

Pow-R-Matic® Hose Reel 2000MD Series Convenience Package Service Manual

AERO-MOTIVE COMPANY



A Woodhead Industries, Inc. Subsidiary

Safety

Please read this manual carefully and follow its instructions. Improper use or failure to follow these instructions could result in serious injury, death or property damage. Operators should be instructed in the safe and proper use and maintenance of this product. Keep this manual for future reference.

The following safety precautions call attention to potentially dangerous conditions.

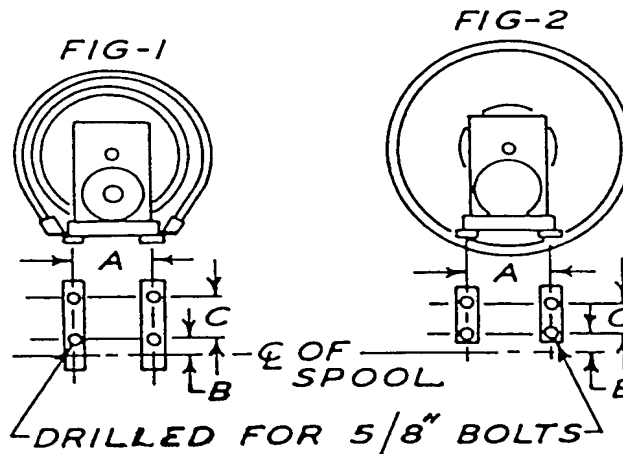
- ⚠ WARNING:** Warnings are used when hazards exist which could result in serious injury, death or property damage if proper precautions are not taken.
- ⚠ CAUTION:** Cautions are used as reminders of safety hazards which could result in personal injury or property damage if proper precautions are not taken.

Installation

Mounting

Pow-R-Matic hose reels are equipped with a fixed base and can be mounted in any position--either base up or base down, wall mounted, or in any position which allows the main shaft to be horizontal. The reel should be mounted so that it is level, and the center line of the drum is in line with the hose run. If the reel cannot be mounted in this way, special hose guides and additional tension may be required.

When a reel is mounted overhead, it is recommended that a secondary chain, bracket or other device be used to prevent the reel from falling if the mounting bolts are removed or loosened due to vibration.



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Model	Dim. A	Dim. B.	Dim. C
2053 - 2050	11.25 (285.8)	9.00 (228.6)	9.25 (247.7)
2343 - 2340	15.25 (387.4)	9.00 (228.6)	9.25 (247.7)
2373 - 2370	15.25 (387.4)	9.00 (228.6)	10.75 (273.1)
2576 & 2776	11.25 (285.2)	8.25 (209.6)	11.38 (289.1)
2577 & 2777	11.25 (285.2)	10.44 (265.2)	11.38 (289.1)
2578 & 2778	11.25 (285.2)	12.56 (319.0)	11.38 (289.1)
2579 & 2779	11.25 (285.2)	14.75 (374.7)	11.38 (289.1)
2570 & 2770	11.25 (285.2)	16.94 (430.3)	11.38 (289.1)

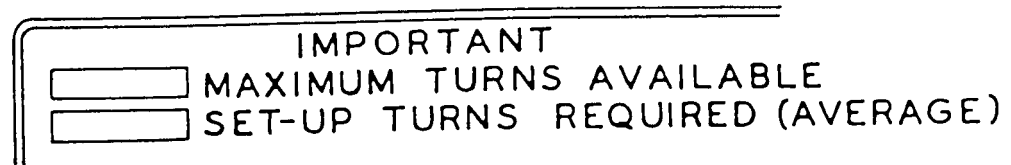
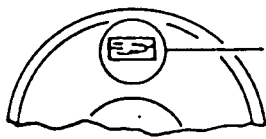
Pretensioning

Pow-R-Matic® reels are not pretensioned at the factory. It will be necessary to apply set up turns to the motor to pretension the reel (in much the same way as a window shade is pretensioned).

A. Determining number of pretension turns.

There are two methods of determining the proper number of pretension turns to be applied to the hose reel.

1. There is an instruction plate located on the flange. This instruction plate states the maximum number of turns available in the reel. The instruction plate also has a space for the number of set up turns to pretension the reel. (If this box is blank, go to Step 2, below.) Using the figure obtained from the set up turn box, proceed to "Applying Pretension - Set Up Turns".



