

INSTRUCTIONS-PARTS LIST



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307-491

Rev. B

Supersedes Rev. A



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

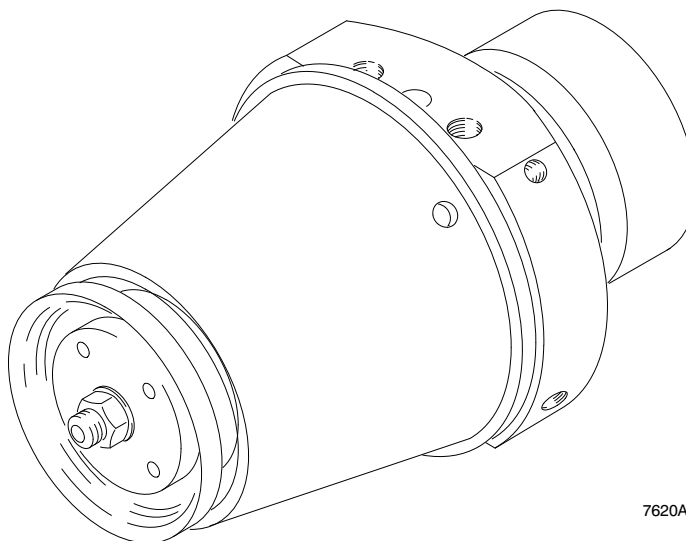
INSTRUCTIONS

Electrostatic Centrifugal Atomizer

CA-1000

80 psi (560 kPa, 5.6 bar) Maximum Working Pressure

Model 955-850



7620A

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Symbols

Warning Symbol



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

Caution Symbol



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

WARNING



INSTRUCTIONS

EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are uncertain about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check the equipment daily. Repair or replace worn or damaged parts immediately.
- Follow the **Pressure Relief Procedure** on page 5 if the spray tip clogs and before cleaning, checking, or servicing the equipment.
- Do not exceed the maximum working pressure of the lowest rated system component. This equipment has a **80 psi (560 kPa, 5.6 bar) maximum working pressure**.
- Route the hoses away from the traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 180°F (82°C) or below -40°F (-40°C).
- Do not use the hoses to pull the equipment.
- Use only Graco approved hoses. Do not remove hose spring guards, which help protect the hose from rupture caused by kinks or bends near the couplings.
- Use fluids or solvents that are compatible with the equipment wetted parts. See the **Technical Data** section of all the equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Never use 1.1.1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use could result in a chemical reaction, with the possibility of explosion.
- Comply with all applicable local, state and national fire, electrical and other safety regulations.

Warnings are continued on the next page.

WARNING



FIRE EXPLOSION AND ELECTRIC SHOCK HAZARD

Improper grounding, poor air ventilation, open flames, or sparks can cause a hazardous condition and result in fire or explosion and serious injury.

- Ground the equipment and the object being sprayed. See **Grounding** on page 4.
- Electrostatic equipment must be used only by trained, qualified personnel who understand the requirements stated in this instruction manual.
- Do not flush the system with the high voltage power supply turned on.
- Use only non-sparking tools to clean residue from the booth and hangers.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvent or the fluid being sprayed.
- Turn off the High Voltage Power Supply before cleaning or servicing the atomizer.
- Extinguish all the open flames or pilot lights in the spray area.
- Electrically disconnect all the equipment in the spray area.
- Keep the spray area free of debris, including solvent, rags, and gasoline.
- Do not turn on or off any light switch in the spray area while operating or if fumes are present.
- Do not smoke in the spray area.
- Do not operate a gasoline engine in the spray area.
- If there is any static sparking while using the equipment, **stop spraying immediately**. Identify and correct the problem.



TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

- Know the specific hazards of the fluid you are using.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.

Installation

Grounding

- Be sure the electric power circuit is properly grounded.
- All components of the system, except the atomizer and the paint hoses, must be electrically grounded.
- Be sure your atomizer is not grounded. Use ungrounded paint hoses to the atomizer only.
- Be sure your supply pump and the object you are painting are grounded.
- All conductive objects within 10 feet (3 m) of the atomizer must be electrically grounded.
- Be sure your installation complies with all applicable local codes.
- When flushing the atomizer, never use conductive solvents. Be sure to turn off the High Voltage Power Supply before flushing the atomizer. Remove all solvent from the atomizer before turning on the power supply again.
- Keep the work hangers and conveyor equipment clean and grounded at all times.

Setup

Notes:

- The CA-1000 Atomizer is part of a custom designed electrostatic paint spray system. Contact your Graco representative for complete design and installation of a system tailored for your specific needs.
- Be sure your installation complies with all Federal, State, and local codes for the installation of electrical apparatus in a Class 1, Divisions 1 and 2 Hazardous Location.

