

CENTRAL PNEUMATIC®

**SPRAY GUN
HVLP INDUSTRIAL
Model 45001**

**ASSEMBLY and OPERATING
INSTRUCTIONS**



3491 Mission Oaks Blvd., Camarillo, CA 93011
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For technical questions and replacement parts, please call 1-800-444-3353

IMPORTANT: Before using for the first time, the spray gun must be cleaned using a solvent based thinner. If not removed, the red oil used by the manufacturer for testing and corrosion protection may contaminate paint. IMPORTANT: The Spray Gun must be cleaned immediately after use. Improper cleaning is a common reason for the Spray Gun not to work.

Specifications

Cup Capacity	1 Quart
Air Inlet	1/4" NPT
Recommended PSI	50-70 PSI
Air Consumption	10 CFM
Nozzle Size	.183"
Hose ID	3/8"
Inlet Screen	20 Mesh
Draw Type	Adj. Siphon Clear Plastic Hose
Dimensions	13" x 6-3/4" x 4-3/8"
Weight	2.45 Lbs.
Two Position Nozzle Adjusts Spray Pattern	

Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **Keep work area clean.** Cluttered areas invite injuries.
2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **Do not force tool.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.

6. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. Do not modify this tool and do not use this tool for a purpose for which it was not intended.
7. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
8. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
9. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
10. **Maintain tools with care.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords and hoses periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
11. **Disconnect power.** When not in use disconnect from compressor.
12. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.
13. **Avoid unintentional starting.** Be sure the switch is in the Off position when not in use and before plugging in. Do not carry any tool with your finger on the trigger, whether it is plugged in or not.
14. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
15. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.
16. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
17. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.
18. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

19. **Use proper size and type extension cord.** If an extension cord is required, it must be of the proper size and type to supply the correct current to the compressor without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the compressor.
20. **Maintenance.** For your safety, maintenance should be performed regularly by a qualified technician.
21. **Keep aware of air hoses.** Be careful not to trip over air hoses while working. Check air connections periodically.
22. **Do not operate Spray Gun near open flames, pilot lights, heaters, or any other heat source.** Make sure you have adequate ventilation. Most solvents and paints are extremely flammable, especially when sprayed. Never smoke cigarettes in the same room you are working in.
23. **Read labels on cleaning solvents and paint coatings.** Chlorinated solvents such as 111-Trichloroethane and Methylene Chloride (also known as methyl-chloride) can chemically react with aluminum and may explode. Many paint sprayers contain aluminum. Contact solvent manufacturer or paint supplier if you are in doubt.
24. **Paints and solvents may be harmful or fatal if swallowed or inhaled.** Always use a respirator when spraying. Avoid prolonged skin contact with solvents or paints as they will irritate skin. After contact immediately wash off exposed area with hot, soapy water.
25. **Check all Spray Gun Seals.** Before use, make sure the **Lid (#42)** is fully tightened to the **Cup (#47)**. Make sure the **Retaining Ring (#1)** is screwed on past the first thread, and the **Air Inlet (#31)** is secure.

Note: Performance of the compressor (if powered by line voltage) may vary depending on variations in local line voltage. Extension cord usage may also affect tool performance.

Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Unpacking

When unpacking, check to make sure the parts listed on page 8 are included. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

Assembly

The only assembly required is fitting the **Yoke (#39)** onto the **Cup (#47)**.

1. Slide the **Yoke (#39)** onto the **Cup (#47)** so that the grooves on the **Cup (#47)** connect to the tabs on the **Yoke (#39)**.
2. Once connected, secure by turning the **Cup Lever (#40)** to the left, locking it.

