INSTRUCTIONS–PARTS LIST

GRACO

308–336

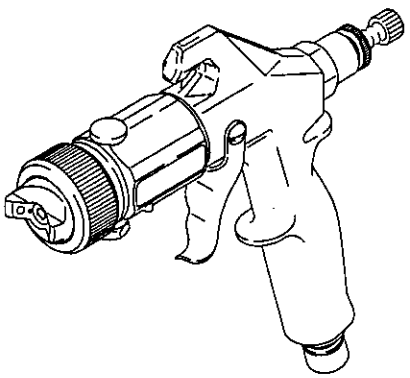
Rev. A

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

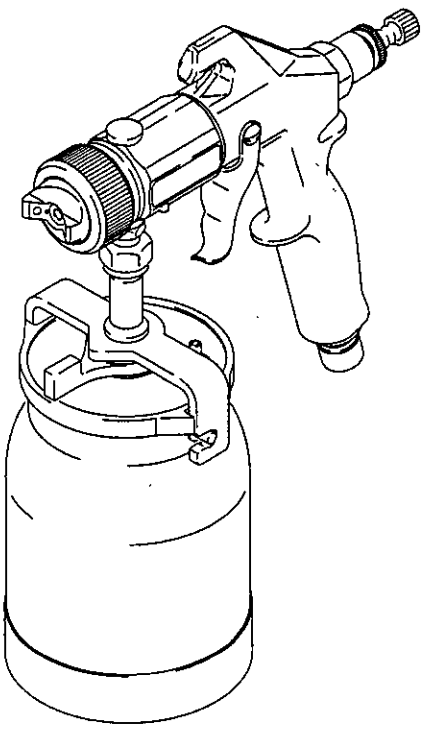
Series 700

Turbine Spray Gun

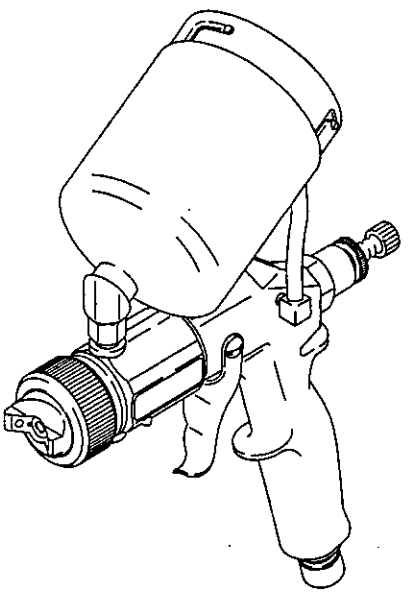
100 psi (7 bar) Maximum Inlet Air Pressure
50 psi (3.5 bar) Maximum Inlet Fluid Pressure



Model 710P



Model 710
Includes 1 quart (1 liter) cup



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Model 709HS
Includes 1/2 quart (1/2 liter) cup

Model 710HS
Includes 3/4 quart (3/4 liter) cup

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

WARNINGS

For Professional Use Only. Observe All Warnings.
Read and understand all instruction manuals before operating equipment.

EQUIPMENT MISUSE HAZARD

General Safety

Any misuse of the spray equipment or accessories, such as improper usage, over pressurizing, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, can cause them to rupture and result in serious injury, fire, explosion or property damage.

- Never point the spray gun at anyone or at any part of the body.
- Never put hand or fingers over the spray nozzle.
- Never try to stop or deflect leaks with your hand or body.
- Always turn off the air supply to the gun before removing the spray gun cup.
- Check all spray equipment regularly and repair or replace worn or damaged parts immediately.
- Only use genuine Graco replacement parts when servicing the gun.
- Never alter or modify any part of this equipment; doing so could cause it to malfunction.
- Read and follow the fluid and solvent manufacturer's literature regarding the use of protective eyewear, gloves, clothing, respirator and other equipment.

Fluid Compatibility

Be sure all fluids and solvents used are chemically compatible with the "Wetted Parts" shown in the **Technical Data** on the back cover. Always read the fluid and solvent manufacturer's literature before using the fluid or solvent in this gun.

Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in the turbine spray system, which contains aluminum and/or galvanized-coated parts. Such use could result in a serious chemical reaction, with the possibility of explosion, which could cause death, serious injury, and/or substantial property damage.

System Pressure

This gun has a *Maximum Inlet Fluid Pressure* of 100 psi (7 bar) and a *Maximum Inlet Air Pressure* of 50 psi (3.5 bar). The accessory remote pressure pots have a *Maximum Inlet Air Pressure* of 50 psi (3.5 bar). Never exceed the maximum pressures of the gun, pressure pot, or any other component or accessory used in the system.

Pressure Relief

The spray gun cups and accessory remote pressure pots remain pressurized until pressure is manually relieved. To reduce the risk of serious injury from pressurized fluid or accidental spray from the gun, always relieve pressure in the cup or pressure pot before checking or servicing any part of the spray system; before installing, cleaning or changing fluid nozzles; before loosening or removing the accessory remote pressure pot cover; and whenever you stop spraying.

Spray Gun Cup

To relieve pressure:

1. Turn off the air supply to the gun.
2. Unlatch the cup cover and loosen or remove the cup from the cover.

Accessory Remote Pressure Pot

To relieve pressure:

1. Turn off the air supply to the pressure pot.
2. *2 1/2 Gallon Remote Pot:* Pull the pressure relief valve ring (206c) until pressure is completely relieved.
   2 Quart Remote Pot: Turn out the pressure relief knob (113) about one turn. Wait until pressure is completely relieved before removing the cover. Close the knob before using the system again.

See Fig. 4 on page 7.

HOSE SAFETY

Tighten all fluid connections securely before each use.

Never use a damaged hose. Before each use, check the entire hose for cuts, leaks, abrasion, bulging cover, or damage or movement of the hose couplings. If any of these conditions exist, replace the hose immediately.

Handle and route hoses carefully. Do not pull on hoses to move equipment. Do not use fluids or solvents which are not compatible with the inner tube and cover of the hose.

FIRE OR EXPLOSION HAZARD

Sparking and Flammable Vapors Hazard
Sparking can be expected in the normal operation of the turbine motor. Sparks could ignite fumes from flammable liquid, dust particles and other flammable substances in the spray area, and cause serious injury and property damage. Be sure to follow the precautions below:

- When flammable liquid is sprayed or used for flushing or cleaning equipment, the turbine must be placed at least 20 feet (6.1 m) away from areas where hazardous concentrations of flammable vapors are likely to occur.
- Use additional air hose if necessary to ensure that the turbine is operated in a clean, dry, well ventilated area.
- Never place the turbine inside a spray booth! Use this equipment outdoors or in extremely well ventilated areas.

Ignition Sources
Avoid all ignition sources such as static electricity from plastic drop cloths, open flames such as pilot lights, hot objects such as cigarettes, arcs from connecting or disconnecting power cords or turning light switches on and off. Extinguish or remove all sources of ignition.

Grounding
To reduce the risk of static sparking, ground the turbine and all other spray equipment used or located in the spray area. Check your local electrical code for detailed grounding instructions for your area and type of equipment.

To ground the turbine: Plug the power supply cord into a properly grounded outlet. Do not remove the grounding prong from the power cord. Do not use an adapter. Extension cords must have three wires and be rated for a minimum of 15 amps.

IMPORTANT

United States Government safety standards have been adopted under the Occupational Safety and Health Act. These standards--particularly the General Standards, Part 1910 and the Construction Standards, Part 1926--should be consulted.

Table of Contents

Introduction

The Series 700 Turbine Spray Gun can spray most coatings or finishes currently being used for automotive refinish, industrial, aerospace, marine, wood, plastic and architectural applications.

This spray gun typically utilizes 5 psi (0.35 bar) inbound air pressure to produce high quality paint finishes. The gun produces a cone of air that carries and directs the paint from the gun to the surface, minimizing overspray and increasing transfer efficiency. This enables painters to comply with new clean air laws that are designed to reduce VOC (volatile organic compounds) emissions, eases paint application by requiring fewer paint passes to obtain coverage, and saves on both material and clean-up time.

Fluid Set Selection Charts

Using the Charts

Unless otherwise ordered, the Turbine Spray Gun includes a 1.4 mm fluid set, part no. M70581. ***The size of the air cap, fluid nozzle, and fluid needle are marked on the parts.***

Use the fluid set charts on page 5 to order a different size fluid set or to find the part number of an individual component of your fluid set. The charts separate fluid sets that are commonly used in contractor applications from those commonly used in automotive applications.

The complete fluid sets (A) include an air cap (B) and a fluid needle/nozzle set (C), which can also be ordered separately. Refer to Fig. 1 and the charts. The fluid needle/nozzle (C) set includes a fluid needle assembly (D) and a fluid nozzle (E), which can be ordered separately.

Narrow fan pattern air caps (wood finishing) are available but are not part of a fluid set. See the **Optional Narrow Fan Pattern Air Caps** chart below for part numbers.

NOTE: To order other replacement parts for your gun, see the parts drawing and list for your gun model on pages 20 to 24. To reference the nozzle, needle, or air cap part number by size alone, see the selection chart in the **Accessories** section, page 26.

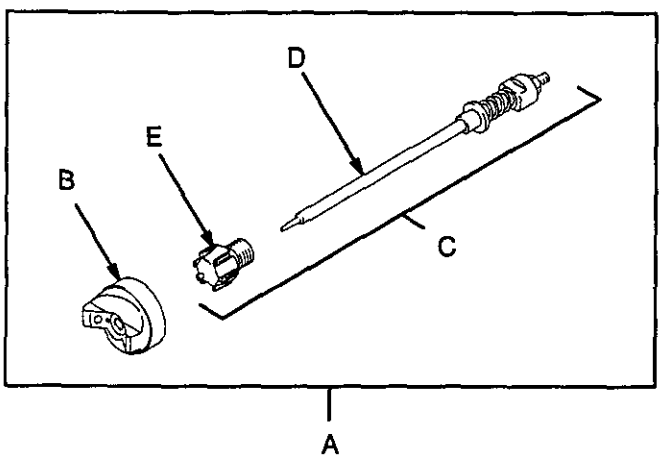


Fig. 1 02981

Selecting the Proper Fluid Set

The turbine spray gun fluid sets (A) range in size to provide different fluid flow rates. The selection charts on page 5 show the recommended combinations based on fluid viscosities, flow rates, and usage.

As a general guideline, use the fluid nozzle that will give the required flow with the needle fully triggered at the lowest fluid pressure.

For low flow rates or light viscosity fluid, select the smaller nozzle sizes.

For high flow rates or high viscosity fluid, select the larger nozzle sizes.

To eliminate mist, use an air cap one size larger than the fluid nozzle. The use of a smaller size air cap produces a finer finish, but it can increase mist.

For very fine finish work (automotive, furniture, etc.), order the air cap two sizes smaller than the needle and nozzle. A 0.5M mm or 0.7M mm multi-hole air cap is recommended for automotive finishes. See the **Automotive User Chart**, above.

For a narrow fan pattern (wood finishing), order a 0.5W mm, 0.7W mm, or 1.0W mm narrow fan pattern air cap. See the chart below.