WARNING

FIRE AND EXPLOSION HAZARD

Mount the atomizer at least 12 in. (305 mm) from the workpiece. To prevent arcing, the front of the atomizer must be at least 12 in. (305 mm) from any grounded object. Follow the recommendations in the OSHA standard, 1910.107(h)(6).

WARNING

ELECTRIC SHOCK HAZARD

To avoid electric shock, make sure the High Voltage Power Supply is turned off before connecting or disconnecting the high voltage leads at the atomizer or the junction arm.

Be sure that all of the supply hoses to the atomizer are properly connected. See Fig. 1. Connect an air supply hose to the port marked **A3**. Connect a coating material supply hose to the port marked **C**. Connect a solvent supply hose (if one is used) to the port marked **S**. Connect two turbine air supply lines to the rear of the air turbine (shown as Ref. X. in Fig. 1.). Wire the rear of the turbine to the high voltage junction point (shown as Ref. Y in Fig. 1).

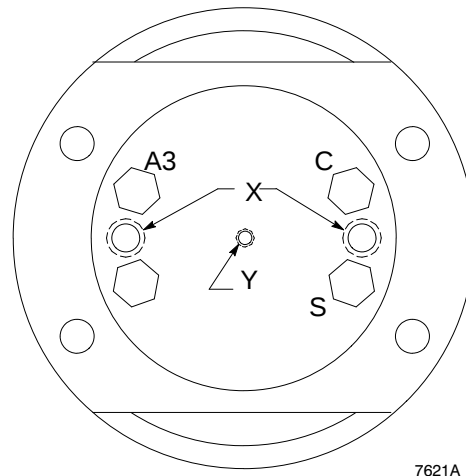


Fig. 1

Ventilation

Check Federal and State codes regarding the air exhaust velocity requirements.

Note: A high velocity of air exhaust will not allow the electrostatic system to operate efficiently.

Operation

Pressure Relief Procedure

WARNING

To reduce the risk of injury from accidental spray from the atomizer, splashing fluid, moving parts, or electric shock, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the baffle.

1. Turn off the high voltage power supply.
2. Shut off the coating supply and solvent supply pump.
3. Actuate the atomizer to relieve the fluid pressure.
4. Relieve the fluid supply pressures as instructed in their manuals.

General Operation

Apply air to the turbine ports as recommended by your Graco representative.

Adjust the system's program so that the atomizer starts spraying just before the workpiece comes into range and stops spraying as soon as the workpiece has passed. The normal spray pattern will be about 24 in. (610 mm) in diameter.

Fluid Control

Use a fluid regulator to adjust the fluid flow to the proper rate.

Pattern Shape Control

Regulate the air to the port **A3** to 15 psi (100 kPa, 1 bar) or until a steady pattern is obtained. Readjust the air as necessary for fluid flow change.

Notes:

- Be sure that your compressed air supply is dry and free of oil to avoid introducing harmful dirt and moisture into the air turbine or the spray pattern.
- Do not use lubricated air for the air turbine.

When all adjustments have been made, turn on the High Voltage Power Supply and begin operation.

Care of the Atomizer

Clean the atomizer and the work area daily. A buildup of conductive residue on either the exterior or the interior surfaces of the gun may interfere with its proper operation.

WARNING

FIRE AND EXPLOSION HAZARD

To avoid a fire and explosion hazard and damage to the equipment;

- Turn off the High Voltage Power Supply before cleaning.
- Never immerse the spray atomizer in solvent or other liquid.

Refer to the **Cleaning** section on page 7. for the proper cleaning procedure.

Troubleshooting

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5.

Before servicing this equipment always make sure to **Relieve the Pressure**.

Check all possible problems and solutions before disassembling the pump.

Problem	Cause	Solution
There is drag on the disc when it is turned manually.	Dried paint has built-up between the shaft and/or the disc and the manifold.	Clean this area.
	The manifold has been assembled to the turbine incorrectly.	Loosen the four manifold screws (8) and retighten them using three complete turns.
The air turbine is running slowly.	The air supply is inadequate.	Check for a clogged air filter, a loose or kinked air line, or loose screw(s) on the air turbine rear cap.
	There is dirt in the air turbine port orifice.	Remove the air cap from the rear of the atomizer and use air to blow it clean.
	The exhaust ports are blocked.	The 1/4 npt ports at the rear of the turbine ports must be open.
	The muffler is clogged.	Remove the air turbine and replace the muffler foam.
The spray pattern is pulsing.	There is air in the fluid lines.	Purge all air from the fluid lines.
	Paint has built-up on the disc edge.	Clean the disc and operate the atomizer at a higher turbine speed and/or reduce the fluid pressure.
	The fluid filter is clogged.	Check and clean the filter.
	The fluid regulator is clogged.	Check and clean the regulator.
The pattern shape is erratic.	The shaping air holes are clogged.	Clean the air holes.
	The nozzle and/or the fluid lines are clogged.	Clean the nozzle and/or flush the fluid lines.
	The spray booth air exhaust velocity has changed.	Correct the velocity.

