

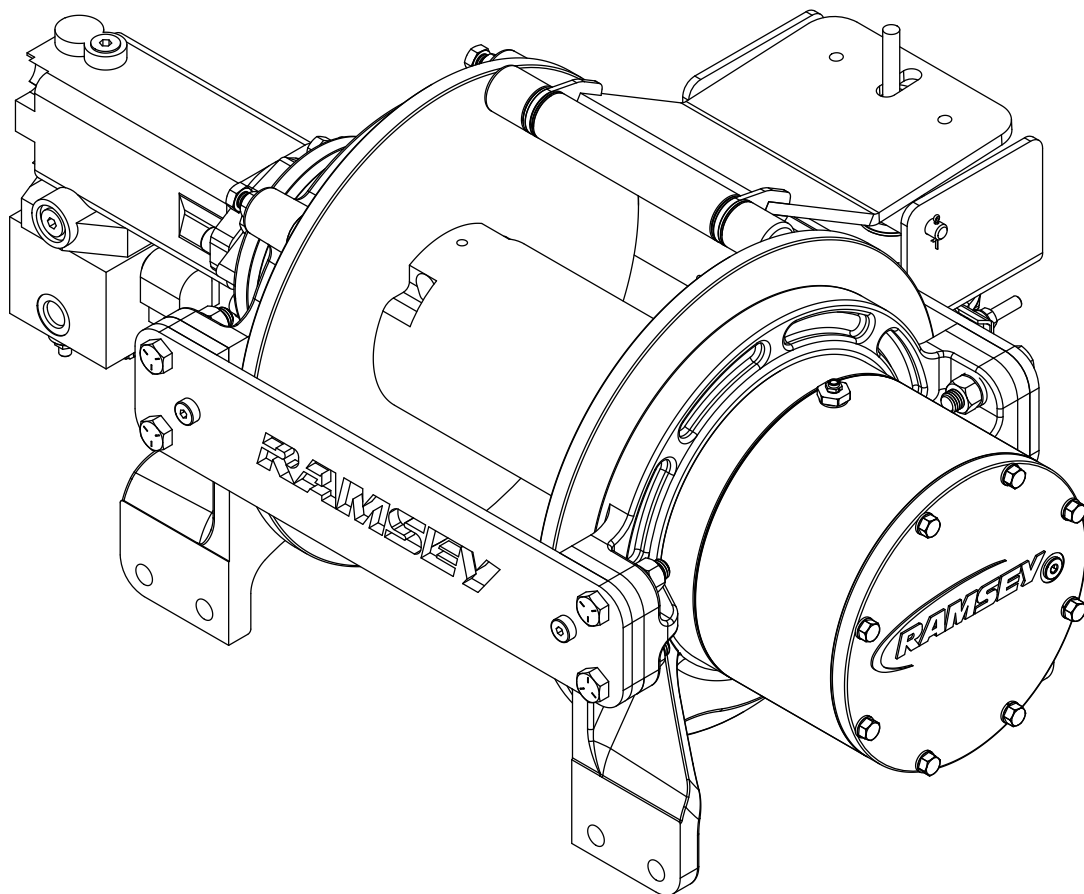


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Operating/Service/Maintenance Manual

# Hercules 35,000

OM 914301-0226-D



 **CAUTION**

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

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# Introduction 1

| SPECIFICATIONS  |      |        |        |        |        |        |                       |
|---|------|--------|--------|--------|--------|--------|-----------------------|
| RELATED LINE PULL (LBS.) .....  |      |        |        |        |        |        | 35,000                |
| (KGS.) .....  |      |        |        |        |        |        | 15,909                |
| GEAR REDUCTION .....  |      |        |        |        |        |        | 33.16:1               |
| WEIGHT (WITHOUT CABLE) .....  |      |        |        |        |        |        | 500 LBS. (226.8 KGS.) |
| LAYER OF CABLE  |      | 1      | 2      | 3      | 4      | 5      | 6                     |
| RATED LINE PULL<br>PER LAYER  | LBS. | 35,000 | 28,600 | 24,200 | 21,000 | 18,500 | 16,500                |
|   | KGS. | 15,875 | 12,972 | 10,976 | 9,525  | 8,391  | 7,484                 |
| CABLE<br>CAPACITY   | FT.  | 20     | 55     | 90     | 130    | 175    | 230                   |
|   | M.   | 6      | 16     | 27     | 39     | 53     | 70                    |
| LINE SPEED (LOW)<br>(AT 25GPM)  | FPM  | 23     | 27     | 32     | 36     | 41     | 46                    |
|   | MPM  | 7      | 8.2    | 9.7    | 10.9   | 12.5   | 14                    |
| LINE SPEED (HIGH)<br>(AT 25GPM)   | FPM  | 46     | 56     | 64     | 72     | 82     | 92                    |
|   | MPM  | 14     | 16.4   | 19.4   | 21.8   | 25     | 28                    |
| * THESE SPECIFICATIONS ARE BASED ON RECOMMENDED WIRE ROPE OF .75" DIAMETER EIPS CABLE AND 11.9 CU. IN./REV. MOTOR AT 2725 PSI WORKING PRESSURE. |      |        |        |        |        |        |                       |
| * USE ONLY RAMSEY WINCH RECOMMENDED 3/4" SYNTHETIC ROPE.  |      |        |        |        |        |        |                       |
| * DIRECTIONAL CONTROL VALVE: 3-POSITION, 4 WAY MOTOR SPOOL.   |      |        |        |        |        |        |                       |
| * WINCH MEETS SAE J706 AT STATED WORKING PRESSURE.  |      |        |        |        |        |        |                       |

 **WARNING** Clutch must be totally 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 drum barrel is necessary to hold the load.

Cable anchor is not designed to hold load.

Use only Ramsey Winch recommended 5/8" synthetic rope.

A minimum of 8 wraps of Ramsey Winch recommended synthetic rope is necessary to hold load.

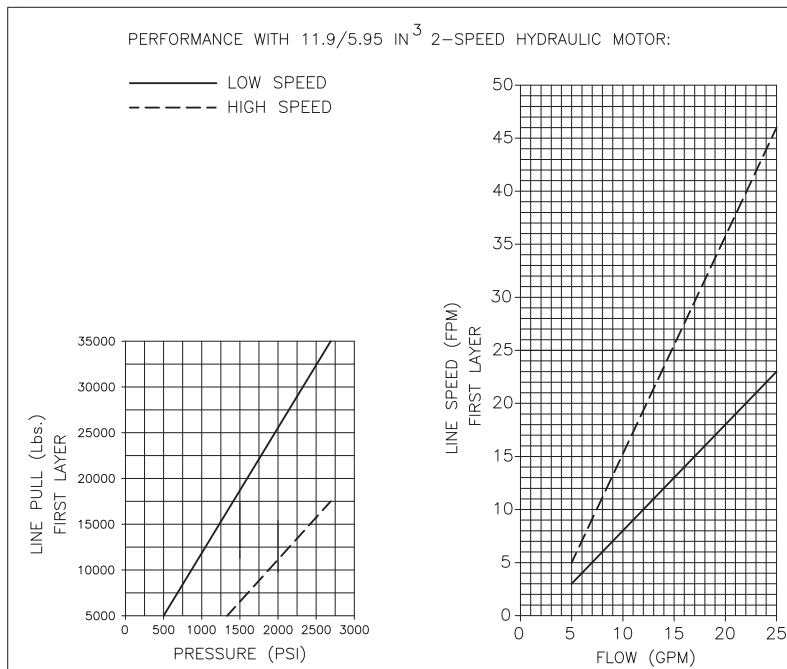
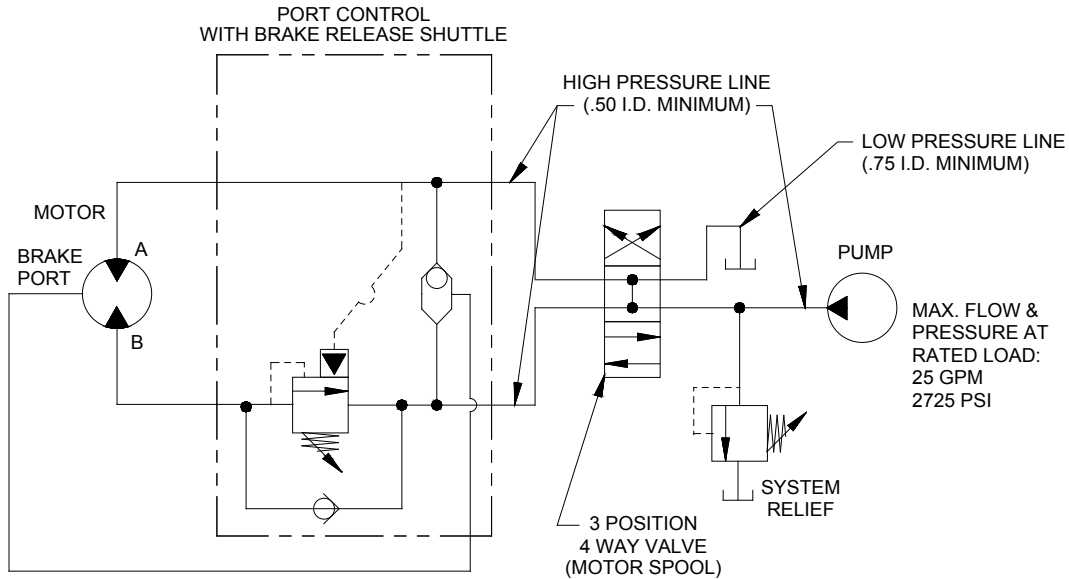
Cable anchor is not designed to hold load.

