



INSTRUCTIONS

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

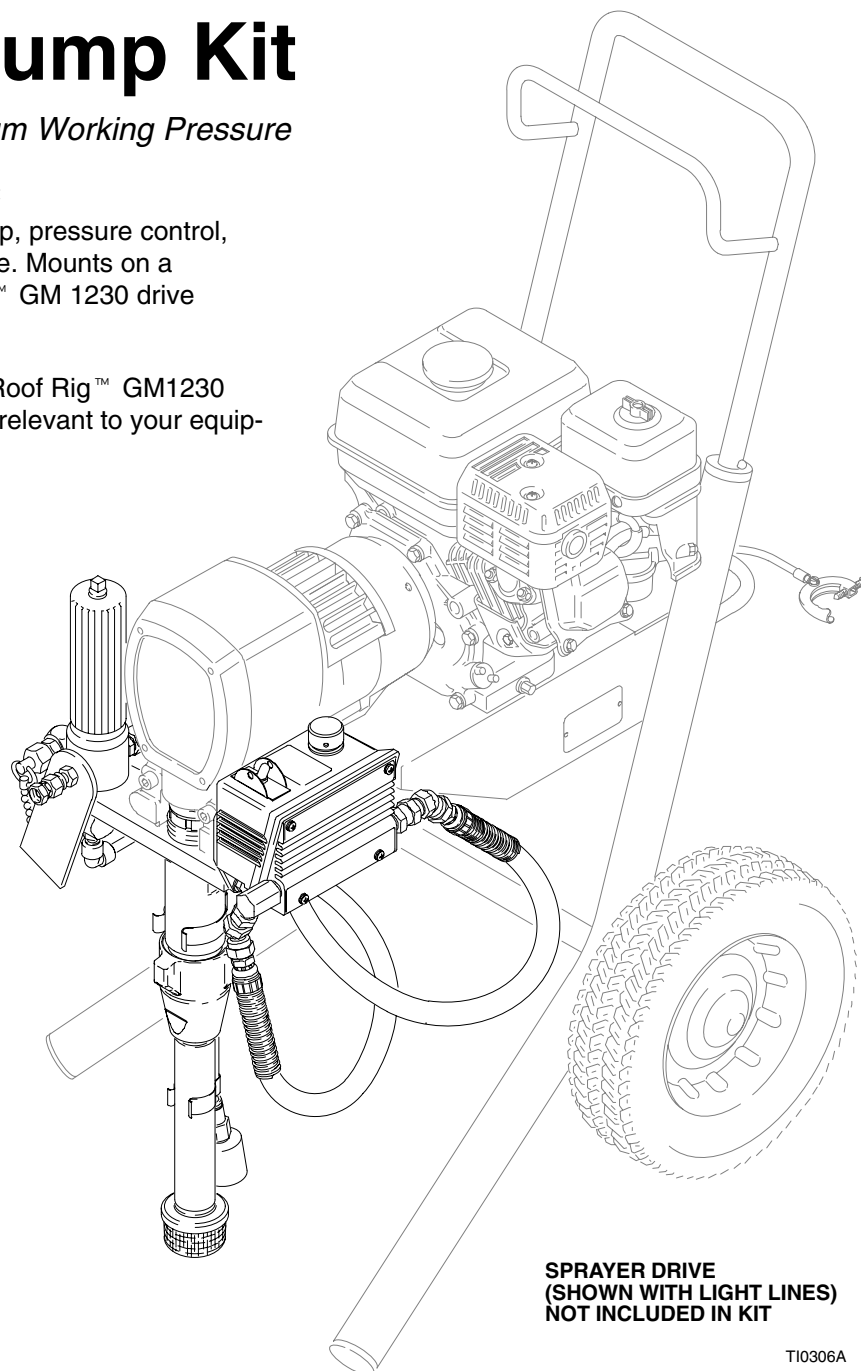
GM3012 Pump Kit

3000 psi (210 bar) Maximum Working Pressure

Part No. 224524, Series C

Kit includes a displacement pump, pressure control, fluid filter and mounting hardware. Mounts on a TexSpray GM 1030 or Roof Rig™ GM 1230 drive assembly.

Refer to TexSpray GM 1030 or Roof Rig™ GM1230 manuals for additional warnings relevant to your equipment.



