

LD Series Enclosed Hose Reels

313938T

ΕN

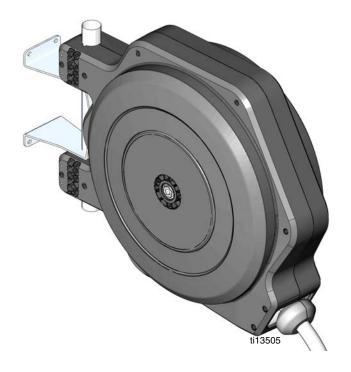
For dispensing air, water, antifreeze, windshield washer solvent, transmission fluid, oil and grease. Not recommended for outdoor use.

Not approved for use in European explosive atmosphere locations.

Part Numbers and Models: Pages 4



Important Safety Instructions
Read all warnings and instructions in this manual. Save these instructions.



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 symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

WARNING



FIRE AND EXPLOSION HAZARD

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:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources, such as cigarettes and portable electric lamps.
- 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.
- · Ground all equipment in the work area.
- Use only grounded hoses.
- If there is static sparking or you feel a shock, **stop operation immediately.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.



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 Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- 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.



SKIN INJECTION HAZARD



High-pressure fluid from dispense valve, 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.**



- Do not point dispense valve at anyone or at any part of the body.
- Do not put your hand over the end of the dispense nozzle.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.



PRESSURIZED ALUMINUM PARTS HAZARD

Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.

MARNING



MOVING PARTS HAZARD

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

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** in this manual. Disconnect power or air supply.



PRESSURIZED EQUIPMENT HAZARD

Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

Models

The last character of each Model No. indicates the hose reel color. For example: D = black. On the table below this last character is represented by the generic # symbol. For example, to show the complete model number for a black HEL13# model hose reel, the # symbol in the table is replaced with "D". The complete model number is: HEL13D.

D=Black, Swivel Bracket K=Orange, Fixed Bracket

NOTES: For Parts and Kits, including hoses, inlets and hose stops, see Parts starting on page 19.

Additional Technical Data is provided on pages 23 and 24.

BSPT	BSPP	NPT	Annliagtion	Hose Size		Maxi	mum Pres	sure
Model No.	Model No.	Model No.	Application	поѕ	nose Size		Bar	Мра
24F789	24J126	24H655	Air Only	1/4 in. x 35 ft.	6 mm x 10 m	250	17.2	1.7
24F790	24J127	24H656	Air Only	14 in. x 50 ft.	6 mm x 15 m	250	17.2	1.7
24F791	24J128	24H657	Air / Water	3/8 in. x 35 ft.	10 mm x 10 m	250	17.2	1.7
24F792	24J129	24H658	Air / Water	3/8 in. x 50 ft.	10 mm x 15 m	250	17.2	1.7
24F793	24J130	24H659	Air / Water	1/2 in. x 35 ft.	12 mm x 10 m	250	17.2	1.7
24F794	24J131	24H660	Air / Water	1/2 in. x 45 ft.	12 mm x 14 m	250	17.2	1.7
24F795	24J132	24H661	Oil	3/8 in. x 35 ft.	10 mm x 10 m	1800	124.0	12.4
24F796	24J133	24H662	Oil	1/2 in. x 35 ft.	12 mm x 10 m	1800	124.0	12.4
24F797	24J134	24H663	Grease	1/4 in. x 35 ft.	6 mm x 10 m	5000	345	34.5
	26C106		Grease	1/4 in. x 35 ft.	6 mm x 10 m	5000	345	34.5

BSPT Models with Bracket Only

Model No *	Ammliaatiam	1100	a Cina	Ма	ximum Pres	sure	Indat Kit t
Model No.*	Application	Hose Size		PSI	Bar	Мра	Inlet Kit❖
HEL13#	Air Only	1/4 in. x 35 ft.	6 mm x 10 m	250	17.2	1.7	24C437
HEL15#	Air Only	14 in. x 50 ft.	6 mm x 15 m	250	17.2	1.7	24C437
HEL23#	Air / Water	3/8 in. x 35 ft.	10 mm x 10 m	250	17.2	1.7	24C438
HEL25#	Air / Water	3/8 in. x 50 ft.	10 mm x 15 m	250	17.2	1.7	24C438
HEL33#	Air / Water	1/2 in. x 35 ft.	12 mm x 10 m	250	17.2	1.7	24C438
HEL34#	Air / Water	1/2 in. x 45 ft.	12 mm x 14 m	250	17.2	1.7	24C438
HEM23#	Oil	3/8 in. x 35 ft.	10 mm x 10 m	1800	124.0	12.4	24C440
HEM33#	Oil	1/2 in. x 35 ft.	12 mm x 10 m	1800	124.0	12.4	24C441
HEH13#	Grease	1/4 in. x 35 ft.	6 mm x 10 m	5000	345	34.5	24C442
24M275* 24M276*	Oil	1/2 in. x 35 ft.	12 mm x 10 m	750	52.0	5.2	24C441
24M277*	Air Only	NA	8 mm x 15 m	150	10.5	1.05	24C437
24Y202*	Air / Water	3/8 in. x 35 ft.	10 mm x 10 m	250	17.2	1.7	24J254
24Y203*	Oil	1/2 in. x 35 ft.	12 mm x 10 m	1800	124.0	12.4	24J256

[♦] Must be ordered separately. See page 21 for additional information.

★Included in package.

^{*} Color choice option is not available for these models.