Optional Narrow Fan Pattern Air Caps

Air Cap P/N	Size
M70435	0.5W mm
M70438	0.7W mm
M70441	1.0W mm

Fluid Set Selection Charts

Contractor User Chart

(A) Complete Fluid Set P/N & Size	*Complete Fluid Set Includes:* (B) Air Cap P/N & Size	(C) Fluid Needle/ Nozzle Set P/N & Size	Needle/Nozzle Set Includes: (D) Fluid Needle Assy. P/N	(E) Fluid Nozzle P/N	Type of Fluid**	Fluid Usage
M70562 1.0 mm	M70439 1.0 mm	M71328 1.0 mm	M70456	M70448	Light 14–18 sec.	Fine finish work with stains, laquers
M70643 1.2 mm	M70630 1.2 mm	M71329 1.2 mm	M70637	M70634	Light–Medium 18–20 sec.	Medium speed application with laquers, enamels
M70581* 1.4 mm	M70442 1.4 mm	M71330 1.4 mm	M70458	M70449	Medium 20–22 sec.	Normal output with laquers, enamels, urethanes, varnish, waterborne lacquers
M70650 1.6 mm	M70632 1.6 mm	M71331 1.6 mm	M70639	M70635	Medium 20–26 sec.	Medium speed industrial finishes
M70651 1.8 mm	M70633 1.8 mm	M71332 1.8 mm	M70641	M70636	Medium 20–26 sec.	Higher speed industrial finishes
M70582 2.0 mm	M70444 2.0 mm	M71333 2.0 mm	M70460	M70450	Heavy 22–26 sec.	Heavy output with laquer and enamels, latex and oil wall paints
M70583 2.8 mm	M70445 2.8 mm	M71334 2.8 mm	M70462	M70451	Heavy 26+ sec.	Wax base stripper, sound deadeners, latex paint, multi-color

* *Standard fluid set*
** *Fluid measured with a #4 Ford cup (part no. M70702). See Accessories to order.*

Automotive User Chart

(A) Complete Fluid Set P/N & Size	*Complete Fluid Set Includes:* (B) Air Cap P/N & Size	(C) Fluid Needle/ Nozzle Set P/N & Size	Needle/Nozzle Set Includes: (D) Fluid Needle Assy. P/N	(E) Fluid Nozzle P/N	Fluid Usage
M70497 0.5 mm	M70434† 0.5M mm	M71326 0.5 mm	M70452	M70446	Ultra fine finish with automotive touch-up, spot jobs
M70528 0.7 mm	M70437† 0.7M mm	M71327 0.7 mm	M70454	M70447	Fine finish work with all automotive finishes, color matching, automotive base coat
M70559 0.5/1.0 mm	M70434† 0.5M mm	M71328 1.0 mm	M70456	M70448	Fine finish work with acrylic enamels, automotive base coat
M70647 0.7/1.2 mm	M70437† 0.7M mm	M71329 1.2 mm	M70637	M70634	Medium speed application with automotive clear coat, urethanes
M70581* 1.4 mm	M70442 1.4 mm	M71330 1.4 mm	M70458	M70449	Normal output with enamels, urethanes, zinc chromate, automotive primers

* *Standard fluid set*
† *Multi-hole air cap*

Setup

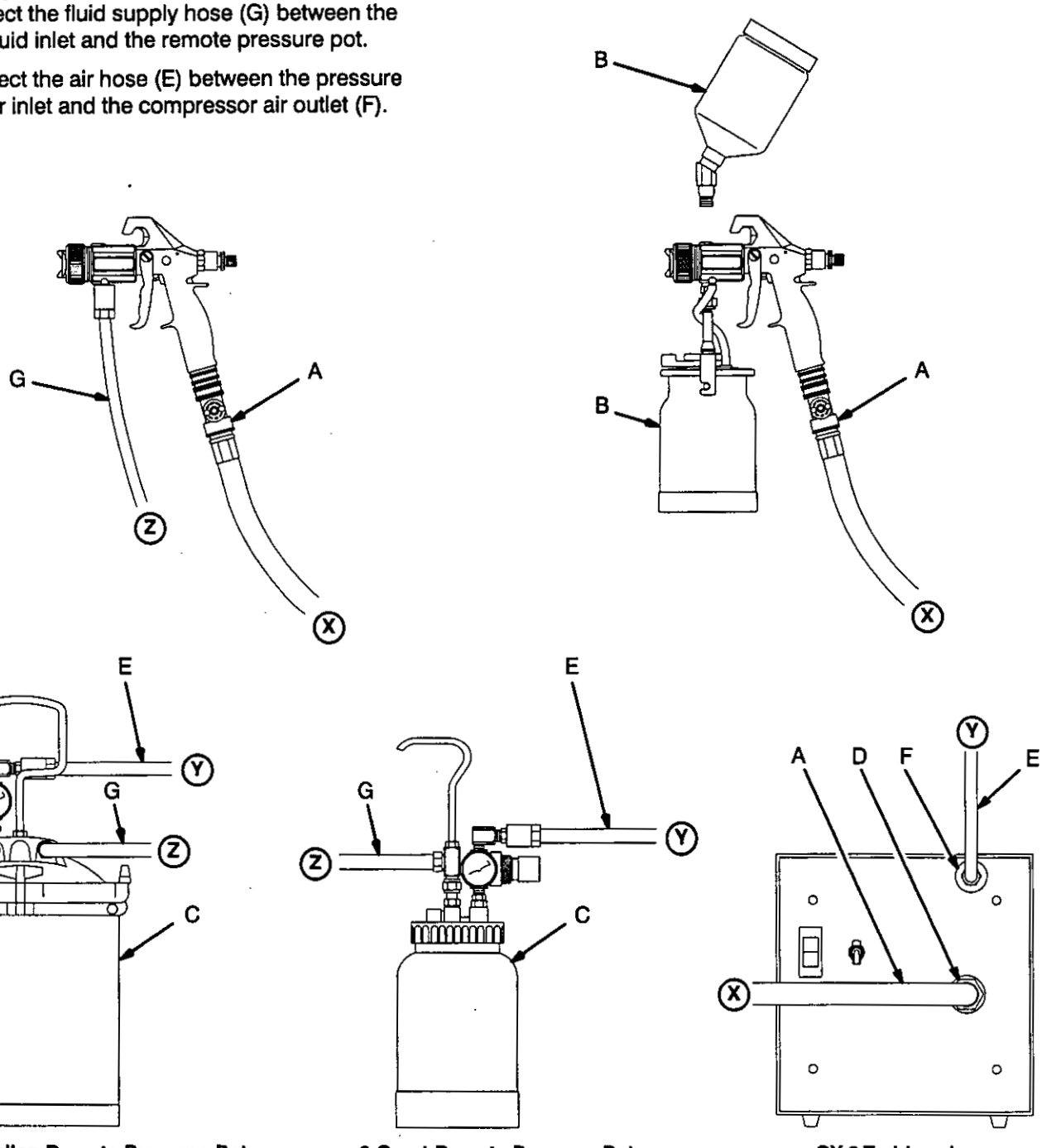
Connect the Fluid and Air Supply

1. Connect the gun air supply hose (A) between the turbine air outlet (D) and the gun air inlet. See Fig. 2.
2. *If using a spray gun cup (B),* connect the cup to the gun fluid inlet.
3. *If using an accessory remote pressure pot (C),* connect the fluid supply hose (G) between the gun fluid inlet and the remote pressure pot.

   Connect the air hose (E) between the pressure pot air inlet and the compressor air outlet (F).

NOTES:

- The circled letters in Fig. 2 indicate hose line connections.
- Only the CX-8, CX-12, and CX-20 turbine units include a compressor for use with a remote pressure pot.



2-1/2 Gallon Remote Pressure Pot Part No. M70604 *(see Accessories)*

2 Quart Remote Pressure Pot Part No. M70585 *(see Accessories)*

CX-8 Turbine shown

Fig. 2 02859

Setup

Prepare the Fluid

1. Always strain the fluid before spraying; this includes color, reducer and hardeners if used.

2. When using a turbine spray system, you need to use a slower drying reducer or thinner to compensate for the faster drying time caused by the warm air of the turbine. Do not over reduce.

Paint Reduction – Automotive Type Finishes

Reduce and catalyze all paint to manufacturer's specifications. To compensate for the faster drying time of turbine systems, use a reducer one-step slower than what is used for conventional air spray.

Paint Reduction – Industrial or Domestic Coatings

Reduce and catalyze all paint to manufacturer's specifications. If no reductions are given, first thoroughly mix the fluid to be sprayed. Then gradually mix in the proper reducer, testing the fluid until you have the correct spraying consistency.

To test the consistency: Remove the stir stick from the thinned paint. When the paint stream running off the stir stick breaks into droplets, the first few drops should be about one second apart.

Fill the Cup or Remote Pressure Pot

Spray Gun Cup

WARNING

The spray gun cup is pressurized by the gun's air supply. To reduce the risk of serious injury from pressurized fluid or accidental spray from the gun, always turn off the air supply to the gun before removing the spray gun cup.

Only fill the cup 3/4 full to help keep the fluid tube clean, then install the cover. The under-cup cover has a latch (H) to secure it to the cup. The over-cup has a ring with notches (J) that secures the cup hood into place when locked in place on the cup.

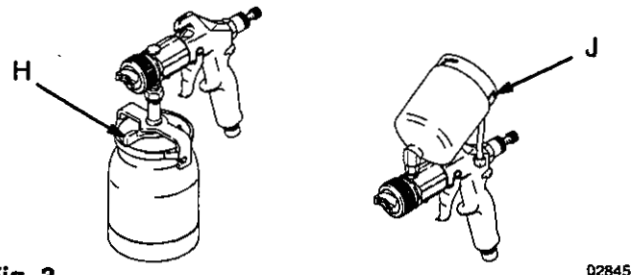


Fig. 3 02845

Accessory Remote Pressure Pot

WARNING

The accessory remote pressure pots remain pressurized until pressure is manually relieved. To reduce the risk of serious injury from pressurized fluid or accidental spray from the gun, always relieve pressure in the pressure pot before loosening or removing the cover.

1. Relieve the remote pressure pot pressure by following these steps:

   a. Turn off the air supply to the pressure pot.

   b. *2 1/2 Gallon Remote Pot:* Pull the pressure relief valve ring (206c) until pressure is completely relieved.
   2 Quart Remote Pot: Turn out the pressure relief knob (113) about one turn. Wait until pressure is completely relieved before removing the cover. Close the knob before using the system again.
   See Fig. 4.

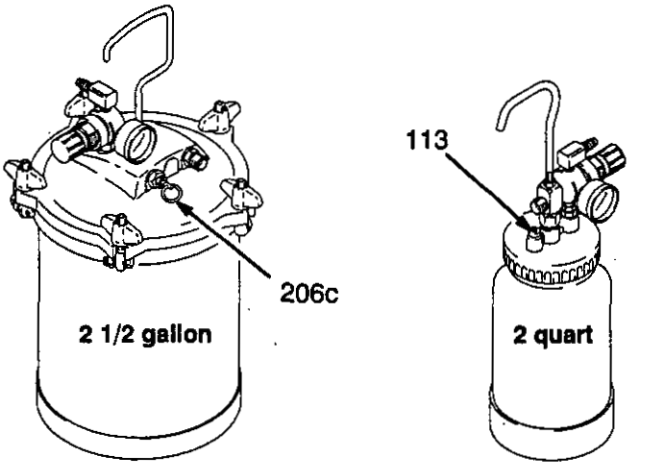


Fig. 4 02860 02882

2. Remove the pressure pot cover and fill the pressure pot. Secure the cover.

NOTE: *2 quart remote pressure pot only:* lightly coat the cover threads with petroleum jelly.

CAUTION

If the 2 quart remote pressure pot is accidentally tipped over or held at too great of an angle, fluid may leak into the air regulator. Take precautions to avoid this. If fluid does get into the regulator, clean it immediately.

CAUTION

Do not tighten the pressure pot cover more than hand-tight. Excessive tightening may damage the cover gasket.

Setup

Prepare the Surface to be Sprayed

To achieve proper adhesion, make sure the surface to be sprayed is completely clean.

Operating the Turbine

WARNING

Sparking can be expected in the normal operation of the turbine motor. Sparks could ignite fumes from flammable liquid, dust particles and other flammable substances in the spray area, and cause serious injury and property damage. Be sure to follow the precautions below:

- When flammable liquid is sprayed or used for flushing or cleaning equipment, the turbine must be placed at least 20 feet (6.1 m) away from areas where hazardous concentrations of flammable vapors are likely to occur.
- Use additional air hose if necessary to ensure that the turbine is operated in a clean, dry, well ventilated area.
- Never place the turbine inside a spray booth! Use this equipment outdoors or in extremely well ventilated areas.
- Avoid all ignition sources such as static electricity from plastic drop cloths, open flames such as pilot lights, hot objects such as cigarettes, arcs from connecting or disconnecting power cords or turning light switches on and off. Extinguish or remove all sources of ignition.

1. Turn the turbine on a few minutes before you start spraying to allow for warm-up time. Turn the turbine off when it is not in use; it does not shut off automatically.
2. Be sure the turbine filter is clean before operating. See page 13 to check and clean the filter.

Cold Weather Operation

Turbine Spray Model CX-8, CX-12, and CX-20 have a diaphragm compressor. When these compressors are new, the diaphragm will become stiff in cold weather. If cold enough, the stiff diaphragm will not allow the compressor to start (the unit will hum). If this occurs, follow these steps:

1. Turn the turbine and compressor off.
2. Unplug the turbine from the power source.
3. Loosen the four main filter screws and remove the filter; replace the main filter and pre-filter if they are dirty.
4. Hand spin the cooling fan on the compressor for a few revolutions.
5. Reassemble the turbine.
6. Plug in the turbine and turn it on. The compressor should start.