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2. If the set up turn box is blank, use the following procedure: Determine the number of revolutions of the hose drum to wrap up the working hose. Subtract the number of turns required, to wrap the hose on the drum, from the maximum turns available (obtained from the instruction plate on the flange). Divide the answer by two (2). This will give you the average number of pretensioning set up turns. EXAMPLE: A reel has 100 feet of working hose. You determine by counting the number of revolutions that the drum rotates 20 times to wrap the working hose. The instruction plate states that there are a maximum of 50 turns available.

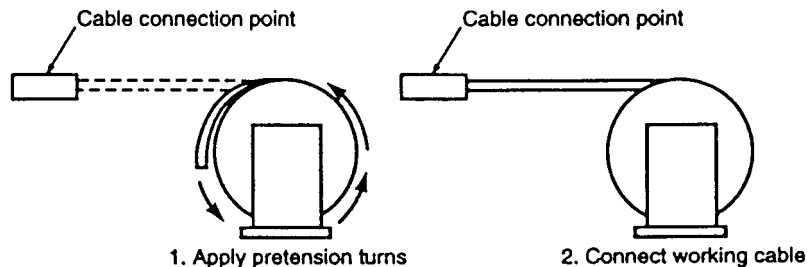
50 turns available

-20 turns to wrap hose on drum

30 turns ÷ 2 = 15 set up turns. This reel would have 15 pretension set up turns applied.

Applying pretension - set up turns

Prior to terminating hose, follow the prescribed steps below. Make sure that there are no twists or kinks in the hose, and that all hose is on the reel. NOTE: When reversing winding the reel, you will hear a clicking sound as the springs disengage from the drive hubs. This is a safety device and no damage will result. All springs will engage when the hose is pulled out.



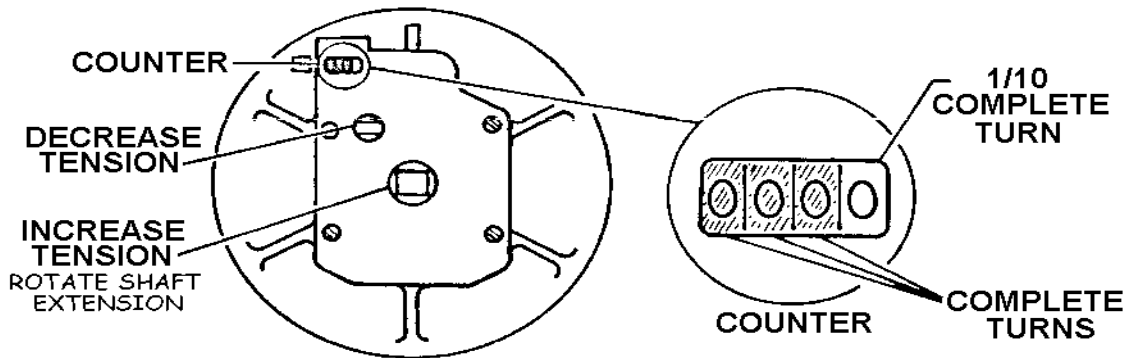
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1. Mill duty reels and Pow-R-Matic hose reels, with a convenience package, are equipped with external tensioning devices, the following method of pretensioning can be used. Find the fifth and sixth digits of the model number in the chart below.

Factor	Factor	Factor
10 or 50 = 1.0	17 or 57 = 1.7	26 or 66 = 2.6
12 or 52 = 1.2	20 or 60 = 2.0	30 or 70 = 3.0
13 or 53 = 1.3	22 or 62 = 2.2	36 or 76 = 3.6
15 or 55 = 1.5	23 or 63 = 2.3	40 or 80 = 4.0
16 or 56 = 1.6	25 or 65 = 2.5	45 or 85 = 4.5

Multiply the appropriate factor by the number of set up turns. The figure obtained is what the counter reading should be on the motor end plate.

After the hose has been properly anchored, as described in "Hose Anchoring", the pretension, set up turns are applied as follows: Make sure the counter is set at 0000, then using a wrench, or bar, the shaft extension located at the rear of the motor is rotated until the above figure is reached. The number of turns are recorded on a counter. The counter records whole turns and tenths of a turn (much the same as an odometer in a car). See Figure 3.



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Alternate method of pretensioning

Pull the hose out far enough to allow one full wrap of hose to be thrown back over the drum. Place a bar through the holes located near the edge of the flanges to prevent the drum from turning while the hose is placed on the reel.

