



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

INSTRUCTIONS

15:1 Ratio Fire-Ball[®] Spray System

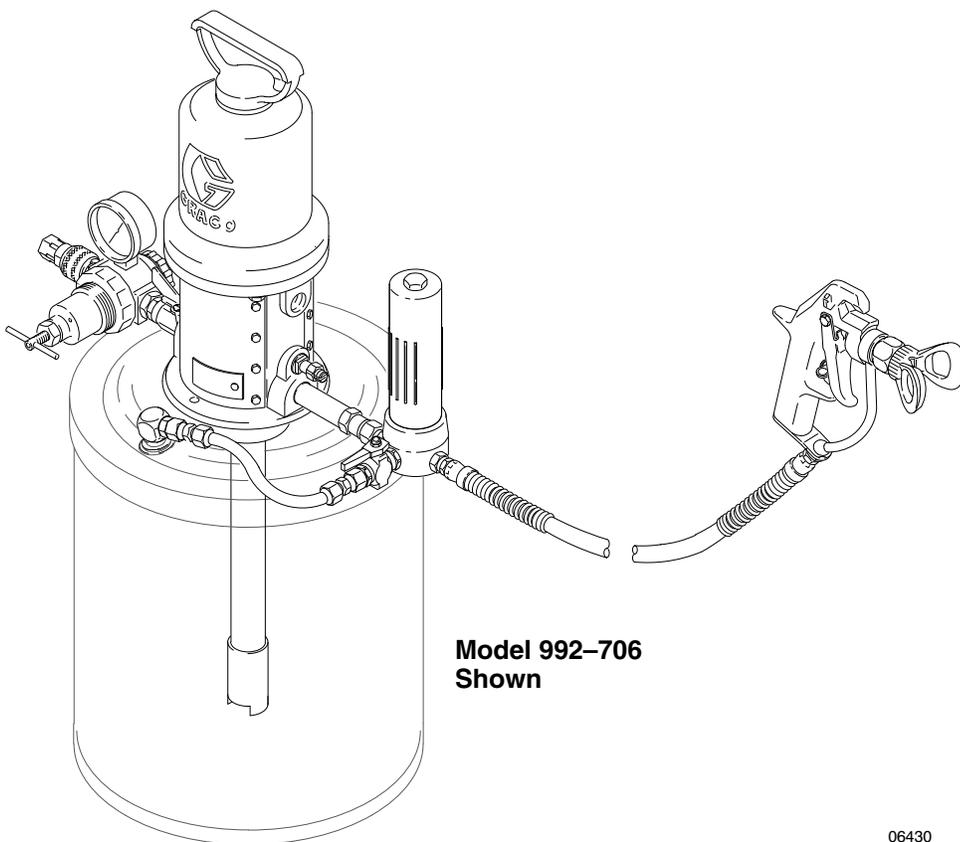
2700 psi (186 bar) Maximum Working Pressure

Model 992-706, Series A

35 lb (16 kg) Pail Size

Model 992-714, Series A

400 lb (180 kg) Pail Size



**Model 992-706
Shown**

06430

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Symbols

Warning Symbol



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

Caution Symbol



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

! WARNING



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.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure stated on the equipment or in the **Technical Data** for your equipment. Do not exceed the maximum working pressure of the lowest rated component in your system.
- 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.
- Handle hoses carefully. Do not pull on hoses to move equipment.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 66°C (150°F) or below -40°C (-40°F).
- Wear hearing protection when operating this equipment.
- Do not move or lift pressurized equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

! WARNING



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 is a serious injury. The injury may look like just a cut, but it is a serious injury. Get immediate medical attention.
- 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 8 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, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.



MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers.

- Keep clear of all moving parts when starting or operating the pump.
- Before checking or servicing the equipment, follow the **Pressure Relief Procedure** on page 8 to prevent the equipment from starting unexpectedly.

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 5.
- 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.
- Before operating this equipment, electrically disconnect all equipment in the spray area.
- Before operating this equipment, 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 spraying or while operating if fumes are present.
- Do not operate a gasoline engine in the spray area.
- Never use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents, or fluids containing such solvents in this equipment. Such use could result in a serious chemical reaction, which could cause death, serious injury, and/or substantial property damage.
- Consult your fluid suppliers to ensure that the fluids being used are compatible with aluminum and zinc parts



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.

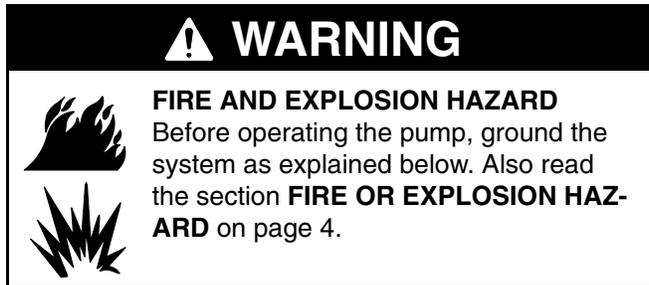
Installation

General Information

NOTE: Reference numbers and letters in parentheses in the text refer to the callouts in the figures and the parts drawing.

NOTE: Always use Genuine Graco Parts and Accessories, available from your Graco distributor.

Grounding



1. *Pump:* use a ground wire and clamp as shown in Fig. 1. Loosen the grounding lug locknut (W) and washer (X). Insert one end of a 12 ga (1.5 mm²) minimum ground wire (Y) into the slot in lug (Z) and tighten the locknut securely. Connect the other end of the wire to a true earth ground. Order part number 222-011 Grounding Clamp and Wire.
2. *Air and fluid hoses:* use only electrically conductive hoses.
3. *Air compressor:* follow manufacturer's recommendations.

4. *Spray gun or dispensing valve:* ground through connection to a properly grounded fluid hose and pump.
5. *Object being sprayed:* follow your local code.
6. *Fluid supply container:* 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.
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.

