

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



HVLP Spray Gun

Attention: Campbell Hausfeld recommends that servicing other than that shown in the instruction manual should be performed by an authorized service facility.

Description

High volume, low pressure (HVLP) paint sprayers are designed to deliver a fine finish with low overspray. The sprayer can be used to apply various acrylics, stains, sealers, lacquers, latexes, and primers. This unit can be used for painting cabinets, furniture, machinery, equipment, walls and trim work. Sprayers of this type are not recommended for automotive final coat. This portable unit is an ideal alternative to conventional spray guns. The HVLP's high transfer efficiency provides professional results with much less material waste and environmental contamination than other conventional spray painting systems.

Unpacking

When unpacking the sprayer, inspect carefully for any damage that may have occurred during transit. Make sure any loose fittings, bolts, etc., are tightened before putting sprayer into service. Each sprayer has been tested before shipment.

NOTE: The packing nut may need additional adjustment due to the packing material relaxing during shipment.

The fluid used for testing the sprayer has been drained, but some of this fluid will remain in the spray gun. This fluid should be flushed from the spray gun to prevent contamination of the coating material. Use a solvent compatible with the coating to be sprayed.

Table Of Contents

Description	1
Unpacking	1
General Safety Information	1
Setup	2-3
Operation	4
Maintenance	4-5
Troubleshooting	6
Warranty	10

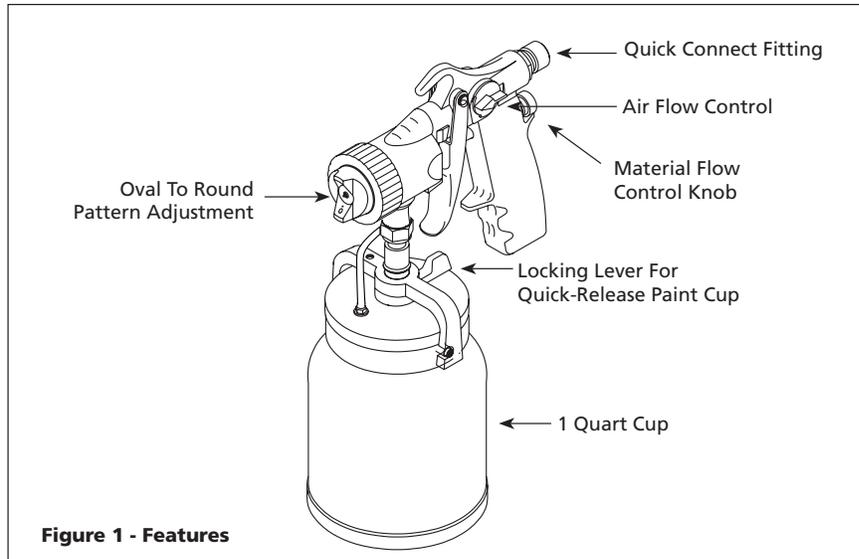


Figure 1 - Features

General Safety

⚠ DANGER Danger means a hazard that will cause death or serious injury if the warning is ignored.

⚠ WARNING Warning means a hazard that could cause death or serious injury if the warning is ignored.

⚠ CAUTION Caution means a hazard that may cause minor or moderate injury if the warning is ignored. It also may mean a hazard that will only cause damage to property.

⚠ NOTICE Notice means any additional information pertaining to the product or its proper usage.

Read all instructions and safety precautions before operating the unit.

⚠ WARNING Risk of fire or explosion! Solvent and paint fumes can explode or ignite, causing severe injury and property damage.



Paints and solvents containing HALOGENATED HYDROCARBONS can react explosively with aluminum. Always check the product's label before using these materials in the unit.

Make sure the room is well-ventilated.

Avoid all ignition sources, such as static electricity sparks, open flames, hot objects, sparks from connecting and disconnecting power cords, and working light switches.

Follow the material and solvent manufacturers' safety precautions and warnings. Do not use liquids with flash points less than 100 degrees Fahrenheit (38 degrees Celsius).

Do not carry TURBINE while spraying.

Keep the turbine at the maximum distance from the spraying area.

Static electricity can be produced by HVLP spraying. Make sure any electrically conductive object being sprayed is grounded to prevent static sparking. The sprayer is grounded through the electric cord. If an extension cord is necessary, the cord must be a grounded, 115 volt, three wire type cord.

General Safety (continued)



Hazardous vapors: Paints, solvents, insecticides, and other materials may be harmful if inhaled, causing severe nausea, fainting, or poisoning.

Use a respirator or mask whenever there is a chance that vapors may be inhaled. Read all instructions with the mask to ensure that the mask will provide the necessary protection against the inhalation of harmful vapors.

NEVER point the spray gun at any part of the body, or at anyone else.

CAUTION

Tipping the gun causes the gun to clog. Dried spray material also clogs the pressure delivery tube and fittings. The spray gun does not function when clogging occurs.

When not in use, be sure to disconnect the hose and place the gun on a solid, level surface to avoid tipping.