**SPRAYER DRIVE
(SHOWN WITH LIGHT LINES)
NOT INCLUDED IN KIT**

T10306A

Setup

1. **Install the GM3012 pump kit.** See page 5.

NOTE: If desired, replace the 100 mesh filter element already in the filter with the 30 mesh element, supplied with the sprayer.

2. **Connect the hose and gun.** See Fig 1. Screw a minimum 50 ft. (15.2 m) main fluid hose (B) onto the swivel (238). Connect a 3 ft. (0.9 m) whip hose (C) between the fluid hose and the gun (A). Do not use thread sealant, and Do not install the spray tip yet!

⚠ WARNING

Be sure the fluid hoses are electrically conductive, that the gun has a tip guard, and that each part is rated for at least *3000 psi (210 bar) Maximum Working Pressure*. This is to reduce the risk of serious bodily injury caused by static sparking, fluid injection or over-pressurization and rupture of the hose or gun.

3. **Fill the packing nut/wet-cup.** Pull the plastic cap (5) up from the packing nut/wet-cup and fill the cup 1/3 full with Graco Throat Seal Liquid (TSL). Reinstall the cap. TSL helps lubricate and protect the throat packings. Check the level of the TSL regularly and fill as necessary.

⚠ **Main Fluid Outlet**
Do not install any shutoff device here

4. **Flush the pump.** See page 6.

5. **Prepare the paint or coating.** For most paints: remove any skin, stir to mix pigments, strain through a fine nylon mesh bag to remove particles that could clog the filter or spray tip. This is an important for trouble-free spraying.

6. **Two gun hookup** (See Fig 1.) Remove the cap (228) from the secondary hose outlet and attach a hose and gun to the 1/4 npsm(m) nipple.

⚠ CAUTION

To avoid damaging the pressure control, which may result in poor equipment performance and component damage, follow these precautions.

1. Always use nylon spray hose at least 50 ft. (15.2 m) long.
2. Never use a wire braid hose; it is too rigid to act as a pulsation dampener.
3. Never install any shutoff device between the filter and the main hose. See Fig 1.
4. Always use the main filter outlet for one gun operation. Never plug this outlet.