# 2 Hydraulic System Requirements

Refer to the performance charts to properly match your hydraulic system to Hercules 35K 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 11.9 cubic inches with 25 GPM maximum flow rate. See page 18 for motor port size.

## 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

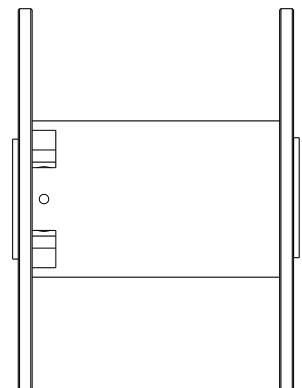
Do not attempt to engage the clutch by first running the winch motor and then moving the clutch control valve to the "clutch-engaged" position while the motor is running. Do not start picking up the load at the same time the clutch is being engaged.

**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.



## SYNTHETIC ROPE

### NOTICE

The roller tensioner must be removed to use synthetic rope.

1. Use only 12 strand (HMPE) high modulus polyurethane fiber coated synthetic rope, commonly known as Dyneema (MBS 47,500 lbs.). Maximum Winch capacity is 250 ft. of 5/8" rope.
2. Install and anchor synthetic rope as shown below.

## 4 Synthetic Rope Installation

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1. Tape the end of the rope with electrical tape 2"-3" from end as shown in picture. This will aid in installing the rope through the anchor hole.



2. Run rope through anchor hole. Pull approximately 60" of rope past anchor.



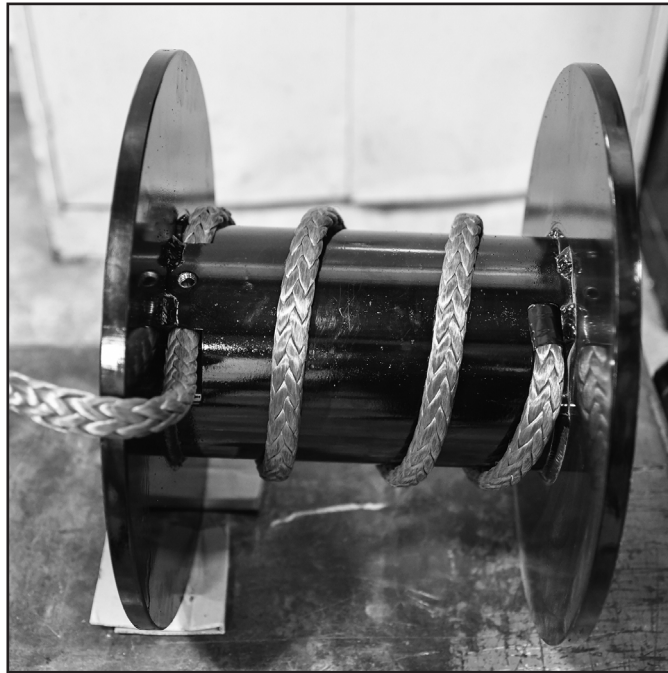
# Synthetic Rope Installation 4

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3. Spiral wrap rope around drum barrel, approximately 3 times, evenly spaced to second flange.



4. Pull excess slack from rope until rope is tight against drum barrel. Tape end of rope onto drum.



## 4 Synthetic Rope Installation

---

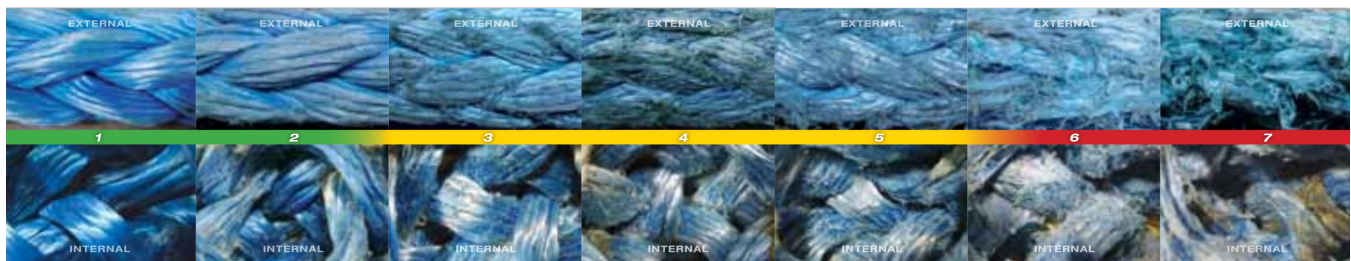
5. Wind rope onto drum (no load) for minimum of 8 wraps before applying load to install entire length of rope.



# Rope Inspection Techniques 5

| INSPECTION  | WHAT   | CAUSE   | CORRECTIVE ACTION:  |
|---|--|---|---|
| <b>CUT STRANDS</b><br>REPAIR OR RETIRE                | <ul style="list-style-type: none"> <li>TWO OR MORE CUT STRANDS IN PROXIMITY</li> </ul>   | <ul style="list-style-type: none"> <li>ABRASION</li> <li>SHARP EDGES AND SURFACES</li> <li>CYCLIC TENSION WEAR</li> </ul> | IF POSSIBLE, REMOVE AFFECTED SECTION AND RESPLICE WITH A STANDARD END-FOR-END SPLICE. IF RESPLICING IS NOT POSSIBLE, RETIRE THE ROPE. |
| <b>COMPRESSION</b><br>NOT PERMANENT REPAIR            | <ul style="list-style-type: none"> <li>VISIBLE SHEEN</li> <li>STIFFNESS REDUCED BY FLEXING THE ROPE</li> <li>NOT TO BE CONFUSED WITH MELTING</li> <li>OFTEN SEEN ON WINCH DRUMS</li> </ul> | <ul style="list-style-type: none"> <li>FIBER MOLDING ITSELF TO THE CONTACT SURFACE UNDER A RADIAL LOAD.</li> </ul>        | FLEX THE ROPE TO REMOVE COMPRESSION.  |
| <b>PULLED STRAND</b><br>NOT PERMANENT REPAIR          | <ul style="list-style-type: none"> <li>STRAND PULLED AWAY FROM THE REST OF THE ROPE</li> <li>IS NOT CUT OR OTHERWISE DAMAGE</li> </ul>   | <ul style="list-style-type: none"> <li>SNAGGING ON EQUIPMENT OR SURFACES</li> </ul>                                       | WORK BACK INTO THE ROPE.  |
| <b>MELTED OR GLAZED FIBER</b><br>REPAIR OR RETIRE     | <ul style="list-style-type: none"> <li>FUSED FIBERS</li> <li>VISIBLY CHARRED AND MELTED FIBERS, YARNS, AND/OR STRANDS</li> <li>EXTREME STIFFNESS</li> <li>UNCHANGED BY FLEXING</li> </ul>  | <ul style="list-style-type: none"> <li>EXPOSURE TO EXCESSIVE HEAT, SHOCK LOAD, OR A SUSTAINED HIGH LOAD</li> </ul>        | IF POSSIBLE, REMOVE AFFECTED SECTION AND RESPLICE WITH A STANDARD END-FOR-END SPLICE. IF RESPLICING IS NOT POSSIBLE, RETIRE THE ROPE. |
| <b>DISCOLORATION/ DEGRADATION</b><br>REPAIR OR RETIRE | <ul style="list-style-type: none"> <li>FUSED FIBERS</li> <li>BRITTLE FIBERS</li> <li>STIFFNESS</li> </ul>  | <ul style="list-style-type: none"> <li>CHEMICAL CONTAMINATION</li> </ul>  | IF POSSIBLE, REMOVE AFFECTED SECTION AND RESPLICE WITH A STANDARD END-FOR-END SPLICE. IF RESPLICING IS NOT POSSIBLE, RETIRE THE ROPE. |
| <b>INCONSISTENT DIAMETER</b><br>REPAIR OR RETIRE      | <ul style="list-style-type: none"> <li>FLAT AREAS</li> <li>LUMPS AND BUMP</li> </ul>   | <ul style="list-style-type: none"> <li>SHOCK LOADING</li> <li>BROKEN INTERNAL STRAND</li> </ul>                           | IF POSSIBLE, REMOVE AFFECTED SECTION AND RESPLICE WITH A STANDARD END-FOR-END SPLICE. IF RESPLICING IS NOT POSSIBLE, RETIRE THE ROPE. |
| <b>ABRASION</b><br>REPAIR OR RETIRE                   | <ul style="list-style-type: none"> <li>BROKEN FILAMENTS AND YARNS</li> </ul>   | <ul style="list-style-type: none"> <li>ABRASION</li> <li>SHARP EDGES AND SURFACES</li> <li>CYCLIC TENSION WEAR</li> </ul> | CONSULT ABRASION IMAGES* AND RATE INTERNAL/EXTERNAL ABRASION LEVEL OF ROPE. EVALUATE ROPE BASED ON ITS MOST DAMAGED SECTION.          |

Minimal strength loss (continue use)
  Significant strength loss (consult rope supplier)
  Severe strength loss (retire rope)



# 6 Maintenance

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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.