Components

(1) Gun - fully assembled, with all purpose needle/nozzle installed

Setup

NEEDLE AND NOZZLE ASSEMBLY

- Use Chart 1 to determine the proper size nozzle and needle for the material to be applied. The all purpose needle and nozzle are installed at the factory.

IMPORTANT: The needle and nozzle are a matched assembly. It is very important that both the needle and nozzle are correctly selected and installed. The needle/nozzle kits are identified by groove rings machined into both the needle, and the nozzle. Make sure that the number of rings in the nozzle and the needle match. Failure to match these two components properly results in poor finish quality.

- The thin material needle and nozzle have a single groove ring as shown in Figure 2 below.

SPRAYING MATERIAL	NEEDLE/NOZZLE
Acrylics	All purpose or Thin
Stains	Thin
Sealers	Thin
Lacquers	Thin
Latex Paint	All purpose
Oil Base Paint	All purpose or Thick

Chart 1 - Material Needle/Nozzle Combination

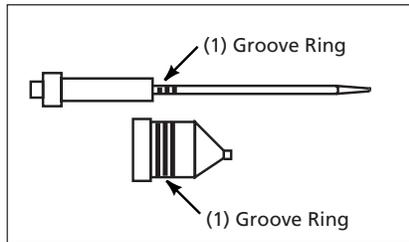


Figure 2 - Thin Material Needle And Nozzle Kit

- The all purpose material needle and nozzle have three groove rings as shown in Figure 3 below.

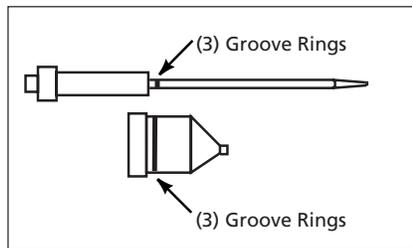


Figure 3 - All Purpose Material Needle And Nozzle Kit

- The thick material needle and nozzle have 2 groove rings as shown in Figure 4 below.

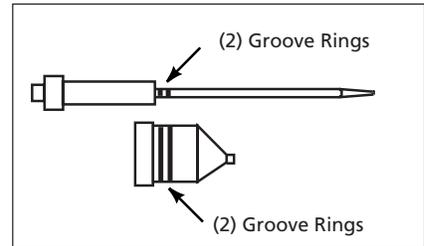


Figure 4 - Thick Material Needle Kit

Note: The all-purpose material needle kit is included with the unit. The thick and thin material needle kits are not included, however these kits can be purchased from the retail outlet that sold the unit or call 1-800-626-4401.

- Remove the retaining ring, air cap, nozzle, material control knob, spring, and needle assembly (Fig. 5).

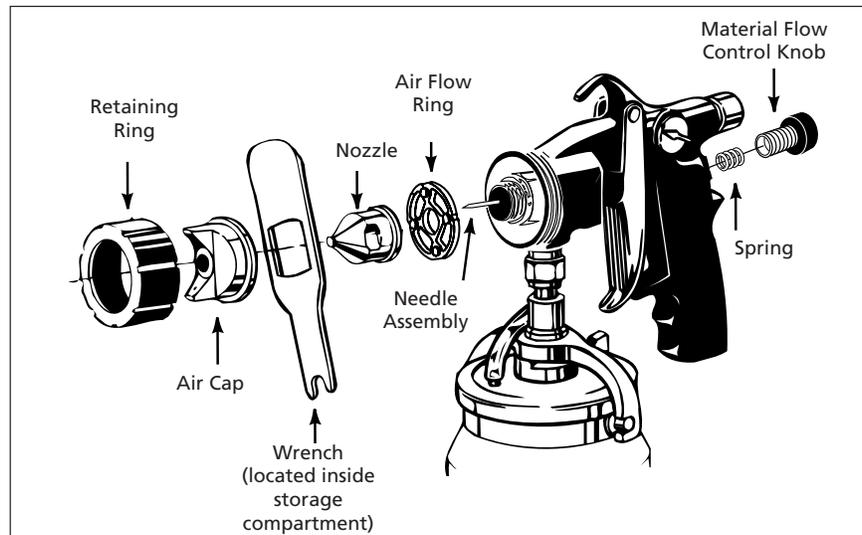


Figure 5 - Needle/Nozzle Installation

Setup (continued)

6. Install the appropriate needle/nozzle assembly selected for the material to be sprayed (Fig. 2, 3 & 4).
7. Reassemble the needle assembly, spring, material control knob, nozzle, air cap, and retainer ring.

ADJUSTING PACKING

Occasionally the packing nut, located forward of the trigger assembly, will require adjustment. The packing nut will also require adjustment when the needle/nozzle assembly is changed (Figure 6).

1. Turn the material flow control knob clockwise at least 3/4 of the way in.
2. Tighten the packing nut with the wrench by turning the nut clockwise until the needle will not return to the closed position when the trigger is released. Do not overtighten the packing nut. To properly adjust the packing, the nut should be tightened no further than is required to stop the needle from returning. (See Figure 6).

