

LDX Series Hose Reels

3A8216C

EN

For dispensing air, water, antifreeze, windshield washer solvent, transmission fluid, diesel exhaust fluid, oil and grease. For professional use only.

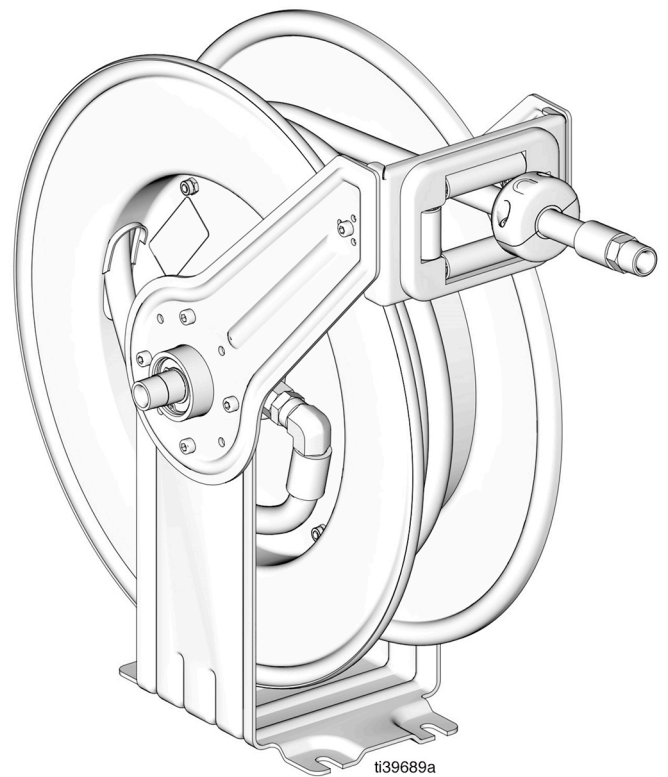
Not approved for use in explosive atmospheres or hazardous (classified) locations.

See page 3 for model information, including maximum working pressure.



Important Safety Instructions

Read all warnings and instructions in this manual before using the equipment.
Save these instructions.



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Models

Model	Maximum Working Pressure	Media	Connection Size		Line Size in. (cm)	Hose Length ft. (m)	Dry Weight lb (kg)
			Inlet	Outlet			
HEL010	300 psi (2.07 MPa, 20.7 bar)	Air/Water	3/8 npt(m)	3/8 npt(m)	3/8 (0.95)	50 (15.24)	40.7 (18.5)
HEL012	300 psi (2.07 MPa, 20.7 bar)	Air/Water	3/8 npt(m)	1/4 npt(m)	3/8 (0.95)	50 (15.24)	40.7 (18.5)
HEL015	150 psi (1.03 MPa, 10.3 bar)	DEF	1/2 bspp(f)	3/4 bspp(m)	1/2 (1.27)	45 (13.716)	46.2 (21.0)
HEM004	1500 psi (10.3 MPa, 103.4 bar)	Oil	1/2 npt(m)	1/2 npt(m)	1/2 (1.27)	50 (15.24)	48.0 (21.8)
HEH006	4060 psi (28 MPa, 279.9 bar)	Grease	3/8 npt(m)	3/8 npt(m)	3/8 (0.95)	50 (15.24)	50.6 (23.0)

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 <h2 style="margin: 0;">WARNING</h2>	
    	<p>SKIN INJECTION HAZARD</p> <p>High-pressure fluid from dispensing device, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not point dispensing device at anyone or at any part of the body. • Do not put your hand over the fluid outlet. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses and couplings daily. Replace worn or damaged parts immediately.
 	<p>FIRE AND EXPLOSION HAZARD</p> <p>When flammable fluids are present in the work area, such as gasoline and windshield wiper fluid, be aware that flammable fumes can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well-ventilated area. • Eliminate all ignition sources, such as cigarettes and portable electric lamps. • Ground all equipment in the work area. • Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline. • Do not plug or unplug power cords or turn lights on or off when flammable fumes are present. • Use only grounded hoses. • Stop operation immediately if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area.



WARNING



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.



- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Specifications** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Specifications** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.



MOVING PARTS HAZARD

Moving parts can pinch, cut or amputate fingers and other body parts.



- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.



PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. Protective equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Typical Installation

Overhead-Mounted Hose Reel

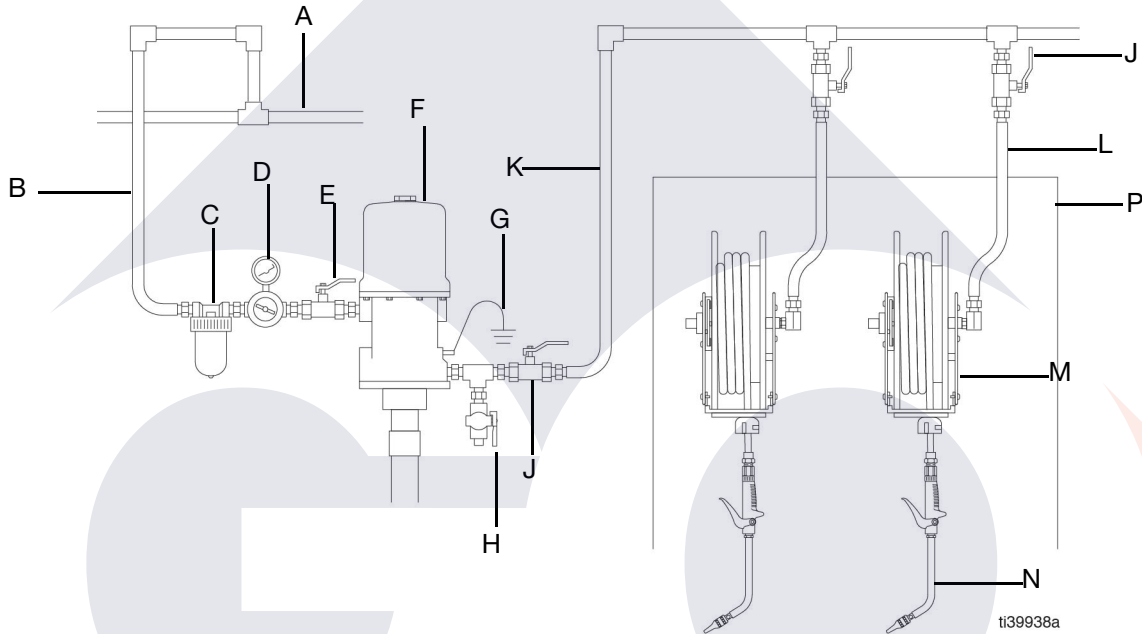


FIG. 1: Typical Installation

Key:

- A Main Air Supply Line
- B Pump Air Supply Line
- C Air Filter
- D Air Regulator
- E Bleed-type Master Air Valve (required)
- F Pump
- G Pump Grounding Wire (required)
- H Fluid Drain Valve (required)
- J Fluid Shutoff Valve
- K Fluid Line
- L Hose Inlet Kit
- M Hose Reel
- N Dispense Valve
- P Mounting Surface

Installation



A ground wire (G), bleed-type master air valve (E), and fluid drain valve (H) are required in your system installation. These components help reduce the risk of serious injury, including fire and explosion, injection, and splashing in your eyes or on the skin.