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 electric shock and splashing in your eyes or on the skin.

- The ground wire must be connected to the pump grounding lug and to a true each ground according to your local code.
- 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 displacement pump, hose and gun. Triggering the valve to relieve pressure may not be sufficient.

Typical Installation Layout

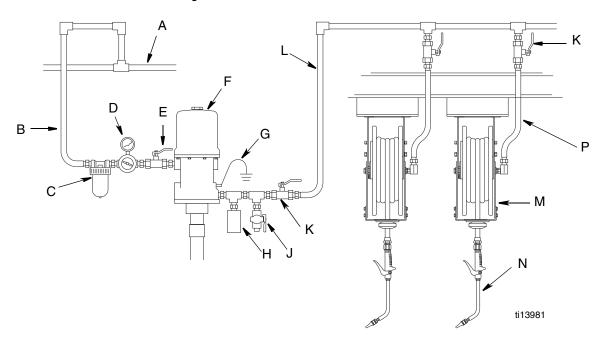


Fig. 1

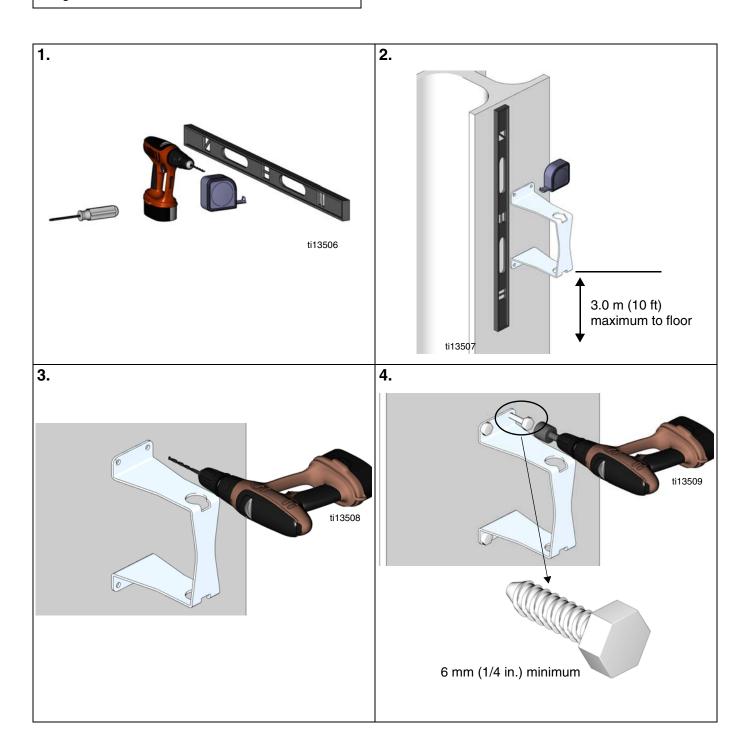
- A Main air supply
- B Pump air supply
- C Air filter
- D Air regulator
- E Bleed-type master air valve (required)
- F Pump
- G Pump grounding wire (required)
- H Thermal relief valve (required)
- J Dump valve (required)
- K Fluid shut-off valve

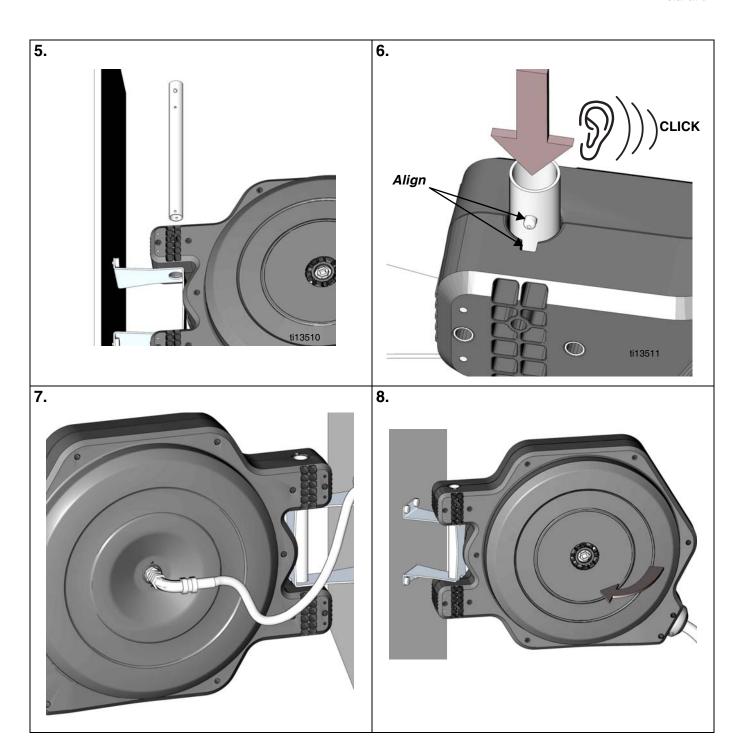
- L Fluid line25A113
- M Hose reel
- N Dispensing valve
- P Flexible inlet hose

Wall Mounting



To reduce the risk of injury, be sure the mounting surface is strong enough to support the reels, weight of the lubricants and stress caused by hard pulls on the service hoses. See Technical Data, page 19 for weights of hose reel assemblies.

