



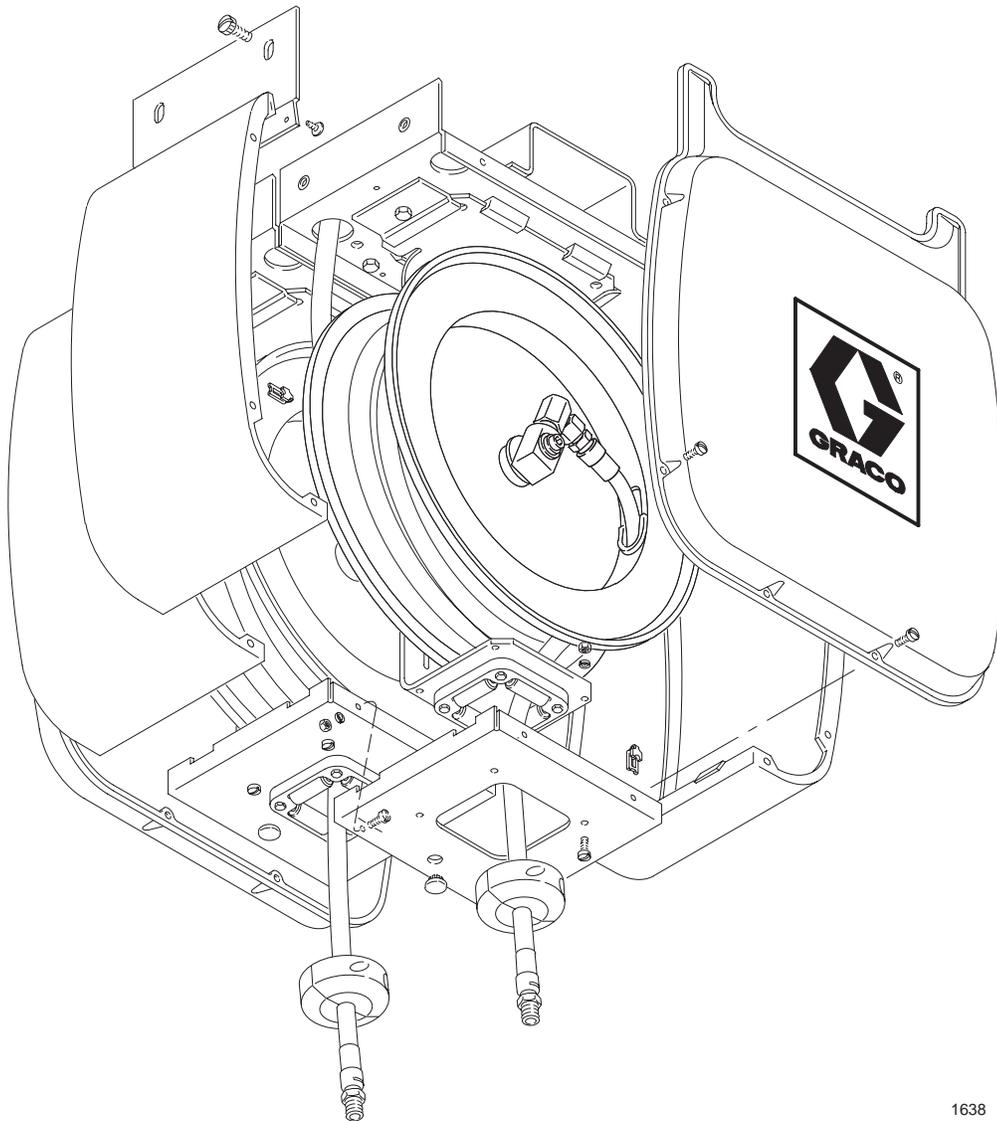
This manual contains important warnings and information.
READ AND KEEP FOR REFERENCE.

INSTRUCTIONS

First choice when quality counts.™

Series 200 Hose Reels

See pages 6 to 9 for Hose Reel part numbers, descriptions, and maximum working pressure information.



1638

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441

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Symbols

Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

! WARNING



INSTRUCTIONS

EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are not sure, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories. Use only extensions that are designed for use with your dispensing valve. Modifying parts can cause a malfunction and result in serious bodily injury.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. The tables on pages 6 to 9 give the maximum working pressures of the assemblies. The maximum working pressure of your hose reel assembly is indicated on the hose reel identification plate on the reel base. See also the **Technical Data** section on page 33.
- Use fluids and solvents that are compatible with the equipment wetted parts. Refer to the **Technical Data** section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Do not use hoses to pull equipment.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose hoses to temperatures above 82°C (180°F) or below -40°C (-40°F).
- Do not lift pressurized equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.
- If you are adding a service hose and dispensing valve to a bare hose reel, be sure you know the maximum working pressure of all the components.
- Never use a low-pressure flexible extension designed for low-pressure dispensing valves or hand-powered lubricating equipment on a medium- or high-pressure dispensing valve.

WARNING



INJECTION HAZARD

Fluid from the dispensing valve, leaks, or ruptured components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Fluid splashed in the eyes or on the skin can also cause serious injury.

- Fluid injected into the skin might look like a minor cut, but it is a serious injury. **Get immediate medical attention.**
- Do not point the dispensing valve at anyone or at any part of the body.
- Do not put your hand or fingers over the dispensing valve nozzle.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** on page 19 if the dispensing valve clogs and before cleaning, checking, or servicing the equipment.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn or damaged parts immediately. Do not repair medium- or high-pressure couplings; you must replace the entire hose.
- Do not attempt to force lubricant into a fitting. If the lubricant is not flowing, stop dispensing immediately; the fitting may be clogged.



TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if inhaled, swallowed, splashed in the eyes, or splashed on the skin.

- Know the specific hazards of the fluid you are using.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state, and national guidelines.
- Always wear protective eyewear, gloves, clothing, and a respirator as recommended by the fluid and solvent manufacturer.

WARNING



FIRE AND EXPLOSION HAZARD

Improper grounding, poor ventilation, open flames, or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

- Be sure the entire fluid system is properly grounded. The hoses supplied with these hose reels are electrically conductive. The hose reel is grounded by connecting electrically conductive supply hoses to a properly grounded system. Refer to your pump instruction manual for complete details.
- If there is any static sparking or you feel an electric shock while using this equipment, **stop dispensing immediately**. Do not use the equipment until you identify and correct the problem.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being dispensed.
- Keep the dispensing area free of debris, including solvent, rags, and spilled gasoline.
- Do not smoke while dispensing flammable fluids.



HOSE REEL SPRING HAZARD

The spring, which is located behind the flange, is always under great tension and could be propelled from the lower flange with enough force to cause serious injury.

- To reduce the risk of serious injury when doing any repair work that exposes you to the spring, be sure to carefully follow the instructions carefully.
- Be sure you understand this procedure in the **Reel Spring** section on page 22 before you continue with the repair work.

Hose Reel Model Chart

Series 200 Open Hose Reels

Type of Service	Order No. consists of Bare Hose Reel 218344 , plus:			Maximum Working Pressure	Parts Breakdown on Page:
	ORDER NO.	Hose	Dispensing Valve		
CHASSIS GREASE	218440	1/4" ID x 20'	None	5000 psi (34.5 MPa, 345 bar)	10
	218441	1/4" ID x 35'	None	5000 psi (34.5 MPa, 345 bar)	10
	218442	1/4" ID x 20'	223903	5000 psi (34.5 MPa, 345 bar)	10
	218443	1/4" ID x 35'	223903	5000 psi (34.5 MPa, 345 bar)	10

Type of Service	Order No. consists of Bare Hose Reel 218345 , plus:				Maximum Working Pressure	Parts Breakdown on Page:
	ORDER NO.	Hose	Dispensing Valve	Type of Meter		
OIL & LIGHT LUBRICANTS	218444	1/2" ID x 16'	None	None	1800 psi (12.4 MPa, 124 bar)	10
	218445	1/2" ID x 25'	None	None	1800 psi (12.4 MPa, 124 bar)	10
MOTOR OIL	223146	1/2" ID x 16'	238451	Gallon/Quart/Pint, Electronic	1800 psi (12.4 MPa, 124 bar)	11
	223147	1/2" ID x 25'	238451	Gallon/Quart/Pint, Electronic	1800 psi (12.4 MPa, 124 bar)	11
ATF	223148	1/2" ID x 16'	238452	Gallon/Quart/Pint, Electronic	1800 psi (12.4 MPa, 124 bar)	12
	223149	1/2" ID x 25'	238452	Gallon/Quart/Pint, Electronic	1800 psi (12.4 MPa, 124 bar)	12
GEAR LUBE	218452	1/2" ID x 16'	222412	None	1800 psi (12.4 MPa, 124 bar)	11
	218453	1/2" ID x 25'	222412	None	1800 psi (12.4 MPa, 124 bar)	11
	223150	1/2" ID x 16'	238453	Gallon/Quart/Pint, Electronic	1800 psi (12.4 MPa, 124 bar)	12
	223151	1/2" ID x 25'	238453	Gallon/Quart/Pint, Electronic	1800 psi (12.4 MPa, 124 bar)	12

Hose Reel Model Chart

Series 200 Open Hose Reels

Type of Service*	Order No. consists of Bare Hose Reel 224880, plus:			Maximum Working Pressure	Parts Breakdown on Page:
	ORDER NO.	Hose	Dispensing Valve		
AIR or WATER	224885	1/4" ID x 40'	None	180 psi (1.2 MPa, 12 bar)	10
	224886	3/8" ID x 40'	None	180 psi (1.2 MPa, 12 bar)	10
	224836	1/2" ID x 25'	None	180 psi (1.2 MPa, 12 bar)	10
AIR	224846	1/4" ID x 40'	218544	180 psi (1.2 MPa, 12 bar)	13
	224847	3/8" ID x 40'	218545	180 psi (1.2 MPa, 12 bar)	13
	224848	1/2" ID x 25'	218544 & 159842 Bushing	180 psi (1.2 MPa, 12 bar)	13
WATER	224930	1/4" ID x 40'	180685	180 psi (1.2 MPa, 12 bar)	13
	224931	3/8" ID x 40'	180685 & 150287 Bushing	180 psi (1.2 MPa, 12 bar)	13
	224932	1/2" ID x 25'	180685 & 159842 Bushing	180 psi (1.2 MPa, 12 bar)	13

BUSHING DESCRIPTION:

150287 1/4 npt(m) x 3/8 npt(f)

159842 1/4 npt(m) x 1/2 npt(f)

* Bare Hose Reel 224880 is designed to be corrosion-resistant, for longer product life, when used with air, water, anti-freeze (ethylene glycol or propylene glycol), water and anti-freeze mixtures, and windshield wash solutions (typically methyl alcohol diluted with water).

Hose reels are available in the following four levels:

Bare Hose Reels are available in a high pressure model and a low pressure model. One of these reels is used in all other reels in this manual. Bare reels do not include hoses, valves or enclosures.

Basic Hose Reel Assemblies include a bare hose reel, a service hose, a hose inlet kit (except Model 218543), and a hose stop kit. There are three types of basic hose reels: High Pressure Grease Reel, Medium Pressure Oil & Light Lubricants Reel, and Low Pressure Air & Water Reel.

