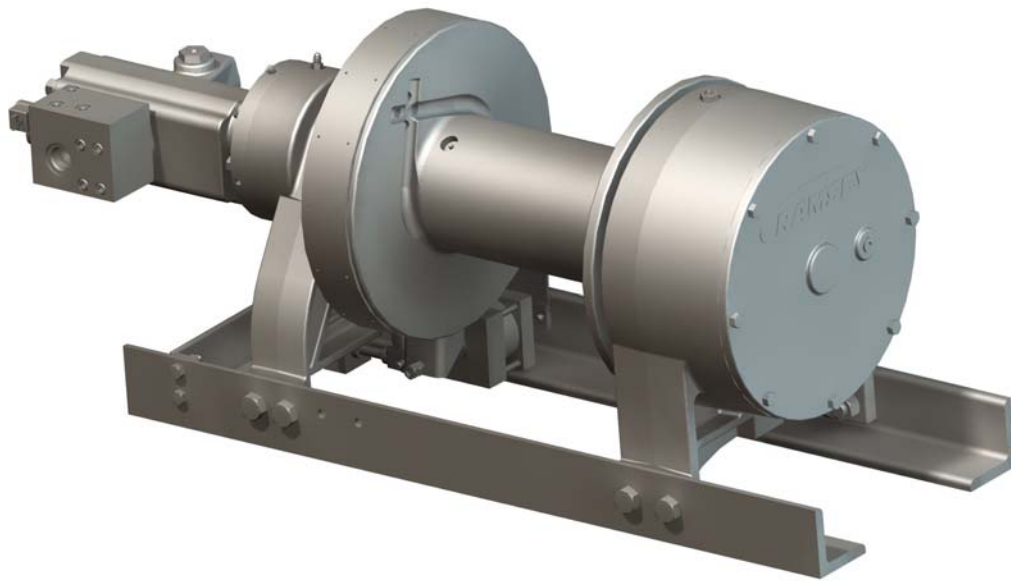


WILDCATTM
WINCH SERIES

**OPERATING, SERVICE AND
MAINTENANCE MANUAL**

By **RAMSEY**



**WILDCAT SERIES 50,000 LB
INDUSTRIAL WINCH**



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

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RAMSEY HYDRAULIC PLANETARY WINCH MODEL WILDCAT 60K

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 your winch, please follow instructions for prompt service on all warranty claims. Refer to back page for limited warranty.

SPECIFICATIONS*

APPROXIMATE WEIGHT:		976 LBS								
WORKING PRESSURE:		2600 PSI								
CABLE DIAMETER:		7/8 INCH								
MAX FLOW:		60 GPM								
LAYER OF CABLE	CABLE CAPACITY		LOW SPEED				HIGH SPEED			
			LINE PULL		LINE SPEED		LINE PULL		LINE SPEED	
	Ft	m	Lb	Kg	fpm	mpm	Lb	Kg	fpm	mpm
1	30	9	50000	22670	41	12.4	25000	11330	82	24.9
2	75	22	41300	18730	49	14.8	20600	9340	98	29.7
3	125	38	35200	15960	56	17.0	17600	7980	113	34.3
4	130	54	30700	13970	64	19.4	15300	6930	129	39.2
5	245	74	27200	12330	72	21.8	13600	6160	145	44.0
* These specifications are based on recommended wire rope of 7/8" Extra Improved Plow Steel Cable and a 10.3 cu. in. / Rev. motor.										

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 WINCHING OPERATION.

DO NOT START WINCH MOTOR BEFORE ENGAGING CLUTCH.

DO NOT DISENGAGE CLUTCH UNDER LOAD.

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 AROUND THE DRUM BARREL IS NECESSARY TO HOLD THE LOAD.

CABLE ANCHOR IS NOT DESIGNED TO HOLD LOAD.

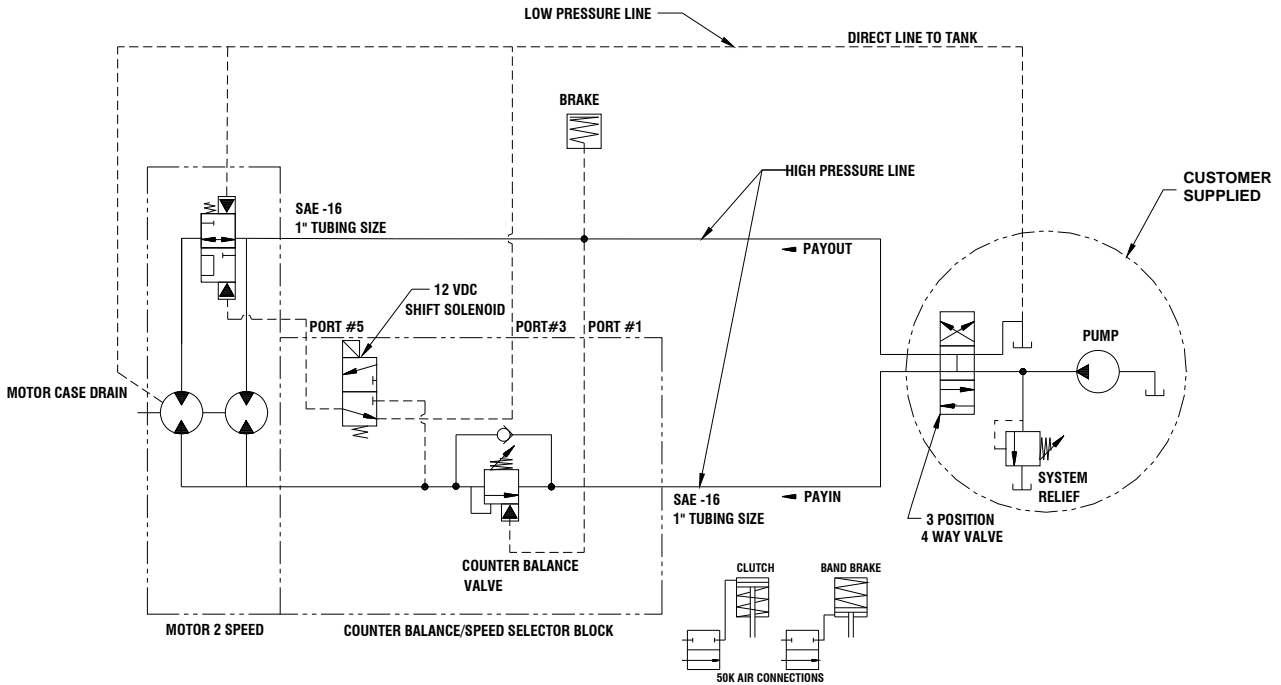
BAND BRAKE IS NOT TO BE USED TO HOLD LOAD

HYDRAULIC SYSTEM REQUIREMENTS

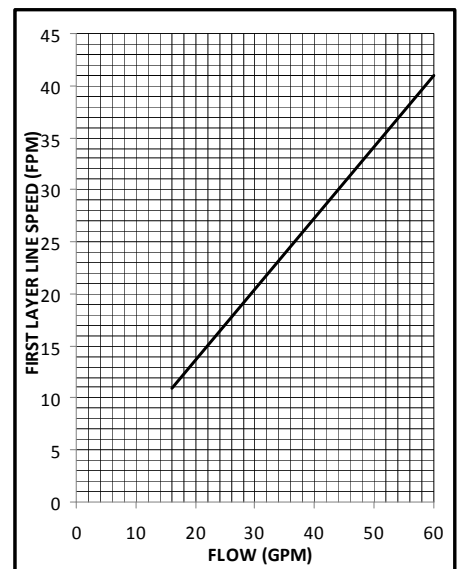
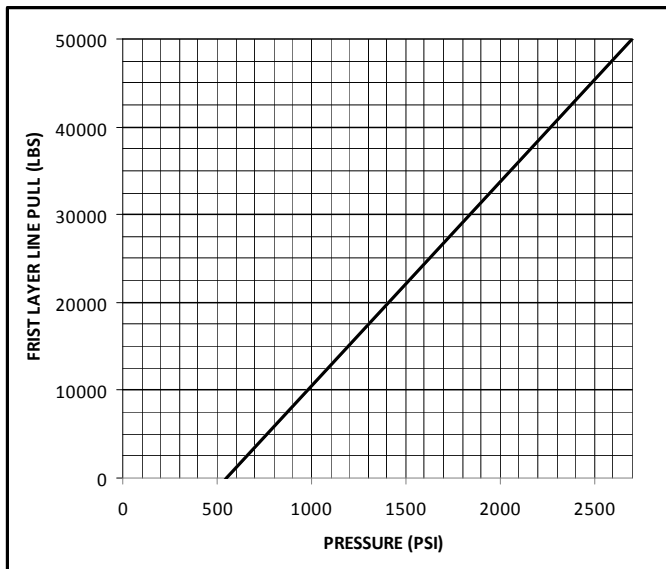
Refer to the performance charts, below, to properly match your hydraulic system to winch performance. The charts consist of:

(1) Line pull (lb.) first layer vs. working pressure (PSI) and (2) line speed, first layer (FPM) vs. gallons per minute (GPM). Performance based on a motor displacement of 10.3 cubic inches/rev with 60 GPM maximum flow rate. Motor has (2) 1"-12 SAE straight thread o-ring ports.

Note: A motor spool (open center) directional control valve is required for brake operation.