- The ground wire must be connected to the pump grounding lug and to a true earth ground according to your local codes.
- The bleed-type master air valve relieves air trapped between this valve and the pump after the air is shut off. Trapped air can cause the pump to cycle unexpectedly. Locate the valve close to the pump.
- The fluid drain valve assists in relieving fluid pressure in the pump, hose, and dispense valve. Triggering the valve to relieve pressure may not be sufficient to relieve pressure when the Fluid Shutoff Valve (J) is closed.

The typical installation shown in FIG. 1 is only a guide for selecting and installing a hose reel system. The components shown are the minimum requirements for all dispensing systems. However, it is not an actual dispensing system design. Contact your Graco Distributor for assistance in designing a system to suit your needs.

NOTE: The air and fluid accessories used in your system must be properly sized to the pump. Refer to your pump manual for selecting pump accessories.

Grounding



The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.

Pump: follow manufacturer’s recommendations.

Hose reels: connect to a true earth ground when dispensing petroleum products. This can be done by bolting the reel to a grounded structure, or by using a conductive inlet hose to connect to a grounded piping system.

Fluid hoses: use only conductive hoses when dispensing petroleum products.

Dispense valves: use thread sealant when connecting the meter to the hose. Do not use PTFE tape on the pipe joints, as it may cause loss of ground across the pipe joint.


Waste container while flushing: use a grounded metal container. Hold the hose coupling or metal part of the meter firmly to the side of the waste container while flushing.

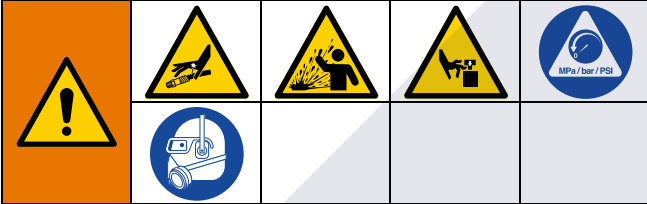
Required Components

Be sure to have the following components before beginning installation.

- Hose inlet kits (L)
- A mounting surface suitable for the weight of the reel. NOTE: most reels will be mounted directly to a wall or bench top, so a bracket is not necessarily required
- Dispense valves (N)

Pressure Relief Procedure

 Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing the equipment.

1. Turn off the power supply to the pump or close the upstream ball valve.
2. Trigger the Dispense Valve (N) into a grounded waste container to relieve pressure.
3. Leave the Fluid Drain Valve (H) open until ready to pressurize the system.

NOTE: If you suspect that the dispense valve is clogged, or that the pressure has not been fully relieved after following the above steps, very slowly loosen the coupler or hose end coupling to relieve the pressure gradually, then loosen completely. After doing this, the obstruction can be cleared (FIG. 2).

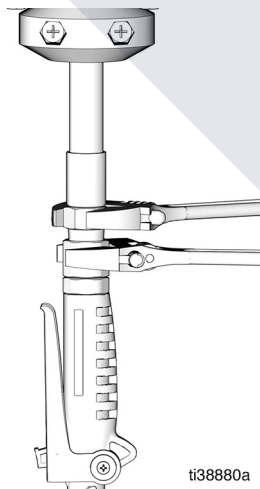


FIG. 2

Installation Mounting Options

Roller Support Arm Position Selection



To reduce the risk of injury, be sure that the mounting surface is strong enough to support the reels, weight of the lubricants, and the stress caused by hard pulls on the hoses. See **Models**, page 3, for weights of the hose reel assemblies.

NOTE: Always use four (4) large flat washers with four (4) bolts to mount the hose reel pedestal to any surface.

NOTE: The reels perform best when the arm allows the hose to pull straight off of the spool (FIG. 3).

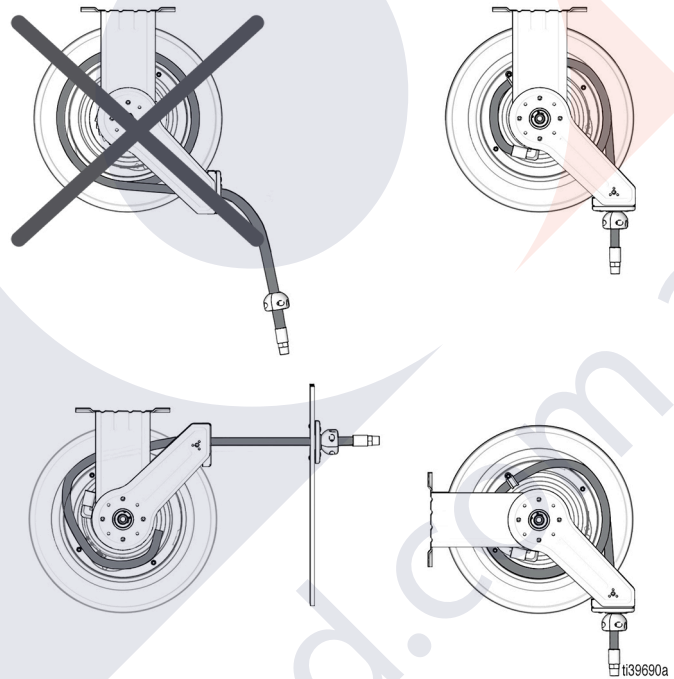


FIG. 3

1. Determine if the position of the roller guide arm (a) (FIG. 4) is in the desired installation position.

The hose reel is factory-assembled and shipped with the roller guide arm (a) in the EE position (FIG. 4).

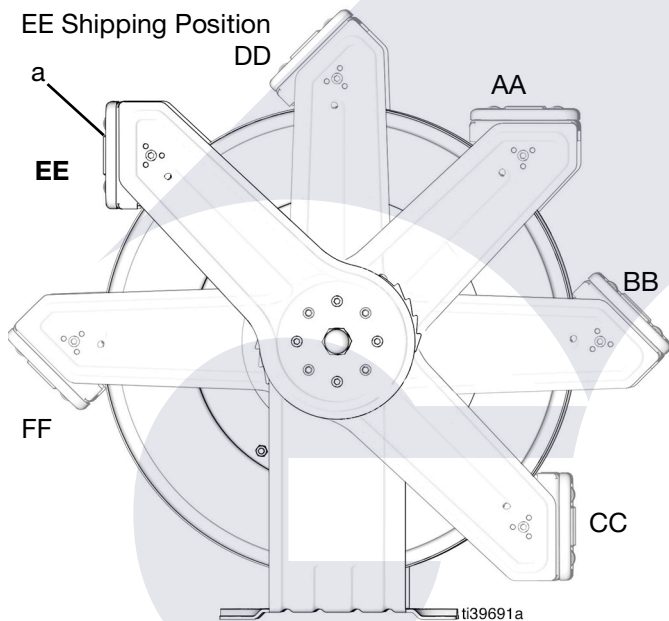
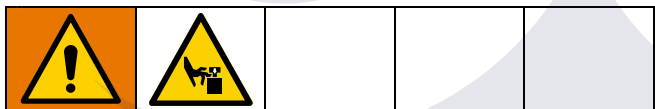


FIG. 4



2. To reposition the roller guide arm (a) to a position other than Shipping Position EE:
 - a. Secure the reel to a solid surface with C-clamps (C) (FIG. 5).
 - b. Attach a C-clamp (D) to the reel flange to prevent the reel from unintentionally becoming unlatched and spinning freely (FIG. 5).