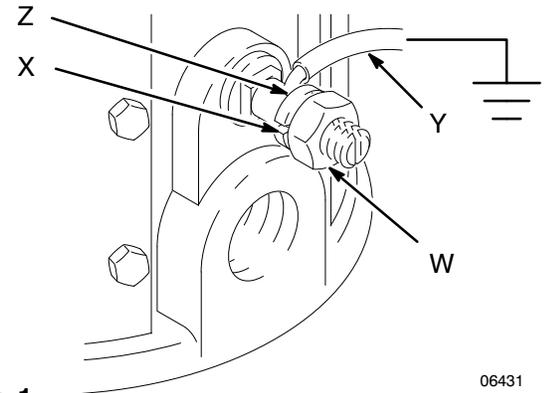
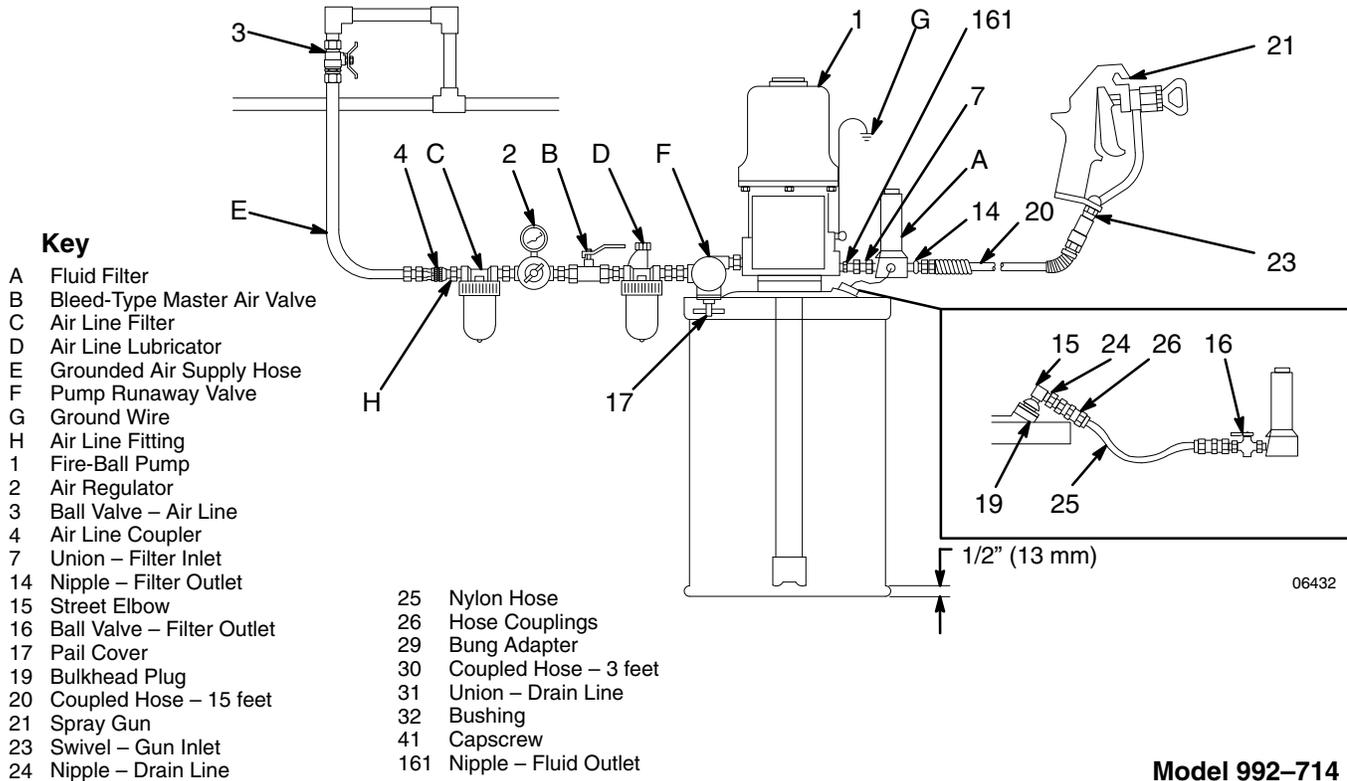


Fig. 1

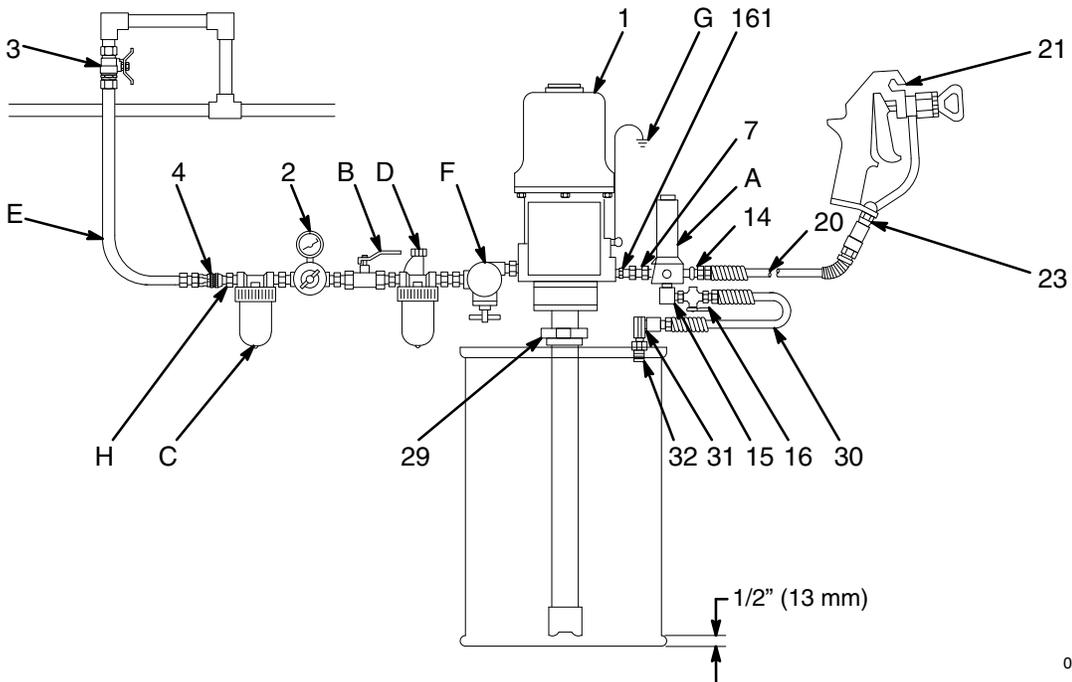
Installation

Typical Installation

Model 992-706



Model 992-714



Installation

Typical Installation

The Typical Installations shown on page 6 are only guides to selecting and installing accessories and components. For designing a system to suit your needs, contact your Graco representative.

1. Mount the pump (1) onto the pail.
 - a. For Model 992–706 (35 lb size), place the cover (17) on the pail and secure it with the three thumbscrews. Lower the pump into the pail through the hole in the cover, and secure with the two screws (41) and washers.
 - b. For Model 992–714 (400 lb size), tighten the bung adapter (29) in the cover's bung hole, then adjust the pump so its intake valve is 1/2 in. (13 mm) off the bottom of the drum. Tighten the bung adapter thumbscrews to hold this position.
2. Install the 3/8 npt nipple (161) in the pump fluid outlet. Install the union (7) in the inlet of the fluid filter (A). Connect the union to the nipple, with the head of the filter facing down as shown on page 6.
3. Install the 1/4 npt nipple (14) in one outlet of the filter. Install the swivel (23) at the fluid inlet on the spray gun (21). Connect the filter outlet nipple to the gun swivel, using the 15 ft coupled hose (20)
4. Install the drain line.
 - a. For Model 992–706, install the ball valve (16) into one of the outlets of the filter (A). Install the o-ring (39) on the plug (19), and install the plug in the cover hole. Secure with setscrews (40). Screw the street elbow (15) into the plug and install the 1/4 npt nipple (14) into the elbow. Install couplings (26) on both ends of the nylon hose (25). Connect the hose to the plumbing on the cover and the ball valve on the filter. Use the pipe plugs (27 and 28) to close off the unused filter outlets.
 - b. For Model 992–714, screw the street elbow (15) into the filter outlet as shown on page 6. Screw the ball valve (16) into the street elbow. Insert the bushing (32) into the hole in the drum cover, and screw the swivel union (31) into the bushing. Connect the male end of the 3 ft. (.9 m) coupled hose (30) to the swivel union, and connect the female end to the ball valve of the filter. Close off the unused filter outlets with the plugs (27 and 28).
5. Install the air line accessories in the order shown on page 6. Install a pump runaway valve (F) closest to the air pump to shut off the air to the pump if the pump accelerates beyond the pre-adjusted setting. A pump which runs too fast can be seriously damaged.
6. Next, install an air line lubricator (D) for automatic air motor lubrication, a bleed-type master air valve (B) to relieve air trapped between the valve and the pump, an air regulator (2, supplied) to control the pump speed, and an air line filter (C) to remove harmful dirt and moisture from the compressed air supply.
7. Be sure the air line (E) is properly grounded, and is large enough to supply an adequate volume of air to the motor.
8. Install the air line ball valve (3, supplied) on the air line, upstream from the accessories. Screw the air line fitting (H, supplied) into the air line filter inlet. Attach the air line coupler (4, supplied) to the end of the air line, but do not attach it to the air line fitting yet.