Service

Cleaning



WARNING

FIRE AND EXPLOSION HAZARD

To avoid a fire and explosion hazard and damage to the equipment;

- Turn off the High Voltage Power Supply before cleaning.
- Never immerse the spray atomizer in solvent or other liquid.

After each spraying operation, turn off the high voltage power supply and solvent flush the system until all traces of the coating material are removed from the hose and the atomizer.



CAUTION

Never use metal instruments to clean the holes of the air shaping baffle or the fluid manifold. Never immerse the atomizer in solvent.

1. Remove the baffle assembly, being careful to protect the fragile edge of the disc. Immerse the assembly in solvent to remove all of the paint residue.
2. Inspect the face of the manifold (7), the nozzle (4), motor shaft (10), and the air baffle (5). Clean off any paint build-up.

Disassembly



WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 5.

Notes:

- The following instructions indicate which parts of the atomizer may be disassembled for cleaning or replacement. Do not disassembly any other parts. If your atomizer still does not function properly after you have checked all of the items in the **Troubleshooting** section and have made the suggested repairs, contact your Graco representative.

- Do not service the air turbine. If it does not operate properly, contact your Graco distributor.

- Refer to the **Parts Drawing** on page 8.

Relieve the pressure and shut off the high voltage power supply. Remove the air and the fluid hoses from the atomizer; cap the ends to prevent contamination of the hoses. Remove the atomizer from its mounting and take it to a repair bench.

Baffle Assembly (1):

Unscrew the nut (2) and remove the washer (3). Pull the assembly straight off the manifold. Do not disassemble the baffle assembly.

Atomizer Cover (13):

Unscrew the four pan-head screws(14).

Fluid manifold (7):

Remove the manifold for cleaning only if it has become clogged with dried paint and sediment. The normal flushing procedure usually keeps the fluid passages clean. To remove the manifold, remove the cover (13), then remove the four recessed flat-head screws (8). Pull the manifold straight off. Use solvent and a soft implement to clean the manifold. Never use a hard or sharp implement to clean the passages.

Motor (10):

Remove all of the above parts in the listed order. Then, unscrew the motor from the motor support (11).

Air Shaping Baffle (5):

