

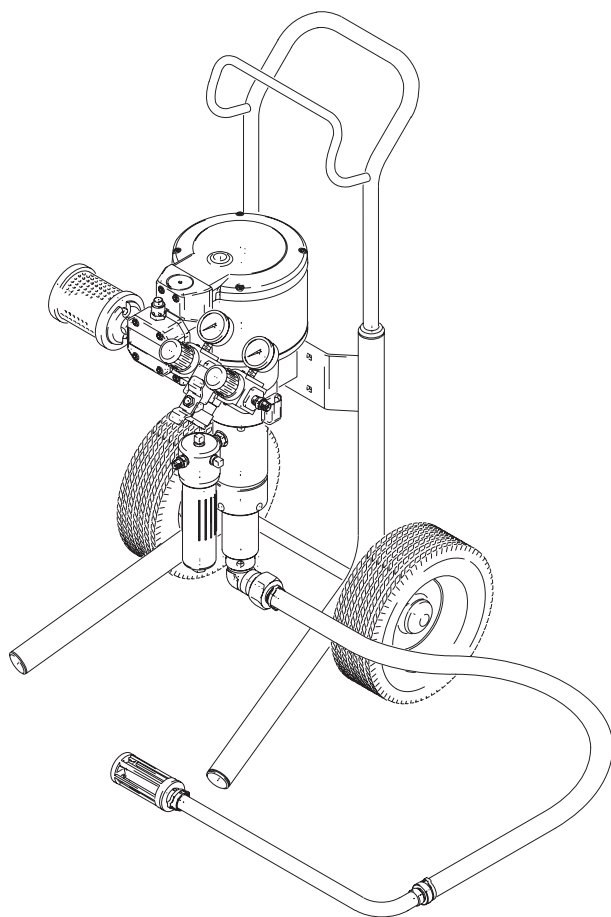
Merkur™ Spray Packages

309463N

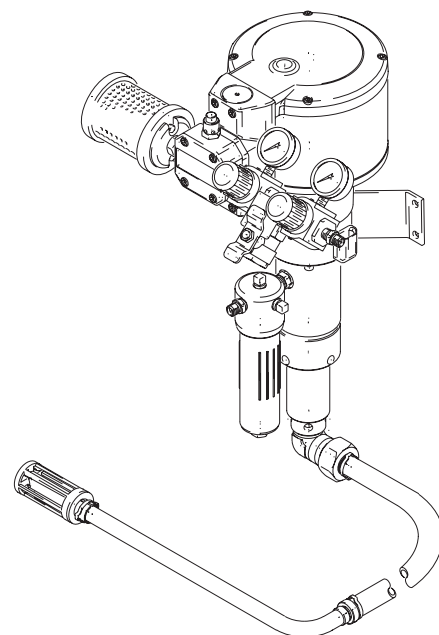


Important Safety Instructions

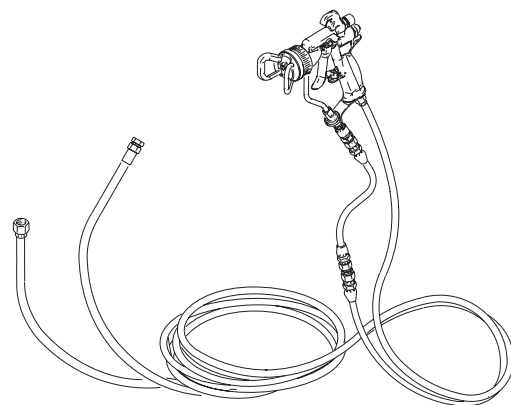
Read all warnings and instructions in this manual.
Save these instructions.



T12102A



T12101A



T12103A




PROVEN QUALITY. LEADING TECHNOLOGY.



Contents

Manual Conventions	2
Related Manuals	2
Model Information	3
Wall Mount Sprayers	3
Cart Mount Sprayers	4
Warning	5
Installation	8
General Information	8
Grounding	8
Install the Muffler	8
Air and Fluid Hoses	8
Wall Mount Packages	10
Air Inlet Fitting	10
Air Line Accessories	10
Fluid Inlet Fitting	10
Suction Tube Strainer	10
Fluid Line Accessories	10
Flush the Pump Before First Use	10
Installing a Fluid Regulator (accessory)	11
Operation	12
Pressure Relief Procedure	12
Starting and Adjusting the Pump	13
Shutdown and Care of the Pump	13
Flush the Equipment	14
Maintenance	15
Preventive Maintenance Schedule	15
Storage	15
Tightening Threaded Connections	15
Cleaning	15
Wet-Cup	15
Troubleshooting	16
Parts	18
Wall Mount Packages	18
Cart Mount Packages	20
Air Inlet Details	22
Hose and Gun Details	24
Technical Data	26
Wall Mount Dimensions	27
Package Weights	27
Wall Mount Sprayers	27
Cart Mount Sprayers	27
Graco Standard Warranty	28
Graco Information	28

Manual Conventions

Warning


 **WARNING**

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


Symbols, such as fire and explosion (shown above), alert you to a specific hazard and direct you to read the indicated hazard warnings (pages 5-6) for detailed information.

Caution

 **CAUTION**

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

Note

 A note calls attention to additional helpful information.

Related Manuals



AA Series Spray Gun Manual 311001



Merkur Pump Manual 309462



Fluid Filter Manual 307273

Model Information

Wall Mount Sprayers

Sprayer Part No.	Series	Ratio	Sprayer Includes:							Maximum Air Input Pressure psi (MPa, bar)	Maximum Fluid Working Pressure psi (MPa, bar)
			Pump Model	Thread Type	Bare Sprayer	Air Controls	Siphon Hose	Fluid Filter	Hose and Gun		
233891*	A	15:1	015.050	BSPP	✓					100 (0.7, 7)	1500 (10.5, 105)
233892*	A	20:1	020.035	BSPP	✓					100 (0.7, 7)	2000 (14.0, 140)
233893*	A	30:1	030.020	BSPP	✓					100 (0.7, 7)	3000 (21.0, 210)
233894*	A	30:1	030.050	BSPP	✓					100 (0.7, 7)	3000 (21.0, 210)
233895*	A	40:1	040.035	BSPP	✓					100 (0.7, 7)	4000 (28.0, 280)
233896	A	15:1	015.050	NPT	✓					100 (0.7, 7)	1500 (10.5, 105)
233897	A	20:1	020.035	NPT	✓					100 (0.7, 7)	2000 (14.0, 140)
233898	A	30:1	030.020	NPT	✓					100 (0.7, 7)	3000 (21.0, 210)
233899	A	30:1	030.050	NPT	✓					100 (0.7, 7)	3000 (21.0, 210)
233900	A	40:1	040.035	NPT	✓					100 (0.7, 7)	4000 (28.0, 280)
233901	A	15:1	015.050	NPT	✓	✓	✓			100 (0.7, 7)	1500 (10.5, 105)
233902	A	20:1	020.035	NPT	✓	✓	✓			100 (0.7, 7)	2000 (14.0, 140)
233903	A	30:1	030.020	NPT	✓	✓	✓			100 (0.7, 7)	3000 (21.0, 210)
233904	B	30:1	030.050	NPT	✓	✓	✓			100 (0.7, 7)	3000 (21.0, 210)
233905	A	40:1	040.035	NPT	✓	✓	✓			100 (0.7, 7)	4000 (28.0, 280)
233906	B	15:1	015.050	NPT	✓	✓	✓	✓	✓ (AA)	100 (0.7, 7)	1500 (10.5, 105)
233907	B	20:1	020.035	NPT	✓	✓	✓	✓	✓ (AA)	100 (0.7, 7)	2000 (14.0, 140)
233908	B	30:1	030.020	NPT	✓	✓	✓	✓	✓ (AA)	100 (0.7, 7)	3000 (21.0, 210)
233909	B	30:1	030.050	NPT	✓	✓	✓	✓	✓ (AA)	100 (0.7, 7)	3000 (21.0, 210)
233910	B	40:1	040.035	NPT	✓	✓	✓	✓	✓ (AA)	100 (0.7, 7)	4000 (28.0, 280)
288120	A	15:1	015.050	NPT	✓	✓	✓	✓	✓ (AA Carbide)	100 (0.7, 7)	1500 (10.5, 105)

* These packages are only available in Europe.

(AA) These packages are Air Assisted Spray packages.