Adjust the Pattern Direction and Shape

The spray pattern direction and shape are determined by the 3 different positions of the air cap shown in Fig. 5. Rotate the air cap as needed to achieve the desired pattern.

NOTE: You do not have to loosen the air cap retaining ring to change patterns unless the air cap is set to its widest pattern. Refer to Fig. 11, page 10.

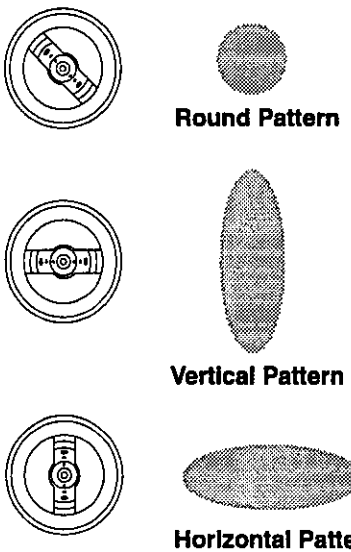


Fig. 5

Setup

Adjust the Spray Pattern

WARNING

Do not exceed the gun's 50 psi (3.5 bar) *Maximum Fluid Inlet Pressure* and 100 psi (7 bar) *Maximum Air Inlet Pressure*. Higher pressures can cause parts to rupture and result in serious injury or property damage.

To establish the correct fluid flow:

1. Turn the fluid adjustment knob (20) counterclockwise until no restriction of the trigger movement is felt. See Fig. 6.

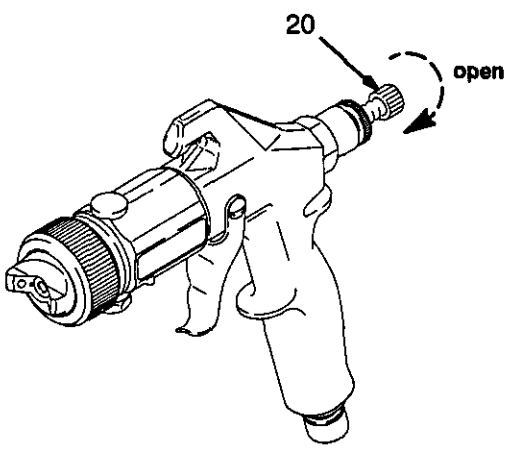


Fig. 6 02845

2. *If a remote pressure pot is used,* hold the gun parallel to the floor and adjust the fluid pressure to yield a 12 to 18 inch (305 to 457 mm) fluid stream. See Fig. 7.

   A 2 quart remote pressure pot typically should be set at 2 to 4 psi (0.14 to 0.28 bar).

   A 2 1/2 gallon remote pressure pot typically should be set at 4 to 8 psi (0.28 to 0.56 bar).

   Heavier fluid or a long fluid hose will require more pressure.

WARNING

To reduce the risk of over-pressurizing the accessory remote pressure pots, which could cause serious injury, never exceed 50 psi (3.5 bar) *Maximum Air Inlet Pressure*.

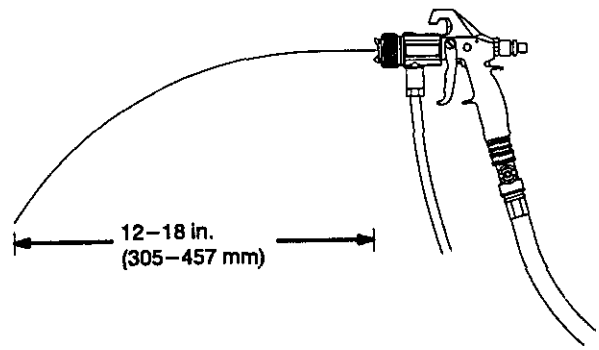


Fig. 7 02848

Fluid Velocity of Fluid Nozzles at the Same Flow Rate

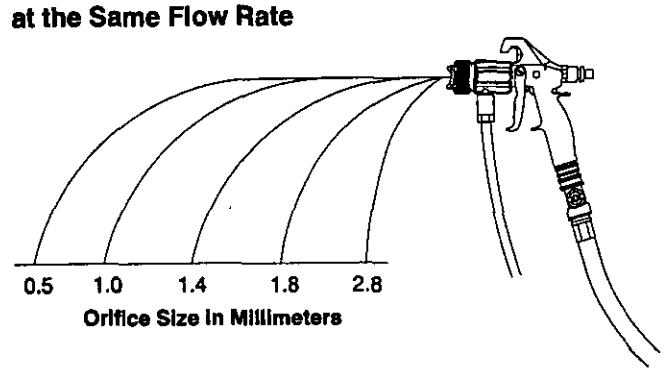


Fig. 8 02849

3. If further fluid adjustment is needed at the gun, turn the fluid adjustment knob (20) clockwise to reduce the volume of fluid output and obtain the desired results. See Fig. 9.

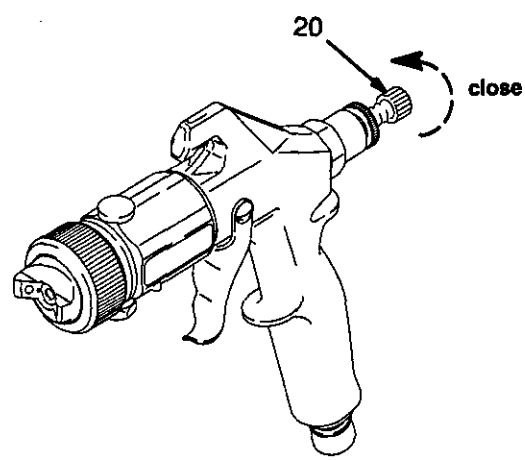


Fig. 9 02845

CAUTION

Restricting the trigger and fluid needle travel by continuously spraying with the fluid adjustment knob closed *(turned clockwise)*, will cause accelerated abrasive wear on the fluid needle and wear on the trigger.

For the best results, adjust the fluid flow at the pressure source or use a different size needle/nozzle/air cap combination.

Setup

Adjust the Spray Pattern *(continued)*

To establish the correct air flow:

4. Test the spray pattern and atomization while holding the gun about 6 to 8 inches (150 to 200 mm) from the test piece.

5. The Air Control Valve (M) on the end of the turbine hose controls both the atomizing air and the pressure in the spray gun cup (if used). See Fig. 10. Adjust the air control valve as needed.

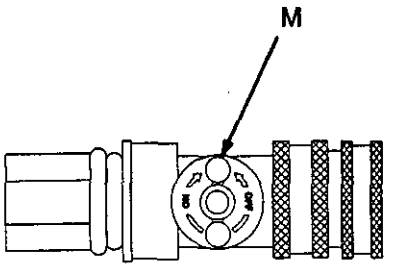


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Fig. 10

NOTES:

- To control over-spray mist, use only as much air as is necessary for the fluid being sprayed. The lighter the fluid, the less air required.

- If atomization is unacceptable after following the procedure above, the fluid may need to be thinned further or a different fluid set may be required. Refer to pages 4 and 5 to select the proper fluid set or page 7 to prepare the fluid.

Adjust the Pattern Size

Change the pattern size by turning the air cap retaining ring in for a wide pattern or out for a narrow pattern. See Fig. 11. For a smoother finish, use a narrow pattern. For more fluid output, use a wide pattern.

NOTE: If the air cap retaining ring is turned too far out, the fluid flow will stop or flutter.

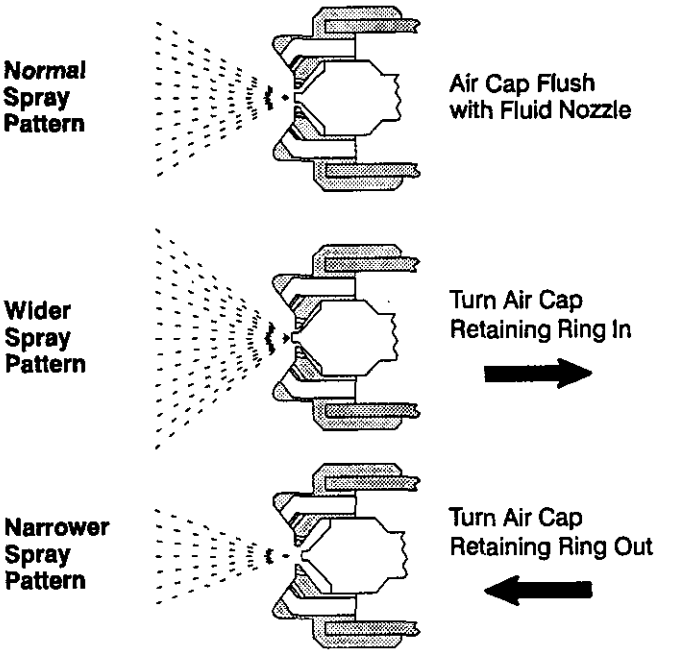

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Fig. 11

Shutdown

WARNING

The spray gun cups and accessory remote pressure pots remain pressurized until pressure is manually relieved. To reduce the risk of serious injury from pressurized fluid or accidental spray from the gun, always relieve pressure in the cup or pressure pot before checking or servicing any part of the spray system; before installing, cleaning or changing fluid nozzles; before loosening or removing the accessory remote pressure pot cover; and whenever you stop spraying.

1. When spraying is finished, turn off the air supply to the gun.

2. *If using a remote pressure pot,* relieve its pressure by following these steps:

   a. Turn off the air supply to the pressure pot.

   b. *2 1/2 Gallon Remote Pot:* Pull the pressure relief valve ring (206c) until pressure is completely relieved.
   2 Quart Remote Pot: Turn out the pressure relief knob (113) about one turn. Wait until pressure is completely relieved before removing the cover. Close the knob before using the system again.

   See Fig. 12.

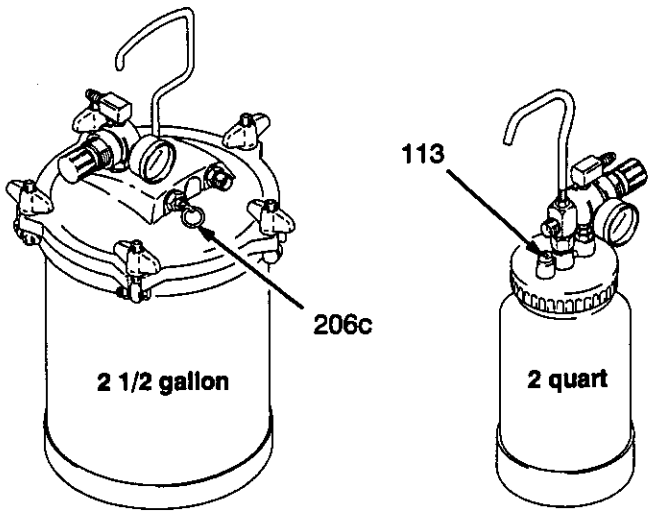


Fig. 12

NOTE: Elevate the spray gun and pull the trigger. This will allow the fluid in the fluid hose to drain back into the remote pressure pot.

3. *If using a spray gun cup,* unlatch the cup cover and loosen or remove the cup from the cover to relieve the cup pressure.

4. Clean the spray gun and cup as instructed on pages 14 and 15.

Spraying Techniques

General Spraying Techniques

1. Select the proper fluid set for the fluid you are spraying. See pages 4 and 5.

2. When fluid is first being applied, start with the fluid nozzle and air cap adjusted to the "normal spray pattern" position. See Fig. 13. Then adjust as needed.

