

GAP Pro Spray Gun

311322M
EN

***For use with non-flammable polyurethane foams. For professional use only.
Not for use in explosive atmospheres.***

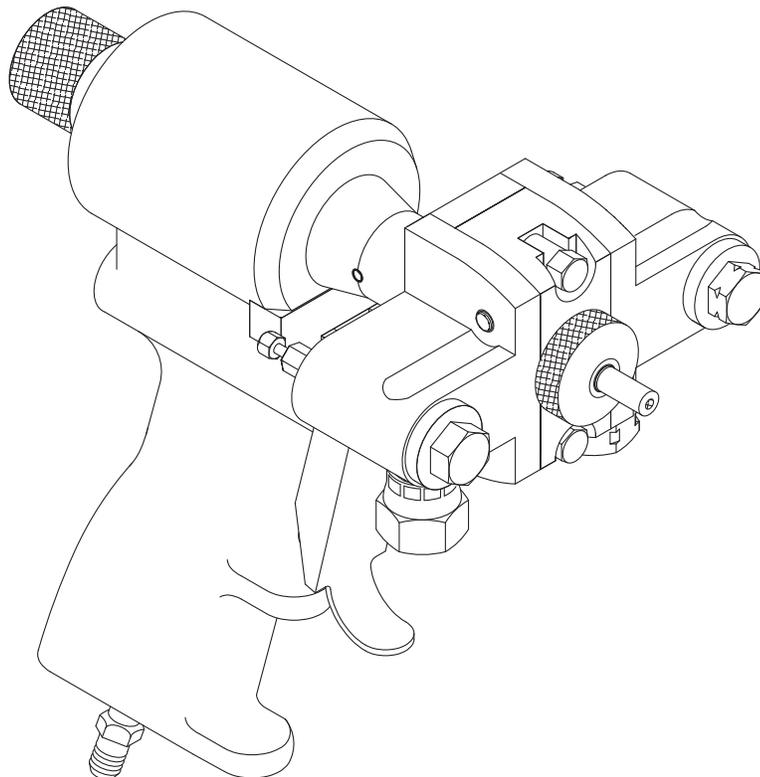
See page 3 for model information.

3000 psi (20.7 MPa, 207 bar) Maximum Working Fluid Pressure

125 psi (0.86 MPa, 8.6 bar) Maximum Working Air Pressure



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



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Gun Models

Part No.	Description	Mix Module
295557	Round Pattern Gun	#00 round
295558	Round Pattern Gun, Recirculating	#00 round
295559	Round Pattern Gun	#01 round
295560	Round Pattern Gun	#02 round
295561	Round Pattern Gun	#03 round
295562	Round Pattern Gun	#04 round

Warnings

The following general warnings are for the setup, use, grounding, maintenance, and repair of this equipment. Additional, more specific warnings may be found throughout the body of this manual where applicable. *Symbols appearing in the body of the manual refer to these general warnings. When these symbols appear throughout the manual, refer back to these pages for a description of the specific hazard.*

 WARNING	
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>Always wear appropriate personal protective equipment and cover all skin when spraying, servicing equipment, or when in the work area. Protective equipment helps prevent serious injury, including long-term exposure; inhalation of toxic fumes, mists or vapors; allergic reaction; burns; eye injury and hearing loss. This protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • A properly fitting respirator, which may include a supplied-air respirator, chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority. • Protective eyewear and hearing protection.
 	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled or swallowed.</p> <ul style="list-style-type: none"> • Read Safety Data Sheet (SDS) for handling instructions and to know the specific hazards of the fluids you are using, including the effects of long-term exposure. • When spraying, servicing equipment, or when in the work area, always keep work area well ventilated and always wear appropriate personal protective equipment. See Personal Protective Equipment warnings in this manual. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
 	<p>SKIN INJECTION HAZARD</p> <p>High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not point gun at anyone or at any part of the body. • Do not put your hand over the spray tip. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Do not spray without tip guard and trigger guard installed. • Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.

 WARNING	
	<p>PRESSURIZED EQUIPMENT HAZARD Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
	<p>FIRE AND EXPLOSION HAZARD Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Ground all equipment in the work area. See Grounding instructions. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a fire extinguisher in the work area.
	<p>EQUIPMENT MISUSE HAZARD Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment manuals. • Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine Graco/Gusmer replacement parts only. • Do not alter or modify equipment. • Use equipment only for its intended purpose. Call your Graco/Gusmer distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not kink or over bend hoses or use hoses to pull equipment. • Keep children and animals away from work area. • Comply with all applicable safety regulations.
	<p>PRESSURIZED ALUMINUM PARTS HAZARD Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.</p>

Important Two-Component Material Information

Isocyanate Conditions



Spraying or dispensing fluids that contain isocyanates creates potentially harmful mists, vapors, and atomized particulates.

- Read and understand the fluid manufacturer’s warnings and Safety Data Sheet (SDS) to know specific hazards and precautions related to isocyanates.
- Use of isocyanates involves potentially hazardous procedures. Do not spray with this equipment unless you are trained, qualified, and have read and understood the information in this manual and in the fluid manufacturer’s application instructions and SDS.
- Use of incorrectly maintained or mis-adjusted equipment may result in improperly cured material, which could cause off gassing and offensive odors. Equipment must be carefully maintained and adjusted according to instructions in the manual.
- To prevent inhalation of isocyanate mists, vapors and atomized particulates, everyone in the work area must wear appropriate respiratory protection. Always wear a properly fitting respirator, which may include a supplied-air respirator. Ventilate the work area according to instructions in the fluid manufacturer’s SDS.
- Avoid all skin contact with isocyanates. Everyone in the work area must wear chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority. Follow all fluid manufacturer recommendations, including those regarding handling of contaminated clothing. After spraying, wash hands and face before eating or drinking.
- Hazard from exposure to isocyanates continues after spraying. Anyone without appropriate personal protective equipment must stay out of the work area during application and after application for the time period specified by the fluid manufacturer. Generally this time period is at least 24 hours.
- Warn others who may enter work area of hazard from exposure to isocyanates. Follow the recommendations of the fluid manufacturer and local regulatory authority. Posting a placard such as the following outside the work area is recommended:



For all applications except spray foam



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- Use of isocyanates involves potentially hazardous procedures. Do not spray with this equipment unless you are trained, qualified, and have read and understood the information in this manual and in the fluid manufacturer's application instructions and SDS.
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- To prevent inhalation of isocyanate mists, vapors, and atomized particulates, everyone in the work area must wear appropriate respiratory protection. Always wear a properly fitting respirator, which may include a supplied-air respirator. Ventilate the work area according to instructions in the fluid manufacturer's SDS.
- Avoid all skin contact with isocyanates. Everyone in the work area must wear chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority. Follow all fluid manufacturer recommendations, including those regarding handling of contaminated clothing. After spraying, wash hands and face before eating or drinking.

Material Self-ignition



Some materials may become self-igniting if applied too thick. Read material manufacturer's warnings and Safety Data Sheet (SDS).

Keep Components A and B Separate



Cross-contamination can result in cured material in fluid lines which could cause serious injury or damage equipment. To prevent cross-contamination:

- **Never** interchange component A and component B wetted parts.
- Never use solvent on one side if it has been contaminated from the other side.

Moisture Sensitivity of Isocyanates

Exposure to moisture (such as humidity) will cause ISO to partially cure, forming small, hard, abrasive crystal that become suspended in the fluid. Eventually a film will form on the surface and the ISO will begin to gel, increasing in viscosity.

NOTICE

Partially cured ISO will reduce performance and the life of all wetted parts.

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. **Never** store ISO in an open container.
- Keep the ISO pump wet cup or reservoir (if installed) filled with appropriate lubricant. The lubricant creates a barrier between the ISO and the atmosphere.
- Use only moisture-proof hoses compatible with ISO.
- Never use reclaimed solvents, which may contain moisture. Always keep solvent containers closed when not in use.
- Always lubricate threaded parts with an appropriate lubricant when reassembling.

NOTE: The amount of film formation and rate of crystallization varies depending on the blend of ISO, the humidity, and the temperature.

Foam Resins with 245 fa Blowing Agents

Some foam blowing agents will froth at temperatures above 90°F (33°C) when not under pressure, especially if agitated. To reduce frothing, minimize preheating in a circulation system.

Changing Materials

NOTICE

Changing the material types used in your equipment requires special attention to avoid equipment damage and downtime.

- When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.
- Always clean the fluid inlet strainers after flushing.
- Check with your material manufacturer for chemical compatibility.
- When changing between epoxies and urethanes or polyureas, disassemble and clean all fluid components and change hoses. Epoxies often have amines on the B (hardener) side. Polyureas often have amines on the B (resin) side.