Cart Mount Sprayers

Sprayer Part No.	Series	Ratio	Sprayer Includes:							Maximum Air Input Pressure psi (MPa, bar)	Maximum Fluid Working Pressure psi (MPa, bar)
			Pump Model	Thread Type	Air Controls	Siphon Cup	Siphon Hose	Fluid Filter	Hose and Gun		
233911*	A	15:1	015.050	NPT	✓	✓				100 (0.7, 7)	1500 (10.5, 105)
233912*	A	20:1	020.035	NPT	✓	✓				100 (0.7, 7)	2000 (14.0, 140)
233913*	A	30:1	030.020	NPT	✓	✓				100 (0.7, 7)	3000 (21.0, 210)
233914*	A	30:1	030.050	NPT	✓	✓				100 (0.7, 7)	3000 (21.0, 210)
233915*	A	40:1	040.035	NPT	✓	✓				100 (0.7, 7)	4000 (28.0, 280)
233916*	B	15:1	015.050	NPT	✓	✓		✓	✓ (AA)	100 (0.7, 7)	1500 (10.5, 105)
233917*	B	20:1	020.035	NPT	✓	✓		✓	✓ (AA)	100 (0.7, 7)	2000 (14.0, 140)
233918*	B	30:1	030.020	NPT	✓	✓		✓	✓ (AA)	100 (0.7, 7)	3000 (21.0, 210)
233919*	B	30:1	030.050	NPT	✓	✓		✓	✓ (AA)	100 (0.7, 7)	3000 (21.0, 210)
233920*	B	40:1	040.035	NPT	✓	✓		✓	✓ (AA)	100 (0.7, 7)	4000 (28.0, 280)
233921	A	15:1	015.050	NPT	✓		✓			100 (0.7, 7)	1500 (10.5, 105)
233922	A	20:1	020.035	NPT	✓		✓			100 (0.7, 7)	2000 (14.0, 140)
233923	A	30:1	030.020	NPT	✓		✓			100 (0.7, 7)	3000 (21.0, 210)
233924	A	30:1	030.050	NPT	✓		✓			100 (0.7, 7)	3000 (21.0, 210)
233925	A	40:1	040.035	NPT	✓		✓			100 (0.7, 7)	4000 (28.0, 280)
233926	B	15:1	015.050	NPT	✓		✓	✓	✓ (AA)	100 (0.7, 7)	1500 (10.5, 105)
233927	B	20:1	020.035	NPT	✓		✓	✓	✓ (AA)	100 (0.7, 7)	2000 (14.0, 140)
233928	B	30:1	030.020	NPT	✓		✓	✓	✓ (AA)	100 (0.7, 7)	3000 (21.0, 210)
233929	B	30:1	030.050	NPT	✓		✓	✓	✓ (AA)	100 (0.7, 7)	3000 (21.0, 210)
233930	B	40:1	040.035	NPT	✓		✓	✓	✓ (AA)	100 (0.7, 7)	4000 (28.0, 280)
234725	A	30:1	030.050	NPT	✓		✓			100 (0.7, 7)	3000 (21.0, 210)
234726	A	40:1	040.035	NPT	✓		✓			100 (0.7, 7)	4000 (28.0, 280)
234727	A	30:1	030.050	NPT	✓		✓	✓	✓ (A)	100 (0.7, 7)	3000 (21.0, 210)
234728	A	40:1	040.035	NPT	✓		✓	✓	✓ (A)	100 (0.7, 7)	4000 (28.0, 280)
288123	A	15:1	015.050	NPT	✓		✓	✓	✓ (AA Carbide)	100 (0.7, 7)	1500 (10.5, 105)

*These packages are only available in Europe.

(A) Airless Spray packages.

(AA) Air Assisted Spray packages.


WARNING
**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.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. Refer to the **Technical Data** on page 26 for the maximum working pressure of this equipment.
- Use fluids and solvents which 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 Graco hoses to temperatures above 82°C (180°F) or below -40°C (-40°F).
- Wear hearing protection when operating this equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

**SKIN INJECTION HAZARD**

Spray from the gun, 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 just a cut, but it is a serious injury. **Get immediate surgical treatment.**
- Do not point the gun at anyone or at any part of the body.
- Do not put your hand or fingers over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Do not "blow back" fluid; this is not an air spray system.
- Always have the tip guard and the trigger guard on the gun when spraying.
- Check the gun diffuser operation weekly. Refer to the gun manual.
- Be sure the gun trigger safety operates before spraying.
- Lock the gun trigger safety when you stop spraying.
- Follow the **Pressure Relief Procedure** on page 12 if the spray tip 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 high pressure couplings; you must replace the entire hose.



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.

- Ground the equipment and the object being sprayed. Refer to **Grounding** on page 8.
- If there is any static sparking or you feel an electric shock while using this equipment, stop spraying 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 sprayed.
- Keep the spray area free of debris, including solvent, rags, and gasoline.
- Electrically disconnect all equipment in the spray area.
- Extinguish all open flames or pilot lights in the spray area.
- Do not smoke in the spray area.
- Do not turn on or off any light switch in the spray area while operating or if fumes are present.
- Do not operate a gasoline engine in the spray area.



TOXIC FLUID HAZARD

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

- 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 respirator as recommended by the fluid and solvent manufacturer.



A series of horizontal lines spanning the width of the page, providing a template for writing or drawing.

Installation

General Information

- Reference numbers and letters in parentheses in the text refer to the callouts in the figures and the parts drawing.
- Always use Genuine Graco Parts and Accessories, available from your Graco distributor. If you supply your own accessories, be sure they are adequately sized and pressure-rated for your system.
- FIG. 2 is a guide for selecting and installing system components and accessories. It is not an actual system design. Contact your Graco distributor for assistance in designing a system to suit your particular needs.

2. *Air and fluid hoses:* use only electrically conductive hoses.
3. *Air compressor:* follow manufacturer's recommendations.
4. *Spray gun:* ground through connection to a properly grounded fluid hose and pump.
5. *Fluid supply container:* follow your local code.
6. *Object being sprayed:* follow your local code.
7. *Solvent pails used when flushing:* follow your local code. Use only metal pails, which are conductive, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts the grounding continuity.

Grounding

WARNING



Before operating the pump, ground the system as explained below. Read the warnings on page 6.

1. *Pump:* use Part No. 238909 Ground Wire and Clamp (supplied). See FIG. 1. Insert one end of the ground wire (Y) into the pump's grounding clamp (X) and tighten the screw (W) securely. Connect the other end of the wire to a true earth ground.

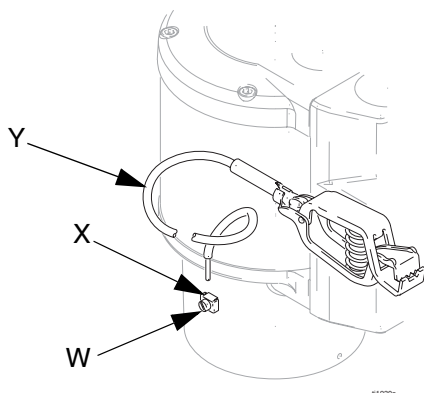
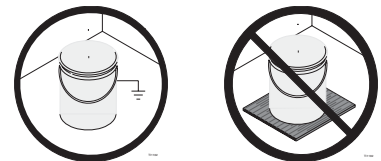
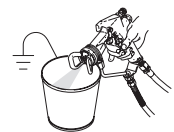


FIG. 1. Grounding Wire



8. *To maintain grounding continuity when flushing or relieving pressure,* hold a metal part of the spray gun firmly to the side of a grounded *metal* pail, then trigger the gun.