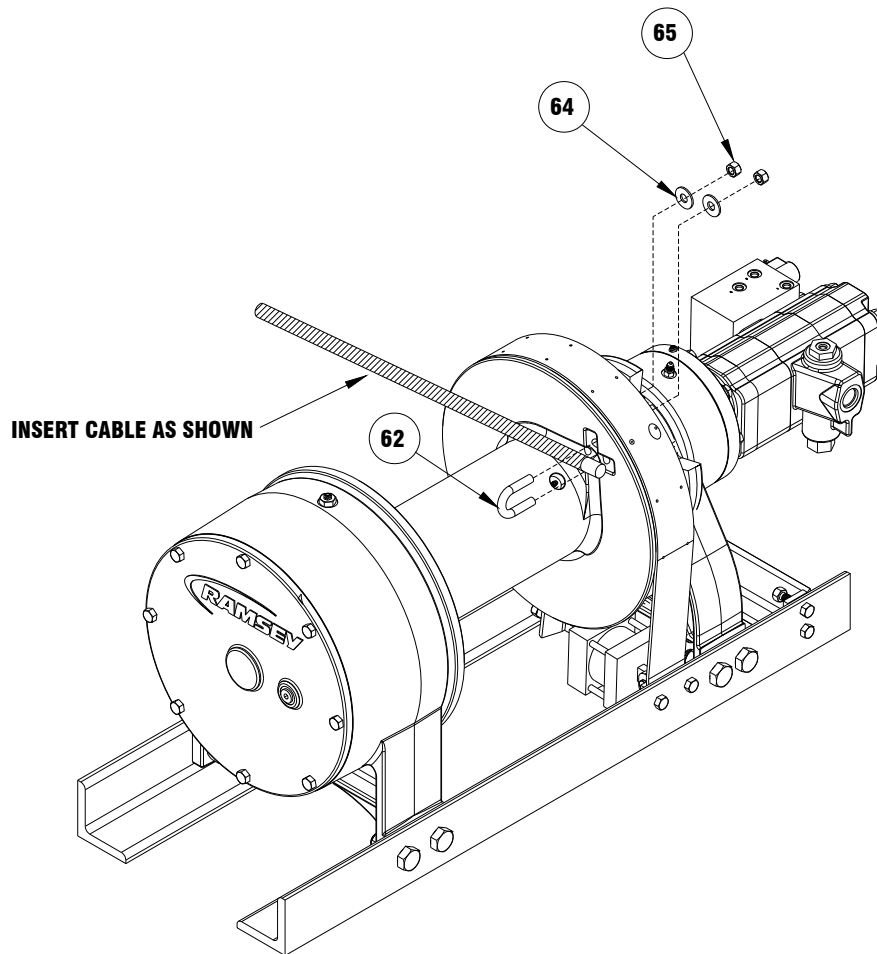
PERFORMANCE CHARTS



BASED ON 10.3 CU IN/REV MOTOR

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. Place taped end of cable around the drum and into the track on drum flange. Secure using supplied u-bolt #62 and (2) washers #64 and (2) nuts #65.
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. After installing cable, band brake is used to prevent bird nesting while pulling out cable, when clutch is disengaged.



CLUTCH OPERATION

WARNING: CLUTCH MUST BE FULLY ENGAGED BEFORE STARTING THE WINCHING OPERATION.

To engage clutch:

1. Move clutch control to engage the clutch.
2. Run the motor in the cable out direction until the drum begins to turn.

WARNING: DO NOT DISENGAGE CLUTCH UNDER LOAD.

To disengage clutch:

1. Run the winch in the "cable out" direction until the load is off the cable.
2. Move the clutch control to disengage the clutch. The cable may now be spooled off.

WINCH OPERATION

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.

MAINTENANCE

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

A. 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 on the gear housing cover and the brake housing cover. Be sure they are not plugged.
3. Lubricate cable with light oil.
4. Lubricate drum bushings with grease. It is necessary to remove cable to expose the grease zerks on drum. Use high quality lithium grease for best results.
5. Apply a high quality lithium grease to clutch spline. Apply band brake to control drum. Declutch drum and apply grease to spline between clutch and drum.

B. MONTHLY

1. Check the winch mounting bolts. If any are missing, replace them and securely tighten any that are loose. Use grade 8 or better bolts.
2. Inspect the cable. If the cable has become frayed with broken strands, replace immediately.

C. ANNUALLY

1. Drain the oil from the winch annually or more often if winch is used frequently.
2. Refill the winch to the oil level plug with all purpose GL-5 oil, (see page 6) for gear lube compatible with your climate.
3. Inspect winch for damage and wear.

LUBRICATION TABLE

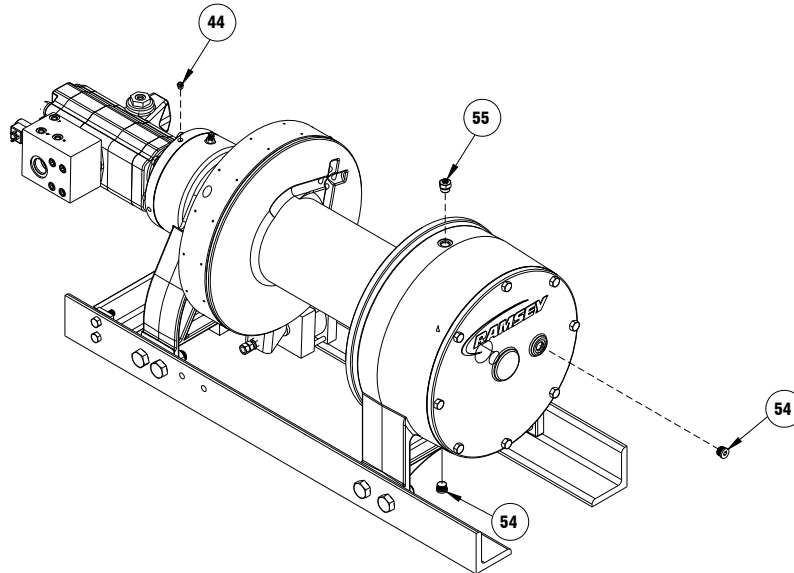
Lubricant Description*	Temp Range F(C)		
	Min Ambient & Operating	Max Ambient	Max Operating
80W140 Synthetic	-25 (-32)	125 (52)	225 (107)
75W90 Synthetic	-40 (-40)	115 (46)	215 (102)
80W90 Conventional	-20 (-29)	100 (38)	180 (82)
85W140 Conventional	20 (6)	120 (50)	200 (93)
*Use API GL-5 or EP lubricants.			

TROUBLE SHOOTING GUIDE

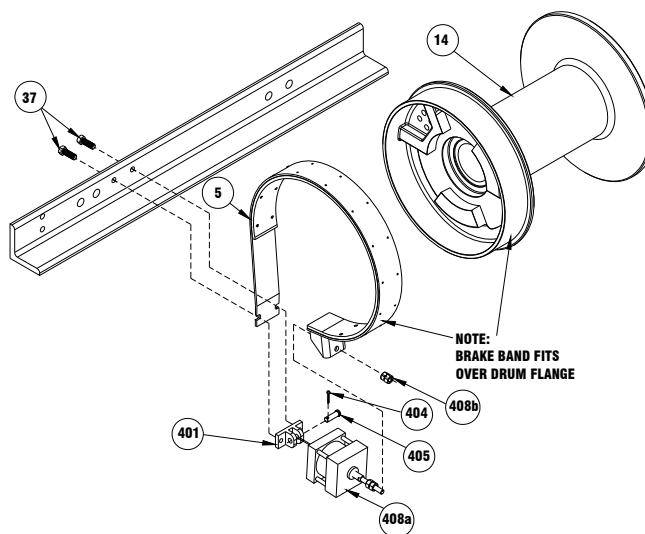
CONDITIONS	POSSIBLE CAUSE	CORRECTION
OIL LEAKS FROM WINCH	<ol style="list-style-type: none"> 1. Seals damaged or worn. 2. Too much oil. 3. Damaged o-rings. 4. Case drain not connected. 	<ol style="list-style-type: none"> 1. Replace seal 2. Drain excess oil. Refer to page 7. 3. Replace o-rings. 4. Connect case drain.
WINCH RUNS TOO SLOW	<ol style="list-style-type: none"> 1. Low flow rate. 2. Hydraulic motor worn out. 	<ol style="list-style-type: none"> 1. Check flow rate. Refer to Hydraulic Systems Performance Chart, page 3. 2. Replace motor.
CABLE DRUM WILL NOT FREESPOOL	<ol style="list-style-type: none"> 1. Clutch not disengaged 	<ol style="list-style-type: none"> 1. Check operation, refer to Clutch Operation, page 5.
BRAKE WILL NOT HOLD	<ol style="list-style-type: none"> 1. Incorrect directional control valve (cylinder spool, closed center). 2. Excessive hydraulic system back pressure. 3. Sprag clutch worn out. 	<ol style="list-style-type: none"> 1. Use only a motor spool (open center) directional control valve. 2. Reduce system back pressure to less than 100 psi. 3. Replace sprag clutch mechanism.
BRAKE WILL NOT RELEASE	<ol style="list-style-type: none"> 1. Brake line disconnected or blocked 	<ol style="list-style-type: none"> 1. Repair brake line.
WINCH WILL NOT OPERATE AT HIGH SPEED	<ol style="list-style-type: none"> 1. Shift solenoid not working. 	<ol style="list-style-type: none"> 1. Verify shift spool is energized.
WINCH OPERATES ERRATICALLY ON INHAUL	<ol style="list-style-type: none"> 1. Sprag hub is reversed. 	<ol style="list-style-type: none"> 1. Install sprag hub correctly.