WARNING

Required in your system are a bleed-type master air valve (B) and a fluid drain valve (16). These components help reduce the risk of serious injury including fluid injection, splashing in the eyes or on the skin, and injury from moving parts if you are adjusting or repairing the pump.

The *bleed-type master air valve* relieves air trapped between the valve and the pump after the pump is shut off. Trapped air can cause the pump to cycle unexpectedly and result in serious injury, including amputation. Locate the valve within easy reach of the pump.

The *fluid drain valve*, which is supplied with your system, helps relieve pressure in the displacement pump, hose, and gun when shutting off the pump. Triggering the gun to relieve pressure may not be sufficient, especially if there is a clog in the hose, gun, or spray tip.

Operation

Pressure Relief Procedure

WARNING



INJECTION HAZARD

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 tips.

1. Engage the spray gun safety latch.
2. Close the pump air regulator.
3. Close the bleed-type master air valve (required in your system).
4. Disengage the gun safety latch.
5. Hold a metal part of the gun firmly to a grounded metal waste container and trigger to relieve the fluid pressure.
6. Engage the safety latch again.
7. Open the pump drain valve (supplied with your system), having a container ready to catch the drainage.
8. Leave the drain valve open until you are ready to spray again.

*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 and relieve pressure gradually, then loosen completely. Now clear the tip or hose.*

Flush the Pump Before Using

Pumps are tested with lightweight oil which is left in to protect pump parts. To prevent fluid contamination, flush the pump with a compatible solvent before using it.

Starting and Adjusting the Pump

Note: Do not install the spray tip yet.

Connect the air line coupler (4) to the pin fitting (H). Open the bleed-type master air valve (B).

Trigger the gun into a grounded metal container. Holding a metal part of the gun firmly to the container, slowly open the air regulator until the pump starts running. Always use the lowest pressure necessary to get the desired results.

WARNING

To reduce the risk of serious injury, including fluid injection and splashing in the eyes or on the skin, and property damage, never exceed the maximum working pressure of the lowest rated component in your system.

After all the air is purged, release the gun trigger. The pump will start and stop as the gun is opened and closed.

Follow the **Pressure Relief Procedure** at left and then install the spray tip in the gun.

Never allow the pump to run dry of fluid being pumped. A dry pump will quickly accelerate to a high speed, possibly damaging itself (a pump runaway valve automatically alerts you to this problem – see page 7). 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, prime the pump and lines with fluid, or flush and leave filled with compatible solvent. Be sure to eliminate all air from the fluid system.

Maintenance

Shutdown and Care of the Pump

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

Always stop the pump at the bottom of its stroke to prevent fluid from drying on the rod and damaging the throat packings. When you finish pumping always **Relieve the Pressure**.

If you are pumping fluid which dries, hardens, or sets up, flush the system with a compatible solvent as often as necessary to prevent build up in the pump or hoses.

Every 40 hours of operation, **Relieve the Pressure** and remove either the warning plate (135) or the identification plate (120) to check that the packing nut (132) is tight. Use a 1/4 in. rod or spanning wrench. Tighten just snug – do not overtighten or the packings may be damaged.

WARNING

Never operate the pump with the air motor warning plate (135) or the identification plate (120) removed. These plates enclose the piston which moves when air is supplied to the motor, and protect your fingers from serious injury, including amputation.

Flushing

Relieve the Pressure, then remove the spray tip before flushing. Hold a metal part of the gun firmly to the side of a grounded metal waste container. Use the lowest possible fluid pressure when flushing.

Corrosion Protection

CAUTION

Never leave water or water-base fluid in the pump overnight. If you are pumping water-base fluid, flush with water first, then with a rust inhibitor such as mineral spirits. **Relieve the Pressure**, but leave the rust inhibitor in the pump to protect the parts from corrosion.

Lubrication

The accessory air line lubricator (D) provides automatic air motor lubrication. For daily, manual lubrication, disconnect the regulator, place about 15 drops of light machine oil in the pump air inlet, reconnect the regulator, and turn on the air supply to blow oil into the motor.

Filter Service

Clean the filter regularly, as needed. Dried fluid can clog the screen and greatly reduce filtering ability. To clean, **Relieve the Pressure**, then open the system drain valve and wait a few minutes for the filter to drain. Have a bucket and solvent available.

Unscrew the bowl from the head (13). Pull the screen (9) out of the bowl. Remove the spring (12) from the bottom of the screen, and gently push in on the stud to remove the support (10). If the parts are stuck together, soak them in a compatible solvent before disassembling. To avoid damaging the parts, never force them apart.

Clean all parts thoroughly with a compatible solvent. Improper reassembly prevents filtering and damages the parts. Be sure the drain plug (27) is in place before starting the unit.

Troubleshooting

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

Note: To troubleshoot or service the following system components, refer to the instruction manuals listed below.

| Component | Manual |
|-----------------------|---------|
| Spray Gun 208–237 | 307–046 |
| Air Regulator 202–156 | 307–204 |
| Ball Valve 208–393 | 307–069 |
| Ball Valve 210–657 | 306–861 |
| Swivel 204–940 | 308–861 |

1. **Relieve the Pressure** before you check or service any system equipment.
2. Check all possible causes and solutions in the Troubleshooting Chart before disassembling the pump.

| Problem | Cause | Solution |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Pump fails to operate | Inadequate air supply pressure or restricted air lines Closed or clogged valves Clogged fluid lines, hoses, valves, etc. Damaged air motor Exhausted fluid supply | Increase air supply; clear* Open; clean Clear* Service air motor Refill and reprime, or flush |
| Continuous air exhaust | Worn or damaged air motor gasket, packing, seal etc. | Service air motor |
| Erratic pump operation | Exhausted fluid supply Held open or worn intake valve or piston packings | Refill and reprime, or flush Clear; Service |
| Pump operates, but output low on up stroke | Held open or worn piston packings | Clear; service |
| Pump operates, but output low on down stroke | Held open or worn intake valve | Clear; service |
| Pump operates, but output low on both strokes | Inadequate air supply or restricted air lines. Closed or clogged valves Exhausted fluid supply Clogged fluid lines, hoses, valves, etc. Packing nut too tight Loose packing nut or worn packings | Increase air supply; clear* Open; clean Refill and reprime, or flush Clear* Loosen Tighten; replace |

* Follow the **Pressure Relief Procedure**, and disconnect the fluid line. If the pump starts when the air is turned on again, the line, etc., is clogged.

Service

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

Before You Start

- To reduce downtime, be sure you have all necessary repair parts available. Recommended “tool box” spare parts are listed in the parts list with an asterisk, for example (130*).
- An air motor repair kit, part no. 206–728, is available. If you have a repair kit, use all the new parts for the best results. Parts included in the air motor repair kit are marked with a dagger, for example (113†).
- To avoid damaging the surfaces of some parts, padded pliers are essential. Part No. 207–579 Padded Pliers accessory is available.
- Whenever you replace the packings, also replace the glands and bearing.
- When cleaning parts, use a compatible solvent. Inspect all parts for wear and damage and replace as necessary.
- Use light, water-proof grease whenever grease is mentioned.

Air Motor and Throat

1. Flush the pump and **Relieve the Pressure**.
2. Disconnect all air and fluid hoses. Remove the pump from its mounting and clamp the air motor in a vise.
3. Use a pipe wrench on the knurled part of the riser tube (160 or 163) to screw it out of the air motor base (104). Pull the connecting rod (159 or 162) down as far as it will go. Use a hammer and punch to remove the pin (146) from the piston rod (128). Screw the connecting rod out of the piston rod.
4. Manually push on the piston rod to move the piston (118) up as far as it will go. Unscrew the cylinder cap nut (141 or 142). Pull the nut up. Grip the trip rod (103) with padded pliers and screw the nut off of the rod.