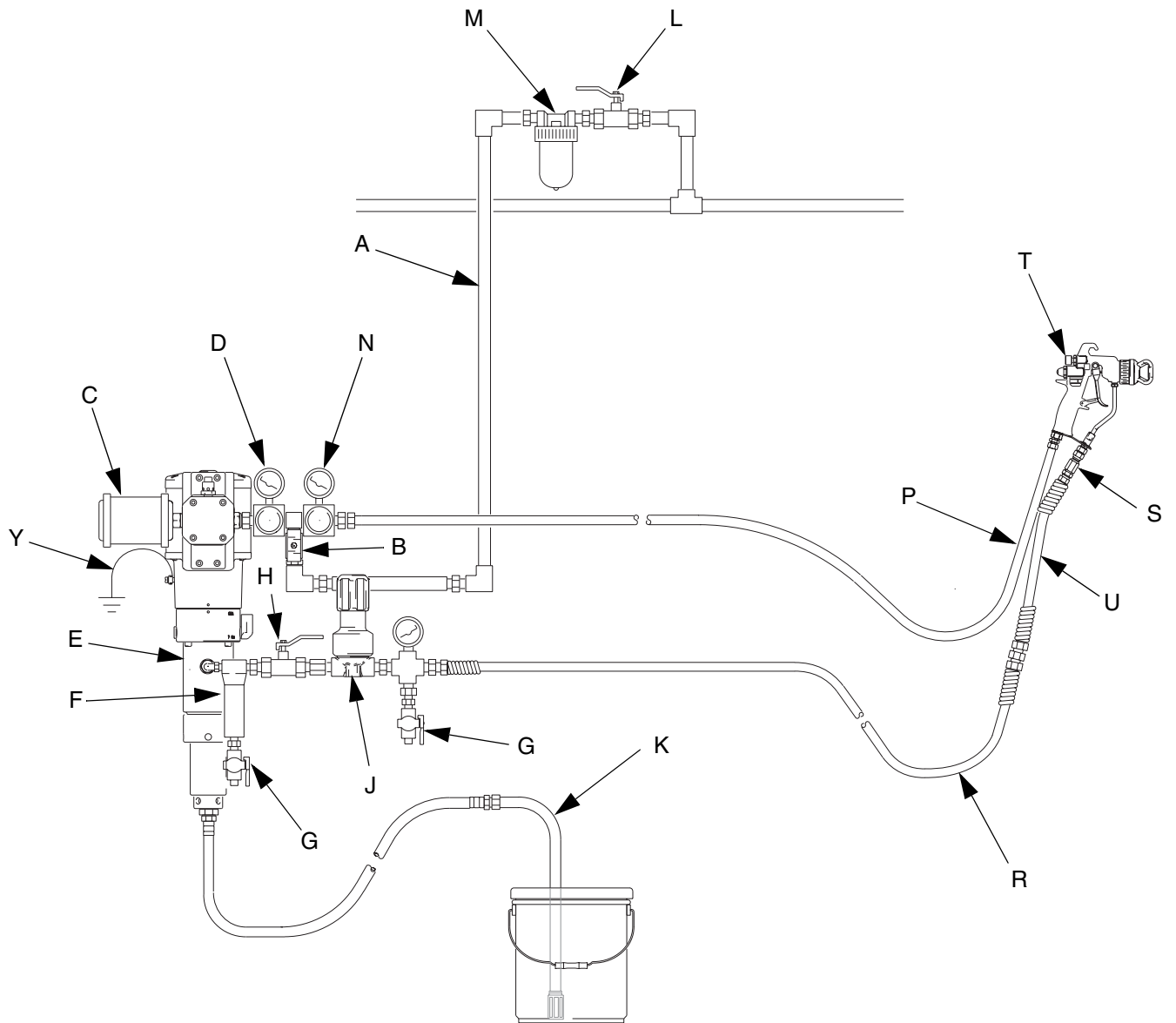


Install the Muffler

The muffler (C, FIG. 2) is shipped loose. Screw the muffler into the muffler port before installing the pump.

Air and Fluid Hoses

See FIG. 2. Be sure all air hoses (A, P) and fluid hoses (R, U) are properly sized and pressure-rated for your system. Use only electrically conductive hoses. Fluid hoses must have spring guards on both ends. Use a swivel (S) between the fluid hose (R) and the gun (T) to allow easier gun movement.



T11763C

FIG. 2. Typical Installation

Key:

- | | | | |
|---|-----------------------------|---|----------------------------|
| A | Pump Air Supply Line | M | Air Line Filter |
| B | Bleed-Type Master Air Valve | N | Gun Air Pressure Regulator |
| C | Muffer | P | Gun Air Supply Line |
| D | Pump Air Pressure Regulator | R | Gun Fluid Supply Line |
| E | Pump | S | Gun Swivel |
| F | Fluid Filter | T | Air-Assisted Spray Gun |
| G | Fluid Drain Valve | U | Fluid Whip Hose |
| H | Fluid Shutoff Valve | Y | Pump Ground Wire |
| J | Fluid Pressure Regulator | | |
| K | Fluid Suction Tube | | |
| L | Air Shutoff Valve | | |

Wall Mount Packages

FIG. 2 illustrates a wall mount system.

1. Be sure the wall can support the weight of the pump, bracket, hoses and accessories, as well as the stress caused during operation.
2. Position the wall bracket (4) about 1.2-1.5 m (4-5 ft) above the floor. For ease of operation and service, make sure the pump air inlet, fluid inlet, and fluid outlet ports are easily accessible.
3. Using the wall bracket (4) as a template, drill 9 mm mounting holes in the wall. Wall mounting dimensions are shown on page 27.
4. Attach the bracket to the wall. Use screws that are long enough to keep the pump from vibrating during operation. Be sure the bracket is level.

Air Inlet Fitting

The air inlet fitting (104) is held in place with a setscrew. See page 22. Loosen this setscrew before removing the fitting. Tighten the setscrew to hold the fitting in place.

Air Line Accessories

Install the following accessories in the order shown in FIG. 2, using adapters as necessary:

- A bleed-type master air valve (B) is required in your system to relieve air trapped between it and the air motor when the valve is closed. Be sure the bleed valve is easily accessible from the pump.
- A pump air regulator (D) controls pump speed and outlet pressure by adjusting the air pressure to the pump. Locate the regulator close to the pump.
- A gun air regulator (N) controls air pressure to the air-assisted spray gun.
- An air line filter (M) removes harmful dirt and moisture from the compressed air supply.
- A second bleed-type air valve (L) isolates the air line accessories for servicing. Locate upstream from all other air line accessories.

Fluid Inlet Fitting

The packages include either a fluid inlet adapter (7) or an elbow (8). These fittings include a sealing o-ring (7a, 8a). Be sure the o-ring is in place before installing the fitting. Screw the fitting into the pump a minimum of two full turns, until it faces the desired direction. It is not necessary to fully engage the threads. Do not overtighten.

If your package uses the fluid inlet elbow (8), connect the suction tube by pushing the tube into the elbow until it seats, then tighten the elbow nut to secure the tube.

Suction Tube Strainer

To replace the suction tube strainer (9a), loosen the clamp and remove the strainer. Slide the new clamp onto the suction tube, install the new strainer, then slide the clamp onto the strainer and squeeze it to tighten.

Fluid Line Accessories

Install the following accessories in the positions shown in FIG. 2, using adapters as necessary:

- A fluid filter (F) with a 60 mesh (250 micron) stainless steel element, to filter particles from the fluid as it leaves the pump. Install a fluid drain valve (G), which is required in your system to relieve fluid pressure in the hose and gun.
- A fluid shutoff valve (H) shuts off fluid flow.
- A fluid pressure regulator (J) allows more precise adjustment of the fluid pressure. See page 11.
- A gun or valve (T) dispenses the fluid. The gun shown in FIG. 2 is an air-assisted spray gun for light to medium viscosity fluids.
- A fluid line swivel (S) allows easier gun movement.
- A suction kit (K) allows the pump to draw fluid from a fluid container.

Flush the Pump Before First Use

The pump is tested with lightweight oil, which is left in to protect the pump parts. If the fluid you are using may be contaminated by the oil, flush it out with a compatible solvent before using the pump. See **Flush the Equipment** on page 14.

Installing a Fluid Regulator (accessory)

Packages Without a Fluid Filter

1. Install Kit 234083 (nipple and washer) into pump fluid outlet.
2. Install Part No. 112497 1/4 npt(m) x 3/8 npsm(f) Swivel (B) in the inlet of Fluid Regulator 222121 (J). See manual 307886 for information on the fluid regulator.
3. Install Part No. 166846 1/4 npt x 1/4 npsm Nipple (C) in the outlet of Fluid Regulator 222121 (J).
4. Screw the swivel (B) onto the nipple (A).
5. Connect the fluid hose to nipple (C).

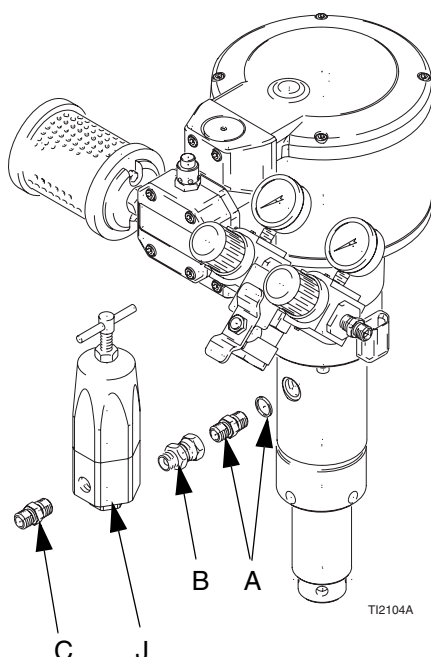


FIG. 3. Fluid Regulator on Package Without Fluid Filter

Packages With a Fluid Filter

1. Install Kit 234083 (nipple and washer) into pump fluid outlet.
2. Install Part No. 235208 3/8 npt (mx) Swivel (B) in the inlet of Fluid Filter 223160 (F). The swivel and filter are supplied with some packages.
3. Install Part No. 166846 1/4 npt x 1/4 npsm Nipple (C) in the outlet of Fluid Regulator 222121 (J). See manual 307886 for information on the fluid regulator.
4. Screw the fluid regulator (J) onto the nipple (D) at the outlet of the fluid filter (F).
5. Screw the swivel (B) onto the nipple (A).
6. Connect the fluid hose to nipple (C).