Overall View

Major Components

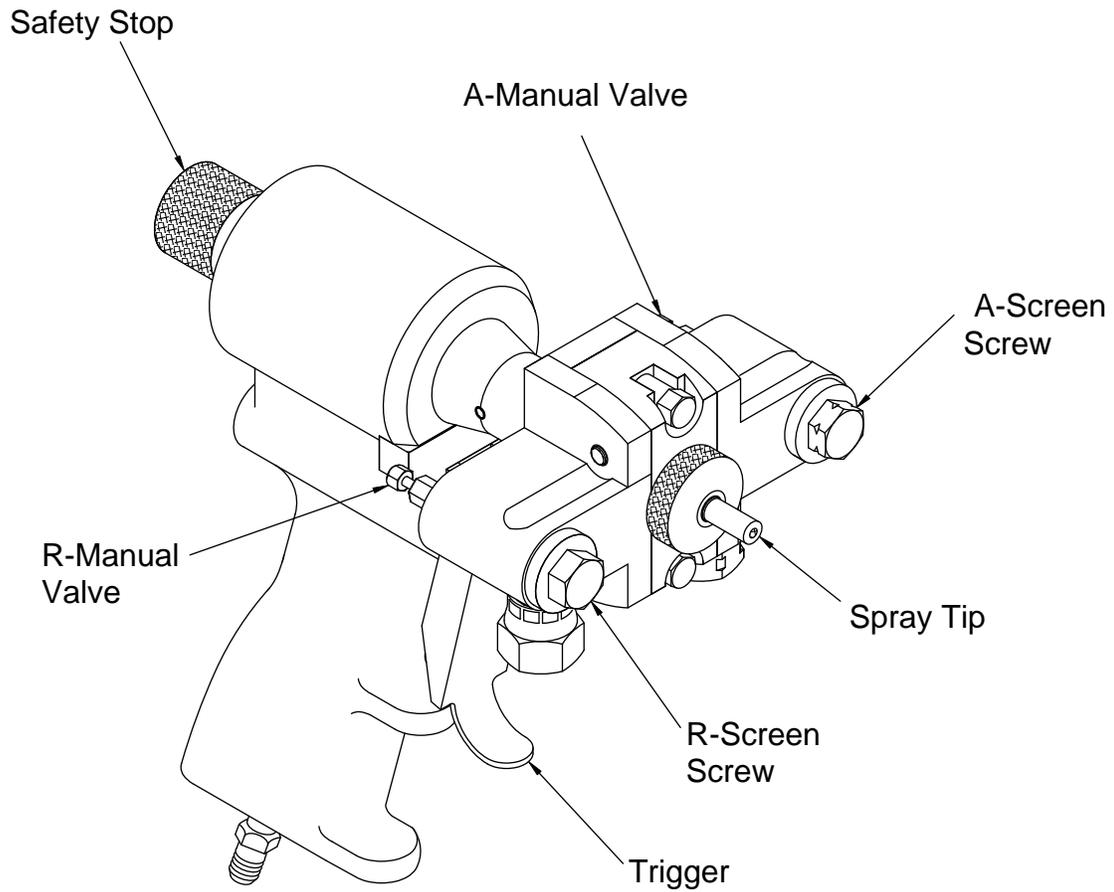


FIG. 1. Major Components (shown with round spray tip)

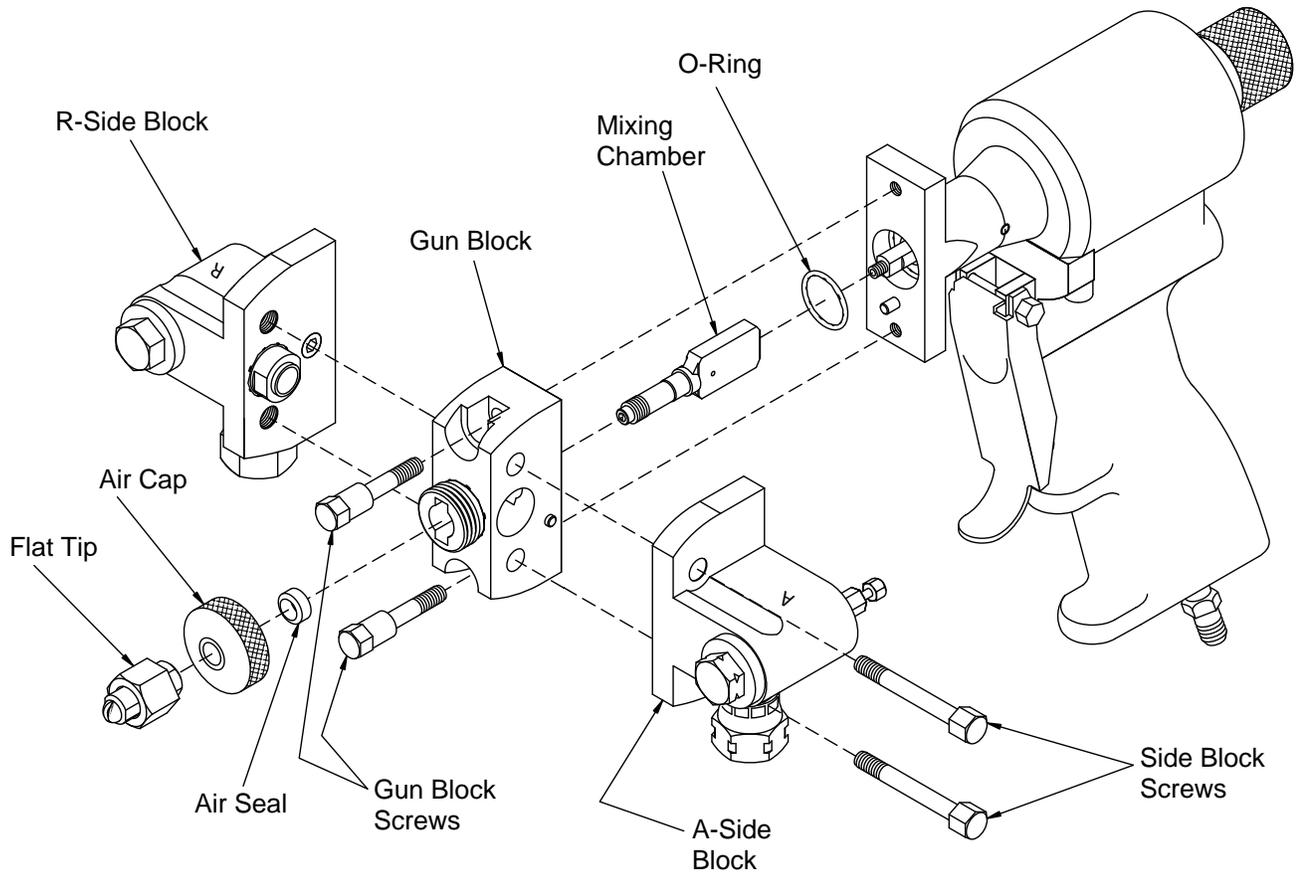


FIG. 2. Front End Components (shown with flat spray tip assembly)

Operation

						
<p>To prevent accidental gun operation, always disconnect air supply before servicing gun or anytime gun is not in use.</p>						

Isocyanate Hazard

						
<p>Spraying materials containing isocyanates creates potentially harmful mists, vapors, and atomized particulates.</p> <p>Read material manufacturer's warnings and material MSDS to know specific hazards and precautions related to isocyanates.</p> <p>Prevent inhalation of isocyanate mists, vapors, and atomized particulates by providing sufficient ventilation in the work area. If sufficient ventilation is not available, a supplied-air respirator is required for everyone in the work area.</p> <p>To prevent contact with isocyanates, appropriate personal protective equipment, including chemically impermeable gloves, boots, aprons, and goggles, is also required for everyone in the work area.</p>						

Keep A and B Components Separate

CAUTION
<p>To prevent cross-contamination of the gun's wetted parts, do not interchange A component (isocyanate) and B component (resin) parts. The gun is shipped with the A side on the left.</p>

Grounding

						
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Check your local electrical code and proportioner manual for detailed grounding instructions.

Ground the spray gun through connection to a Graco-approved grounded fluid supply hose.

Safety Stop

						
<p>Always engage safety stop, close both manual valves, and disconnect air before cleaning, maintaining, or repairing gun, or any time gun is not in use.</p>						

The GAP Pro gun has a 2-position safety stop. When engaged, it prevents accidental triggering of gun. When disengaged, it allows gun to dispense.

1. **To engage the safety stop**, push in and turn the safety stop knob clockwise. See FIG. 3.

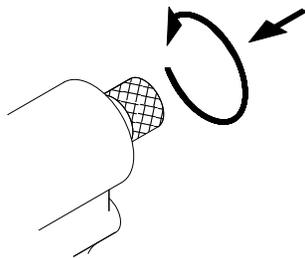


FIG. 3. Engage Safety Stop

2. **To disengage the safety stop**, push in and turn the safety stop knob counterclockwise. See FIG. 4.

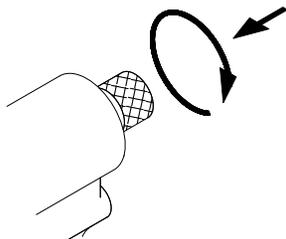


FIG. 4. Disengage Safety Stop

Manual Valves

Manual valves located on the side blocks control flow of each chemical component to gun.

 Triggering gun with manual valves closed may cause crossover if gun ports contain residual chemical.

						
<p>Always engage safety stop, close both manual valves, and disconnect air before cleaning, maintaining, or repairing gun, or any time gun is not in use.</p> <p>Never open a manual valve unless side block is secured to gun or exit port is directed into flush pail.</p>						

1. Open manual valves using a 5/16 in. nut driver; turn manual valves counterclockwise approximately three full turns.
2. Close manual valves by turning fully clockwise.