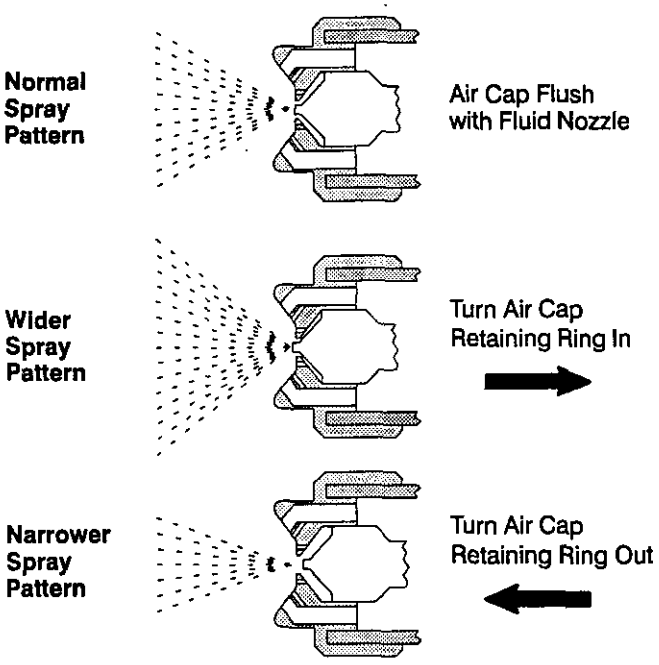


Fig. 13

3. Keep the gun perpendicular to the surface and maintain a consistent distance of approximately 6 to 8 inches (150 to 200 mm) from the object being sprayed. See Fig. 14.

4. Always have the spray gun in motion before triggering it. Move the spray gun across the workpiece in a straight, smooth stroke, maintaining the same speed and distance. Release the trigger at the end of the stroke.

5. To obtain an even finish, overlap previous strokes by the same amount, generally 50% overlap.

6. Apply a full, wet coat whenever possible.

Automotive Spraying Techniques

1. When blending spots, work from the outside in.

2. Two lengths of 20 foot (6.1 m) hose are recommended when applying automotive finish coats. The additional hose will allow the air to cool for better flow.

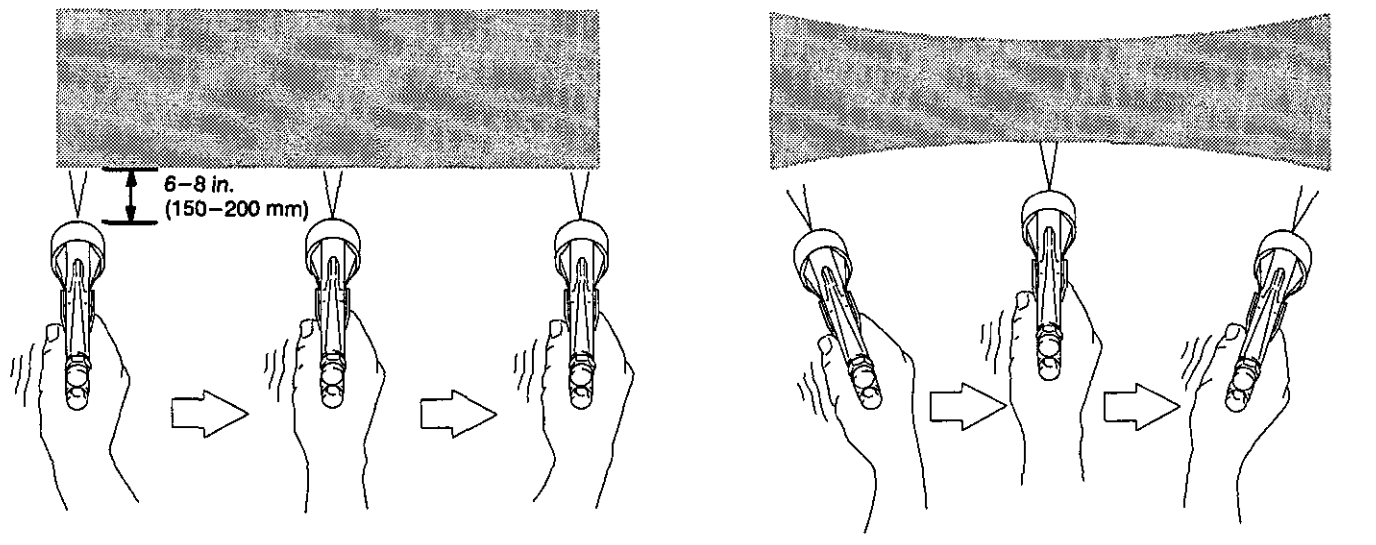


Fig. 14

Spraying Techniques

Prolonged Overhead or Downward Spraying with a Cup

For prolonged overhead spraying, loosen the fluid tube nut (N) and turn the entire cup assembly one-half turn. See Fig. 15. This will position the fluid tube (36) in the back side of the cup so the entire contents will be sprayed.

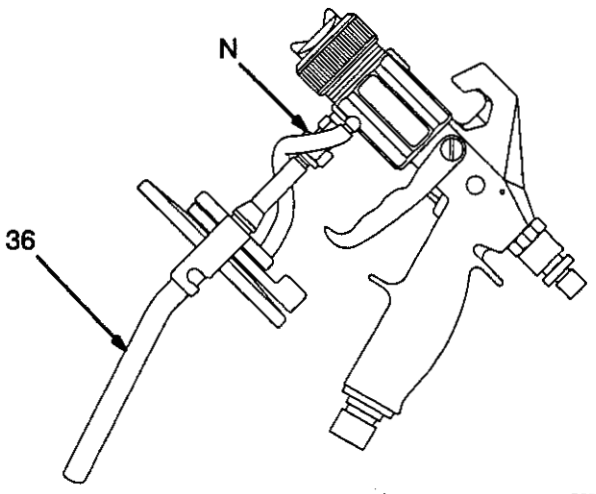


Fig. 15

For prolonged downward spraying, make sure the fluid tube (36) is positioned as shown in Fig. 16.

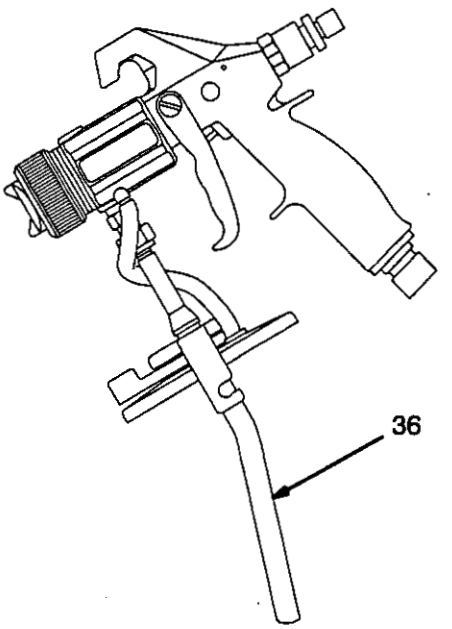


Fig. 16

Maintenance

Turbine Filter Maintenance

The turbine systems are lifetime lubricated. The only maintenance required is filter cleaning and replacement.

The turbine main filter and pre-filter must be clean at all times to provide sufficient air flow to cool the motor and atomize the fluid. Check the filters weekly, minimum. Replace the pre-filter as required.

NOTE: To check the filter, turn on the turbine and place a piece of paper against the air intake filter. If the air intake holds the paper in place, the filter is okay.

To clean the main filter:

1. Turn off and unplug the turbine.
2. Loosen the four main filter screws.
3. Remove the main filter and clean it by following one of the following three methods:
   - Tap the filter gently on a flat surface, dirty side down.
   - Direct compressed air (100 psi [7 bar] maximum) through the filter panel in the opposite direction of the arrows on the side of the filter.
   - Soak the filter for 15 minutes in water and a mild detergent. Rinse the filter until it is clean. Air dry the filter; do not use compressed air.

WARNING

To avoid damage to the turbine and possible electric shock, never install a damp filter in the turbine.

***Maintenance** continued on next page.*

Maintenance

WARNING

The spray gun cups and accessory remote pressure pots remain pressurized until pressure is manually relieved. To reduce the risk of serious injury from pressurized fluid or accidental spray from the gun, always relieve pressure in the cup or pressure pot before checking or servicing any part of the spray system; before installing, cleaning or changing fluid nozzles; before loosening or removing the accessory remote pressure pot cover; and whenever you stop spraying.

NOTES:

- Check for any fluid leakage from the gun and fluid hoses. Tighten fittings or replace equipment as needed.
- Flush the gun before changing colors and whenever you are done spraying.

CAUTION

Clean all parts with a solvent compatible with the fluid being sprayed and compatible with the spray gun and cup or accessory remote pressure pot wetted parts. See the **Technical Data** on the back cover.

Flushing the Spray Gun Using a Remote Pressure Pot

1. Turn off the air supply to the gun.
2. Relieve the pressure pot pressure by following these steps:
   a. Turn off the air supply to the pressure pot.
   b. *2 1/2 Gallon Remote Pot:* Pull the pressure relief valve ring (206c) until pressure is completely relieved.
   2 Quart Remote Pot: Turn out the pressure relief knob (113) about one turn. Wait until pressure is completely relieved before removing the cover. Close the knob before using the system again.
   See Fig. 12, page 11.
3. Fill the pressure pot with compatible solvent.
4. Turn the air cap to the round pattern position and turn the air control valve so it's half open to reduce the solvent mist. See Fig. 17.
5. Flush the spray gun, using compressor air only. Point the gun down into a container and flush until the solvent runs clean.
6. Relieve the pressure pot pressure, following steps 2.a and b, above.
7. Disconnect the air and fluid hoses from the gun.
8. Clean and lubricate the gun as instructed on pages 15 and 16.

Flushing the Spray Gun and Cup

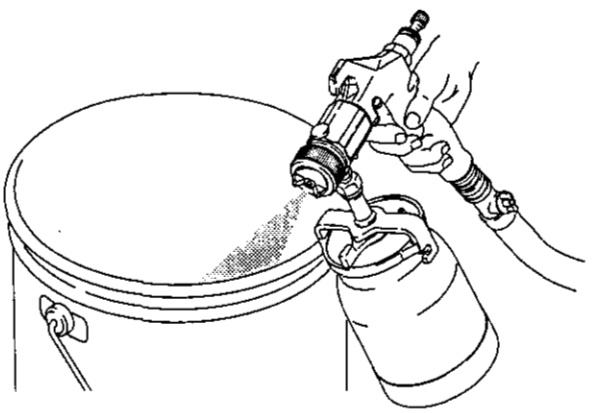
1. Turn off the air supply to the gun.
2. Unlatch the cup cover and remove the cup from the cover.
3. Turn the air cap to the round pattern position and turn the air control valve so it's half open to reduce the solvent mist. See Fig. 17.

Air Cap Round Pattern Position

02847

Fig. 17

4. Fill the empty cup with about 1-1/2 inches (38.1 mm) of compatible solvent and reinstall the cup. Be sure the cover is secured.
5. Turn on the air to the gun.
6. Point the gun down into a container and flush until the solvent runs clean. See Fig. 18.



02844

Fig. 18

7. Turn off the air to the gun.
8. Disconnect the air supply and remove the cup from the gun. Clean and lubricate the gun as instructed on pages 15 and 16.

Maintenance

Clean the Spray Gun

1. Clean the gun and cup by hand with a compatible solvent or place them in a gun washer with the trigger held open; cycle the washer as necessary to clean the gun.

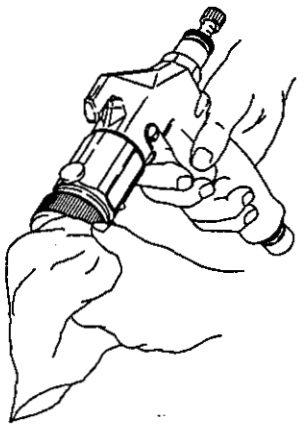


Fig. 19 02853

2. Remove the air cap retaining ring (29), air cap (27), spring (25), and detent plate (26). See Fig. 20.

3. Trigger the gun while you remove the fluid nozzle (19) with the nozzle wrench (P), provided. See Fig. 20.

CAUTION

Trigger the gun whenever you tighten or remove the nozzle. This keeps the needle seat away from the nozzle seating surface and prevents the seat from being scratched.