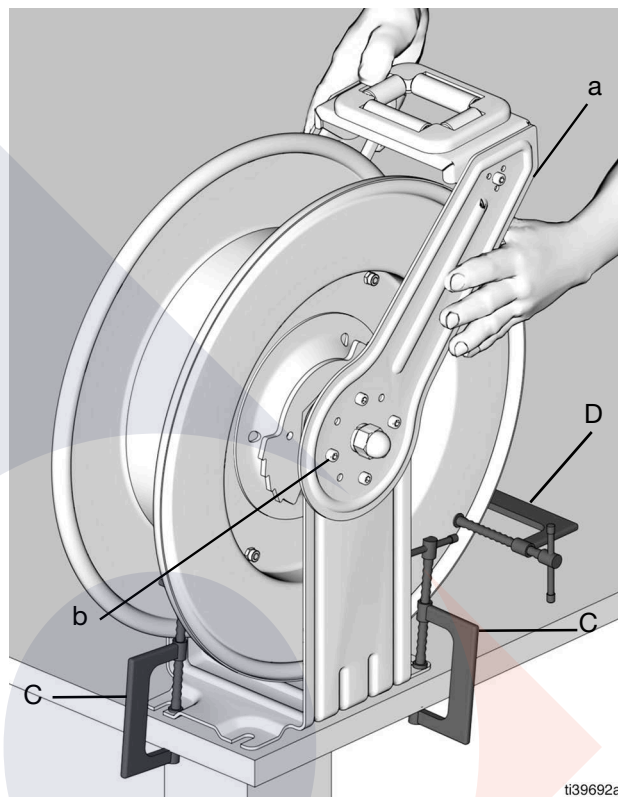


FIG. 5

- c. Remove the nuts (b) from each side and rotate arm (a) to the desired position.

NOTE: The reels have eight (8) nuts, four (4) on each side.

Installation

- d. Check the pawl to make sure it is not wedged on the side of the ratchet (FIG. 6).

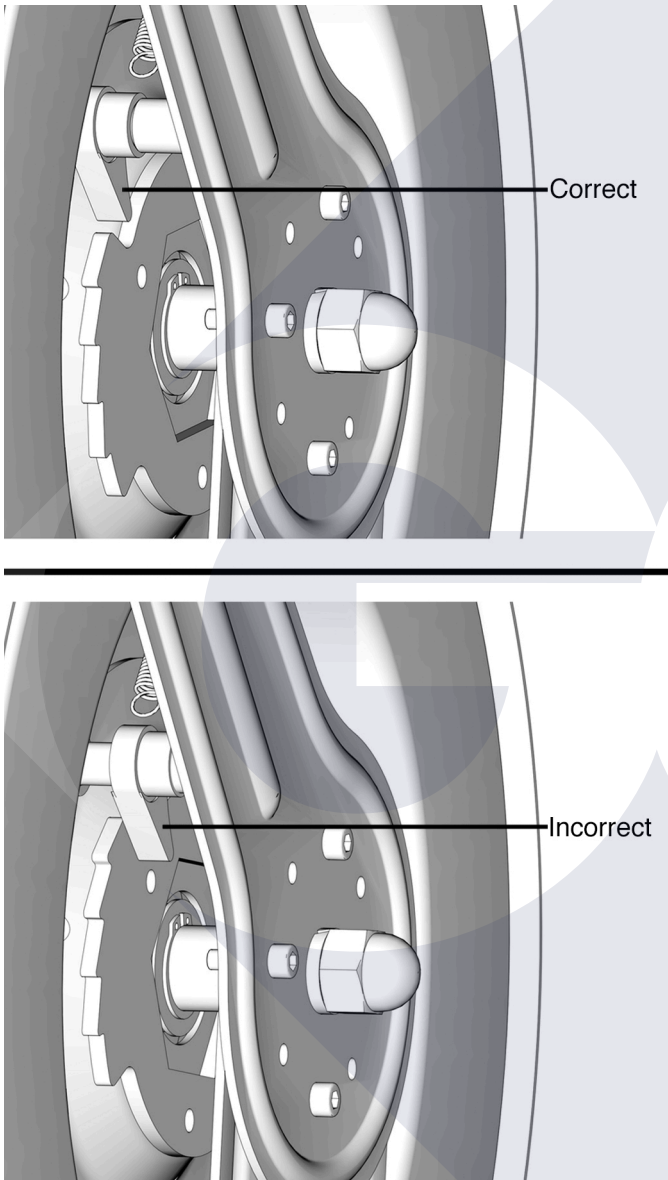


FIG. 6

- e. Replace and tighten nuts to secure the arm (torque 53 - 62 in-lb/6.0 - 7.0 N•m).

Ceiling Installations



To reduce the risk of injury, always use a man-lift platform or other type of lift while doing a hose reel ceiling installation.