INSTRUCTIONS FOR DISASSEMBLY

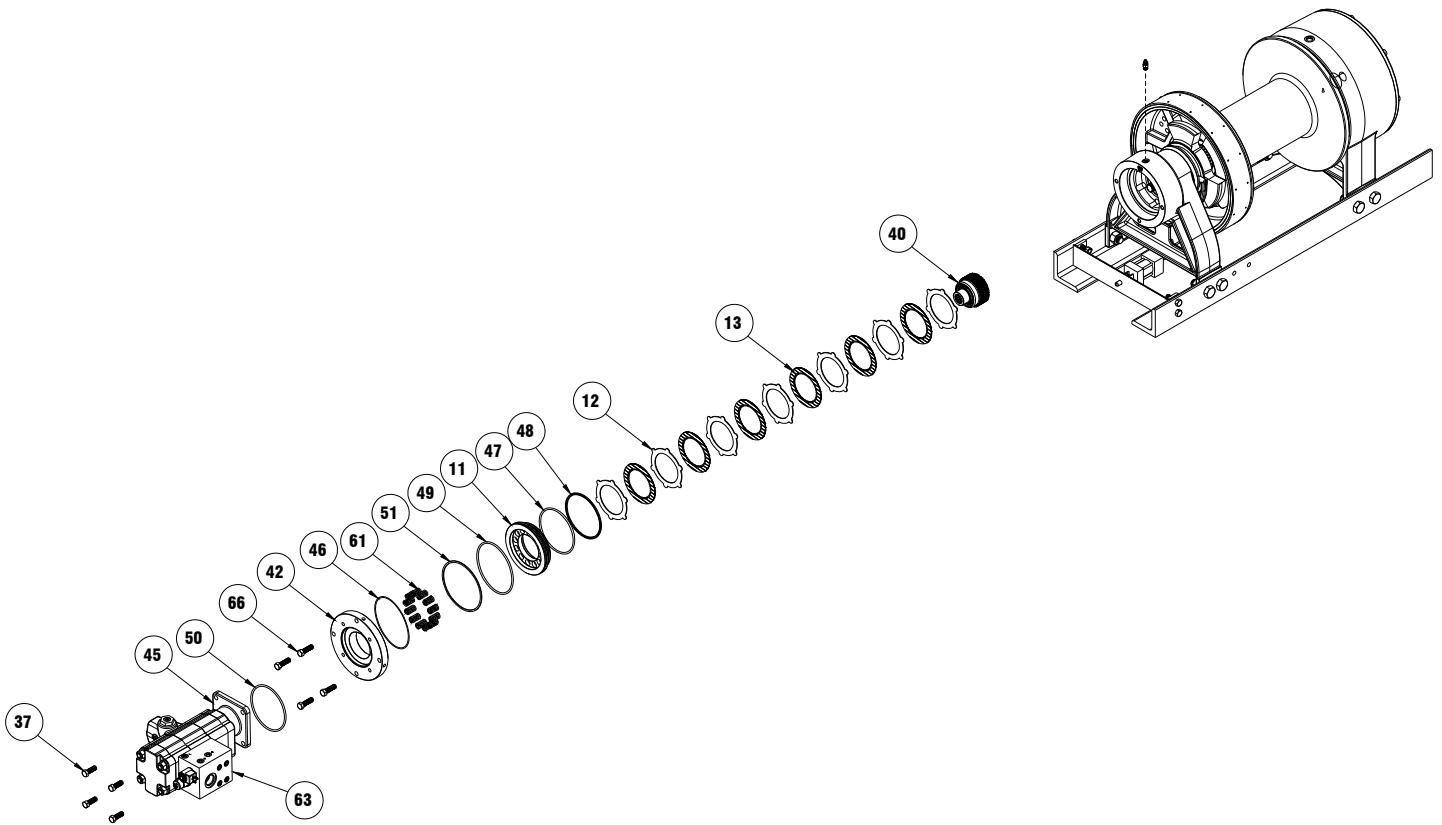
1. Remove wire rope from drum.
2. Drain oil from winch by removing (2) plugs #54, removing the lower plug first.
3. When replacing lubricant, use 192 oz of applicable lube for your climate from table on page 6 adding 4 oz at #44 and 188 oz at # 55.



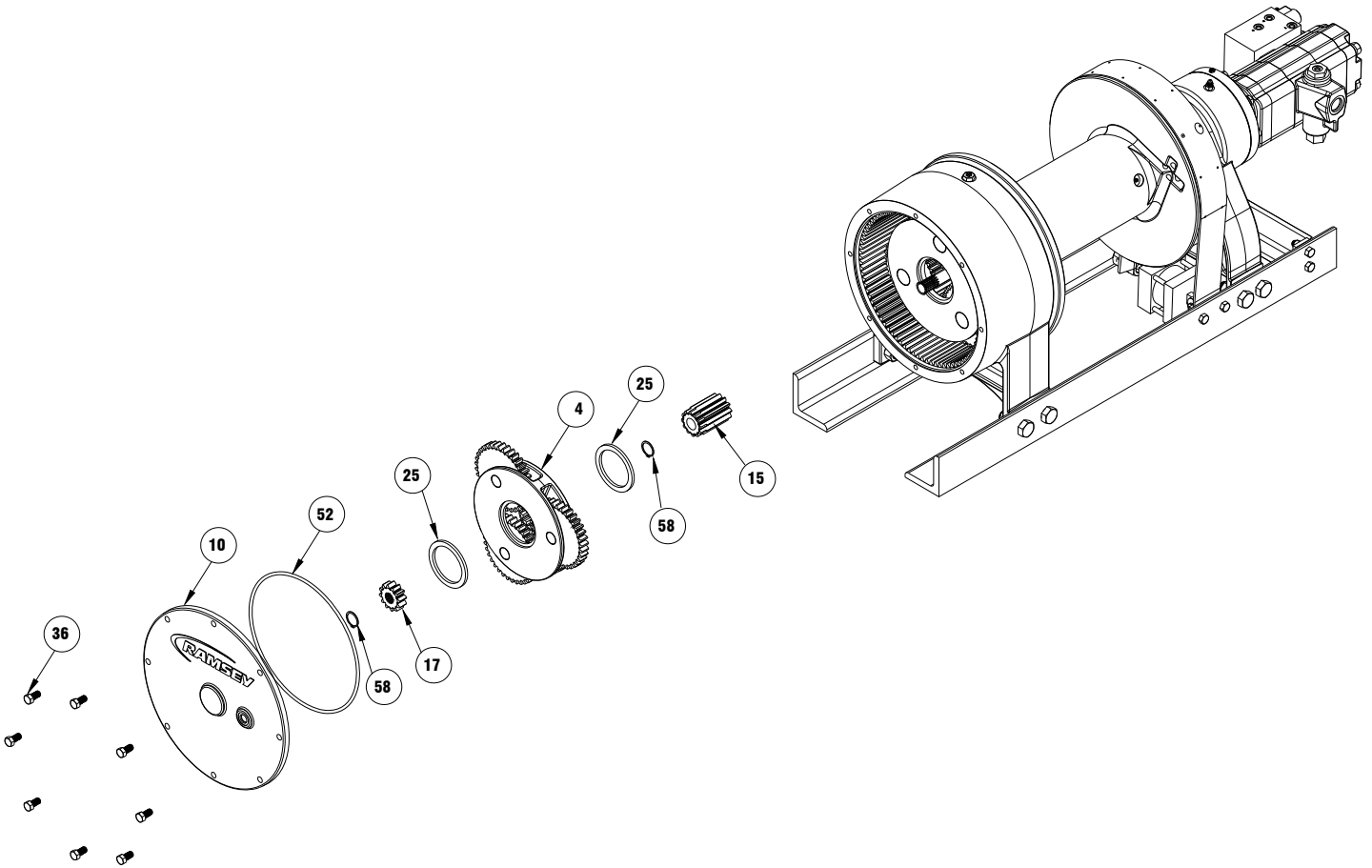
4. Remove (2) nuts #408b from air cylinder #408a. Air cylinder may now be removed. If needed, mounting bracket #401 may be removed by removing pin #404 from pin #405 and then sliding pin out of mounting bracket. Brake band #5 may be expanded over drum flange to barrel for easiest removal.