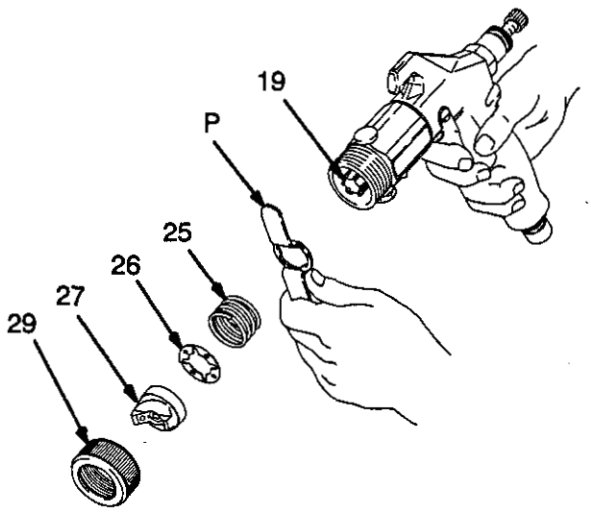


Fig. 20 02854

4. Soak the air cap, detent plate and fluid nozzle in solvent. Clean the air cap and fluid nozzle daily, minimum, with solvent and the brush (R), provided. See Fig. 21. Some applications require more frequent cleaning. Keep all air cap holes clean.

CAUTION

Clean air cap horn holes with a non-metallic item to avoid permanently damaging them.

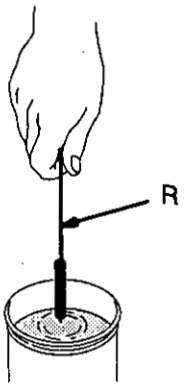


Fig. 21 02856

5. With the gun pointed down, clean the front of the gun, using the brush and solvent.

6. Trigger the gun while you install the fluid nozzle (19) with the nozzle wrench (P). See Fig. 20.

7. Install the spring (25) into the front of the gun.

8. Install the detent plate (26) into the gun housing with its open sockets (S) facing up; align the detent plate tab (T) with the notch in the gun housing. See Fig. 22.

9. Install the air cap (27), aligning the air cap balls (U) with the detent plate sockets (S). See Fig. 22. Secure the air cap with the air cap retaining ring (29).

NOTE: If installed correctly, the air cap will snap into 4 definite positions, with no loose rotation between the positions.

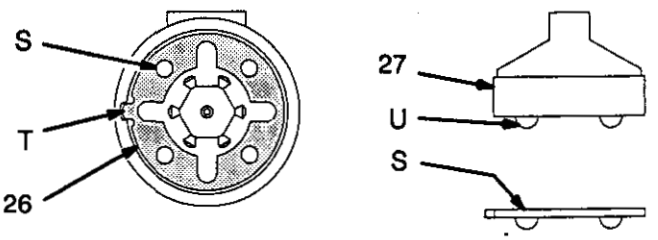


Fig. 22 02968

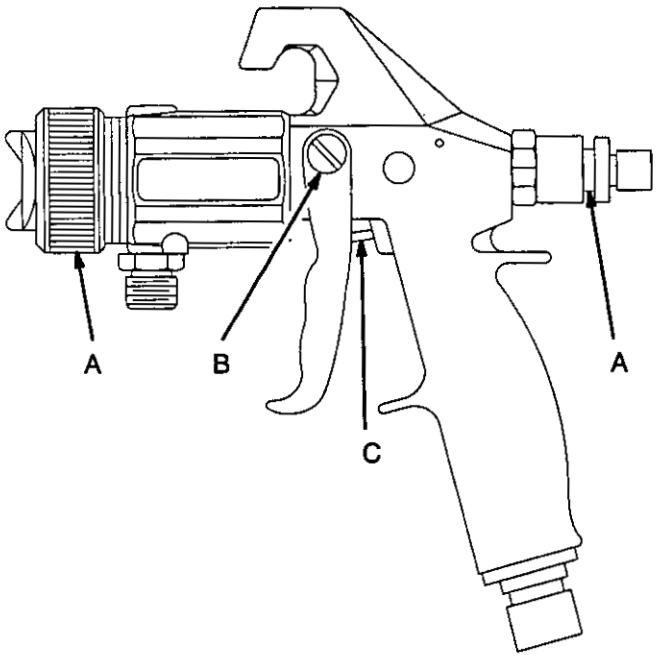
10. Lubricate the gun after cleaning it as instructed on page 16.

Service

Lubricating the Spray Gun

After cleaning or servicing the gun, lubricate the parts indicated in Fig. 23 with silicone-free spray gun lubricant or similar material. See page 26 to order lubricant.

- All threaded areas (A)
- Trigger screws (B)
- Trigger axle (C)
- Fluid needle assembly (D) – where indicated



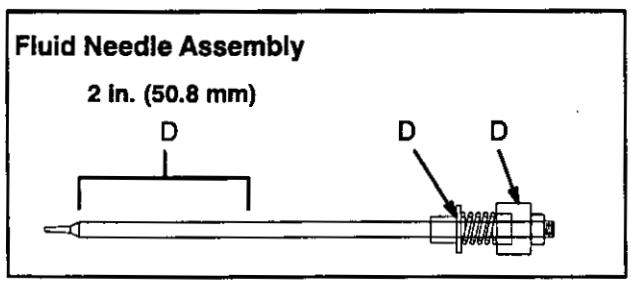


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Fig. 23

Adjusting the Needle

The needle may need to be adjusted whenever you change nozzle/needle sizes or to compensate for wear.

To adjust the needle:

1. Remove the housing (22) from the back of the gun. The fluid adjustment knob (20), nut (21), and spring (23-not shown) will come out with it. See Fig. 24.
2. Loosen the locking nut (14d) and turn the drum (14c). See Fig. 25.
3. Turn the drum (14c) until the trigger has about 1/16 in. (1.59 mm) free travel before the needle (14) is engaged and starts to move. See Fig. 25.
4. Lock the adjustment with the locking nut (14d).
5. Make sure the spring (23) is in place in the housing (22), then install the housing with the other parts. Hand-tighten the housing.

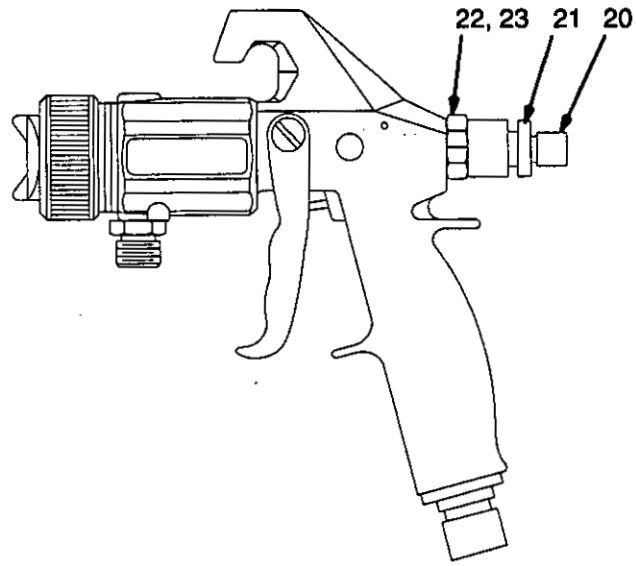
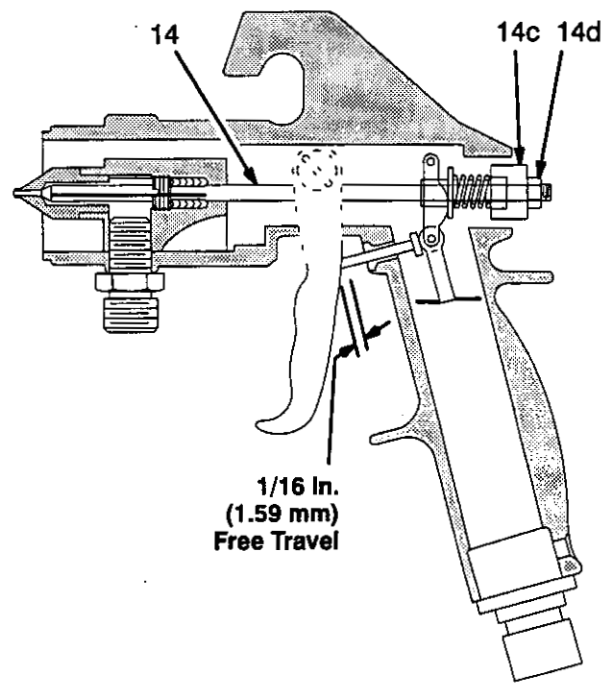


Fig. 24



02857

Fig. 25

Service

Adjusting the Needle Packings

The needle packings require adjustment once a month under normal use to ensure fluid does not leak back through the needle packings. The needle packings must also be adjusted whenever the needle is removed or adjusted.

To adjust the needle packings:

1. First flush the gun as instructed on page 14.

2. Remove the air cap retaining ring (29), air cap (27), spring (25), and detent plate (26). See Fig. 26.

3. Trigger the gun while you remove the fluid nozzle (19) with the nozzle wrench (P), provided. See Fig. 26. Clean the gun as instructed on page 15.

CAUTION

Trigger the gun whenever you tighten or remove the nozzle. This keeps the needle seat away from the nozzle seating surface and prevents the seat from being scratched.

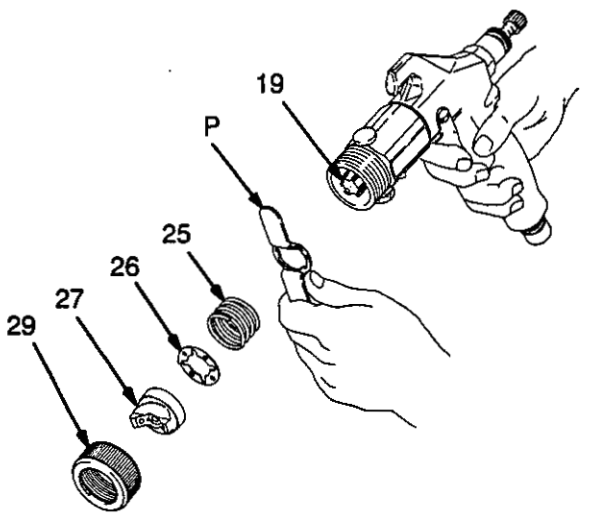


Fig. 26 02854

4. Trigger the gun while you turn the packing nut (9) slightly clockwise with the packing wrench (K), provided. See Fig. 27. This will compress the packings.

   The packings need very little pressure to seal well. If the needle binds, the packings are too tight; back the packing nut off 1/16 turn. The needle should then move freely. If the packings are over-tightened, they may be damaged and need to be removed and replaced.

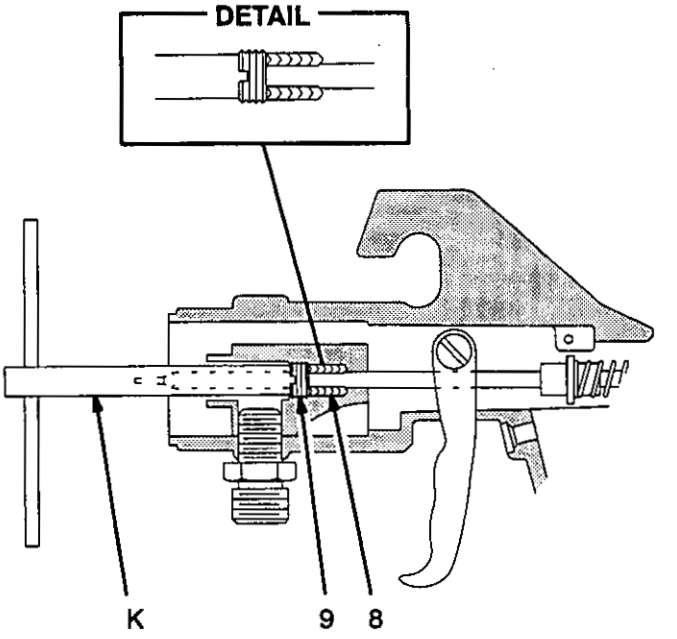


Fig. 27 02858

5. Trigger the gun while you install the fluid nozzle (19) with the nozzle wrench (P). See Fig. 26.

6. Install the spring (25) into the front of the gun.

7. Install the detent plate (26) into the gun housing with its open sockets (S) facing up; align the detent plate tab (T) with the notch in the gun housing. See Fig. 28.

8. Install the air cap (27), aligning the air cap balls (U) with the detent plate sockets (S). See Fig. 28. Secure the air cap with the air cap retaining ring (29).

NOTE: If installed correctly, the air cap will snap into 4 definite positions, with no loose rotation between the positions.