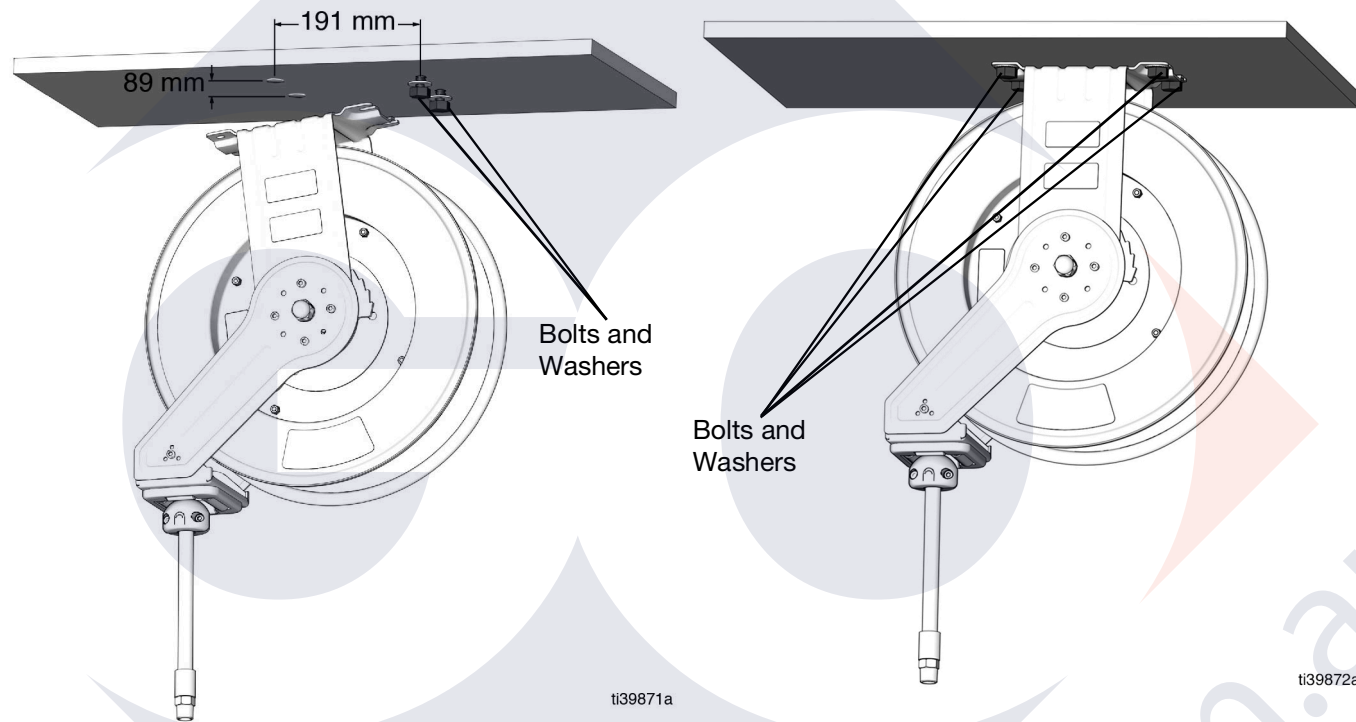


FIG. 7: Typical Installation

Wall Installations

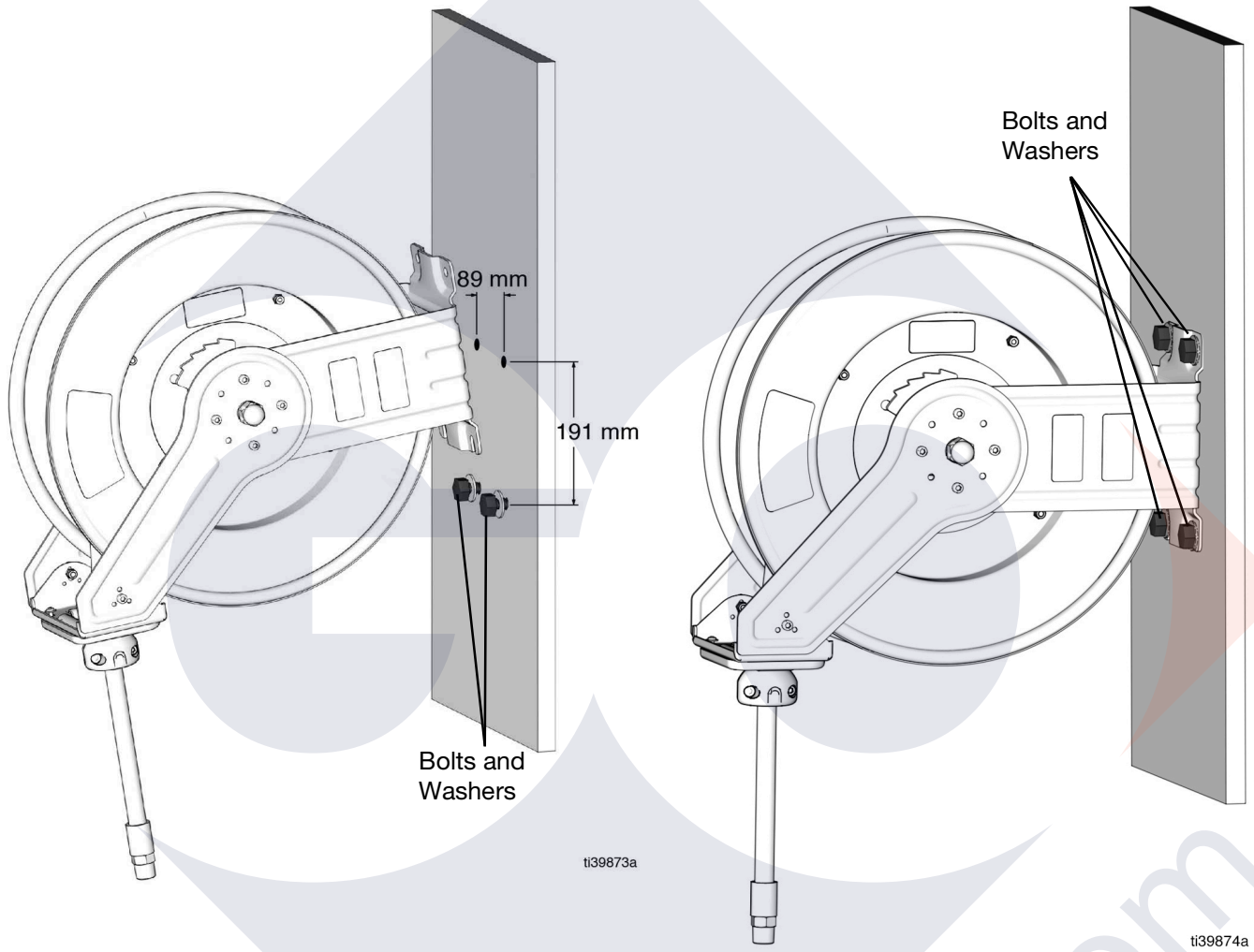


FIG. 8: Typical Installation

Swivel Mounting Bracket

Order Kit 24N444

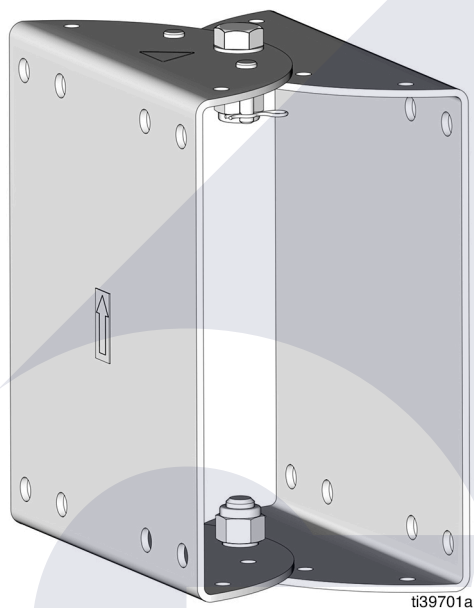


FIG. 9

Flush the Equipment



To help avoid fire and explosion, always ground equipment and waste container. To avoid static sparking and injury from splashing, always flush at the lowest possible pressure.