Open Hose Reel Assemblies include a basic hose reel and a dispensing valve. Some models include an electronically metered dispensing valve.

Enclosed Reel Assemblies include an open hose reel and a side enclosure kit, and a dispensing valve. Some models include an electronically metered dispensing valve. End enclosure kits must be purchased separately – one kit per bank of reels.

NOTE: Metric conversions for hoses are:

1/4" ID x 20'	(6 mm x 6.1 m)
1/4" ID x 35'	(6 mm x 11.5 m)
1/4" ID x 40'	(6 mm x 12.2 m)
3/8" ID x 40'	(6 mm x 12.2 m)
1/2" ID x 16'	(12 mm x 4.9 m)
1/2" ID x 25'	(12 mm x 7.6 m)

Hose Reel Model Chart

Series 200 Enclosed Hose Reels

Type of Service	Order No. consists of Bare Hose Reel 218344 , Side Enclosure 218546 , plus:			Maximum Working Pressure	Parts Breakdown on Page:
	ORDER NO.	Hose	Dispensing Valve		
CHASSIS GREASE	218428	1/4" ID x 20'	223903	5000 psi (34.5 MPa, 345 bar)	10
	218429	1/4" ID x 35'	223903	5000 psi (34.5 MPa, 345 bar)	10

Type of Service	Order No. consists of Bare Hose Reel 218345 , Side Enclosure 218546 , plus:				Maximum Working Pressure	Parts Breakdown on Page:
	ORDER NO.	Hose	Dispensing Valve	Type of Meter		
MOTOR OIL	220482	1/2" ID x 16'	None	None	1500 psi (10.3 MPa, 103 bar)	11
	220483	1/2" ID x 25'	None	None	1500 psi (10.3 MPa, 103 bar)	11
	223130	1/2" ID x 16'	238451	Gallon/Quart/Pint, Electronic	1000 psi (7 MPa, 69 bar)	11
	223131	1/2" ID x 25'	238451	Gallon/Quart/Pint, Electronic	1000 psi (7 MPa, 69 bar)	11
ATF	223132	1/2" ID x 16'	238452	Gallon/Quart/Pint, Electronic	1000 psi (7 MPa, 69 bar)	12
	223133	1/2" ID x 25'	238452	Gallon/Quart/Pint, Electronic	1000 psi (7 MPa, 69 bar)	12
GEAR LUBE	218436	1/2" ID x 16'	222412	None	1500 psi (10.3 MPa, 103 bar)	11
	218437	1/2" ID x 25'	222412	None	1500 psi (10.3 MPa, 103 bar)	11
	223134	1/2" ID x 16'	238453	Gallon/Quart/Pint, Electronic	1000 psi (7 MPa, 69 bar)	12
	223135	1/2" ID x 25'	238453	Gallon/Quart/Pint, Electronic	1000 psi (7 MPa, 69 bar)	12

NOTE: For each bank of reels you order, include one End Enclosure Kit, Part No. 218548.

Hose Reel Model Chart

Series 200 Enclosed Hose Reels

Type of Service	Order No. consists of Bare Hose Reel 224880 , Side Enclosure 218546 , plus:			Maximum Working Pressure	Parts Breakdown on Page:
	ORDER NO.	Hose	Dispensing Valve		
AIR or WATER	224837	1/4" ID x 40'	None	180 psi (1.2 MPa, 12 bar)	12
	224838	3/8" ID x 40'	None	180 psi (1.2 MPa, 12 bar)	12
	224839	1/2" ID x 25'	None	180 psi (1.2 MPa, 12 bar)	12
AIR	224840	1/4" ID x 40'	218544	180 psi (1.2 MPa, 12 bar)	13
	224841	3/8" ID x 40'	218545	180 psi (1.2 MPa, 12 bar)	13
	224842	1/2" ID x 25'	218545	180 psi (1.2 MPa, 12 bar)	13
WATER	224843	1/4" ID x 40'	180685	180 psi (1.2 MPa, 12 bar)	13
	224844	3/8" ID x 40'	180685 & 150287 Bushing	180 psi (1.2 MPa, 12 bar)	13
	224845	1/2" ID x 25'	180685 & 159842 Bushing	180 psi (1.2 MPa, 12 bar)	13
NOTE: For each bank of reels you order, include one End Enclosure Kit, Part No. 218548.					

BUSHING DESCRIPTION:

150287 1/4 npt(m) x 3/8 npt(f)

159842 1/4 npt(m) x 1/2 npt(f)

Component Descriptions

High Pressure Hose Reel Assemblies for Basic Chassis Grease

5000 psi (34.5 MPa, 345 bar) Maximum Working Pressure

Model No.	Bare Hose Reel	Hose, buna-N	Hose Inlet Kit (See page 32)	Hose Stop Kit
218440 Series B	218344	109153 1/4" ID x 20' (6.1 m); 3/8 npt(mbe)	219097	222225
218441 Series B	218344	109156 1/4" ID x 35'(11.5 m); 3/8 npt(mbe)	219097	222225

Medium Pressure Hose Reel Assemblies for Basic Oil & Light Lubricants

1800 psi (12.4 MPa, 124 bar) Maximum Working Pressure

Model No.	Bare Hose Reel (See page 26)	Hose, buna-N	Hose Inlet Kit (See page 32)	Hose Stop Kit
218444 Series B	218345	220592 1/2" ID x 16' (4.9 m); 1/2 npt(mbe)	219096	218341
218445 Series B	218345	220608 1/2" ID x 25'(7.6 m); 1/2 npt(mbe)	219096	218341

Basic Low Pressure Hose Reel Assemblies for Air & Water

180 psi (1.2 MPa, 12 bar) Maximum Working Pressure

Model No.	Bare Hose Reel	Hose, neoprene	Hose Inlet Kit (See page 32)	Hose Stop Kit
224885	224880	218491 1/4" ID x 40' (12.2 m); 3/8npt(mbe)	219096	218340
224886	224880	218497 3/8" ID x 40'(12.2 m); 1/2 npt(mbe)	219096	218341
224836	224880	205273 1/2" ID x 25'(12.2 m); 1/2 npt(mbe)	219096	218341

High Pressure Chassis Reel Assemblies

5000 psi (34.5 MPa, 345 bar) Maximum Working Pressure

Model No.	Basic Hose Reel 1/4" ID Hose (See pages 8 and 9) <i>Hose Length</i>		High Pressure Control Valve w/Swivel 202577 (See 308112)	Side Panel Kit (See page 30)
218442	218440	20' (6.1 m)	223903	None
218428	218440	20' (6.1 m)	223903	218546
218443	218441	35'(11.5 m)	223903	None
218429	218441	35'(11.5 m)	223903	218546

Component Descriptions

Medium Pressure Motor Oil Reel Assemblies

1000 psi (7 MPa, 69 bar) Maximum Working Pressure

Model No.	Basic Hose Reel 1/2" ID Hose (See page 9)		Low Pressure Control Valve w/16 qt. totalizing meter (See 307995)	Side Panel Kit (See page 30)
	<i>Hose Length</i>			
220482	218444	16'(4.9 m)	None	218546
220483	218445	25'(7.6 m)	None	218546

Medium Pressure Gear Lube Reel Assemblies

1500 psi (10.3 MPa, 103 bar) Maximum Working Pressure

Model No.	Basic Hose Reel 1/2" ID Hose (See pages 8 and 9)		Low Pressure Control Valve w/gear lube nozzle (See 307995)	Side Panel Kit (See page 30)
	<i>Hose Length</i>			
218452	218444	16' (4.9 m)	222412	None
218436	218444	16' (4.9 m)	222412	218546
218453	218445	25'(7.6 m)	222412	None
218437	218445	25'(7.6 m)	222412	218546

Medium Pressure Motor Oil Reels With Electronic Meter

Model No.	Basic Hose Reel 1/2" ID Hose (See pages 6 and 8)		Control Valve w/electronic meter <i>Type of Meter</i>	Side Panel Kit (See page 30)	Maximum Working Pressure psi (MPa, bar)
	<i>Hose Length</i>				
223146	218444	16' (4.9 m)	238451 (G/Q/P) (See 308487)	None	1000 (7, 69)
223130	218444	16' (4.9 m)	238451 (G/Q/P) (See 308487)	218546	1000 (7, 69)
223147	218445	25'(7.6 m)	238451 (G/Q/P) (See 308487)	None	1000 (7, 69)
223131	218445	25'(7.6 m)	238451 (G/Q/P) (See 308487)	218546	1000 (7, 69)

G/Q/P stands for Gallon/Quart/Pint

Component Descriptions

Medium Pressure ATF Reels With Electronic Meter

Model No.	Basic Hose Reel 1/2" ID Hose (See page 6 and 8) <i>Hose Length</i>		Control Valve w/electronic meter <i>Type of Meter</i>	Side Panel Kit (See page 30)	Maximum Working Pressure psi (MPa, bar)
	223148	218444	16' (4.9 m)	238452 (G/Q/P) (See 308487)	None
223132	218444	16' (4.9 m)	238452 (G/Q/P) (See 308487)	218546	1000 (7, 69)
223149	218445	25'(7.6 m)	238452 (G/Q/P) (See 308487)	None	1000 (7, 69)
223133	218445	25'(7.6 m)	238452 (G/Q/P) (See 308487)	218546	1000 (7, 69)

G/Q/P stands for Gallon/Quart/Pint

Medium Pressure Gear Lube Reels With Electronic Meter

Model No.	Basic Hose Reel 1/2" ID Hose (See pages 6 and 8) <i>Hose Length</i>		Low Pressure Control Valve w/electronic meter <i>Type of Meter</i>	Side Panel Kit (See page 30)	Maximum Working Pressure psi (MPa, bar)
	223150	218444	16' (4.9 m)	238453 (G/Q/P) (See 308487)	None
223134	218444	16' (4.9 m)	238453 (G/Q/P) (See 308487)	218546	1000 (7, 69)
223151	218445	25'(7.6 m)	238453 (G/Q/P) (See 308487)	None	1000 (7, 69)
223135	218445	25'(7.6 m)	238453 (G/Q/P) (See 308487)	218546	1000 (7, 69)

G/Q/P stands for Gallon/Quart/Pint

Low Pressure Air or Water Reel Assemblies

180 psi (1.2 MPa, 12 bar) Maximum Working Pressure

Model No.	Basic Hose Reel (See page 9) <i>Hose</i>		Side Panel Kit (See page 30)
	224837	224885	1/4" ID x 40' (12.2 m)
224838	224886	3/8" ID x 40' (12.2 m)	218546
224839	224836	1/2" ID x 25' (12.2 m)	218546

Component Descriptions

Low Pressure Air Reel Assemblies

180 psi (1.2 MPa, 12 bar) Maximum Working Pressure

Model No.	Basic Hose Reel (See pages 6 and 7)		Low Pressure Control Valve with tire chuck	Side Panel Kit (See page 30)
	Hose			
224846	224885	1/4" ID x 40' (12.2 m)	218544	None
224840	224885	1/4" ID x 40' (12.2 m)	218544 & 159842 Bushing	218546
224847	224886	3/8" ID x 40' (12.2 m)	218545	None
224841	224886	3/8" ID x 40' (12.2 m)	218545	218546
224848	224836	1/2" ID x 25' (12.2 m)	218544 & 159842 Bushing	None
224842	224836	1/2" ID x 25' (12.2 m)	218545	218546

BUSHING DESCRIPTION:

159842 1/4 npt(m) x 1/2 npt(f)

Low Pressure Water Reel Assemblies

180 psi (1.2 MPa, 12 bar) Maximum Working Pressure

Model No.	Basic Hose Reel (See pages 7 and 9)		Low Pressure Control Valve for water	Side Panel Kit (See page 30)
	Hose			
224930	224885	1/4" ID x 40' (12.2 m)	180685	None
224843	224885	1/4" ID x 40' (12.2 m)	180685	218546
224931	224886	3/8" ID x 40' (12.2 m)	180685 & 150287 Bushing	None
224844	224886	3/8" ID x 40' (12.2 m)	180685 & 150287 Bushing	218546
224932	224836	1/2" ID x 25' (12.2 m)	180685 & 159842 Bushing	None
224845	224836	1/2" ID x 25' (12.2 m)	180685 & 159842 Bushing	218546

BUSHING DESCRIPTIONS:

150287 1/4 npt(m) x 3/8 npt(f)

159842 1/4 npt(m) x 1/2 npt(f)

Installation

Hose reels are shipped from the factory with the roller support arm (10) at a 45° angle. If your application is to utilize enclosures, or requires the support arm to be in a vertical position for a ceiling mount, follow the procedure below.