CAUTION

Do not damage the plated surface of the trip rod. A padded pliers is available as an accessory. Damage to the surface of the trip rod can cause poor air motor operation.

To avoid damaging the highly polished cylinder (117) wall, always lift the cylinder straight up off of the piston. Never tilt the cylinder as it is being removed.

5. Remove the six screws (107) holding the cylinder (117) to the base. Carefully pull the cylinder straight up off of the piston (118).

WARNING

To reduce the risk of pinching or amputating your fingers, always keep fingers clear of the toggle assemblies (F). See Fig. 2.

6. Use a screwdriver to push down on the trip rod yoke (109) and snap the toggles down. Remove the lockwires (120†) from the adjusting nuts (116†) of the transfer valves. Screw the top nuts off. Screw the stems (115†) out of the grommets (113†) and bottom nuts. Take the valve poppets (114†) off the stems and squeeze them firmly to check for cracks.
7. Grip the pivot pins (111) with a pliers. See Fig. 2. Compress the springs (112) up away from the piston lugs, and remove the parts. Check that the valve actuator (121) is supported by the spring clips (119), but slides easily into them. Remove the trip rod yoke, actuator, and trip rod (103) check the exhaust valve poppets (122†) for cracks.

Note: To remove the exhaust valve poppets (122), stretch them out and cut with a sharp knife.

8. Remove one of the motor plates (127 or 135). Pull the piston (118) up out of the base (104). Remove the throat packing nut (132) and take out the flat packing (130), back-up washer (129), bearing (139), packings (137) and gland (138).
9. Clean all parts carefully in a compatible solvent, and inspect for wear or damage. Replace parts as necessary. Check the polished surfaces of the piston (118), piston rod (128), and cylinder (117) wall for scratches or wear. A scored rod will cause premature packing wear and leaking.

Service

10. Lubricate the parts with light water-proof grease. Install the gland (138) v-packings (137) with the lips facing down, bearing (139), back-up washer (129), and flat packing (130) into the throat. Screw the packing nut (132) loosely into the base. Slide the piston rod (128) down through the packings and lower the piston (118) onto the base. Be sure that the o-rings (125 & 126) are in place.
11. Reinstall the transfer valve poppets (114†) on the valve stems (115†). Pull the exhaust valve poppets (122†) into the actuator (121) and clip off the top part (shown with a dotted line in Fig. 3). Install the transfer valve grommets (113†) in the valve actuator. Reinstall the trip rod (103) in the piston (118). Place the trip rod yoke (109) and valve actuator (121) on the trip rod. Check that the o-ring (123) is in place, and that the valve actuator is supported by the spring clips (119)
12. Install bottom adjusting nuts (116†) on the valve stems (115†) and screw the stems into the grommets (113†). Screw the top nuts (116†) on the stems. Before installing the lockwires (120†) in the adjusting nuts, adjust the transfer valve so there is a 0.145 in. (3.68 mm) clearance between the poppets (114†) and the seats when they are open. See Fig. 3. Adjustment gauge 171–818 is available to measure this. Reinstall the springs (112) and pivot pins (11) on the toggle arms (124) and snap the toggles to the up position with a screwdriver.

⚠ WARNING

To reduce the risk of pinching or amputating your fingers, always keep fingers clear of the toggle assemblies.

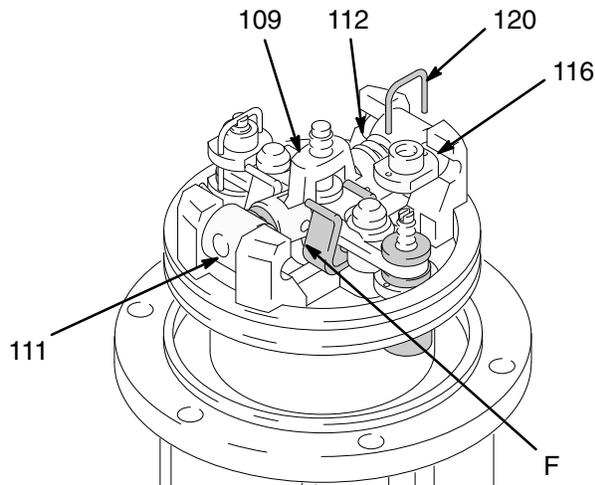


Fig. 2

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13. Carefully lower the air motor cylinder (117) over the piston (118) and onto the air motor base (104). Secure with the six screws (107).
14. Manually push on the piston rod to move the piston (118) up as far as it will go. Grip the trip rod (103) with padded pliers and screw the cylinder cap nut (141 or 142) onto the trip rod. Pull the piston rod (128) to move the piston downward. Check that the o-ring (108) is in place at the top of the air motor cylinder (117), then screw the cylinder cap nut into the cylinder.
15. Screw the connecting rod (159 or 162) into the piston rod (128) and secure with the pin (146). Screw the riser tube (160 or 163) into the air motor base (104).
16. Before putting the motor plates (127 & 135) back on, tighten the throat packing nut (132) just snug – do not overtighten. Before remounting the pump, connect an air hose and run the pump slowly (about 40 psi [3 bar]) to see that it operates smoothly.

⚠ WARNING

Never operate the pump with the air motor warning plate (135) or the identification plate (127) removed. These plates enclose the piston, which moves during operation, and help protect your fingers from serious injury, including amputation.

17. If the grounding wire was disconnected before service was begun, be sure to reconnect it before operating the pump.

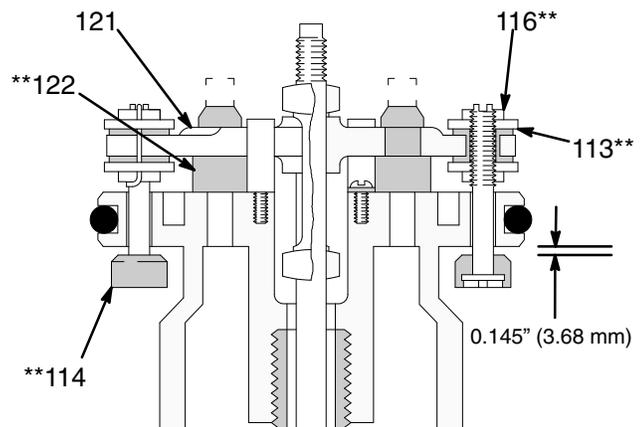


Fig. 3

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Service

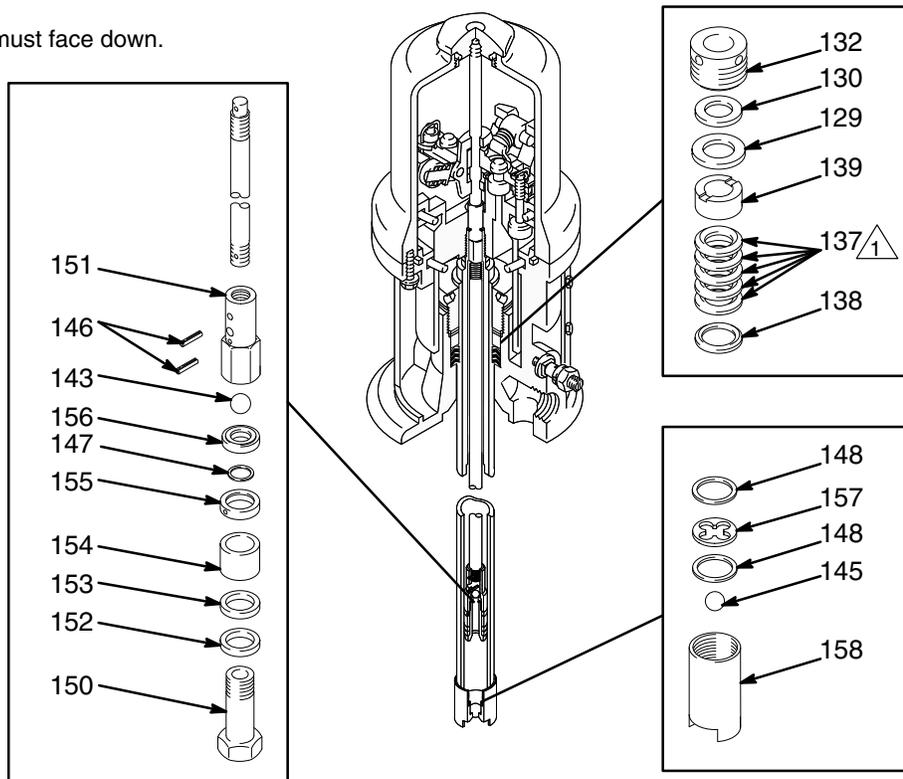
Displacement Pump

⚠ WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 8.