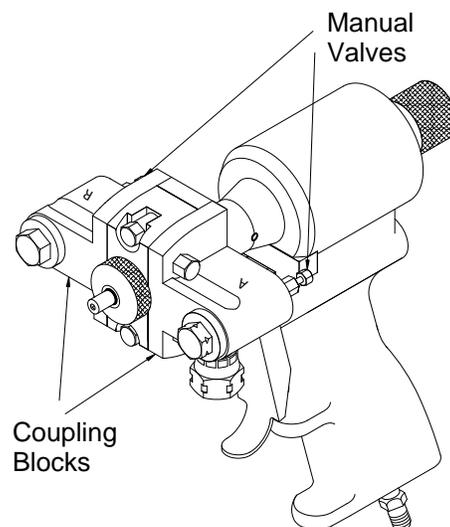


FIG. 5. Manual Valves

Air Hose Configurations

The GAP Pro Gun has two possible air hose configurations. In the standard configuration, the air connection is at the base of the handle. In the optional configuration, the air connection is at the rear of the gun.



Always engage safety stop, close both manual valves, and disconnect air before changing air hose configuration.

1. See FIG. 6. Remove air hose from nipple at base of gun handle.
2. Remove nipple from gun handle.
3. Remove pipe plug from back of gun.
4. Install pipe plug in base of gun handle.
5. Install nipple in back of gun.
6. Connect air hose to nipple and use wrench to tighten.

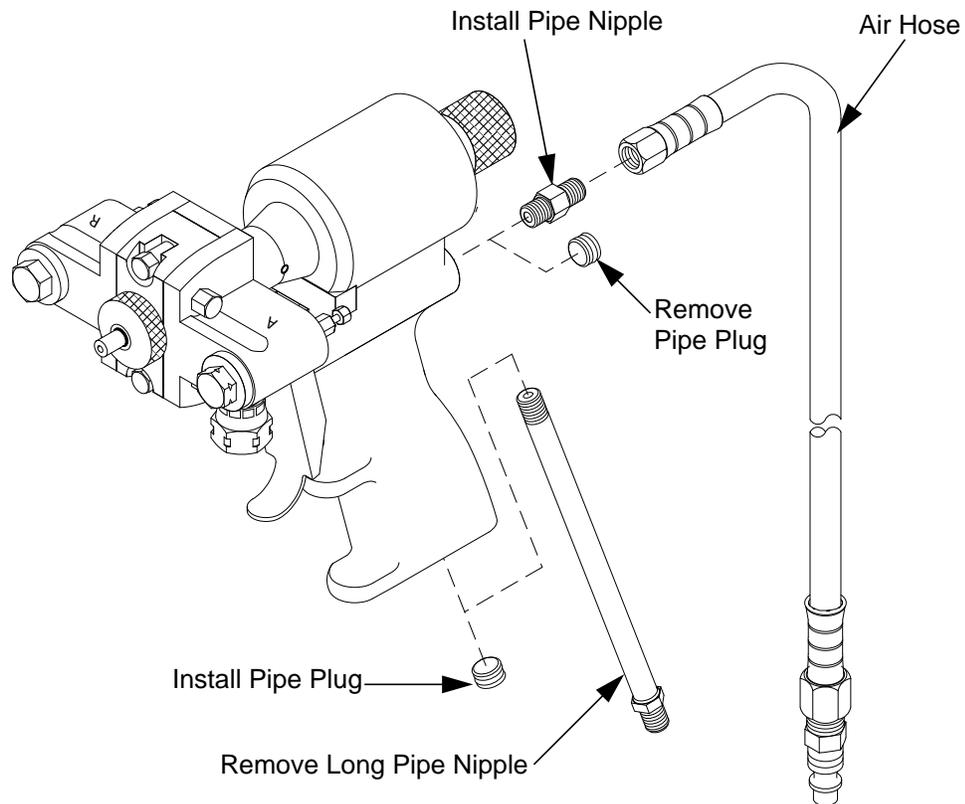


FIG. 6. Air Hose Configuration

Initial Set Up



1. Close both manual valves.
2. Engage safety stop.
3. Install female quick disconnect fitting on air hose, which is bundled with fluid supply hoses.
4. Connect A-isocyanate hose (red-taped) to fitting on A-side block. Then connect R-resin hose (blue-taped) to fitting on R-side block.

 A and R side hoses are sized differently to prevent improper connection.

5. Pressurize A and R chemical hoses and check for leaks. (See Proportioning Unit manual.)
6. Check proportioning unit for proper hose temperature, heater temperature, and pressure. (See Proportioning Unit manual.)
7. Connect air supply hose to gun.
8. Open both manual valves, page 12.
9. Disengage safety stop.
10. Test spray on disposable surface.
11. Proceed with Daily Start-up procedure or Shutdown procedure as required.

Daily Start-Up



Ensure side blocks are attached to gun, and proportioning unit is at desired temperature and pressure.

1. Connect air supply to gun, page 13.
2. Trigger gun multiple times to ensure proper mixing chamber movement.
3. Open both manual valves, page 12.
4. Disengage safety stop.
5. Test spray on disposable surface.

Daily Shutdown



 Follow this procedure when gun is out of service for any length of time. Daily disassembly of gun for cleaning is not recommended if it has been operating properly. However, if you remove gun from coupling block, flush and clean thoroughly.

1. Follow Pressure Relief Procedure, page 15.
2. Shutdown proportioning unit as required.
3. Grease gun, page 15.

Pressure Relief Procedure

						
Relieve pressure before cleaning or repairing gun.						

1. Close both manual valves.
2. Engage safety stop.
3. Trigger gun once onto waste area to relieve fluid pressure in gun front end.
4. Disconnect gun air supply, page 13.

						
If fluid in hose and proportioner is still under pressure, follow Pressure Relief Procedure in proportioner manual.						
To relieve pressure in hose after gun is removed, place fluid manifold over containers, facing away from you. Very carefully open fluid valves. Under high pressure, fluid will spray sideways from fluid ports.						

Grease Gun

 Do not grease gun if gun will be serviced following shutdown.

1. Follow **Pressure Relief Procedure**, page 15.
2. Insert GAP Gun Chamber Lubricant Needle into nozzle of mixing chamber. Dispense a small amount of lubricant into mixing chamber.

 To determine correct amount of lubricant, remove air cap to view internal chamber area. When lubricant becomes visible, stop dispensing.

3. Connect gun air supply.
4. With safety stop engaged, trigger gun 2 or 3 times to discharge any excess lubricant.
5. Disconnect gun air supply, page 13.

Repair

						
Shutdown proportioner and allow chemicals to cool before performing any repair procedures.						

Side Blocks

						
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1. Follow **Pressure Relief Procedure**, page 15.

2. See FIG. 7. Remove A-side screen screw, seal, and screen. Inspect for damage. Thoroughly rinse and dry screen. Hold screen up to a bright light; mesh must be free of particles and material buildup. Replace as necessary. Repeat for R-side.
3. Alternately loosen side block mounting screws. Carefully separate side blocks from gun. Wipe mating surfaces with a rag soaked in gun cleaner.
4. Remove check valve retainer/side seal assembly from A-side block.

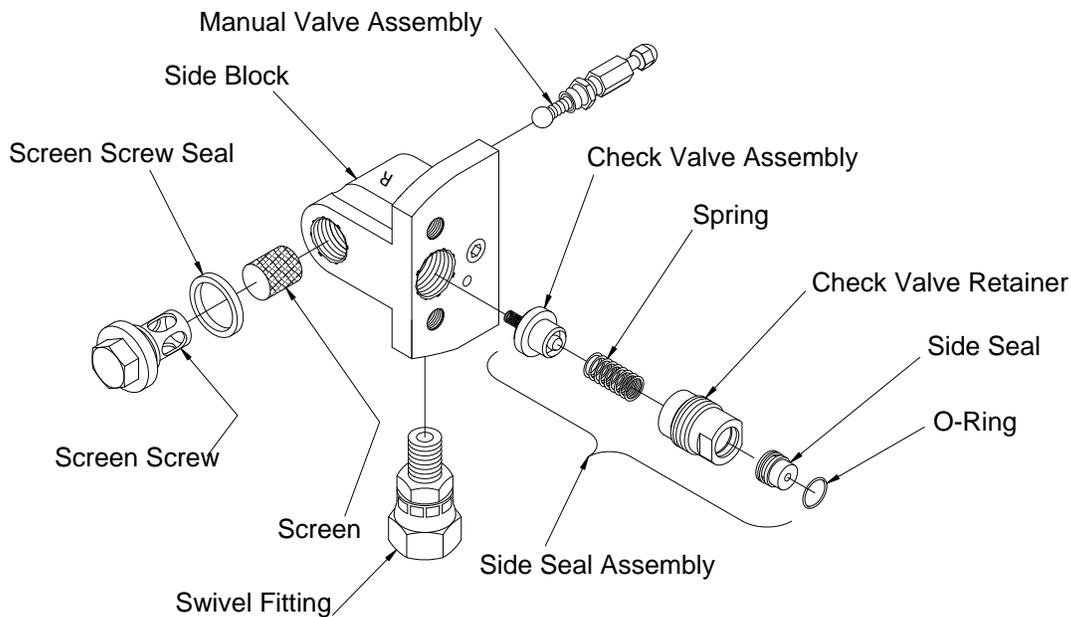


FIG. 7. Side Block Components

- Remove check valve and clean with gun cleaner. Inspect and replace if damaged.

