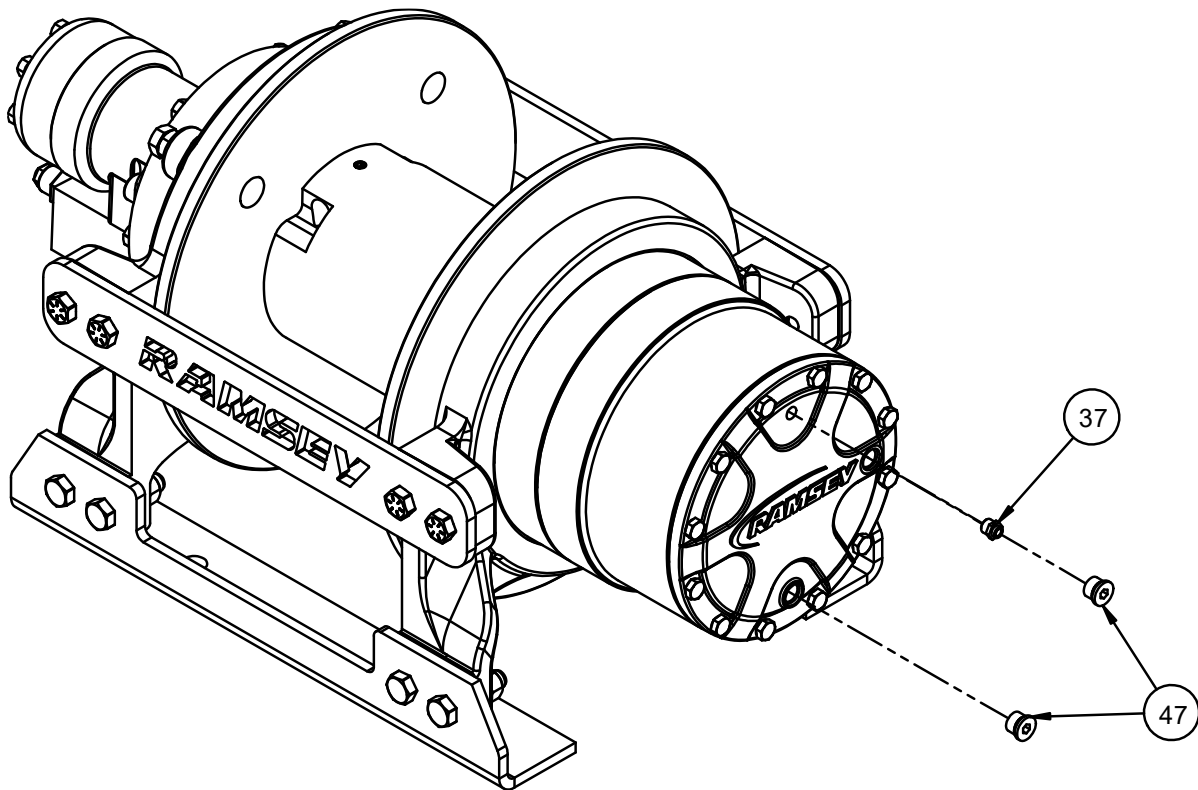
1. Drain the oil from the winch annually or more often if winch is used frequently.
2. Fill the winch to the oil level plug with clean kerosene. Run the winch a few seconds with no load in the reel in direction. Drain the kerosene from the winch.
3. Refill the winch to the oil level plug with all-purpose SAE 75W-90 synthetic gear oil.
4. Inspect frame and surrounding structure for cracks or deformation.

TROUBLESHOOTING GUIDE		
CONDITIONS	POSSIBLE CAUSE	CORRECTION
OIL LEAKS FROM WINCH	1. SEALS DAMAGED OR WORN 2. TOO MUCH OIL 3. DAMAGED GASKETS	1. REPLACE SEAL 2. DRAIN EXCESS OIL. REFER TO OPERATION 3. REPLACE GASKETS
WINCH RUNS TOO SLOW	1. LOW FLOW RATE 2. HYDRAULIC MOTOR WORN OUT	1. CHECK FLOW RATE. REFER TO HYDRAULIC SYSTEMS PERFORMANCE CHART PAGE 2. 2. REPLACE MOTOR
CABLE DRUM WILL NOT FREE-SPOOL	1. CLUTCH NOT DISENGAGED	1. CHECK AIR PRESSURE TO CLUTCH CYLINDER: 100 PSI MINIMUM REQUIRED. REFER TO PAGE 15 FOR PORT LOCATION.
BRAKE WILL NOT RELEASE	1. BRAKE LINE DISCONNECTED OR BLOCKED	1. CHECK BRAKE FUNCTION