Before installation of the Dispense Valve (N) to the end of the dispense hose, flush the line with the dispensing fluid.

1. Place the end of the dispense hose into a grounded metal waste container. Hold the hose firmly against the waste container throughout the flushing process (FIG. 10).

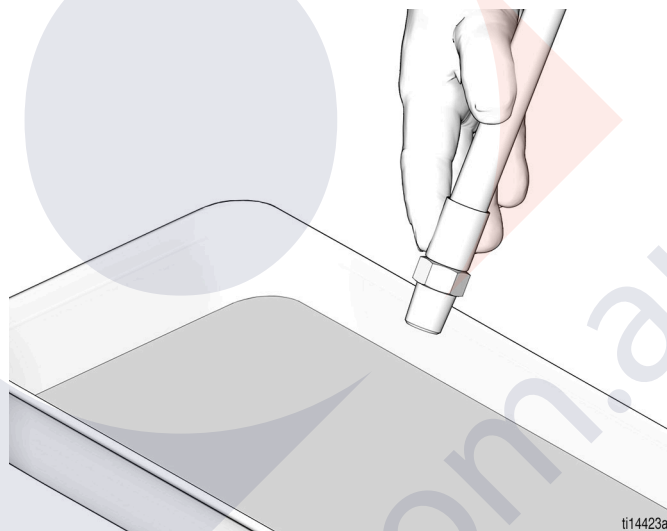


FIG. 10

2. Open the Bleed-Type Master Air Valve (E) and close the Fluid Drain Valve (H). See **Typical Installation**, page 6.

3. Flush the fluid being dispensed through the equipment until the fluid runs clear of particles or visible contaminants (FIG. 11).

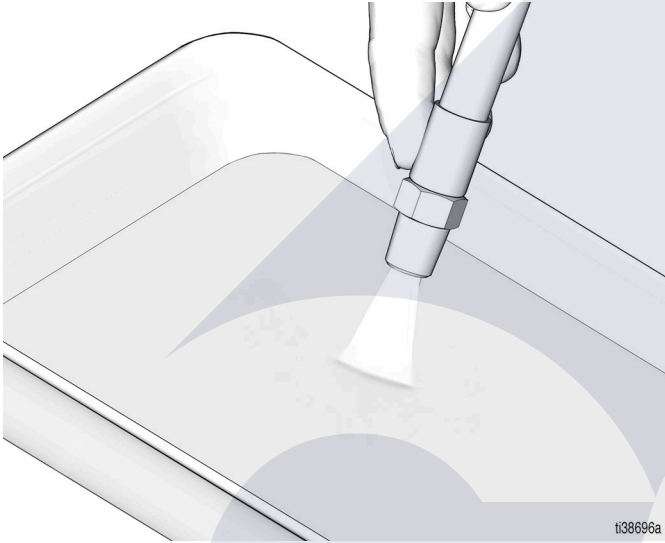


FIG. 11

Adjust Spring Tension



SPRING TENSION HAZARD

The hose reel spring is always under great tension, which if released in an uncontrolled manner could cause serious injury.

- The hose reel spring is not a serviceable part. Do not attempt to replace or service the hose reel spring.
- Never allow the reel to spin freely. Uncontrolled spinning could cause serious injury if hit by the hose.
- Securely fasten the reel in place while making adjustments.
- Always wear heavy gloves while adjusting the spring tension to protect your hands from being cut on the hose reel.

Increase the spring tension if the spring is too loose, the hose does not retract completely, or if hose retraction is sluggish.

Decrease the spring tension if the spring is too tight, or if the hose retracts too fast.

Increase Spring Tension

1. Pull the hose out one to two turns, then engage the latch.
2. Mark the position of the hose stop and remove the hose stop from the end of the hose.
3. Pull the hose back through the hose guides.
4. Wrap a loop of hose onto the reel.
5. Put the hose end through the hose guides and fix the hose stop to the marked position.
6. Check the spring tension. The hose must pull out fully and retract fully. Repeat steps 1 through 5 to increase the spring tension until the spring has the desired tension.

NOTE: Do not put so many loops onto the reel so that the spring winds up tightly before the hose is fully extended.

Decrease Spring Tension

To decrease the spring tension, remove loops around the reel (see Step 4, **Increase Spring Tension**) until tension is at the desired level.

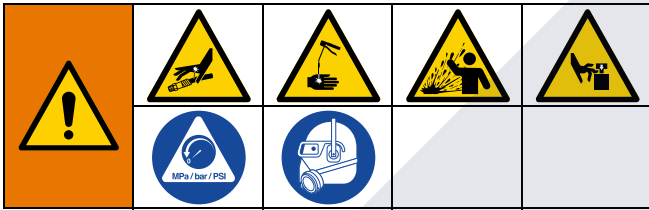
Recycling and Disposal

End of Product Life

At the end of the product's useful life, dismantle and recycle it in a responsible manner.

- Perform the **Pressure Relief Procedure**, page 8.
- Drain and dispose of fluids according to applicable regulations. Refer to the material manufacturer's Safety Data Sheet.
- Deliver remaining product to a recycling facility.

Troubleshooting



1. Follow **Pressure Relief Procedure**, page 8, before checking or repairing the equipment.
2. Check all possible problems and causes before disassembling.

Problem	Cause	Solution
The reel does not retract	Worn or broken spring	Replace the reel.
Hose reel swivel is leaking fluid and/or air	Worn or damaged swivel seals	Replace swivel seals. See page 22 to determine the swivel or seal kit needed.
Fluid delivery is slow	Pressure setting on the pump is too low	Increase fluid pressure.

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Repair

Replace the Hose (Kits listed on page 22)



1. Follow the **Pressure Relief Procedure**, page 8.
2. Fully extend the hose (B) and latch the reel (FIG. 12).
3. Attach a C-clamp (A) to the reel flange to prevent the reel from unintentionally becoming unlatched and spinning freely (FIG. 12).



SPRING TENSION HAZARD

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- The hose reel spring is not a serviceable part. Do not attempt to replace or service the hose reel spring.
- Never allow the reel to spin freely. Uncontrolled spinning could cause serious injury if hit by the hose.
- Securely fasten the reel in place while making adjustments.
- Always wear heavy gloves while adjusting the spring tension to protect your hands from being cut on the hose reel.