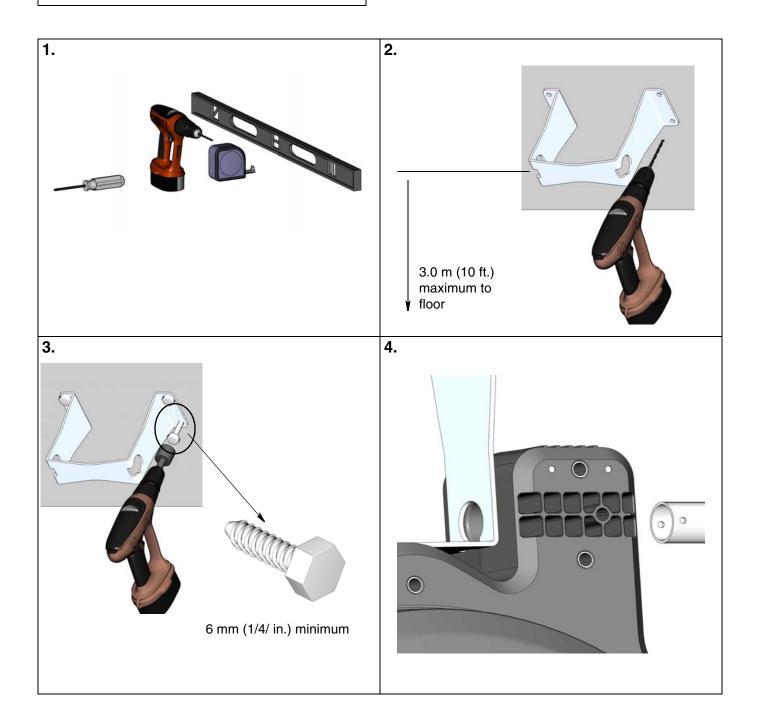


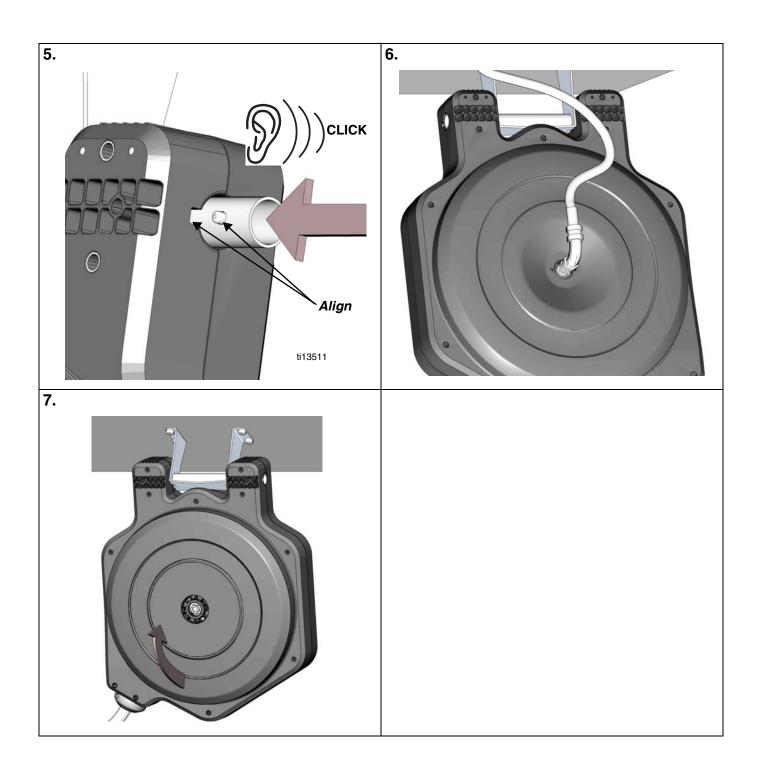


Overhead Mounting

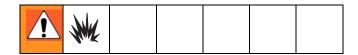


To reduce the risk of injury, be sure the mounting surface is strong enough to support the reels, weight of the lubricants and stress caused by hard pulls on the service hoses. See Technical Data, page 19 for weights of hose reel assemblies.