1. Flush the pump, and **Relieve the pressure**
2. Disconnect all air and fluid hoses.
3. Remove the pump from its mounting and clamp the air motor base in a vise.
4. Screw the intake valve housing (158) off riser tube (160 or 163). See Fig. 4. Remove gaskets (148), ball stop (157), and ball (145). Clean and inspect for wear or damage. Replace as necessary.
5. Use a pipe wrench at the knurled part of the riser tube (160 or 163) to screw it out of the air motor base (104). Inspect the inside surface of the rise tube for score marks or wear which could damage the packing or cause low output on the upstroke. Check by rubbing a finger on the surface, or by holding it up to the light at a slight angle.
6. Unscrew the piston body (150) from the piston coupling (151). Remove the ball (143), seat (156), gasket (147), bearing (155), PTFE[®] packing (154), and seal (153). Do not remove the press-fit brass bearing (152).
7. Clean all the parts in a compatible solvent and inspect for wear or damage. Replace as necessary. Lubricate parts with light waterproof grease.
8. Reinstall the seal (153*), packing (154*), bearing (155*), gasket (147*) seat (156*), and ball (143) on the piston body (150). The check ball seat (156*) may be reversed if desired to provide a new seat. Screw the piston body (150) into the piston coupling (151).
9. Screw the riser tube (160 or 163) into motor base (104).
10. Reinstall the ball (145), gasket (148), ball stop (157), and other gasket (148) in the intake valve housing (158). Screw the intake valve housing onto the riser tube (160 or 163)
11. If the grounding wire was disconnected before service was begun, be sure to reconnect it before operating the pump.

⚠ Lips of packings must face down.



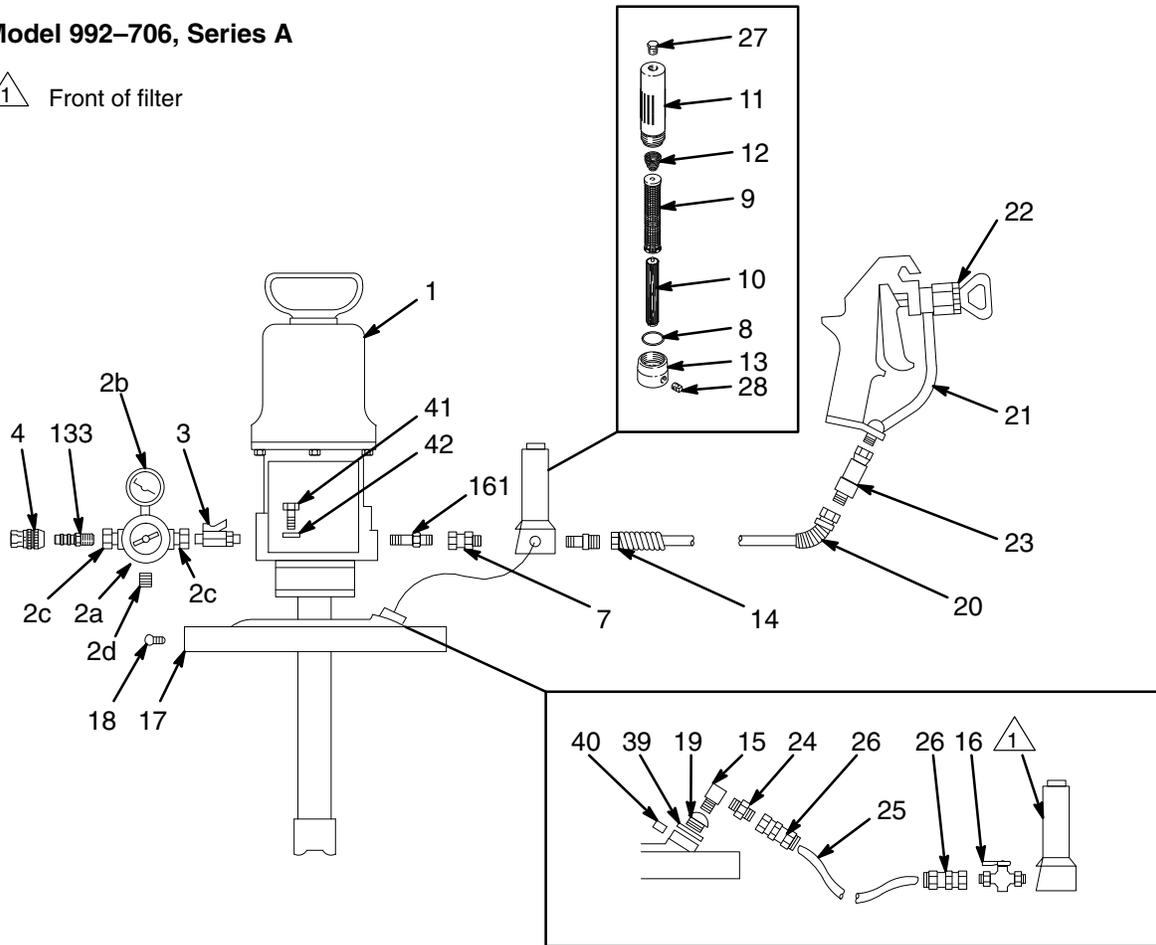
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Fig. 4