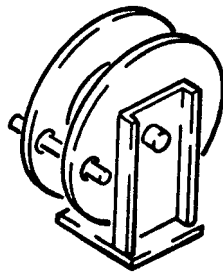
This placed one pretension set up turn on the reel. Repeat the above procedure until the proper number of set up turns have been applied.

Hose anchoring

CAUTION: Before terminating or anchoring hoses, always pull all of the hose off from the reel (against the spring tension) to be sure that there are enough turns in the reel, for the hose travel. If you reach the end of the spring before all hose is removed form the drum, stop and remove pretension turns. Remove any twists or kinks from the hose, while hose is extended.

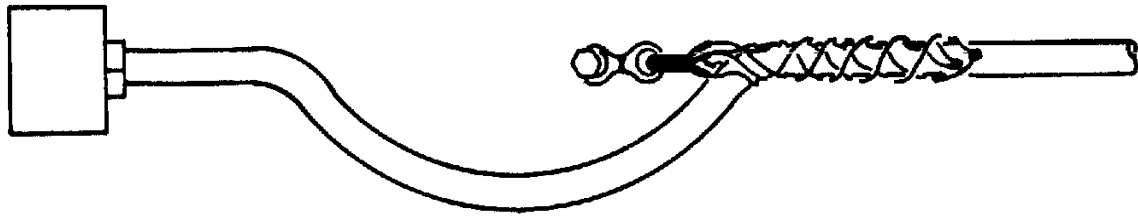
Failure to comply with these procedures can result in damage to the reel and hose.

- A. Pull the working hose (against the tension of the reel) to the connection point, with adequate slack to make the connections. Place a bar through the holes near the edge of the flanges to relieve the tension on the hose, and hold the pretension turns on the reel. Make sure there are no twists or kinks in the hose.



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- B. When anchoring the hose, a hose grip should be incorporated in such a way as to allow a slack in the hose prior to entering the connection points.



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⚠ CAUTION: Never apply so many turns that the springs are worked to the end of their travel. Always leave several turns between the end of the spring and the position of the drum when the drum is fully extended. If the spring reaches the end of its travel before satisfactory tension is achieved, consult the factory.

Service

⚠ CAUTION: Before performing any service, always remove all reel spring tension. Failure to comply with these practices can result in injury to personnel or damage to equipment.

Be sure that all spring tension has been removed from reel before servicing spring motor.