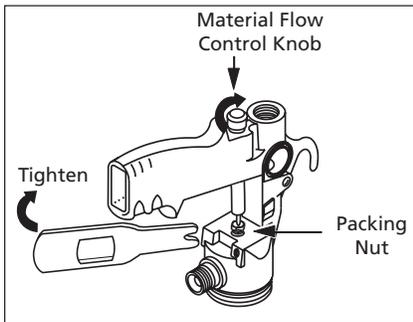


Figure 6 - Adjusting The Packing Nut

3. Loosen the packing nut (approx. 1/4 turn) until the needle returns freely to the closed position.

Preparation

PREPARING TO SPRAY

Some manufacturers specify that their materials should not be thinned. In general, these instructions apply only when a brush or roller is used. It may be necessary to thin these materials if they are to be sprayed. Check with the paint supplier for specific details when purchasing the material to be sprayed. Be sure to stir the material thoroughly after adding a thinning agent, and before checking the viscosity. Failure to properly mix the material results in a poor finish.

NOTICE: Some latex finishes are very thick and require the greatest amount of thinning and mixing. A latex paint conditioner can be added to the paint to improve spray performance (available at most home centers).

1. Strain paint before spraying. Unstrained paint may affect material flow and spray pattern. When spraying thin materials such as lacquer or stains, consult with the material supplier for the proper strainer mesh number.
2. Pour material into the paint cup. Fill the material cup only 1/2 to 3/4 full if thinning of the material is required. (See Figure 7). Refer to the material chart below for proper thinning instructions.

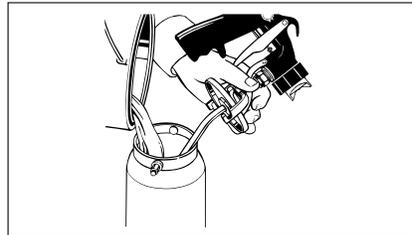


Figure 7 - Filling The Paint Cup

NOTICE Follow the material manufacturer's recommendation for the proper thinning solvent.

3. Using the following procedure, check the viscosity of the material before locking the gun onto the material cup (Figure 8).

NOTICE The viscosity stick is located in the storage compartment.

- a. Dip the viscosity stick into the material. As the viscosity stick is removed from the material, the material will initially run off the stick as a stream. The material stream will break up and begin to drip after running off the stick for a short time.

- b. Estimate the time interval between each of the first three drips of material. The time between the first three drips of material will vary depending on the thickness or the "viscosity" of the material.
- c. The material is adequately thinned if the first three drips from the viscosity stick are about one second apart.
- d. As a general rule, if the time between drips is more than one second, the material is too thick. Add thinning agent, stir thoroughly and repeat the above procedure until the proper viscosity is attained.

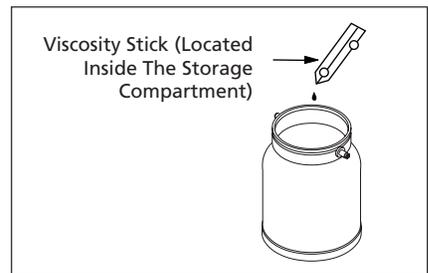


Figure 8 - Viscosity Stick

4. To tighten and lock the cup, place the retainer arms securely around the retaining pins on the paint cup.
5. Move the locking lever clockwise to the locked position. (See Figure 9).

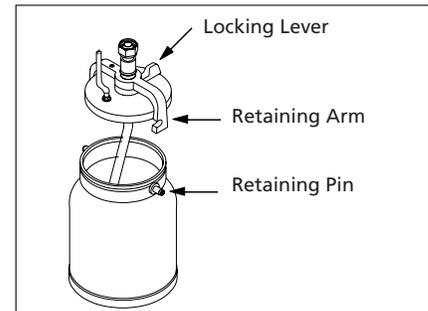


Figure 9 - Locking The Cup

MATERIAL	PERCENT REDUCED
Acrylics.....	Follow Manufacturer's Instructions
Stains	No Thinning Required
Clear Sealers.....	No Thinning Required
Lacquers	Follow Manufacturer's Instructions
Oil-Base Paint.....	10 - 40%
Latex Paints.....	15 - 20%

Preparation (continued)

- Attach the air hose quick-connect fitting to the gun.

NOTICE The quick-connect fitting outer sleeve is spring loaded and must be pulled back to attach or remove it from the gun (See Figure 10).

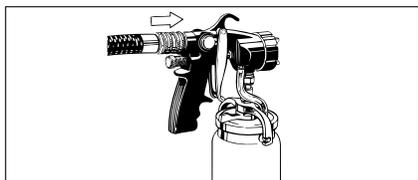


Figure 10 - Attaching The Air Hose

Operation

Always practice first. Make the gun adjustments on a test surface such as cardboard before spraying the project.

- Keep the gun 4" - 9" from, and parallel to the surface of the object being sprayed. (See Figure 11). If the material delivery is adjusted for a small narrow pattern, it may be necessary to move as close as 2" from the work surface.