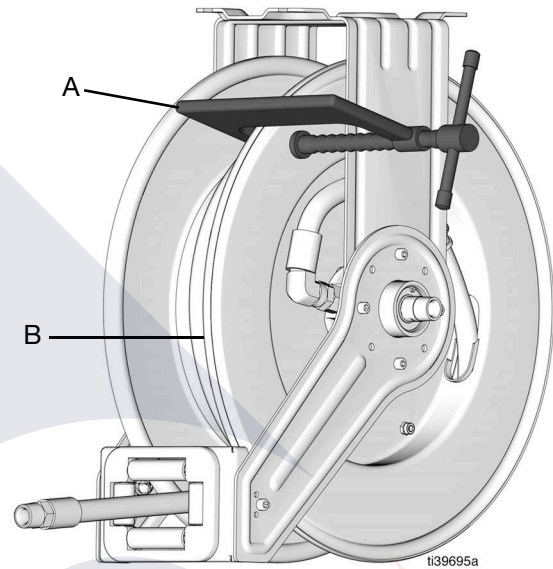


FIG. 12

4. Remove the hose stop from the hose end and put all of the parts in a secure place for re-installation on the new hose (FIG. 13).
 - a. Loosen and remove screws and nuts (FIG. 13).
 - b. Separate the two hose stop components to remove from the end of the hose (FIG. 13).

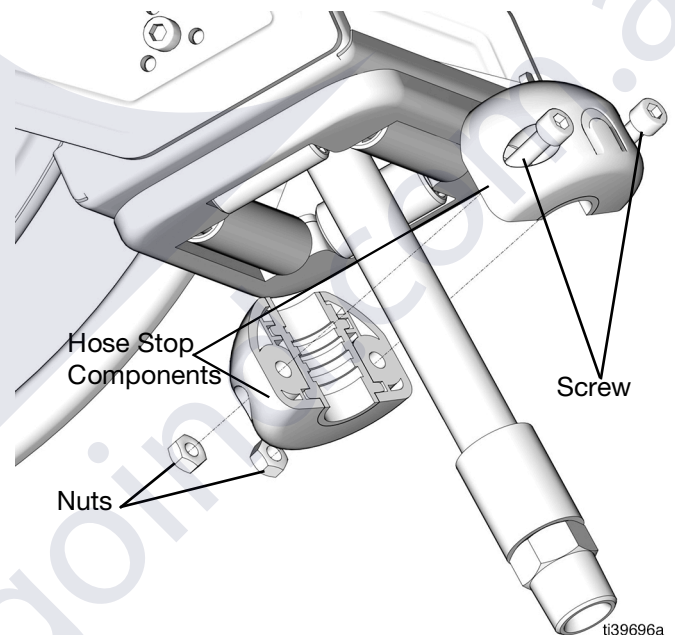


FIG. 13

- Loosen and remove the hex nut and hose clamp

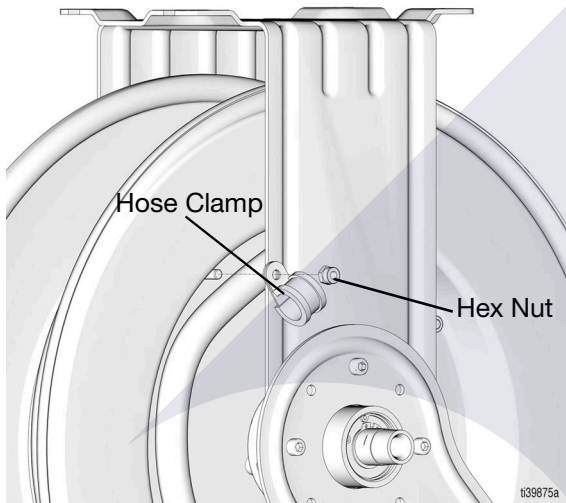


FIG. 14

(FIG. 14).

- Disconnect the hose (B) from the swivel (C) (FIG. 16).
- Install the hose stop (D) to the end of the replacement hose. If the hose has a warning tag (F), the hose stop (D) should be installed on the same end as the warning tag (F) (FIG. 15).

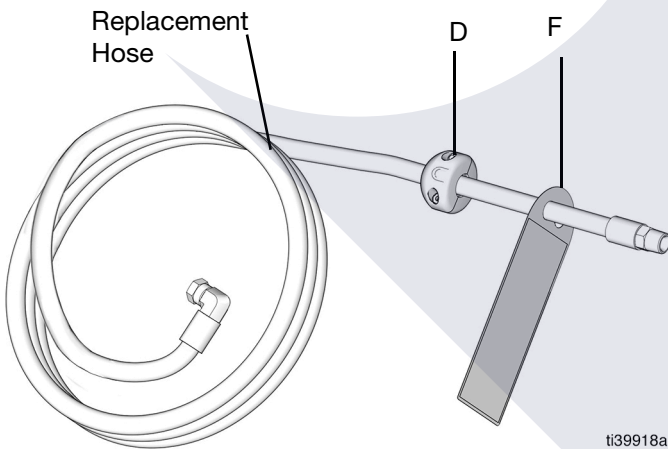


FIG. 15

NOTE: If the hose is equipped with a spring guard, this end must be on the same end as the hose stop.

- Insert screws through the hose stop and hand tighten the nuts to hold the hose stop in place (FIG. 13).

- Run the end of the hose (B) through the hose guide (G), and then through the hole (E) in the reel (FIG. 16).
- Attach the hose end (B) to the hose reel swivel (C) (FIG. 16).
- Attach the hose to the hose clamp and tighten the hex nut until secured.
- Remove the C-clamp (A) (FIG. 12).

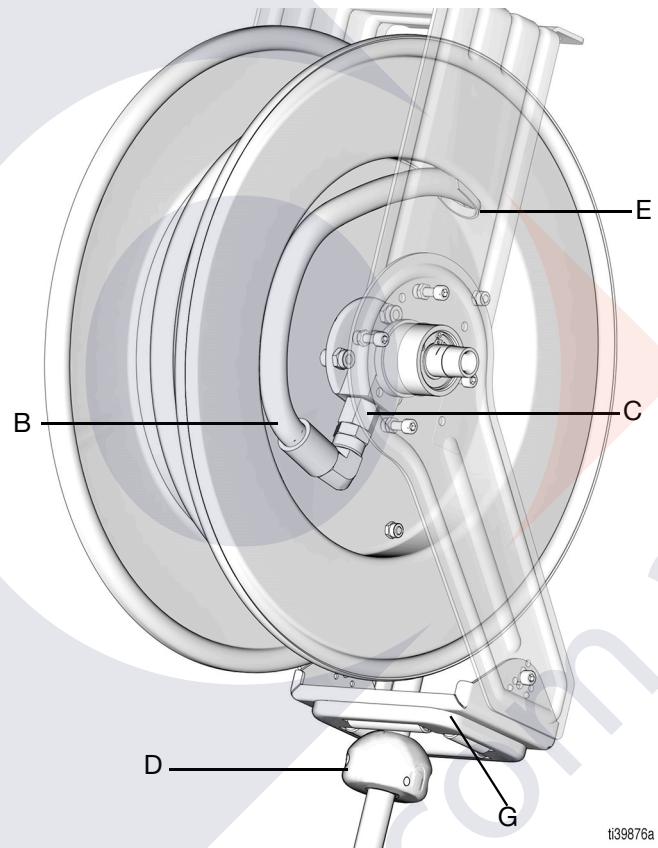


FIG. 16

- Pull the hose (B) hard enough to release the latch and slowly allow the hose to retract.
- If used, re-assemble the hose reel enclosure.
- Adjust the spring tension, see **Adjust Spring Tension**, page 14.
- Flush the hose reel following the **Flush the Equipment** instructions, page 13.