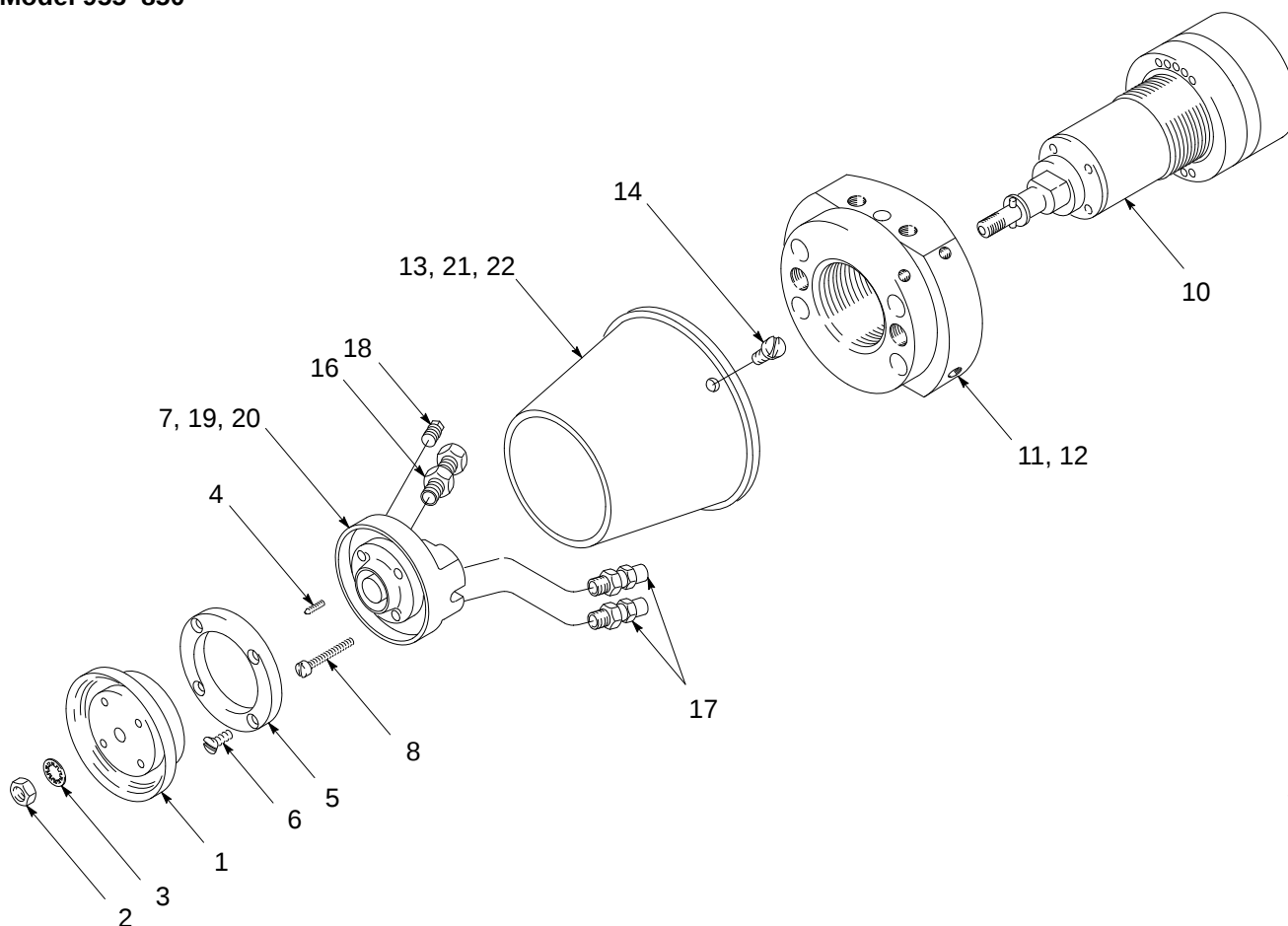
Remove the baffle assembly (1). Unscrew the four screws (6) holding the air baffle in place. Use a soft implement such as a toothpick to clean the air passages. Never use a hard or sharp implement to clean the passages

Reassembly

Reassemble the parts in the reverse order of disassembly. Mount the atomizer and reconnect the hoses to the proper ports.

Parts

Model 955-850



7622A

Ref. No.	Part No.	Description	Qty.
1		BAFFLE ASSEMBLY (Customer choice, order separately)	1
2	101-984	NUT, 5/16-18	1
3	100-186	LOCKWASHER, 5/16"	1
4		NOZZLE (Customer choice, order separately)	1
5	677-254	BAFFLE, air shaping	1
6	597-121	SCREW, oval hd; 6-32 x 1/2	4
7	677-255	MANIFOLD, fluid	1
8	597-120	SCREW, flat head; 6-32 x 1-1/2	4
10	906-429	MOTOR	1
11	677-257	SUPPORT, motor	1
12	597-122	SCREW, set; 5/16-18 x 3/4"	2
13	677-249	COVER	1
14	597-126	SCREW, pan hd; 1/4-20 x 1/2	4
16	205-437	COUPLING, hose, air; 1/4 x 1/8 npt	1
17	205-436	COUPLING, hose, fluid; 1/8 x 1/8 npt(m)	2
18	596-763	PLUG, pipe	1

Ref. No.	Part No.	Description	Qty.
19*	597-123	SEAL; o-ring (not shown)	1
20*	597-124	SEAL; o-ring (not shown)	1
21*	597-411	FOAM; muffler (not shown)	1
22*	597-410	FOAM; muffler (not shown)	1

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

Baffle Assemblies (Must be purchased separately)

906-238	Standard
907-600	LDL

Nozzles (Must be purchased separately)

677-781	0.030 in. (0.762 mm) ID
677-782	0.045 in. (1.143 mm) ID
677-783	0.060 in. (1.524 mm) ID

Technical Data

Category	Data
Maximum Working Pressure	80 psi (560 MPa, 5.6 bar)
Minimum Working Pressure	20 psi (140 kPa, 1.4 bar)
Average Air Requirement	20 scfm
Weight	5 lb., 5 oz. (2.4 Kg)
Wetted Parts	SST, Aluminum, Galvanized Steel
Dimensions	4.75 in. (121 mm) diameter x 7.875 in. (200 mm) long

[illegible]

[illegible]

The Graco Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or 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 of Graco equipment with 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 claimed defect. 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.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

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

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you:
1-800-367-4023 Toll Free.

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