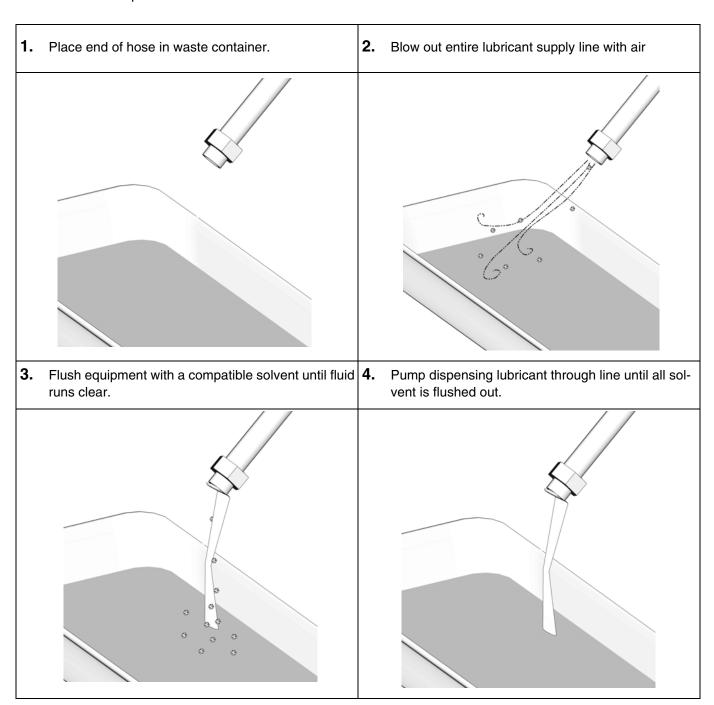




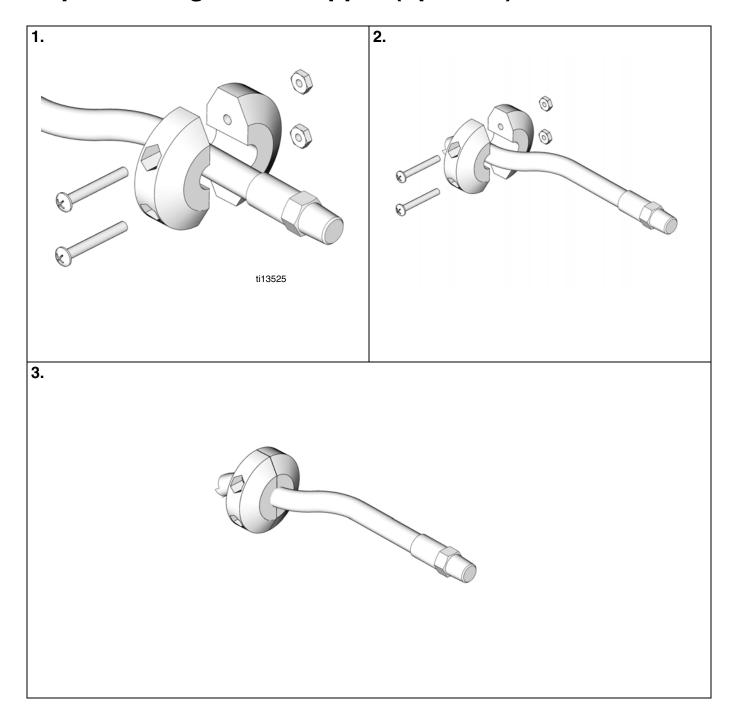
Flushing



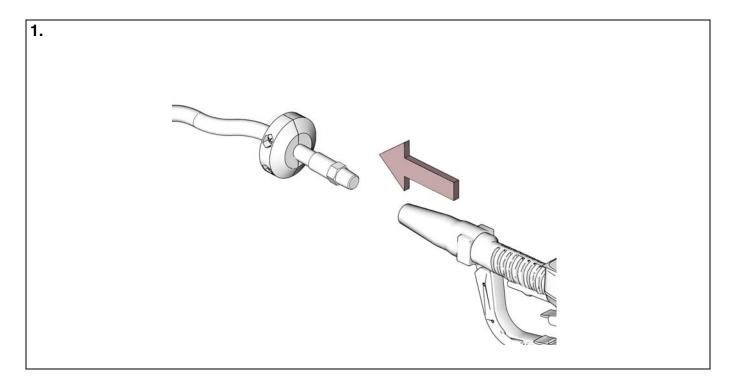
<u>Before</u> installing meter or dispense valve to end of hose, flush supply line with a compatible solvent such as Stoddard solvent or mineral spirits.



Repositioning Hose Stopper (optional)



Installing Meter



Adjusting Spring Tension





IMPACT HAZARD

The spring is always under great tension and could be propelled or uncoil with enough force to cause serious injury.

- The hose reel spring is not a serviceable part. Do not attempt to replace or service the spring.
- Always grasp ratchet handle firmly with both hands when adjusting tension.
- When decreasing spring tension, never attempt to turn ratchet more than 1/4 turn with each push-in motion.

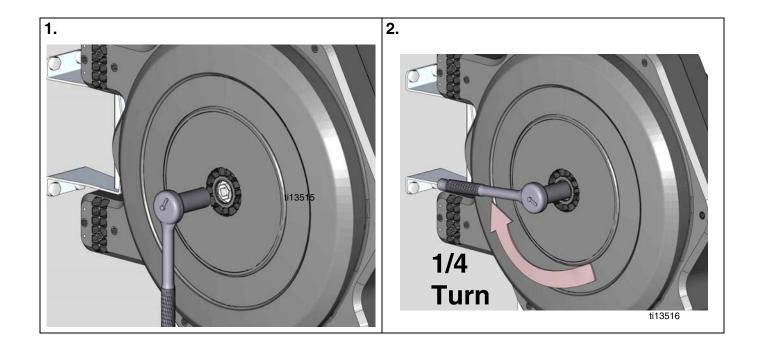
Uncontrolled spinning of the hose reel could cause serious injury if you are hit by the hose or a tool.

- Never allow reel to spin freely.
- The reel must be bolted securely in place when making adjustments.