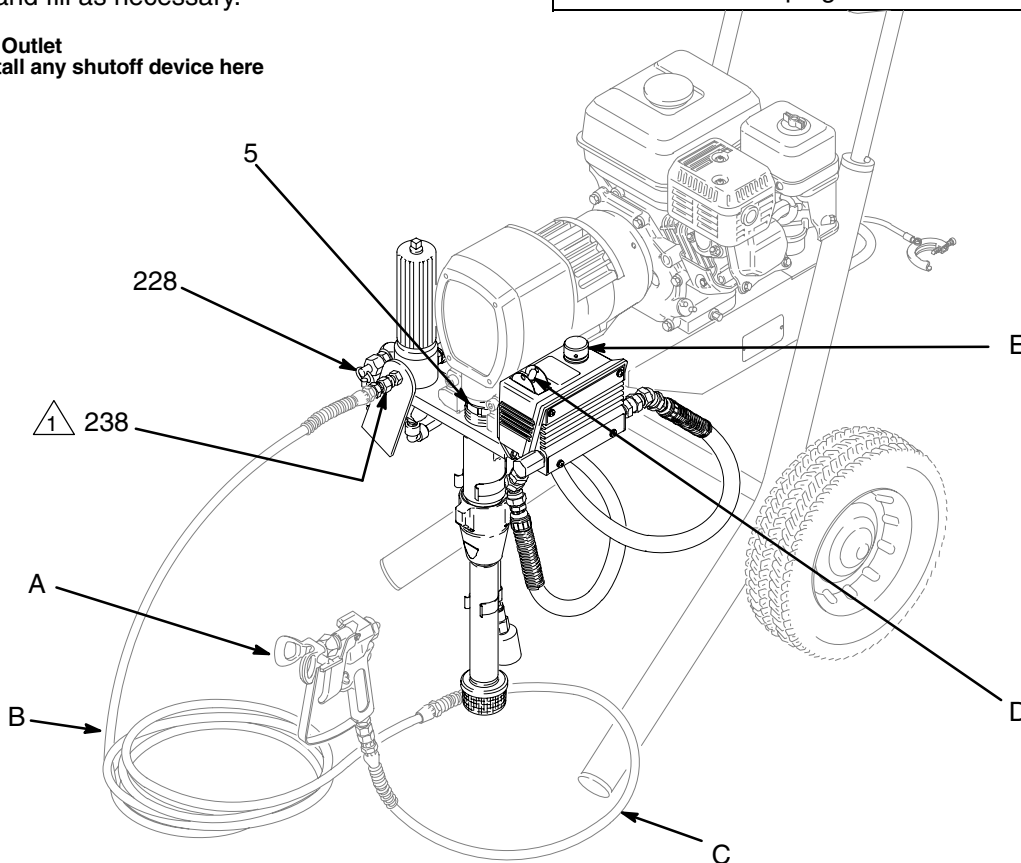


Fig 1

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Removing & Installing a Pump Assembly

WARNING



INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tip.

Pressure Relief Procedure

1. Lock the gun trigger safety.
2. Turn the engine ON/OFF switch to OFF.
3. Move the pressure control switch to OFF.
4. Unlock the trigger safety. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve the pressure. See Fig. 4, A.
5. Lock the gun trigger safety.
6. Open the pressure drain valve. Leave the valve open until you are ready to spray again.
7. Disconnect the spark plug cable.

If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen the tip guard retaining nut or hose end coupling to relieve the pressure gradually, then loosen completely. Now clear the tip or hose.

Removal

WARNING



INJECTION HAZARD

To reduce the risk of serious bodily injury, always follow the **Pressure Relief Procedure** before repairing the sprayer.

1. Flush sprayer. Remove suction hose, if used.

WARNING



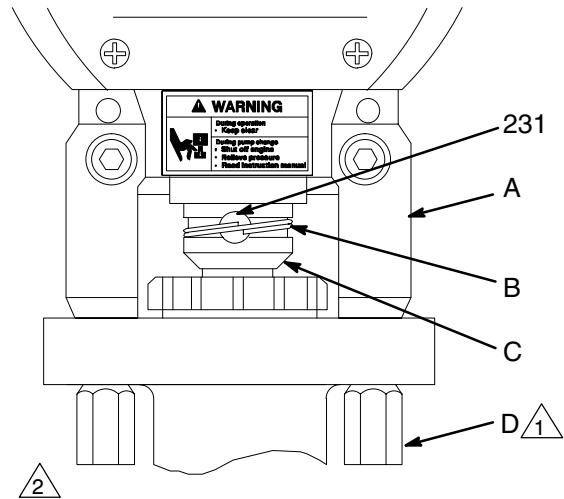
MOVING PARTS HAZARD

To reduce the risk of pinching or amputating a finger, keep fingers away from the area of the connecting link and pin while jogging the engine.

2. Start the engine. Jog the pressure control ON/OFF switch until the connecting rod (C) stops near the bottom of the stroke and is fully exposed. See Fig 2. Shut off the engine.
3. Unscrew collar (J) of power supply cord and unplug it from pressure control (F). See Fig 3.
4. Relieve pressure. See page 2.
5. Remove the outlet hose. Slightly loosen the two pump mounting screws (D). See Fig 2.
6. Use a small screwdriver to push in the connecting rod pin (231) just until you can gently pry the retaining ring (B) up from the back of the connecting rod. Push the pin in so it falls out the back.
7. Remove the two mounting screws while supporting the weight of the pump with your free hand.

Removing & Installing a Pump Assembly

1. Push the pin (231) just barely into the connecting rod (C), but not into the mating hole of the pump piston rod (E).
2. Pull piston rod (E) out of pump 2 - 3 in. (50-75 mm).
3. Align the flats of the piston rod (E) and the pump outlet. Lift the pump into position and gently push on the pin (231) while moving the pump slightly until the pin slips into the hole. Be sure the retaining ring (B) snaps down over the end of the pin.
4. Check the back of the bearing housing (A) to be sure the parts are installed properly.
5. Lift the pump to align the mounting holes and install the mounting screws (D). **IMPORTANT** – torque the screws to 20 ft-lb (27 N.m). See Fig 2.
6. Plug in the power cord so the notch (H) in the collar (J) and the tab (G) in the socket align. Screw on the collar. See Fig 3.