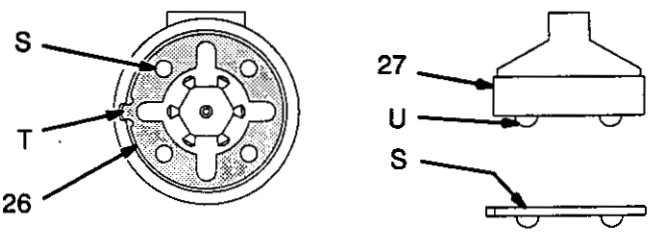


Fig. 28 02966

Troubleshooting

Spray Gun Problems

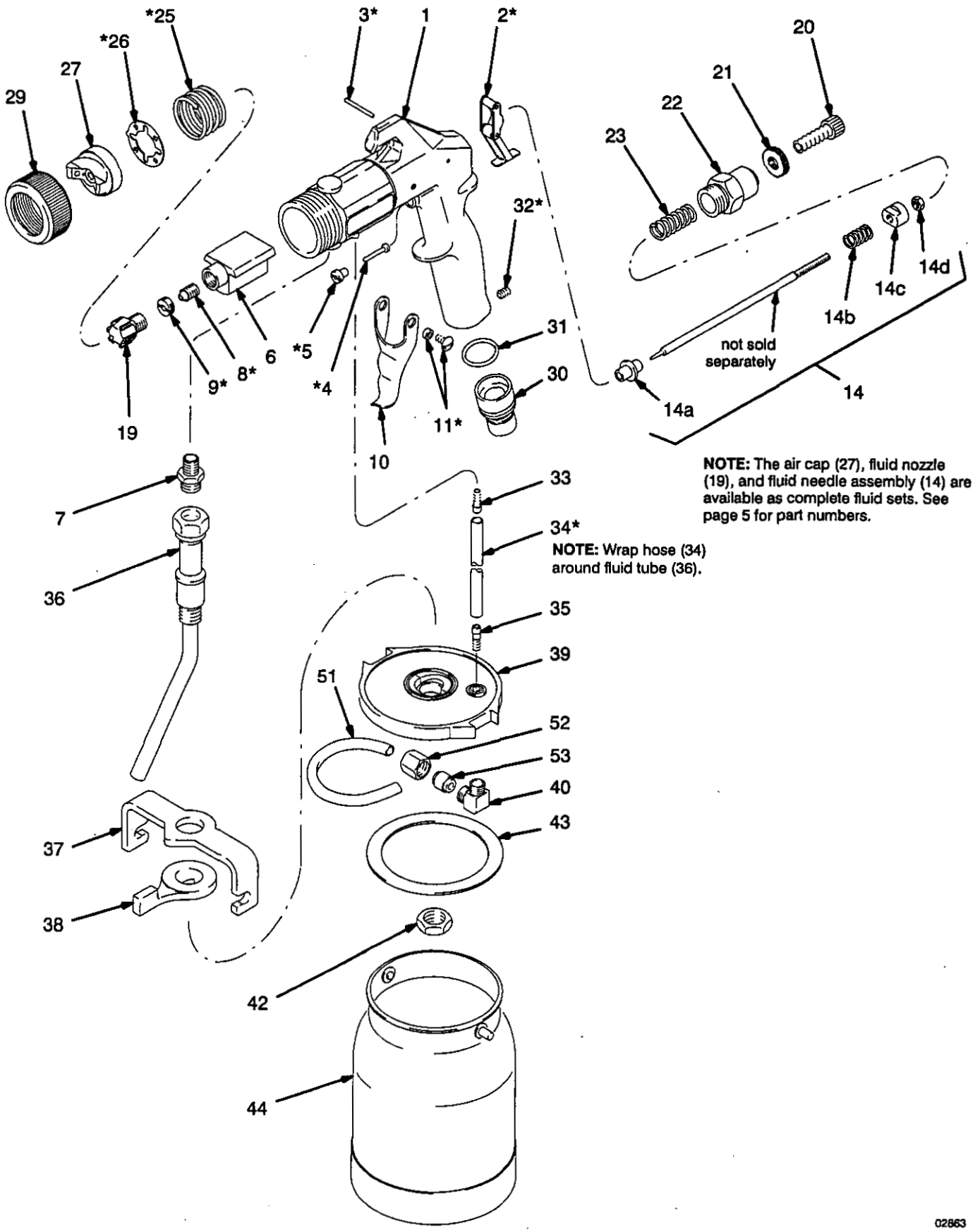
PROBLEM	CAUSE	SOLUTION
No or slow fluid flow, intermittent spray, or fluttering spray	Proper size fluid set is not being used.	Select the proper fluid set for the fluid being sprayed. See pages 4 and 5.
	Air cap is adjusted too far forward.	Adjust the air cap to "normal" position. See page 10.
	Gun fluid nozzle is not tight enough, is blocked by dried paint, or is damaged.	Tighten, clean or replace fluid nozzle.
	Cup or pressure pot cover is not tight enough or gasket is damaged.	Tighten cover or replace gasket.
	Cup or pressure pot fluid tube blocked by dried paint or is damaged.	Clean or replace fluid tube.
	Air flow to cup is blocked.	To check: remove the cup (leave cover connected), trigger the gun and check for air flow out of the cup lower pressure tube. If air is not flowing freely, clean the air passage tubes.
	Needle packings are not properly adjusted. Fluid loss though the packings will effect fluid pressure and cause a fluid build-up in the gun body.	Clean the gun body with solvent and the brush provided. Adjust the needle packings as instructed on page 17.
	Needle is not properly adjusted. Fluid flow will be restricted if there is too much free travel between the trigger and needle.	Adjust the needle as instructed on page 16.
Fluid leaks at fluid nozzle after the trigger is released	Needle is not seating in the fluid nozzle.	• Check for a loose fluid nozzle or a bent nozzle or needle; tighten the nozzle or replace parts as needed. • Check the needle adjustment; see page 16. • Check the needle packings adjustment; see page 17.
Poor spray pattern	Air cap horn holes and/or fluid nozzle plugged.	Soak air cap and/or fluid nozzle in solvent. Clean air cap horn holes with non-metallic item to avoid permanently damaging them. See page 15.

Troubleshooting

Spray Finish Problems

PROBLEM	CAUSE	SOLUTION
Orange peel finish – Paint surface not smooth	Paint droplets too large.	• Maintain proper spraying distance; see page 12. • Keep the turbine air filters clean to allow full air flow. See page 13. • Do not use an air hose that is too long to provide sufficient atomization pressure. • If droplets are still too large, reduce the fluid or use a smaller air cap.
	Paint droplets drying too fast to properly flow out of gun.	Keep the object being sprayed out of direct sunlight. When spraying in warmer temperatures, use a slower evaporating solvent or a retarder.
	Cold weather spraying.	Keep the fluid and the object being sprayed as close to room temperature as possible. When sprayed on a cold surface, most paints will become too thick to flow properly.
Blushing – Clear coatings appear milky	Moisture condensation is trapped in the lacquer when spraying in hot, humid conditions.	• Allow the turbine to warm up a few minutes before spraying. • Store the lacquer off concrete floors, at room temperature. • Apply lighter coats and allow for proper drying time. • Use a slower evaporating solvent or retarder. • Do not spray in windy conditions.
Fish eyes – Small pools on painted surface that will not fill	Silicone contamination from lubricants, grease, polish, or waxes on the surface being sprayed.	Clean all parts with a cleaning solvent; use a solvent rag and a clean rag to wipe with. Replace rags as needed. If the problem persists, use a fish eye eliminator.
Runs and sags	Applying too much paint per pass for the drying conditions.	• Move the gun faster or decrease the fluid flow. • Maintain proper spraying distance; see page 12. • Reduce the amount of thinner or use a faster drying thinner.
Solvent pops or bubbles	Sprayed surface drying before solvent gas can be released.	• Apply fluid in lighter coats to allow for proper evaporation. • Use the recommended thinners. • Follow the solutions, above, for *Orange peel finish–paint droplets too large.*

Parts for Model 710



NOTE: The air cap (27), fluid nozzle (19), and fluid needle assembly (14) are available as complete fluid sets. See page 5 for part numbers.

NOTE: Wrap hose (34) around fluid tube (36).

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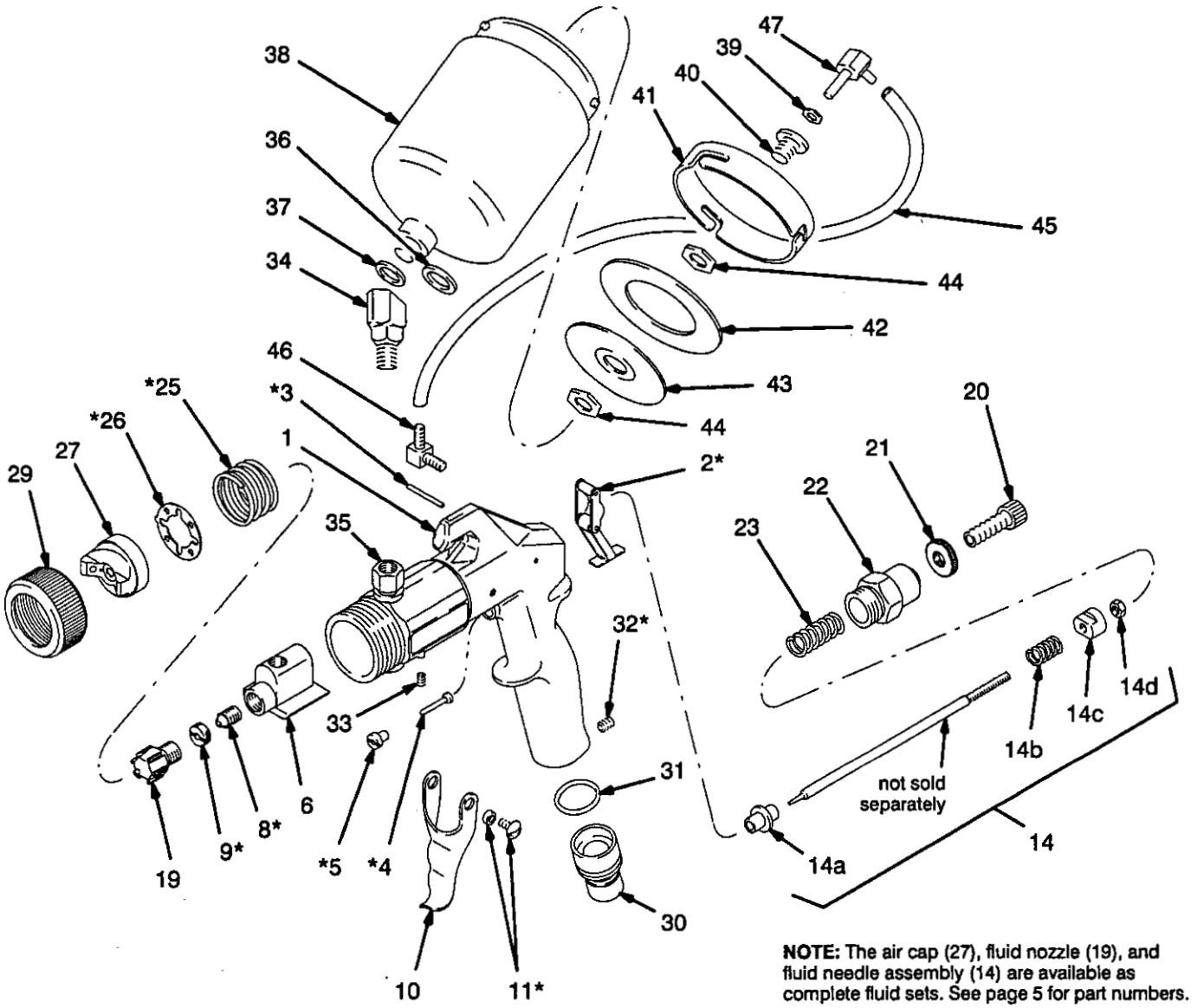
Parts for Model 710