Instructions for Overhaul 5

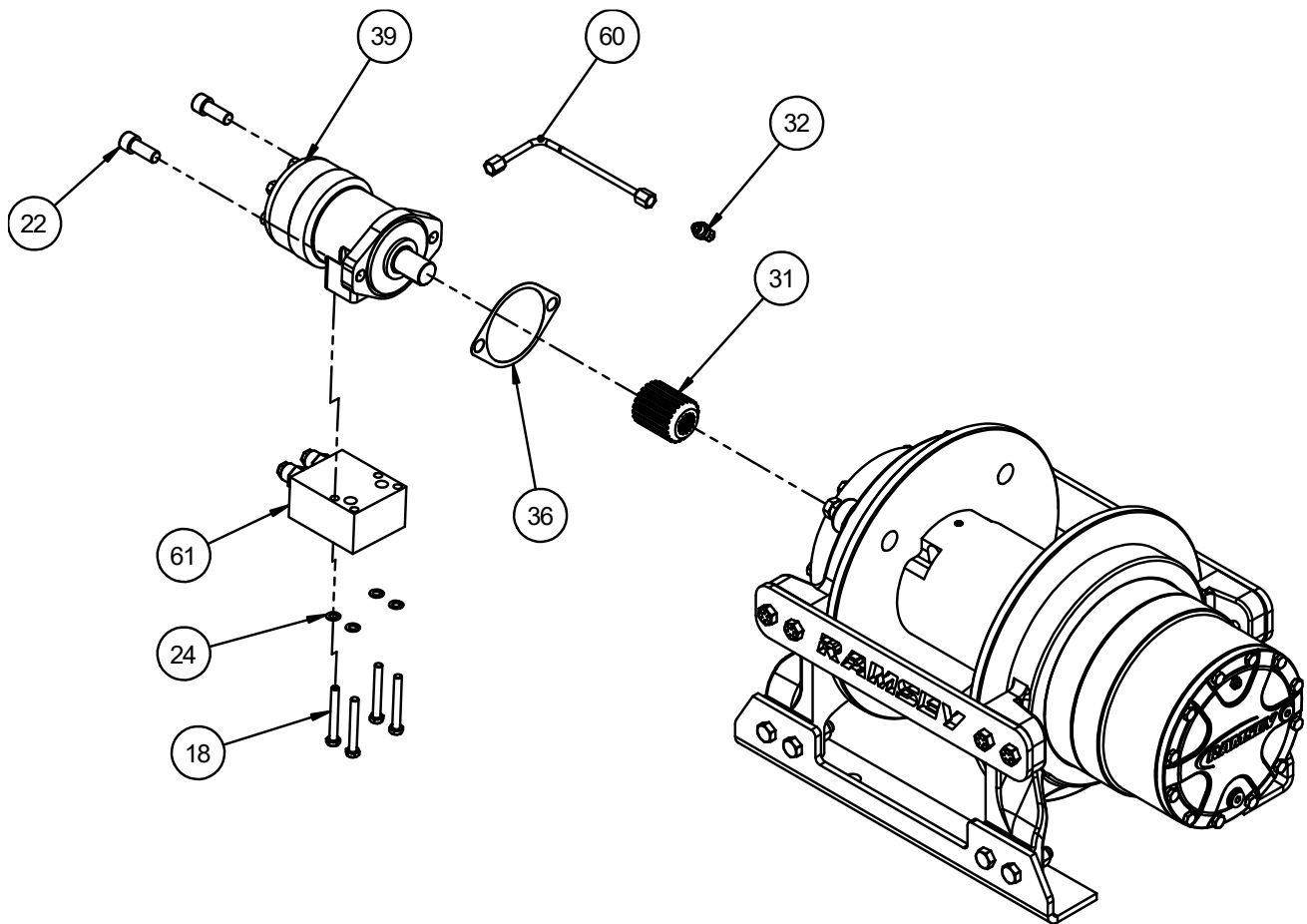
Disassembly

1. Drain oil from gear housing by removing oil drain plug, o-ring plug #47 and relief fitting #37. Remove tensioner assembly.



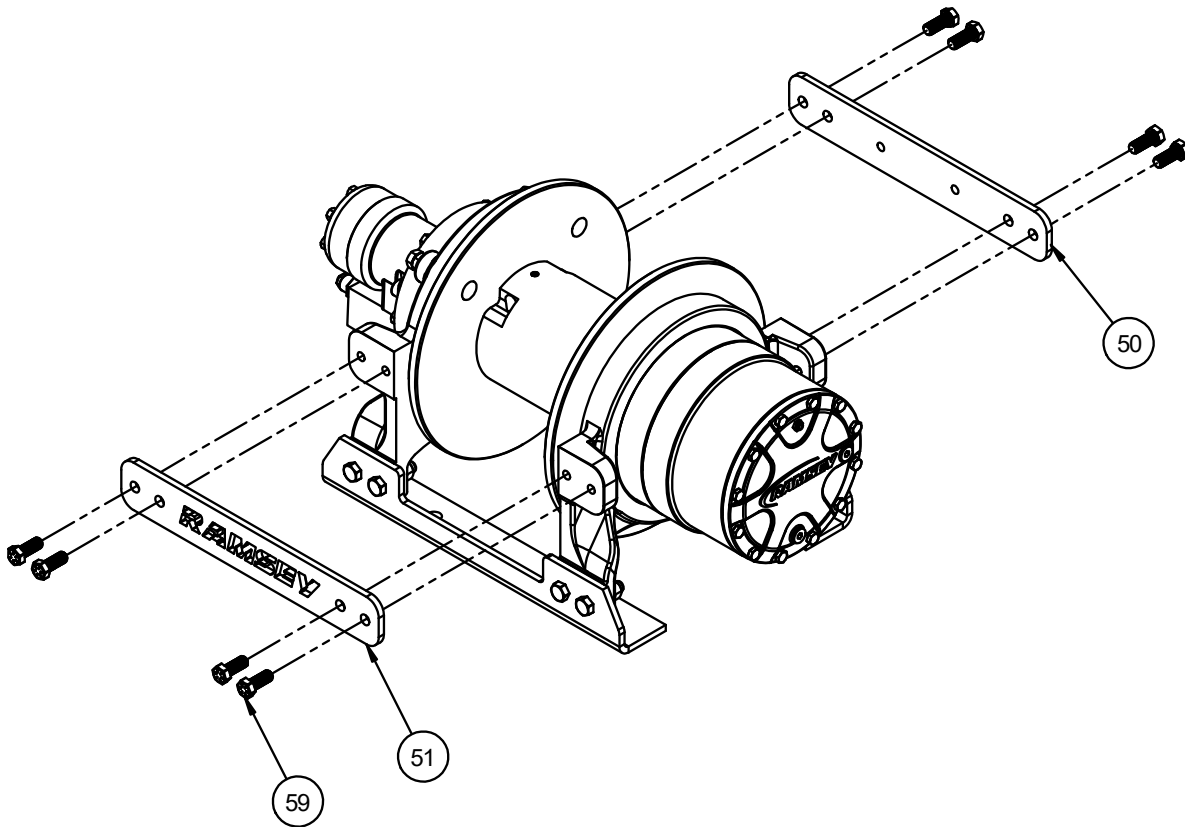
5 Instructions for Overhaul

2. Disconnect hose #60 from valve #61 and fitting #32. Remove motor #39 and gasket #36 by removing (2) capscrews #22. Remove valve #61, if needed from motor by loosening (4) capscrews #18 & washers (4) #24.