Increasing Tension

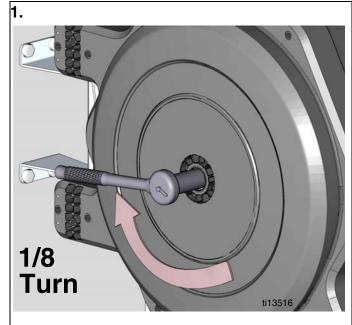
Table 1: Recommended Turns to Set and Decrease Spring Tension

	Approxima	ate No. of Turns
Model	Full Turns to Increase Spring Tension	1/4 Turns to Decrease Spring Tension
HEL13#, 24F735, 24F744, 24F753, 24F762,	4	16
24F771, 24F780, 24J258, 24J267, 24J276		
HEL15#, 24F736, 24F745, 24F754, 24F763,	3	12
24F772, 24F781, 24J259, 24J268, 24J277,		
24M277		
HEL23#, 24F737, 24F746, 24F755, 24F764,	4	16
24F773, 24F782, 24J260, 24J269, 24J278		
HEL25#, 24F738, 24F747, 24F756, 24F765,	4	16
24F774, 24F783, 24J261, 24J270, 24J279		
HEL33#, 24F739, 24F748, 24F757, 24F766,	4	16
24F775, 24F784, 24J262, 24J271, 24J280		
HEM23#, 24F741, 24F750, 24F759, 24F768,	5	20
24F777, 24F786, 24J264, 24J273, 24J282		
HEM33#, 24F742, 24F751, 24F760, 24F769,	7	28
25A113, 24F787, 24J265, 24J274, 24J283		
HEH13#, 24F743, 24F752, 24F761, 24F770,	6	24
24F779, 24F788, 24J266, 24J275, 24J284,		
26C106		
HEL34#, 24F740, 24F749, 24F758, 24F767,	4	16
24F776, 24F785, 24J263, 24J272, 24J281,		
24M275, 24M276		



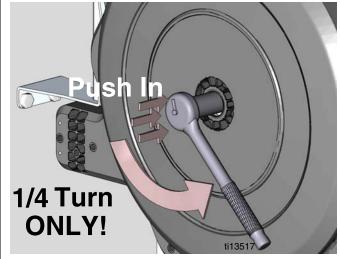
Decreasing Spring Tension



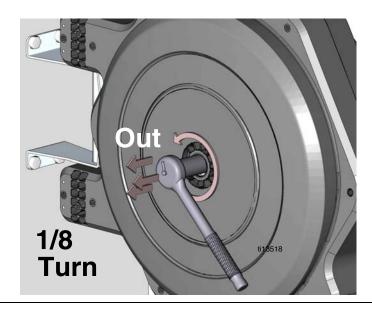


2. Push in on ratchet. Grasp handle firmly with both hands; then turn ratchet counter-clockwise 1/4 turn ONLY.

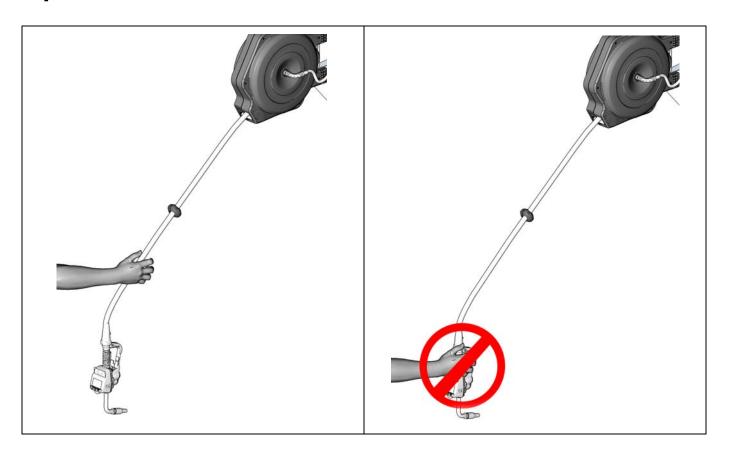
Repeat this procedure of pushing in and turning ratchet counter-clockwise, ONLY 1/4 turn at a time, until spring tension has been completely released. See Table 1, page 13 for the recommended number of 1/4 turns needed to completely release the spring tension.



3.