Ref No.	Part No.	Description	Qty
1	M70373	GUN BODY	1
2*	M70410	ACTUATOR, needle	1
3*	M70388	PIN, actuator	1
4*	M70389	AXLE, trigger	1
5*	M70392	GUIDE, trigger axle	1
6	M70384	HOLDER, nozzle	1
7	M70401	FITTING, fluid inlet	1
8*	M70381	PACKING KIT, fluid; PTFE	1
9*	M70380	NUT, packing	1
10	M70391	TRIGGER	1
11*	M70386	SCREW/BUSHING ASSY., trigger	2
14	–	NEEDLE ASSY.; See chart on page 5 for part no.; Includes items 14a–14d	1
14a	M70403	• RING, driving	1
14b	M70404	• SPRING, driving ring	1
14c	M70405	• DRUM	1
14d	M70406	• LOCKING NUT, drum	1
19	–	FLUID NOZZLE, See chart on page 5 for part no.	1
20	M70467	ADJUSTMENT KNOB, fluid	1
21	M70466	NUT, adjustment	1
22	M70465	HOUSING, adjustment	1
23	M70407	SPRING, needle return	1
25*	M70378	SPRING, air cap	1
26*	M70377	DETENT PLATE, air cap	1
27	–	AIR CAP; See chart on page 5 for part no.	1
29	M70375	RETAINING RING, air cap	1
30	M70400	QUICK DISCONNECT, turbine	1
31	M70721	O-RING; quick disconnect	1
32*	M70430	SET SCREW, quick disconnect	1
33	M70394	CONNECTOR, hose	1
34*	M70395	HOSE, air pressure (upper)	1
35	M70426	CONNECTOR, hose	1
36	M70413	FLUID TUBE	1
37	M70415	YOKE, cup	1
38	M70417	LEVER, cup	1
39	M70422	COVER, cup	1
40	M71151	ELBOW, air pressure	1
42	M70420	NUT, locking	1
43	M70424	GASKET, cup; polyethylene; See Accessories to order 5 pack	1
44	M70423	CUP; 1 quart (1 liter)	1
51	M70419	HOSE, air pressure (lower)	1
52	M71117	CONNECTOR, hose	1
53	M71118	FERRULE	1
55	M70612	TOOL KIT; *(not shown)* Includes a brush, T-wrench, & nozzle wrench	1

• *These parts are included in Repair Kit M70290, which may be purchased separately.*

Parts for Models 709HS & 710HS

NOTE: Model 709HS includes 1/2 quart (1/2 liter) cup
Model 710HS includes 3/4 quart (3/4 liter) cup



NOTE: The air cap (27), fluid nozzle (19), and fluid needle assembly (14) are available as complete fluid sets. See page 5 for part numbers.

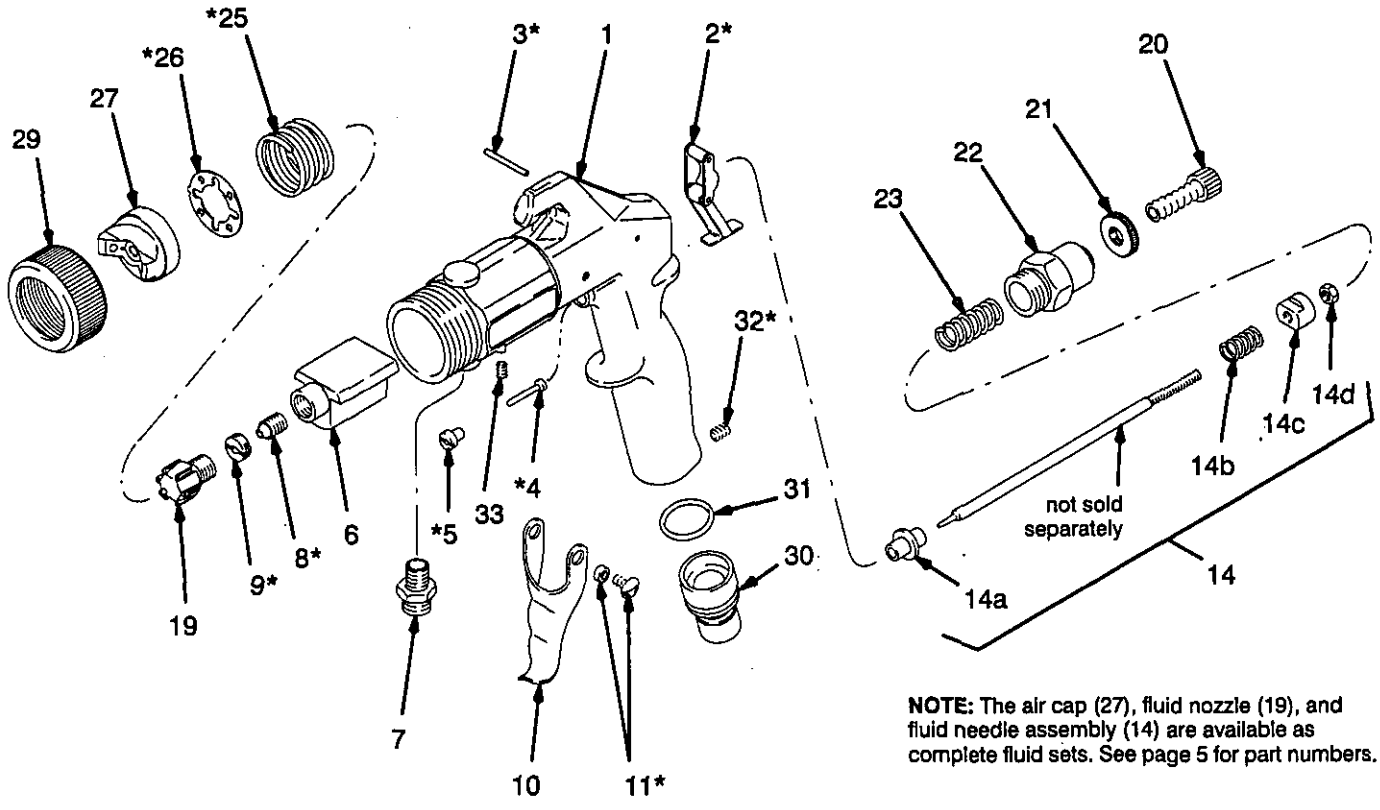
02865

Parts for Models 709HS & 710HS

Ref No.	Part No.	Description	Qty
1	M71114	GUN BODY	1
2*	M70410	ACTUATOR, needle	1
3*	M70388	PIN, actuator	1
4*	M70389	AXLE, trigger	1
5*	M70392	GUIDE, trigger axle	1
6	M70384	HOLDER, nozzle	1
8*	M70381	PACKING KIT, fluid; PTFE	1
9*	M70380	NUT, packing	1
10	M70391	TRIGGER	1
11*	M70386	SCREW/BUSHING ASSY., trigger	2
14	–	NEEDLE ASSY.; See chart on page 5 for part no.; Includes items 14a–14d	1
14a	M70403	• RING, driving	1
14b	M70404	• SPRING, driving ring	1
14c	M70405	• DRUM	1
14d	M70406	• LOCKING NUT, drum	1
19	–	FLUID NOZZLE, See chart on page 5 for part no.	1
20	M70467	ADJUSTMENT KNOB, fluid	1
21	M70466	NUT, adjustment	1
22	M70465	HOUSING, adjustment	1
23	M70407	SPRING, needle return	1
25*	M70378	SPRING, air cap	1
26*	M70377	DETENT PLATE, air cap	1
27	–	AIR CAP; See chart on page 5 for part no.	1
29	M70375	RETAINING RING, air cap	1
30	M70400	QUICK DISCONNECT, turbine	1
31	M70721	O-RING; quick disconnect	1
32*	M70430	SET SCREW, quick disconnect	1
33	M70426	SET SCREW, plug	1
34	M71031	FITTING, fluid inlet	1
35	M71030	NUT, fluid inlet	1
36	M71033	O-RING	1
37	M71032	O-RING	1
38	M71035	CUP, 1/2 quart (1/2 liter); Model 709HS only	1
	M71034	CUP, 3/4 quart (3/4 liter); Model 710HS only	1
39	M71040	NUT	1
40	M71039	FITTING	1
41	M71037	RING, cup	1
42	M71026	GASKET, cup; polyethylene; See Accessories to order 5 pack	1
43	M71021	COVER, cup	1
44	M71019	NUT	2
45	M71045	HOSE, air pressure	1
46	M70393	ELBOW CONNECTOR, hose	1
47	M71046	ELBOW CONNECTOR, hose	1
55	M70612	TOOL KIT; *(not shown)* Includes a brush, T-wrench, & nozzle wrench	1

* *These parts are included in Repair Kit M70290, which may be purchased separately.*

Parts for Model 710P



NOTE: The air cap (27), fluid nozzle (19), and fluid needle assembly (14) are available as complete fluid sets. See page 5 for part numbers.

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Ref No.	Part No.	Description	Qty
1	M70373	GUN BODY	1
2*	M70410	ACTUATOR, needle	1
3*	M70388	PIN, actuator	1
4*	M70389	AXLE, trigger	1
5*	M70392	GUIDE, trigger axle	1
6	M70384	HOLDER, nozzle	1
7	M70401	FITTING, fluid inlet	1
8*	M70381	PACKING KIT, fluPTFE ®	1
9*	M70380	NUT, packing	1
10	M70391	TRIGGER	1
11*	M70386	SCREW/BUSHING ASSY., trigger	2
14	–	NEEDLE ASSY.; See chart on page 5 for part no.; Includes items 14a–14d	1
14a	M70403	• RING, driving	1
14b	M70404	• SPRING, driving ring	1
14c	M70405	• DRUM	1
14d	M70406	• LOCKING NUT, drum	1
19	–	FLUID NOZZLE, See chart on page 5 for part no.	1

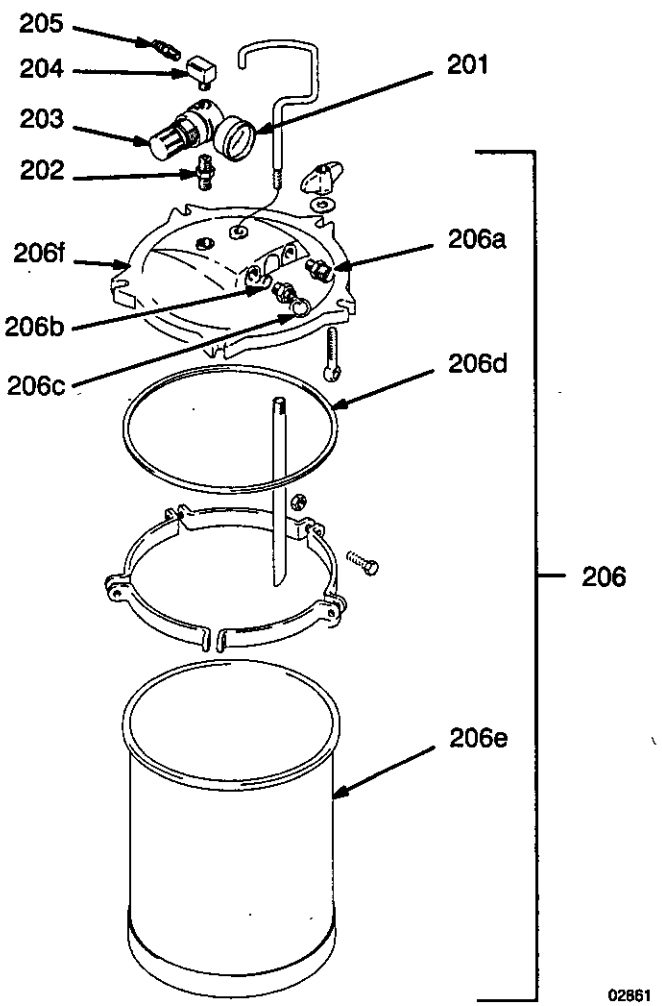
Ref No.	Part No.	Description	Qty
20	M70467	ADJUSTMENT KNOB, fluid	1
21	M70466	NUT, adjustment	1
22	M70465	FITTING, gun	1
23	M70407	SPRING, needle return	1
25*	M70378	SPRING, air cap	1
26*	M70377	DETENT PLATE, air cap	1
27	–	AIR CAP; See chart on page 5 for part no.	1
29	M70375	RETAINING RING, air cap	1
30	M70400	QUICK DISCONNECT, turbine	1
31	M70721	O-RING; quick disconnect	1
32*	M70430	SET SCREW, quick disconnect	1
33	M70426	SET SCREW, plug	1
55	M70612	TOOL KIT; *(not shown)* Includes a brush, T-wrench, & nozzle wrench	1

• *These parts are included in Repair Kit M70290, which may be purchased separately.*

Accessories

2 1/2 Gallon Pressure Pot M70604

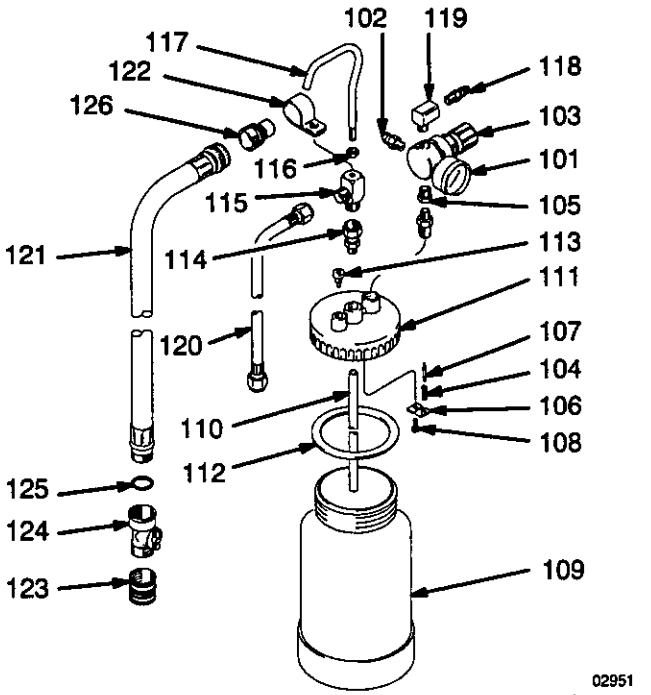
50 psi (3.5 bar) Maximum Inlet Air Pressure
2 1/2 gallon (9.5 liter) capacity, aluminum tank.