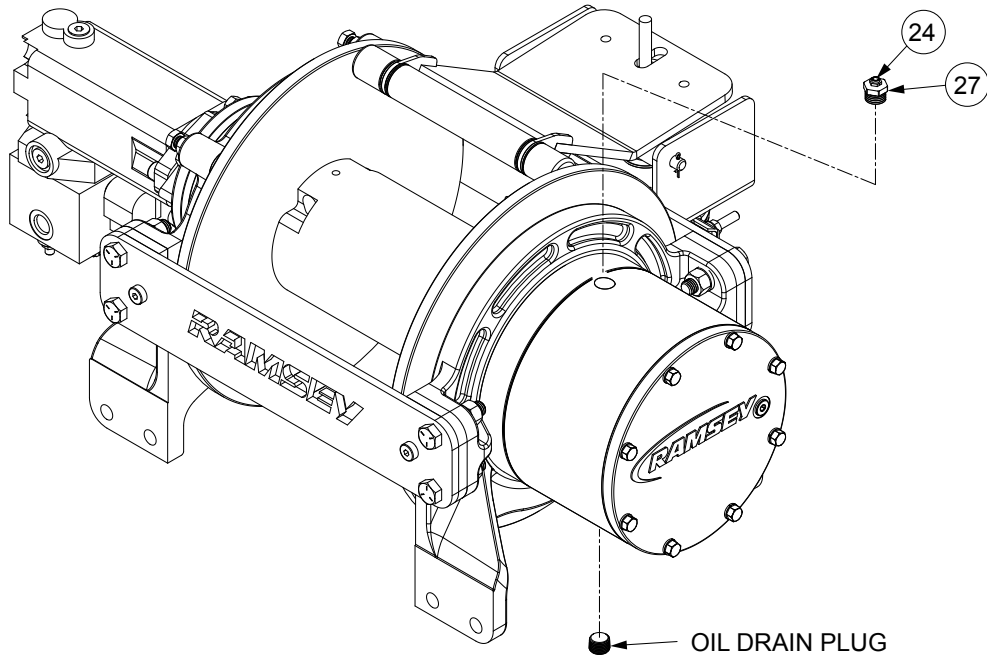
| TROUBLESHOOTING GUIDE          |   |   |
|--------------------------------|---|---|
| CONDITIONS                     | POSSIBLE CAUSE  | CORRECTION  |
| OIL LEAKS FROM WINCH           | 1. SEALS DAMAGED OR WORN<br>2. TOO MUCH OIL<br>3. DAMAGED GASKETS | 1. REPLACE SEAL<br>2. DRAIN EXCESS OIL. REFER TO OPERATION<br>3. REPLACE GASKETS                        |
| WINCH RUNS TOO SLOW            | 1. LOW FLOW RATE<br>2. HYDRAULIC MOTOR WORN OUT                   | 1. CHECK FLOW RATE. REFER TO HYDRAULIC SYSTEMS PERFORMANCE CHART PAGE 2.<br>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   |

# Typical Instructions for Overhaul 7

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## Disassembly

1. Drain oil from gear housing by removing oil drain plug, reducer #27 and relief fitting #24.  
Remove tensioner assembly.

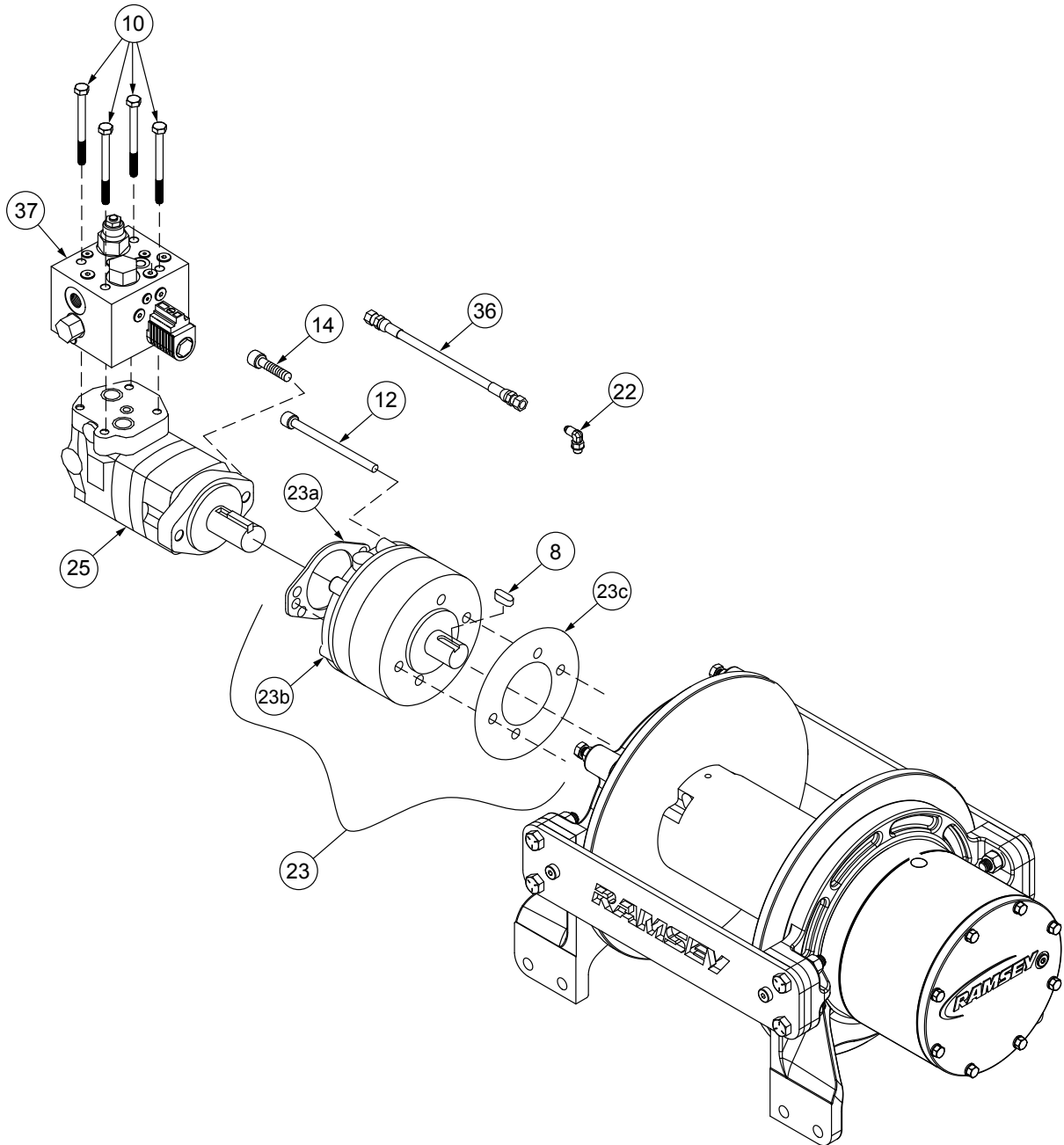


\*For reference only. Actual Configuration may vary.

# 7 Typical Instructions for Overhaul

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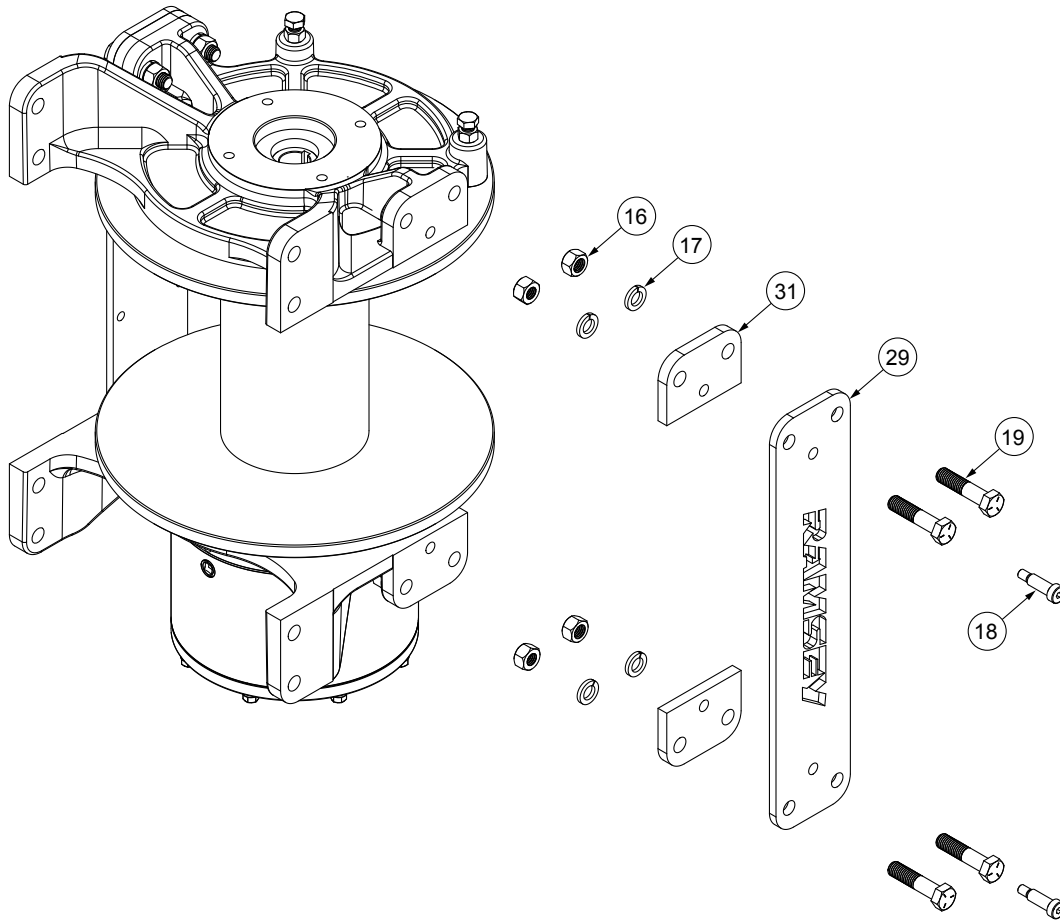
2. Disconnect hose #36 from valve #37 and fitting #22 on brake #23. Remove motor #25 and gasket #23a by removing (2) capscrews #16. Remove valve #37, if needed from motor by loosening (4) capscrews #10.