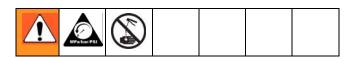


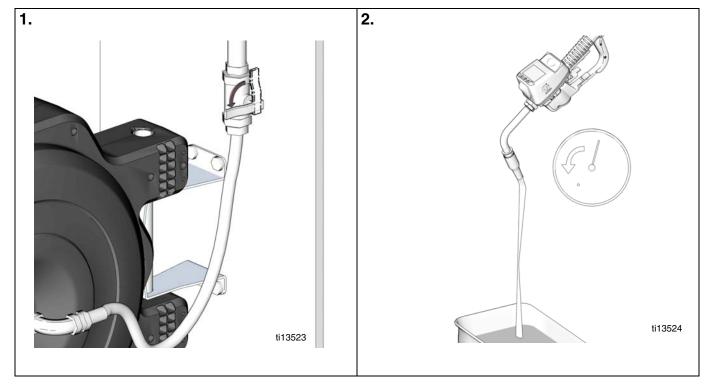
Operation



Repair and Maintenance

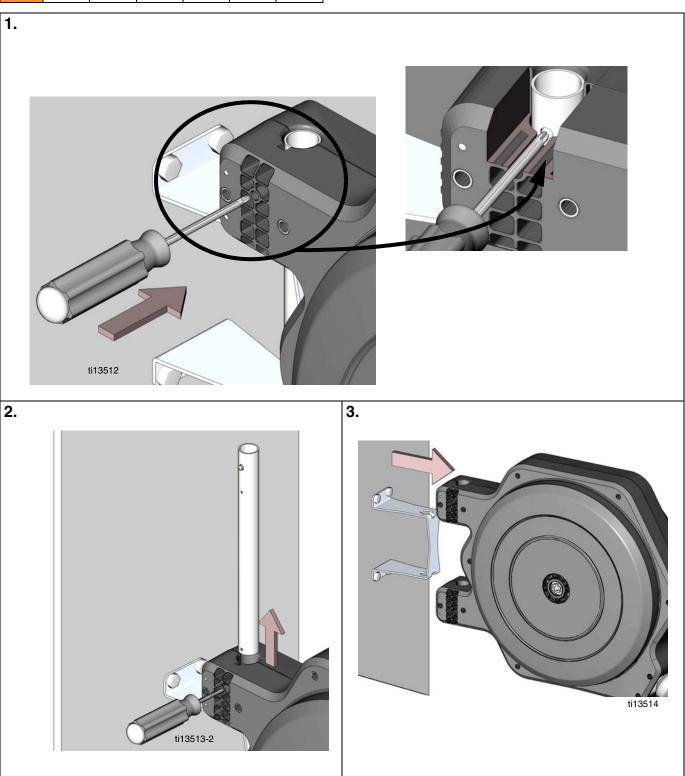
Pressure Relief Procedure



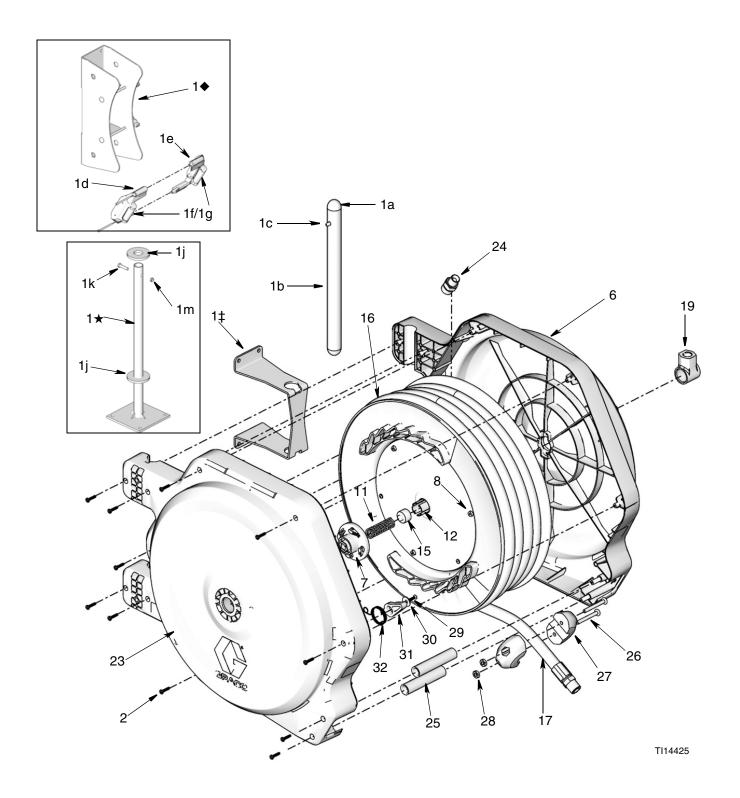


Disassembly





Parts



Ref	Part No.	Description	Qty
1‡	15Y706	BRACKET, swivel, included in all HEL, HEM and HEH models	1
1♦	24E319	BRACKET, fixed, included in models 24M275, 24M276, 24M277	
1★	16C019	BRACKET, fixed, bench mounted,	
1a‡ ♦		. CAP, mounting tube	2
1b‡◆		. TUBE, mounting	1
1c‡◆		. CLIP, button clip	1
1d ♦		. BRACKET, roller A	1
1e ♦		. BRACKET, roller B	1
1f ♦		. PIN, roller	2
1g ♦		. ROLLER, hose	2
1h★		. SCREW, machine, pan head	2
1j★		. WASHER	1
1k ★		. BOLT	1
1m★		. NUT	1
2		SCREW, mach pan hd	11
6		ENCLOSURE (B)	1
7		ADJUSTER, power spring	1
8		SCREW, recessed pan hd	3
11		SPRING, adjuster	1
12		TUBE, shaft	1
15		CAP, shaft	1
16		SPOOL	1