CAUTION

Clean side seals with a wooden or plastic scraper or a brass brush. Do not use a pocketknife, razor blade, or any tool that may scratch surface.

- Remove side seal and o-ring. Replace if damaged.
- Clean all components thoroughly. Use brass brushes or drill bits to remove residual chemical from the gun block. Thorough cleaning ensures unrestricted movement of mixing chamber. Use cotton swabs soaked in gun cleaner if necessary.
- Repeat steps 4-7 for R-side block.

CAUTION

Do not overtighten check valve retainer. Tightening more than 1/4 turn can damage check valve or retainer and cause leaking when gun is pressurized.

- Place check valve assembly in check valve retainer and thread into side block finger tight. Use a 1/2 in. wrench to tighten retainer 1/4 turn and **no more**. See FIG. 8.

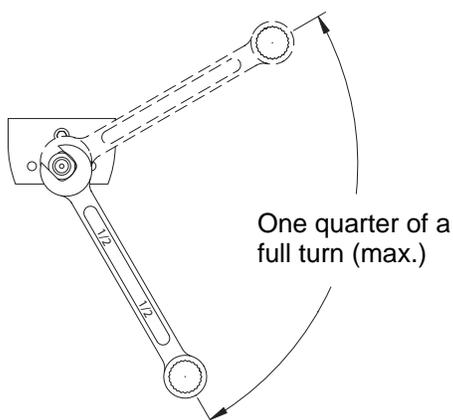


FIG. 8. Tighten Check Valve Retainer

- Check side seal for wear by measuring how far seal protrudes from side seal assembly insert. A worn side seal promotes chemical leakage. Replace side seal if it protrudes 0.065 in. (1.65 mm) or less. In addition, check seal for scratches, which also promote leakage. See FIG. 9.
- Inspect check valve assembly for damage by measuring gap between mating surface of side block and bottom edge of side seal assembly insert. If gap measures 0.018 in. (.46 mm) or less, the check valve assembly has been crushed due to overtightening and it must be replaced. See FIG. 9.

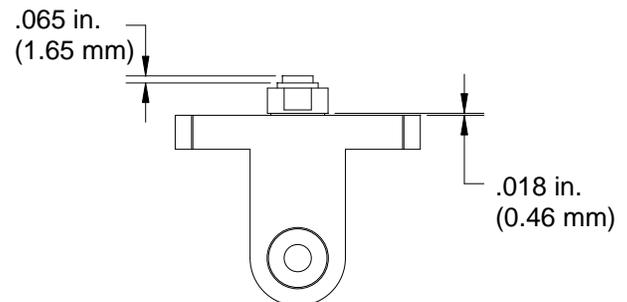


FIG. 9: Side Seal

- Place spring in check valve retainer.
- Lightly coat o-ring with grease and install on side seal.
- Push side seal into the check valve retainer until o-ring engages detent groove and remains in place.
- Install side blocks to gun body with two mounting screws. Tighten screws alternately and evenly to prevent leakage.
- Return gun to service. See **Daily Start-Up**, page 14.

Mixing Chamber and Gun Block



1. Follow **Pressure Relief Procedure**, page 15.

 If your gun has a round pattern spray tip, skip step 2 and go to step 3.

2. Remove flat tip assembly from end of mix module.
3. Remove air cap.
4. Use a 5/16 in. nut driver to alternately loosen side block mounting screws. Carefully separate side blocks from gun. Wipe mating surfaces with a rag soaked in gun cleaner.

 To repair side blocks, see **Side Blocks**, page 16.

5. Remove gun block bolts. Slide gun block away from gun. Wipe mating surfaces with a rag soaked in gun cleaner. Clean gun block with gun cleaner and brass brushes to remove residual chemical and built-up material. This ensures unrestricted movement of mixing chamber.
6. Use a 3/16 in. wrench or needle-nose pliers to hold end of piston shaft while unscrewing mixing chamber by hand. Clean mixing chamber with gun cleaner and drill bits. Inspect for damage and replace if necessary.
7. Hold end of piston shaft with a 3/16 in. wrench or needle-nose pliers. Screw mixing chamber onto shaft by hand.

8. Slide gun block over mixing chamber and up to gun. Install two mounting screws. Tighten screws alternately and evenly to prevent leakage.
9. Install side blocks to gun body with two mounting screws. Tighten screws alternately and evenly to prevent leakage.
10. Return gun to service. See **Daily Start-Up**, page 14.

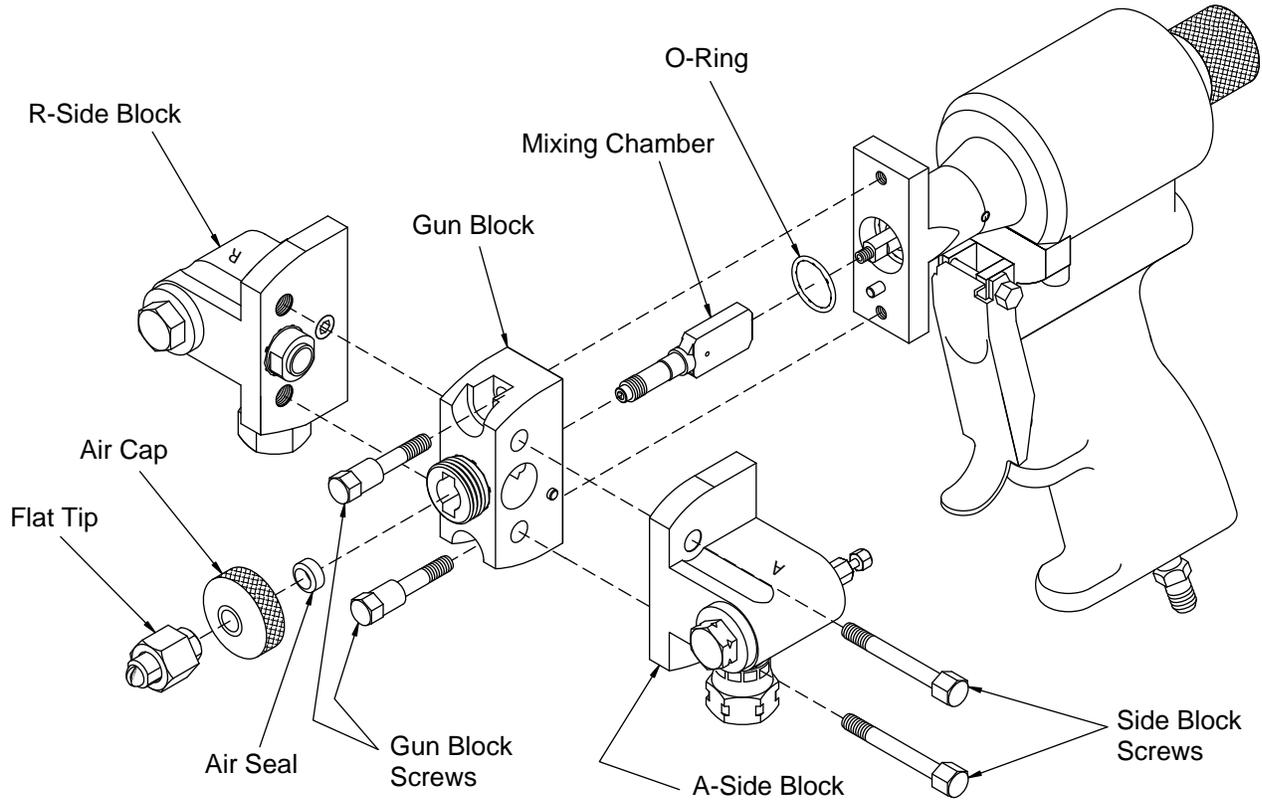


FIG. 10. Mixing Chamber and Gun Block

End Cap and Air Piston



1. Follow **Pressure Relief Procedure**, page 15.

2. Use a 5/16 in. nut driver to alternately loosen side block mounting screws. Carefully separate side blocks from gun. Wipe mating surfaces with a rag soaked in gun cleaner.

 To repair side blocks, see **Side Blocks**, page 16.

3. Use a 5/16 in. nut driver to remove gun block mounting screws. Slide gun block away from gun. Wipe mating surfaces with a rag soaked in gun cleaner. Be sure to retain o-ring located between gun block and mounting flange.

 To repair gun block, see **Mixing Chamber and Gun Block**, page 18.

4. See FIG. 11. Use a 3/16 in. wrench or needle-nose pliers to hold end of piston shaft while unscrewing mixing chamber by hand.

 To repair mixing chamber, see **Mixing Chamber and Gun Block**, page 18.