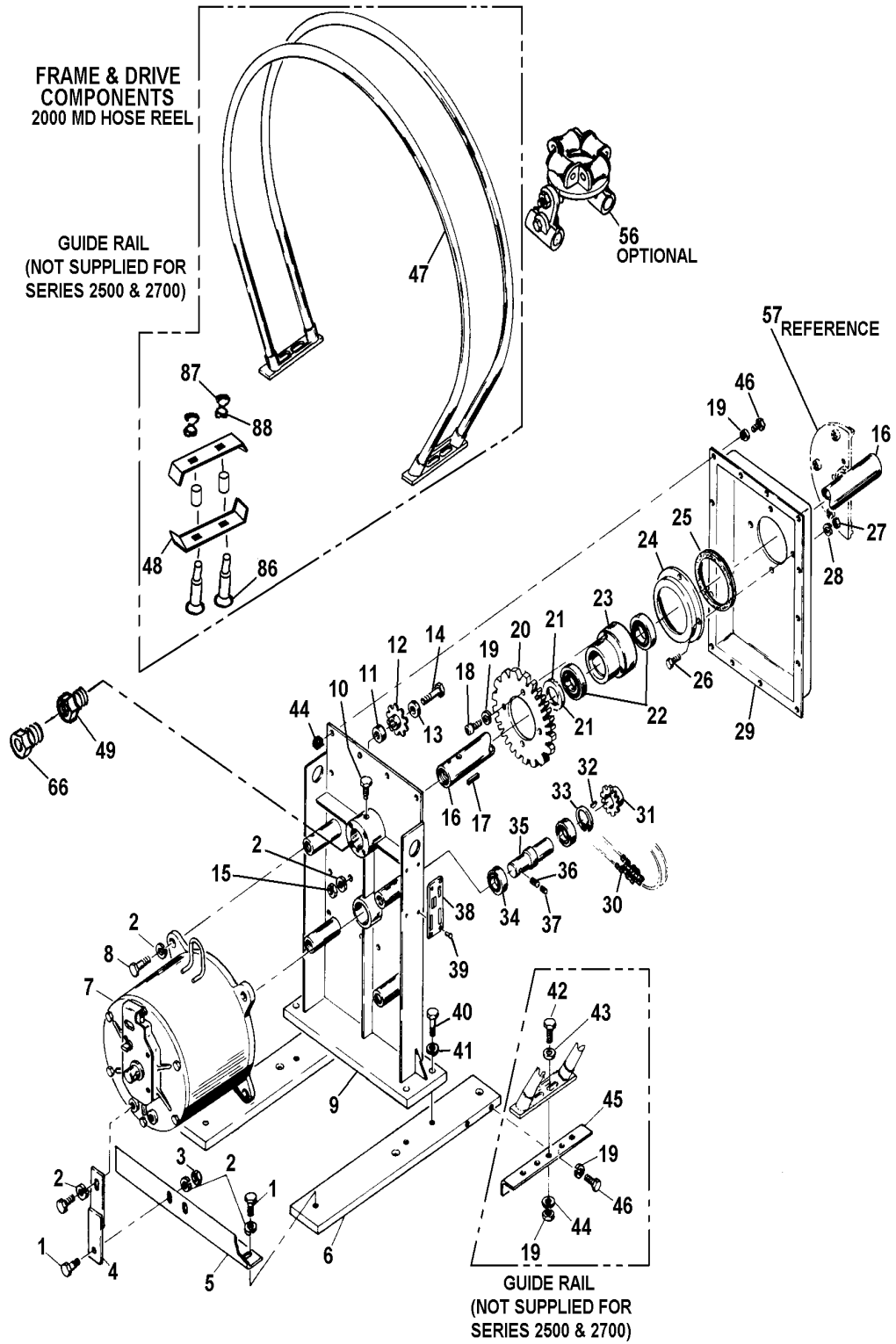
A. Spring motor replacement

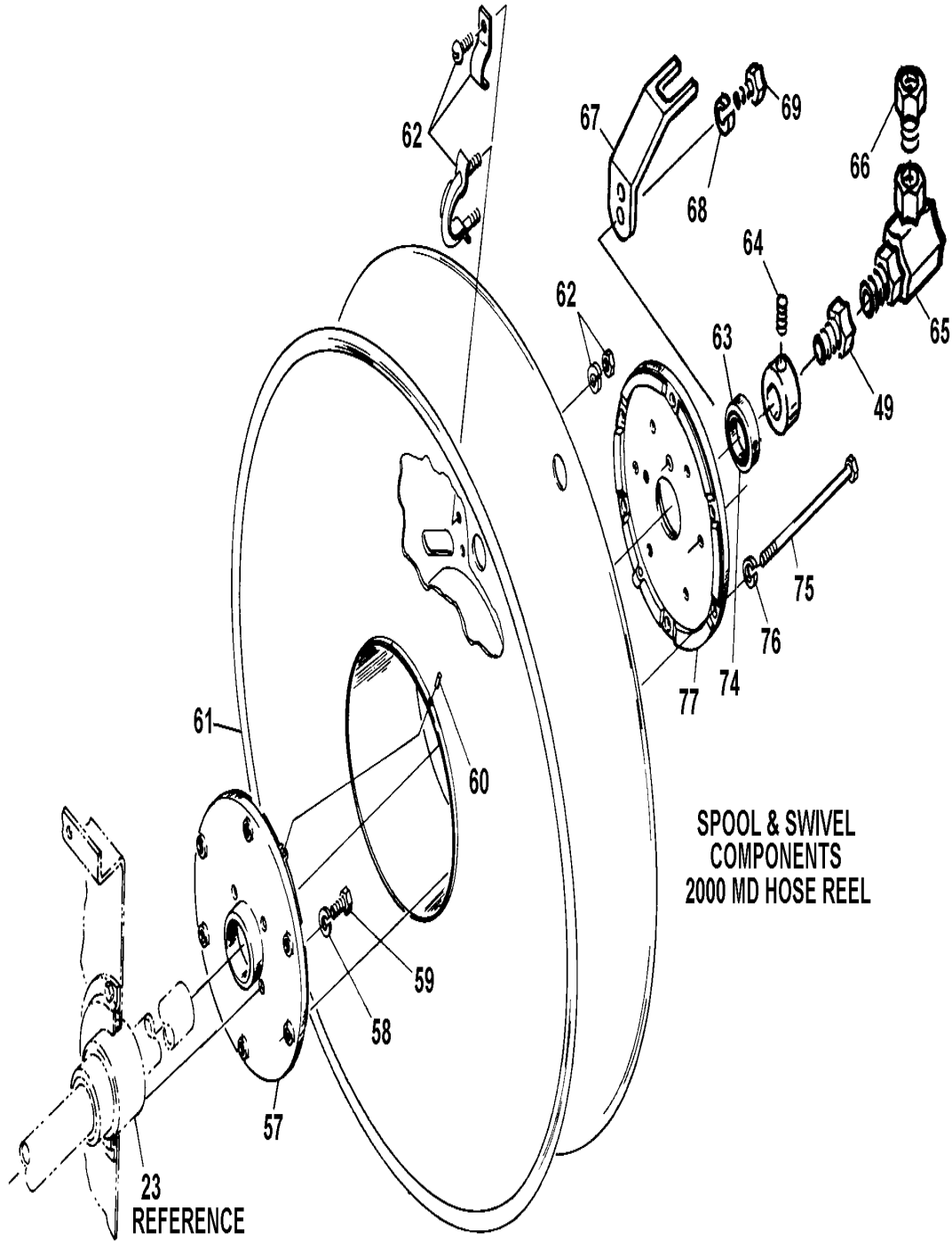
1. Be sure spring motor is adequately supported. Lifting hooks have been provided for this.
2. Remove four bolts (8) and rear motor support bracket (4), when applicable, hose (5).
3. Slide the spring motor back to disengage from the drive shaft.
4. Read the enclosed spring motor instructions carefully before attempting spring replacement.
5. To replace spring motor, reverse the above procedure.
6. After spring motor is reinstalled, repeat the spring tensioning procedure in the pretensioning section.