Parts

Model 992-706, Series A

 Front of filter



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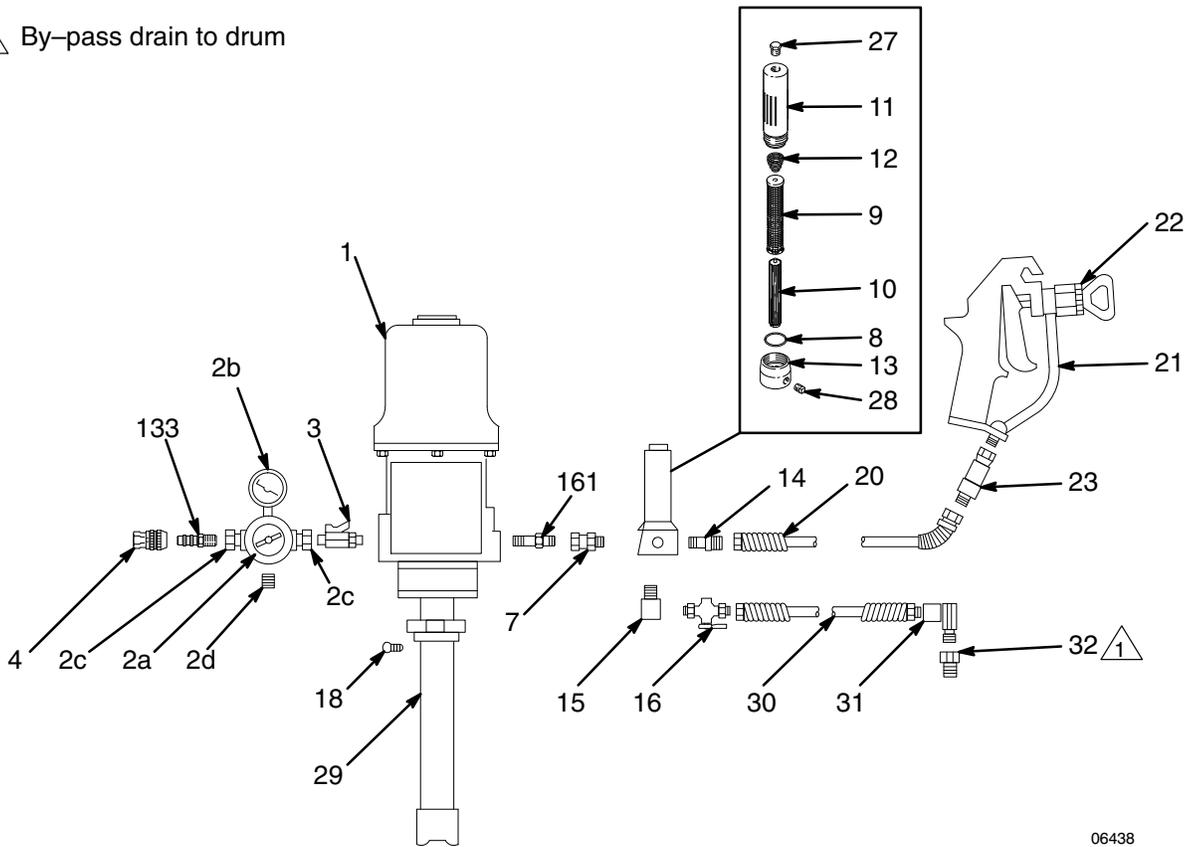
| Ref. No. | Part No. | Description | Qty. | Ref. No. | Part No. | Description | Qty. |
|----------|----------|---------------------------------------------|------|----------|----------|------------------------------------------------|------|
| 1 | 992-721 | FIRE-BALL PUMP, 15:1 See pages 18 & 19 | 1 | 17 | 205-786 | COVER | 1 |
| 2 | 202-156 | REGULATOR, air Includes items 2a-2d | 1 | 18 | 100-220 | THUMBSCREW, 5/16-18 | 3 |
| 2a | 104-266 | . REGULATOR, air | 1 | 19 | 609-522 | PLUG, bulkhead | 1 |
| 2b | 100-960 | . GAUGE, pressure | 1 | 20 | 223-756 | HOSE, coupled, 1/4 npsm(fbe), 15 ft (4.6 m) | 1 |
| 2c | 100-081 | . BUSHING, 1/2 npt x 3/8 npt | 2 | 21 | 235-462 | SPRAY GUN; See 308-236 for parts | 1 |
| 2d | 100-721 | . PLUG, headless, 1/4-18 npt | 1 | 22 | 163-716 | SPRAY TIP | 1 |
| 3 | 208-393 | VALVE, ball; See 307-068 for parts | 1 | 23 | 204-940 | SWIVEL, 1/4 npt(m) x 1/4 npsm(f) | 1 |
| 4 | 208-536 | COUPLER, air line | 1 | 24 | 156-971 | NIPPLE, 1/4 npt | 1 |
| 7 | 155-665 | UNION, adapter, 3/8 npsm(f) x 3/8 npt(m) | 1 | 25 | 061-132 | HOSE, nylon, 1/4" ID | 2 |
| 8 | 104-361 | O-RING, PTFE [®] | 1 | 26 | 205-447 | COUPLING, hose, 1/4-18 npsm (f) | 2 |
| 9 | 167-026 | SCREEN, stainless, 100 mesh | 1 | 27 | 100-040 | PLUG, pipe; 3/8-18 npt(m) | 1 |
| 10 | 179-801 | SUPPORT, filter, carbon steel | 1 | 28 | 100-509 | PLUG, pipe; 1/4-18 npt(m) | 1 |
| 11 | 179-773 | BOWL, filter, carbon steel | 1 | 39 | 160-516 | O-RING, buna-n | 1 |
| 12 | 171-941 | SPRING, compression | 1 | 40 | 101-962 | SCREW, soc hd, 1/4-20 x 3/8" | 2 |
| 13 | 171-942 | HEAD, filter | 1 | 41 | 100-270 | CAPSCREW, hex hd, 1/4-20 x 5/8" | 2 |
| 14 | 162-453 | NIPPLE, 1/4-18 npsm x 1/4 npt | 1 | 42 | 100-016 | LOCKWASHER | 2 |
| 15 | 100-840 | ELBOW, street, 1/4-18 npt | 1 | | | | |
| 16 | 210-657 | VALVE, ball; See 306-861 for parts | 1 | | | | |