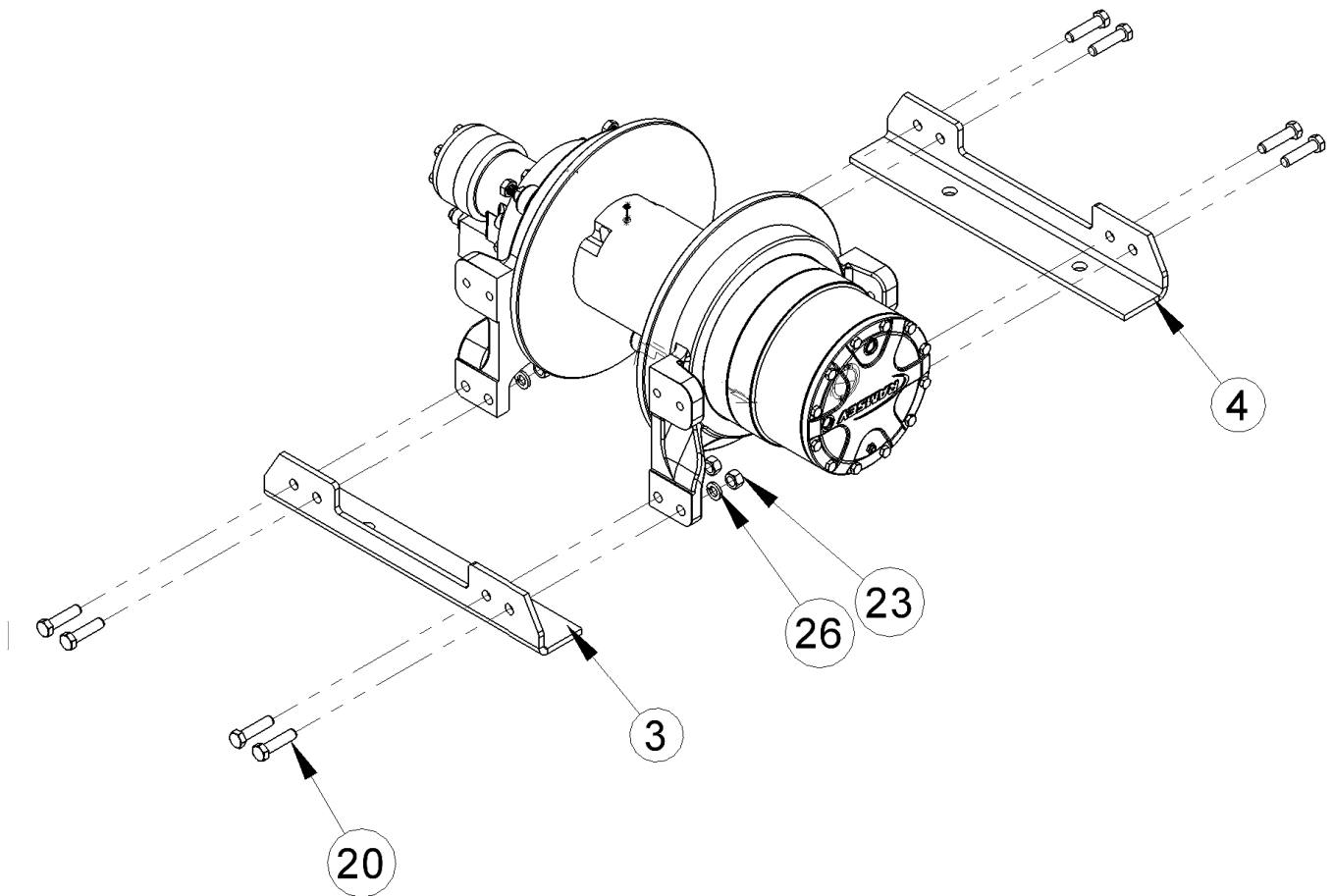
Instructions for Overhaul 5

3. Stand winch up on gear box end as shown. Remove winch tie plates #50 & #51 by removing (8) bolts #59.



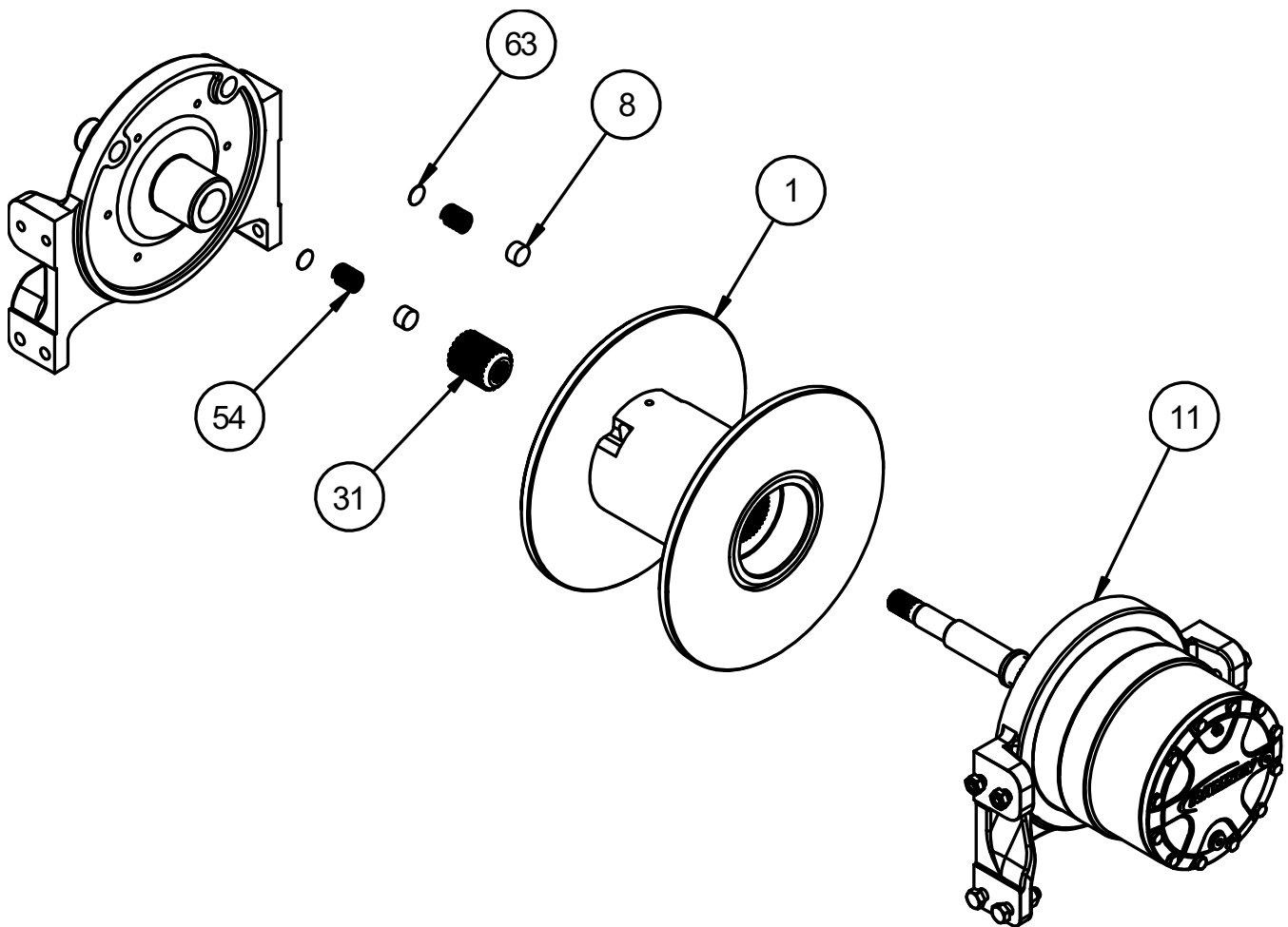
5 Instructions for Overhaul

4. Remove winch mounting frame #3 & #4 by removing (8) capscrews #20, (8) washers #26 & (8) nuts #23.



Instructions for Overhaul 5