\*For reference only. Actual Configuration may vary.

# Typical Instructions for Overhaul 7

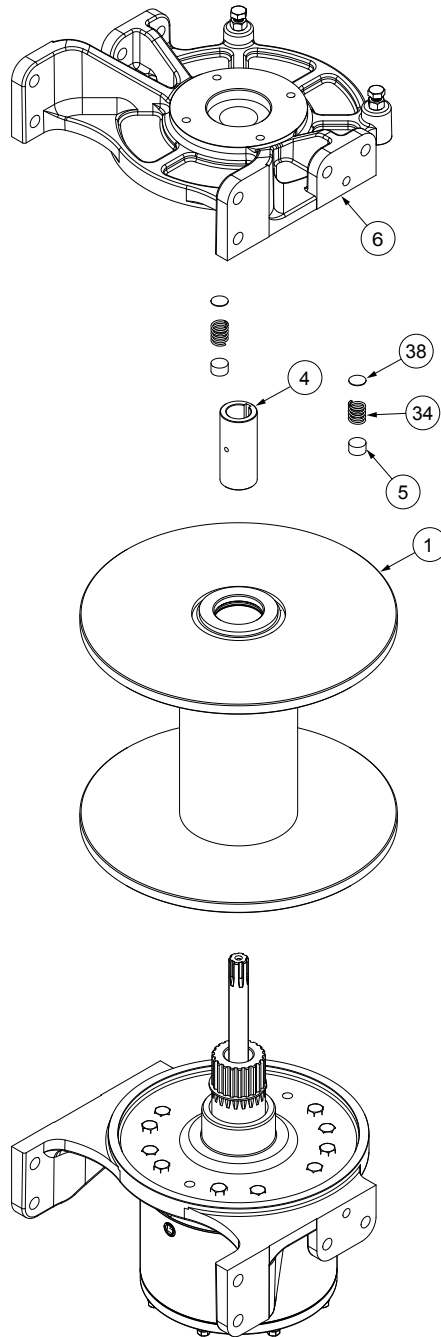
3. Stand winch up on gear box end as shown. Remove winch tie plates #29 by removing (8) capscrews #19, (8) lock washers #17, (8) nuts #16, and (4) shoulder bolt #18.



# 7 Typical Instructions for Overhaul

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4. Pull motor end bearing #6 from drum assembly #1. Drag brake, brake parts #5, #34, and #38 may fall out when motor end bearing #6 is removed. Remove motor coupling #4 from input shaft. Pull drum assembly #1 from gear end bearing #6. Remove quad rings from grooves in drum bushings. Examine drum assembly for signs of wear.

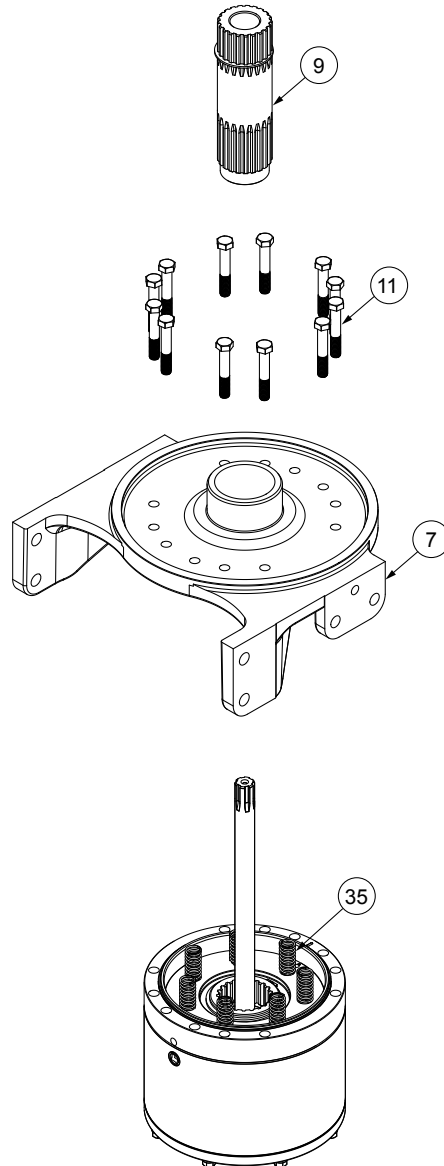


# Typical Instructions for Overhaul 7

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5. Remove output shaft #9 from gear end bearing #7. Remove and inspect output coupling #9 for damage or wear. Replace if damaged. Remove gear end bearing by removing the (12) capscrews #11.

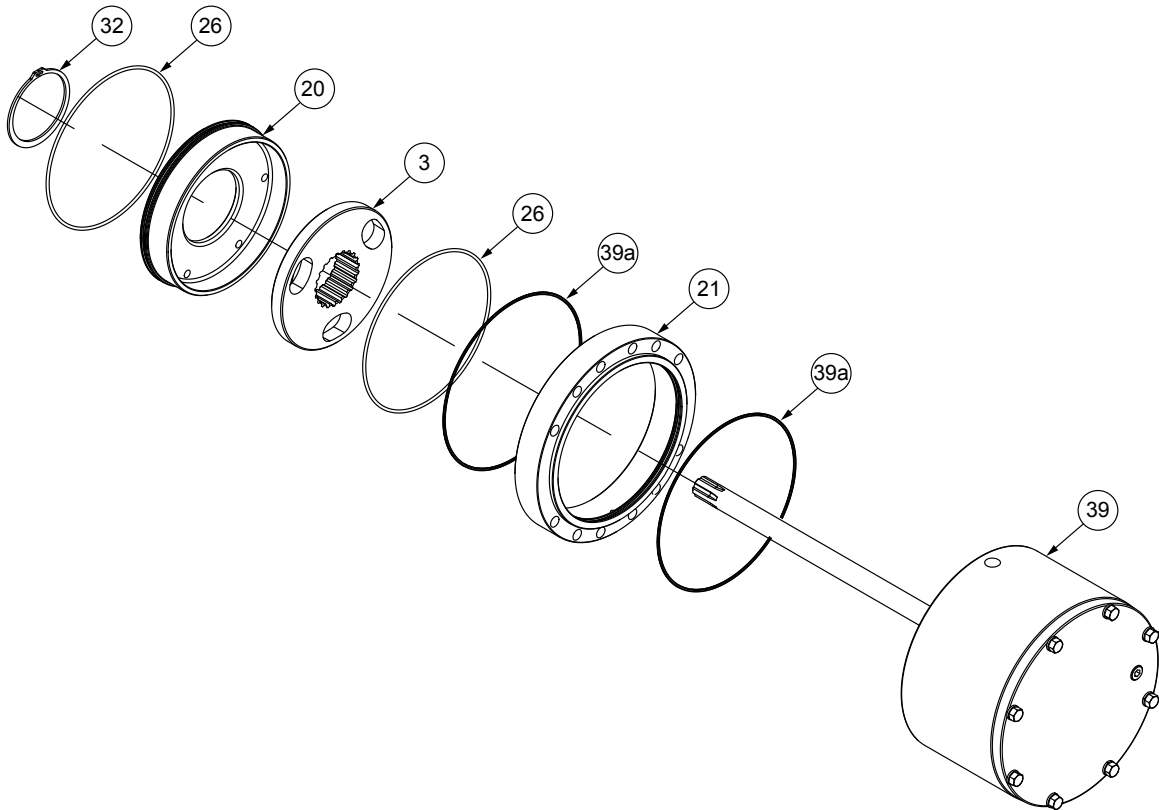
**Note:** The gear end bearing will be spring loaded and will "spring up" slightly when last capscrew is removed. Remove (7) springs #35.



## 7 Typical Instructions for Overhaul

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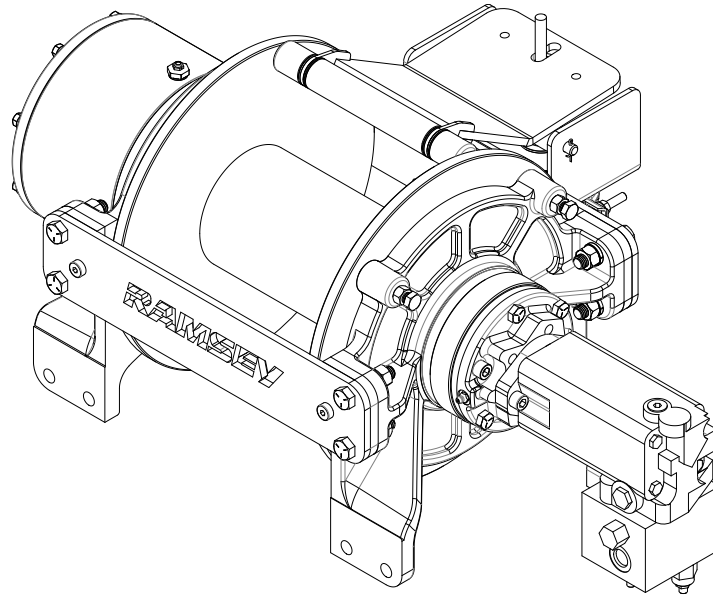
6. Remove clutch housing #21 with piston #20 and clutch #3 inside from gearbox assembly #39. Inspect clutch for wear or damage and replace if required. Remove clutch #3 from piston by removing retainer ring #32. To remove piston from clutch housing apply air to 1/8" port on bottom of clutch housing. Remove O-rings #26 from grooves on piston and clutch housing and inspect for damage or wear. Inspect gear box assembly #39 and #39a for damage or wear. Replace complete gear box assembly if gears are damaged.