306 and 307 numbers in description refer to separate instruction manuals

Parts

Model 992-714, Series A

 By-pass drain to drum

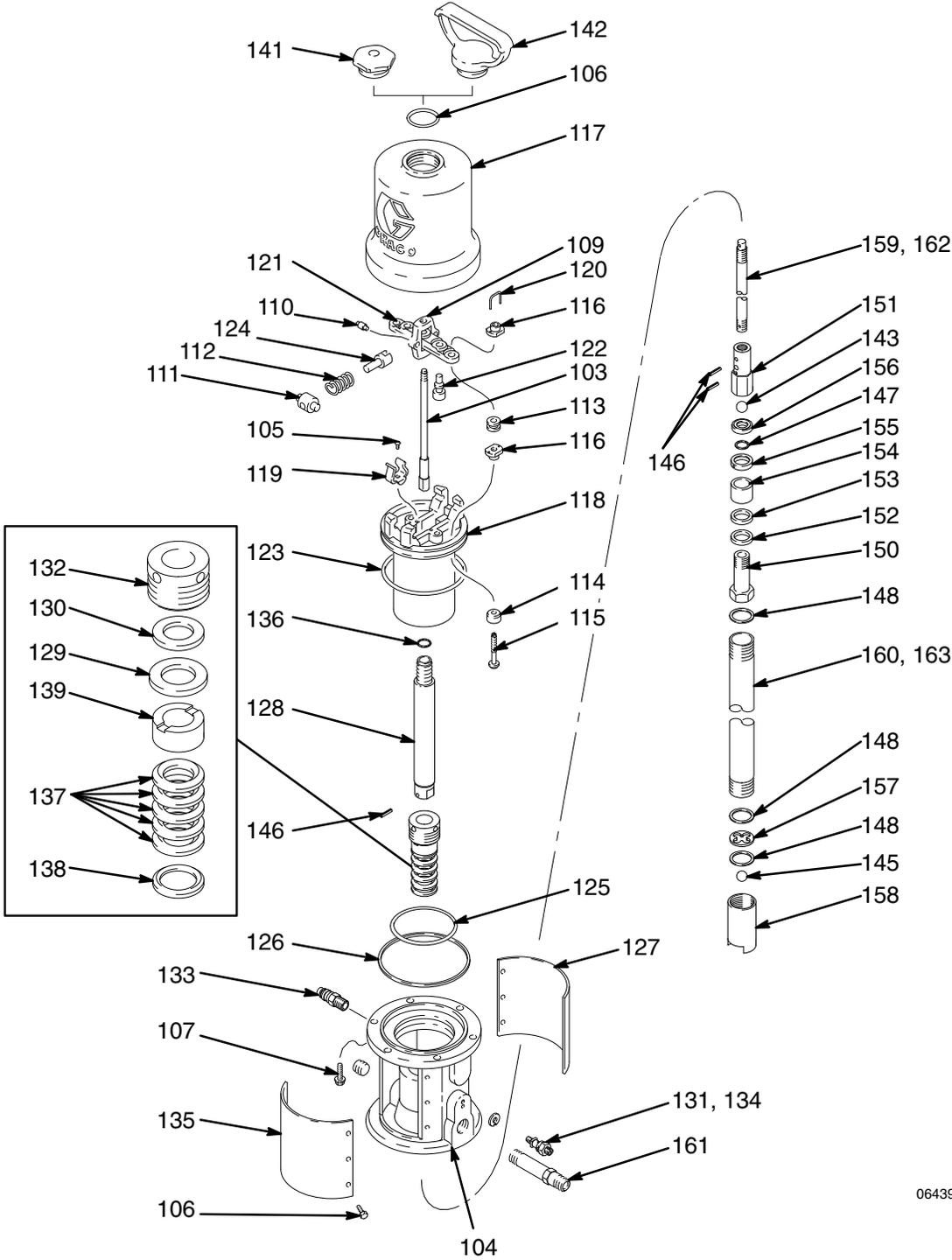


06438

| Ref. No. | Part No. | Description | Qty. | Ref. No. | Part No. | Description | Qty. |
|----------|----------|---------------------------------------------|------|----------|----------|----------------------------------------------------------------|------|
| 1 | 992-720 | FIRE-BALL PUMP, 15:1 See pages 18 & 19 | 1 | 15 | 100-840 | ELBOW, street, 1/4-18 npt | 1 |
| 2 | 202-156 | REGULATOR, air Includes items 2a-2d | 1 | 16 | 210-657 | VALVE, ball; See 306-861 for parts | 1 |
| 2a | 104-266 | . REGULATOR, air | 1 | 18 | 100-220 | THUMBSCREW, 5/16-18 | 2 |
| 2b | 100-960 | . GAUGE, pressure | 1 | 20 | 214-629 | HOSE, coupled, 1/4 npsm(fbe), 15 ft (4.6 m) | 1 |
| 2c | 100-081 | . BUSHING, 1/2 npt x 3/8 npt | 2 | 21 | 235-462 | SPRAY GUN; See 308-236 for parts | 1 |
| 2d | 100-721 | . PLUG, headless, 1/4-18 npt | 1 | 22 | 163-716 | SPRAY TIP | 1 |
| 3 | 208-393 | VALVE, ball; See 307-068 for parts | 1 | 23 | 204-940 | SWIVEL, 1/4 npt(m) x 1/4 npsm(f) | 1 |
| 4 | 208-536 | COUPLER, air line | 1 | 27 | 100-040 | PLUG, pipe; 3/8-18 npt(m) | 1 |
| 5 | 169-971 | FITTING, air line; 3/8-18 npt(m) | | 28 | 100-509 | PLUG, pipe; 1/4-18 npt(m) | 1 |
| 7 | 155-665 | UNION, adapter, 3/8 npsm(f) x 3/8 npt(m) | 1 | 29 | 622-517 | ADAPTER, bung | 1 |
| 8 | 104-361 | O-RING, PTFE® | 1 | 30 | 214-701 | HOSE, coupled; 1/4-18 npt(m) x 1/4 npsm(f); 3 ft (1 m) long | 1 |
| 9 | 167-026 | SCREEN, stainless, 100 mesh | 1 | 31 | 155-541 | UNION, swivel; 1/4 npsm(f) x 1/4 npt(m) | 1 |
| 10 | 179-801 | SUPPORT, filter, carbon steel | 1 | 32 | 100-615 | BUSHING ; 3/4 npt(m) x 1/4 npt(f) | 1 |
| 11 | 179-773 | BOWL, filter, carbon steel | 1 | | | | |
| 12 | 171-941 | SPRING, compression | 1 | | | | |
| 13 | 171-942 | HEAD, filter | 1 | | | | |
| 14 | 162-453 | NIPPLE, 1/4-18 npsm x 1/4 npt | 1 | | | | |

306 and 307 numbers in description refer to separate instruction manuals

Parts



06439

Parts

Fire-Ball Pump Model 992-720, Series B

Includes items 101, 143-161

Fire-Ball Pump Model 992-721, Series B

Includes items 102, 143-158, 161-163

| Ref No. | Part No. | Description | Qty. | Ref No. | Part No. | Description | Qty. |
|---------|----------|---------------------------------------------------------------------|------|---------|----------|----------------------------------------------------------------|------|
| 101 | 220-174 | AIR MOTOR, used with 992-720 only; Includes items 103-141, 161 | 1 | 133 | 169-971 | . FITTING, air line | 1 |
| 102 | 220-175 | AIR MOTOR, used with 992-721 only; Includes items 103-140, 142, 161 | 1 | 134 | 104-029 | . CLAMP, grounding | 1 |
| 103 | 203-965 | . ROD, trip | 1 | 135 | 172-457 | . PLATE, instruction | 1 |
| 104 | 204-896 | . BASE, air motor | 1 | 136 | 160-932 | . GASKET; copper | 1 |
| 105 | 102-975 | . SCREW, machine; 6-32 x 1/4" | 2 | 137* | 162-391 | . V-PACKING; leather | 5 |
| 106 | 100-078 | . SCREW, thread forming; 8-32 x 3/8" | 12 | 138* | 168-851 | . GLAND, male | 1 |
| 107 | 101-578 | . SCREW, cap | 6 | 139* | 168-852 | . BEARING | 1 |
| 108 | 156-698 | . O-RING; nitrile rubber | 1 | 140 | 180-233 | . LABEL, warning (not shown) | 2 |
| 109 | 158-360 | . YOKE, rod, trip | 1 | 141 | 161-435 | . NUT, cap, cylinder used with 220-174 motor only | 1 |
| 110 | 158-362 | . PIN, toggle | 2 | 142 | 164-704 | . NUT, cap, cylinder used with 220-175 motor only | 1 |
| 111 | 158-364 | . PIN, pivot | 2 | 143 | 100-114 | BALL; steel; 0/44" (11.2 mm) dia. | 1 |
| 112 | 167-585 | . SPRING, compression | 2 | 144 | 104-088 | RIVET, blind (not shown) | 2 |
| 113† | 158-367 | . GROMMET | 2 | 145 | 100-400 | BALL, steel; 0.75" (19 mm) dia. | 1 |
| 114† | 170-708 | . POPPET, valve, urethane | 2 | 146* | 101-579 | PIN, spring | 3 |
| 115† | 160-896 | . STEM, valve | 2 | 147* | 150-451 | GASKET; copper | 1 |
| 116† | 160-261 | . NUT, valve | 4 | 148† | 150-694 | GASKET; copper | 3 |
| 117 | 160-613 | . CYLINDER, motor | 1 | 149 | 172-446 | PLATE, designation (not shown) | 1 |
| 118 | 160-614 | . PISTON, motor | 1 | 150 | 160-939 | BODY, piston | 1 |
| 119 | 172-866 | . CLIP, spring | 2 | 151 | 160-940 | COUPLING, piston | 1 |
| 120† | 160-618 | . WIRE, lock | 2 | 152* | 160-941 | BEARING, press-fit; brass | 1 |
| 121 | 172-867 | . ACTUATOR, valve | 1 | 153* | 160-942 | SEAL, piston; PTFE® | 1 |
| 122† | 170-709 | . POPPET, valve; urethane | 2 | 154* | 671-561 | PACKING, PTFE® | 1 |
| 123† | 160-621 | . O-RING; nitrile rubber | 1 | 155* | 160-944 | BEARING, piston; brass | 1 |
| 124 | 160-623 | . ARM, toggle | 2 | 156 | 160-945 | SEAT, piston ball | 1 |
| 125 | 160-624 | . O-RING, nitrile rubber | 1 | 157 | 183-326 | STOP, ball | 1 |
| 126† | 160-625 | . O-RING, nitrile rubber | 1 | 158 | 166-930 | HOUSING, intake valve | 1 |
| 127 | 172-464 | . PLATE, identification | 1 | 159 | 161-050 | ROD, connecting; 25-7/8" (657 mm) long; used with 992-720 only | 1 |
| 128 | 605-187 | . ROD, piston | 1 | 160 | 161-051 | TUBE, riser; 32-5/16" (821 mm) long used with 992-270 only | 1 |
| 129 | 160-641 | . WASHER, back-up | 1 | 161 | 160-790 | NIPPLE, adapter; 3/8 npt | 1 |
| 130* | 160-644 | . PACKING, flat; leather | 1 | 162 | 165-970 | ROD, connecting; 5-1/4" (133 mm) long; used with 992-721 only | 1 |
| 131 | 104-582 | . WASHER, tab | 1 | 163 | 165-971 | TUBE, riser; 11-11/16" (297 mm) long; used with 992-721 only | 1 |
| 132 | 160-640 | . NUT, packing | 1 | | | | |