Changing Position of the Roller Support Arm from 45° to 180° (vertical)

The procedure below maintains a minimum of 2 screws holding the pedestal (1) and the flange (13) together.

⚠ CAUTION

Changing positions **must** be completed prior to mounting. If your hose reel is already mounted, **remove** the reel from its mount and move it to a workbench.

Refer to Fig. 1 during this procedure.

1. Lay the reel on a flat surface so the pedestal (1) is on the bottom.

2. Extend the hose and hose stop 6 to 12 inches (15 to 30 cm) beyond the rollers and latch the reel.
3. Remove the cap screw at position E and replace in position H. Tighten the cap screw.
4. Remove cap screws at positions C and G.
5. Reposition the roller support arm (10) to the vertical position.
6. Insert capscrews in position B and F, then tighten.
7. Remove the screw at position A and reinsert at position D, then tighten.
8. Unlatch the hose and allow it to retract.

Remount the reel or continue with the installation procedure on page 15.

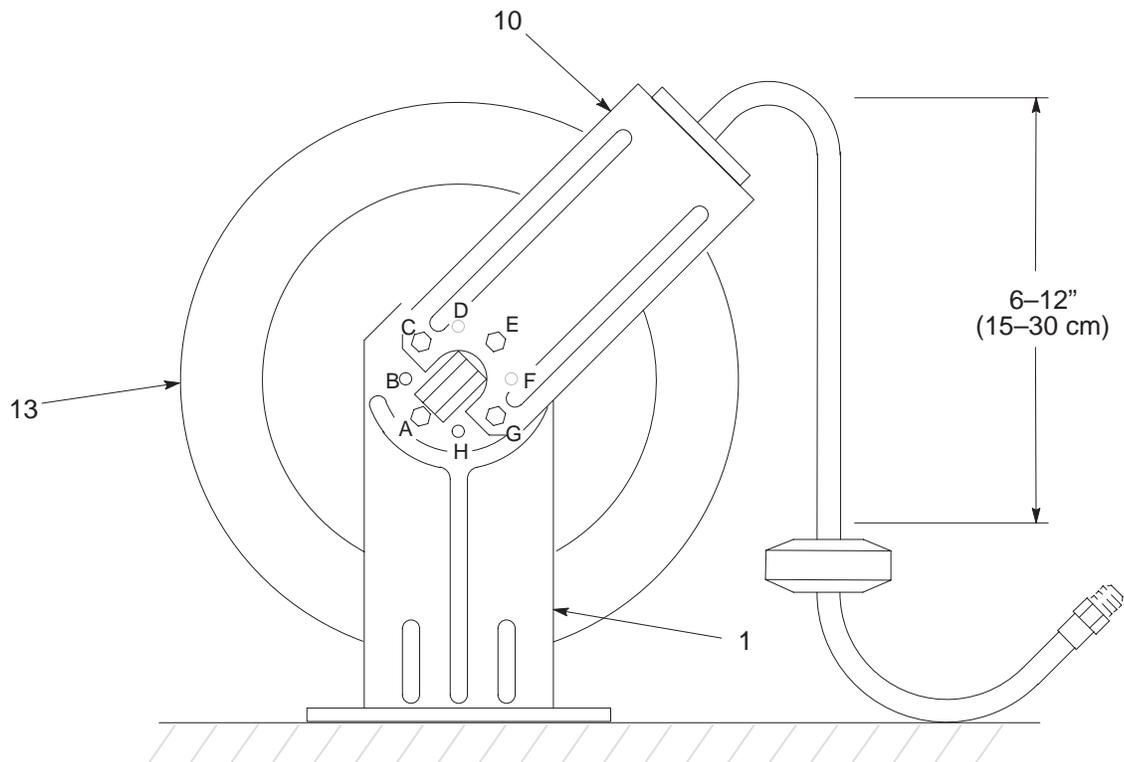


Fig. 1

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Installation

NOTE: To install a 200 Series Reel into a K-Frame Enclosure, part no. 206604, order the Hose Retainer Kit, part no. 220897. See manual 307844, supplied with the kit, for installation instructions.

Mounting the Hose Reel(s)

1. **Select the reel bank mounting location.** If the ceilings are very high, suspend a suitable support structure for the reels, so the hoses will be long enough to reach your service area.

The reel bank should be mounted in a one-lift service bay, at least 6 feet (1.9 m) from the center line of the lift. See Fig. 2. In a two-lift bay, mount the bank equal distance between the lifts. A bank of all motor oil reels should be mounted about 5 feet (1.5 m) from the center of the lift, toward the front of the lift rails. A mounting bracket to secure the mounting base to an I-beam is available. See **Accessories**, page 31.

 CAUTION
<p>Be sure the mounting surface is strong enough to support the reels, the weight of the lubricants, and the stress caused by hard pulls on the service hoses. See page 33 for the dry weights of the hose reel assemblies.</p>

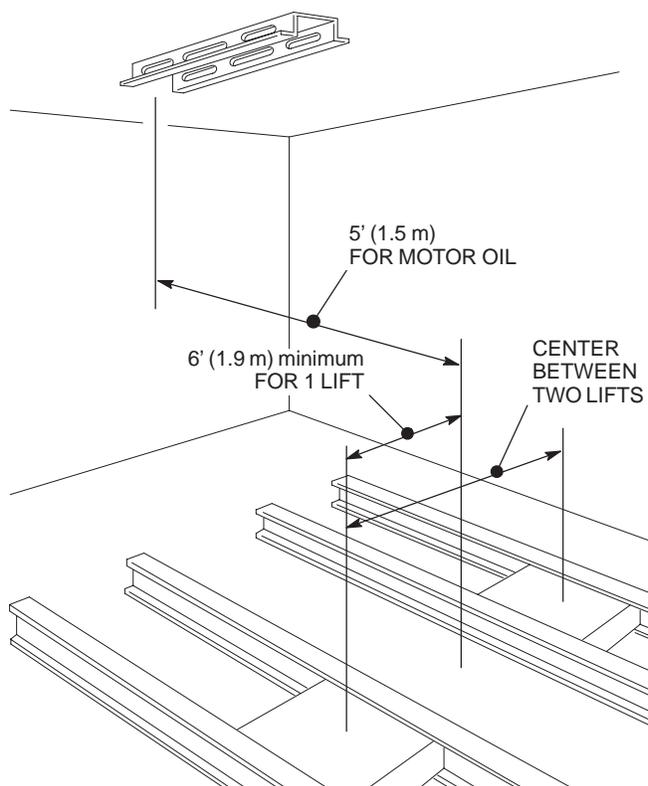


Fig. 2

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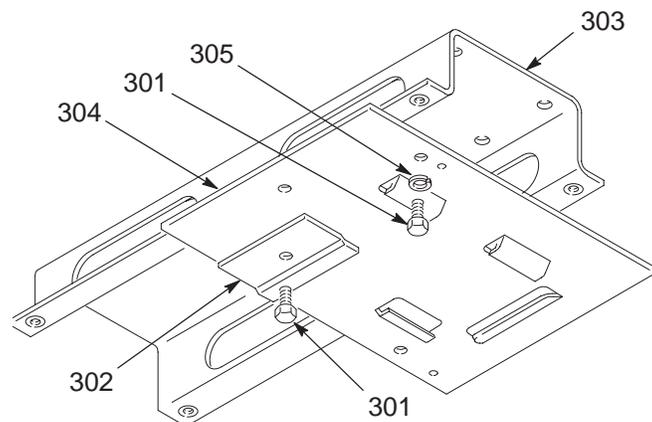


Fig. 3

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2. **If you are NOT installing a hose reel enclosure,** order the Reel Mounting Base parts listed on page 31 and install the frame (303) and base plate (304) as shown in Fig. 3.

If you are installing the hose reel enclosure, bolt the reel base (103 or 304) to the mounting channel (J), using the lockwashers (K) and screws (L) which are supplied with the mounting channel. See Fig. 4.

3. **If you are installing permanent supply lines,** drill 1.5 in. (38 mm) diameter holes through the ceiling on the inlet side of the reels.
4. **Slide the hose reel onto the mounting base** and install the hold-down plate (104 or 302) and capscrew (105 or 301). Tighten the screw firmly. See Fig. 4.

Installation

5. **Connect the supply line** to the inlet hose of the reel.

NOTE: All other hose reels listed in this manual are supplied with a Hose Inlet Kit. Refer to Detail A in Fig. 4, and page 32.

6. **Adjust the spring tension of the reel.**

Hose Reels shipped with hoses come from the factory with the tension pre-set for a typical installation. To adjust for more or less tension, see page 20.

If you are installing a hose on a bare reel, connect the service hose to the swivel (31). See Fig. 4. Then wrap the hose loosely around the flange. Extend the hose fully and latch it. Wrap one or two loops around the hose reel, then retract the hose again.

Check the spring tension; the hose must pull out fully and retract fully. Wrap ONE more loop, extend the hose, and latch it. Do this as many times as necessary until the spring has the desired tension.

7. **Install the hose stop (M) and dispensing valve.**

Position the hose stop so the hose extends far enough for all operators to reach it.

Installation

CAUTION

Do not put so many loops onto the reel that the spring winds up tightly before the hose is fully extended. A spring that is wound too tightly stops rotating before the hose is fully extended. That puts excessive strain on the hose and reel spring and could damage the reel. To decrease tension, remove two or three loops of hose from the reel.

NOTE: Reel Base (103) has two holes (N). Run the inlet hose through either hole, depending on the orientation of the hose reel.