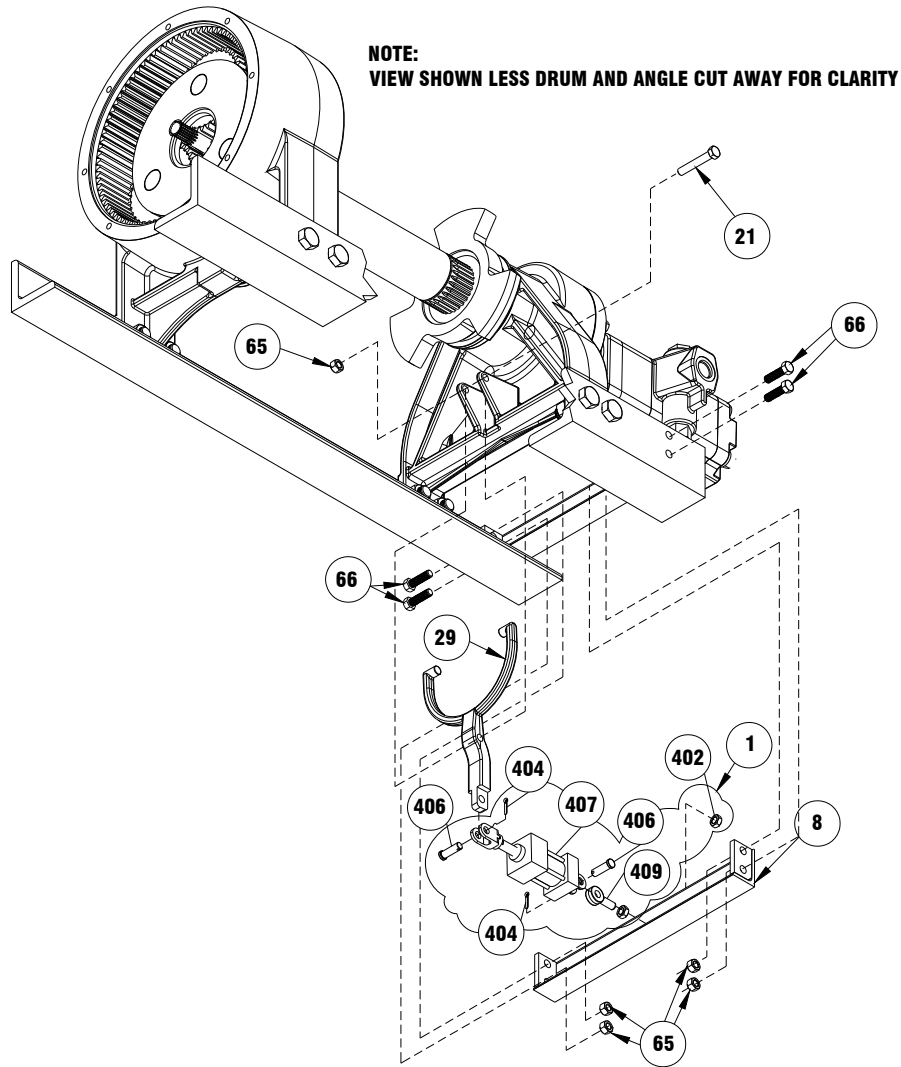
5. Remove motor #45 from winch by first disconnecting hydraulic lines (see page 17), solenoid wires, and then remove (4) bolts #37. O-ring #50 may now be removed.
6. Remove brake cover #42 by removing (4) bolts #66. **The cover is spring loaded, use care when removing.** Remove o-ring #46 then springs #61 may be removed; residual oil may be present in the brake housing.
7. Remove piston #11 including o-rings and backup rings #47, #48, #49, and #51 by using a momentary puff of compressed air into the brake port located on top of the end bearing. Capture the piston by placing a shop rag over the opening prior to using air. Capture the piston by placing a shop rag over the opening prior to using air.
8. Remove the sprag brake hub assembly #40, (7) stator plates #12, and (6) disc brakes #13. The sprag brake hub assembly #40 is not a serviceable part, if damaged a replacement assembly should be ordered.



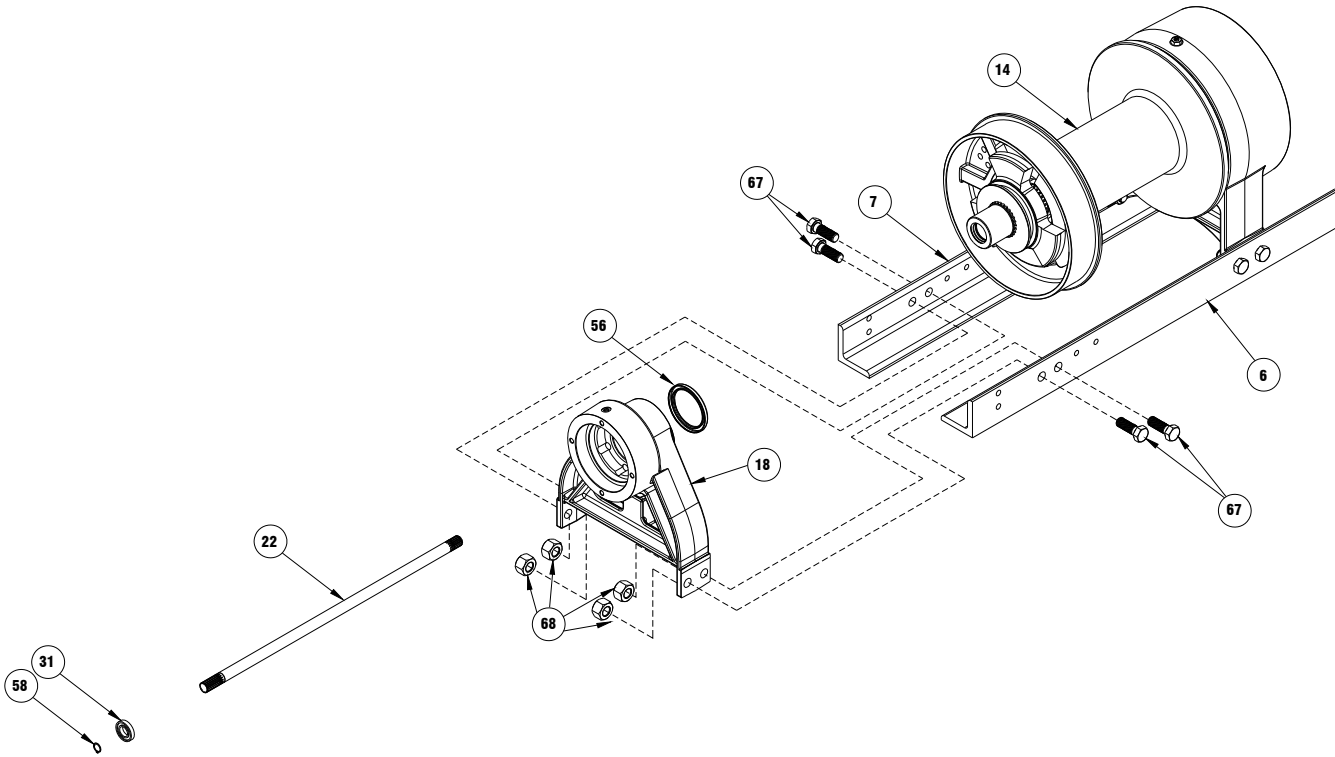
9. Remove (8) cover bolts #36; cover #10, and o-ring #52.
10. Remove snap ring #58, and sun gear #17.
11. The planetary carrier assembly #4 may now be removed along with (2) spacers #25.
12. Remove second snap ring #58 and output sun gear #15.



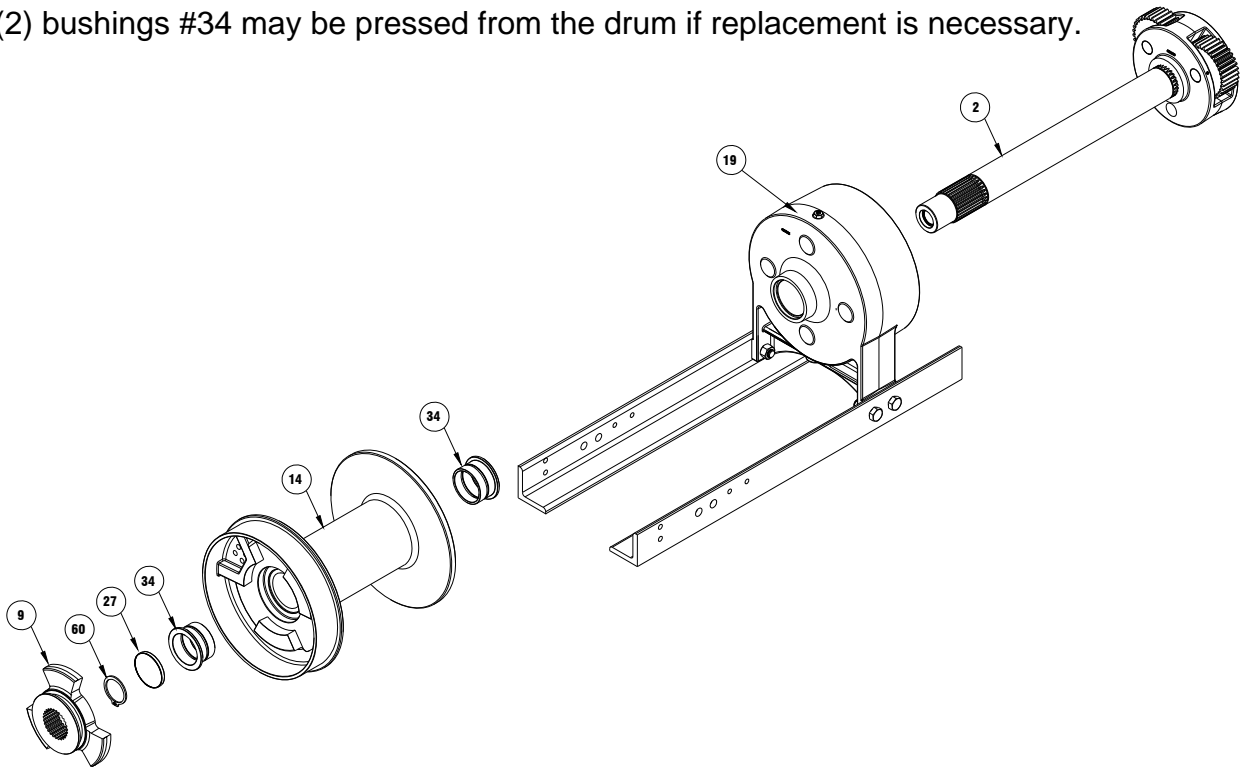
13. Remove the clutch cylinder #1 by removing the (2) cotter keys #404 and (2) pins #406 from either end of the air cylinder #407.
14. The clutch cylinder support angle #8 can be removed by removing the four bolts #66 and nuts #65 attaching it to the mounting angles.
15. Remove the clutch yoke #29 by removing center pivot bolt #21 and nut #65.