* Recommended "tool box" spare parts. Keep on hand to reduce down time.

† Included in repair kit 206-728.

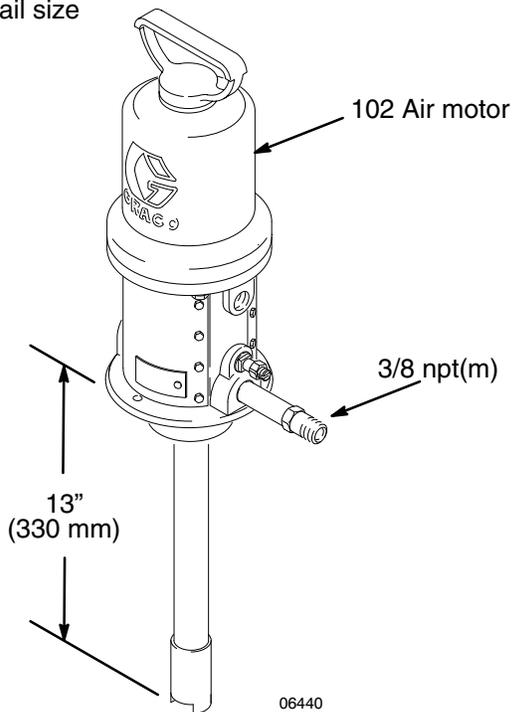
Technical Data

| | |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum working pressure | 2700 psi (186 bar) |
| Air operating pressure | 40–180 psi (3–12 bar) |
| Air consumption | 17.5 cfm per gallon pumped (0.2 m ³ /min/liter) at 100 psi (7 bar) air pressure; up to 11.7 cfm (0.33 m ³ /min) with pump operated within recommended range |
| Maximum recommended pump speed | 66 cycles/min 0.67 gpm (2.5 liter/min) |
| Wetted parts | PTFE [®] , carbon steel, stainless steel, leather, copper, brass, zinc coating, cadmium plating, nickel plating, buna–N, nylon, iron, aluminum |
| Weight | Model 992–721 16 lb (7 Kg) Model 992–720 19 lb (8.5 Kg) |

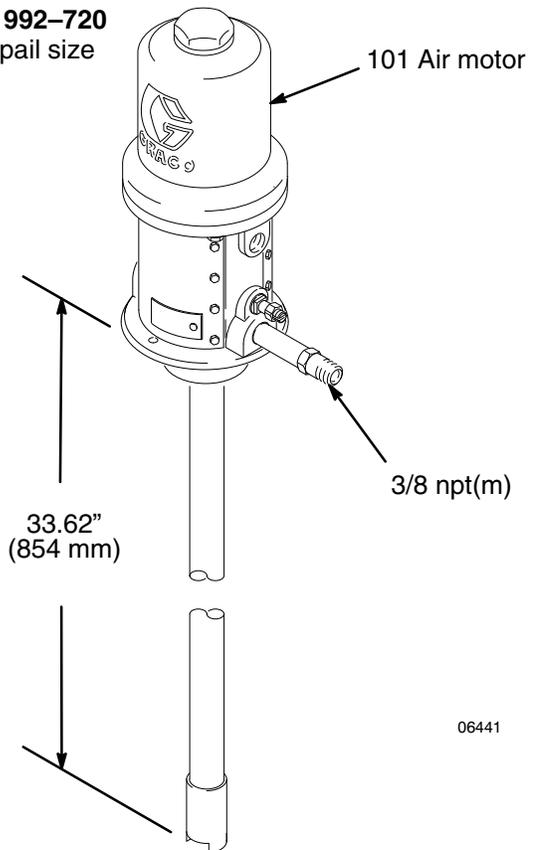
PTFE[®]

Dimensions

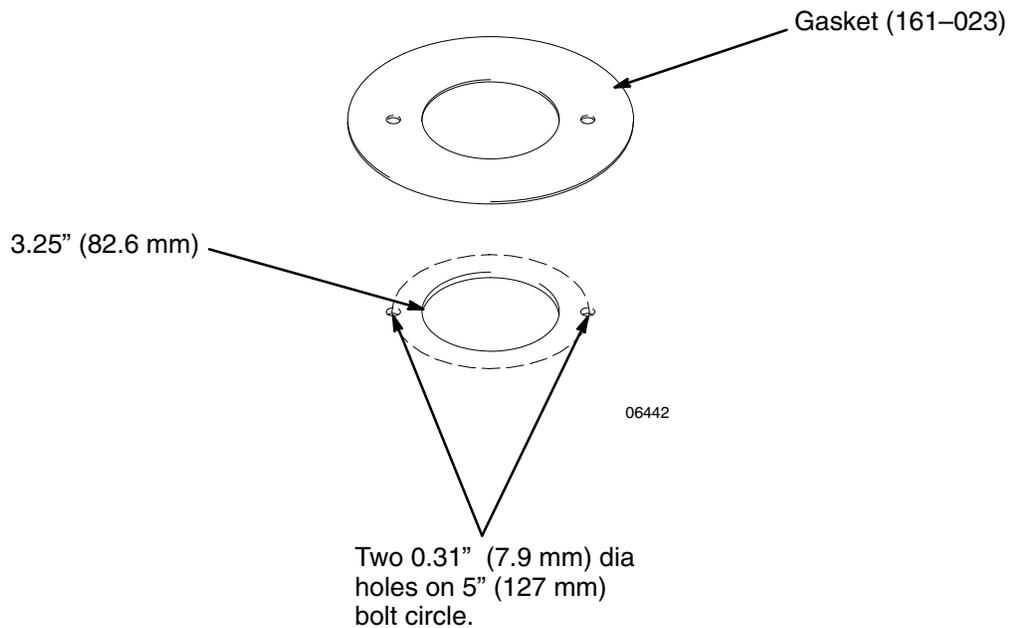
Model 992–721
35 lb pail size



Model 992–720
400 lb pail size



Mounting Hole Layout



Manual Change Summary

The following changes have been added to this manual since the last revision:

- The entire manual was updated electronically.
- For Models 992-706 & 992-714, Ref. No. 21 (208-327, Airless Spray Gun) was changed to (235-462)
- Part No. 150-694 (Ref. 148) was added to repair kit 206-728.

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Graco warrants all equipment listed in this manual which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. 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.

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