1 Torque to 20 ft-lb (27 N.m)

2 Front view of pump and sprayer connecting link

3 Cutaway view shows how pin goes through connecting rod

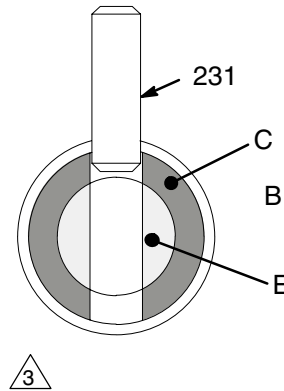


Fig 2

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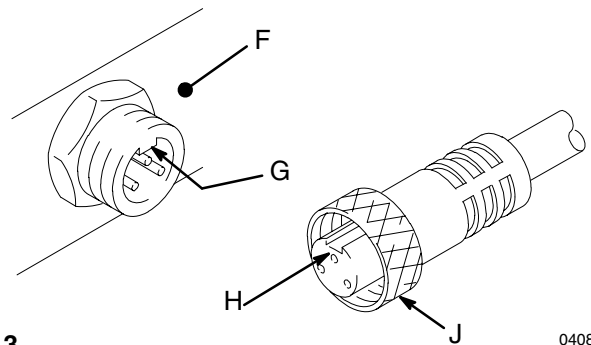


Fig 3

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⚠ WARNING



MOVING PARTS HAZARD

Be sure the retaining spring (B) is firmly in the groove of the connecting rod (C), all the way around, to prevent it from working loose due to vibration. See Fig 2.

If the pin works loose, it or other parts could break off due to the force of the pumping action and result in serious bodily injury or property damage and equipment damage.

Tip Selection Chart

Roofing Applications*

Roof Coating	Recommended Tip Size
Primers	0.031 – 0.035
Acrylics	0.031 – 0.035
Hypolans	0.031 – 0.035
Urethanes	0.031 – 0.035
Bonding Adhesive	0.031 ¹
Architectural Coatings (enamel, latex, acrylic)	0.019 – 0.035

¹ Check coating manufacturer's recommendations for back rolling. Use a Graco Roof Rigs™ Spray Roller, 224470


*The 60 mesh fluid filter screen is standard. Use the optional 30 mesh screen (supplied) with tips larger than 0.031.

General Painting Applications*

Coating	Recommended Tip Size
Smoothy (non-aggregate) Architectural Coatings (enamel, latex, acrylic)	0.019 – 0.035
Primers	0.017 – 0.035
Smooth (non-aggregate) Elastomerics/Acrylics	0.025 – 0.035

Flushing Guidelines

When To Flush

 CAUTION
NEVER leave water in the sprayer if there is the slightest change it could freeze. Pump the water out with mineral spirits. Water frozen in the pressure control tube prevents the sprayer from being started, and causes serious damage to the pressure control.

1. **New Sprayer.** This pump was factory tested in lightweight oil, which was left in to protect the pump parts.

Before using water-base paint, flush with mineral spirits, followed by a soapy water flush, and then a clean water flush.

Before using oil-base paint, flush with mineral spirits, only.

2. **Changing Colors.** Flush with a compatible solvent such as mineral spirits or water.
3. **Changing from water-base to oil-base paint.** Flush with warm, soapy water, then mineral spirits.

4. **Changing from oil-base to water-base paint.** Flush with mineral spirits, followed by warm, soapy water, and then a clean water flush.

5. **Storage.**

Water base paint: flush with water, then mineral spirits and leave the pump, hose and gun filled with mineral spirits. Shut off the sprayer, remove the spark plug cable, and open the pressure drain valve to relieve pressure. Leave the drain valve open.

Oil base paint: flush with mineral spirits and leave the pump, hose and gun filled with mineral spirits. Shut off the sprayer, remove the spark plug cable, and open the pressure drain valve to relieve pressure. Leave the drain valve open.

6. **Startup after storage.**

Before using water-base paint, flush out the mineral spirits with soapy water, and then with clean water.

When using oil-based paint, flush out the mineral spirits with the paint to be sprayed.

Flushing Guidelines

How To Flush

1. Relieve pressure. See page 6.
2. Remove the bowl of the filter (210) and the screen (A or 240); see instruction manual 307273, supplied with the filter. Install the bowl and support (B), without the screen, to flush. Clean the screen separately. See Fig 4.