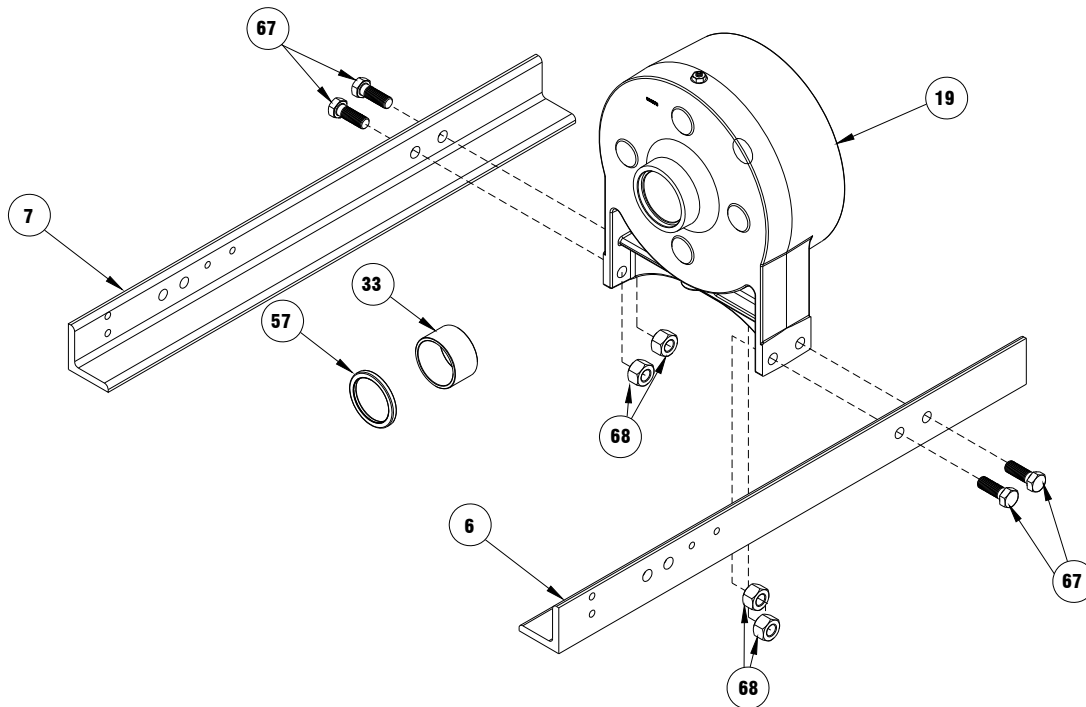
16. By removing snap ring #58, the input shaft #22 and ball bearing #31 may be removed.
17. To remove the motor end bearing #18 support drum #14 with a nylon strap or chain and hoist. Lift on the drum to tension the strap. Remove (4) bolts #67 and (4) nuts #68 attaching the end bearing to the mounting angles #6 and #7. The motor end bearing #18 will be supported on the output shaft end and may be slid off using a nylon strap and hoist to lift it.



18. While continuing to support the drum #14, remove the clutch #9, snap ring #60 and spacer #27.
19. The output carrier assembly #2 may be slid from the drum assembly.
20. The drum #14 is now supported only by the nylon strap and may be removed.
21. The (2) bushings #34 may be pressed from the drum if replacement is necessary.



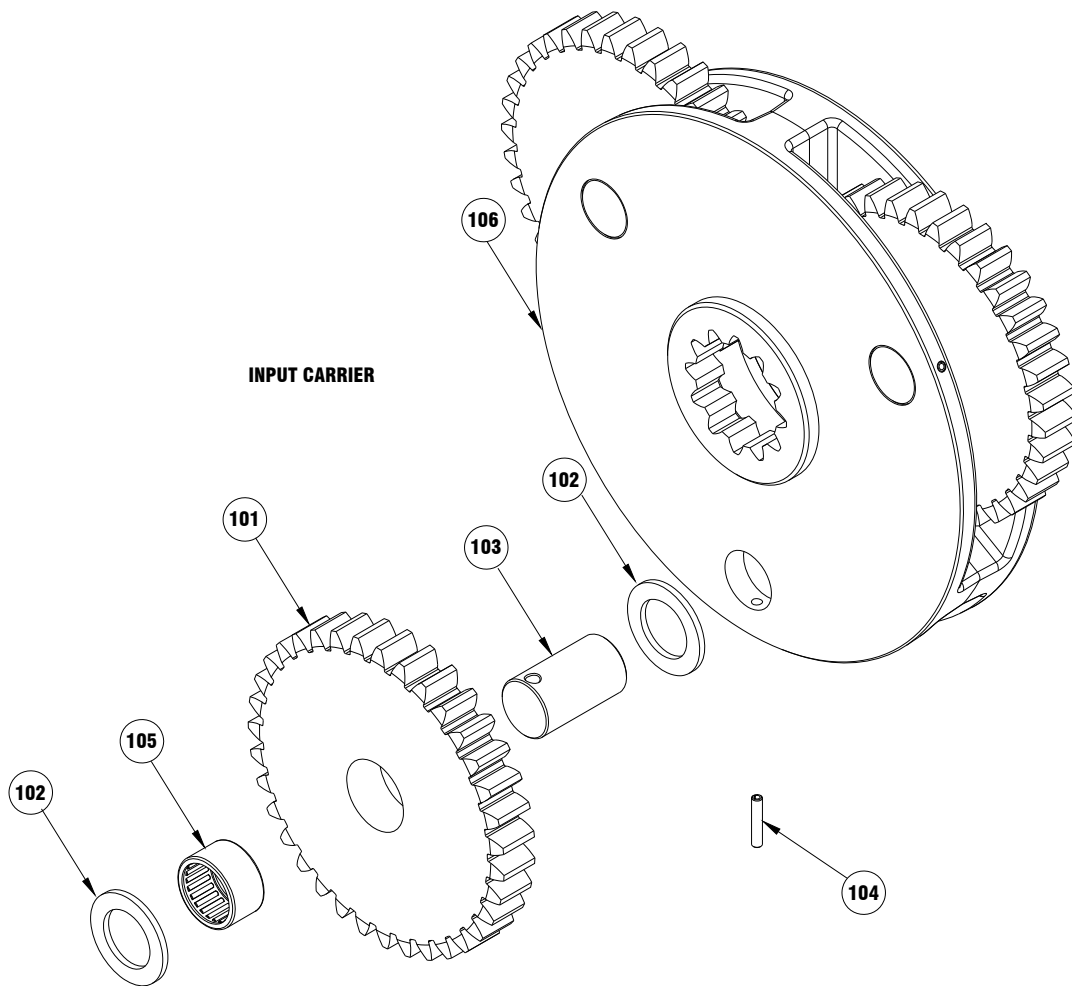
22. To remove gear end bearing #19, from mounting angles #6 and #7, first remove (4) 7/8-9NC bolts #67 and (4) nuts #68 from each angle. Shaft oil seal #57 and end bearing bushing #33 can be removed and replaced at this time, if necessary.



DISASSEMBLY OF INPUT CARRIER

Carrier assemblies may be purchased as a complete assembly (see pg. 20) or parts may be purchased individually (see parts list below). If purchasing individual parts, it will be necessary to disassemble the input gear carrier as outlined below.

1. Carefully drive roll pin #104 into carrier pin #103 so that it is captured within carrier pin #103 but not touching the opposite side of the input carrier #106.
2. Tap carrier pin #103 to remove it from the input carrier #106.
3. Slide the planet gear #101 and the (2) thrust washers #102 from the carrier #106. Bearings #105 may then be pressed out.
4. Remove the roll pin #104 from the carrier pin #106.
5. Repeat this process for the two remaining gears in the carrier.



