



PREMIUM™ DIESEL REELS

EV SERIES

EXTRA VOLUME TRANSFER

Models: 2310-014
2310-015
2310-016
2310-017 (Bare Reel)

See pages 1 and 3 for
Technical Data.





Thoroughly read and understand this manual before
installing, operating or servicing this equipment.

**OPERATION, INSTALLATION,
MAINTENANCE AND REPAIR GUIDE**


General Safety


Thoroughly read and understand this manual before installing, operating or servicing this equipment.


	<p>! IMPORTANT</p>
<p>Because this Hose Reel can be incorporated into a pressurized systems, the following safety precautions should be observed.</p> <p>Check equipment regularly and repair or replace worn and damaged parts.</p> <p>Never alter or modify any parts of this hose reel, doing so may cause damage to hose reel and/or personal injury.</p> <p>Under no circumstances should the dispensing valve be aimed at any person at any time. Personal injury may result.</p> <p>Release pressures built up in the system before any service or repair is begun. See the pressure relief procedure below.</p> <p>Do not operate bare air/water or lube reels above 3000 psi (206.9 bar). Do not operate bare grease reel above 5000 psi (620.6 bar).</p> <p>NOTE: If reel is equipped with hose, reel maximum pressure will be determined by the lowest working pressure rating of the hose, bare reel, or dispense valve.</p> <p>Always read and follow the fluid manufacturer's recommendations regarding the use of protective eyewear, clothing and respirators.</p>	


	<p>! WARNING</p>
<p>Pressure Relief Procedure:</p> <p>Follow this procedure before maintaining and/or repairing your Premium Hose Reel and/or any part of system.</p> <ol style="list-style-type: none"> 1) Disconnect the air to the pump. 2) Point dispensing valve away from yourself and others. 3) Open dispensing valve until pressure is relieved. 	

<p>! CAUTION</p>	
<p>Be aware of possible fluid thermal expansion! A pressure relief valve should be properly installed in any system where this product is used. Should this product fail as a result of thermal expansion and no pressure relief valve was installed, the product warranty will be voided.</p>	

	<p>! CAUTION</p>
<p>USE EXTREME CARE WHEN HANDLING THE POWER SPRING!</p> <p>The spring is ALWAYS under great tension and could be propelled from the case with enough force to cause serious bodily injury.</p>	

	<p>! WARNING</p>
<p>Be sure the mounting surface is strong enough to support the reels, the weight of the fluids and the stress caused by hard pulls on the service hoses. See page 3 for dry weights of the hose reel assemblies.</p>	

	<p>! WARNING</p>
<p>The <i>MAXIMUM WORKING PRESSURE</i> of a hose reel is determined by the lowest rated component in the assembly. The hose reel Technical Data chart on page 3 give the maximum working pressure of bare reels and reels assembled at the factory with hose. The maximum working pressure of a hose reel is indicated on the hose reel identification plate located near the base of the reel.</p> <p>If adding a service hose and dispensing valve to a bare reel, <i>BE SURE</i> you know the maximum working pressure of <i>ALL</i> components!</p>	

	<p>! WARNING</p>
<p>DANGER: Not for use with fluids that have a flash point below 100°F (38°C). Examples: gasoline, alcohol. Sparking could result in an explosion which could result in death.</p>	

<p>! CAUTION</p>	
<p>FOR DIESEL FUEL ONLY. DO NOT exceed 50 psig (3.4 bar) pressure.</p>	

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Model Numbers

Type of Service	Model No.	Hose Size	Maximum Working Pressure	Outlet Hose	Inlet Hose	Bare Reel	Wetted Parts
Diesel Fuel	2310-014	50' x 3/4"	50 psi	8466-050	8466-002	2310-001	Steel (plated), Buna-N, Bronze
	2310-015	60' x 3/4"	50 psi	8466-060	8466-002	2310-001	
	2310-016	50' x 1"	50 psi	8481-050	8481-002	2310-001	

Bare Reel	Model No.	Bare Reel W.P. (psi)	Thread Size		Reel Dimensions			Shipping Weight
			Inlet	Outlet	L.	W.	H.	
	2310-017	3000 psi	1"	1"	19"	14"	24.5"	82 lbs.

Notes

Product Description

The Heavy Duty Premium EV Series™ diesel hose reel is designed for service where longer capacities and larger volumes of deliveries are required. The swivel is balanced with equalized pressure on both internal sides of the seals to eliminate undue unbalanced friction. The roller outlet is quickly adjustable to any of the three mounting positions (i.e. wall, ceiling, or table).

Maximum Fluid Working Pressure:

Diesel Fuel Reels (Bare)3000 psi

Material Inlet:

..... 3/4" nptf
 1" nptf

Material Outlet:

..... 3/4" nptf
 1" nptf

Wetted Parts:

Diesel Fuel..... Steel (plated), Buna-N,
 Bronze

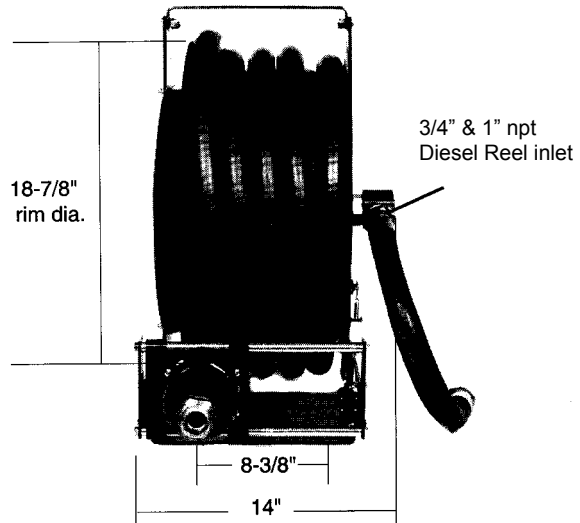
Hose Working Pressure Ratings:

.....3/4" – 50 psi
 1" – 50 psi

Shipping Weight Bare Reels:

Lrg. Frame 82 lbs.