5. Disengage safety stop.

6. Use a 9/64 in. ball point hex key to remove socket head screw and clamp from rear of air cylinder.

7. Use a retaining ring pliers to remove retaining ring. Ring retains end cap position in air cylinder.

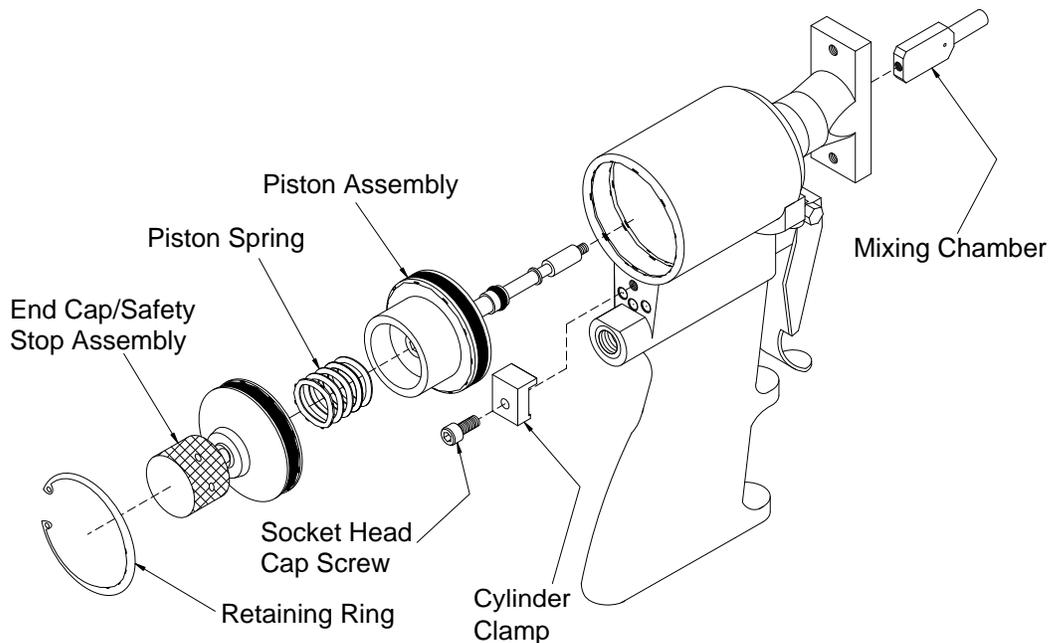


FIG. 11. End Cap and Piston Assembly

 Removing safety stop and end cap requires some force because o-ring is tightly compressed.

8. Pull safety stop until it and attached end cap come free from air cylinder. Be sure to retain piston spring, located inside cylinder.
9. Inspect end cap o-ring and remove if damaged. Lightly coat new o-ring with Lubriplate grease and install on end cap.
10. Pull piston assembly out of air cylinder.
11. See FIG. 12. Remove retaining ring and slide piston shaft out from the back of piston.
12. Inspect shaft and piston o-rings and replace if damaged. Lightly coat new o-rings with Lubriplate grease before installing.
13. Slide piston shaft into the back of piston, being careful not to damage shaft o-rings. Secure with retaining ring.

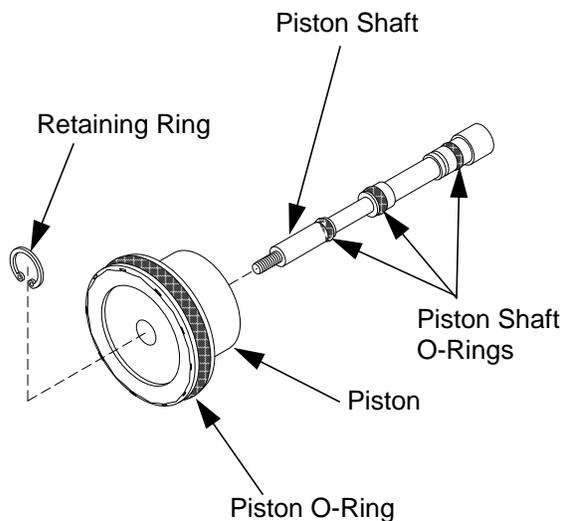


FIG. 12. Piston Assembly

14. Install piston assembly into the air cylinder. See FIG. 11.

						
Be sure to insert retaining ring completely into groove so end cap will remain in air cylinder when gun is pressurized. Keep clear of end cap when reapplying air pressure or triggering gun after reassembly in case of improper retaining ring installation						

15. Center piston spring over raised portion of piston. Align raised portion of end cap with inside diameter of piston spring. Insert end cap into air cylinder. Press end cap until it moves past the undercut groove in air cylinder, which is where retaining ring nests. Maintain pressure on end cap, ensure groove remains visible, and install retaining ring using retaining ring pliers.
16. Reinstall socket head screw and cylinder clamp in rear of air cylinder.
17. Hold end of piston shaft with a 3/16 in. wrench or needle-nose pliers. Screw the mixing chamber onto shaft by hand.
18. Slide gun block over mixing chamber and up to gun. Install two mounting screws. Tighten screws alternately and evenly to prevent leakage.
19. Install side blocks to gun body with two mounting screws. Tighten screws alternately and evenly to prevent leakage.
20. Return gun to service. See **Daily Start-Up**, page 14.

End Cap O-ring and Safety Stop Seal



1. Follow **Pressure Relief Procedure**, page 15.
2. Use a 5/16 in. nut driver to alternately loosen side block mounting screws. Carefully separate side blocks from gun. Wipe mating surfaces with a rag soaked in gun cleaner.

 To repair side blocks, see **Side Blocks**, page 16.

3. Remove socket head screw and clamp from rear of air cylinder.
4. See FIG. 13. Use a retaining ring pliers to remove retaining ring. Ring retains end cap position in air cylinder.

 Removing safety stop and end cap requires some force because o-ring is tightly compressed.

5. Pull safety stop until it and attached end cap come free from air cylinder. Be sure to retain piston spring, which is located inside cylinder.
6. Inspect end cap o-ring and replace if damaged. Lightly coat new o-ring with Lubri-plate grease and install on end cap.

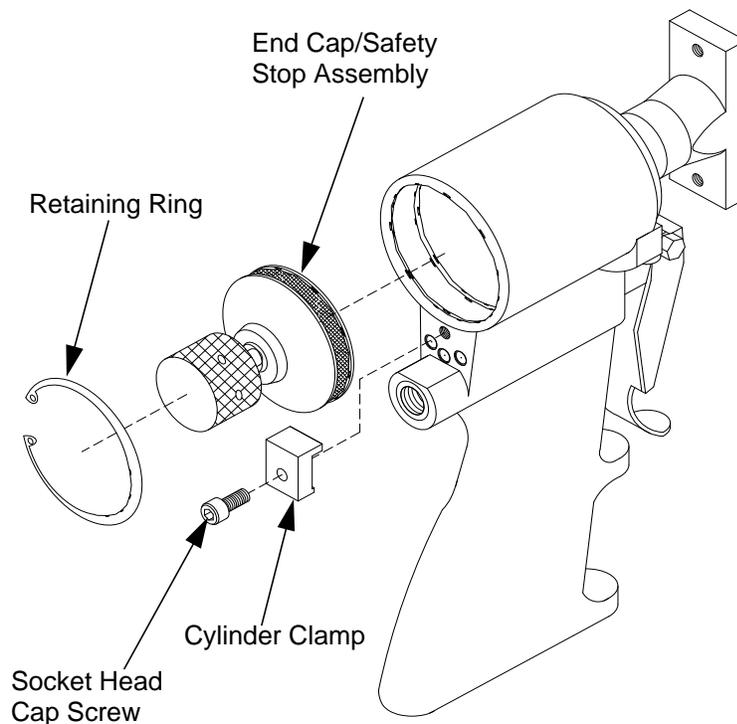


FIG. 13. End Cap Assembly

7. See FIG. 14. Use a 5/64 in. hex key to loosen two setscrews on stop knob. Slide knob off shaft of stop pin. Retain shaft spring. Pull stop pin out of end cap.
8. Remove u-cup seal from end cap and replace if damaged. Lightly coat new seal with Lubriplate grease before installing; u-cup lips must face the air cylinder.
9. Insert stop pin into end cap. Slide shaft spring and stop knob onto shaft of stop pin. Use a 5/64 in. hex key to install two set screws in stop knob. Ensure knob set screws are aligned to flats on stop pin and tighten securely.

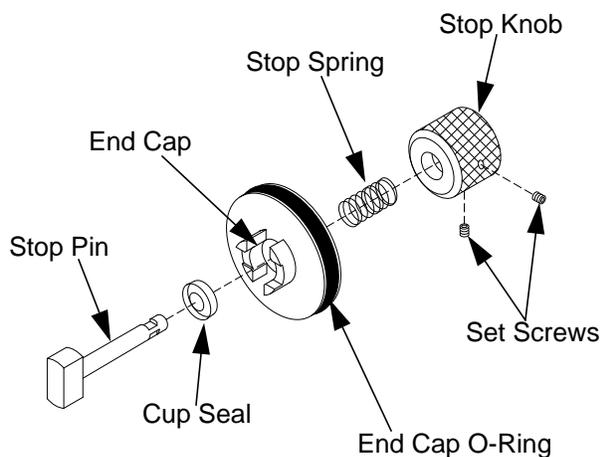


FIG. 14. Safety Stop Assembly

<p>Be sure to insert retaining ring completely into groove to ensure end cap remains in air cylinder when gun is pressurized. Keep clear of end cap when reapplying air pressure or triggering gun after reassembly in case of improper retaining ring installation</p>						

10. Center piston spring over raised portion of piston. Align raised portion of end cap with inside diameter of piston spring. Insert end cap into air cylinder. Press end cap until it moves past undercut groove in air cylinder, which is where retaining ring nests. Maintain pressure on end cap, ensure groove remains visible, and install retaining ring using retaining ring pliers. See FIG. 13.
11. Reinstall socket head screw and cylinder clamp in rear of air cylinder.
12. Install side blocks to gun body with two mounting screws. Tighten screws alternately and evenly to prevent leakage.
13. Return gun to service. See **Daily Start-Up**, page 14.