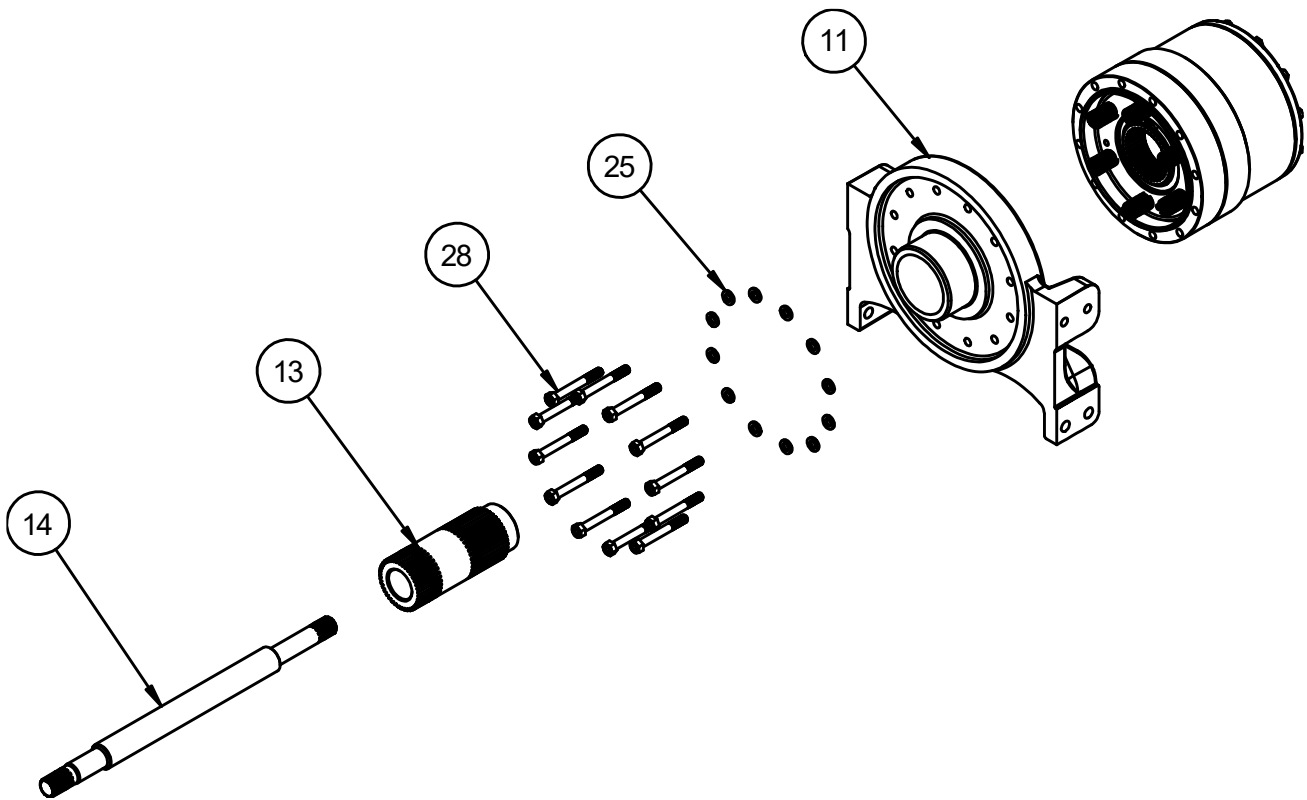
5. Pull motor end bearing #10 from drum assembly #1. Drag brake, brake parts #8, #54, and #63 may fall out when motor end bearing #10 is removed. Remove motor coupling #31 from input shaft. Pull drum assembly #1 from gear end bearing #11. Remove quad rings from grooves in drum bushings. Examine drum assembly for signs of wear.