Dimensions & Mounting Diagram



NOTE: Four 3/8" Dia. Bolts required for Mounting. Mounting pattern stamped in base is 8-3/8" wide x 9.5" long.

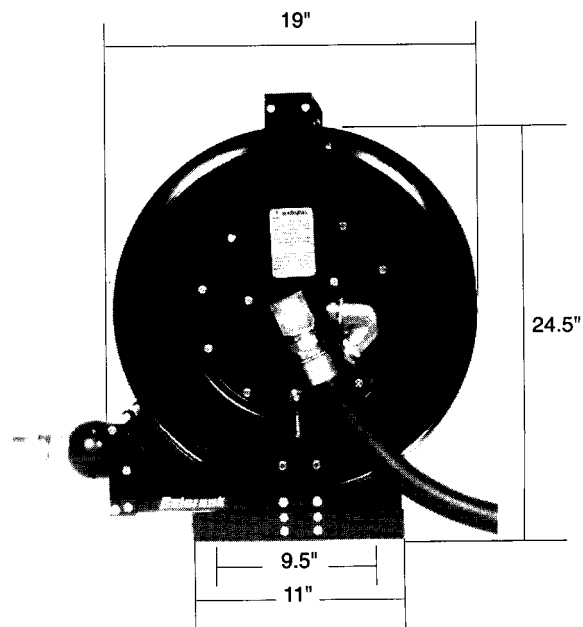


Figure 3
Hose Reel Dimensions

Typical System Installation

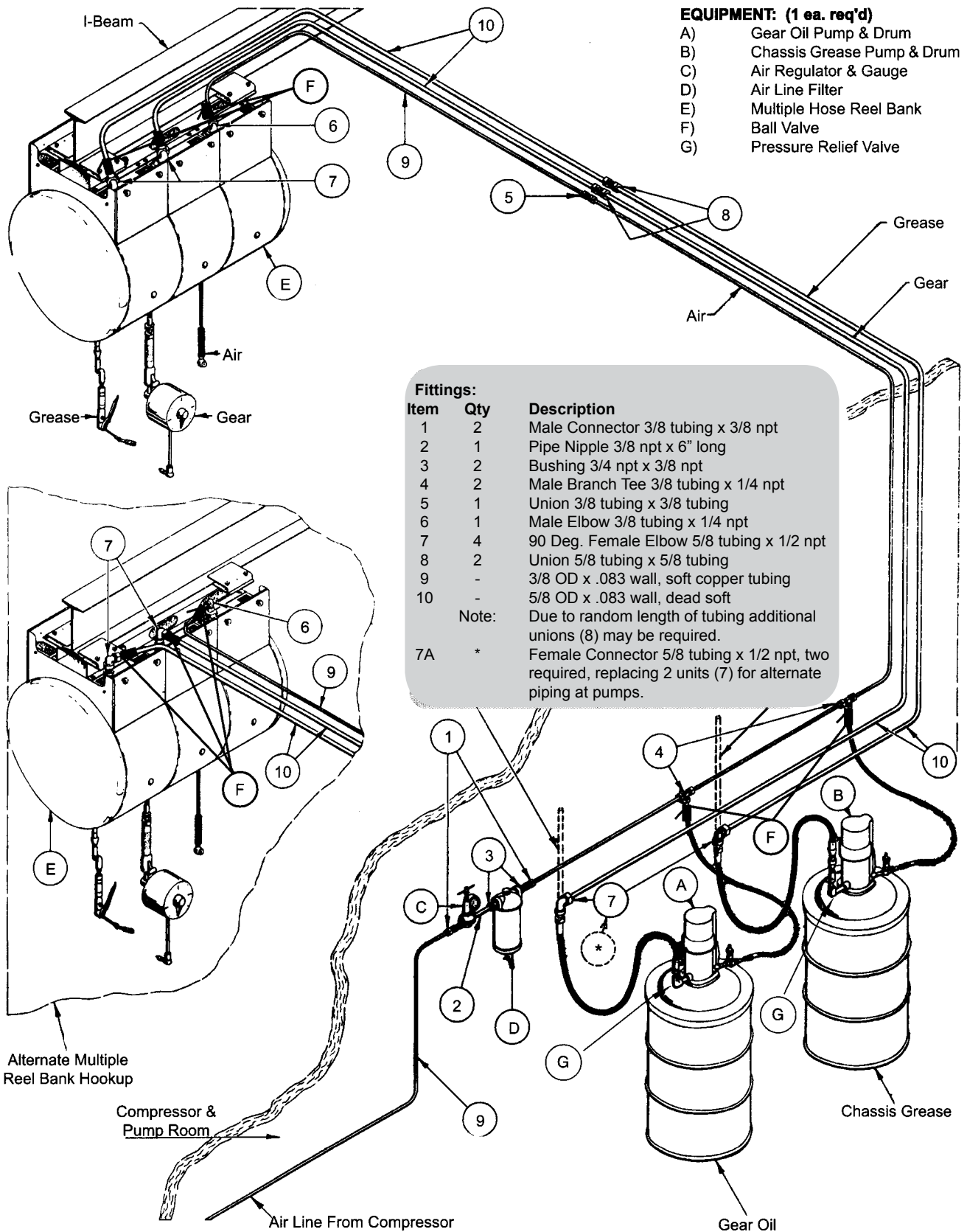


Figure 4
Typical System

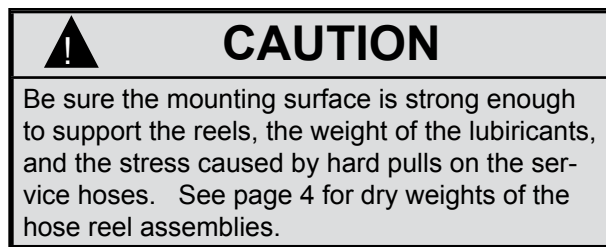
Installation

Table/Wall Mounting:

The hose reel has been shipped ready for use when mounting to wall/table or mobile applications unless specified otherwise. If a Bare reel has been ordered, see installation of hose instructions and power spring adjustment on the following pages.

Ceiling Mounting:

The hose reel has been shipped ready for use when mounting to wall/table or mobile applications unless specified otherwise. The outlet arm will need to be adjusted for ceiling mounting. (see figure 8) The power spring tension will need to be adjusted for the ceiling height of the building. If a Bare reel has been ordered, see installation of hose instructions and power spring adjustment on the following pages.



1. Select the mounting location. Be sure the structure is secure and will not tip when reel is in operation. Tables should be bolted to floor and wall should be part of building structure.
2. Locate the mounting holes for drilling, using measurements on previous page.
3. Fasten the base using bolts of a sufficient strength to prevent the reel from “shearing bolts” during operation when hose is pulled.
4. Connect supply line to the inlet of hose reel. (see figure 5).
5. Install the hose stop and dispensing valve. Position the hose stop so the hose extends far enough for all operations.


Note:

A pressure relief kit is recommended on all Balcrank supply systems. The lack of installing this kit will void all product warranties if system fails because of thermal expansion.

1. Select the mounting location. If the ceiling is very high, suspend a suitable support structure for the reels, so the hoses will be long enough to reach service area.
2. Locate the mounting holes for drilling, using measurements on previous page.
3. Adjust the outlet arm position. Before removing the roller outlet assembly and the top tie bracket, the power spring tension should be released and the uprights should be secured to prevent accidental separation. Once the outlet arm is positioned correctly retighten bolts 80 to 90 inch pounds. (*Refer to illustrations on page 9 for further details on changing the outlet arm position*).
4. Fasten the base using bolts of a sufficient strength to prevent the reel from “shearing bolts” during operation when hose is pulled.
5. Connect supply line to the inlet of hose reel. (see figure 5).
6. Install the hose stop and dispensing valve. Position the hose stop so the hose extends far enough for all operations.

Installation

Installing a Service Hose on a Bare Reel:

	<h2>WARNING</h2>
<p>The <i>MAXIMUM WORKING PRESSURE</i> of a hose reel is determined by the lowest rated component in the assembly. The maximum working pressure of a hose reel is indicated on the hose reel identification plate located near the base of the reel. If adding a service hose and dispensing valve to a bare reel, <i>BE SURE</i> you know the maximum working pressure of <i>ALL</i> components!</p>	

1. Locate or measure the length and size of your hose in the charts below. Note: how many times you must turn the spool of the reel to properly adjust the spring tension.


Low/Med. Press. Hose Description	No. of Turns
3/4" I.D. X 50 F.T.	17
3/4" I.D. X 60 F.T.	18
1" I.D. X 50 F.T.	18

2. Place a piece of tape on the side of the spool to help when counting the number of turns made.

	<h2>WARNING</h2>
<p><i>Wear Heavy Leather Gloves</i> when replacing service hose and/or replacing power spring to protect your hands from possibly being cut.</p>	

3. Wearing **Heavy Leather Gloves**, firmly grasp the outside edge of the spool with both hands. Wind the reel to the proper number of turns, rotating it in a clockwise direction, stopping only at latching locations. Stop the reel where the hose swivel is accessible and where the stop pawl is securely latched.

4. Before installing the hose, secure spool from accidental rotation by placing a clamp on the spool. See figure 7 for proper placement of clamp. This will keep the spool from rotating while installing the hose.

	<h2>WARNING</h2>
<p><i>Never</i> allow the reel to spin freely. Doing so will cause the hose to spin out of control, which could cause serious bodily injury if hit by the hose.</p>	

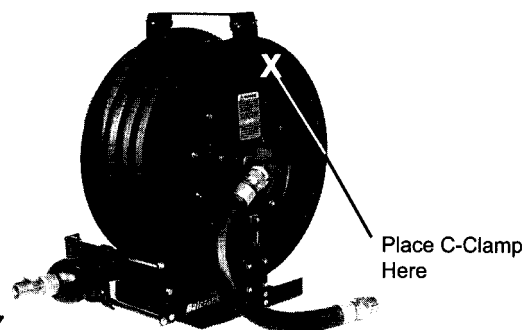



Figure 7
Clamping Spool



5. Uncoil the hose and attach bumper stop. Attach the hose to the reel then remove clamp carefully.
6. Firmly grasp the hose and pull it to release the stop pawl. Slowly retract the hose. **NOTE:** Check the power spring tension. The hose must pull out fully and retract fully. To adjust, add or remove ONE loop from the spool, extend the hose and latch it. Do this as many times as necessary until the power spring has the desired tension.
7. Position the bumper stop so the hose extends far enough for all operators to reach it.