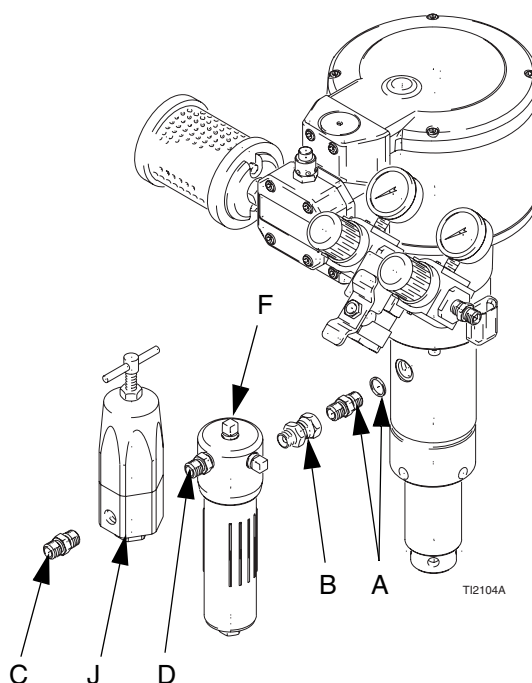



FIG. 4. Fluid Regulator on Package With Fluid Filter

Operation

Pressure Relief Procedure

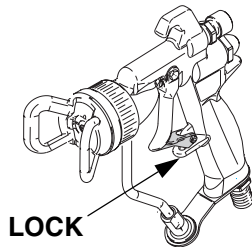
WARNING



Read the warnings on page 5, and follow the Pressure Relief Procedure below whenever you:

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

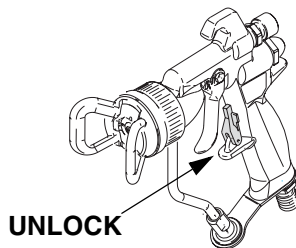
1. Lock the trigger.



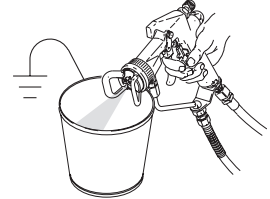
2. Turn off the air bleed valves to the fluid source and to the gun.



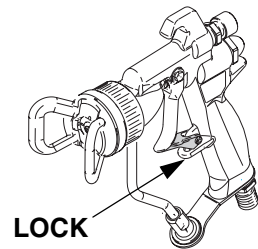
3. Unlock the trigger.



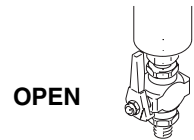
4. Trigger the gun into a grounded metal waste container to relieve the fluid pressure.



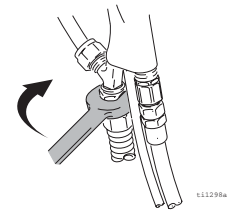
5. Lock the trigger.



6. Open the drain valve on the fluid filter and all other fluid drain valves in the system, having a waste container ready to catch the drainage. Leave the drain valve(s) open until you are ready to spray again.

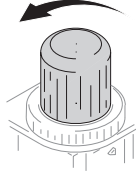


7. If the nozzle or hose is completely clogged or pressure is not fully relieved, slowly loosen the hose end coupling. Now clear the nozzle or hose.

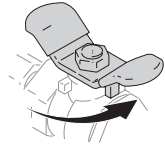


Starting and Adjusting the Pump

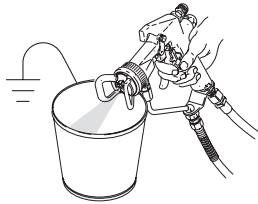
1. Connect the suction kit (K) to the pump's fluid inlet, and place the tube into the fluid supply.
2. Close the pump air regulator (D).



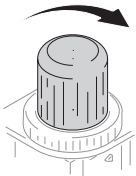
3. Open the pump's bleed-type master air valve (B).



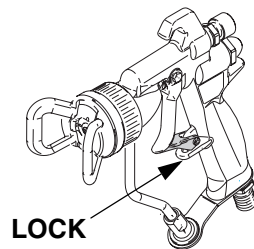
4. Hold a metal part of the gun (T) firmly to the side of a grounded metal pail and hold the trigger open.



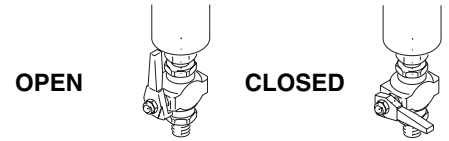
5. Slowly open the air regulator (D) until the pump starts.



6. Cycle the pump slowly until all air is pushed out and the pump and hoses are fully primed.
7. Release the gun trigger and lock the trigger safety latch. The pump should stall against pressure.



8. If the pump fails to prime properly, open the drain valve (G). Use the drain valve as a priming valve until fluid flows from the valve. Close the drain valve when all air is eliminated.



9. With the pump and lines primed, and with adequate air pressure and volume supplied, the pump will start and stop as you open and close the gun. In a circulating system, the pump will speed up or slow down on demand, until the air supply is shut off.
10. Use the air regulator to control the pump speed and the fluid pressure. Always use the lowest air pressure necessary to get the desired results. Higher pressures cause premature tip and pump wear.

⚠ CAUTION

Never allow the pump to run dry of the fluid being pumped. A dry pump will quickly accelerate to a high speed, possibly damaging itself. If your pump accelerates quickly, or is running too fast, stop it immediately and check the fluid supply. If the supply container is empty and air has been pumped into the lines, refill the container and prime the pump and the lines with fluid, or flush and leave it filled with a compatible solvent. Be sure to eliminate all air from the fluid system.


Shutdown and Care of the Pump



For a brief shutdown, relieve the pressure, page 12. Stop the pump at the bottom of its stroke to prevent fluid from drying on the exposed displacement rod and damaging the throat packings.

For a longer shutdown, or overnight, always flush the pump before the fluid dries on the displacement rod, page 14. Relieve the pressure, page 12.

Flush the Equipment

Flush before changing colors, at the end of the day, before storing, and before repairing the equipment.

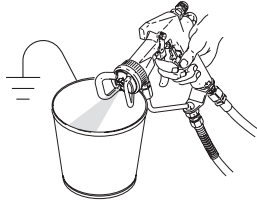
 **WARNING**

Before flushing, be sure the entire system and all grounding pails are properly grounded. See page 8.

Flush with a fluid that is compatible with the fluid you are pumping and with the wetted parts of your system. Check with your fluid manufacturer or supplier for recommended flushing fluids and flushing frequency. Always flush the pump before fluid dries on the displacement rod.

1. Relieve the pressure, page 12.

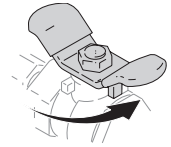


2. Remove the spray tip from the gun. See the gun manual.

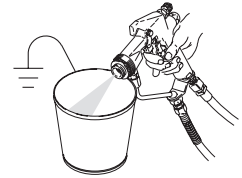
3. Change the fluid source to solvent.



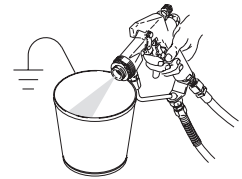
4. Hold a metal part of the gun firmly to the side of a grounded metal pail.
5. Start the pump. Always use the lowest possible fluid pressure when flushing.



6. Trigger the gun. Flush until clean solvent flows from the gun.



7. Relieve the pressure, page 12.



Maintenance

Preventive Maintenance Schedule

Establish a preventive maintenance schedule, based on the sprayer's service history.

Storage

Before storing the sprayer, always flush it, page 14.
Relieve pressure, page 12.

Tightening Threaded Connections

Before each use, check all hoses for wear or damage. Replace as necessary. Check that all threaded connections are tight and leak-free.

Cleaning

Clean the outside of the equipment daily, using a soft cloth and compatible solvent.

Clean the suction tube (K) and inlet strainer daily, using a compatible solvent.

Clean the air filter (M) in your main air line at least once a week.

Wet-Cup

See FIG. 5. The level display is an indicator of the fluid level in the wet-cup. Keep the level display 1/2 full of Graco Throat Seal Liquid (TSL) or another compatible fluid.