ITEM #	QTY	PART #	DESCRIPTION
101	3	334225	GEAR-PLANET
102	6	518070	THRUST WASHER
103	3	470130	PIN-CARRIER
104	3	470103	ROLL PIN 1/4 DIA X 1 1/4 LG
105	3	402140	BEARING-DRAWN CUP NEEDLE ROLLER
106	1	317026	CARRIER-INPUT

ASSEMBLY OF INPUT CARRIER

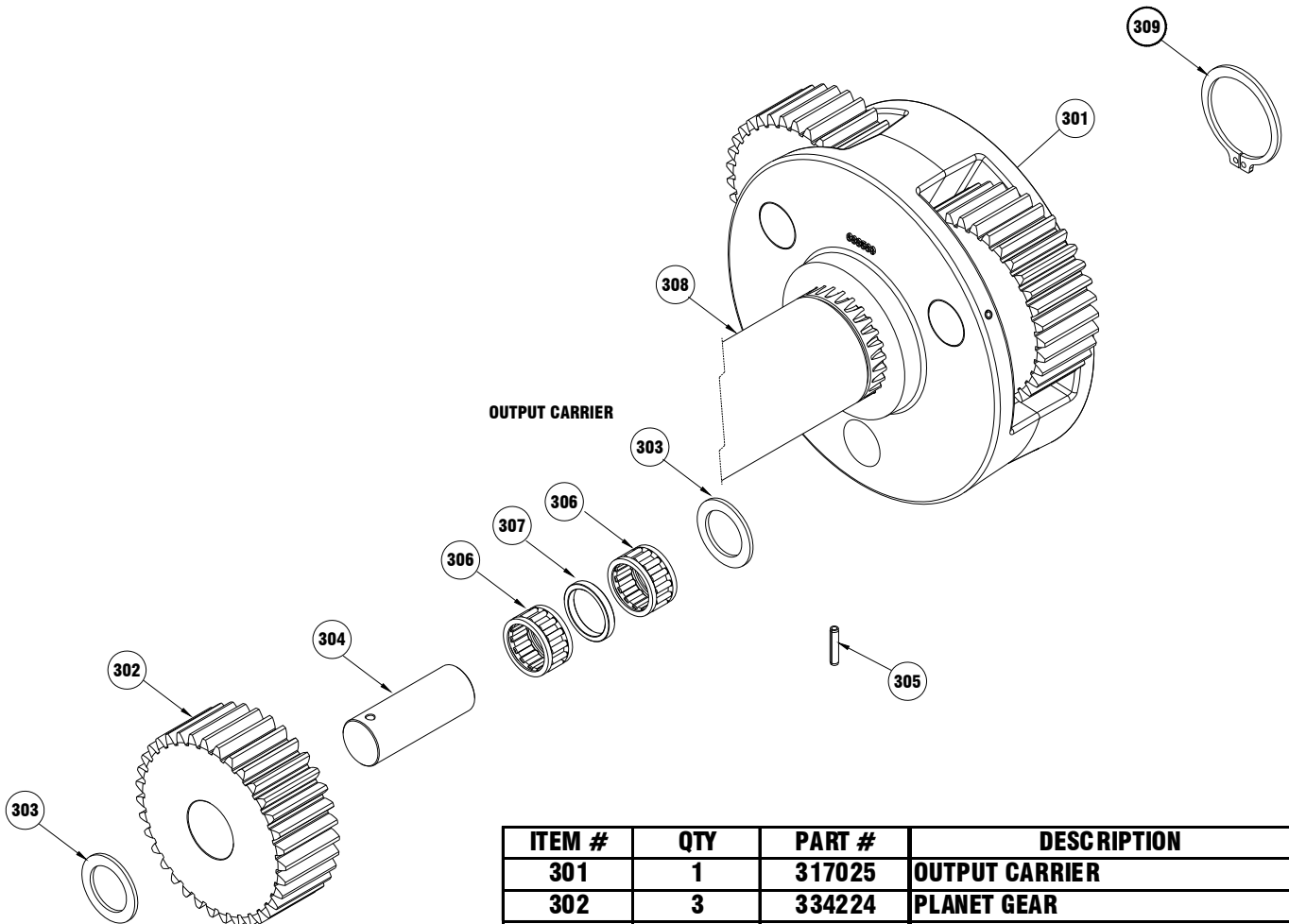
Note: Item Numbers refer to Carrier parts list on page 13

1. Place carrier #106 on flat clean surface.
2. Place the gear #101 on a flat thin clean metal plate; Align the bearing with the chamfer facing toward the gear. Using a press, press the bearing flush to the gear surface.
3. Place thrust washer #102 on top of gear #101. Insert carrier pin #103 into carrier #106, aligning roll pin #104 with the matching hole on the carrier #106.
4. Insert a thrust washer between gear #101 and carrier #106. Completely insert carrier pin #103 into carrier #106 using care to align the roll pin hole in carrier pin #103 with the roll pin hole in the carrier #106.
5. Drive roll pin #104 into carrier #106 until roll pin #104 is $\frac{1}{4}$ " past flush with surface of the carrier #106.
6. Repeat this process to install the two remaining gears into the carrier.

DISASSEMBLY OF OUTPUT CARRIER

Carrier assemblies may be purchased as a complete assembly (see pg. 20) or parts may be purchased individually (see below). If purchasing individual parts, it will be necessary to disassemble the gear carrier as outlined below.

1. Carefully drive roll pin #305 into carrier pin #304 so that it is captured within carrier pin #304 but not touching the opposite side of the output carrier #301.
2. Tap carrier pin #304 to remove it from the output carrier #301.
3. Slide the planet gear #301 and the (2) thrust washers #302 from the carrier #306. Bearings #305 may then be pressed out.
4. Remove the roll pin #305 from the carrier pin #304.
5. Repeat steps 1-4 for remaining gears.
6. Remove snap ring #309 from output shaft # 308 and remove output shaft #308.



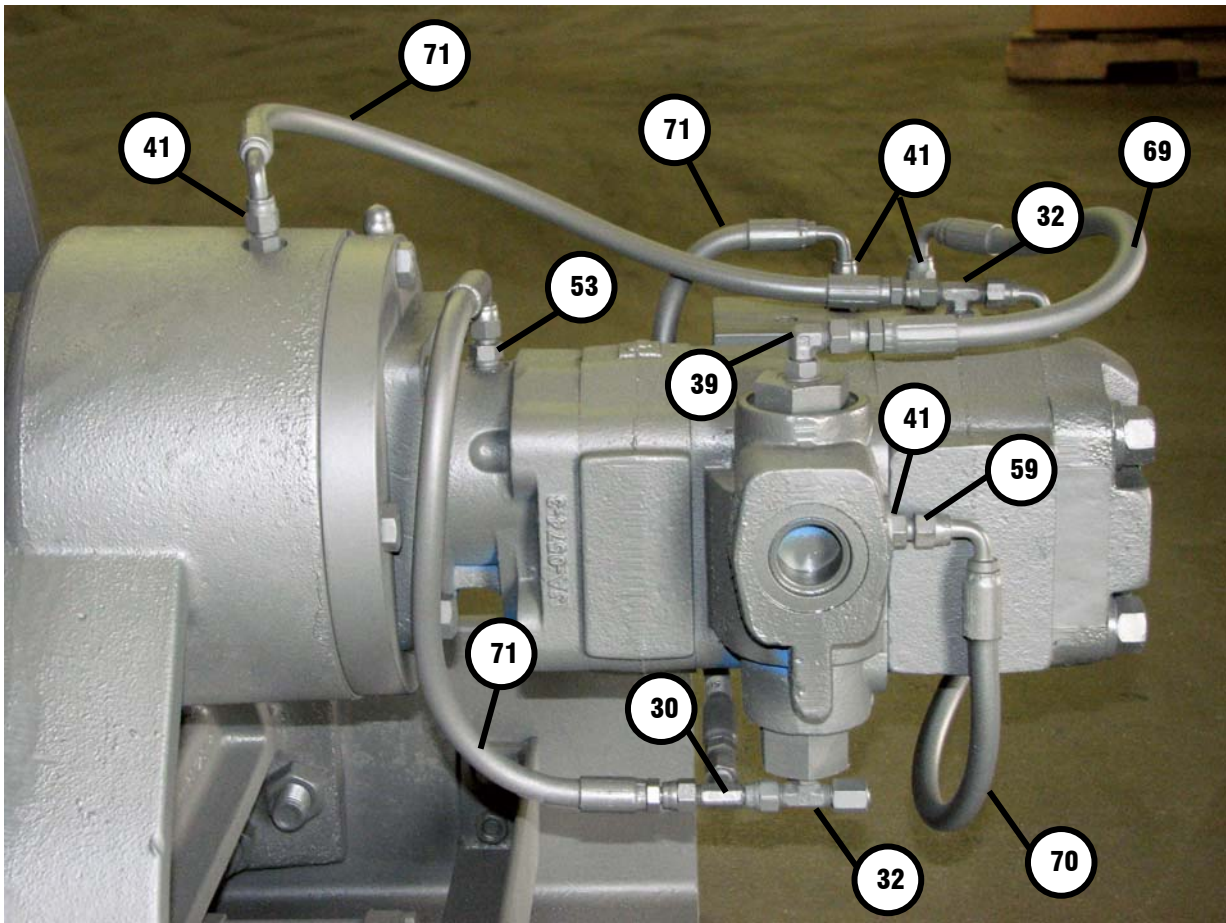
ITEM #	QTY	PART #	DESCRIPTION
301	1	317025	OUTPUT CARRIER
302	3	334224	PLANET GEAR
303	6	518073	THRUST WASHER
304	3	470129	CARRIER PIN
305	3	470103	ROLL PIN 1/4 DIA X 1 1/4 LG
306	6	402143	BEARING-NEEDLE ROLLER
307	3	362316	SPACER
308	1	357534	OUTPUT SHAFT
309	1	490067	SNAP RING