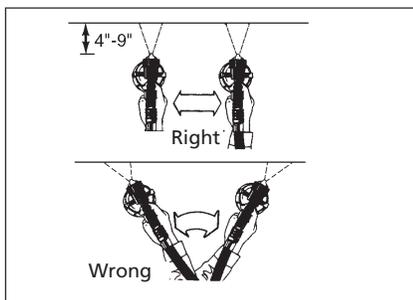


Figure 11 - Painting Strokes

- Move the gun in a smooth even stroke. Begin the stroke before pulling the trigger and continue the stroke after releasing the trigger.
- For best results overlap each stroke by 25 to 50%.
- To adjust the spray pattern "type", turn the air cap to the desired pattern position (See Figure 12).

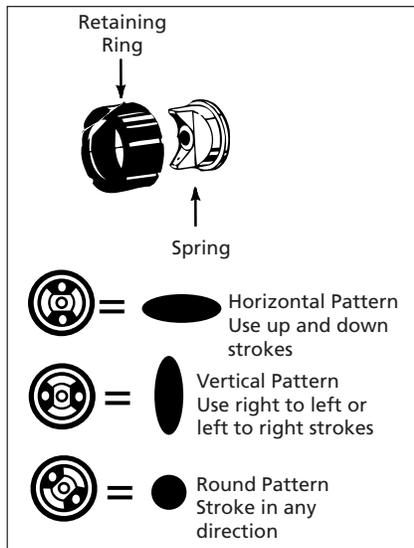


Figure 12 - Adjusting The Spray Patterns "Type"

- To adjust the material flow, turn the material control knob clockwise to decrease and counterclockwise to increase. (See Figure 13).

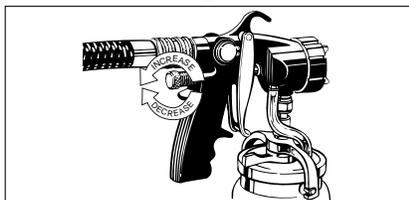


Figure 13 - Adjusting The Material Flow

- For fine pattern adjustment, turn the air flow control knob clockwise to decrease and counterclockwise to increase air flow (See Figure 14).



Figure 14 - Fine Pattern Adjustment

Reducing the air flow also reduces overspray.

NOTICE The turbine air hose can be used to blow-dry those areas that are too heavily coated, or slow in drying.

The air from the turbine is warm as a result of normal operation. This can affect the finish quality on hot dry days due to premature drying of some coatings such as lacquer. Retarding agents can be added to the material to resolve this condition. Consult the material supplier for the proper retarding agent, and mixing procedures.

Maintenance

CLEANING

WARNING Make sure the room is well ventilated when using solvents. Dispose of all materials properly, in accordance with all local regulations.

- Remove the material control knob, spring, and needle. (Pull the trigger to help remove the needle). **NOTICE:** Removing the needle prior to removing the nozzle will prevent needle damage.
- Using the supplied wrench, unscrew and remove the retainer ring, nozzle, and airflow ring (See Figure 15).

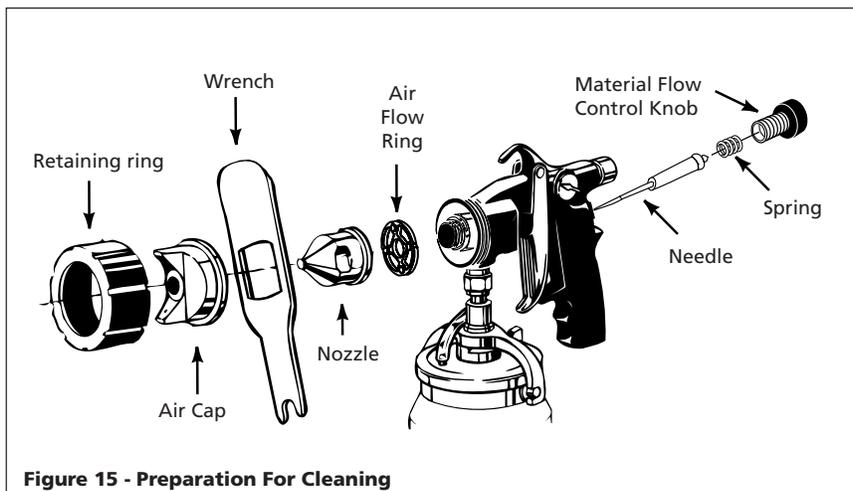


Figure 15 - Preparation For Cleaning

Maintenance (continued)

- Place the parts and the paint cup in a bucket or other suitable container. Soak the parts in a suitable solvent, or in soap and water if latex was used (See Figure 16). To clean the gun, flush a suitable cleaning solvent through the material tube until the solution begins to clear. Repeat the procedure from the nozzle end of the gun (See Figure 16).

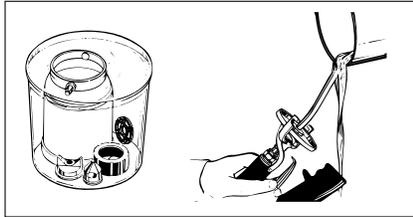


Figure 16 - Cleaning The Spray Gun Parts

- Use the brush (saturated with solvent) between flushes to clean the material tube and the nozzle (See Figure 17).