Trigger/Air Valve



1. Follow **Pressure Relief Procedure**, page 15.
2. Use a 5/16 in. nut driver to alternately loosen side block mounting screws. Carefully separate side blocks from gun. Wipe mating surfaces with a rag soaked in gun cleaner.

 To repair side blocks, see **Side Blocks**, page 16.

3. If gun is configured with air inlet at base of handle (standard), remove 1/8 npt pipe plug at rear of gun.

If gun is configured with air inlet at rear, remove air hose and nipple.

4. Remove screw and locknut holding trigger lever in place. Remove trigger lever.
5. Remove valve retainer hex nut, which holds brass valve spool in place.
6. Carefully grip end of valve spool with a pliers and remove it. Valve spring, which fits into spool, will come out with it. Be careful not to lose spring.
7. Inspect spool o-rings and replace if damaged. Liberally coat new o-rings with Lubriplate grease before installing.
8. Remove 1/16 npt pipe plug from deep in port at rear of gun.
9. Brass spring seat is visible inside port at rear of gun. Use a 1/4 in. diameter (maximum) punch and hammer to gently tap

seat until valve liner and seat are pushed out of valve cavity.

10. Inspect the four o-rings on valve liner and replace if necessary. Apply Lubriplate grease liberally to o-rings before installing.
11. Ensure that valve cavity is free of debris. Apply a thin film of Lubriplate grease inside cavity.
12. Slide spring seat into cavity, tapered end first. Ensure it bottoms out in cavity.
13. There will be some resistance from the o-rings when installing valve liner. Push valve liner into cavity until 2 or 3 of the cavity's internal threads are visible.

 Threads allow engagement with valve retainer nut, which aligns valve liner and spool to proper depth.

14. Apply a small amount of thread sealant to 1/16 npt pipe plug and reinstall. This seals threads to prevent air leaks.
15. Reinstall 1/8 npt pipe plug, or nipple and air hose, at rear of gun.
16. Ensure that valve spring is in place, and insert valve spool into valve liner. Screw in valve retainer nut until snug. Do not over-tighten.
17. Reinstall trigger lever, screw, and locknut.
18. Install side blocks to gun body with two mounting screws. Tighten screws alternately and evenly to prevent leakage.
19. Return gun to service. See **Daily Start-Up**, page 14.

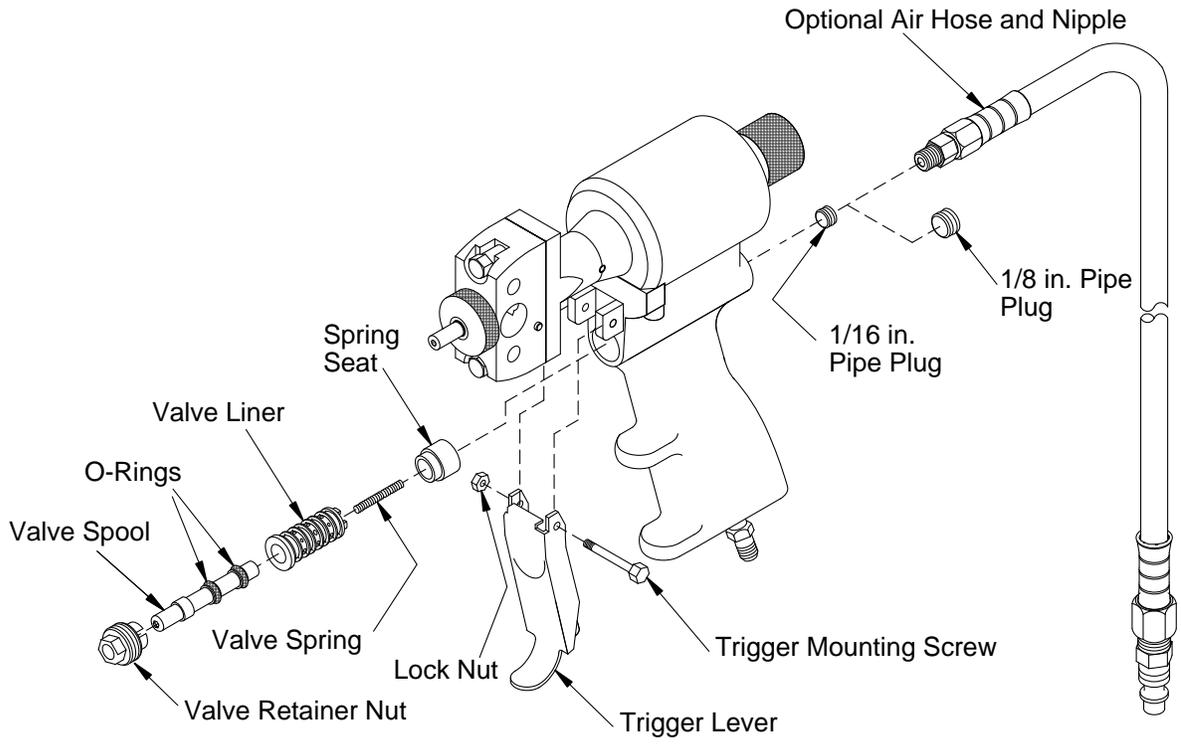


FIG. 15. Trigger/Air Valve Assembly

Air Passage Diagrams

 Use thread sealant when reinstalling any threaded components. In addition, reinstall all set screws flush to outside surface of gun handle.