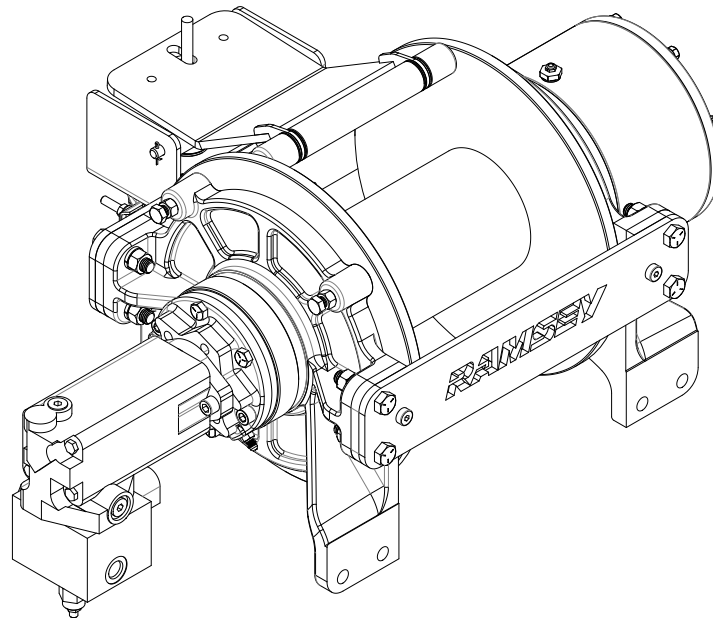
# Typical Winch Mounting Configuration 8

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RIGHT HAND MOUNTING CONFIGURATION



LEFT HAND MOUNTING CONFIGURATION

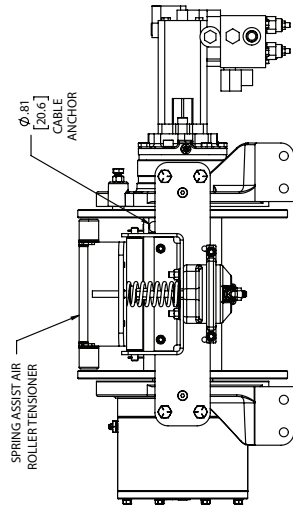
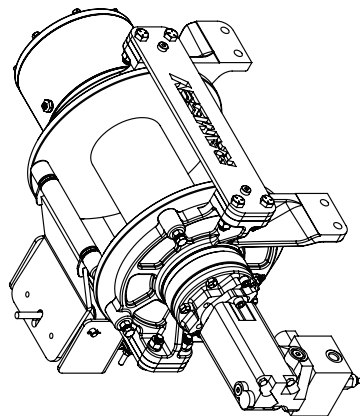


\*For reference only. Actual Configuration may vary.

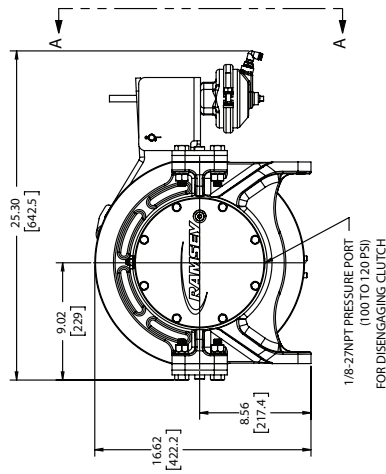
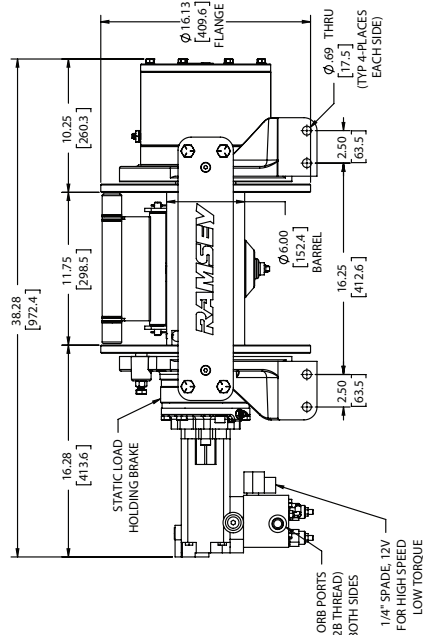
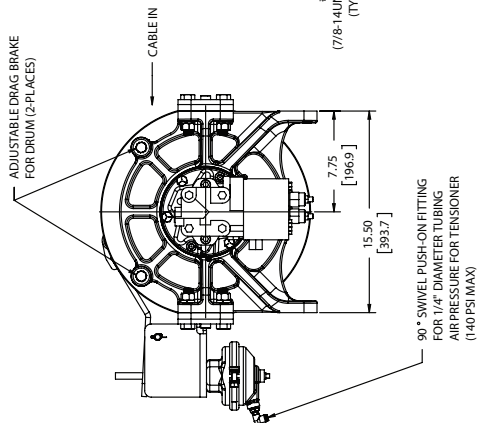
# 9 General Dimensions

**Note:** Typical winch dimensions.

RATED LINE PULL: 35,000 LB.  
 GEAR REDUCTION: 33:1:61  
 WEIGHT (W/O CABLE): 500 LB.  
 CABLE CAPACITY:  
 255 FT. (6 LAYERS) OF  $\phi$  .62 WIRE ROPE  
 230 FT. (6 LAYERS) OF  $\phi$  .75 WIRE ROPE



VIEW A-A

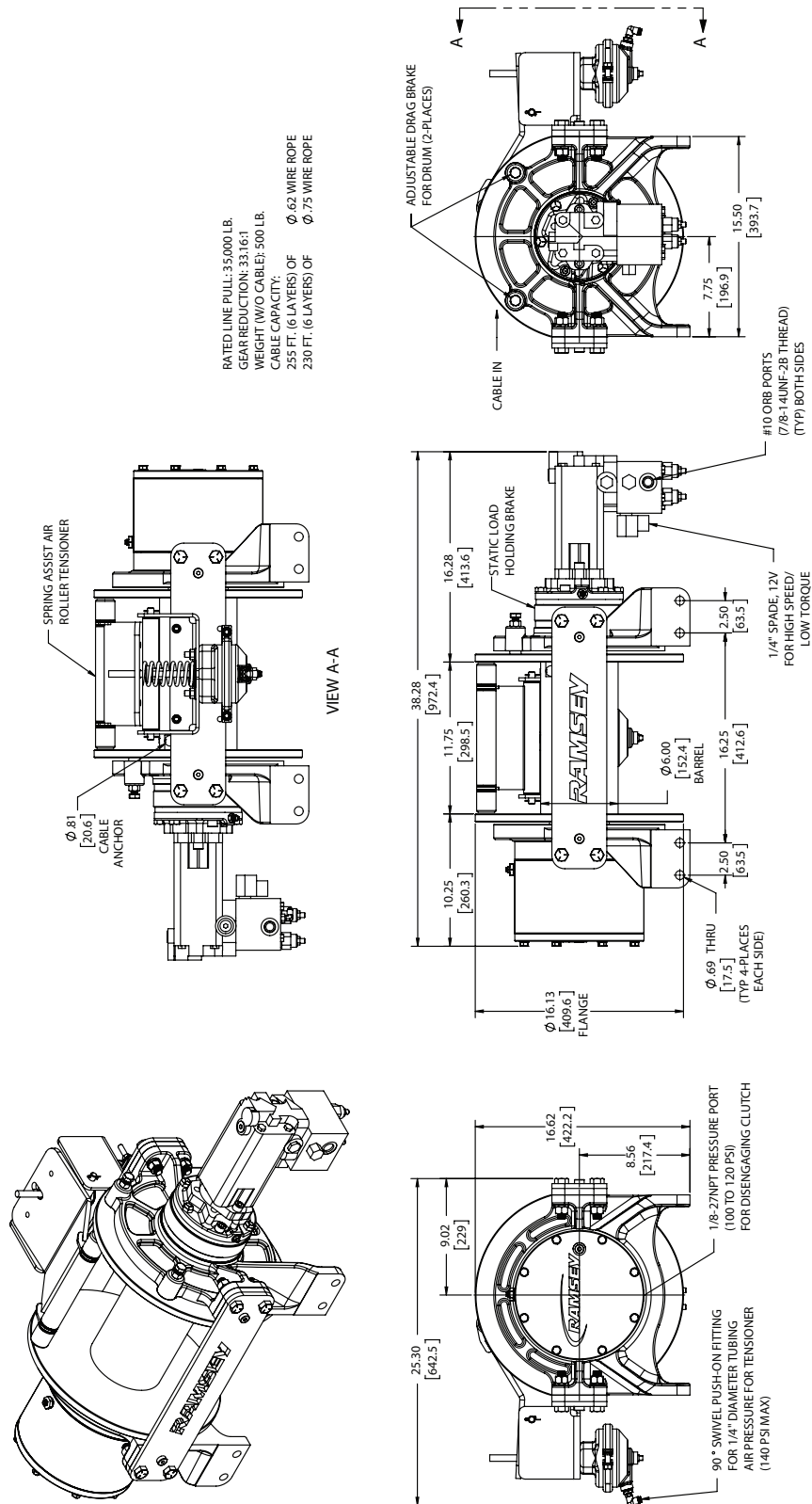


\*For reference only. Actual Configuration may vary.