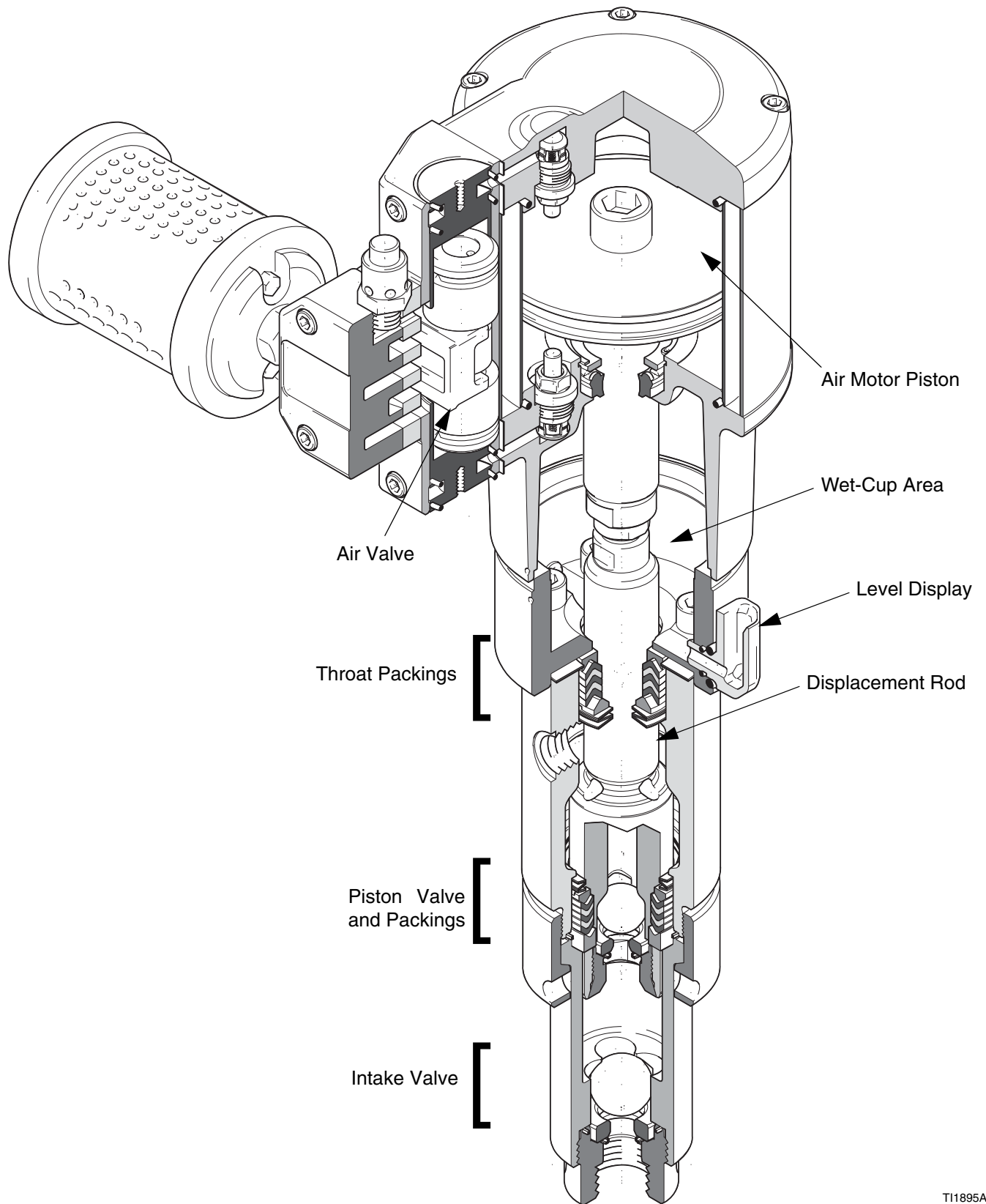
Periodically drain the wet-cup by removing the plug on the opposite side from the level display, then refill with TSL.

Troubleshooting

1. Relieve the pressure, page 12, before checking or servicing the equipment.
2. Check all possible problems and causes before disassembling the pump.

Problem	Cause	Solution
Pump fails to operate.	Restricted line or inadequate air supply; closed or clogged valves.	Clear line or increase air supply. Check that valves are open.
	Obstructed fluid hose or gun; fluid hose ID is too small.	Open, clear*; use hose with larger ID.
	Fluid dried on the displacement rod.	Clean; always stop pump at the bottom of its stroke. Keep wet-cup filled with compatible fluid.
	Dirty, worn, or damaged air motor parts.	Clean or repair air motor. See manual 309462.
Pump operates, but output is low on both strokes.	Restricted line or inadequate air supply; closed or clogged valves.	Clear line or increase air supply. Check that valves are open.
	Obstructed fluid hose or gun; fluid hose ID is too small.	Open, clear*; use hose with larger ID.
	Worn packings in displacement pump.	Replace packings.
Pump operates, but output is low on downstroke.	Held open or worn intake valve.	Clear valve, service; see manual 309462.
Pump operates, but output is low on upstroke.	Held open or worn piston valve or packings.	Clear valve; replace packings. See manual 309462.
Erratic or accelerated pump speed.	Exhausted fluid supply.	Refill and prime.
	Held open or worn piston valve or packings.	Clear valve; replace packings. See manual 309462.
	Held open or worn intake valve.	Clear valve, service; see manual 309462.
Fluid being pumped is visible in the level display.	Worn throat packings.	Replace throat packings; see manual 309462. Clean level display.

* To determine if the fluid hose or gun is obstructed, relieve the pressure. Disconnect the fluid hose and place a container at the pump fluid outlet to catch any fluid. Turn on the air just enough to start the pump. If the pump starts when the air is turned on, the obstruction is in the hose or gun.