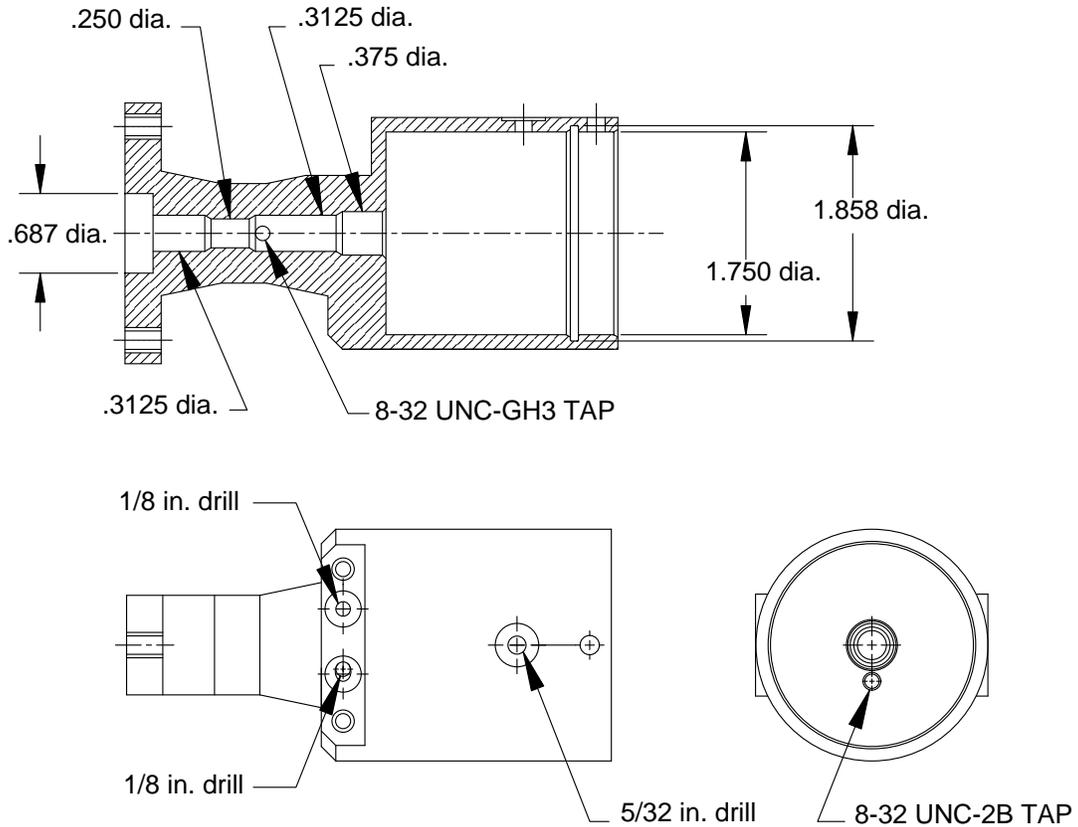


FIG. 16: Air Cylinder Air Passages

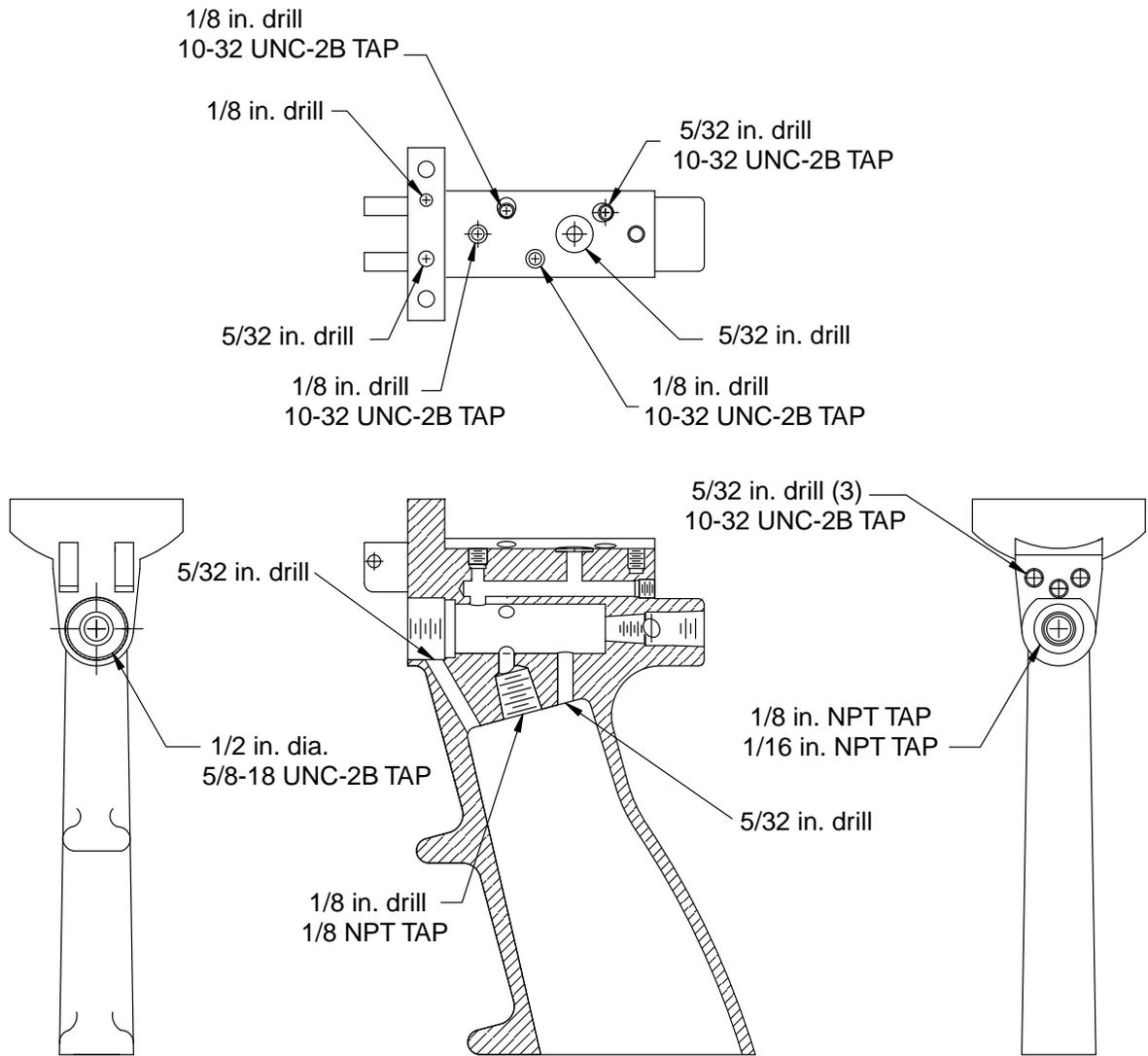


FIG. 17: Handle Air Passages

Parts

GAP Pro Spray Gun Assembly

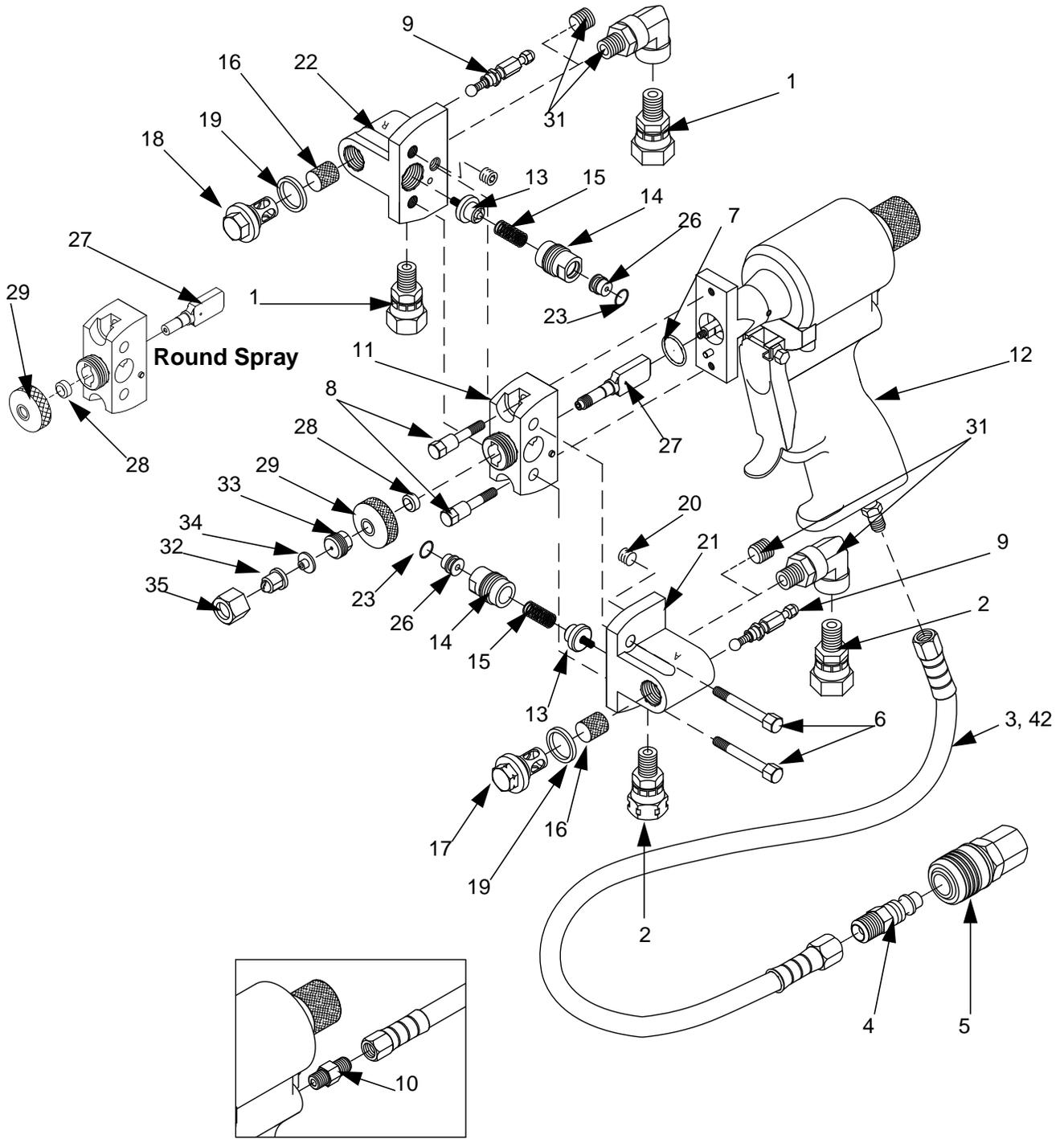


FIG. 18: GAP Pro Final Assembly

GAP Pro Spray Gun Assembly

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	117634	FITTING, R-swivel	1	20	295693	PLUG, seal, flush; 1/16 npt	2
2	117635	FITTING, A-swivel	1	21	296965	BLOCK, A-side	1
3	15B772	HOSE, air; 1/4 npt (fbe) x 23 in. (584 mm)	1	22	296966	BLOCK, R-side	1
4	295596	PLUG, coupler	1	23	248128	O-RING, side seal (pack of 6)	2
5	295597	COUPLER	1	26	❖	SEAL, side	2
6	296964	BOLT, side block (pack of 2)	-	27	❖	MIXING CHAMBER	1
7	115719	O-RING, fluoroelastomer	1	28	❖	SEAL, air	1
8	296963	BOLT, gun block (pack of 2)	-	29	❖	CAP, air	1
9	296970	VALVE ASSEMBLY, manual	2	30	❖	FITTING, straight	4
10	103656	NIPPLE, hex; brass; 1/8 npt	1	31	❖	PLUG or ELBOW	2
11	296952	BLOCK, gun	1	40	❖	TOOL, cleanout	1
12	296960	HANDLE, gun	1	41	❖	TOOL, cleanout	1
13	296953	CHECK VALVE ASSEMBLY	2	42	100030	Fitting	1
14	296957	RETAINER, check valve	2	❖ See Table 1 for part numbers by model.			
15	296959	SPRING (pack of 2)	-				
16	296939	SCREEN; 80 mesh (pack of 10)	-				
17	296940	SCREW, screen, A-side	1				
18	296941	SCREW, screen, R-side	1				
19	296942	SEAL, screw, screen (pack of 2)	-				

Table 1: Round Pattern Guns, Parts by Model Number

Ref. No.	Round Pattern Gun Model No.					
	295557	295558◆	295559	295560	295561	295562
	(00 Round)	(00 Recirc)	(01 Round)	(02 Round)	(03 Round)	(04 Round)
26	296956✱	296956✱	296956✱	296956✱	296956✱	296956✱
27	296846†	296846†	296847†	296848†	296849†	296850†
28	296946	296946	296946	296946	296946	296946
29	296951	296951	296951	296951	296951	296487
31	295662	112307	295662	295662	295662	295662
40	118369	118369	296293	118369	296296	296297
41	296289	296289	296296	296297	296302	296490

◆ This model uses qty. 2 each of items 1 and 2.