	<h2>CAUTION</h2>
<p><i>Do Not</i> put so many loops on to the reel that the power spring winds tightly before the hose is fully extended. A power spring that has been wound too tight stops rotating before the hose is fully extended. This condition will wear the hose and power spring prematurely. To decrease tension, remove one to two loops of hose from the reel.</p>	


Installation

Increasing Power Spring Tension:


1. Pull the hose out fully and engage the stop pawl.
2. Be sure the system pressure has been relieved, **follow the pressure relief procedures below.**

	 WARNING
	<p>Pressure Relief Procedure:</p> <p>Follow this procedure before maintaining and/or repairing your Premium Hose Reel and/or any part of the system.</p> <ol style="list-style-type: none"> 1) Disconnect the air to the pump. 2) Point dispensing valve away from yourself and others 3) Open dispensing valve until pressure is relieved.

3. Remove the bumper stop and dispensing valve.
4. Pull the hose back through the roller outlet and wrap one loop of hose around the spool.
5. Pull the hose back through the roller outlet assembly and check the spring tension; the hose must pull out fully and retract fully. Continue to wrap more loops, one at a time until the power spring has the desired tension.

 CAUTION
<p>Do Not put so many loops onto the reel that the power spring winds tightly before the hose is fully extended. A power spring that has been wound too tight stops rotating before the hose is fully extended. This condition will wear the hose and power spring prematurely. To decrease tension, remove one to two loops of hose from the reel.</p>

Adjusting the Outlet Arm Position:

 CAUTION
<p>Before removal of the roller outlet assembly and the top tie bracket, the power spring tension should be removed and the uprights should be secured against accidental separation.</p>

Ceiling/Wall Mounting Position:

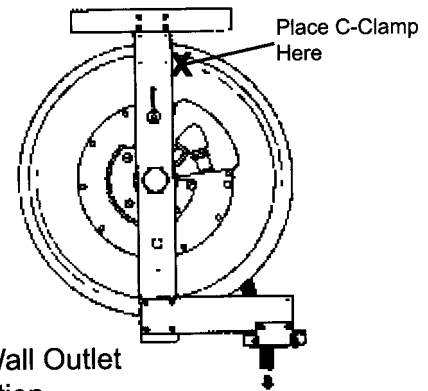


Figure 8
Ceiling/Wall Outlet
arm Position

Tank/Mobile Mounting Position:

1. Pull the hose out fully and engage the stop pawl. Place C-clamp on spool to prevent possible bodily injury (see figure 8).
2. Remove screws (11) from the roller outlet assembly and remove screws (11 & 12) which hold the top tie bracket and outlet arm assembly to the uprights. Reverse the position of the roller outlet assembly as shown in figure 10 and replace screws (see figure 11).

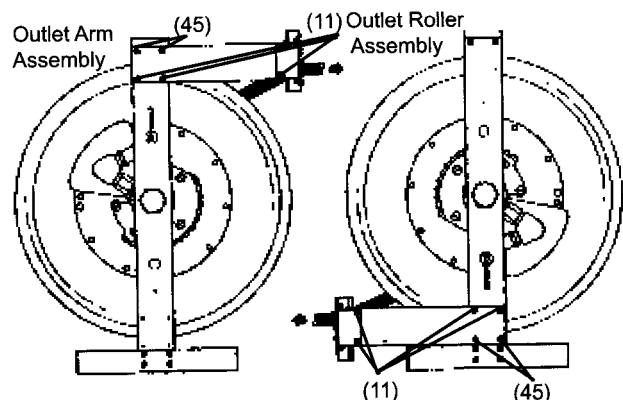



Figure 9 - Tank/Mobile Outlet Arm Position

Maintenance

Replacing Service Hose:

1. Be sure the pressure supply has been relieved when replacing the service hose. **Follow the pressure relief procedures below.**

	WARNING
	Pressure Relief Procedure: Follow this procedure before maintaining and/or repairing your Premium Hose Reel and/or any part of the system. 1) Disconnect the air to the pump. 2) Point dispensing valve away from yourself and others 3) Open dispensing valve until pressure is relieved.

2. Fully extend the service hose, stop the reel where the hose swivel union is accessible and where the stop pawl is securely latched.
3. Secure spool from accidental rotation by placing a C-clamp onto the spool. See figure 12 for proper placement of C-clamp. This will keep the spool from rotating while installing the new service hose.

WARNING
Never allow the reel to spin freely. Doing so will cause the hose to spin out of control, which could cause serious injury if hit by the hose.

4. Disconnect and remove service hose.
5. Uncoil the new hose and assemble the bumper stop, attach the new hose to the reel. and remove the C-clamp carefully.
6. Firmly grasp the hose and pull it, to release the stop pawl. Then Slowly retract the hose.

NOTE: Check the power spring tension. The hose must pull out and retract fully. Wrap *ONE* more loop onto or off the spool, extend the hose, and latch it. Do this as many times as necessary until power spring has the desired tension.

Replacing the Swivel:

1. Be sure the pressure supply has been relieved when replacing the swivel. **Follow the pressure relief procedures below.**

2. Disconnect the inlet hose.

3. Remove the old swivel assembly and replace it with the new assembly. **NOTE:** the new assembly may look different from the old assembly, the important item to be sure of is thread size and pressure style (ex: L.P., M.P. or H.P.) used on your reel.

(Refer to parts listing on page 1 for proper swivel repair or replacement kit.)