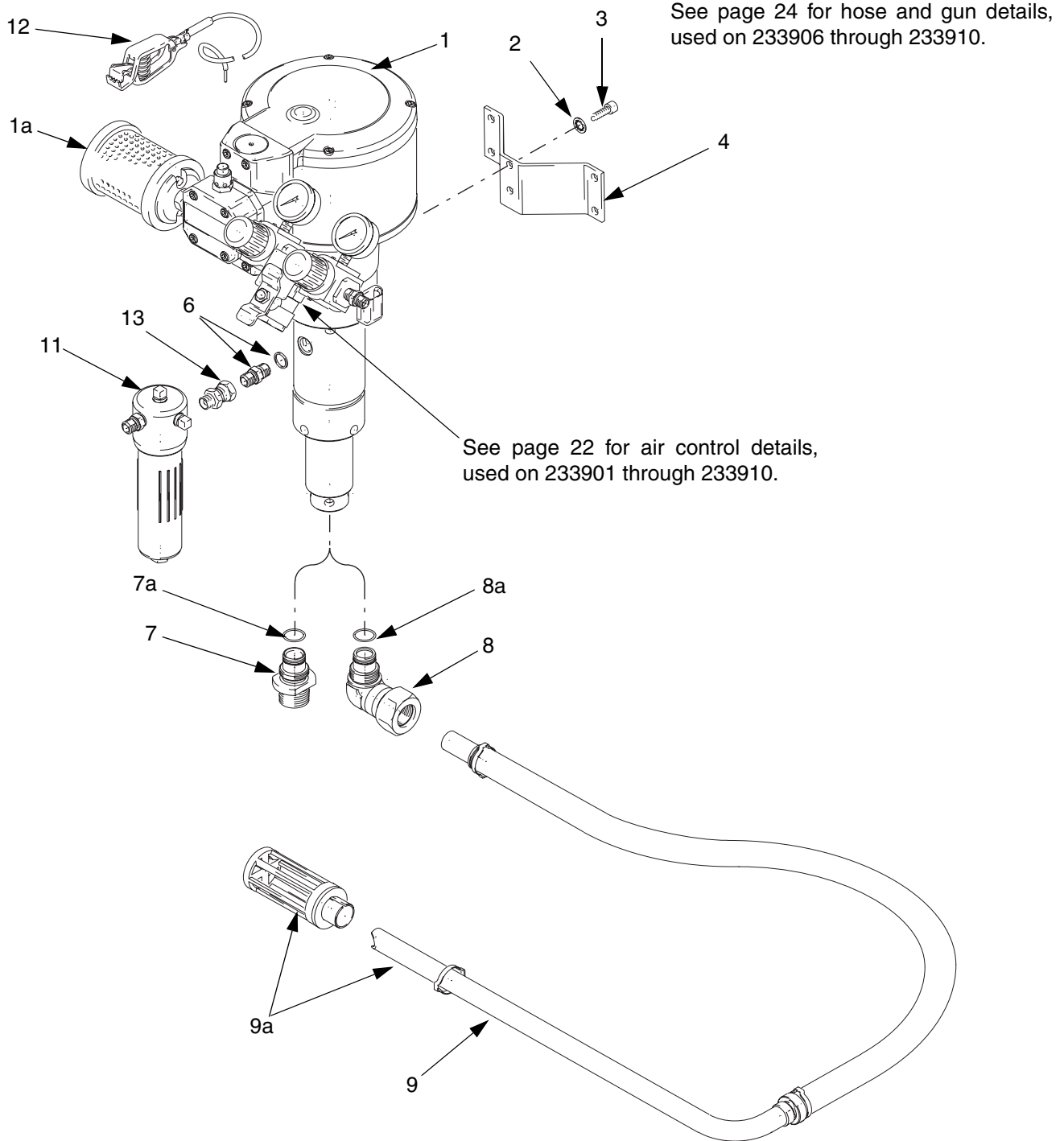


T11895A

FIG. 5. Cutaway View of Merkur Pump


Parts

Wall Mount Packages



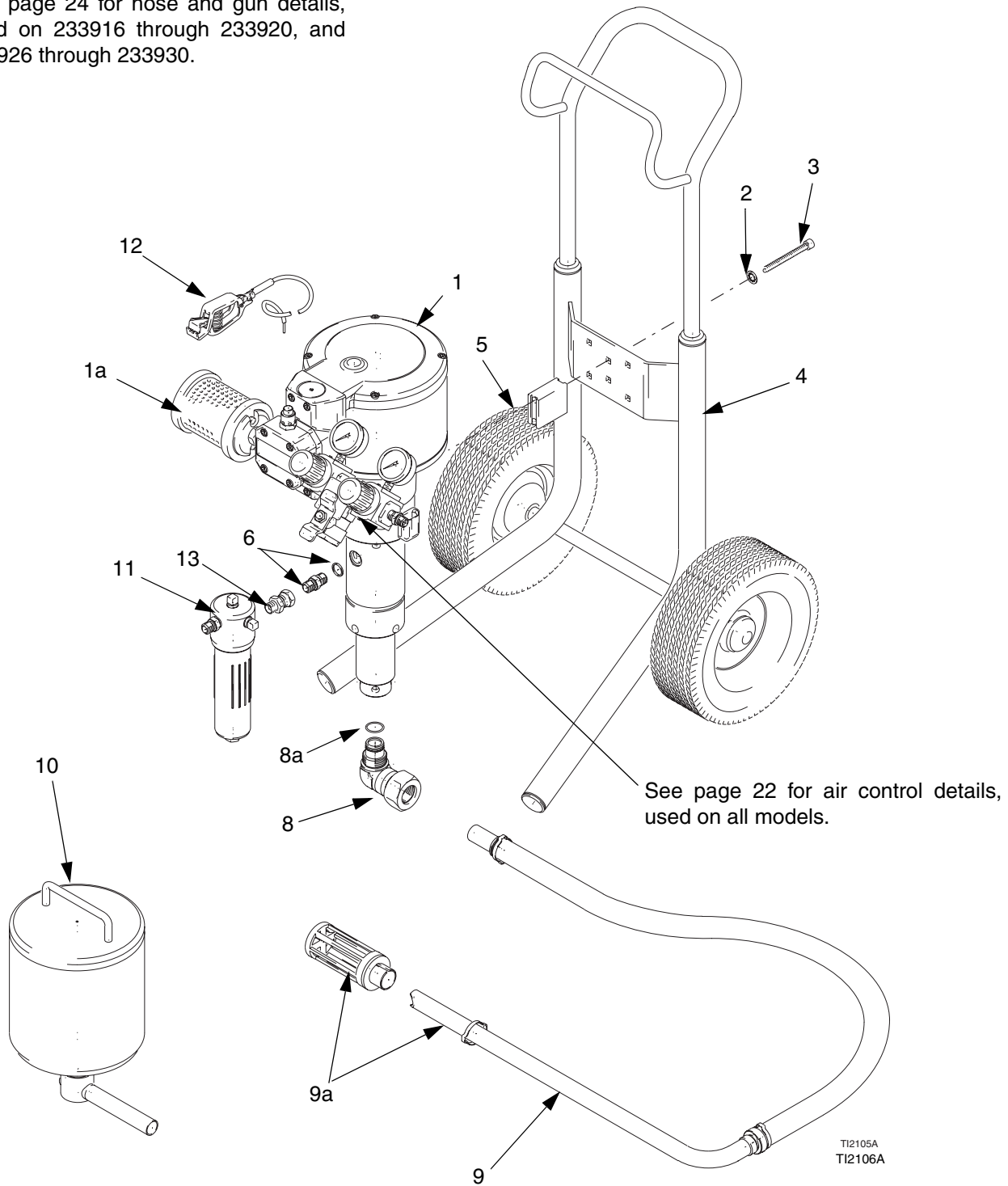
TI2104A

Wall Mount Packages


Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
1	233752	PUMP; used on 233891, 233896, 233901, and 233906; see manual 309462	1	8	233888	ELBOW, inlet, fluid; M26 x 1.5(f); includes item 8a; used on 233901 through 233910	1
	233753	PUMP; used on 233892, 233897, 233902, and 233907; see manual 309462	1	8a	15F150	. O-RING	1
	233754	PUMP; used on 233893, 233898, 233903, and 233908; see manual 309462	1	9	287258	ASSY, tube, suction; 3 ft (0.9 m); includes item 9a; used on 233901 through 233910	1
	233755	PUMP; used on 233894, 233899, 233904, and 233909; see manual 309462	1	9a*	233946	. STRAINER, suction tube; nylon with stainless steel 1.8 mm mesh screen	1
	233756	PUMP; used on 233895, 233900, 233905, and 233910; see manual 309462	1	11	223160	FILTER, fluid; used on 233906 through 233910; see manual 307273	1
1a	117237	MUFFLER; part of item 1; shipped loose	1	12	238909	GROUND WIRE AND CLAMP	1
2	100186	WASHER, lock, internal; 5/16	2	13	235208	UNION, swivel; 3/8 npt (m x f); used on 233906 through 233910	1
3	115264	SCREW, cap, socket-hd; M8 x 16	2			 See page 22 for air control details, used on 233901 through 233910.	
4	117351	BRACKET, wall	1			See page 24 for hose and gun details, used on 233906 through 233910.	
6	234083	KIT, conversion (consists of 3/8 npt x 3/8 bspp nipple and washer)	1			* Part No. 233952 Strainer with 1.0 mm mesh screen is available as an option.	
7	245681	ADAPTER, inlet, fluid; 3/4 npt(m); includes item 7a; used on 233896 through 233900	1				
7a	15F150	. O-RING	1				

Cart Mount Packages

See page 24 for hose and gun details, used on 233916 through 233920, and 233926 through 233930.

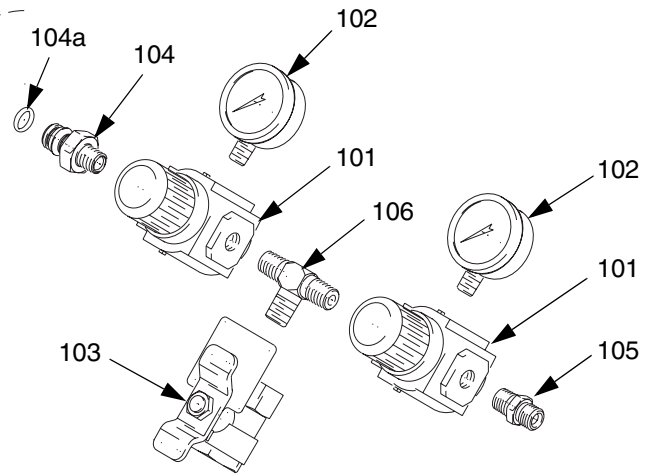


Cart Mount Packages

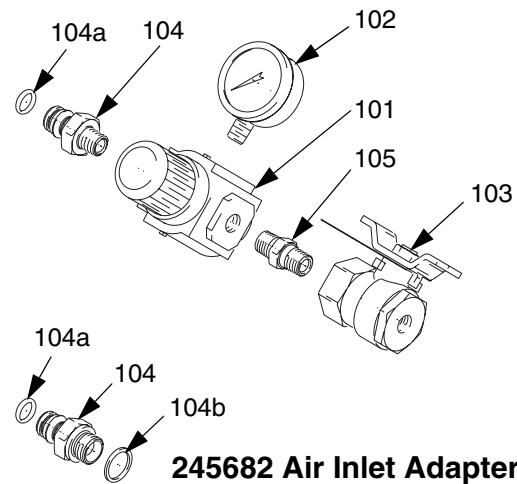
Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
1	233752	PUMP; used on 233911, 233916, 233921, and 233926; see manual 309462	1	9a*	233946	STRAINER, suction tube; nylon with stainless steel 1.8 mm mesh screen	1
	233753	PUMP; used on 233912, 233917, 233922, and 233927; see manual 309462	1	10	245717	CUP, fluid; 5 liter (1.3 gal.); used on 233911 through 233920 (only available in Europe)	1
	233754	PUMP; used on 233913, 233918, 233923, and 233928; see manual 309462	1	11	223160	FILTER, fluid; used on 233916 through 233920, 233926 through 233930, 234727, and 234728; see manual 307273	1
	233755	PUMP; used on 233914, 233919, 233924, 233929, 234725, and 234727; see manual 309462	1	12	238909	GROUND WIRE AND CLAMP	1
	233756	PUMP; used on 233915, 233920, 233925, 233930, 234726, and 234728; see manual 309462	1	13	235208	UNION, swivel; 3/8 npt (m x f); used on 233916 through 233920, 233926 through 233930, 234727, and 234728	1
1a	117237	MUFFLER; part of item 1; shipped loose	1	14	235992	VALVE, ball; only used on 234727 and 234728 (Not Shown)	1
2	100186	WASHER, lock, internal; 5/16	2	 See page 22 for air control details, used on all models.			
3	117368	SCREW, cap, socket-hd; M8 x 65	2				
4	243606	CART, portable	1	See page 24 for hose and gun details, used on 233916 through 233920, and 233926 through 233930.			
5	15A796	BLOCK, mounting	1				
6	234083	KIT, conversion (consists of a 3/8 npt x 3/8 bspp nipple and washer)	1	* Part No. 233952 Strainer with 1.0 mm mesh screen is available as an option.			
8	233888	ELBOW, inlet, fluid; M26 x 1.5(f); includes item 8a	1				
8a	15F150	O-RING	1				
9	287258	ASSY, tube, suction; 3 ft (0.9 m); includes item 9a; used on 233921 through 233930 and 234725 through 234728	1				