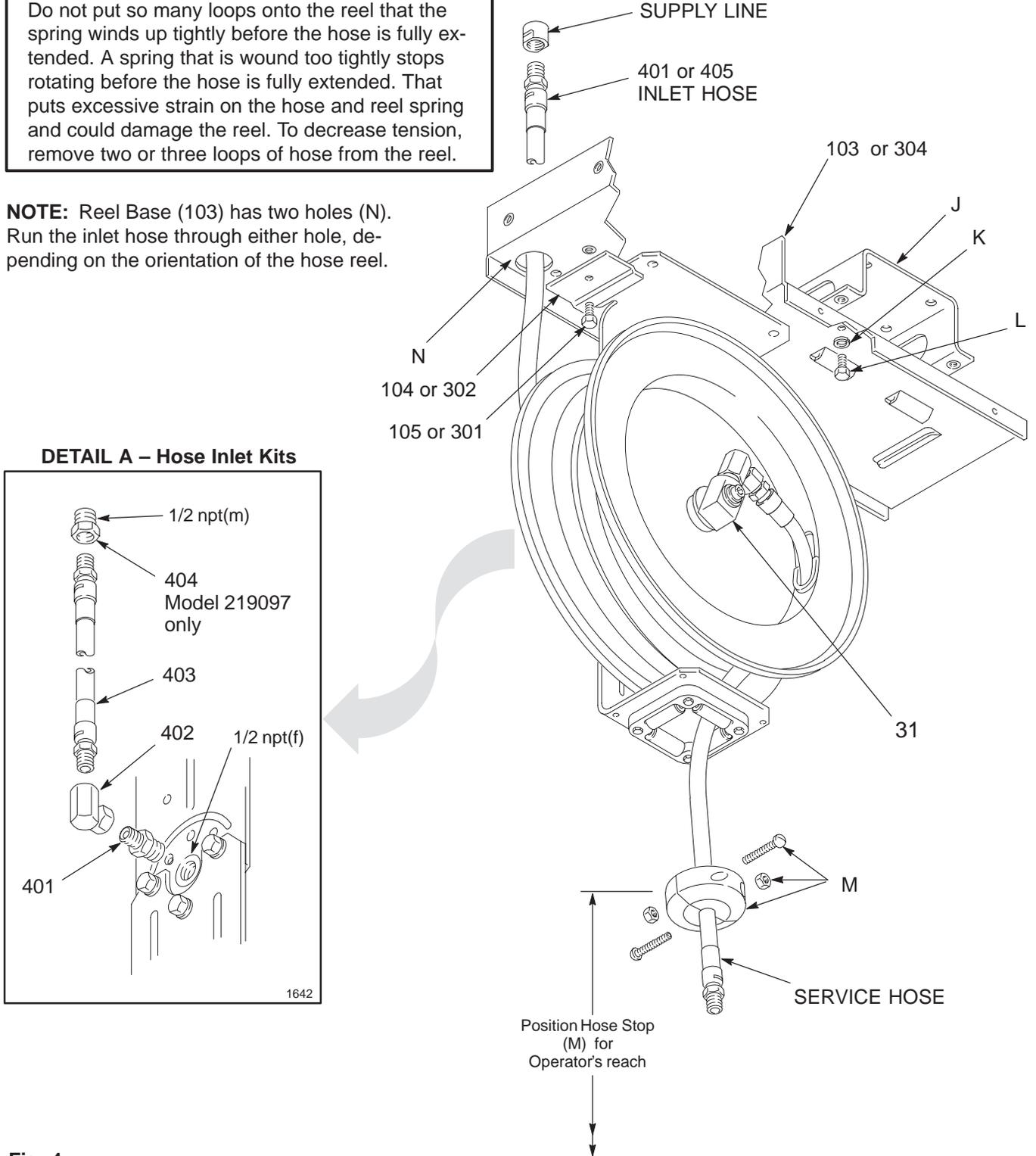


Fig. 4

1641

Installation

Installing the Hose Reel Enclosures (See Fig. 5)

NOTE: Enclosed hose reels are supplied only with side enclosures. Order one end enclosure kit for each reel bank.

1. Secure the hose reel cap (102) to the hose reel support (10) using the screws (106), lockwashers (112), and nuts (111) as shown. See Fig. 5 for correct positioning. Push the button plug (109) into the hole in the cap (102).
2. For more than one reel, bolt the caps together as shown.
3. Noting the correct position, secure the black trim plate (108) to the side panel (101) using the machine screws (110) as shown.
4. Hook the lips of the side enclosures onto the cap and secure the enclosures with the thumbscrews (107).
5. Attach the end enclosures (201) using screws (203) and spring nuts (204) as shown.

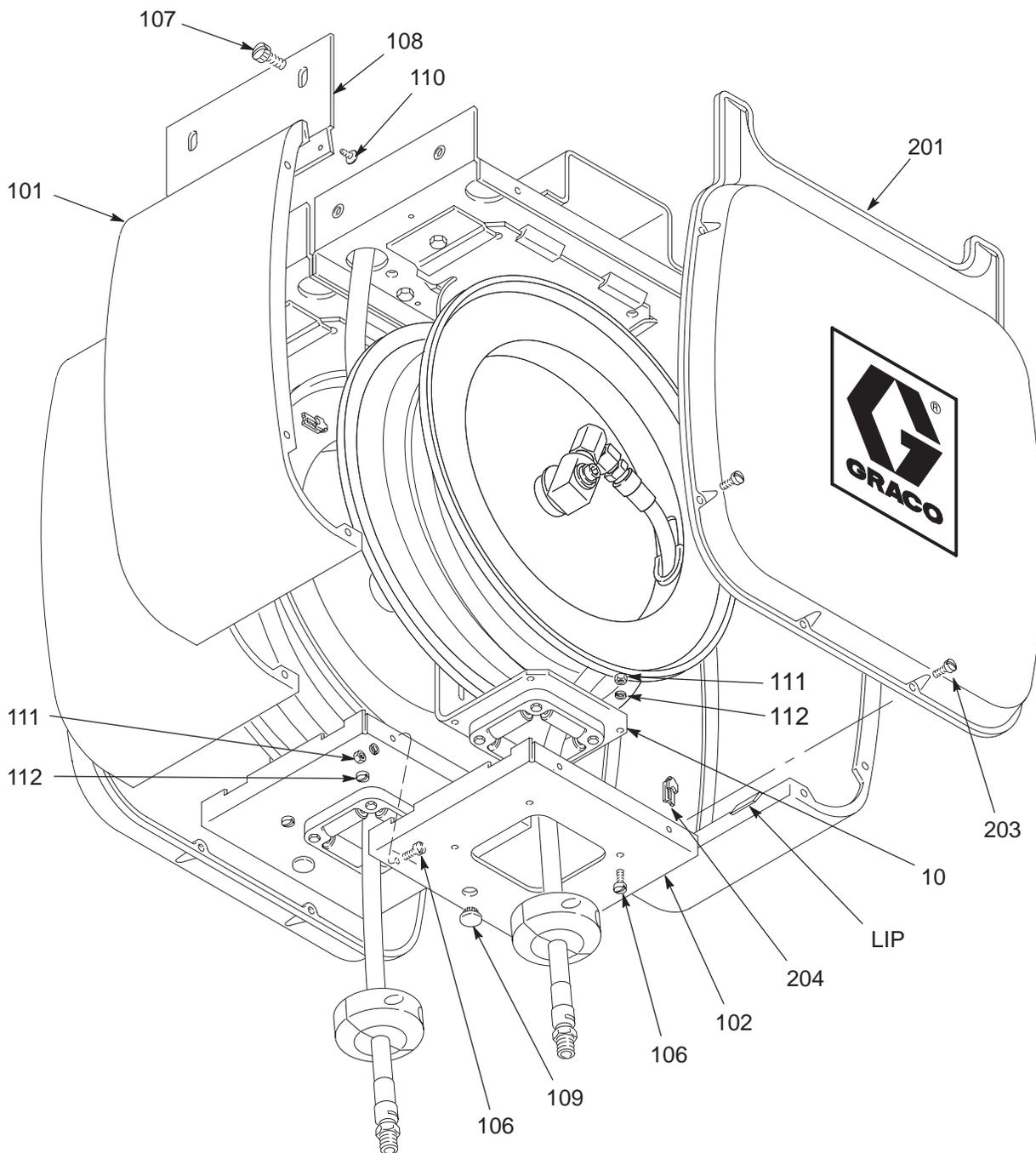


Fig. 5

1638

Maintenance

Pressure Relief Procedure

WARNING



INJECTION HAZARD

To reduce the risk of serious bodily injury, including fluid injection, splashing in the eyes or on the skin, or injury from moving parts, always follow this procedure whenever you shut off the pump, and before you inspect, remove, clean, or repair any part of the pump or system.

1. Close the supply pump's air regulator.
2. Close the supply pump's bleed-type master air valve (required in pneumatic systems).
3. Open the dispensing valve until pressure is fully relieved.

If you suspect that the dispensing valve, extension, or grease fitting is clogged, or that pressure has not been fully relieved after you follow the steps above, very slowly loosen the coupler or the hose end coupling and allow the pressure to be relieved gradually, then loosen the part completely, then clear the clog.

Lubrication (See Fig. 6)

Shut off the air or fluid supply. Open the dispensing valve to relieve pressure from the service hose. every six months, apply one or two drops of light motor oil to lubricate the hose reel at points F, G, and H

CAUTION

Improper lubricating will cause the latching mechanism to fail.

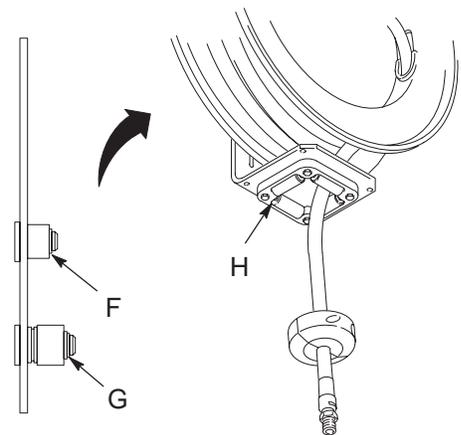


Fig. 6

1643

Maintenance

Increasing or Decreasing Spring Tension (See Fig. 7)

1. Shut off the air or fluid supply, and open the dispensing valve to relieve pressure from the service hose.
2. Pull the hose out a few feet, and engage the latch.
3. To *increase* spring tension, pull the hose back through the hose rollers (34), and wrap a loop of hose around the flange (13).

To *decrease* spring tension, remove a loop of hose from the flange.

4. Check the spring tension; the hose must pull out fully and retract fully. Wrap or unwrap more loops, one at a time, until the spring has the required tension.

⚠ CAUTION

Do not put so many loops onto the reel that the spring winds up tightly before the hose is fully extended. A spring that is wound too tightly stops rotating before the hose is fully extended. That puts excessive strain on the hose and reel spring and could damage the reel. To decrease tension, remove two or three loops of hose from the reel.

Replacing the Service Hose (See Fig. 7)

1. Shut off the air or fluid supply, and open the dispensing valve to relieve pressure from the service hose.
2. Remove the dispensing valve and the hose stop (M).
3. Hold the reel with gloved hands and let it slide slowly through your hands until the reel stops. When the reel stops, the spring tension has been released, and the hose can be unwrapped from the reel.

⚠ WARNING

Never allow the reel to spin freely. Doing so causes the hose to spin out of control, which could cause serious bodily injury if you are hit by the hose.

Always wear heavy gloves when unwinding the spring tension to protect your hands from being cut on the hose reel.