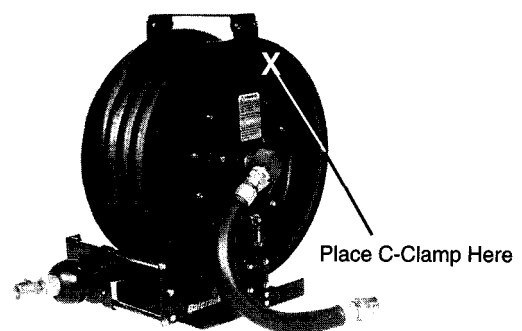



Figure 12
Clamping Spool

NOTE: A spring wound too tightly stops rotating before the hose is fully extended. This condition will place excessive strain on the hose and power spring that could damage and/or shorten the life of the reel.

Maintenance


Replacing Power Spring:

1. Be sure the pressure supply has been relieved. **Follow the pressure relief procedures below.**

	WARNING
Pressure Relief Procedure:	
Follow this procedure before maintaining and/or repairing your Premium Hose Reel and/or any part of the system.	
<ol style="list-style-type: none">1) Disconnect the air to the pump.2) Point dispensing valve away from yourself and others3) Open dispensing valve until pressure is relieved.	

2. Disconnect inlet hose. Remove the reel to work bench and clamp reel base securely.
3. Remove hose stop and control dispensing valve, retract the hose and remove necessary wraps until *all power spring tension has been removed.*
4. Remove screws (11, 12 & 16) from base (40), hub (29) and top tie bar (19).
5. Unclamp the reel from the workbench and lay it on a flat work surface so the spring case (21) is facing up.
6. Twist the complete spring case assembly to the left or right and once the upright (15) is clear of the base (40) and the top tie bar (19) lift to remove the assembly.

NOTE: Be sure that both bolts (24) and safety cotter pins (20) are still in place on each side of the case before lifting. (see figure 12 for placement of cotter pins).

	WARNING
USE EXTREME CAUTION WHEN HANDLING THE POWER SPRING! The spring is ALWAYS under great tension and could be propelled from the case with enough force to cause serious bodily injury. To reduce the risk of serious bodily injury, use extreme caution when removing the top cover (20). Be sure the spring case is lying flat, and then carefully lift up the cover to expose the power spring.	

7. Be sure case is lying flat on the work surface, now remove bolts (24). Next using extreme caution, remove both safety cotter pins from sides of case and lift up on the spring case cover (22) to expose the power spring.
8. *Carefully inspect the Power Spring;* If either end of the power spring is worn or damaged and will not engage the center plates (26) properly, replace the power spring. If the power spring has become uncoiled inside the spring case, the “keeper” has failed. It is strongly advised that you replace the complete spring case assembly. The “keeper” is a metal band that is placed around the power spring to keep it from uncoiling when removed from the case. If you attempt to remove the power spring when this condition has occurred the spring *will uncoil quickly and can cause serious bodily injury.* (see figure 10)
9. Apply a light coat of grease inside the spring case and cover.
10. Install the new power spring, making sure that it is laid into the spring case **counter clockwise** and that the outside end loop is around spring case bolt (24) and spacer (10).
11. Replace spring case cover (23) and insert cotter pins (20) through sides of spring case and cover. Tighten case and cover to upright (15).

(continued on next page)

Replacing Power Spring “continued”:

12. Twist the complete spring case assembly to the left or right, making sure that the power spring is centered and has engaged the spring center plates (26).
13. Align upright assembly (15) with base (40) and top tie bar (19). Place bolts (11 & 12) back through the base and top tie bar and tighten to 100 - 110 inch pounds. Inspect complete reel for proper function and adjust power spring as needed by adding one to two loops of hose at a time to increase power spring tension.

