

DEVILBISS

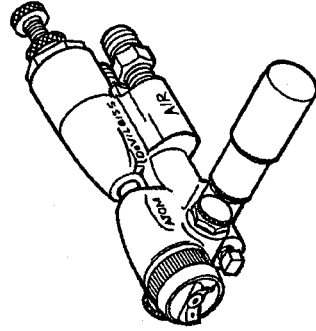
The Right Way To Finish

SERVICE BULLETIN
SB-2-781-C

Replaces SB-2-781-B

AGF-506 AUTOMATIC GUN

IMPORTANT: Before using this equipment, read all Safety Precautions and Instructions. Keep for future use.



DESCRIPTION

The AGF-506 automatic gun has 1/4" NPS air and fluid connections and a stainless steel fluid tip and needle.

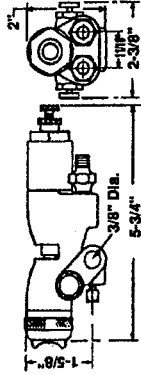
It is a lightweight production gun for relatively small work. For use on automatic and semi-automatic machines where mass production spraying is necessary or hand spraying is not accurate enough.

WARNING

Halogated hydrocarbon solvent - for example 1, 1, 1-Trichloroethane and methylene chloride - can chemically react with the aluminum in this gun and cause an explosion hazard. Read the label or data sheet for the material you intend to spray. Do not use spray materials containing these solvents with this gun.

Maximum Pressures:
100 PSI Air (7 bar)
100 PSI Fluid (7 bar)

Figure 1



INSTALLATION

Mount gun on a 3/8" dia. rod or with stud (30) and secure in place by set screw (31). See Page 4, "Accessories" for mounting clamp.

Cylinder air and atomization air are from the same source. To prevent tip leakage at the end of spray cycle, all air should be exhausted through the gun. Therefore, the automatic valve should be a two-way or three-way valve. It is recommended that a check valve be installed between the gun and the automatic valve at the automatic valve outlet.

Attach air and material hoses to couplings (29) as indicated by AIR or FLUID markings on the gun body. Air supply should be regulated and filtered.

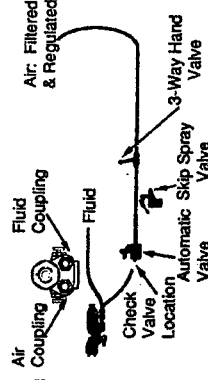


Figure 2

OPERATION

Before operation, place a few drops of SSL-10 spray gun lube (see Accessories) on stem of adjusting valves (6) and through hole in packing gland (15).

Paint Preparation: Mix prepare and strain material to be sprayed according to manufacturer's instructions.

Air Control Valves: To adjust air valve (6), turn clockwise to close, counterclockwise to open. Dot on knob can be used to indicate the amount valves are open for resetting purposes. Valve (6) marked "ATOM" controls the air for material atomization. Spray pattern adjustment from round to full fan is achieved by turning valve (6) marked "FAN" counterclockwise. When both valves are closed, supply air operates cylinder only and can be used for material flow checks.

Material Flow Control: Where possible, control material flow from source (pressure feed tank or pump outlet), and allow gun fluid needle to have its maximum travel. This will give full operational life to fluid tip and needle. If this is not possible, flow can be controlled by turning adjusting screw (28), clockwise to reduce, counter-clockwise to increase until desired flow is obtained.

1. Adjust fluid needle for maximum travel by releasing locknut (27) and turning adjusting screw (28) counterclockwise.

2. Turn "ATOM" valve (6) counterclockwise, open, allowing maximum air to cap.
3. Open valve from material supply.
4. Turn on air at source of supply.

To operate cylinder, a minimum pressure of 60 psi is required at gun. However, pressures used are dependent on pressure required to atomize material, due to the dual use of supply air for atomization and operation of the cylinder.

5. Operate automatic air valve and regulate air pressure, see figure 2, to give proper atomization of material.
6. Adjust spray pattern by turning valve (6) marked "FAN".

PREVENTIVE MAINTENANCE

To Clean: Scrub with stiff brush and solvent. Blow off or wipe with cloth. Never soak gun in solvent as this removes lubricants and destroys "O" ring seals (14 and 17). Air caps and fluid tip may be immersed in solvent to clean. If necessary to clean holes in air caps, use a broom straw or toothpick. Never use a steel wire or hard instrument as this will damage holes and result in distortion of spray pattern.

Lubrication: Occasionally, place a few drops of SSL-10 spray gun lube on stem of valves (6) and through hole in packing gland (15). Remove cylinder end cap (26) and apply coating of light grease to surface of piston (21), piston springs (24 and 25) and "O" rings (14 and 17).

PARTS REPLACEMENT

Fluid Needle Packing (13) and/or "O" rings (14 and 17):

1. Unscrew cylinder end cap (26).
2. Remove piston springs (24 and 25)
3. Withdraw fluid needle by pulling on nut (23).
4. Insert wide bladed screwdriver into slot in packing gland (15) and unscrew.
5. Remove fluid needle packing (13) and/or "O" rings (14 and 17) and replace.