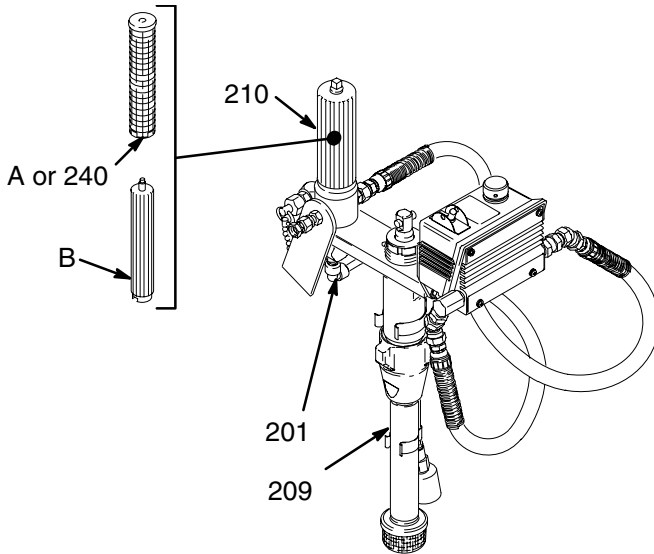


Fig 4

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3. Close the pressure drain valve (201).
4. Put the suction tube in a grounded pail of water or solvent.
5. Remove the spray tip from the gun(s).

! WARNING



FIRE AND EXPLOSION HAZARD

To reduce the risk of static sparking and splashing when flushing, always remove the spray tip from the gun, and hold a metal part of the gun firmly to the side of a grounded metal pail.

6. Start the sprayer. Keep the gun triggered until clean solvent comes from the nozzle. Release the trigger and engage the trigger safety latch.

NOTE: For two guns, release the trigger safety latch on the second gun and trigger that gun until clean water or solvent comes from the nozzle. To ensure that the hoses are well flushed, flush the first gun and then the second gun at least one more time.