Ref	Part No.	Description	Qty
	262214	FLEXIBLE, 1/4 in. x 35 ft (6 mm id x 10 m), BSPT, air	1
	262216	FLEXIBLE, 1/4 in. x 50 ft. (6 mm id x 15 m), BSPT, air	1
	262218	FLEXIBLE, 3/8 in. x 35 ft. (10 mm id x 10 m), BSPT, A/W	1
	262220	FLEXIBLE, 3/8 in. x 50 ft. (10 mm id x 15 m), BSPT, A/W	1
	262222	FLEXIBLE, 1/2 in. x 35 ft. (12 mm id x 10 m), BSPT, A/W	1
	262232	FLEXIBLE, 1/2 in. x 45 ft. (10 mm id x 14 m), BSPT, oil	1
	262224	FLEXIBLE, 3/8 in. x 35 ft. (10 mm id x 10 m), BSPT, oil	1
	262226	FLEXIBLE, 1/2 in. x 35 ft. (12 mm id x 10 m), BSPT, oil	1
	262227	FLEXIBLE ,1/4 in. x 35 ft. (6 mm id x 10 m), BSPT, grease	1
	262584	HOSE, 1/4 in. x 35 ft. (6 mm id x 10 m), NPT, air	1
	262585	HOSE, 1/4 in. x 50 ft. (6 mm id x 15 m), NPT, air	1
	262586	HOSE, 3/8 in. x 35 ft. (10 mm id x 10 m), NPT, A/W	1
	262587	HOSE, 3/8 in. x 50 ft. (10 mm id x 15 m), NPT, A/W	1
17	262588	HOSE, 1/2 in. x 35 ft. (12 mm id x 10 m), NPT, A/W	1
	262589	HOSE, 3/8 in. x 35 ft. (10 mm id x 10 m), NPT, oil	1
	262590	HOSE, 1/2 in. x 35 ft. (12 mm id x 10 m), NPT, oil	1
	262591	HOSE, 1/4 in. x 35 ft. (6 mm id x 10 m), NPT, grease	1
	262592	HOSE, 1/2 in. x 45 ft. (12 mm id x 14 m), NPT, A/W	1
	24J295	HOSE, 1/4 in. x 35 ft. (6 mm id x 10 m), BSPP, air	1
	24J296	HOSE, 1/4 in. x 50 ft. (6 mm id x 15 m), BSPP, air	1
	24J297	HOSE, 3/8 in. x 35 ft. (10 mm id x 10 m) , BSPP, A/W	1
	24J298	HOSE, 3/8 in. x 50 ft. (10 mm id x 15 m), BSPP, A/W	1
	24J299	HOSE, 1/2 in. x 35 ft. (12 mm id x 10 m), BSPP, A/W	1
	24J300	HOSE, 3/8 in. x 35 ft. (12 mm id x 14 m), BSPP, oil	1
	24J301	HOSE, 1/2 in. x 35 ft. (10 mm id x 10 m), BSPP, oil	1
	24J302	HOSE, 1/4 in. x 35 ft. (12 mm id x 10 m), BSPP, air	1
	24J303	HOSE, 1/4 in. x 45 ft. (6 mm id x 10 m), BSPP, A/W	1
	24N175	HOSE, 8 mm id x 15 m, quick coupling	1

Ref	Part No.	Description	Qty
	24C531	KIT, swivel, air, A/W (24F789, 24F790, 24F791, 24F792, 24F793, 24F794, 24J126, 24J127, 24J128, 24J129, 24J130, 24J131, 24M277, and HEL models)	1
40	24C532	KIT, swivel, oil (24F795, 24F796, 24J132, 24J133, 24M275, 24M276 and HEM models)	1
19	24C533	KIT, swivel, grease (24H797, 24J134, and HEH models)	1
	24H474	KIT, swivel, air, A/W (models 24H655, 24H656, 24H657, 24H658, 24H659, 24H660)	1
	24H475	KIT, swivel, air, A/W (models 24H661 and 24H662)	1
	24H476	KIT, swivel, grease (model 24H663)	1
23		ENCLOSURE (A)	1
24		FITTING	1
25		ROLLER, hose guide	2
26		SCREW, mach, phil, pn hd	2
	178029	STOP, hose, 1/2" od	2
27	178030	STOP, hose, 5/8" od	2
	25E147	STOP, hose, 3/4" od	2
28	101324	NUT, hex, jam	2
29		SCREW, countersunk head	1
30		WASHER, id 6.4, od 18	1
31		LATCH	1
32		SPRING, latch	1
33▲	15W036	LABEL, Warning	1

▲ Replacement Danger and Warning labels, tags and cards are available at no cost.

Mounting Bracket Kits

- ‡ 24G866 KIT, Hose Reel Wall Mounting Bracket.
- ◆ 24G865 KIT, Hose Reel Fixed Installation Kit.
- ★ 24C772 KIT, Hose Reel Bench Mounting Bracket.

Inlet Kits

Ordering the Correct Kit for Your Hose Reel

24C437	KIT, hose, 1/4", air, BSPT
24C438	KIT, hose 3/8" and 1/2", A/W, BSPT
24C440	KIT, hose 3/8" and 1/2" oil, BSPT
24C442	KIT, hose, 1/4", grease, BSPT
24C441	KIT, hose 1/2", oil, BSPT
24C443	KIT, hose 1/4", air, NPT
24C444	KIT, hose, 3/8", A/W, NPT
24C537	KIT, hose, 3/8" oil, NPT
24C538	KIT, hose, 1/2" oil, NPT
24C539	KIT, hose, 1/4", grease, NPT
24J253	KIT, hose 1/4", air, BSPP
24J254	KIT, hose, 1/2", A/W, BSPP
24J256	KIT, hose, 1/2" oil, BSPP
24J257	KIT, hose, 1/4" oil, BSPP