Replace the Swivel Seal (Kits Listed on page 22)

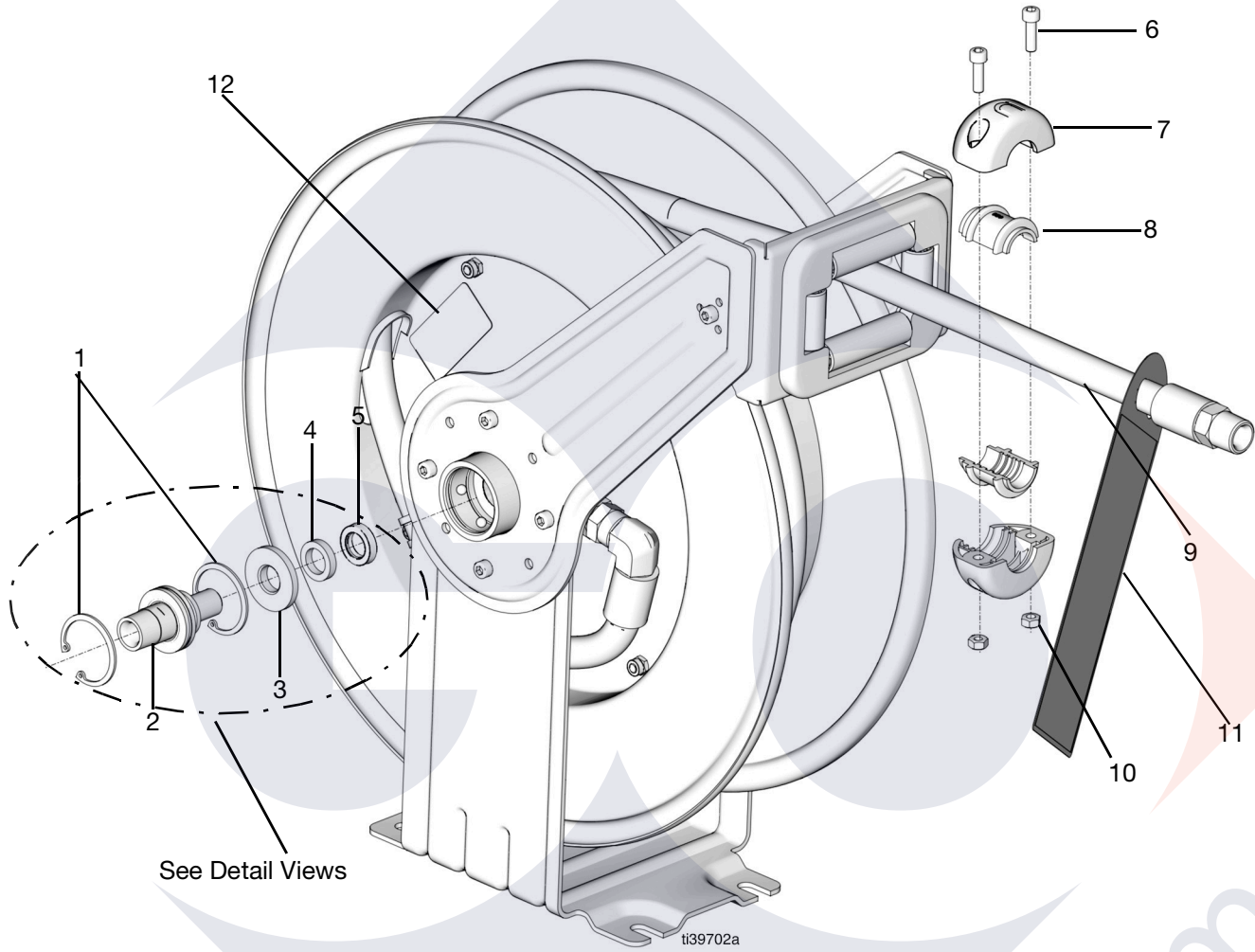


1. Follow the **Pressure Relief Procedure**, page 8.
2. Remove the outmost snap ring (1).
3. Remove the inlet shaft assembly (2).
4. Remove the inside snap ring (1)
5. Remove the retainer (3).
6. Remove the backup ring (4).
7. Remove the swivel seal (5).
8. Replace the swivel seal (5) with the new one from the kit.
9. Replace the backup ring (4) with the new ring from the kit.
10. Replace the retainer (3).
11. Replace the inside snap ring (1) with the new one from the kit.
12. Lubricate the inlet shaft assembly (2) and replace.
13. Replace the outmost snap ring (1) with the new one from the kit.

NOTE: For high pressure models, make sure that the two snap rings in the same groove are aligned with each other.

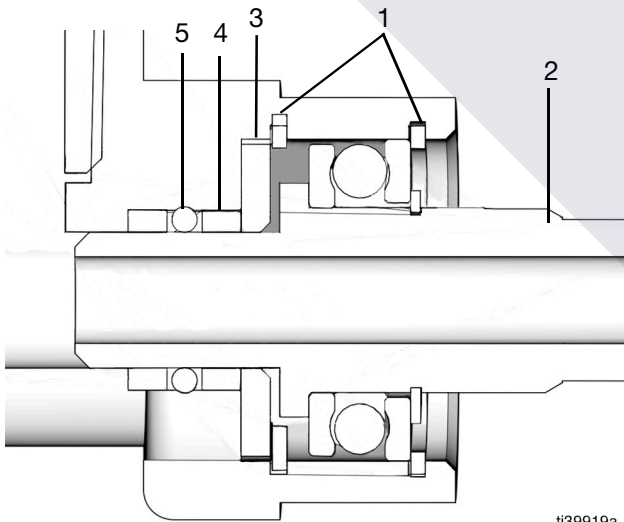
14. Hand rotate the shaft until free.