Air Inlet Details

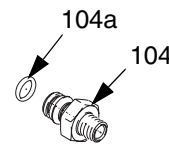
245722 Air Control Kit



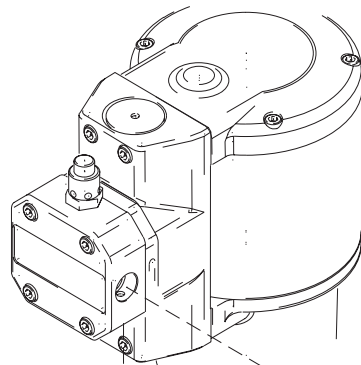
245723 Air Control Kit



245682 Air Inlet Adapter

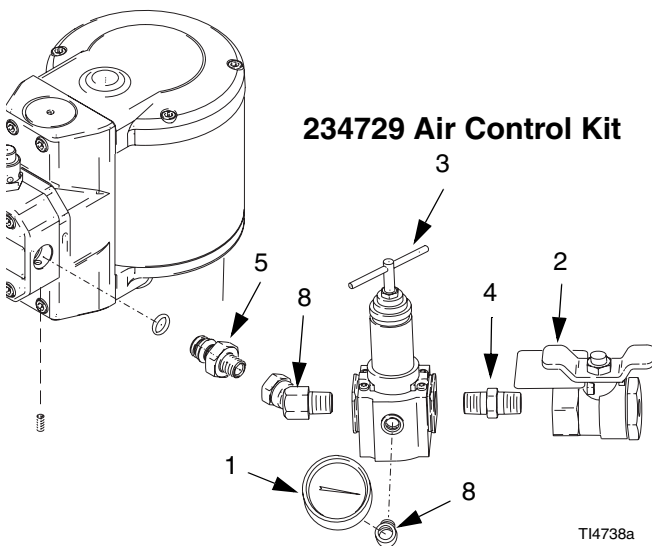


245718 Air Inlet Adapter



Setscrew

234729 Air Control Kit



T14738a

T12107A

Air Inlet Details

245722 Air Control Kit, used on 233906 through 233910, 233916 through 233920, and 233926 through 233930

Ref. No.	Part No.	Description	Qty
100	245722	CONTROL, air; includes items 101-106	1
101	116513	. AIR REGULATOR	2
102	110436	. GAUGE, air	2
103	116473	. VALVE, air, bleed-type; 1/4 npt (fbe)	1
104	245718	. ADAPTER; 1/4 npt(m); includes item 104a	1
104a	117114	. . O-RING	1
105	162453	. NIPPLE; 1/4 npt x 1/4 npsm	1
106	115219	. TEE; 1/4 npt(m)	1

245723 Air Control Kit, used on 233901 through 233905, 233911 through 233915, and 233921 through 233925

Ref. No.	Part No.	Description	Qty
100	245723	CONTROL, air; includes items 101-105	1
101	116513	. AIR REGULATOR	1
102	110436	. GAUGE, air	1
103	116473	. VALVE, air, bleed-type; 1/4 npt (fbe)	1
104	245718	. ADAPTER; 1/4 npt(m); includes item 104a	1
104a	117114	. . O-RING	1
105	156971	. NIPPLE; 1/4 npt	1

245682 Air Inlet Adapter, used on 233891 through 233895

Ref. No.	Part No.	Description	Qty
104	245682	ADAPTER; 3/8 bspp(m); includes items 104a and 104b	1
104a	117114	. O-RING	1
104b	117001	. SEAL, flat	1

245718 Air Inlet Adapter, used on 233896 through 233900

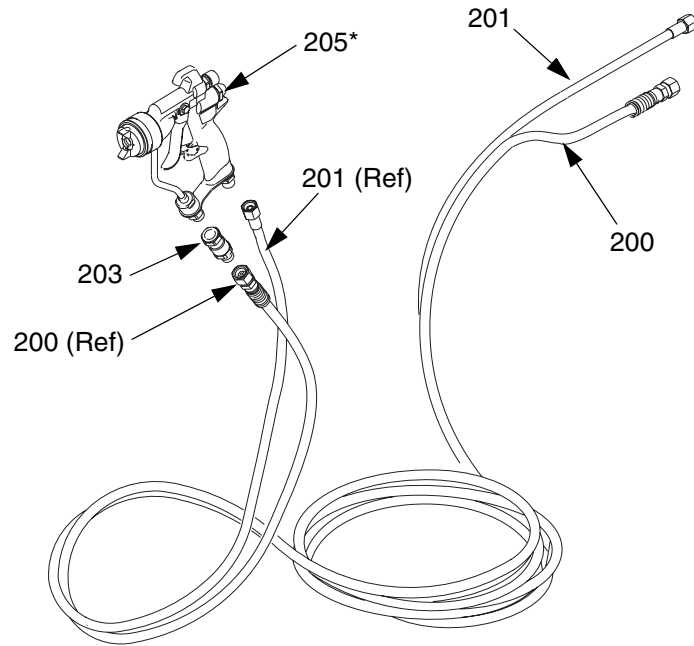
Ref. No.	Part No.	Description	Qty
104	245718	ADAPTER; 1/4 npt(m); includes item 104a only	1
104a	117114	. O-RING	1

234729 Air Control Kit, used on 234725 through 234728

Ref. No.	Part No.	Description	Qty.
1	113911	GAUGE, pressure	1
2	116473	VALVE	1
3	119361	REGULATOR	1
4	156971	NIPPLE	1
5	245718	ADAPTER, assy.	1
7	113630	ELBOW, street 45° 1/8 NPT	1
8	110220	UNION, adapter, swivel	1

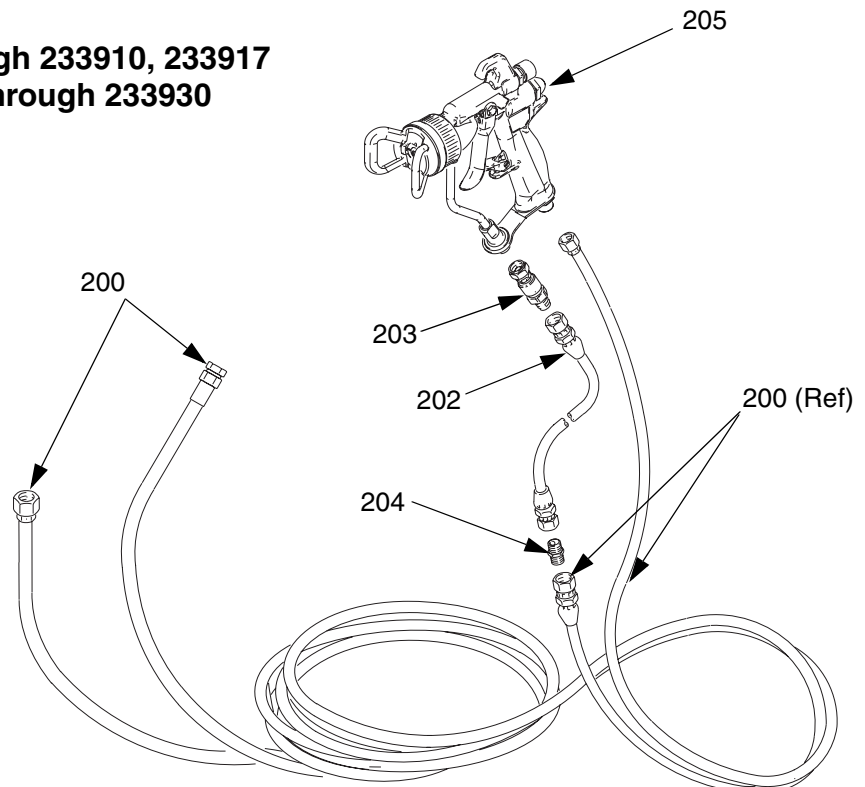
Hose and Gun Details

Used on Models 233906, 233916,
233926, 28120, and 288123



TI2108A

Used on Models 233907 through 233910, 233917
through 233920, and 233927 through 233930



Fluid and air hoses (200) are bundle-wrapped.