5 Instructions for Overhaul

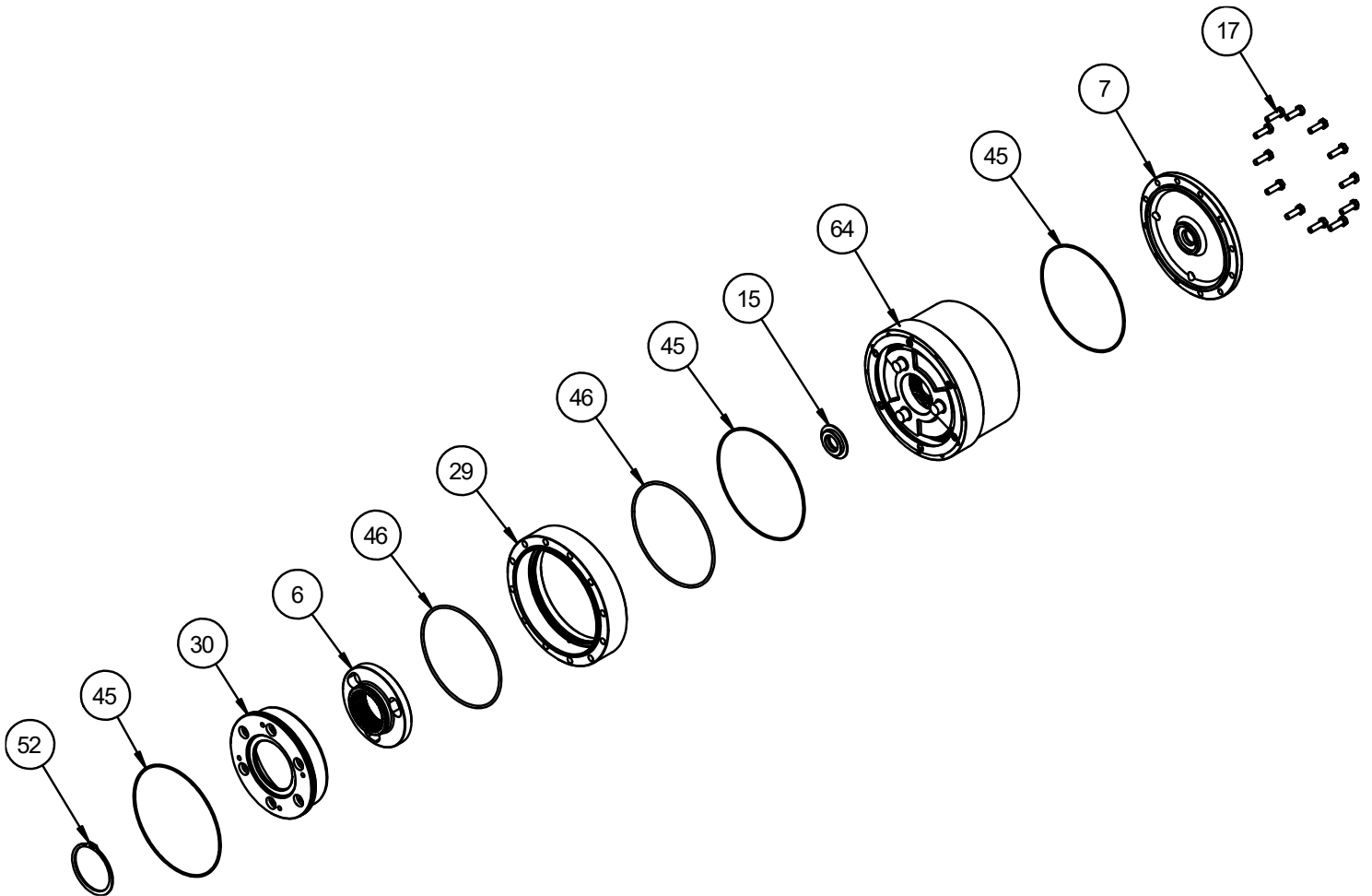
6. Remove output shaft #14 from gear end bearing #11. Remove and inspect output coupling #13 for damage or wear. Replace if damaged. Remove gear end bearing by removing the (12) capscrews #28.

Note: The gear end bearing will be spring loaded and will "spring up" slightly when last capscrew is removed. Remove (6) springs.

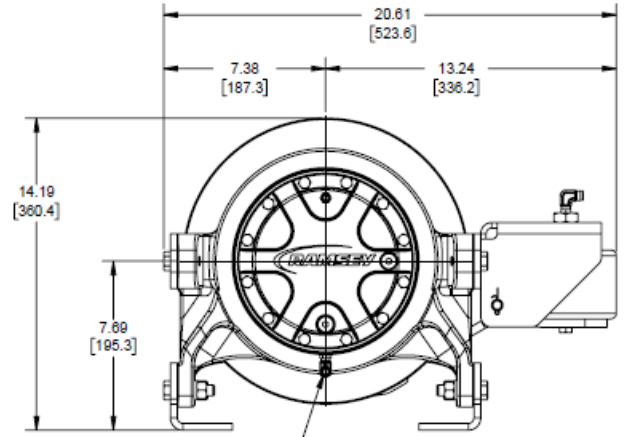
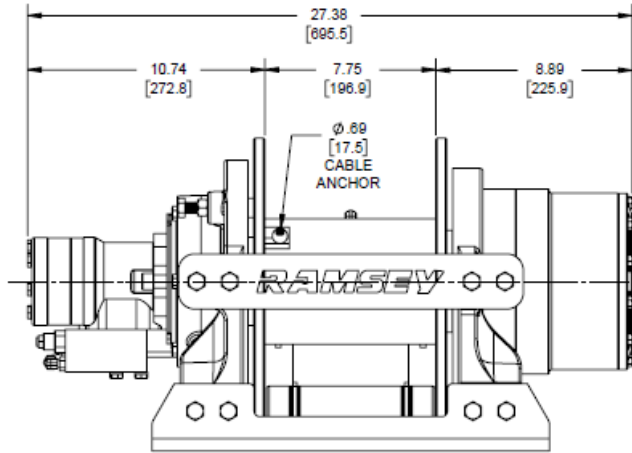


Instructions for Overhaul 5

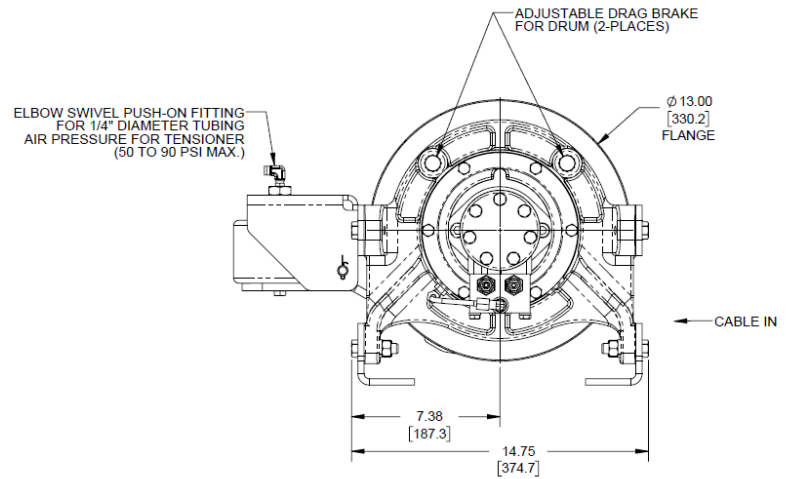
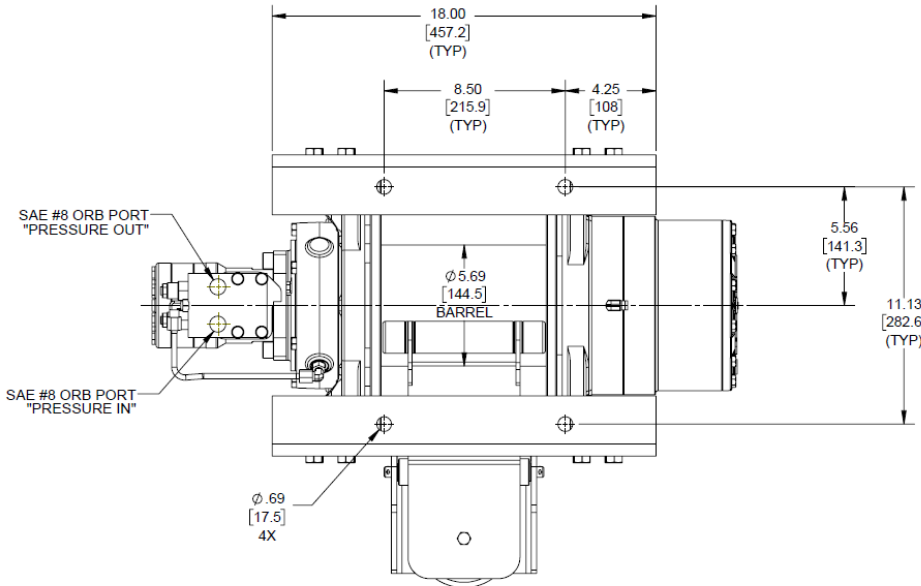
7. Remove clutch housing #29 with piston #30 and clutch #6 inside from gearbox assembly #64. Inspect clutch for wear or damage and replace if required. Remove clutch #6 from piston by removing retainer ring #52. To remove piston from clutch housing apply air to 1/8" port on bottom of clutch housing. Remove O-rings #45 from grooves on piston and clutch housing and inspect for damage or wear. Inspect gear box assembly #64 for damage or wear. Replace complete gear box assembly if gears are damaged.