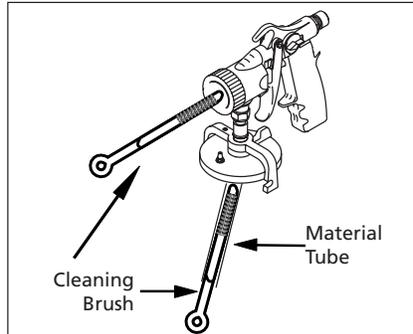


Figure 17 - Cleaning The Material Tube

- Reinstall the components in reverse order of disassembly (See Figure 18). Always install nozzle before installing the needle to prevent needle damage.
- When the gun and all parts are thoroughly cleaned, use the turbine hose to dry the parts and blow the passages dry. Thorough drying of the gun and all components prior to reassembly prevents coating contamination during the next operation of the unit, and inhibits oxidation of internal gun components (See Figure 18).

NOTICE *The four raised knobs on the air flow ring must be facing forward (toward the nozzle) when assembled. (See Figure 18).*

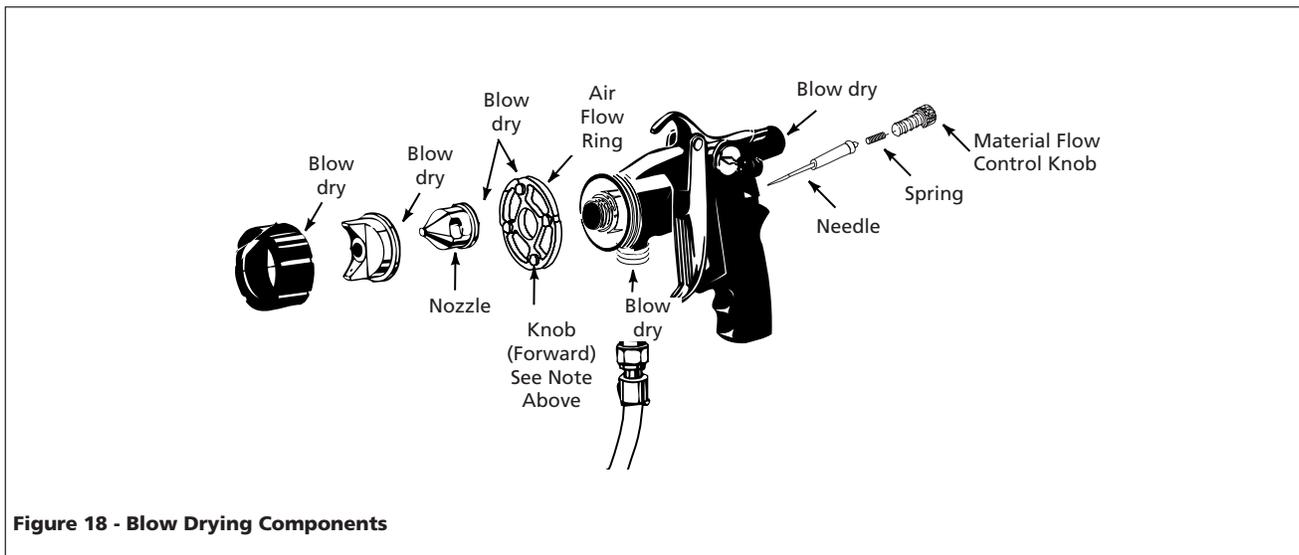


Figure 18 - Blow Drying Components

Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
No material flow	<ol style="list-style-type: none"> 1. Clogged nozzle/air cap 2. Clogged cup pressure tube or fittings 3. Clogged gun 4. Clogged material tube 5. Cup seal leaking 6. Material not properly mixed, or improperly filtered 	<ol style="list-style-type: none"> 1. Disassemble and clean 2. Disassemble and clean (a straight pin can be used to clean fittings) 3. Disassemble and clean 4. Disassemble and clean gun, and check valve 5. Inspect cup seal, cup cap, and clean or replace as necessary 6. Strain paint
Slow material flow	<ol style="list-style-type: none"> 1. Material too thick 2. Improper material adjustment 3. Wrong needle/nozzle 4. Air filter clogged 5. Material not properly mixed, or improperly filtered 6. Material too cold 	<ol style="list-style-type: none"> 1. Clear material tube, gun, fittings, and thin the material 2. Adjust material control knob 3. Refer to material application chart for correct needle/nozzle 4. Remove and replace air filter 5. Strain paint 6. Raise material temp. to 60°F (15°C)
Material leak	<ol style="list-style-type: none"> 1. Cup or gun damaged 2. Loose packing 3. Worn or damaged packing 4. Worn or damaged cup seal 5. Loose cup fittings 6. Loose nozzle 7. Wrong needle/nozzle assembly 8. Damaged needle 9. Loose material control knob 10. Cup seal leaking 	<ol style="list-style-type: none"> 1. Check cup gun and replace damaged parts 2. Adjust packing nut 3. Remove and replace 4. Remove and replace 5. Tighten 6. Tighten 7. Refer to material application chart for correct needle/nozzle 8. Replace 9. Properly adjust by turning clockwise 10. Clean and dry before use
Spray will not shut off	<ol style="list-style-type: none"> 1. Dirty needle 2. Packing too tight 3. Loose material control knob 	<ol style="list-style-type: none"> 1. Clean or replace needle 2. Adjust packing nut 3. Tighten
Pulsating spray	<ol style="list-style-type: none"> 1. Cup seal or check valve leaking 2. Packing improperly adjusted 3. Loose fittings on cup or gun 4. Loose air cap retainer ring 5. Loose nozzle 6. Damaged air flow ring 7. Material not properly mixed, or improperly filtered 	<ol style="list-style-type: none"> 1. Disassemble and clean 2. Adjust packing nut, or replace packing 3. Tighten 4. Tighten 5. Tighten 6. Replace 7. Strain paint