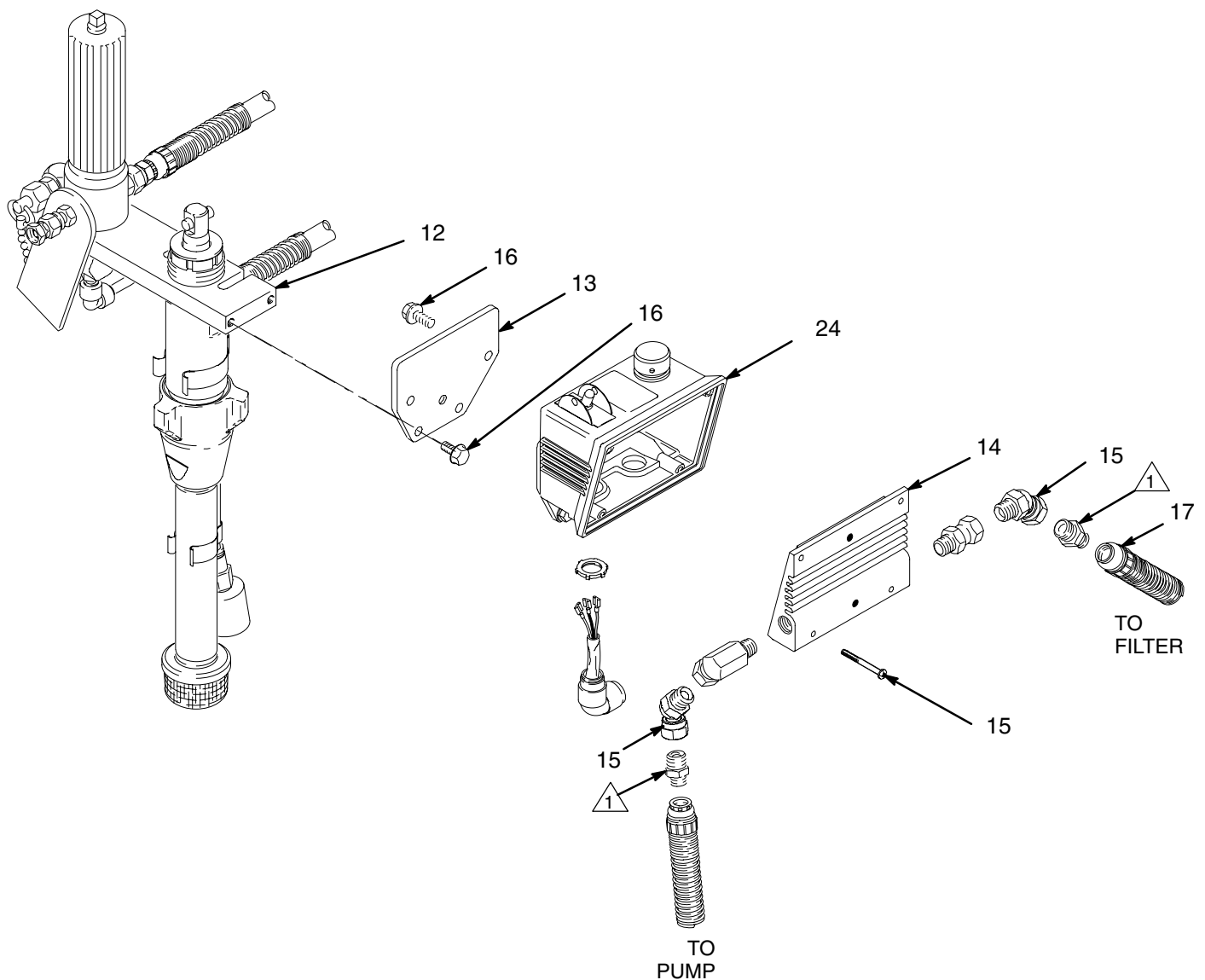
7. Check all fluid connections for leaks. Relieve pressure before tightening any connections. Start the sprayer. Recheck the connections for leaks.
8. Remove the suction tube from the solvent pail. Disengage the trigger safety latch. Trigger the gun to force water or solvent from the hose. Do not let the pump run dry for more than 30 seconds, to avoid damaging the pump packings! Relieve pressure.
9. Leave the pressure drain valve open until you are ready to use the sprayer again. Unscrew the filter bowl and install the clean screen. Install the bowl, hand tight only.
10. Remove the suction tube (209) and clean it separately to be sure all paint sediment is removed. Dried paint in the suction tube can build up and cause performance problems later on.
11. See Storage or Changing Colors, page 6. Relieve pressure.