✱ Kit includes qty. 2 each of items 23 and 26.

† Kit includes (1) 27, (1) 28, and cleanout tools 40 and 41.

GAP Pro Spray Gun Handle Assembly

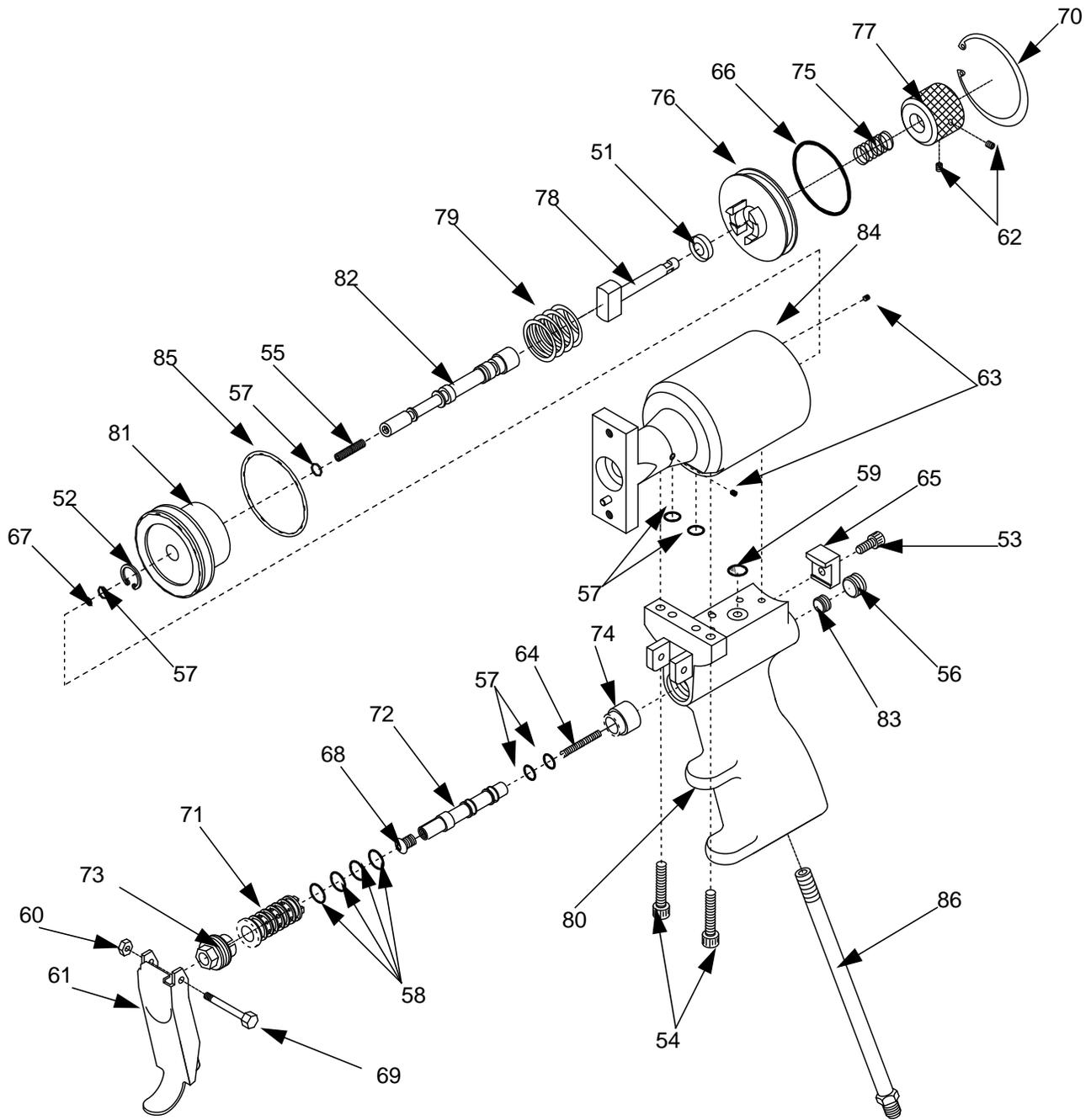


FIG. 19: GAP Pro Handle Assembly

GAP Pro Spray Gun Handle Assembly

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
51*	295435	SEAL, u-cup	1	70	296538	RING, retaining	1
52	295422	RING, retaining	1	71	296866	LINER, valve	1
53	296537	SCREW, cap, socket hd	1	72	296527	SPOOL, valve	1
54	106245	SCREW, cap, socket hd	2	73	296867	NUT, retainer, valve	1
55	296536	SCREW, set; socket hd	1	74	295434	SEAT, spring	1
56	295662	PLUG, pipe	1	75	295436	SPRING	1
57*	C20988	O-RING	6	76	296529	CAP, end	1
58	112085	O-RING	4	77	296530	KNOB	1
59*	103337	O-RING	1	78	296526	PIN, stop	1
60	C02032	NUT	1	79	295416	SPRING, piston	1
61	295692	TRIGGER	1	80	296961	HANDLE, gun	1
62	116624	SCREW, set; socket hd	2	81	296531	PISTON	1
63	102279	SCREW, set; socket hd	2	82	296937	SHAFT, piston	1
64	296971	SPRING	1	83	295693	PLUG, pipe	1
65	296535	CLAMP, cylinder	1	84	296962	CYLINDER, air	1
66*	108103	O-RING	1	85*	114054	O-RING	1
67*	168518	O-RING	1	86	295665	NIPPLE	1
68	295695	SCREW, cap; button hd	1				
69	295671	SCREW, trigger	1				

* Included in Handle Seal Repair Kit 296938
(purchase separately).

Accessories

Tool kit 296968 for GAP Pro spray gun.

Grease syringe 296382; syringe filled with grease for gun maintenance.

Gun Wand Kit

Kit 296984; extends GAP spray gun front-end 21 in.

Pour Package (296983) Components

Includes:
 Pour fitting 297078 1
 Polyflow tubing (3/8 in. diameter x 1 ft. length) 296165 1

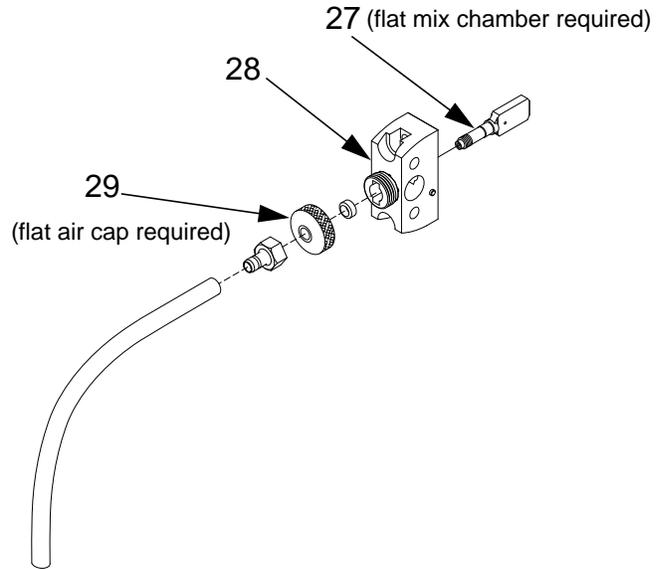


FIG. 20: Pour Package Components

Mixing Chamber Cleanout Drills

Round Mixing Chamber (27)	Mixing Chamber Nozzle Cleanout Drill	Mixing Chamber Port Cleanout Drill
296846	246814	246630
296847	246627	296293
296848	296297	246814
296849	246625	246627
296850	296490	296297
296851	246623	246625

Technical Data

Category	Data
Maximum Fluid Working Pressure	3000 psi (20.7 MPa, 207 bar)
Minimum Air Inlet Pressure	100 psi (0.7 MPa, 7 bar)
Maximum Air Inlet Pressure	125 psi (0.9 MPa, 9 bar)
Maximum Output (flow rate)	40 lb/min (18 kg/min)
Air Inlet Size	1/8 npt
A Component (ISO) Inlet Size	-5 JIC; 1/2-20 UNF
R Component (Resin) Inlet Size	-6 JIC; 9/16-18 UNF
Length	7 in. (17.8 cm)
Height	7.25 in. (18.4 cm)
Width	4.4 in. (11.2 cm)
Weight	2.34 lb (1.06 kg)
Wetted Parts	Stainless steel, carbon steel, brass, nylon, acetal, PTFE, aluminum

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