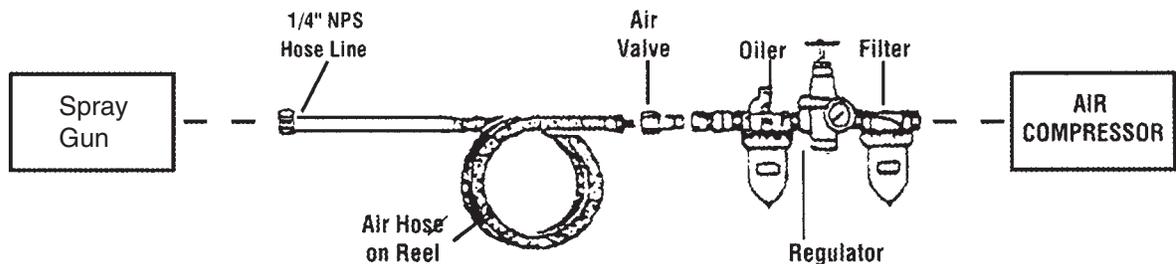
Operation

Warning! Never allow the Spray Gun and **Cup (#47)** to lay on it's side when the **Cup (#47)** is full of paint. The paint will clog the **Air Supply Tube (#48)**.

1. Reverse the assembly process above to remove the **Yoke (#39)** from the **Cup (#47)**.
2. Mix and stir the coating according to the manufacturers specifications.
3. Fill the **Cup (#47)** three quarters full with coating. **DO NOT OVERFILL!!**
4. Reassemble the **Yoke (#39)** and **Cup (#47)** by following the assembly instructions above. Make sure you secure the **Cup Lever (#40)** to the left.

Compressor Attachment

5. Set the regulator between the compressor and Spray Gun to no more than 10 PSI. Set the compressor between 50 and 70 PSI (preferably 60 PSI).



Recommended Air Line Components

For best service, you should incorporate an oiler, a regulator, and an inline air filter, as shown above. All are available at Harbor Freight Tools.

6. Connect the air hose to the **Air Inlet (#31)**.

Spraying Techniques

Note: Use the lowest possible pressure setting on the inline regulator.

1. Spray from a distance of approximately eight inches while keeping the Spray Gun perpendicular to the ground. Activate Gun by depressing the **Trigger (#8)**.
2. Maintain your distance as you evenly move from side to side. Do not fan or arc the Spray Gun or the paint will apply unevenly.
3. Keep the **Fluid Control Screw (#36)** turned all the way in when beginning to spray. Once started, you may unscrew it slightly and slowly to atomize the spray.
4. The **Adjusting Screw (#28)** controls the amount of coating sprayed. Screw it all the way in and the minimum amount of coating is released. The more you screw it out, the more coating is dispensed. **Never unscrew more than five threads during operation!**

Operation (continued)

5. For an even finish, cover your work using smooth even strokes and a 50% overlap.

Note: This HVLP Industrial Spray Gun will not blotch or model when using any coating.

Note: During operation, periodically check that the **Yoke (#39)** is securely fastened to the **Cup (#47)**. **The Cup Lever (#40)** must be securely tightened to the left.

Note: If you are unsatisfied with the results, check the Troubleshooting section further down this page.

Pattern Control

This Spray Gun will spray three jet shapes and two different fan sizes. **Never attempt to adjust the jet shape or fan size when firing the Spray Gun. Keep your hand away from the Trigger (#8) while adjusting jet shape or fan size.**

1. To adjust the fan size, turn the **Retainer Ring (#1)**. Screw the **Retainer Ring (#1)** in, to widen the spray, and screw it out, to narrow the pattern. **Unscrew a maximum of one thread!**

2. The **Air Cap (#2)** adjusts the jet shape. Hold the Spray Gun in firing position (perpendicular to the ground). Turn the **Air Cap (#2)** parallel to the ground for a vertical jet. For a horizontal jet, turn the **Air Cap (#2)** perpendicular to the ground. For a round jet, affix the **Air Cap (#2)** halfway between the two at a 45 degree angle to the ground.

Troubleshooting

Problem 1: Heavy top/bottom, or right/left pattern.

Cause: Material buildup on **Air Cap (#2)**.
Partially plugged **Air Cap (#2)** horn or center holes.

Solution: Remove **Air Cap (#2)**, soak in solvent, and wipe clean.

Cause: Material partially plugging Tip of Gun.

Solution: Remove Tip and clean.

Cause: Damaged **Needle (#24)**.

Solution: Remove and replace the **Needle (#24)** by first removing the **Needle Cap (#26)** and the **Needle Lock Nut (#25)**.

Problem 2: Heavy Center Pattern

Cause: Too much material.

Solution: Reduce fluid flow with the **Adjusting Screw (#28)**.

Cause: Coating too thick.