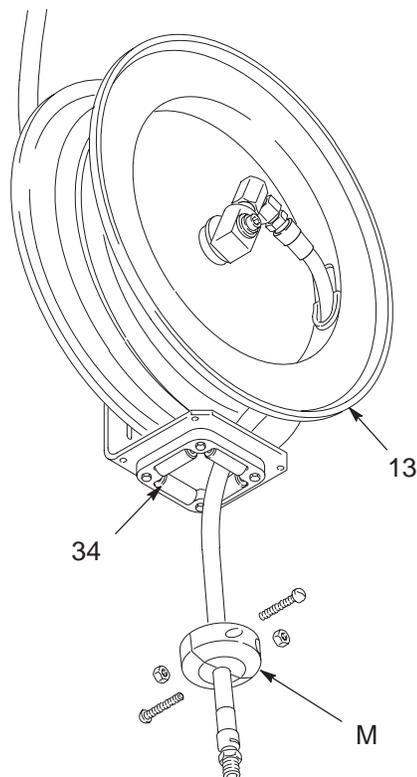


Fig. 7

1644

Service

Swivel

Shut off the air or fluid supply. Open the dispensing valve to relieve pressure from the service hose.

Disassemble the parts as shown in Fig. 8 and Fig. 9 (depending on your hose reel model). Clean the parts and inspect them for wear or damage.

Grease the new parts, and fill the cavity of the swivel assembly (31) with high-quality grease. Install the parts as shown in Fig. 8 or Fig. 9 (depending on your hose reel model).

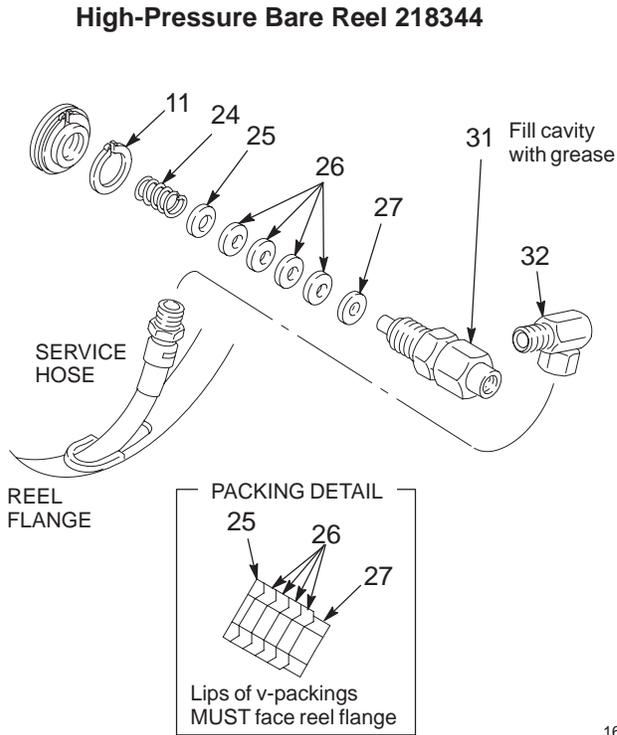


Fig. 8

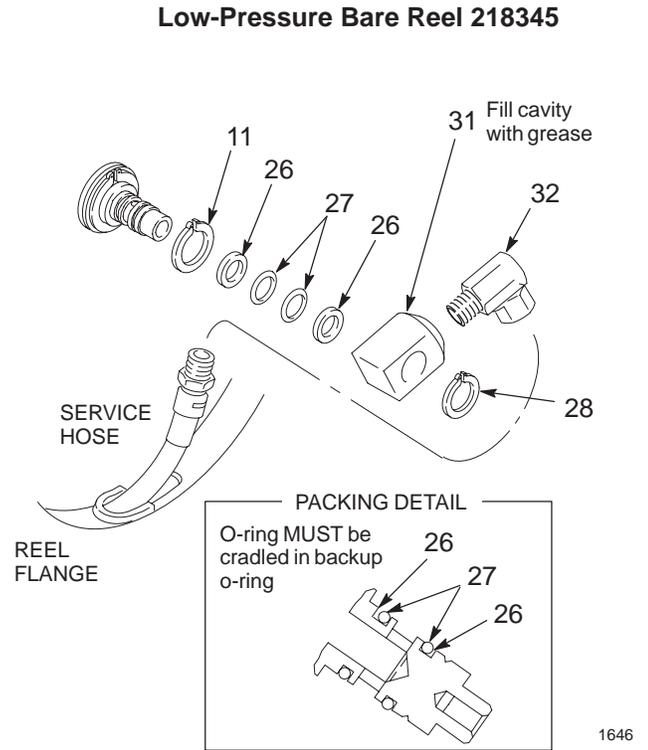


Fig. 9

Service

Latch

If the reel latch (21) fails to latch, replace the latching mechanism. See Fig. 10.

CAUTION

To avoid damage to the reel and to avoid a malfunction of the reel, do not modify the latch arm spring (37). When replacing the spring, order and use Graco Part No. 107440 only.

1. Retract the hose as far as the hose stop to release the spring tension.
2. Remove the reel from the pedestal (1) held by four cap screws (9) to expose the latch.
3. Inspect and replace all worn or damaged parts.
4. Follow lubrication requirements for latch mechanism on page 19. Reassemble the reel.

Reel Spring

Shut off the air or water supply to the reel. Open the dispensing valve to relieve pressure from the service hose. Remove the service hose as described on page 20. Remove the reel from its mounting base. Place the reel on a flat surface so the pedestal (1) is on the bottom.

For Bare Hose Reel 218344, remove the swivel assembly (31) and the retaining ring (11). See Fig. 8.

For Bare Hose Reel 218345 and 224880, remove the retaining ring (28), swivel (31) and retaining ring (11). See Fig. 9.

Remove the screws (18), nuts (20), and retaining ring (39) from the reel flanges (13 and 17). Refer to the parts drawings on pages , pages 24 to 28.

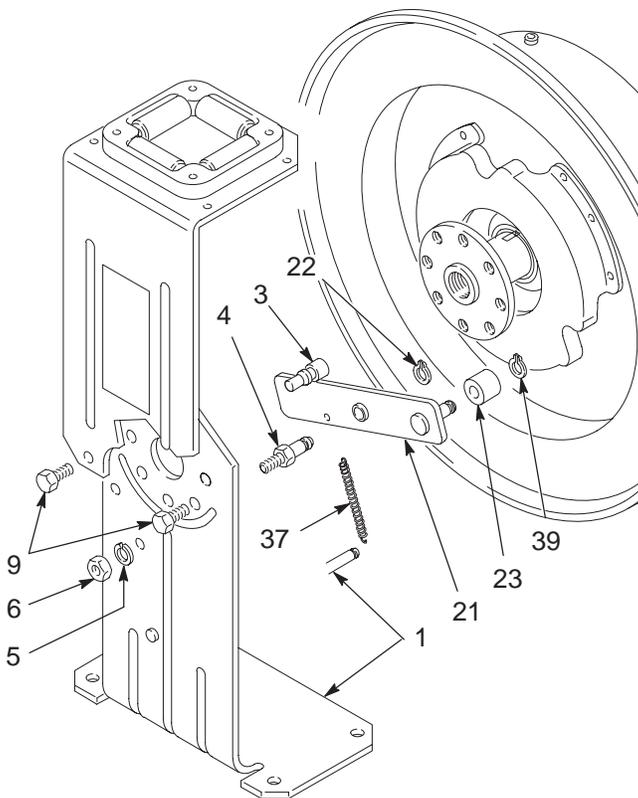


Fig. 10

1649

Service

⚠ WARNING

Use Extreme Caution When Handling the Spring! The spring, which is located behind the flange, is under great tension and could be propelled from the lower flange (13) with enough force to cause serious bodily injury.

To reduce the risk of serious bodily injury, use extreme caution when removing the top reel flange (17). Be sure the reel is laying flat, and then carefully lift up on the flange to expose the spring (16).

Always use locking pliers (Q) to compress and hold several rows of the spring together when removing and installing a spring. See Fig. 11.

Before disposing of the spring, carefully attach a minimum of two hose clamps around the keeper and spring bands as shown in Fig. 12.

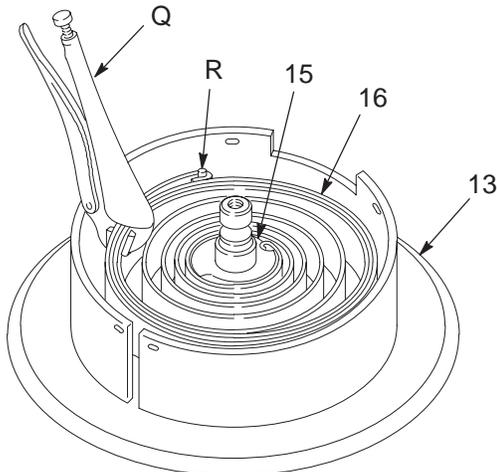


Fig. 11

1647

If either end of the spring (16) is worn or damaged and does not hook properly on the reel hub (15) or the pin (R) which is welded to the inside of the lower reel flange (13), replace the spring. See Fig. 11. If the pin is broken, the lower reel flange must be replaced.

To remove the spring, use a locking pliers (Q) to compress several rows of the spring together. Then lift out the spring. See Fig. 11.

Before disposing of the spring, carefully attach a minimum of two hose clamps around the keeper and spring bands as shown in Fig. 12.

Use a locking pliers (Q) to compress several rows of the spring together when greasing and installing the new spring. Coat the new spring and the flange with a multi-purpose, lithium-based grease before installing the spring.

⚠ CAUTION

To ensure proper spring operation, the spring and reel hub must be installed with the inside end of the spring hooked into the reel hub (15) and the outside end of the spring hooked to the pin (R). See Fig. 11 on page 23.