TI2109A

Hose and Gun Details

Used on Models 233906, 233916, 233926, 288120 and 288123

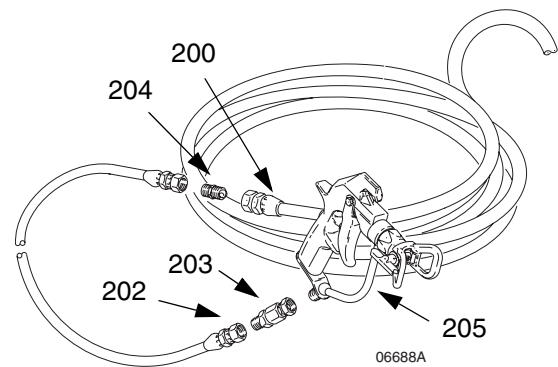
Ref. No.	Part No.	Description	Qty
200	241812	HOSE, fluid; 1/4 npsm(fbe); 1/4 in. (6 mm) ID; 25 ft (7.6 m); nylon	1
201	241811	HOSE, air; 1/4 npsm(fbe); 1/4 in. (6 mm) ID; 25 ft (7.6 m)	1
203	115898	SWIVEL; 1/4 npsm (m x f)	1
205*	288844	GUN, spray, AA Series; see manual 311001	1
	287926	GUN, spray, AA Series; see manual 311001 (288120 and 288123 only)	1

Used on Models 233907 through 233910, 233917 through 233920, and 233927 through 233930

Ref. No.	Part No.	Description	Qty
200	239074	HOSE, bundle, fluid/air; 1/4 npsm(fbe); 1/4 in. (6 mm) ID nylon fluid hose, 3/16 in. (5 mm) ID air hose; 25 ft (7.6 m)	1
202	239069	HOSE, whip, fluid; 1/4 npsm (fbe); 3/16 in. (5 mm) ID; 2 ft (0.6 m)	1
203	189018	SWIVEL; 1/4 npsm (m x f)	1
204	166846	ADAPTER; 1/4 npt x 1/4 npsm (mbe)	1
205	249242	GUN, spray, air-assisted; see manual 311001	1

Used on Models 234727 and 234728

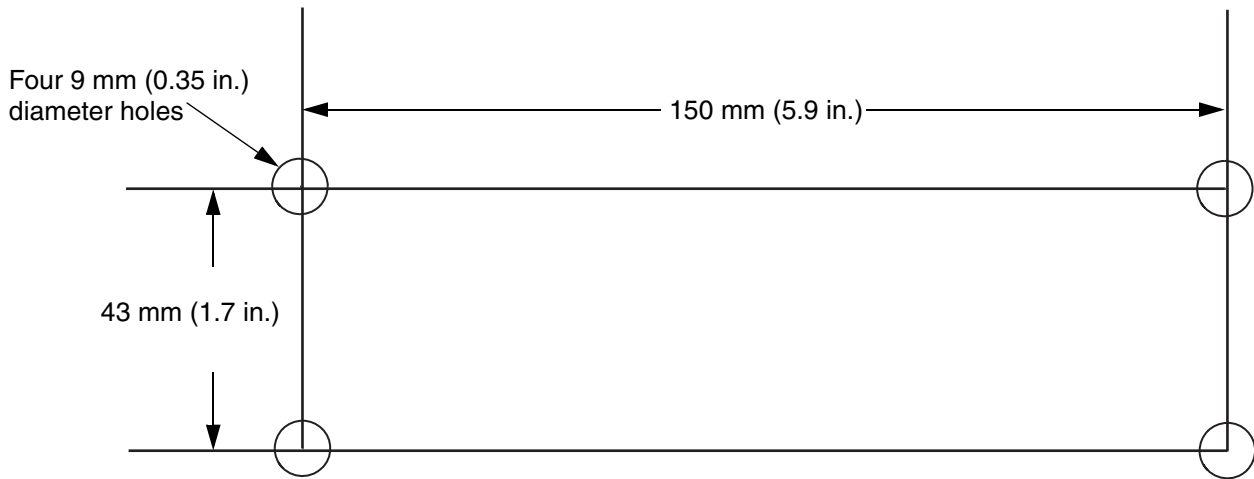
Ref. No.	Part No.	Description	Qty.
200	239107	HOSE, cpld, 6.3 mm (1/4 in.) SST	1
202	239069	HOSE, whip, fluid; 1/4 npsm (fbe); 3/16 in. (5 mm) ID; 2 ft (0.6 m)	
204	166846	ADAPTER, 1/4 npt x 1/4 npsm	1
205	XTR504	GUN, spray, airless; see manual 309092	1



Technical Data

Category	Data
Maximum fluid working pressure	<p><i>Part No. 233891, 233896, 233901, 233906, 233911, 233916, 233921, 233926, 288120, 288123:</i> 1500 psi (10.5 MPa, 105 bar)</p> <p><i>Part No. 233892, 233897, 233902, 233907, 233912, 233917, 233922, 233927:</i> 2000 psi (14.0 MPa, 140 bar)</p> <p><i>Part No. 233893, 233894, 233898, 233899, 233903, 233904, 233908, 233909, 233913, 233914, 233918, 233919, 233923, 233924, 233928, 233929, 234725, 234727:</i> 3000 psi (21.0 MPa, 210 bar)</p> <p><i>Part No. 233895, 233900, 233905, 233910, 233915, 233920, 233925, 233930, 234726, 234728:</i> 4000 psi (28.0 MPa, 280 bar)</p>
Maximum air input pressure	100 psi (0.7 MPa, 7 bar)
Minimum air input pressure	7 psi (0.05 MPa, 0.5 bar)
Ratio	<p><i>Part No. 233891, 233896, 233901, 233906, 233911, 233916, 233921, 233926, 288120, 288123:</i> 15:1</p> <p><i>Part No. 233892, 233897, 233902, 233907, 233912, 233917, 233922, 233927:</i> 20:1</p> <p><i>Part No. 233893, 233894, 233898, 233899, 233903, 233904, 233908, 233909, 233913, 233914, 233918, 233919, 233923, 233924, 233928, 233929, 234725, 234727:</i> 30:1</p> <p><i>Part No. 233895, 233900, 233905, 233910, 233915, 233920, 233925, 233930, 234726, 234728:</i> 40:1</p>
Operating temperature range	50-160°F (10-71°C)
Wetted parts	<p>Pump: See manual 309462.</p> <p>Gun (if present): See manual 311001 or 306686.</p> <p>Fluid Filter (if present): See manual 307273.</p> <p>Fluid Hoses (if present): stainless steel, nylon</p> <p>Suction Tube: synthetic rubber, nylon, stainless steel</p>

Wall Mount Dimensions



T12110A

Package Weights

Wall Mount Sprayers

Sprayer Part No.	Weight kg (lb)	Sprayer Part No.	Weight kg (lb)
233891	14.5 (32.0)	233901	16.3 (36.0)
233892	13.8 (30.5)	233902	15.7 (34.5)
233893	13.4 (29.5)	233903	15.2 (33.5)
233894	16.6 (36.5)	233904	18.4 (40.5)
233895	16.1 (35.5)	233905	17.9 (39.5)
233896	14.8 (32.5)	233906	21.8 (48.0)
233897	14.1 (31.0)	233907	21.8 (48.0)
233898	13.6 (30.0)	233908	21.3 (47.0)
233899	16.8 (37.0)	233909	24.5 (54.0)
233900	16.3 (36.0)	233910	24.1 (53.0)
		288120	21.8 (48.0)
		288123	43.6 (96.0)

Cart Mount Sprayers

Sprayer Part No.	Weight kg (lb)	Sprayer Part No.	Weight kg (lb)
233911	39.7 (87.5)	233923	37.2 (82.0)
233912	39.0 (86.0)	233924	40.4 (89.0)
233913	38.6 (85.0)	233925	40.0 (88.0)
233914	41.8 (92.0)	233926	43.6 (96.0)
233915	41.3 (91.0)	233927	43.6 (96.0)
233916	45.2 (99.5)	233928	43.1 (95.0)
233917	45.2 (99.5)	233929	46.3 (102.0)
233918	44.7 (98.5)	233930	45.9 (101.0)
233919	47.9 (105.5)	234725	40.4 (89.0)
233920	47.4 (104.5)	234726	40.0 (88.0)
233921	38.4 (84.5)	234727	44.5 (98.2)
233922	37.7 (83.0)	234728	44.1 (97.2)

Graco Standard Warranty

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

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

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

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

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

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

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

FOR GRACO CANADA CUSTOMERS

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

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you:

1-800-328-0211 Toll Free

612-623-6921

612-378-3505 Fax

*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.*

This manual contains English. MM 309463

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

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

Copyright 2002, Graco Inc. is registered to I.S. EN ISO 9001

www.graco.com

Revised 4/2008

Download from Www.Softmanuals.com. All Manuals Search And Download.

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>