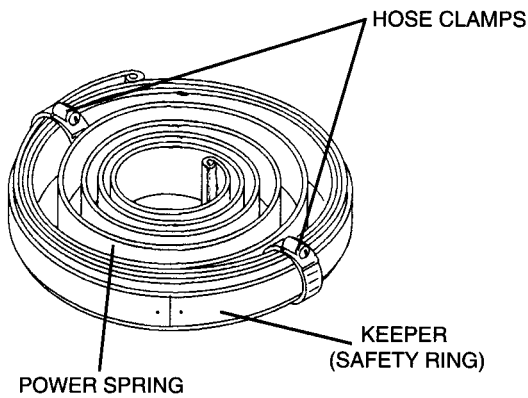


Figure 13
Keeper & Safety Clamps

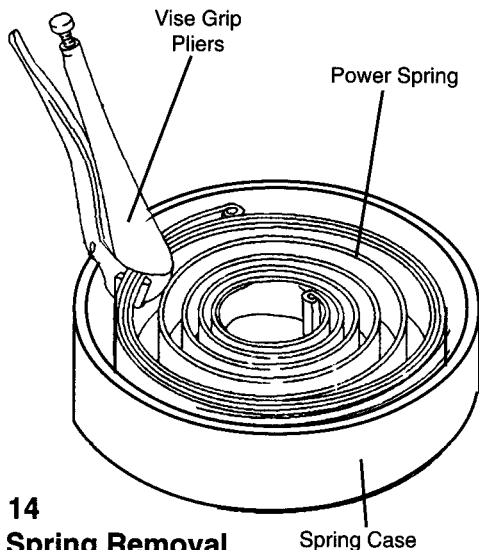


Figure 14
Power Spring Removal
Using Locking Pliers

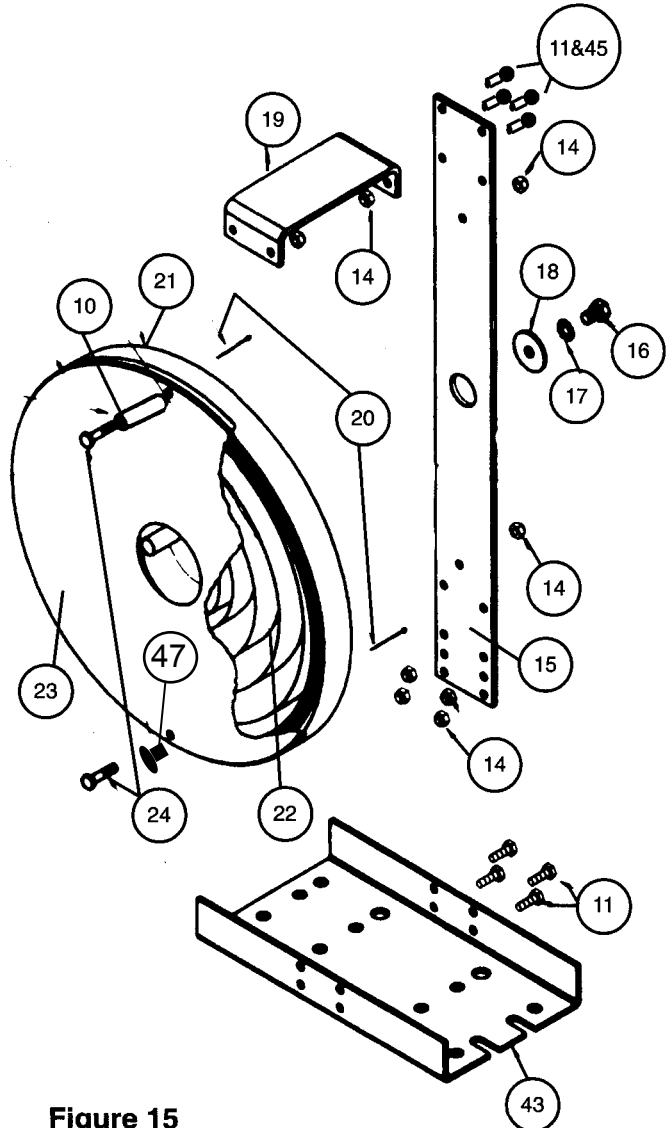


Figure 15
Power Spring & Case Pictorial

Maintenance

Stop Pawl Replacement:

1. Allow the hose to retract as far as the hose stop to remove tension from the power spring and to be sure that the stop pawl is not engaged with the ratchet.
2. With the stop pawl assembly free to be moved by hand, remove the cotter pin (38), spring (37) and snap ring (39). Once this has been done the complete assembly can be removed.
3. Item (36) bronze bearing will need to be knocked out of the upright (41), using a punch and hammer.
4. With the stop pawl kit in hand replace the bronze bearing by pressing the new bearing into the upright (41).
5. Apply a light coat of grease to the stop pawl stud (35), reassemble by placing the stop pawl stud (35) back through the bronze bearing (36) and insert the snap ring (39) into the groove on the shaft of the stop pawl stud (35).
6. Replace the spring (37) and cotter pin (38) with the new ones provided in the kit.
7. Check the stop pawl assembly by hand for free movement. The stop pawl assembly should not stick or drag and it should return to its central position each time it is moved off center.

NOTE: If the assembly does not appear to be returning back to its neutral position, the spring tension may need to be increased. You can increase the spring tension by bending the cotter pin closer to the stop pawl shaft which will stretch the spring slightly.

CAUTION

Never alter or modify any parts of this reel. Doing so may cause damage to reel and/or personal injury. Always use genuine Balcrank replacement parts.

NOTE: Number with “*” is a component of the stop pawl repair kit # 811128.