# General Dimensions 9

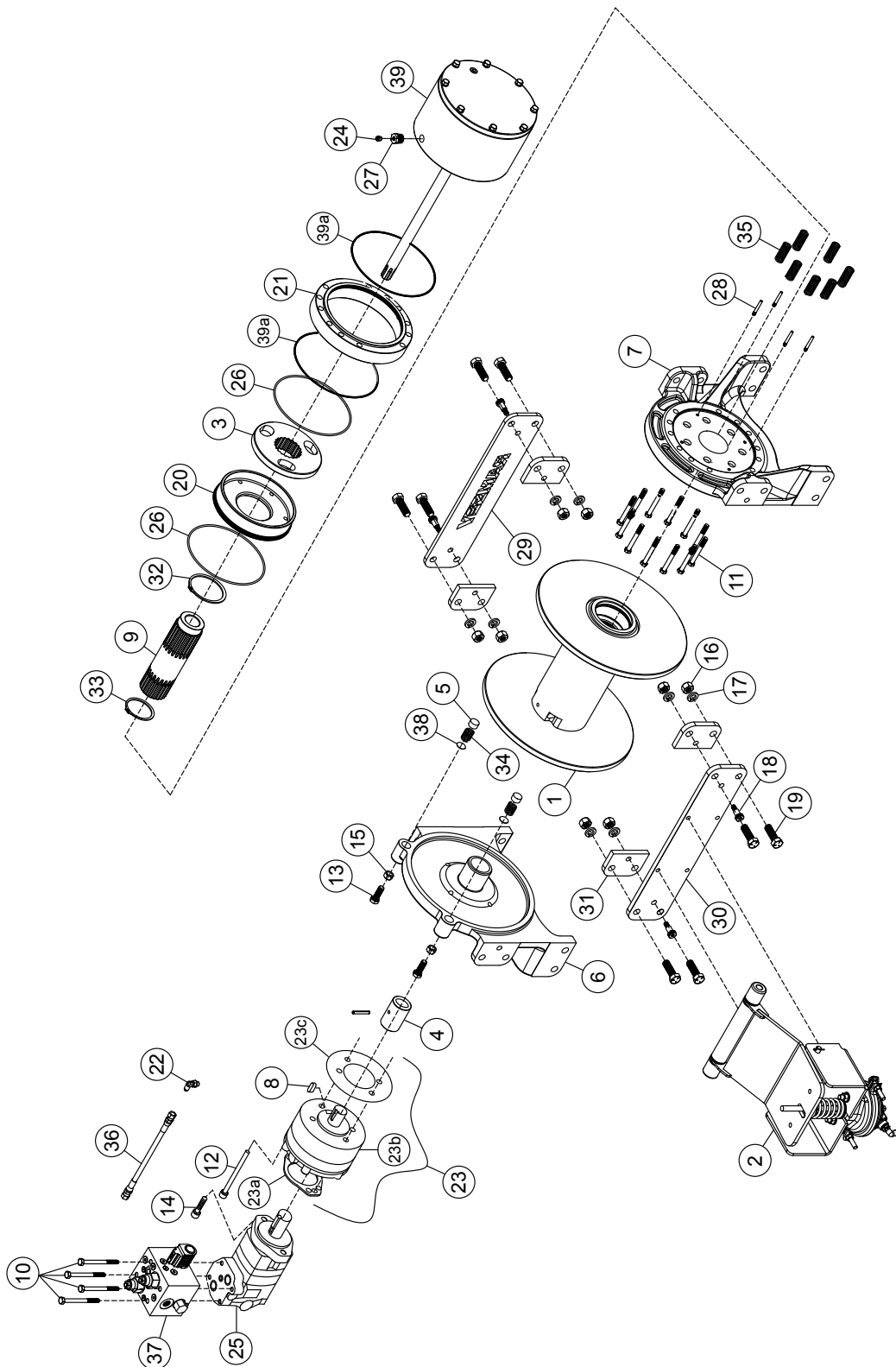
**Note:** Typical winch dimensions.

RATED LINE PULL: 35,000 LB.  
 GEAR REDUCTION: 33:16:1  
 WEIGHT (W/O CABLE): 500 LB.  
 CABLE CAPACITY:  
 255 FT. (6 LAYERS) OF  $\phi$ .62 WIRE ROPE  
 230 FT. (6 LAYERS) OF  $\phi$ .75 WIRE ROPE



\*For reference only. Actual Configuration may vary.

# 10 Typical Winch Exploded View



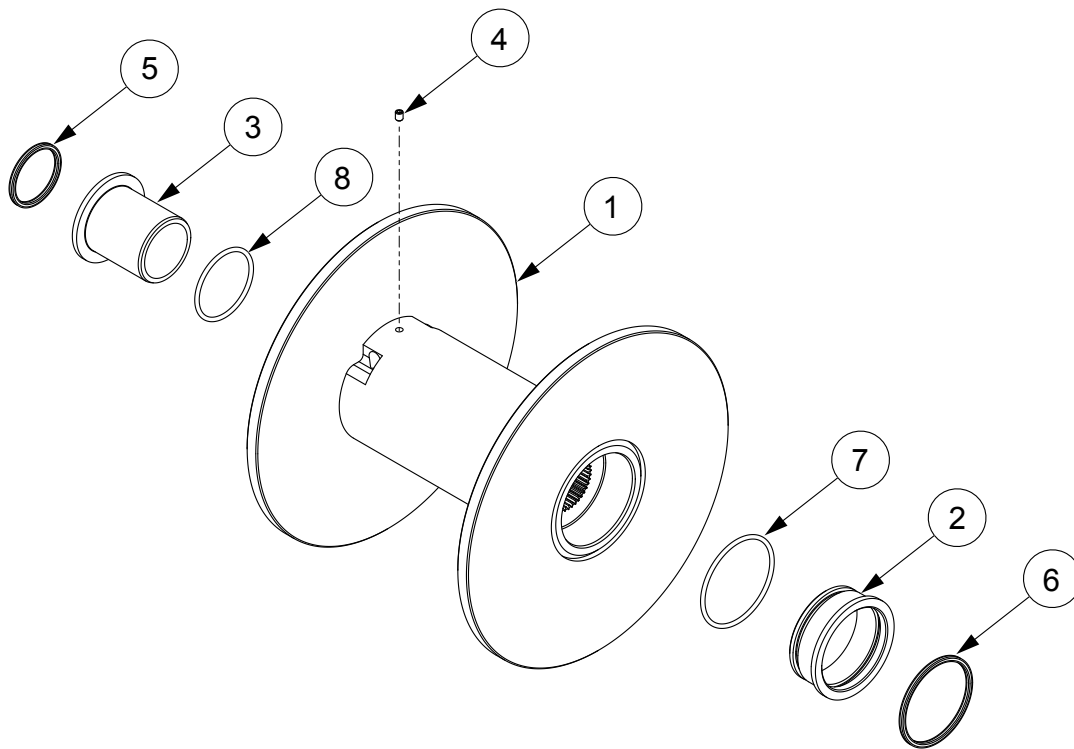
\*For reference only. Actual Configuration may vary.