Parts

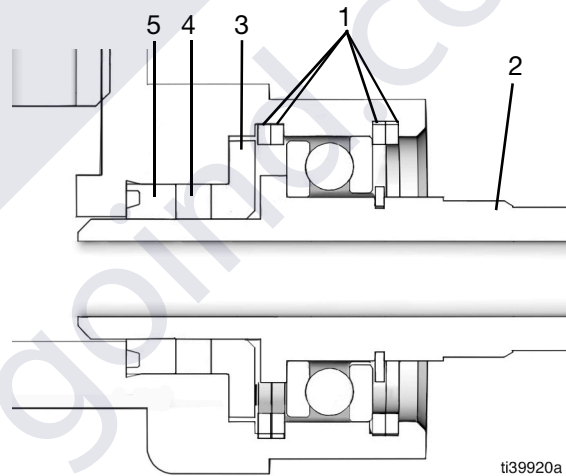


Detail Views

Low/Medium Pressure Models



High Pressure Models



Ref	Part No.	Description	Qty
1		RING, snap (Models HEL010, HEL012, HEL015, HEM004)	2
		RING, snap (Model HEH006)	4
2		ELEMENT, valve, assembly	1
3		RETAINER	1
4		RING, backup	1
5		SEAL, swivel	1
6		SCREW, socket, M6	2
7		STOP, hose	2
8		SLEEVE, hose	2
9		HOSE, 50 ft., npt (Model HEL010), included in Kit 25U373	1
		HOSE, 45 ft., bspt (Model HEL015), included in Kit 25U374	
		HOSE, 50 ft., npt (Model HEM004), included in Kit 25U375	
		HOSE, 50 ft., npt (Model HEH006), included in Kit 25U376	
10		NUT, hex, M6	2
11†	15W071	LABEL, hose, warning (Model HEM004 and HEH006 only)	1
12†	133364	LABEL, safety, warning, ISO, spring	2
13†	15W036	LABEL, warning (base, not shown)	1

† Replacement safety labels, tags, and cards are available at no cost.

A complete list of all available **Kits** begins on page 22.

Kits

Swivel Seal Replacement Kits

Part No.	Models
26D134	HEL010, HEL012
26D135	HEL015
26D136	HEM004
26D137	HEH006

Hose Inlet Kits

Part No.	Models
25U369	HEL010, HEL012
25U370	HEL015
25U371	HEM004
25U372	HEH006

Hose Replacement Kits

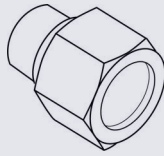
Part No.	Models
25U373	HEL010
25U374	HEL015
25U375	HEM004
25U376	HEH006
25U864	HEL012

Label, Fluid Identification: 24A223



ANTI-FREEZE	HYDRAULIC
SAE 10W-40	ATF
SAE 10W-30	DEXRON
SAE 5W-40	SYNTHETIC
SAE 10W	SAE 5W-30
SAE 20W	SAE 5W-40
SAE 30W	AIR

Fig. 17

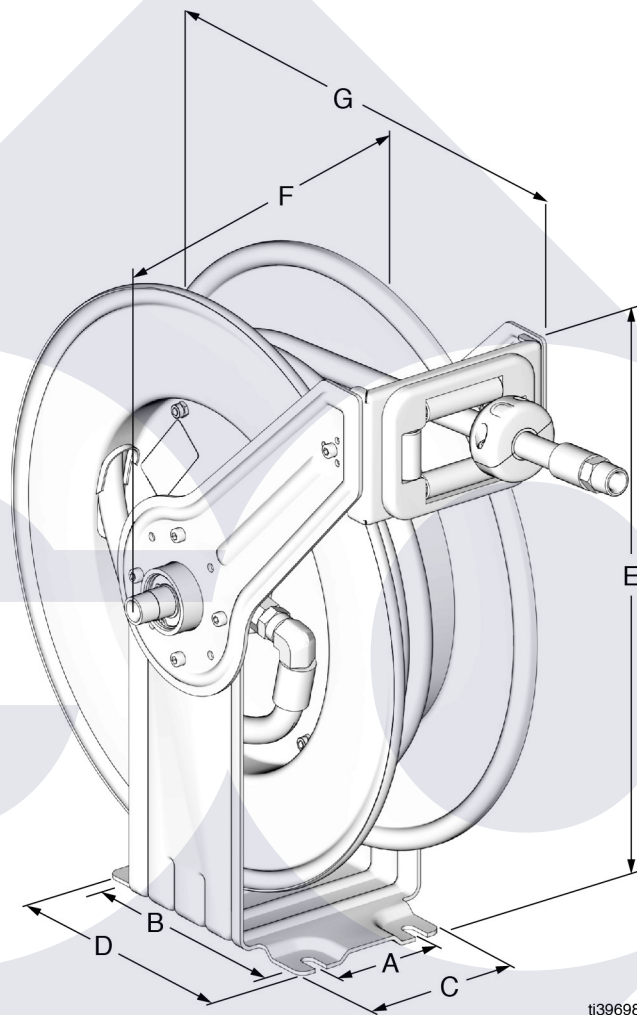
NPT to BSPT/BSPP Adapter Table

	Part No.	Male End	Female End	Max PSI
	132778	1/4 bspp	1/4 npt	5000
	132781	1/4 bspt	1/4 npt	5000
	132779	3/8 bspp	3/8 npt	5000
	132782	3/8 bspt	3/8 npt	5000
	132780	1/2 bspp	1/2 npt	3500
	132783	1/2 bspt	1/2 npt	3500

DEF Adapter

	Part No.	Description	Max Working Pressure
	18F444	1/2 bspp(f) x 3/4 barb	300 psi
	18F445	1/2 bspt(f) x 3/4 bspp(m)	300 psi

Dimensions



t139698a

A	B*	C	D	E†	F	G
3.5 inches (89 mm)	7.5 inches (191 mm)	4.9 inches (125 mm)	8.7 inches (221 mm)	19.0 inches (483 mm)	9.4 inches (239 mm)	17.5 inches (445 mm)

* Measurement taken from center to center of bolt slot/hole.

† Measurement taken from base to top edge of arm.

Measurement taken from edge of spool to edge of hose guide rollers.

Technical Specifications

	US	Metric
Low Pressure Hose Reels		
Maximum fluid working pressure (Air/Water, all hose diameters)	300 psi	2.07 MPa, 20.7 bar
Inlet size	3/8 npt male	
Outlet size	3/8 npt male	
Operating temperature range	-14.8° - 149°F	-26° - 65°C
Wetted parts (Air/Water)	hybrid polymer, brass, nitrile rubber	
Medium Pressure Hose Reels		
Maximum fluid working pressure (DEF)	150 psi	1.03 MPa, 10.3 bar
Inlet size	1/2 bspt male	
Outlet size	1/2 bspt male	
Operating temperature range	-40.0° - 158°F	-40.0° - 70°C
Wetted parts	EPDM, stainless steel, fluorocarbon (FKM)	
High Pressure Hose Reels		
Maximum fluid working pressure (Grease)	4060 psi	28 MPa, 279.9 bar
Inlet size	3/8 npt male	
Outlet size	3/8 npt male	
Operating temperature range	-40° - 212°F	-40° - 100°C
Wetted parts	zinc plated steel, brass, nitrile rubber	
Noise (dBa)		
Maximum sound pressure*	80 dB(A)	
Maximum sound power**	87 dB(A)	
*All readings taken at assumed retraction rate, from assumed operator position.		
**Sound power measured per ISO-9614-2.		
Notes		
All trademarks or registered trademarks are the property of their respective owners.		

California Proposition 65

CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm – www.P65warnings.ca.gov.

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

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Graco Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

Phone: 612-623-6928 **or Toll Free:** 1-800-533-9655, **Fax:** 612-378-3590

All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Original instructions. This manual contains English. MM 3A8216

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