Reassemble, reversing Steps 1 to 4, ensuring that piston (21) and "O" rings (14 and 17) are lightly coated with petroleum jelly prior to assembly and adjust gland (15) to seal and still allow free movement of needle.

Piston Cup (20): Repeat Steps 1, 2 & 3.

6. Remove retaining ring (18), then slide piston spacer (19) and cup (20) over piston (21) and replace.

Reassemble, reversing Steps 1, 2, 3 and 6. See Fig. 3 for correct positioning of retaining ring (18).

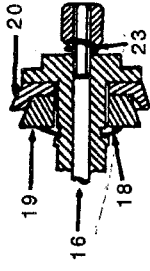
PARTS REPLACEMENT (Continued)

Fluid Needle (16): Repeat Steps 1, 2, & 3.
 7. Unscrew nut (23), remove lock washer (22) and fluid needle (16) from piston (21) and replace.

10 gun lube, ensuring cone of washer (9) is installed facing packing (8).

Reassemble, reversing Steps 9, 10 & 11.

Figure 3 - Note direction of bow on (18).



Air Adjusting Valve Packing (8):

- 9. Remove valve from gun body by unscrewing (7).
- 10. Screw in valve (6) clockwise to relieve spring tension.
- 11. Release retaining ring (12), remove spring (10), washers (9 & 11) and packing (8), replace and lubricate packing (8) with SSL.

Fluid Tip (4) and/or baffle (5):

8. Pull baffle (5) straight out from body, never twist as this may bend the locating pin in gun body and damage baffle. When replacing baffle (5), make certain that it is

SAFETY PRECAUTIONS

This manual contains information that is important for you to know and understand. This information relates to USER SAFETY and PREVENTING EQUIPMENT PROBLEMS. To help you recognize this information, we use the following symbols. Please pay particular attention to these sections.



Important safety information - A hazard that may cause injury or loss of life.



Important information that tells how to prevent damage to equipment.

Note

Information that you should pay special attention to.



The following hazards may occur during the normal use of this equipment. Please read the following chart before using this equipment.

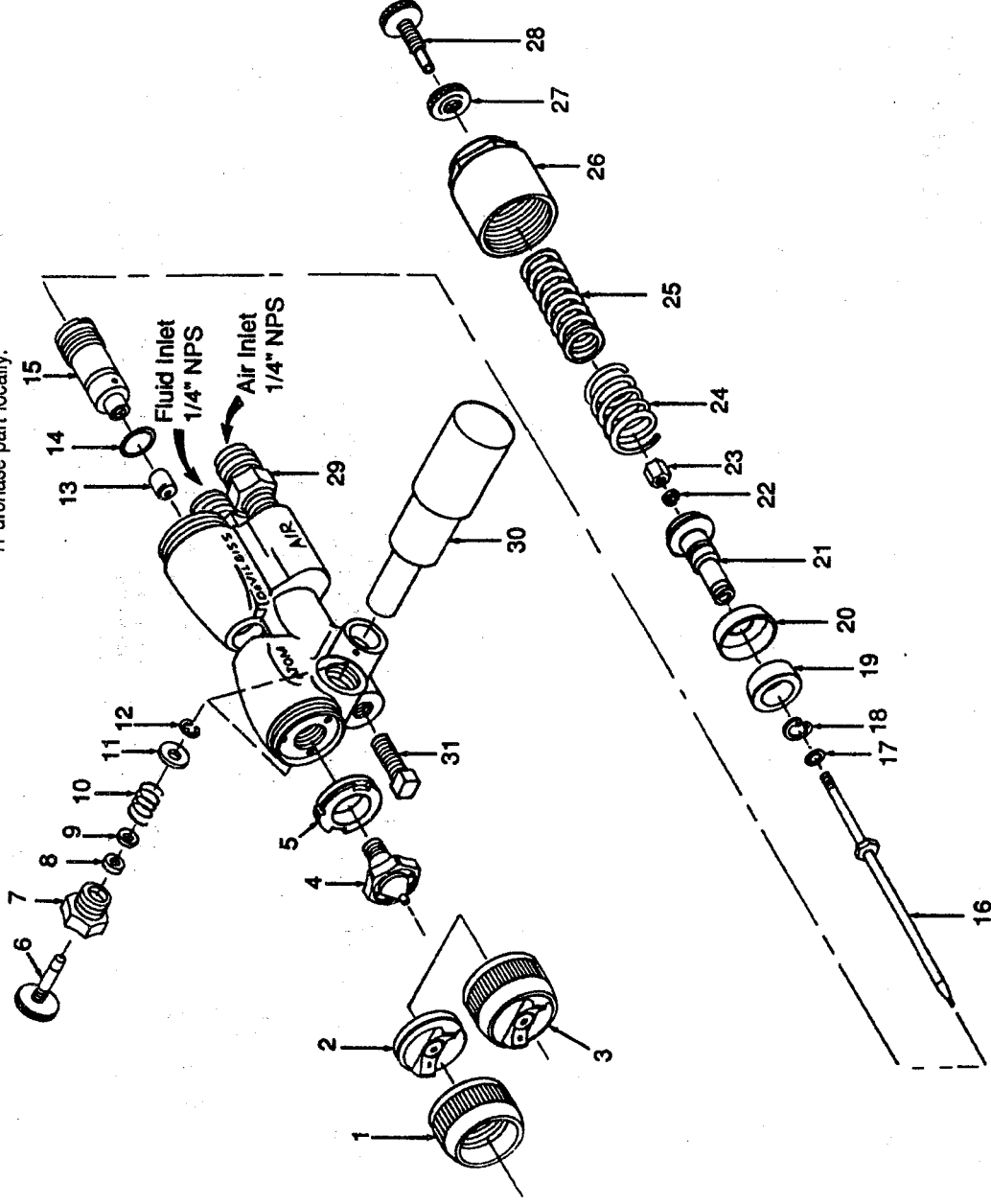
HAZARD	CAUSE	SAFEGUARD
 Fire	Solvent and coatings can be highly flammable or combustible, especially when sprayed.	Adequate exhaust must be provided to keep air free of accumulations of flammable vapors. Smoking must never be allowed in the spray area. Fire extinguishing equipment must be present in the spray area.
 Solvent Spray	During use and cleaning and flushing, solvents can be forcefully expelled from fluid and air passages. Some solvents can cause eye injury.	Wear eye protection.
 Inhaling Toxic Substances	Certain materials may be harmful if inhaled, or if there is contact with the skin.	Follow the requirements of the Material Safety Data Sheet supplied by your coating material manufacturer. Adequate exhaust must be provided to keep the air free of accumulations of toxic materials. Use a mask or respirator whenever there is a chance of inhaling sprayed materials. The mask must be compatible with the material being sprayed and its concentration. Equipment must be as prescribed by an industrial hygienist or safety expert, and be NIOSH approved.
 Explosion Hazard - Incompatible Materials	Halogenated hydrocarbon solvents - for example; methylene chloride and 1, 1, 1 - Trichloroethane can chemically react with aluminum. The chemical reaction caused by these solvents reacting with aluminum can become violent and lead to an equipment explosion.	Read the label or data sheet for the material you intend to spray. 1. Do not use any type of spray coating material containing these solvents. 2. Do not use these solvents for equipment cleaning or flushing. 3. If in doubt as to whether a material is compatible, contact your material supplier.