# Typical Winch Exploded View 10

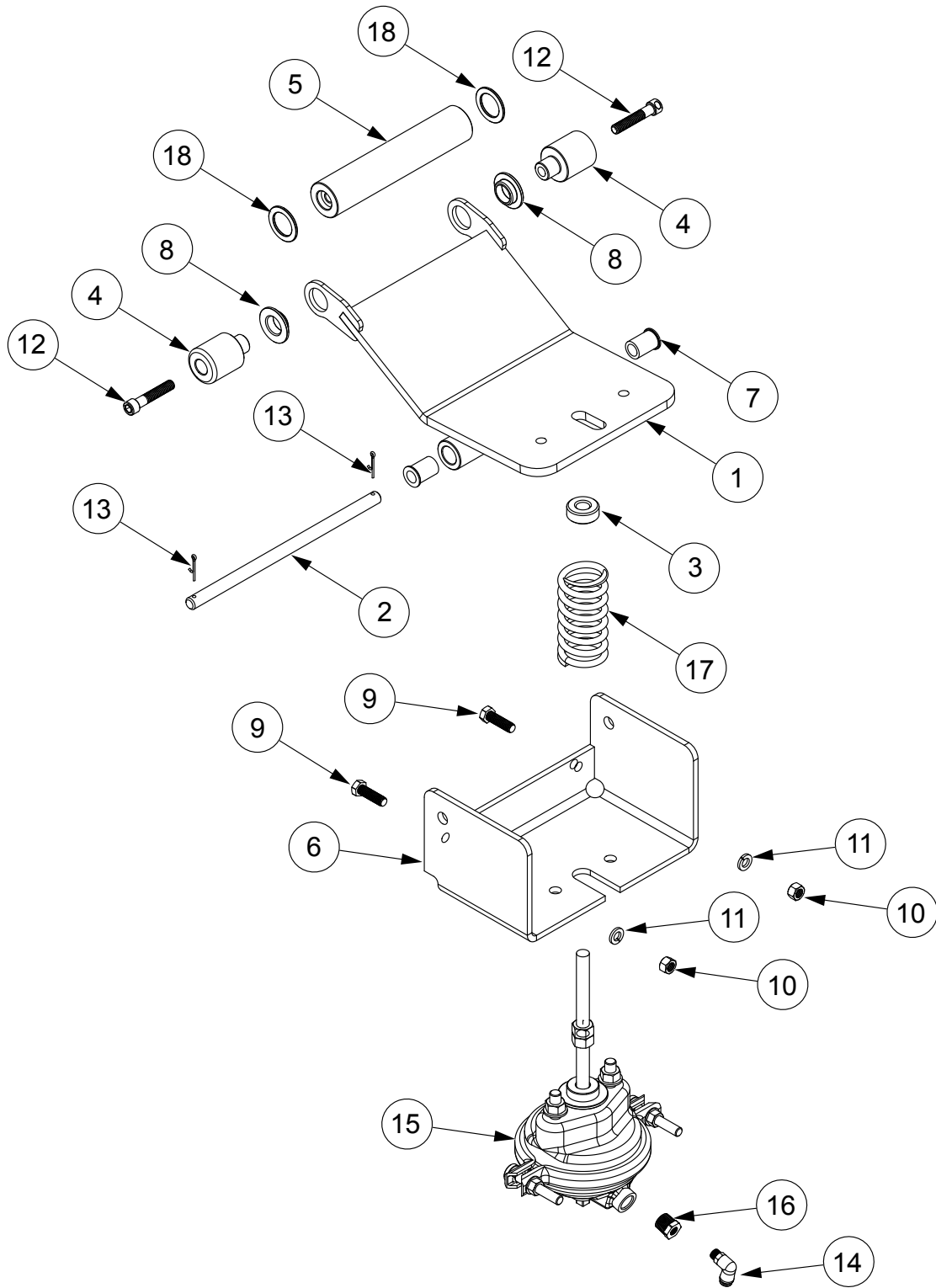
| ITEM NO. | QTY | PART NO. | DESCRIPTION   |
|----------|-----|----------|---|
| 1        | 1   | 234275   | DRUM ASSEMBLY   |
| 2        | 1   | 299789   | TENSIONER ASSEMBLY  |
| 3        | 1   | 324520   | CLUTCH  |
| 4        | 1   | 324528   | MOTOR COUPLING  |
| 5        | 2   | 330015   | DRUM DRAG FREESPOOL PUCK  |
| 6        | 1   | 338470   | MOTOR END BEARING   |
| 7        | 1   | 338471   | GEAR END BEARING  |
| 8        | 2   | 342081   | KEY   |
| 9        | 1   | 357552   | OUTPUT COUPLING   |
| 10       | 4   | 414400   | CAPSCREW-3/8-24 NF X 4LG, HX HD, GR-5                               |
| 11       | 12  | 414543   | CAPSCREW-1/2-13 NC X 3, HX HD, Z/P, G5                              |
| 12       | 2   | 414548   | CAPSCREW-1/2-13 NC X 3-1/2 LONG, HX SOC HD, GR8, BLACK OXIDE FINISH |
| 13       | 2   | 414549   | CAPSCREW-1/2-13 NC X 2-1/2, HX HD, Z/P, G5                          |
| 14       | 2   | 414948   | CAPSCREW-1/2-13 NC X 1-1/4LG, SOCKET HD                             |
| 15       | 2   | 418069   | NUT-1/2-13 NC HEX REG, ZINC PLATED                                  |
| 16       | 8   | 418080   | NUT-5/8-11 NC REG HEX, ZINC PLATED                                  |
| 17       | 8   | 418237   | LOCKWASHER-5/8 MED SECTION, ZINC PLT                                |
| 18       | 4   | 418453   | SHOULDER BOLT, 1/2 X 1-1/4 LG, Z/P                                  |
| 19       | 8   | 420048   | CAPSCREW-5/8-11 NC X 2.75 LG, HX HD, ZP, GR8                        |
| 20       | 1   | 426061   | CLUTCH PISTON   |
| 21       | 1   | 426062   | CLUTCH CYLINDER   |
| 22       | 1   | 432023   | FITTING-7/16-20, 90, PARKER #4-C50 X-LOK                            |
| 23       | 1   | 438044   | BRAKE-MODULAR AUSCO #91795 HDP40-50                                 |
| 24       | 1   | 456008   | RELIEF FIT-1/8-27 PFT, BALL CHECK, Z/P                              |
| 25       | 1   | 458126   | HYDRAULIC MOTOR   |
| 26       | 2   | 462110   | O-RING  |
| 27       | 2   | 468004   | REDUCER-1/2-1/8 NPTF, HEX, STL PLAIN                                |
| 28       | 4   | 470156   | THREADED TAPER PIN  |
| 29       | 1   | 474250   | TIE PLATE W/LOGO  |
| 30       | 1   | 474251   | TIE PLATE   |
| 31       | 4   | 474252   | TIE PLATE SPACER  |
| 32       | 1   | 490067   | RING-RETAINER   |
| 33       | 1   | 490072   | RING-RETAINER   |
| 34       | 2   | 494002   | SPRING  |
| 35       | 7   | 494140   | SPRING  |
| 36       | 1   | 509138   | HOSE  |
| 37       | 1   | 516025   | MOTOR CONTROL VALVE   |
| 38       | 2   | 530094   | BREAK DISC SPACER   |
| 39       | 1   | 530177   | GEAR BOX ASSEMBLY   |

# 11 Drum Assembly

| ITEM NO. | QTY | PART NO. | DESCRIPTION   |
|----------|-----|----------|---------------|
| 1        | 1   | 234274   | DRUM WELDMENT |
| 2        | 1   | 412092   | BUSHING       |
| 3        | 1   | 412188   | BUSHING-DRUM  |
| 4        | 1   | 416059   | SETSCREW      |
| 5        | 1   | 462013   | QUAD RING     |
| 6        | 1   | 462050   | QUAD RING     |
| 7        | 1   | 462052   | O-RING        |
| 8        | 1   | 462054   | O-RING        |