Always include model number and serial number when ordering parts or information.

Replacement Parts

- 00118, BMP -





Reference Number	Part Number	Qty.	Description
1	00032P0105	3	Screw hex head cap 3/8-16x7/8
	00032P0103	1	Screw hex head cap 3/8-16x1 2300 only
2	00101P0021	8	Washer lock 3/8"
3	C22020312	1	Nut hex 3/8-16 2300 only
4	5987500000	1	Support 2300 and MD2, MD3, MD4, MD5 only
5	5987400001	1	Support - others
6	4083200000 *	2	Mounting foot - specify complete model number -- 2000, 2300 series
	4395300000 *	2	Mounting foot - specify complete model number -- 2500, 2700 series
7 **	4391200000 *	1	Spring motor
	4391201305	AR	Spring motor for model 2xx3-xx-xxx
	4391201405	AR	Spring motor for model 2xx4-xx-xxx
	4391201505	AR	Spring motor for model 2xx5-xx-xxx
	4391201605	AR	Spring motor for model 2xx6-xx-xxx
	4391201705	AR	Spring motor for model 2xx7-xx-xxx
	4391201805	AR	Spring motor for model 2xx8-xx-xxx
	4391201905	AR	Spring motor for model 2xx9-xx-xxx
	4391201005	AR	Spring motor for model 2xx0-xx-xxx
8	00032P0103	4	Screw hex head cap 3/8-16x1
9	5982700000	1	Stand weldment - others
	5987800000	1	Stand weldment - 2300 and MD2, MD3, MD4, and MD5 only
10	4068000000	1	Set screw
11	4082500000	1	Spacer, sprocket
12	00380P0003	1	Idler
13	C01010222	1	Washer 3/8x.065
14	00032P0112	1	Screw hex head cap 3/8-16x2
15	C22020312	1	Nut hex 3/8-16
16	40149xxxxx	1	Main shaft - specify model number
17	4077300002	1	Key 1/4 sq. X 7/8 l
18	000029P0108	4	Screw 1/4-20x5/8 - Soc HD
19	00101P0030	23	Washer 1/4x.062 - 15 required - 2500 and 2700
20	4082200000 *	1	Sprocket, driven - specify model number
21	4011900000	1	Spacer
22 **	4000500000	1	Bearing
23	4080600000	1	Sprocket hub
24	6116700000	1	Retainer
25	4081600000	2	Felt washer
26	00030P0211	4	Screw hex head cap #10 - 24x3/8
27	00151P0025	4	Nut hex #10 - 24
28	00101P0015	4	Washer
29	6111500000	1	Housing, sprocket
30 **	00158P0002	AR	Chain #40 - specify model number
31 **	4372300000 *	1	Sprocket, driving - specify model number
32	00751P0011	1	Key, Woodruf 1/4 x 3/4
33	00581P0075	2	Retainer ring
34 **	00376P0120	2	Bearing
35	4370300000	1	Shaft
36 **	00230P0133	1	Pin .375 dia x 175 long
37 **	00230P0151	1	Pin .218 dia x 1.75
38	3743600000	1	Name plate
39	00209P0023	4	Rivet, dome 1/8"
40	00034P0013	4	Screw, hex head cap 1/2 - 12x1-1/4
41	00101P0016	4	Washer 1/2 lock -- 2000 and 2300 only
42	00030P0117	4	Screw hex head cap 1/4x20 2000 and 2300 only
43	00126P0050	4	Washer flat 1/4" x 20 2000 and 2300 only
44	00151P0020	11	Nut 1/4" x 20 x 5/8 - quantity 15 on 2000 and 2300
45	4026600000	4	Mounting bracket 2000 and 2300 only