Thread	Replacement Reel	Hose Kit (17)	Swivel Kit (19)	Stop (27)	Inlet Kit
BSPT	24F789, HEL13#*	262214	24C531	178029	24C437
BSPT	24F790, HEL15#*	262216	24C531	178029	24C437
BSPT	24F791, HEL23#*	262218	24C531	178030	24C438
BSPT	24F792, HEL25#*	262220	24C531	178030	24C438
BSPT	24F793, HEL33#* 24M275*, 24M276*	262222	24C531	25E147	24C438
BSPT	24F794, HEL34#*	262232	24C531	25E147	24C438
BSPT	24F795, HEM23#*	262224	24C532	178030	24C440
BSPT	24F796, HEM33#* 24M275, 24M276	262226	24C532	25E147	24C441
BSPT	24F797, HEH13#*	272227	24C533	178029	24C442
NPT	24H655	262584	24H474	178029	24C443
NPT	24H656	262585	24H474	178029	24C443
NPT	24H657	262586	24H474	178030	24C444
NPT	24H658	262587	24H474	178030	24C444
NPT	24H659	262588	24H474	25E147	24C444
NPT	24H660	262592	24H474	25E147	24C444
NPT	24H661	262589	24H475	178030	24C537
NPT	24H662	262590	24H475	25E147	24C538
NPT	24H663	262591	24H476	178029	24C539
BSPP	24J126	24J295	24C531	178029	24J253
BSPP	24J127	24J296	24C531	178029	24J253
BSPP	24J128, 24Y202	24J297	24C531	178030	24J254
BSPP	24J129	24J298	24C531	178030	24J254
BSPP	24J130	24J299	24C531	25E147	24J254
BSPP	24J131	24J300	24C531	25E147	24J254
BSPP	24J132	24J301	24C532	178030	24J255
BSPP	24J133, 24Y203	24J302	24C532	25E147	24J256
BSPP	24J134	24J303	24C533	178029	24J257
BSPT	24M277*	24N175	24C531	178029	24C437
BSPP	26C106	24J303	24C533	178029	24J257

^{*}Includes bracket

Technical Data

Additional hose reel information, including Application, Hose Sizes and Maximum Working Pressure Ratings is provided on pages 4 and 4.

Models H/24F = BSPT	Temperature Range C° (F°)	Inlet (BSPT, NPT, BSPP)	Outlet (BSPT, NPT, BSPP)	Weight	Wetted Parts
HEL13#, 24F789, 24H655, 24J126	-10°C - 60°C (14°F - 140°F)	1/2 in.	1/4 in.	9.0 kg 19.8 lb	Aluminum, Buna-N Rubber, PVC
HEL15#, 24F790, 24H656, 24J127	-10°C - 60°C (14°F - 140°F)	1/2 in.	1/4 in.	9.5 kg 21 lb	Aluminum, Buna-N Rubber, PVC
HEL23#, 24F791, 24H657, 24J128,24Y202	-17.8°C - 60°C* (0°F - 140°F)	1/2 in.	3/8 in.	10.4 kg 23 lb	Aluminum, Buna-N Rubber
HEL25#, 24F792, 24H658, 24J129	-17.8°C - 60°C* (0°F- 140°F)	1/2 in.	3/8 in.	11.0 kg 24.25 lb	Aluminum, Buna-N Rubber
HEL33#, 24F793, 24H659, 24J130	-17.8°C - 60°C* (0°F - 140°F)	1/2 in.	1/2 in.	10.5 kg 23.1 lb	Aluminum, Buna-N Rubber
HEL34#, 24F794, 24H660, 24J131	-17.8°C - 60°C* (0°F - 140°F)	1/2 in.	1/2 in.	11.4 kg 25.1 lb	Aluminum, Buna-N Rubber
HEM23#, 24F795, 24H661, 24J132	-17.8°C - 60°C (0°F - 140°F)	1/2 in.	3/8 in.	11.4 kg 25.1 lb	Carbon Steel, Buna-N Rubber, PTFE
HEM33#, 24F796, 24H662, 24J133, 24M275, 24M276, 24Y203	-17.8°C - 60°C (0°F - 140°F)	1/2 in.	1/2 in.	14.0 kg 30.8 lb	Carbon Steel, Buna-N Rubber, PTFE
HEH13#, 24F797, 24H663, 24J134, 26C106	-17.8°C - 60°C (0°F - 140°F)	3/8 in.	1/4 in.	13.2 kg 29.1 lb	Carbon Steel, Buna-N Rubber
24M277	-10°C - 60°C (14°F - 140°F)	1/2 in.		9.5 kg 21 lb	Aluminum, Buna-N Rubber, PU

Sound Data All Models

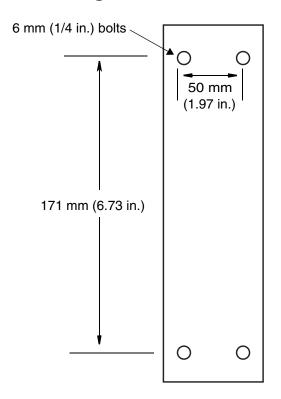
Sound Pressure: 69.3 dB(A)†

Sound Power: 75.3 dB(A)†

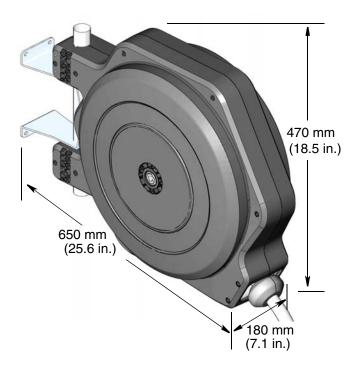
^{*0°}C - 60°C (32°F - 140°F) for Water Applications.

[†] Tested in accordance with ISO9614-2 with an assumed operator position.

Mounting Pattern



Dimensions



Notes			

Graco 5-Year Hose Reel 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 from the date of sale as defined in the table below, repair or replace equipment covered by this warranty and 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.

Graco 5-Year Hose Reel Extended Warranty	
Component	Warranty Period
Structural Components	5 years
Power Spring	3 years
Wear Parts - including but not limited to hose, seals, swivel seats and roller guides	1 year
Bare reels - all components	1 year

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 one (1) year past the warranty period, or two (2) years for all other parts.

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

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

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

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

Original instructions. This manual contains English. MM 313938

Graco Headquarters: Minneapolis International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA

Copyright 2009, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.