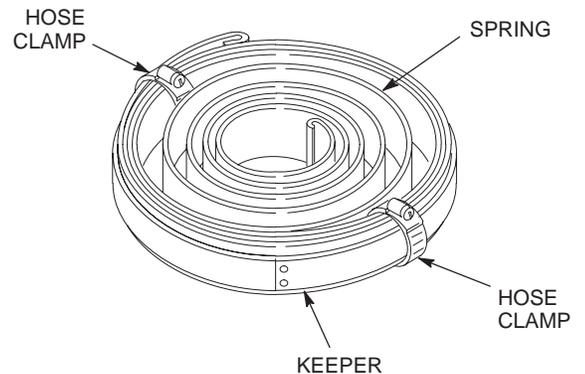
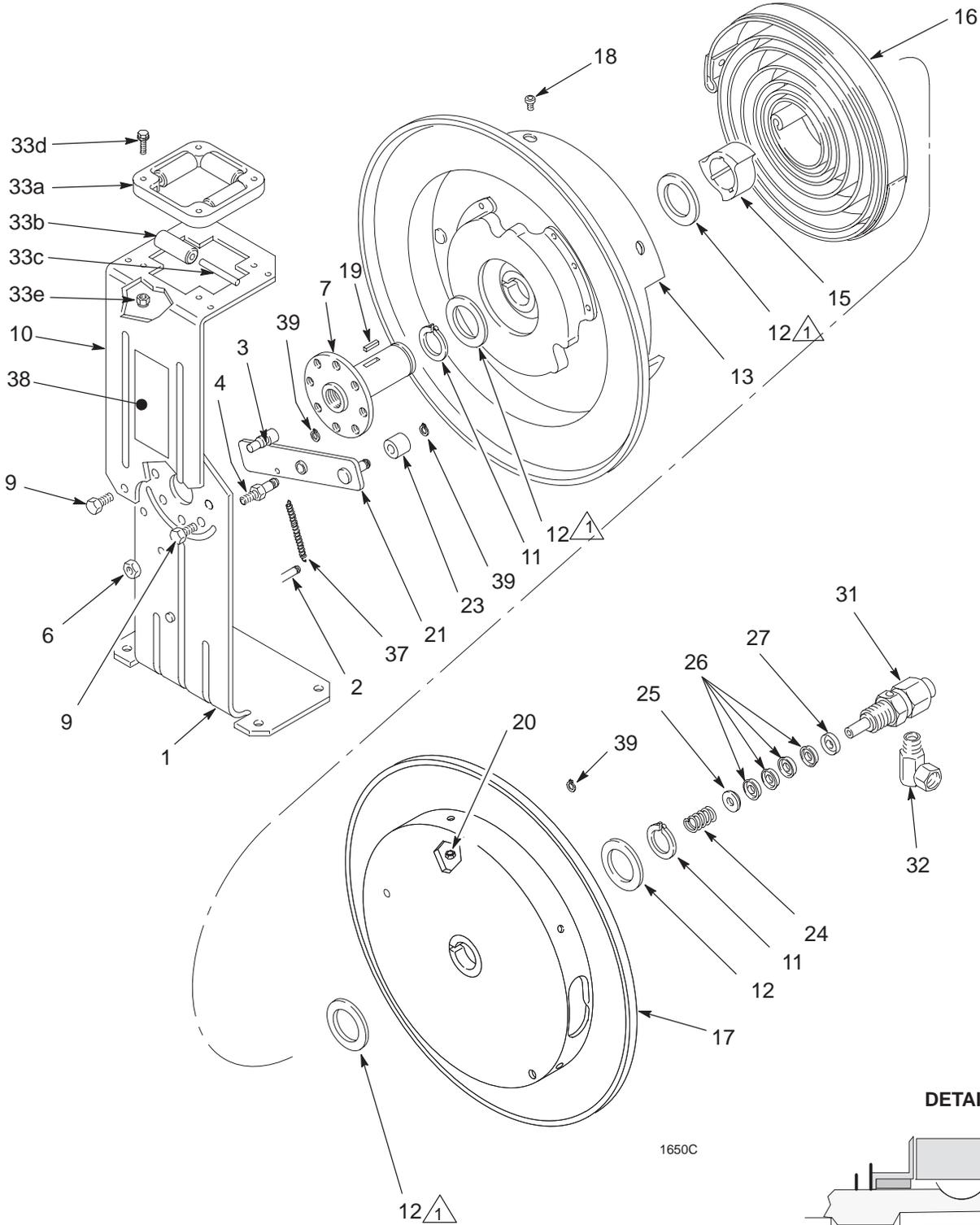


Fig. 12

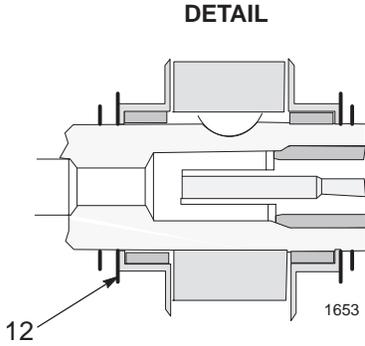
1647

Parts

Model 218344, Series B



△ Use up to one additional washer (12) next to each washer (12) shown in the parts drawing, to obtain the dimension required shown in the detail drawing above.



Parts

Model 218344, Series B

High Pressure Hose Reel without hose or valve

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	178687	PEDESTAL, reel	1	31	201882	SWIVEL, ASSEMBLY	1
2	106577	PIN, grooved	1	32	155494	UNION, swivel, 90°, 3/8 npt(m) x 3/8 npt(f) swivel	1
3	190029	BUMPER	1	33	218591	HOSE ROLLER KIT; Includes items 33a to 33e	
4	178692	STUD, pawl	1	33a	178675	• BRACKET, roller	1
6	112958	NUT, hex, flanged, 3/8–16	1	33b	178670	• ROLLER, hose	4
7	236998	SHAFT, reel	1	33c	178705	• PIN, roller	4
9	111799	SCREW, cap, flange head; M8 x 1.25	4	33d	107439	• SCREW, mach, hex washer hd	4
10	178694	SUPPORT, roller (includes item 38)	1	33e	102920	• NUT, lock	
11	106082	RING, retaining, external	2	37	107440	SPRING, extension	1
12	177679	WASHER, retaining	8	38▲	187034	LABEL, warning	1
13	237189	FLANGE, reel, hose	1	39	111220	RING, retaining	3
15	178681	HUB, reel	1	40▲	189056	TAG, Caution (<i>not shown</i>)	1
16☆	157529	SPRING, reel, hose	1				
17	237188	FLANGE, reel, hose	1				
18	106084	SCREW, mach, pan head, M5 x 10	6				
19	113267	KEY, square, parallel; 3/16" x 1"	1				
20	105332	NUT, lock, hex; M5 x 0.08"	6				
21	217394	PAWL, latch	1				
23	108971	BUMPER	1				
24*	167528	SPRING, compression	1				
25*	150419	GLAND, male	1				
26*	150418	V-PACKING, leather	4				
27*	155938	GLAND, female	1				

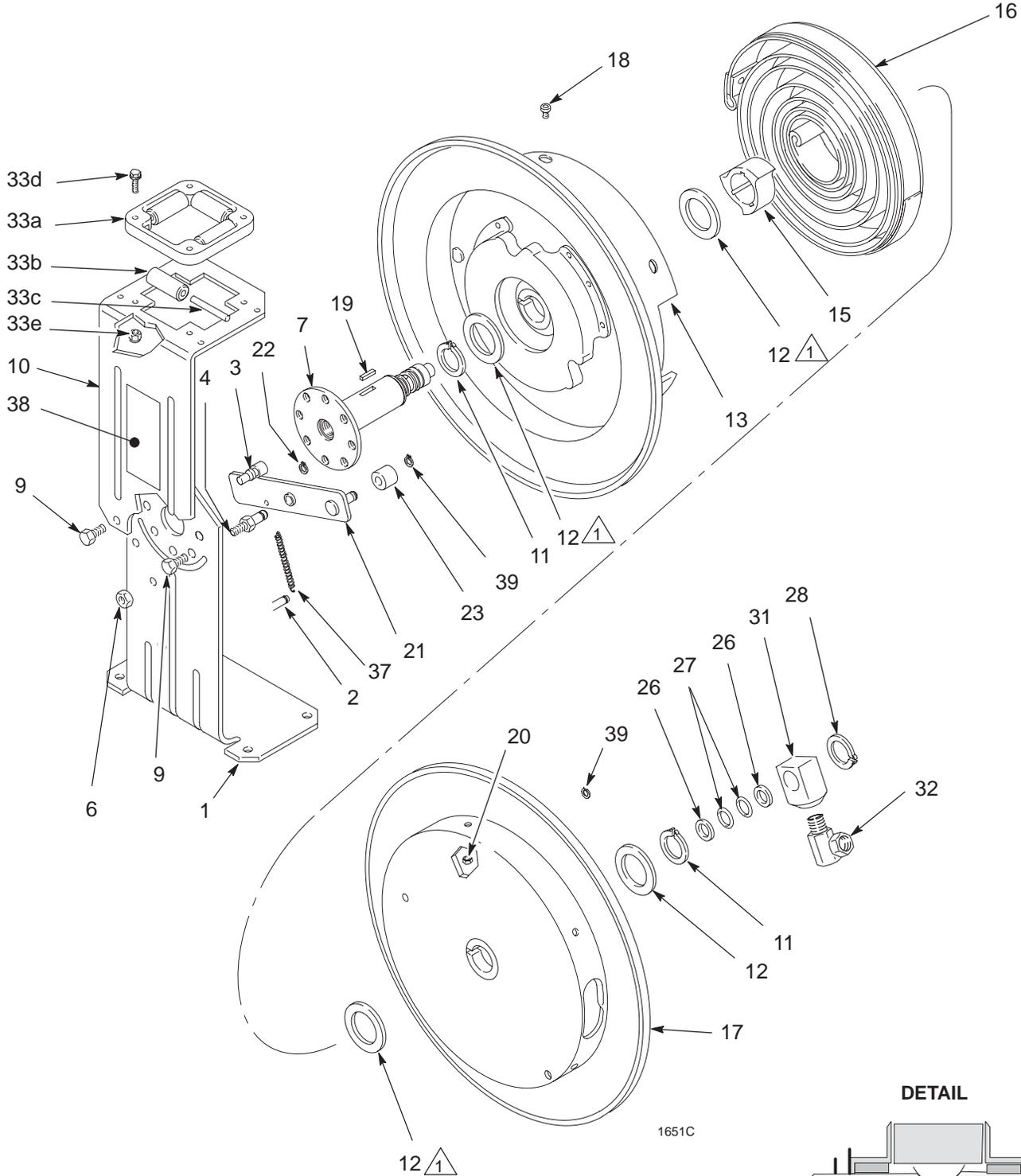
* *These parts are included in Repair Kit 237094, which may be purchased separately.*

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

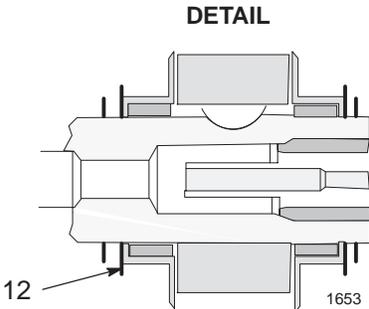
☆ *Optional: A heavy duty spring is available as a replacement for use with larger and longer hoses. Order part number 181902.*

Parts

Model 218345, Series C



▲ Use up to one additional washer (12) next to each washer (12) shown in the parts drawing, to obtain the dimension required shown in the detail drawing above.