46	00030P0111	11	Screw hex head cap 1/4 - 20x5/8 - quantity 15 on 2000 and 2300
47	2R	1	Guide rail assembly 2000 - 40729
	3R	1	Guide rail assembly 2300 - 4" wide spool (40729-1)
	4928500003	1	Guide rail assembly 2300 - 7" wide spool
48	6079300000	2	Tie bar with 4 inch wide spool
	6079400000	2	Tie bar with 7 inch wide spool
49	00669P0035	2	Reducer -- 2xxx-xx-002 through -004, -014
	00669P0054	2	Reducer -- 2xxx-xx-006, -016
	00669P0030	2	Reducer -- 2xxx-xx-012, -013
56	2F-RE, YE	1	Roller guide -- 41826-1
	3F-RE, YE	1	Roller guide -- 43752
57	4080500001	1	End plate
58	00101P0031	15	Washer 1/4x.062 lock -- 6 for REF#80 junciton box
59	00030P0110	4	Screw, hex head 1/4-20 x 3/4
60	00230P0105	2	Pin .094 dia x .375 long
61	4399000001	1	Spool - 5" width, 24" dia no ratchet
	4399000002	1	Spool - 5" width, 24" dia for ratchet CW rotation
	4399000003	1	Spool - 5" width, 24" dia for ratchet CCW rotation
62	6150300000 *	AR	Hose clamp assembly - specify hose size
	4920100000 *	AR	Hose clamp assembly - specify hose size
63	5947900000	1	Collar, locking
64	00011P0019	1	Screw, set
65 **	00666P0032	1	Swivel -- 2xxx-xx-002 through -004
	00666P0038	1	Swivel -- 2xxx-xx-006, -008
	H72410001	1	Swivel -- 2xxx-xx-012, -013
	H72410002	1	Swivel -- 2xxx-xx-014
	H72410003	1	Swivel -- 2xxx-xx-016
	H72410005	1	Swivel -- 2xxx-xx-018
66	00669P0010	2	Reducer -- 2xxx-xx-002
	00669P0064	2	Reducer -- 2xxx-xx-003
	00669P0041	3	Reducer -- 2xxx-xx-012
67	5953500000	1	Drive fork -- 2xxx-xx-002 through -004, -012 through -014
	5953800000	1	Drive fork -- 2xxx-xx-006, -008
	M53320034	1	Drive fork -- 2xxx-xx-016, -018
68	00101P0030	2	Washer, lock 1/4x.062
69	00030P0115	2	Screw
74 **	4000500000	1	Bearing
75	4014300034	6	Bolt tie - 4" spool
76	00101P0030	6	Lock washer 1/4x.062
85	00053P0504	1	Set screw 3/8-16 x 1-1/2 - models 2xxx-50, 52, 53, 55
	00053P0231	2	Set screw #10 - 24x1/4 - models 2xxx-56-85
86	00035P0014	2	Bolt, carriage 5/16-18x1-3/4
87	00151P0075	2	Nut hex 5/16-18
88	00101P0014	2	Washer lock 5/16
89	6110500000	2	Spacers

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