Solution: Thin out coating.

Problem 3: Split spray pattern.

Cause: Pressure too high.

Solution: Reduce air pressure at the regulator.

Cause: Not enough material.

Solution: Increase fluid flow with **Adjusting Screw (#28)**.

Problem 4: Jerky or fluttering spray.

Cause: Insufficient fluid.

Solution: Fill **Cup (#47)**.

Cause: Gun and **Cup (#47)** tipped at excessive angle.

Solution: Correct angle.

Cause: Obstructed **Fluid Tube (#38)**.

Solution: Clean

Cause: Loose or cracked **Fluid Tube (#38)** in **Cup (#47)**.

Solution: Tighten or replace.

Problem 4 (Continued)

Cause: Loose or cracked **Needle (#24)**.

Solution: Tighten or replace.

Cause: Fluid too heavy for suction feed.

Solution: Thin material

Cause: Dry or worn **Packing (#10)** or **Bushings (#11,12)**.

Solution: Lubricate, replace, or tighten.

Problem 5: Will not spray.

Cause: Low air pressure at Spray Gun.

Solution: Check lines for kinks.

Cause: Closed **Adjusting Screw (#28)**.

Solution: Open

Cause: Fluid too heavy for suction feed.

Solution: Thin material.

Problem 6: Dripping from tip.

Cause: Worn **Needle (#24)**.

Solution: Replace (follow instructions in Maintenance section).

Maintenance

1. Periodically check the **Gasket (#43)** for wear (replace if necessary). Keep the air holes clean.
2. Check for **Needle (#24)** wear (not uncommon). Look for tip wear and wear at the contact point of the **Needle (#24)** and the **Packing (#10)**. To replace **Needle (#24)**, carefully remove spring loaded **Adjusting Screw (#28)** by twisting and pulling the **Needle Cap (#26)** and the **Needle Lock Nut (#25)**. The **Spring (#27)** will pop out. Replace **Needle (#24)**, and reassemble by reversing the directions above.
3. After each use, unscrew and remove **Muffler (#16)**. Blow out with air or wash if necessary.

Reminder: Replacement parts available at Harbor Freight Tools.

Cleaning (Gun should be attached to compressor to complete the cleaning process)

Warning!! Do not use paint strippers on this unit as they will damage the aluminum. Never allow the unit to lay on it's side while coating is in the **Cup (#47)**.

1. Be careful, as the **Cup (#47)** may still be pressurized. Loosen the **Fluid Control Screw (#36)** to relieve pressure. Empty paint from **Cup (#47)** and add small amount of clean solvent. Replace **Lid (#42)** and shake **Cup (#47)** vigorously. At the lowest possible pressure, spray out the solvent into a waste bucket (make sure you are wearing respirator and eye protection).
2. Empty **Cup (#47)** of remaining solvent and repeat the process until the **Cup (#47)** solvent appears clean and free of the coating.
3. Disconnect air supply. Remove surplus solvent and wipe the **Cup (#47)** clean with a lint free cloth.

Note: The **Cup (#47)** may be fully immersed in solvent for no more than 24 hrs. if needed.

Lubrication (before and after each use).

1. Using a non-silicon spray, lube the expose parts of the **Needle (#24)** surrounding the **Trigger (#8)**. Lube the **Trigger Stud (#9)** so it moves freely.
2. Remove **Adjusting Screw (#28)** and lubricate threads. Replace.
3. Unscrew **Fluid Control Screw (#36)** and lube **Fluid Control Elbow (#32)**. Remove **Air Supply Tube (#48)** and check and clean. Do the same for the **No-Drip Elbow Assembly (#45)**. Replace.