Parts

Model 218345, Series C

Medium Pressure Hose Reel without hose or valve

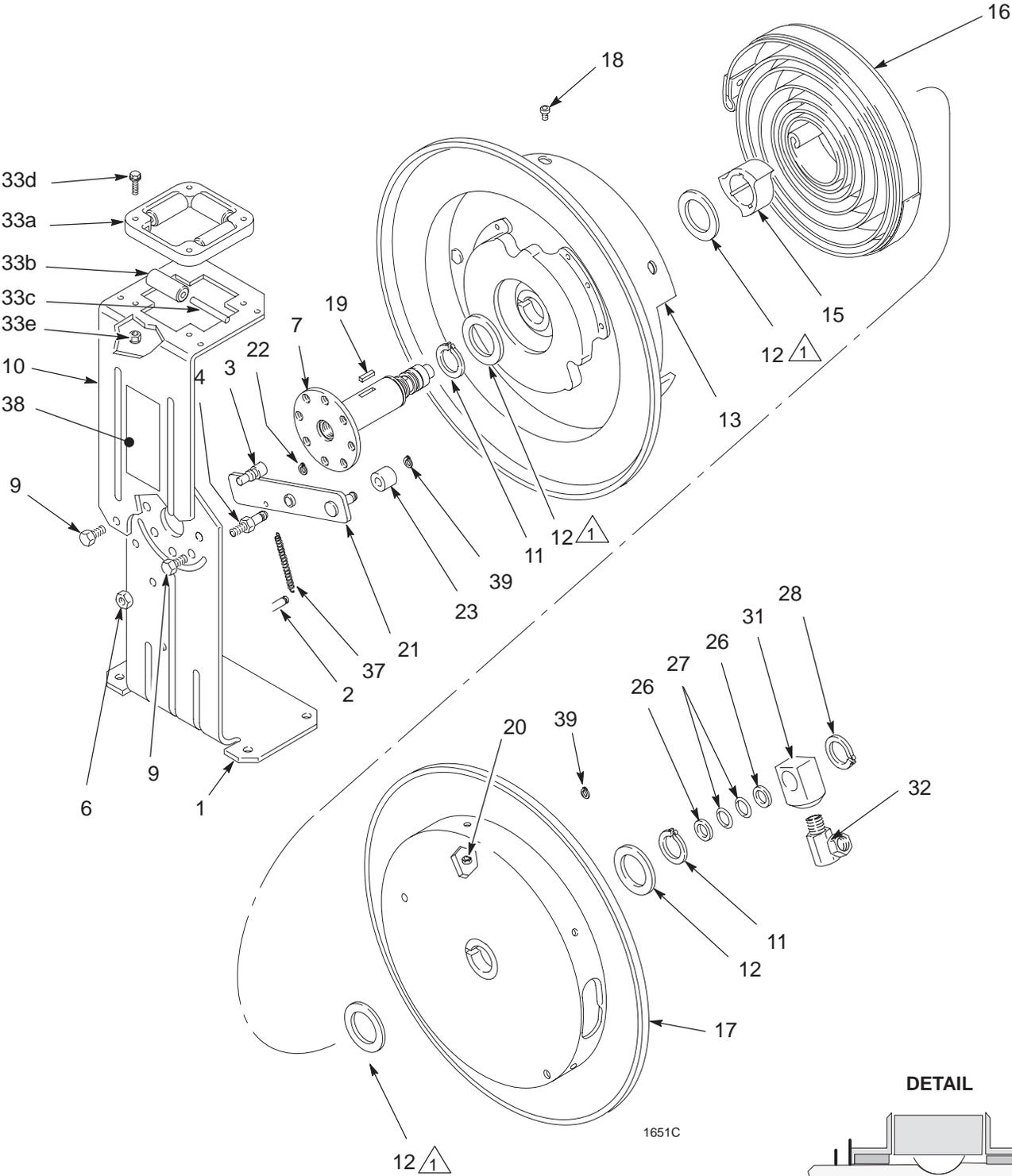
Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	178687	PEDESTAL, reel	1	31	187559	ELBOW, swivel	1
2	106577	PIN, grooved	1	32	114592	UNION, swivel, 90°; 3/8 npt(m) x 1/2 npsm(f) swivel	1
3	190029	BUMPER	1	33	218591	HOSE ROLLER KIT; Includes items 33a to 33e	1
4	178692	STUD, pawl	1	33a	178675	• BRACKET, roller	1
6	112958	NUT, hex, flanged, 3/8–16	1	33b	178670	• ROLLER, hose	4
7	236997	SHAFT, reel	1	33c	178705	• PIN, roller	4
9	111799	SCREW, cap, flange head; M8 x 1.25	4	33d	107439	• SCREW, mach, hex washer hd	4
10	178694	SUPPORT, roller (includes item 38)	1	33e	102920	• NUT, lock	1
11	106082	RING, retaining, external	2	37	107440	SPRING, extension	1
12	177679	WASHER, retaining	8	38▲	187034	LABEL, warning	1
13	237189	FLANGE, reel, hose	1	39	111220	RING, retaining	3
15	178681	HUB, reel	1	40▲	189056	TAG, Caution (<i>not shown</i>)	1
16	181902	SPRING, reel, hose	1				
17	237188	FLANGE, reel, hose	1				
18	106084	SCREW, mach, pan head, M5 x 10	6				
19	113267	KEY, square, parallel; 3/16" x 1"	1				
20	105332	NUT, lock, hex; M5 x 0.08"	6				
21	217394	PAWL, latch	1				
23	108971	BUMPER	1				
26*	108235	RING, backup, o-ring	2				
27*	166702	O-RING, buna-N	2				
28	106083	RING, retaining, external	1				

* *These parts are included in Repair Kit 224450, which may be purchased separately.*

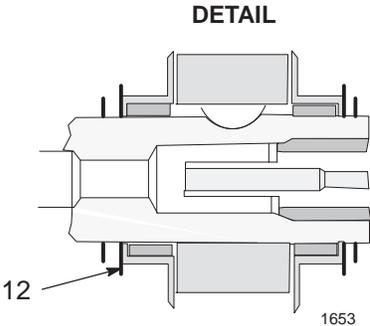
▲ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

Parts

Model 224880, Series A



▲ Use up to one additional washer (12) next to each washer (12) shown in the parts drawing, to obtain the dimension required shown in the detail drawing above.



Parts

Model 224880, Series A

Low Pressure Hose Reel without hose or valve

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	178687	PEDESTAL, reel	1	31	187559	ELBOW, swivel	1
2	106577	PIN, grooved	1	32	114592	UNION, swivel, 90°; 3/8 npt(m) x 1/2 npsm(f) swivel	1
3	190029	BUMPER	1		155494	UNION, swivel, 90°, 3/8 npt(m) x 3/8 npt(f) swivel (Model 224885 only; see pg 9)	1
4	178692	STUD, pawl	1				
6	112958	NUT, hex, flanged, 3/8–16	1				
7	237120	SHAFT, reel	1				
9	111799	SCREW, cap, flange head; M8 x 1.25	4	33	218591	HOSE ROLLER KIT; Includes items 33a to 33e	
10	178694	SUPPORT, roller (includes item 38)	1	33a	178675	• BRACKET, roller	1
11	106082	RING, retaining, external	2	33b	178670	• ROLLER, hose	4
12	177679	WASHER, retaining	8	33c	178705	• PIN, roller	4
13	237189	FLANGE, reel, hose	1	33d	107439	• SCREW, mach, hex washer hd	4
15	178681	HUB, reel	1	33e	102920	• NUT, lock	
16	181902	SPRING, reel, hose	1	37	107440	SPRING, extension	1
17	237188	FLANGE, reel, hose	1	38▲	187034	LABEL, warning	1
18	106084	SCREW, mach, pan head, M5 x 10	6	39	111220	RING, retaining	3
19	113267	KEY, square, parallel; 3/16" x 1"	1	40▲	189056	TAG, Caution (not shown)	1
20	105332	NUT, lock, hex; M5 x 0.08"	6				
21	217394	PAWL, latch	1				
23	108971	BUMPER	1				
26*	108235	RING, backup, o-ring	2				
27*	166702	O-RING, buna-N	2				
28	106083	RING, retaining, external	1				

* These parts are included in Repair Kit 224450, which may be purchased separately.

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

Parts

Side & End Enclosure Kits

Side Enclosure Kit 218546

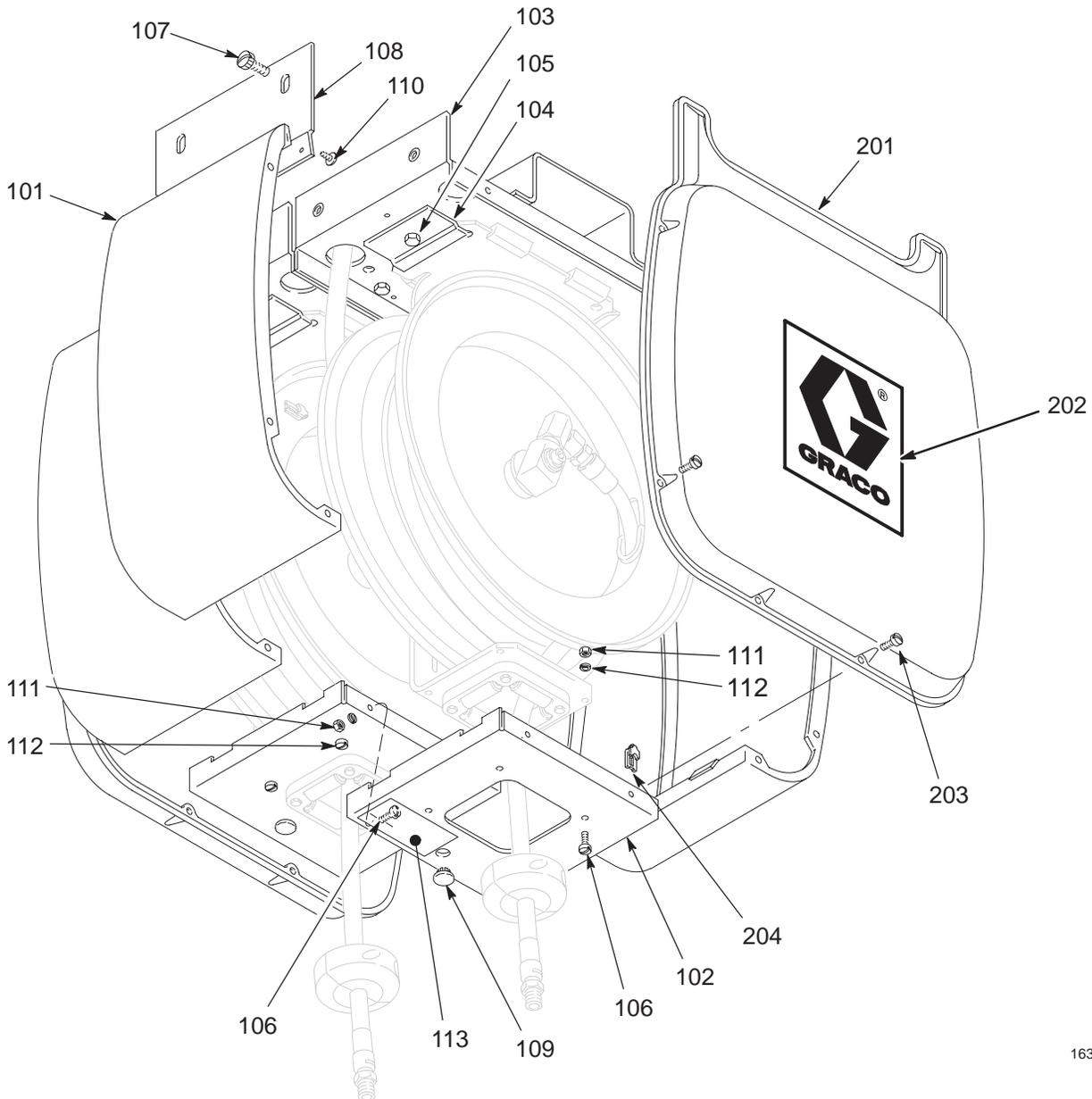
Order 1 for each bare or basic hose reel.
 Enclosed hose reels include one Side Kit per reel.