# Cable Tensioner 12



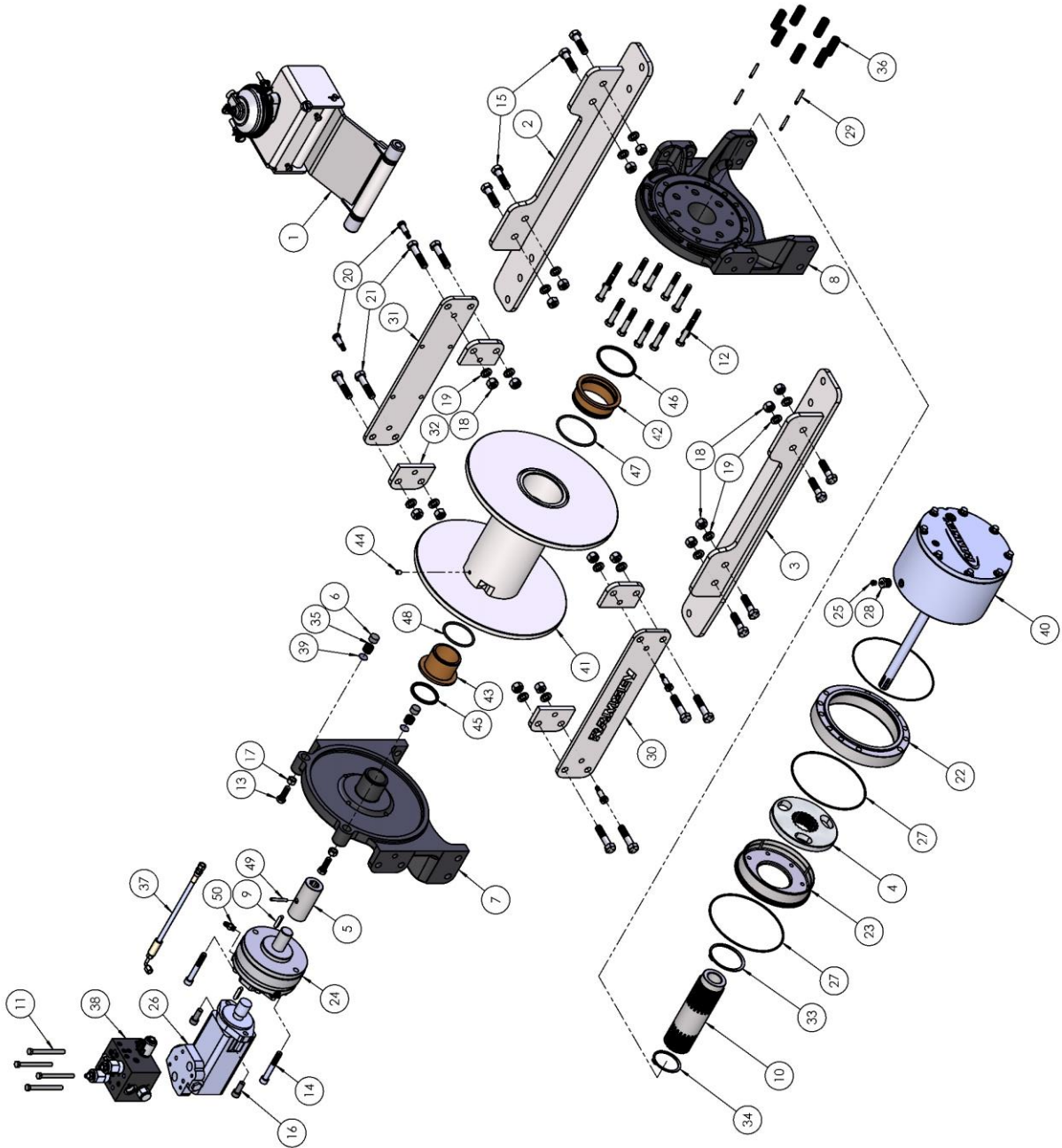
# 12 Cable Tensioner

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| ITEM NO. | QTY | PART NO. | DESCRIPTION          |
|----------|-----|----------|----------------------|
| 1        | 1   | 265135   | WELDMENT-LEVER ARM   |
| 2        | 1   | 346046   | PIN-PIVOT            |
| 3        | 1   | 352038   | RETAINER             |
| 4        | 2   | 354083   | ROLLER-SHORT         |
| 5        | 1   | 354084   | ROLLER               |
| 6        | 1   | 408452   | BRACKET              |
| 7        | 2   | 412108   | BUSHING              |
| 8        | 2   | 412178   | TENSIONER BUSHING    |
| 9        | 2   | 414316   | CAPSCREW-3/8 X 1-1/4 |
| 10       | 2   | 418045   | NUT-3/8              |
| 11       | 2   | 418177   | LOCKWASHER-3/8       |
| 12       | 2   | 420031   | CAPSCREW             |
| 13       | 2   | 424005   | COTTER PIN           |
| 14       | 1   | 432041   | FITTING-AIR          |
| 15       | 1   | 433036   | AIR CYLINDER         |
| 16       | 1   | 468002   | REDUCER BUSHING      |
| 17       | 1   | 494155   | SPRING               |
| 18       | 2   | 518100   | SHER                 |

# KITS AND MAINTENANCE PARTS 13

## 127602 & 127603



# 13 KITS AND MAINTENANCE PARTS

## 127602 & 127603

| ITEM # | QTY. | PART NUMBER | DESCRIPTION                            | WINCH(ES) |        | KITS   |        |        |        |        |
|--------|------|-------------|--|-----------|--------|--------|--------|--------|--------|--------|
|        |      |             |  | 127602    | 127603 | 207033 | 222080 | 246067 | 248059 | 283091 |
| 1      | 1    | 299789      | AIR ROLLER TENSIONER                   |           |        |        |        |        |        |        |
| 2      | 1    | 303203      | WELDMENT-ANGLE, REAR                   |           |        |        |        |        |        |        |
|        | 1    | 303201      | WELDMENT-ANGLE, REAR                   |           |        |        |        |        |        |        |
| 3      | 1    | 303204      | WELDMENT-ANGLE, FRONT                  |           |        |        |        |        |        |        |
|        | 1    | 303202      | WELDMENT-ANGLE, FRONT                  |           |        |        |        |        |        |        |
| 4      | 1    | 324520      | CLUTCH                                 |           |        |        | X      |        |        |        |
| 5      | 1    | 324528      | COUPLING-MOTOR                         |           |        |        |        |        |        | X      |
| 6      | 2    | 330015      | PUCK-DRUM                              |           |        |        |        |        |        |        |
| 7      | 1    | 338470      | MOTOR END BEARING                      |           |        |        |        |        |        |        |
| 8      | 1    | 338471      | END BEARING-GEAR END                   |           |        |        |        |        |        |        |
| 9      | 2    | 342081      | KEY                                    |           |        | X      |        |        |        |        |
| 10     | 1    | 357552      | SHAFT-OUTPUT                           |           |        |        |        |        |        |        |
| 11     | 4    | 414400      | CAPSCREW-3/8-24NF X4LG,HXHD            |           |        |        |        |        |        |        |
| 12     | 12   | 414543      | CAPSCREW-1/2-13NCX3LG,HXHD,Z/P         |           |        |        |        |        |        |        |
| 13     | 2    | 414548      | CAPSCREW-1/2-13NCX1 1/2,HXHD,Z/P       |           |        |        |        |        |        |        |
| 14     | 2    | 414595      | CAPSCREW-1/2-13NC x 3-1/2, HX SOC HD   |           |        | X      |        |        |        |        |
| 15     | 8    | 414669      | CAPSCREW-5/8-11NCX2 1/4LG, HXHD        |           |        |        |        |        |        |        |
| 16     | 2    | 414948      | CAPSCREW-1/2-13NCX1 1/4LG, SOC HD      |           |        |        |        |        |        |        |
| 17     | 2    | 418069      | NUT-1/2-13NC HEX REG,ZINC PLATED       |           |        |        |        |        |        |        |
| 18     | 16   | 418080      | NUT-5/8-11NC REG HEX,ZINC PLATED       |           |        |        |        |        |        |        |
| 19     | 16   | 418237      | LOCKWASHER-5/8 MED SECTION             |           |        |        |        |        |        |        |
| 20     | 4    | 418555      | SHOULDER BOLT-1/2 X 1-1/4, Z/P         |           |        |        |        |        |        |        |
| 21     | 8    | 420048      | CAPSCREW-5/8-11NC X 2.75 LG, HX HD, ZP |           |        |        |        |        |        |        |
| 22     | 1    | 426061      | CYLINDER-PISTON                        |           |        |        |        |        |        |        |
| 23     | 1    | 426062      | PISTON-CLUTCH                          |           |        |        |        |        |        |        |
| 24     | 1    | 438044      | BRAKE-MODULAR                          |           |        | X      |        |        |        |        |
| 25     | 1    | 456008      | RELIEF FIT-1/8-27PFT                   |           |        |        |        |        |        |        |
| 26     | 1    | 458126      | MOTOR-HYDRAULIC                        |           |        |        |        |        |        |        |
| 27     | 2    | 462110      | O'RING                                 |           |        |        | X      | X      |        |        |
| 28     | 1    | 468004      | REDUCER-1/2-1/8NPTF                    |           |        |        |        |        |        |        |
| 29     | 4    | 470156      | THREADED TAPER PIN                     |           |        |        | X      |        |        |        |
| 30     | 1    | 474250      | PLATE-TIE                              |           |        |        |        |        |        |        |
| 31     | 1    | 474251      | PLATE-TIE                              |           |        |        |        |        |        |        |
| 32     | 4    | 474252      | SPACER-TIE PLATE                       |           |        |        |        |        |        |        |
| 33     | 1    | 490067      | RING-RETAINING                         |           |        |        | X      |        |        |        |
| 34     | 1    | 490072      | RING-RETAINING, EXTERNAL               |           |        |        |        |        |        |        |
| 35     | 2    | 494002      | SPRING                                 |           |        |        |        |        |        |        |
| 36     | 7    | 494140      | SPRING                                 |           |        |        | X      |        |        |        |
| 37     | 1    | 509140      | HOSE                                   |           |        |        |        |        |        |        |
|        | 1    | 509138      | HOSE                                   |           |        |        |        |        |        |        |

# KITS AND MAINTENANCE PARTS 13

## 127602 & 127603

|        |      |             |                                      | WINCH(ES) |        | KITS   |        |        |        |        |
|--------|------|-------------|--------------------------------------|-----------|--------|--------|--------|--------|--------|--------|
| ITEM # | QTY. | PART NUMBER | DESCRIPTION                          | 127602    | 127603 | 207033 | 222080 | 246067 | 248059 | 283091 |
| 38     | 1    | 516061      | VALVE                                |           |        |        |        |        |        |        |
| 39     | 2    | 530094      | SPACER                               |           |        |        |        |        |        |        |
| 40     | 1    | 530177      | GEARBOX                              |           |        |        |        |        |        |        |
| 41     | 1    | 234274      | DRUM WELDMENT                        |           |        |        |        |        |        |        |
| 42     | 1    | 412092      | BUSHING-DRUM, GEAR HSG. END          |           |        |        |        |        | X      |        |
| 43     | 1    | 412188      | BUSHING-DRUM, MOTOR END              |           |        |        |        |        | X      |        |
| 44     | 1    | 416059      | SETSCREW 3/8-16NCX1/2 HX SOCK HD CUP |           |        |        |        |        |        |        |
| 45     | 1    | 462013      | QUAD-RING-2 7/8ODX2 1/2IDX3          |           |        |        |        | X      |        |        |
| 46     | 1    | 462050      | QUAD-RING                            |           |        |        |        | X      |        |        |
| 47     | 1    | 462052      | O-RING                               |           |        |        |        | X      |        |        |
| 48     | 1    | 462054      | O-RING-3/16X3IDX3 3/8OD              |           |        |        |        | X      |        |        |
| 49     | 1    | 470089      | SPRING PIN-1/4 X 11/16 LG            |           |        |        |        |        |        | X      |
| 50     | 1    | 432023      | FITTING                              |           |        |        |        |        |        |        |

**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](http://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](mailto: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](http://www.ramseywinch.com).