Parts List

Part No.	Description	Part No.	Description
1	Retainer Ring	25	Needle Lock Nut
2	Air Cap	26	Needle Cap
3	Air Cap Plate	27	Spring
4	Air Cap Spring	28	Adjusting Screw
5	Fluid Nozzle	29	O-ring
6	Gun Body	30	Air Inlet Adapter
7	Screw	31	Air Inlet
8	Trigger	32	Fluid Control Elbow
9	Trigger Stud	33	Steel Ball
10	Packing	34	Spring
11	Bushing	35	Seal
12	Bushing	36	Fluid Control Screw
13	Safety Valve	37	Fluid Connector
14	Spring	38	Fluid Tube
15	Fluid Adjusting Screw	39	Yoke
16	Muffler	40	Cup Lever
17	Spindle Housing	41	Cup Lever Spacer
18	Spring	42	Lid
19	Spindle Assembly	43	Gasket
20	Spring	44	Nut
21	Spindle Housing	45	No-Drip Elbow Assembly
22	O-ring	46	No-Drip Tube
23	Adjusting Screw Receiver	47	Cup
24	Needle	48	Air Supply Tube

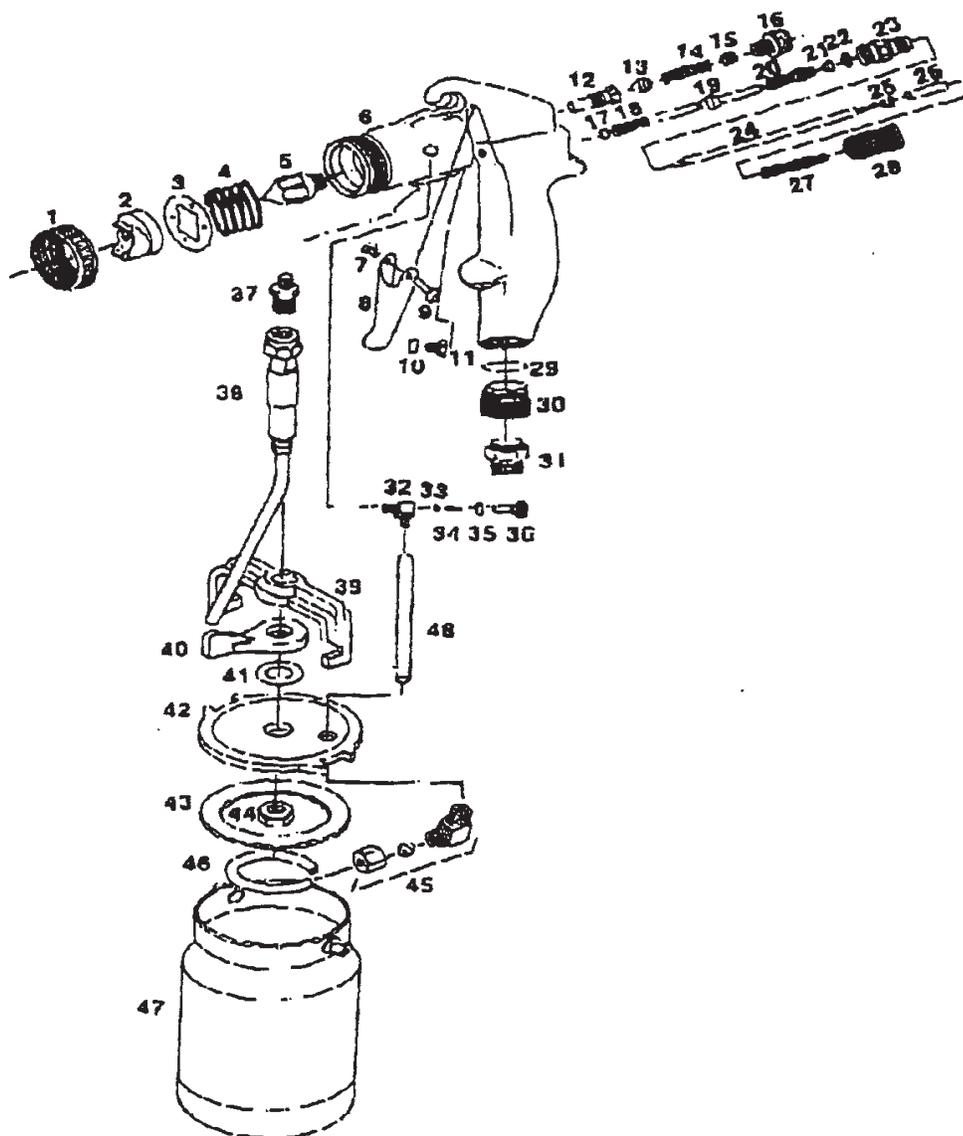
PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

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Assembly Drawing



90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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