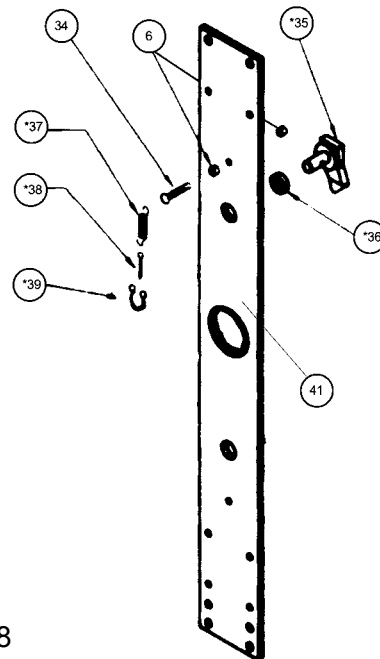
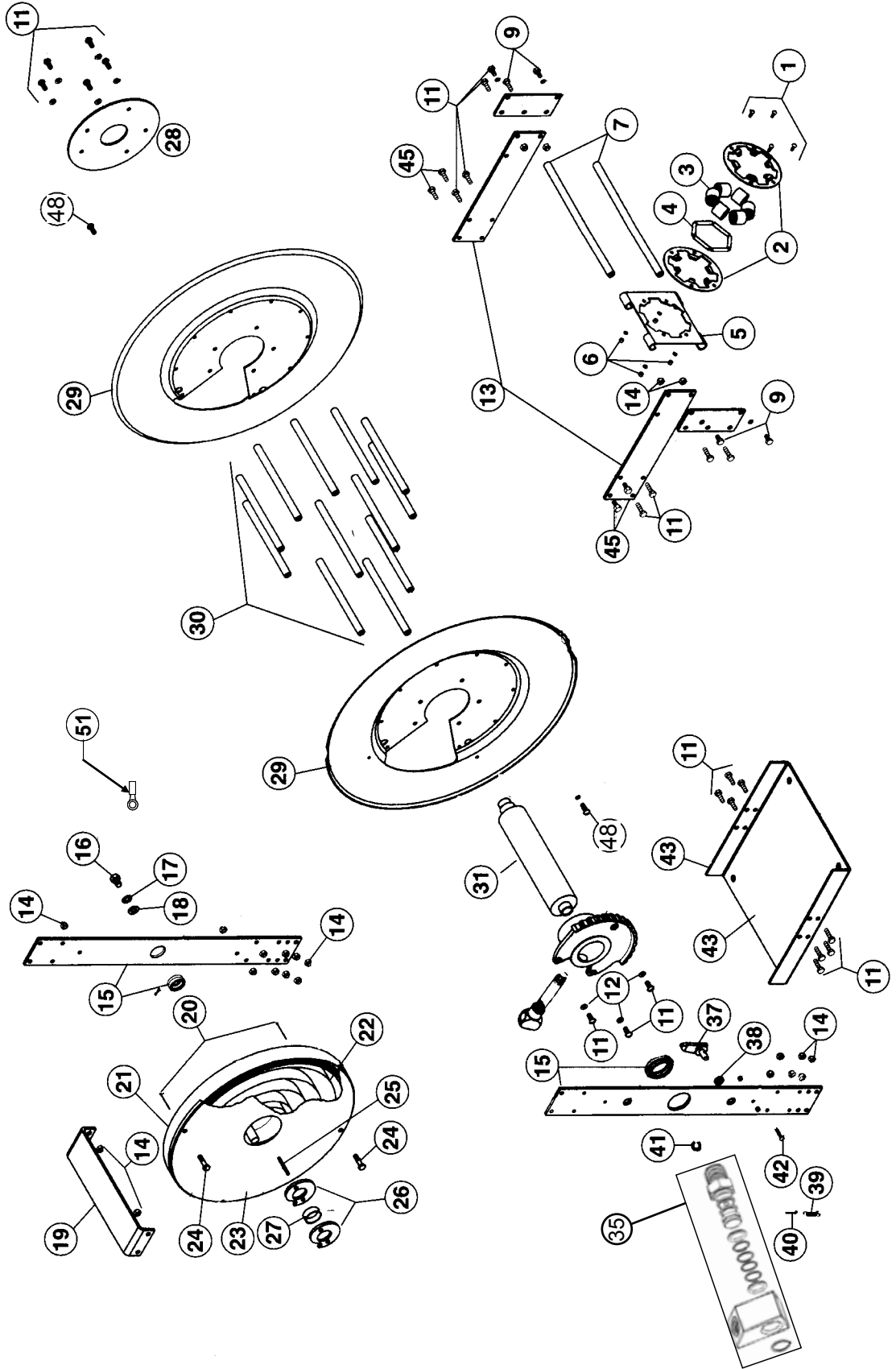


Figure 8
Stop Pawl Replacement

Troubleshooting Guide

Trouble	Probable Cause	Remedy
No spring tension	Power spring broken (item 22)	Replace power spring (see pg 10)
Low or high tension on hose	Lost wraps or too many wraps of hose on reel	Add or take off wraps of hose by pulling hose on reel down just enough to allow stop pawl to engage ratchet. Now wraps can be added or taken off as needed. (see pg 8)
Hose will not retract	Stop pawl lock-up	CAUTION: Wearing heavy leather gloves, firmly grasp the outside edge of the spool with both hands. Release the tension on the stop pawl by hand for one or two revolutions.
Stop pawl will not engage	Spring broken or unhooked	Replace or repair (item 39)
Swivel leaking	Worn o-rings or block	Replace swivel (item 35)

Figure 17
Parts Pictorial



PARTS LISTING PREMIUM EV DIESEL REELS

CAUTION
Never alter or modify any parts of this reel. Doing so may cause damage to reel and/or personal injury. Always use genuine Balcrank® replacement parts.

NOTE: (*) Component of "Roller Outlet Assembly #X820025
(**) Component of "Stop Pawl Assembly #811128

Parts Listing for Premium EV Diesel Reels				Parts Listing for Premium EV Diesel Reels			
ITEM	PART #	DESCRIPTION	QTY	ITEM	PART #	DESCRIPTION	QTY
1	805818	10-24 x 1/2" Rd. Hd Screw	4	27	808967	Spacer-Spring Center Plate	1
2	807171	Outlet Frame (*)	2	28	809311	Support Plate	1
3	807172	Outlet Roller (*)	6	29	808793 (1)	Hose Reel Disc	2
4	807173	Outlet Pin (*)	6	30	809266	Disc & Ratchet Spacer	11
5	820165 (1)	Slider Frame (*)	1	31	829236	Low/Med Pressure Hub	1
6	814247	10-24 Hex Nut (*)	4	32	829240	Ratchet	1
7	820003	Slide Rod (*)	2	33	826829	Outlet Adapter	1
8	820166 (1)	End Support (*)	2	34	809258	60 Deg. Elbow	1
9	819066	1/4-20 x 1/2" Hx. Hd Bolt (*)	8	35	829258	Low/Med Pressure Swivel	1
10	831730	Spacer (after 1/04) see pg. 11	1	36	X810639	Left Upright Assy (1)	1
11	805823	1/4-20 x 3/4" Hx. Hd Bolt	26	37	809860	Stop Pawl & Stud (**)	1
12	805784	1/4" Lock Washer	6	38	826395	Stop Pawl Bearing (**)	1
13	808984 (1)	Roller Outlet Brace	2	39	807727	Stop Pawl Spring (**)	1
14	813561	1/4-20 Elastic (Nylok) Nut	22	40	805743	3/32 x 3/4" Cotter Pin (**)	1
15	X810638 (1)	Right Hand Upright Assy	1	41	826396	Snap Ring (**)	1
16	805795	3/8-16 x 1/2" Hx. Hd Bolt	1	42	808315	10-24 x 1" Rd. Hd Screw	1
17	813738	3/8" Star Lock Washer	1	43	809269	Base Plate (1)	1
18	806186	3/8" Flat Washer	1	44	N/A	Spool Assembly	1
19	809267 (1)	Top Tie Bar	1	45	820499	1/4-20 x 1" Bolt	4
20	808719	3/32 x 1-1/4" Cotter Pin	2	46	805835	10-24 Hexnut	2
21	824459	Spring Case	1	47	831729	Spacer w/Shoulder (after 1/04 see pg. 11)	1
22	813014	Power Spring	1	48	824480	1/4-20 x 1/2 whiz lock screw	16
23	832319	Spring Case Cover	1	49	826398	Hose Stop 3/4" (not shown)	1
24	825720	1/4-20 Rd. Hd Screw	2		826399	Hose Stop 1" (not shown)	1
25	808764	7/32 x 1-5/8" Roll Pin	2	50	820230	Bushing, 1" to 3/4" (not shown)	1
26	813779	Spring Center Plate	2	51	831489	Ring, Terminal grounding (green)	