ASSEMBLY OF OUTPUT CARRIER

Note: Item Numbers refer to Carrier parts list on page 15

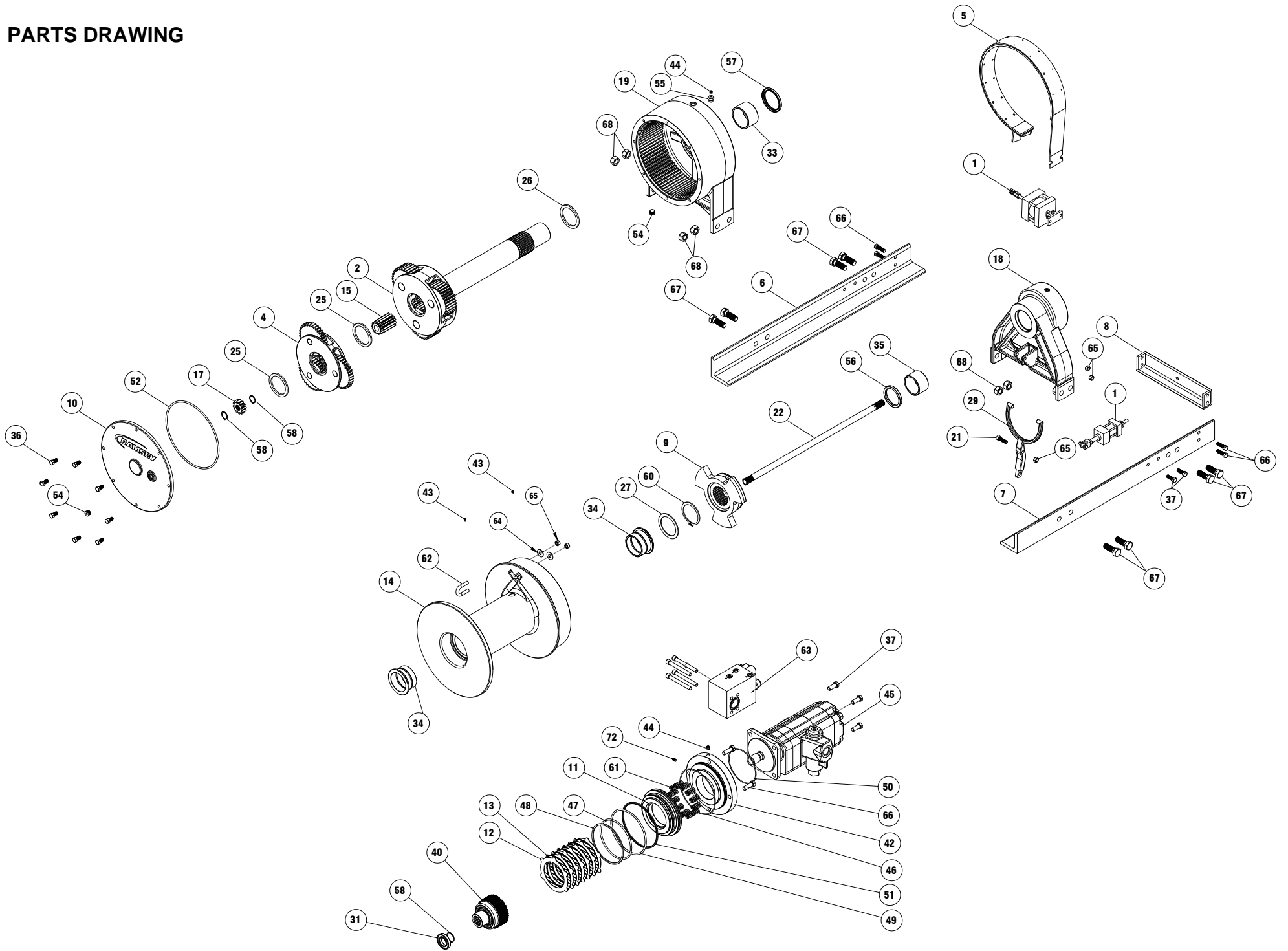
1. Install the output shaft # 308 into the carrier and install snap ring #309 on the output shaft.
2. Place output carrier #301 on flat clean surface.
3. Press one set of needle bearings #306 into gear #302. Turn gear #302 over.
4. Install spacer #307, and the next needle bearing #306.
5. Slide the gear #302 into position in the output carrier #301.
6. Place thrust washer #303 on top of gear #302. Insert carrier pin #304 into carrier #301
7. Turn output carrier #301 on its side so that the gear #302 is on top.
8. Insert a thrust washer between gear #302 and output carrier #301. Completely insert carrier pin #304 into carrier #301 using care to align the roll pin hole in carrier pin #304 with the roll pin hole in the output carrier #301.
9. Drive roll pin #305 into output carrier #301 until roll pin #305 is flush with surface of the output carrier #301.
10. Repeat steps 2-9 to install the two remaining gears into the output carrier.