Displacement Pump Repair

See manual 308798 for displacement pump parts and repair.

Pressure Control Replacement (FDR Style)

1. Relieve Pressure. See page 2
2. Disconnect both hoses at control. Note the original location of each hose to be sure that you reassemble them correctly at the end of this procedure. See Fig 12.
3. Remove mounting plate (13) and control from mounting bracket (12).
4. Remove 45° swivels (15) from control.
5. Reverse order for re-assembly.



1 Adapter required for Bourdon tube control replacement

TI0308A

Fig 5

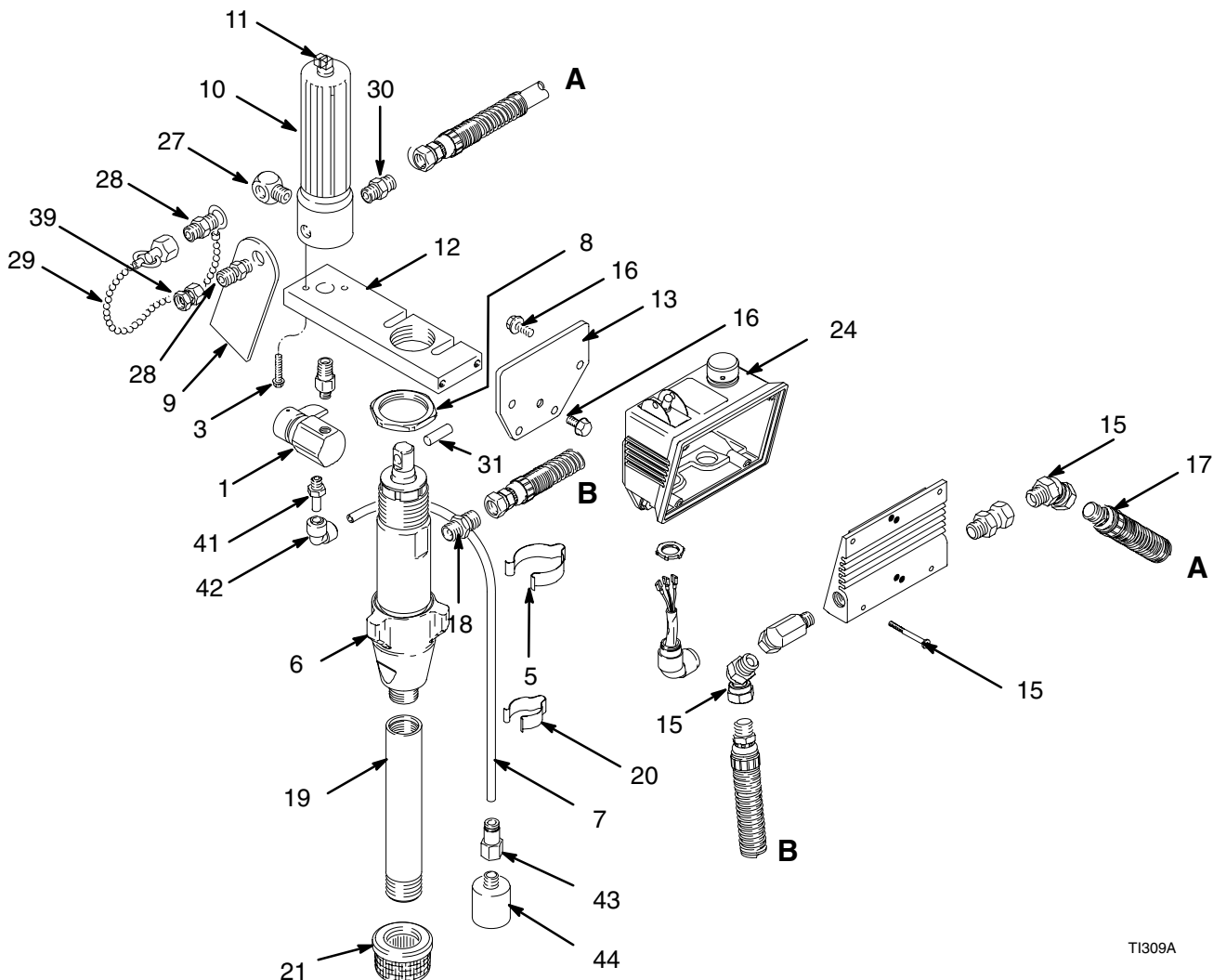
Parts

Model 224524

Includes items 1 to 39 as listed below.

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
1	236347	VALVE, pressure drain	1	20	181102	CLAMP, spring	2
3	111367	SCREW, hex hd, flanged	2	21	181072	STRAINER, 16 mesh	1
5	186490	CLIP, spring	1	24	241327	PRESSURE CONTROL (see parts list on page 14)	1
6	240151	DISPLACEMENT PUMP manual 308798	1	27	100840	ELBOW, street, 1/4-18 (m x f)	1
7	190336	DRAIN TUBE	1	28	162453	NIPPLE, hex, 1/4 npt x 1/4 npsm 1-3/16" long	2
8	183170	NUT, hex (special)	1	29	220285	CAP, secondary fluid outlet	1
9▲	178034	TAG, WARNING at filter	1	30	162485	ADAPTER, 3/8 npsm x 3/8 npt	1
10	214570	FLUID FILTER Includes item 11 manual 307273	1	31	183210	PIN, 3/8 x 1-1/8" (special)	1
11	100040	.PLUG, 3/8 npt	1	39	159153	SWIVEL	1
12	187228	BRACKET, quick disconnect	1	40	224458	30 MESH FILTER SCREEN (can be used in place of standard screen)	1
13	194442	BRACKET, mounting	1				
15	161889	SWIVEL, 45°	2	41	190446	ADAPTER	1
16	110963	SCREW, serrated flange, hex hd, 5/16-18 x 3/4"	5	42	190447	ELBOW	1
17	222516	HOSE, 3/8" ID, cpld 3/8 npsm (fbe X mbe), 29" (737 mm), spring guards	2	43	115507	ADAPTER, tube	1
18	162485	ADAPTER, 1/4 npt(m) x 3/8 npsm (m)	1	44	241717	DIFFUSER	1
19	193097	TUBE, intake	1				

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



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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.

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Graco does provide extended warranty and wear warranty for products described in the "Graco Contractor Equipment Warranty Program".

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