Ref. No.	Part No.	Description	Qty.
201	M70670	PRESSURE GAUGE	1
202	M70674	HEX NIPPLE, 1/4 in.	1
203	M70671	PRESSURE REGULATOR	1
204	M70805	ELBOW, 90°	1
205	M70675	QUICK DISCONNECT, male	1
206	M71433	PRESSURE POT ASSEMBLY Includes replaceable items 206a–206f	1
206a	M70687	• COUPLING	1
206b	M70676	• O-RING, pressure relief valve	1
206c	M70686	• PRESSURE RELIEF VALVE	1
206d	M70616	• GASKET, standard; EPDM	1
	M70617	GASKET, solvent resistant; Thiokal (optional–must order separately)	1
206e	M70683	• POT, 2 1/2 gallon (9.5 liter), galvanized steel	1
206f	M70688	• COVER	1

2 Quart Pressure Pot M70962

50 psi (3.5 bar) Maximum Inlet Air Pressure
2 quart (2 liter) capacity, aluminum cup.



Ref. No.	Part No.	Description	Qty.
101	M70670	PRESSURE GAUGE	1
102	M70727	SAFETY VALVE	1
103	M70671	PRESSURE REGULATOR	1
104	M70731	SPRING	1
105	M70895	REDUCER	1
106	M70733	BRACKET	1
107	M70734	VALVE	1
108	M70735	SCREW	1
109	M70730	POT, 2 quart (1.94 liter), aluminum	1
110	M70729	FLUID TUBE	1
111	M70728	COVER	1
112	M70628	GASKET, polyethylene	1
113	M70726	PRESSURE RELIEF KNOB	1
114	M70725	FITTING	1
115	M70724	FLUID OUTLET	1
116	M70723	NUT	1
117	M70722	HANDLE	1
118	M70675	PLUG, male, quick disconnect	1
119	M70805	ELBOW, 90°	1
120	M71491	HOSE, fluid; 5 ft. (1.5 m) long; 1/4 in. (6.35 mm) ID	1
121	M71470	HOSE, air; 4.5 ft. (1.4 m) long	1
122	M70854	HOSE CLAMP	1
123	M70402	QUICK DISCONNECT, female	1
124	M70397	AIR CONTROL VALVE	1
125	M71412	O-RING, air valve	1
126	M70399	QUICK DISCONNECT, male	1

Accessories continued on next page.

Accessories

NOTE: For information on making selections according to the type of fluid being sprayed, see pages 4 and 5.

Needle, Nozzle, and Complete Fluid Set Chart
Listed by size.

Orifice Size	Fluid Needle Assy. P/N	Fluid Nozzle P/N	Fluid Needle/ Nozzle Set* P/N	Complete Fluid Set ** P/N
0.5 mm	M70452	M70446	M71326	M70497
0.7 mm	M70454	M70447	M71327	M70528
1.0 mm	M70456	M70448	M71328	M70562
1.2 mm	M70637	M70634	M71329	M70643
1.4 mm	M70458	M70449	M71330	M70581
1.6 mm	M70639	M70635	M71331	M70650
1.8 mm	M70641	M70636	M71332	M70651
2.0 mm	M70460	M70450	M71333	M70582
2.8 mm	M70462	M70451	M71334	M70583

Air Cap Chart
Listed by size.

Orifice Size	Standard Air Cap P/N	Narrow Fan Air Cap P/N
0.5 mm	M70434†	M70435††
0.7 mm	M70437†	M70438††
1.0 mm	M70439	M70441††
1.2 mm	M70630	
1.4 mm	M70442	
1.6 mm	M70632	
1.8 mm	M70633	
2.0 mm	M70444	
2.8 mm	M70445	

* Fluid needle/nozzle set includes the needle and nozzle.

** Complete fluid set includes needle, nozzle, and standard air cap.

† Multi-hole air cap. Size marked with an M (example: 05M).

†† Narrow fan pattern air cap. Size marked with a W (example: 05W).

User Kit M70704

Used with CX-5, CX-7, CX-9, CX-10, and CX-20.
Includes:

Part No.	Description	Qty.
M70562	1.0 mm Fluid Set	1
M70582	2.0 mm Fluid Set	1
M70425	1 Quart Under-cup Gaskets	1
M70464	Fluid Strainer	1
M70395	Upper Air Pressure Hose	3
–	Parts Box with Compartments	1

User Kit M71449

Used with CX-8 and CX-12.
Includes:

Part No.	Description	Qty.
M70439	1.0 Air Cap	1
M70444	2.0 Air Cap	1
M70448	1.0 Fluid Nozzle	1
M70450	2.0 Fluid Nozzle	1
M71425	5 pack of Polyethylene Gaskets for 2 quart (2 liter) pressure pot	1
M70460	2.0 Needle Assembly	1
M70456	1.0 Needle Assembly	1
M70377	Detent Plate	1
M70378	Spring	1

Lubricant 111–265

One 4 oz. (113 gram) tube sanitary (non-silicone) lubricant for fluid seals and wear areas.

#4 Ford Viscosity Cup M70702

To measure viscosity of fluid.

Blow Gun M70703

For dusting and drying. With quick disconnect and air control valve.

1 Quart (1 liter) Cup Lid M70610

Fits on cup part no. M70423 for air tight storage of fluid.

1 Quart (1 liter) Cup and Lid Assembly M70427

1 quart (1 liter) under-cup with air tight lid.

1 Quart (1 liter) Cup Gaskets M70427

5 pack of polyethylene gaskets for use with 1 quart (1 liter) under-cup.

3/4 Quart (3/4 liter) Cup and Lid Assembly M71047

3/4 quart (3/4 liter) over-cup with lid.

3/4 Quart (3/4 liter) Cup Gaskets M71027

5 pack of polyethylene gaskets for use with 3/4 quart (3/4 liter) over-cup.

Cup Check Valve M71007

To help prevent the cup from de-pressurizing after the air is shut off.

Accessories

Fluid Strainer M70464

Install on the end of the cup or pressure pot fluid tube to strain the fluid and help eliminate surface blemishes and plugged tips. 100 mesh screen.

Air Hose M70666
For use with the 2 quart (2 liter) pressure pot

250 psi (17.5 bar) Maximum Working Pressure
For connection between the pressure pot and compressor. 20 ft. (6.10 m) long, coupled, f x f quick-disconnect, 1/4 in. (6.35 mm) braided.

Air Hose Extension M70665
For use with the 2 quart (2 liter) pressure pot

250 psi (17.5 bar) Maximum Working Pressure
To extend the length of pressure pot air hose M70666. 20 ft. (6.10 m) long, coupled, m x f quick-disconnect, 1/4 in. (6.35 mm) braided.

Air Hose M70803
For use with the 2 1/2 gallon (9.5 liter) pressure pot

150 psi (10.5 bar) Maximum Working Pressure
For connection between the pressure pot and compressor. 3 ft. (0.92 m) long, coupled, 1/4 in. (6.35 mm).
NOTE: Quick-Disconnect M70911 and Barbed Fitting M70804 are needed to connect the air hose.

Female Quick-Disconnect M70911

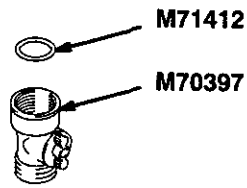
For use with air hose M70803 to connect to the male quick-disconnect on the 2 1/2 gallon (9.5 liter) pressure pot.

Barbed Fitting M70804

For use with air hose M70803 to connect to the compressor.

Air Control Valve M70397

Install on turbine hose to control the atomizing air and the pressure in the spray gun cup. To replace the air valve o-ring, order part no. M71412.



Turbine Hose

100 psi (7 bar) Maximum Working Pressure
For connection between the turbine and spray gun. Coupled, 3/4 in. (19 mm), spring on turbine end.

Part No.	Length
M71451	20 ft. (6.10 m)
M71453	30 ft. (9.15 m)

Turbine Hose Extension

100 psi (7 bar) Maximum Working Pressure
To extend the length of turbine hose M71451 or M71453. Coupled, 3/4 in. (19 mm).

Part No.	Length
M71462	20 ft. (6.10 m)
M71464	30 ft. (9.15 m)

Fluid Hose M71481
For use with the 2 1/2 gallon (9.5 liter) pressure pot

175 psi (12.1 bar) Maximum Working Pressure
For connection between the pressure pot and spray gun. 25 ft. (7.63 m) long, coupled, 3/8 in. (9.53 mm).

Fluid Hose Extension
For use with the 2 1/2 gallon (9.5 liter) pressure pot

175 psi (12.1 bar) Maximum Working Pressure
To extend the length of fluid hose M71481. Coupled, 3/8 in. (9.53 mm).
NOTE: Fluid Hose Connector M70693 must be ordered with the fluid hose extension.

Part No.	Length
M71480	20 ft. (6.10 m)
M71484	30 ft. (9.15 m)

Fluid Hose Connector M70693

For use with fluid hose extension M71480 or M71484. 3/8 npsm.

The Graco Warranty and Disclaimers

WARRANTY

Graco warrants all equipment manufactured by it 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. As purchaser's sole remedy for breach of this warranty, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment proven 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, 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 with Graco equipment of 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 claim. 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.

DISCLAIMERS AND LIMITATIONS

The terms of this warranty constitute purchaser's sole and exclusive remedy and are in lieu of any other warranties (express or implied), **including warranty of merchantability or warranty of fitness for a particular purpose**, and of any non-contractual liabilities, including product liabilities, based on negligence or strict liability. Every form of liability for direct, special or consequential damages or loss is expressly excluded and denied. In no case shall Graco's liability exceed the amount of the purchase price. Any action for breach of warranty must be brought within two (2) years of the date of sale.

EQUIPMENT NOT COVERED BY GRACO WARRANTY

Graco makes no warranty, and disclaims all implied **warranties of merchantability and fitness for a particular purpose**, with respect to accessories, equipment, materials, or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motor, 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.

Technical Data

Maximum Inlet Fluid Pressure	50 psi (3.5 bar)
Maximum Inlet Air Pressure	100 psi (7 bar)
Atomizing Air Pressure	10 psi (0.7 bar)
Air Inlet	Quick-disconnect
Fluid Inlet	3/8 nps
Wetted Parts	
Bare Spray Gun	Stainless Steel,PTFE
Spray Gun Cups	Hard-coated Aluminum, Aluminum, Polyethylene
2 Quart Accessory Remote Pressure Pot	Aluminum, Polyethylene
2-1/2 Gallon Accessory Remote Pressure Pot	Galvanized Steel, EPDM (standard)

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Graco Phone Numbers

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**

FOR TECHNICAL ASSISTANCE, service repair information or assistance regarding the application of Graco equipment: **1-800-543-0339 Toll Free**

Sales Offices: Atlanta, Chicago, Dallas, Detroit, Los Angeles, Mt. Arlington (N.J.)
Foreign Offices: Canada; England; Korea; Switzerland; France; Germany; Hong Kong; Japan

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