Excessive overspray	<ol style="list-style-type: none"> 1. Material too thin 2. Excessive air flow 3. Wrong needle/nozzle 4. Gun too far from project 5. Spray blown by wind 6. Excessive material flow 7. Material not properly mixed, or improperly filtered 	<ol style="list-style-type: none"> 1. Check material viscosity (add non-thinned material) 2. Adjust air flow 3. Wrong needle/nozzle assembly 4. Move gun closer to surface 5. Move to an area without wind 6. Adjust material flow control knob 7. Strain paint

Troubleshooting Chart

Symptom	Possible Cause(s)	Corrective Action
Spray not uniform (spitting)	<ol style="list-style-type: none"> 1. Material too thick 2. Wrong needle/nozzle assembly 3. Cup seal leaking 4. Loose packing 5. Material not properly mixed, or improperly filtered 	<ol style="list-style-type: none"> 1. Check material viscosity (Thin per instructions) 2. Change to proper needle/nozzle 3. Tighten cup, replace seal or check valve 4. Adjust or replace packing 5. Strain paint
Poor pattern	<ol style="list-style-type: none"> 1. Material buildup on nozzle or air cap 2. Worn nozzle/needle 3. Clogged air cap 4. Material not properly mixed, or improperly filtered 	<ol style="list-style-type: none"> 1. Clean nozzle and air cap 2. Replace 3. Clean 4. Strain paint
Overheating	<ol style="list-style-type: none"> 1. Clogged filter 	<ol style="list-style-type: none"> 1. Replace
Poor air flow	<ol style="list-style-type: none"> 1. Clogged filter 2. Air flow control improperly adjusted 	<ol style="list-style-type: none"> 1. Replace filter 2. Adjust air flow control
Spray tip clogs	<ol style="list-style-type: none"> 1. Improper material flow adjustment 2. Cup seal leaking 3. Wrong needle/nozzle 	<ol style="list-style-type: none"> 1. Adjust material control 2. Replace cup seal 3. Change to proper needle/nozzle

Troubleshooting Chart - Finish Quality

Symptom	Possible Cause(s)	Corrective Action
Orange Peel (Rough rolling appearance similar to an actual orange peeling)	<ol style="list-style-type: none"> 1. Material drying too fast 2. Gun too far from surface 3. Material too thick 	<ol style="list-style-type: none"> 1. Use a slower solvent, or add a retarding agent 2. Move gun closer to surface 3. Thin material per thinning instructions
Runs and sags	<ol style="list-style-type: none"> 1. Material too thin 2. Moving gun too slow 3. Excessive material flow 4. Gun too close to surface 	<ol style="list-style-type: none"> 1. Add material to increase thickness 2. Move gun more quickly 3. Turn material control knob clockwise to reduce flow 4. Move gun further from surface
Pin-holing and solvent pops	<ol style="list-style-type: none"> 1. Trapped solvents 2. Pigment settling 3. System contamination 	<ol style="list-style-type: none"> 1. Apply material in lighter coats, allowing solvents time to evaporate 2. Possible bad material 3. Thoroughly clean all parts
Fish eye	<ol style="list-style-type: none"> 1. Possible silicone contamination 	<ol style="list-style-type: none"> 1. Use solvent to clean all parts and projects
Blistering	<ol style="list-style-type: none"> 1. Moisture in/on surface 2. Incompatible top coats or under-coats 	<ol style="list-style-type: none"> 1. Dry surface 2. Make sure coatings are compatible
Lumpy, coarse surface	<ol style="list-style-type: none"> 1. Dirt on surface 	<ol style="list-style-type: none"> 1. Thoroughly clean surface
Mottled surface finish	<ol style="list-style-type: none"> 1. Too much thinner 2. Poor spray technique 	<ol style="list-style-type: none"> 1. Reduce thinner 2. Refer to "Operation" for spraying instructions