Ref. No	Part No.	Description	Qty.
101	218367	PANEL, side	2
102	220908	CAP, hose reel	1
103	203556	BASE, reel	1
104	159790	PLATE, hold down	1
105	100575	SCREW, cap, hex hd; 3/8" x 5/8"	1
106	107452	SCREW, mach; bdghd; No. 10 x 5/8"	6
107	159760	SCREW, thumb	4
108	180672	PLATE, trim	2
109	102521	PLUG, button	1
110	100271	SCREW, type Z, drive; No. 10 x 3/8"	4
111	100179	NUT, hex, No. 10	6
112	100020	LOCKWASHER, spring; No. 10	6
113	183442	LABEL, installation	1

End Enclosure Kit 218548

Order 1 for each bank of reels.

Ref. No.	Part No.	Description	Qty.
201	178669	PANEL, end	2
202	183682	LABEL, Graco	2
203	107452	SCREW, mach, bdghd; No. 10 x 5/8"	12
204	107451	NUT, spring	12

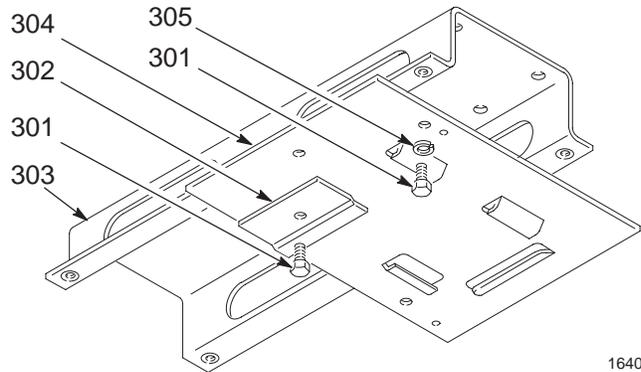


Accessories

Two or Three Reel Mounting Bases

Order the following items in the quantities indicated for mounting the reels without enclosures to a mounting channel.

Ref No.	Part No.	Description	Quantity	
			2-reel channel 205072	3-reel channel 205073
301	100575	SCREW, cap, hex hd; 3/8-16 x 5/8"	10	15
302	159790	PLATE, hold-down, reel	2	3
303	203558	CHANNEL, mounting, 2-reel	1	
	203559	CHANNEL, mounting, 3-reel		1
304	205093	PLATE, base	2	3
305	100133	LOCKWASHER, 3/8"	10	15

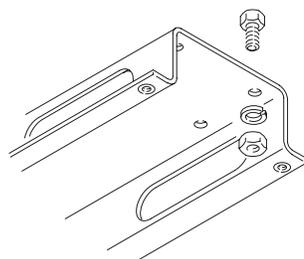


1640

Mounting Channels

For mounting hose reels to ceiling. Includes cap screws (3/8-16 UNC-2a x 0.625"), lockwashers and nuts.

- 203521** for 1 reel
- 203522** for 2 reels
- 203523** for 3 reels
- 203524** for 4 reels
- 203525** for 5 reels
- 203526** for 6 reels



1654

Identification Labels 180698

Sheet of 14 sticky-back labels for labeling hose reels. Includes labels for the following:

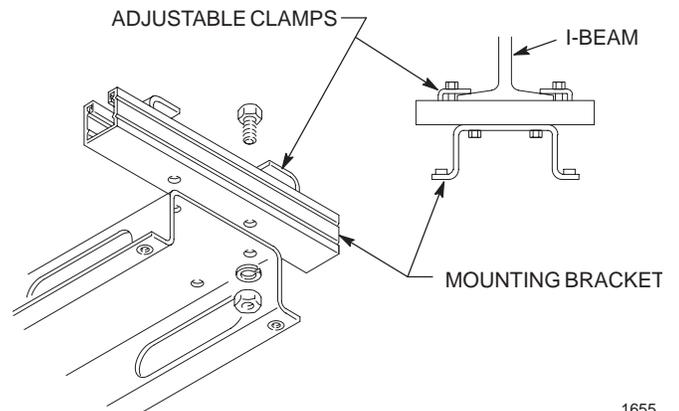
SAE 10-40	SAE 20W	HYDRAULIC	AIR
SAE 10-30	SAE 30W	ANTIFREEZE	ATF
SAE 5-40	DEXRON	CHASSIS	
SAE 10W	WATER	GEAR	

Mounting Bracket 204741

Secures mounting channel to I-beam without holes drilled in I-beam. Bracket fits all standard I-beams with flanges up to 7 in. (178 mm). Mount the bracket to the mounting channel before securing it to the I-beam. This mounting bracket will work on 2- or 3-reel mounting channel. Screws, lockwashers, and nuts are included.

NOTE:

For one to three reels, **two** of 204741 are required. For four to six reels, **three** of 204741 are required.



1655

Hose Retainer Kit 220897

Enables installation of a 200 Series Hose Reel in a K-Frame enclosure. See manual 307844 for installation information.

Accessories

Hose Inlet Kits

Low Pressure Reels 219096

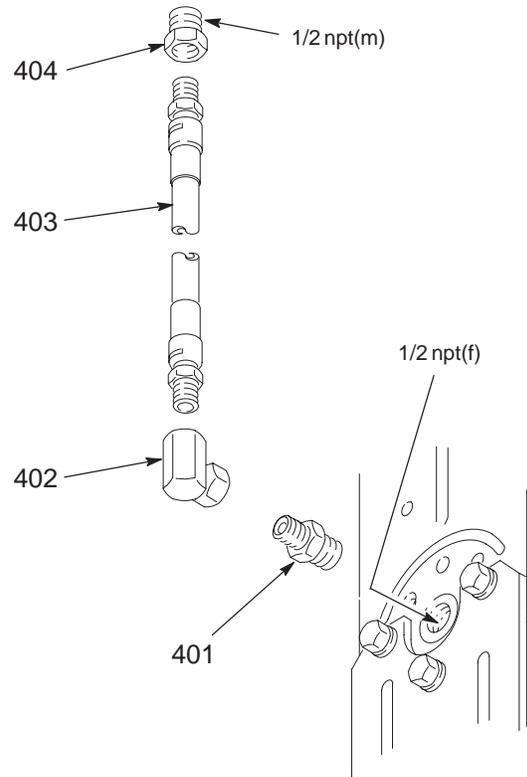
Includes items 401 to 403

Ref. No.	Part No.	Description	Qty.
401	158491	NIPPLE, 1/2 npt	1
402	157416	UNION, 90°; 1/2 npt(f) x 1/2 npsm (f) swivel	1
403	110069	HOSE, fluid, buna-N; 1/2" ID; cpld 1/2 npt(mbe); 15" (381 mm) long	1

High-Pressure Reels 219097

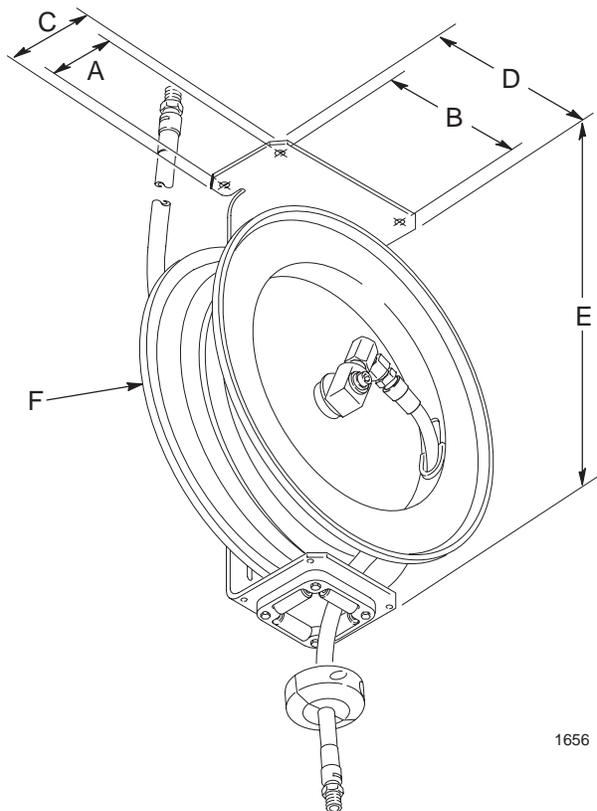
Includes items 401 to 404

Ref. No.	Part No.	Description	Qty.
401	159239	NIPPLE, reducing, 1/2 npt to 3/8 npt	1
402	155677	UNION, 90°; 3/8 npt(f) x 3/8 npsm(f) swivel	1
403	109146	HOSE, 1/4" ID x 15" (381 mm) long; cpld 3/8 npt(mbe)	1
404	158212	BUSHING, 1/2 npt(m) x 3/8 npt(f)	1



1642

Dimensions



- A 3.5" (88.9 mm)
- B 7.5" (190.5 mm)
- C 4.75" (120.7 mm)
- D 9.0" (228.6 mm)
- E 21.25" (540 mm)
- F 17.0" (431.8 mm) Diameter

1656

Technical Data

Model 218344 High Pressure Hose Reel

Inlet 1/2 npt(f)
 Outlet 3/8 npsm(f)
 Bearings acetal
 Wetted Parts carbon steel, leather, brass

Model 224880 Low Pressure Hose Reel

Inlet 1/2 npt(f)
 Outlet 1/2 npsm(f)
(3/8 npt(f) on Model 224885 Complete Reel)
 Bearings acetal
 Wetted Parts stainless steel, nitrile rubber, brass

Model 218345 Medium Pressure Hose Reel

Inlet 1/2 npt(f)
 Outlet 1/2 npsm(f)
 Bearings acetal
 Wetted Parts .. carbon steel, nitrile rubber, aluminum

Dry Weights (approximate)

MODEL	Weight		MODEL	Weight		MODEL	Weight		MODEL	Weight	
	lb.	kg.		lb.	kg.		lb.	kg.		lb.	kg.
218344	31.75	14.3	218452	52.5	23.6	223148	43.4	19.5	224844	50.9	22.9
218345	31.75	14.3	218453	48.0	21.6	223149	45.9	20.6	224845	50.9	22.9
218428	63.7	28.7	220482	48.5	21.8	223150	43.4	19.5	224846	40.5	18.2
218429	75.8	34.1	220483	50.5	22.5	223151	45.9	20.6	224847	39.5	17.8
218436	52.5	23.6	223130	54.4	24.5	224836	40.5	18.2	224848	51.5	23.2
218437	59.0	26.5	223131	56.9	25.6	224837	51.0	23.0	224880	31.8	14.3
218440	49.7	22.4	223132	54.4	24.5	224838	50.0	22.5	224885	40.0	18.0
218441	61.8	27.8	223133	56.9	25.6	224839	50.0	22.5	224886	39.0	17.5
218442	52.7	23.75	223134	54.4	24.5	224840	51.5	23.2	224930	40.9	18.4
218443	64.8	29.16	223135	56.9	25.6	224841	50.5	22.5	224931	49.9	18.0
218444	37.5	16.9	223146	43.4	19.5	224842	50.5	22.5	224932	51.9	23.4
218445	40.0	18.0	223147	54.9	20.6	224843	51.9	23.4			

Notes

Notes

Graco Standard Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor 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

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 présent 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.

Manual Change Summary

This manual went from Rev. AE to Rev. AF to include the following changes:

- In Models 218345 and 224880, the swivel (32) is changed from Part No. 217430 to 114592.
- Service instructions on page 20 and Accessory details on page 31 have been better clarified.

Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you: **1-800-367-4023 Toll Free**

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.

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