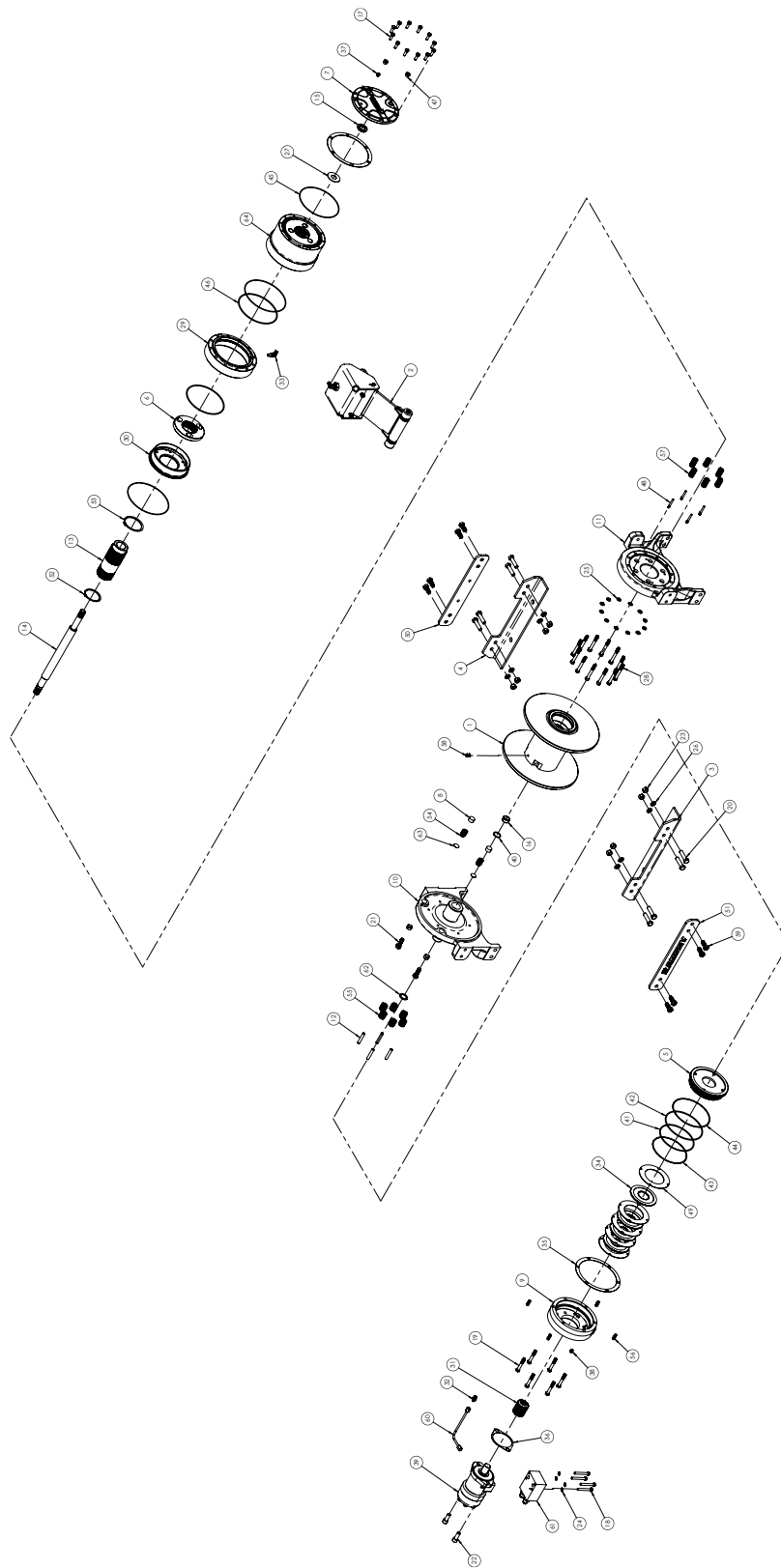
6 General Dimensions



ELBOW SWIVEL PUSH-ON FITTING
FOR 1/4" DIAMETER TUBING
(100 TO 120 PSI)
AGING CLUTCH



Winch Exploded View 7



7 Winch Exploded View

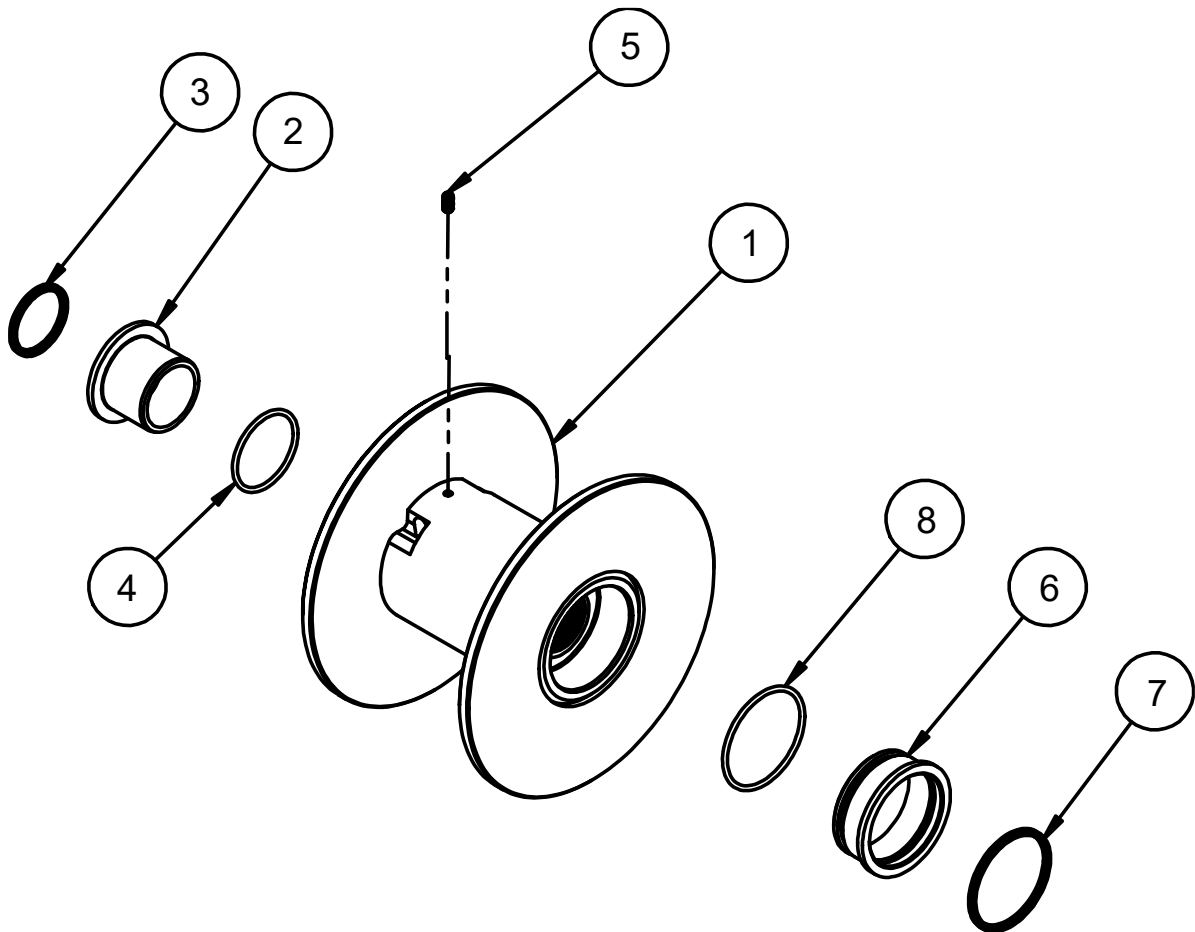
Item#	QTY.	PART NUMBER	DESCRIPTION
1	1	234304	ASSEMBLY-DRUM
2	1	299811	ASSEMBLY-AIR TENSIONER
3	1	303214	BASE ANGLE- ONE
4	1	303215	BASE ANGLE- TWO
5	1	306042	PISTON-BRAKE
6	1	324527	CLUTCH
7	1	328213	COVER-GEAR BOX
8	2	330015	PUCK-DRUM DRAG
9	1	338302	HSG-BRAKE
10	1	338481	MOTOR END BEARING
11	1	338482	GEAR END BEARING
12	4	346045	PIN-BRAKE,RPH12,.375 DIA.X2.125 LG.
13	1	357579	COUPLING-OUTPUT
14	1	357600	SHAFT-INPUT
15	1	362360	SPACER-COVER
16	1	402121	BEARING
17	12	414136	CAPSCREW-5/16-18NCX1LG,HXHD,GR5
18	4	414159	CS-5/16-18UNCX2.50,HXHD,GR5
19	6	414303	BOLT-3/8-16NC X2 1/2,HXHD,GR-5
20	8	414513	CAPSCREW-1/2-13 X 2.0 LG HX HD GR8
21	2	414548	CAPSCREW-1/2-13NCX1 1/2,HXHD,Z/P,G5
22	2	414948	CAPSCREW-1/2-13NCX1 1/4LG,SOCKET HD
23	10	418069	NUT-1/2-13NC HEX REG
24	4	418163	LOCKWASHER-5/16 MED SECT
25	12	418177	LOCKWASHER-3/8 MED SECT
26	8	418218	LOCKWASHER-1/2 ID MED SECT
27	1	418462	CLUTCH WASHER 2.125 OD X .878 ID X .070
28	12	420047	CAPSCREW-3/8-16NC X 3 LG, HX HD, GR8
29	1	426076	CYLINDER-CLUTCH
30	1	426077	PISTON-CLUTCH
31	1	431015	COUPLING-MOTOR
32	1	432018	FITTING, 7/16-20 90 degree