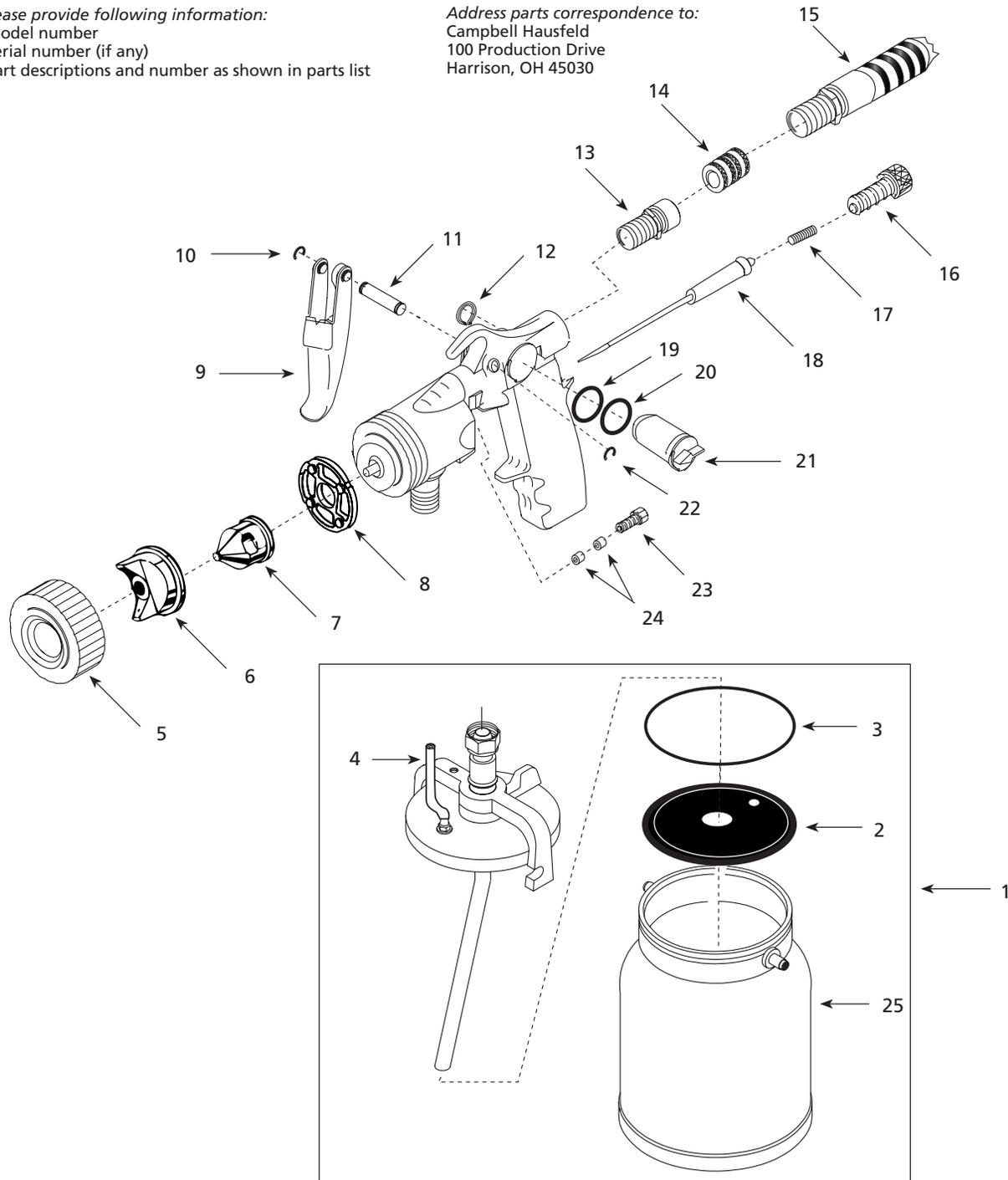
NOTICE:

- Weather conditions can cause unsatisfactory results when spraying some coatings.
- High humidity prolongs set, and cure times.
- High temperatures decrease set, and cure times.
- Cold temperatures extend set, and cure times.
- Variations in temperature, and humidity can cause variations in finish quality.
- Coating manufacturers can recommend additives to resolve some of these problems, and should be contacted for assistance with particular problem resolutions.

For Replacement Parts, or technical assistance, Call 1-800-626-4401

Please provide following information:
-Model number
-Serial number (if any)
-Part descriptions and number as shown in parts list

Address parts correspondence to:
Campbell Hausfeld
100 Production Drive
Harrison, OH 45030



Replacement Parts List

Ref No.	Description	Part Number	Qty
1	Canister assembly (as shown)	SK205800AJ	1
2	■ Check valve	HV004400AV	1
3	■ Canister seal kit (Includes 3)	SK206401AJ	1
4	■ Pressure tube	SK105100AJ	1
5	Retainer ring	HV000901AV	1
6	Air cap kit	HV011000SV	1
7	Nozzle	See chart below	1
7	Air flow ring	HV001201AV	1
9	Trigger	◆ *	1
10	E-ring	◆	1
11	Trigger pin	◆	1
12	Retaining ring	▲	1
13	* Male quick connect fitting	HV003500AV	1
14	Quick connect fitting	HV002200AV	1
15	Hose	MP310600AJ	1
16	Material flow control knob	HV003400SV	1
17	Spring	HV002900AV	1
18	Needle	See chart below	1
19	O-ring	▲	1
20	O-ring	▲	1
21	Air control valve	▲ *	1
22	E-ring	◆	1
23	* Packing nut	HV003200SV	1
24	* Packing	HV002800SV	2
25	Canister	DH077900AV	1