HOSE HOOKUP



NOTES

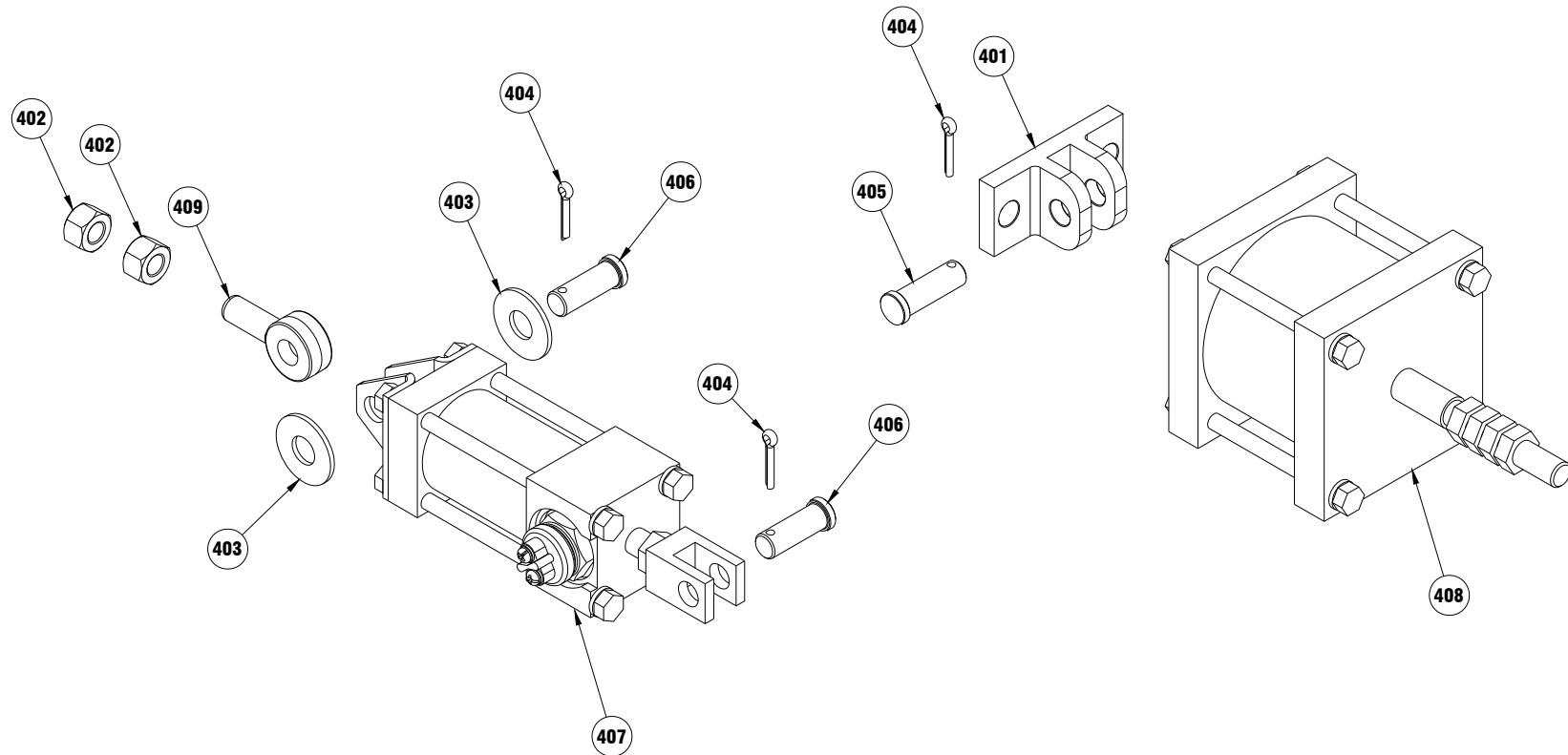
PARTS DRAWING



PARTS LIST

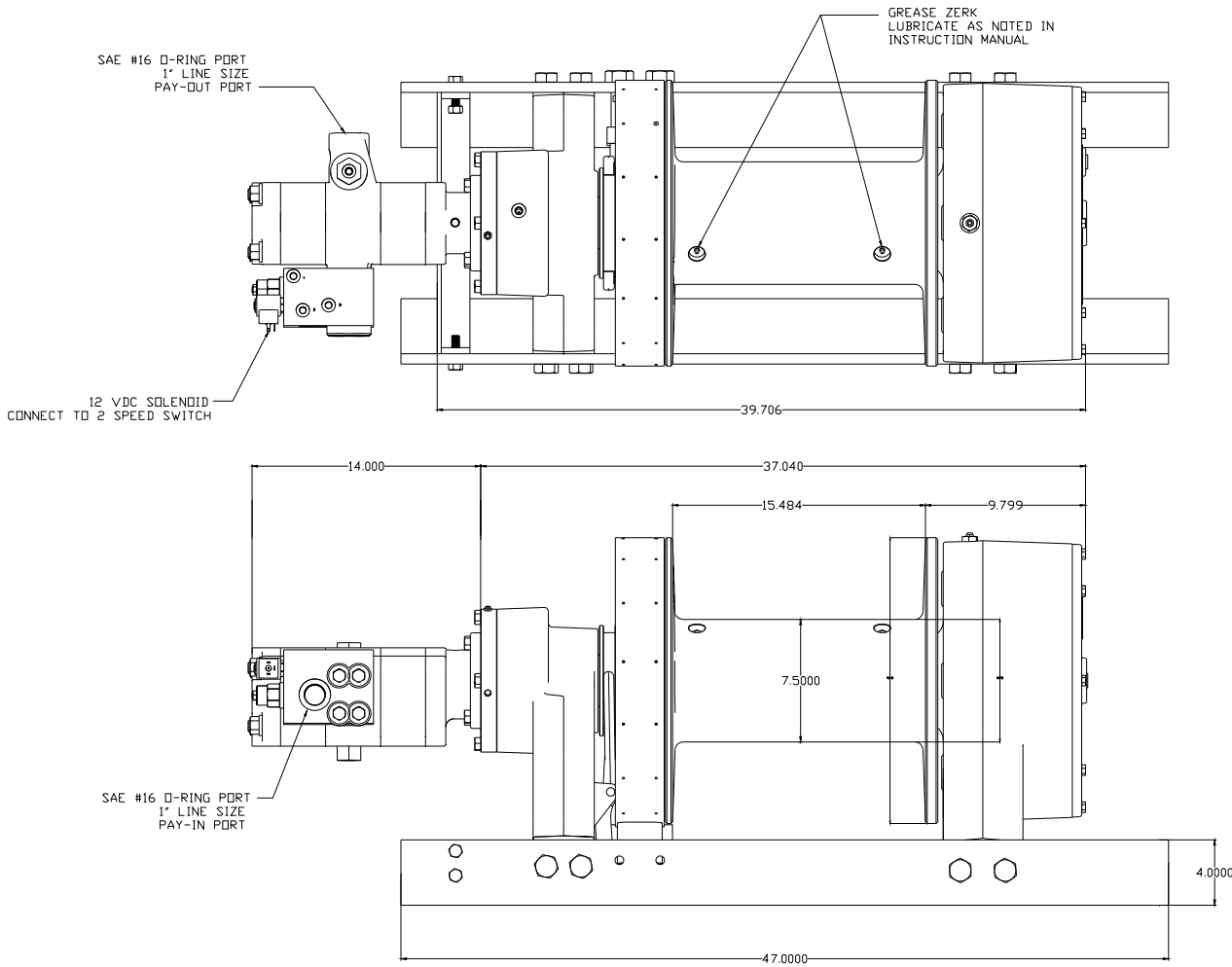
ITEM	QTY	PART NO	DESCRIPTION	ITEM	QTY	PART NO	DESCRIPTION
1	1	256131	AIR CYLINDER	37	6	414578	CAPSCREW-1/2-13NCX1 1/4, HXHD, GR.5, ZP
2	1	296684	OUTPUT CARRIER ASSEMBLY	38			NOT USED
3			NOT USED	39	1	432018	FITTING JIC O-RING EL
4	1	296685	INPUT CARRIER ASSEMBLY	40	1	296688	SPRAG BRAKE HUB ASSEMBLY
5	1	299750	BAND BRAKE	41	4	432023	FITTING JIC O-RING NIPPLE
6	1	303156	LH MOUNTING ANGLE	42	1	438043	BRAKE COVER
7	1	303157	RH MOUNTING ANGLE	43	2	456001	FITTING-LUBE, 3/16 DRIVE FIT, SHORT
8	1	312575	CLUTCH CYLINDER SUPPORT BRACKET	44	2	456008	FITTING-RELIEF1/8-27NPTF, 15 PSI MAX
9	1	324511	CLUTCH	45	1	458169	MOTOR-HYD
10	1	328175	GEAR HOUSING COVER	46	1	462063	O-RING 2-165
11	1	330016	BRAKE PISTON	47	1	462082	O-RING 2-358
12	7	330017	STATOR PLATE	48	1	462083	BACK UP RING
13	6	330018	DISC-BRAKE	49	1	462084	O-RING 2-362
14	1	332248	DRUM	50	1	462081	O-RING 2-159
15	1	334226	GEAR-SUN OUTPUT	51	1	462085	BACK UP RING
16			NOT USED	52	1	462093	O-RING 2-280
17	1	334227	GEAR-SUN INPUT	53	1	432053	FITTING JIC O-RING NIPPLE
18	1	338400	END BEARING-MOTOR SIDE	54	2	468041	PLUG, -8 SAE, 3/4"-16 UNF
19	1	338401	END BEARING-GEAR SIDE	55	1	468042	REDUCER-3/4-16 SAE O-RING X 1/8NPTF
20			NOT USED	56	1	486096	SEAL-OIL-SHAFT
21	1	414543	CAPSCREW-1/2-13NCX3LG,HXHD, GR 5	57	1	486097	SEAL-OIL-SHAFT
22	1	357533	INPUT SHAFT	58	3	490068	SNAP RING 5100-1.25
23			NOT USED	59	1	432054	FITTING JIC SWIVEL EL
24			NOT USED	60	1	490067	SNAP RING
25	2	362301	SPACER - INPUT CARRIER	61	12	494129	SPRING-BRAKE
26	1	362317	SPACER - OUTPUT CARRIER	62	1	514020	U-BOLT
27	1	362318	SPACER - DRUM	63	1	516048	COUNTER BALANCE BLOCK
28			NOT USED	64	2	418223	FLATWASHER 1/2
29	1	370062	YOKE-SHIFTER	65	7	418069	NUT-1/2-13NC HEX REG,Z/P
30	1	432048	FITTING JIC SWIVEL TEE	66	8	414556	CAPSCREW-1/2-13NCX1 3/4 HXHD GR.5
31	1	402142	BALL BEARING	67	8	414790	BOLT-7/8-9NC X 3.25 LG,HXHD,GR8, Z/P
32	2	432049	FITTING JIC BRANCH TEE	68	8	418108	NUT-7/8-9NC HEX REG Z/P
33	1	412139	GEAR END BEARING BUSHING	69	1	509137	HOSE
34	2	412141	DRUM BUSHING	70	2	509140	HOSE
35	1	412140	MOTOR END BEARING BUSHING	71	3	509141	HOSE
36	8	414521	CAPSCREW-1/2-13 NC X 1 LG HX HD	72	1	468016	PIPE PLUG

AIR CYLINDER KIT #256131 PARTS LIST

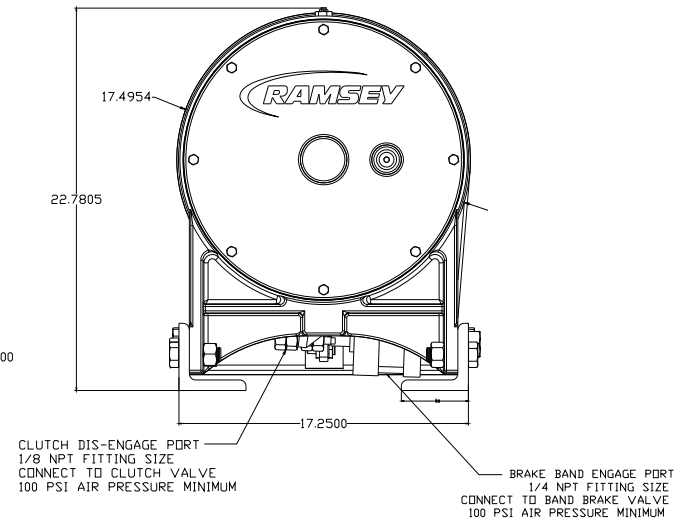


ITEM	QTY	PART NO	DESCRIPTION
401	1	408422	MOUNTING BRACKET
402	2	418067	NUT-1/2-20NF HEX JAM
403	2	418223	WASHER-1/2 USS FLAT
404	3	424005	COTTER PIN- 1/8 DIA X 1 LG
405	1	424027	CLEVIS PIN-1/2 SHAFT DIA X 1 1/2 LG
406	2	424205	CLEVIS PIN-1/2 SHAFT DIA X 1 23/64 LG
407	1	433031	AIR CYLINDER
408	1	433032	AIR CYLINDER
409	1	448108	EYE BOLT

DIMENSIONAL DRAWING



Bolt Size (inches)	Thds Per Inch	Bolt Torque (ft-lb)	
		SAE Grade 5	SAE Grade 8
7/16	14	54	78
1/2	13	78	119
5/8	11	154	230
3/4	10	257	380
7/8	9	382	600
1	8	587	700





By 

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.

See warranty card for details.



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