Winch Exploded View 7

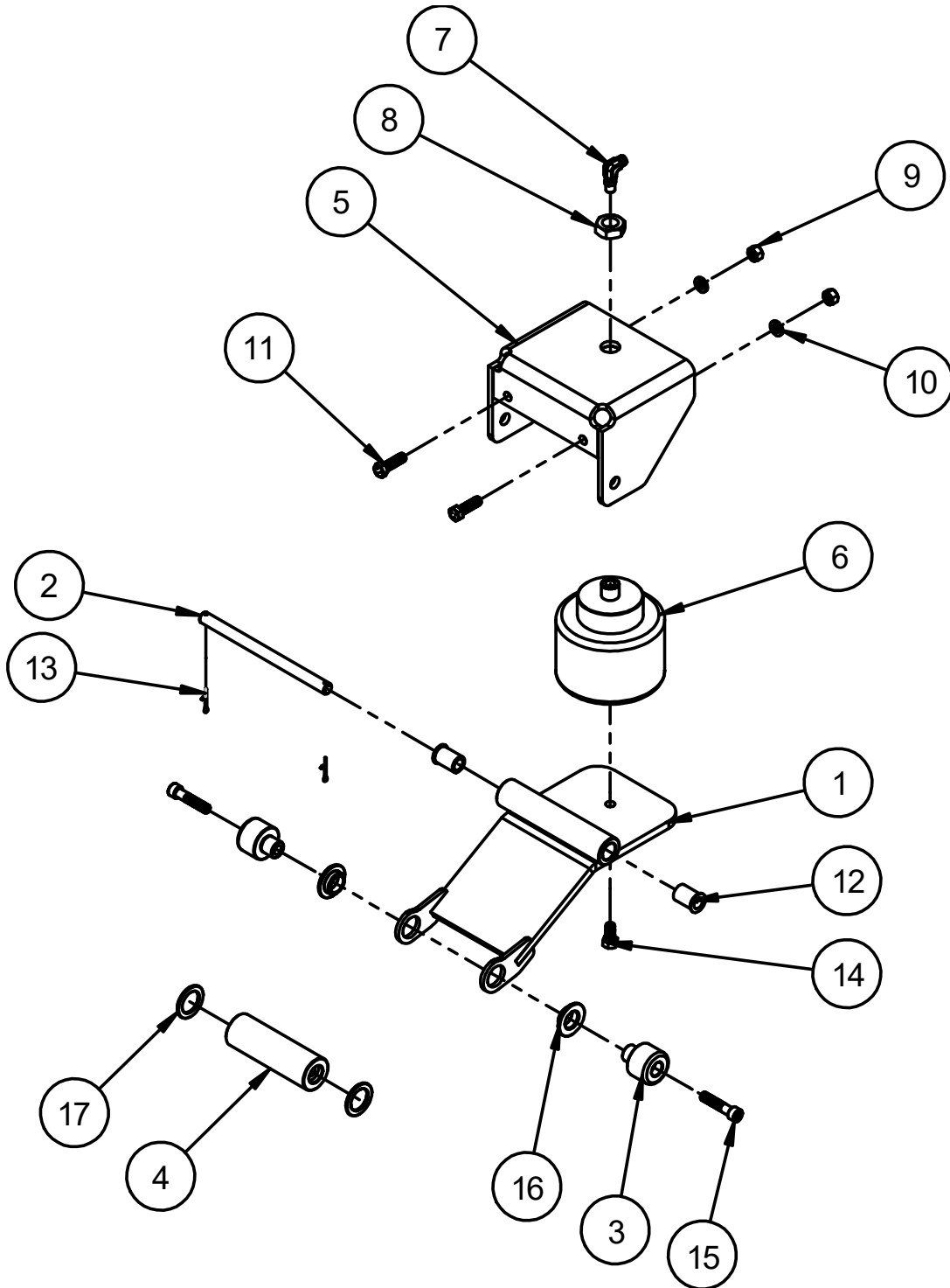
Item#	QTY.	PART NUMBER	DESCRIPTION
33	1	432041	FITTING-AIR
34	4	438022	DISC-BRAKE
35	1	442220	GASKET-BRAKE HSG
36	1	442223	GASKET-MOTOR FLANGE
37	1	456008	RELIEF FIT-1/8-27PFT
38	1	456038	FITTING-VENT
39	1	458195	MOTOR HYDRAULIC 6.0 CU IN 1 IN KEYED SHAFT
40	1	462056	O-RING, 6.484 ID X 6.762 OD X .139THK
41	1	462057	O-RING, 5.734 ID
42	1	462058	O-RING, 6.234 ID
43	1	462059	RING-BACK-UP, 5.75 ID
44	1	462060	RING-BACK-UP, 5.75 ID
45	3	462063	O-RING, 6.487 ID
46	2	462127	O-RING, 6.484 ID X 6.762 OD X .139THK
47	2	468045	PLUG-O-RING BOSS, 9/16-18UNF-2B (SAE #6) HEX SOC HD
48	4	470156	THREADED TAPER PIN
49	5	474111	PLATE-SEPARATOR
50	1	474276	TIE-PLATE
51	1	474277	TIE-PLATE
52	1	490080	RING-RETAINER
53	1	490081	RING-RETAINER
54	2	494002	SPRING-QQ-W-428
55	6	494110	SPRING-BRAKE
56	4	494112	SPRING
57	6	494140	SPRING-HDP40-50
58	1	416065	SETSCREW-3/8-16UNCX3/4LG,HXSOHD,CUP
59	8	414961	BOLT 1/2-13NC X 1/1/4 LG, HX HD GR8
60	1	509009	TUBE ASSY-1/4OD,HYD.BRK
61	1	516074	VALVE-COUNTERBALANCE
62	1	518052	WASHER-THRUST,1.37 O.D
63	2	530094	SPACER-BRK DISC,20GAX7/8 D
64	1	530187	ASSEMBLY-GEAR BOX

8 Drum Assembly

Item#	QTY.	PART NUMBER	DESCRIPTION
1	1	234303	WELDMENT-DRUM
2	1	412188	BUSHING-DRUM, MOTOR END
3	1	462013	QUAD-RING-2 7/8ODX2 1/2IDX3
4	1	462054	O-RING-3/16X31DX3 3/8OD
5	1	416065	SETSCREW-3/8-16UNCX3/4LG,HXSOHD,CUP
6	1	412092	BUSHING-DRUM, GEAR HSG. END
7	1	462050	QUAD-RING
8	1	462052	O-RING, 3 7/8 ID



Cable Tensioner 9



9 Cable Tensioner

Item#	QTY.	PART NUMBER	DESCRIPTION
1	1	265137	WELDMENT-LEVER ARM
2	1	346087	PIN-PIVOT
3	2	354106	ROLLER-SHORT
4	1	354091	ROLLER-LONG
5	1	408503	BRACKET-MOUNTING
6	1	433029	SPRING-AIR
7	1	432041	FITTING-AIR
8	1	418098	NUT-3/4-16NF HEX JAM
9	2	418045	NUT-3/8-16NC HEX REG GR.5
10	2	418177	LOCKWASHER-3/8 MED SECT
11	2	414316	CAPSCREW-3/8-16NCX1 1/4,HXHD,G5
12	2	412108	BUSHING-SHIFTER SHAFT
13	2	424005	COTTER PIN- 1/8DIA X 1 LG
14	1	414278	CAPSCREW-3/8-16NCX3/4LG,HXHD,G5
15	2	414909	SCREW-3/8-16NCX1-3/4,HXSOC
16	2	412178	BUSHING-ROLLER TENSIONER
17	2	518100	THRUST WASHER-ROLLER TENSIONER

**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.