(1) When ordering these components please specify green paint for Diesel reels.

Balcrank Lubrication Equipment Warranty Statement

All Balcrank equipment sold by authorized Balcrank distributors is warranted to their original customer to be free from defects in materials and workmanship for a period of one year from the date of sale to that customer. Selected Balcrank equipment carries warranty terms for a more extended period as defined in the Balcrank Lubrication Equipment & Accessories User Price List, wherein a "lifetime" warranty represents a warranty period of thirty years. Within the initial one-year warranty period, Balcrank will repair or replace all Balcrank equipment determined by Balcrank to have defective materials or workmanship. For equipment carrying more extended warranties, Balcrank will repair or replace the product including parts and labor during the first full year and will provide parts only for the remainder of the warranty period.

This warranty applies only to equipment installed and operated according to applicable Balcrank Service Bulletins and Installation Instructions.

Any equipment claimed to be defective must be returned, freight prepaid, to an Authorized Balcrank Service Center (ASC). Upon receiving candidate warranty equipment from a customer, ASC will: 1) diagnose to determine the warrantable condition of the equipment, 2) submit, prior to repair or replacement, a request to Balcrank for warranty authorization, then 3) in cooperation with Balcrank, proceed with repair locally or forward the equipment to Balcrank and obtain replacement. If the part(s) or equipment items are found defective upon inspection by Balcrank, they will be repaired or replaced, and then will be returned to the ASC. If Balcrank finds the claimed part(s) or equipment not to be defective, the ASC will receive written authorization from the original customer, and then repair them for a reasonable charge to the customer, which will include all applicable parts, labor, and return transportation costs.

Optionally, the customer may submit certain eligible products directly to Balcrank for warranty return by using Balcrank Lubrication Equipment Direct Service Warranty Procedure. Eligible products are defined in the Balcrank Lubrication Equipment & Accessories User Price List. Refer to the Balcrank web site www.balcrank.com for a copy.

Any equipment returned to Balcrank must have the Warranty Service Claim number (WSC#) clearly marked on the outside of the carton. Balcrank's sole responsibility is for defects in material and workmanship, and Buyer's sole and exclusive remedy hereunder, shall be limited to repair or replacement of the defective part or equipment.

This warranty does not cover, nor shall Balcrank be liable for repair or replacement of parts or equipment resulting from general wear and tear through use, or damage or failure caused by improper installation, abuse, misapplication, abrasion, corrosion, insufficient or improper maintenance, negligence, accident, alteration, or substitution of non-Balcrank parts.

Furthermore, the Warranty for Lubrication Equipment and Accessories does not cover the following specific conditions:

- Failure or damage to equipment caused by dirt or debris in compressed air lines and fluid lines. This includes, but is not limited to, clogged inlet filters, strainers, or regulators; fluid meters; control handles; fluid tips; and valves.
- Failure of normal wear parts including but not limited to: o-rings, packings, seals and valves unless originally improperly installed by the factory.
- Products placed in applications for which their use was not intended. Examples include but are not limited to Lubricant pump being used to pump solvents, or placing equipment intended strictly for indoor use outdoors
- Damage to equipment resulting from operation above and beyond Balcrank's recommendations.
- Leaks at air and fluid fittings and connections.
- Damage caused by thermal expansion whenever adequate pressure relief was not included in the system.
- Loose suction tubes on pumps.
- Incorrect hose reel spring tension, requiring adjustment.

THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL BALCRANK BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL, OR OTHER DAMAGES OF SIMILAR NATURE, INCLUDING BUT NOT LIMITED TO LOST PROFITS, LOST PRODUCTION, PROPERTY DAMAGE, PERSONAL INJURY, WHETHER SUFFERED BY BUYER OR ANY THIRD PARTY, IRRESPECTIVE OF WHETHER CLAIMS OR ACTIONS, LEGAL OR EQUITABLE, FOR SUCH DAMAGES ARE BASED UPON CONTRACTS, WARRANTY, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE. ANY CLAIM OR ACTION FOR BREACH OF WARRANTY MUST BE BROUGHT WITHIN TWO (2) YEARS FROM THE DATE OF SALE TO THE ORIGINAL CUSTOMER.

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