Replacement Parts Kit

Ref No.	Description	Part Number	Qty
	■ Canister assembly (Includes items 2-4)	SK205800AJ	1
	◆ Trigger assembly (Includes items 9-11 & 22)	SK206100AJ	1
	▲ Air flow control knob assembly (Includes items 12, 19-21)	SK206200AJ	1
	* Gun body assembly (as shown, includes 9-13, & 16-24)	SK600000AJ	1

Note: Air Cap Kit includes #5, 6 & 8

Air Cap only (guns with Campbell Hausfeld embossed in handle) HV000801AV

Needle/Nozzle Set	CH Embossed Gun	Smooth Handle Gun
Thin Material	HV7005	MP3018
All-Purpose	HV7004	MP3017
Thick Material	HV7006	MP3019

Limited Warranty

1. **DURATION:** From the date of purchase by the original purchaser as follows: Standard Duty Paint Application Systems and all Paint Application Accessories - 1 year, Serious Duty Paint Application Systems - 3 years, Extreme Duty Paint Application Systems - 5 years.
2. **WHO GIVES THIS WARRANTY (WARRANTOR):** Campbell Hausfeld/A Scott Fetzer Company, 100 Production Drive, Harrison, Ohio, 45030, Telephone: 1-800-626-4401.
3. **WHO RECEIVES THIS WARRANTY (PURCHASER):** The original purchaser (other than for purposes of resale or rental) of the Campbell Hausfeld Product.
4. **WHAT PRODUCTS ARE COVERED BY THIS WARRANTY:** All non-compressor driven paint application systems, HVLP spraying systems, and paint application accessories supplied or manufactured by the Warrantor.
5. **WHAT IS COVERED UNDER THIS WARRANTY:** Defects in material and workmanship which occur within the duration of the warranty period. Warrantor will also cover normal wear items for a period of thirty days from the date of original purchase against defects in material and workmanship. These wear items are: HVLP-filters, motor brushes, gun packing, gun canister seal, gun check valve and gun air flow ring; Airless-inlet valve, outlet valve, gun valve, filters, tips, all seals and o-rings.
6. **WHAT IS NOT COVERED UNDER THIS WARRANTY:**
 - A. Implied warranties, including those of merchantability and FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED FROM THE DATE OF ORIGINAL PURCHASE AS STATED IN THE DURATION. If standard duty product is used for commercial or industrial purposes, the warranty will apply for ninety (90) days from the date of original purchase. If product is used for rental purposes, the warranty will apply for ninety (90) days from the date of original purchase. Some states do not allow limitation on how long an implied warranty lasts, so the above limitations may not apply to you.
 - B. ANY INCIDENTAL, INDIRECT, OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE, OR MALFUNCTION OF THE CAMPBELL HAUSFELD PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
 - C. Any failure that results from an accident, purchaser's abuse, neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) supplied with product. Accident, purchaser's abuse, neglect or failure to operate products in accordance with instructions shall also include the removal or alteration of any safety devices. If such safety devices are removed or altered, this warranty is void.
 - D. Normal adjustments which are explained in the owner's manual(s) provided with the product.
 - E. Items or services that are normally required to maintain the product: HVLP-filters, motor brushes, gun packing, gun canister seal, gun check valve and gun air flow ring; Airless-inlet valve, outlet valve, gun valve, filters, tips, all seals and o-rings., or any other expendable part not specifically listed, will only be covered for thirty days from date of original purchase.
7. **RESPONSIBILITIES OF WARRANTOR UNDER THIS WARRANTY:** Repair or replace, at Warrantor's option, products or components which are defective, have malfunctioned and/or failed to conform within duration of the warranty period.
8. **RESPONSIBILITIES OF PURCHASER UNDER THIS WARRANTY:**
 - A. Provide dated proof of purchase and maintenance records.
 - B. Deliver or ship the Campbell Hausfeld product or component to the nearest Campbell Hausfeld Authorized Service Center. Freight costs, if any, must be borne by the purchaser.
 - C. Use reasonable care in the operation and maintenance of the products as described in the owner's manual(s).
9. **WHEN WARRANTOR WILL PERFORM REPAIR OR REPLACEMENT UNDER THIS WARRANTY:**
 - A. Repair or replacement will be scheduled and serviced according to the normal work flow at the servicing location, and depending on the availability of replacement parts.
 - B. If the purchaser does not receive satisfactory results from the Authorized Service Center, the purchaser should contact Campbell Hausfeld (see paragraph 2)

This Limited Warranty applies in the U.S. and Canada only and gives you specific legal rights. You may also have other rights which vary from state to state, or country to country.