PARTS LIST



Ref. No.	Part No.	Description	Ind. Parts Req.
1	TGA-31	Retaining Ring	1
2	CV-39-90	Air Cap (Use with fluid tip CV-30-F)	1
3	CV-439-92	Air Cap (Use with fluid tip CV-30-E)	1
4	CV-30-E	Fluid tip	1
5	CV-30-F	Fluid tip	1
6	AGF-5	Baffle	2
7	AGF-7	Air Adjusting Valve	2
8	AGF-8	Valve Body	2
9	AGF-9-K10	Packing (Kit of 10)	2
10	AGF-10-K5	Washer (Kit of 5)	2
11	KN-40-K5	Spring (Kit of 5)	2
12	25746-007-K10	Washer (5/16 flat, brass)	2
13	38273-136-K5	Retaining Ring (Kit of 10)	2
14	23162--024-K10	Fluid Needle Packing (Kit of 5)	1
15	AGF-6	"O" Ring (Kit of 10)	1
		Packing Gland	1

Ref. No.	Part No.	Description	Ind. Parts Req.
16	AGF-404-E	Fluid Needle	1
17*	AGF-404-F	"O" Ring (Kit of 5)	1
18+	MBC-1164-K5	Retaining Ring	1
		5/6" Dia. x .025 thick, Truarc-No. 5101-31	1
19	AGF-19	Piston Spacer	1
20*	VA-246	Cup	1
21	AGF-36	Piston	1
22+		Lockwasher - (No. 4, 1-1/8")	1
		Nut	1
23	AGF-15	Piston Spring (outer)	1
24*	AGF-33	Piston Spring (inner)	1
25	AGF-32	Cylinder End Cap	1
26	AGF-31	Locknut	1
27*	AGF-35	Fld. Needle Adj. Screw	1
28*	AGF-34	Coupling 1/4" NPS	1
29	H-1766	Mounting Stud	2
30	AGF-20	Square Head Screw 1/4 - 20 UNC x 5/8"	1
31+			1




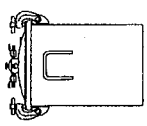
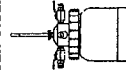
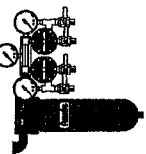
* These parts should be kept on hand for service convenience.
 + Purchase part locally.



TROUBLESHOOTING

Condition	Cause	Correction
 An improper spray pattern	Gun incorrectly adjusted. Material build-up on air cap or fluid tip. Not enough material. Material too thick or too much.	Readjust gun, see Pg. 1 under "Operation". Clean cap/tip, see Pg. 1 under "Preventive Maintenance". Reduce air pressure or increase fluid flow. Thin or reduce material flow.
 Jerky or fluttering spray	Insufficient material in pressure tank or obstruction in hose. Gun material passage obstructed. Worn or dry packing (13), loose gland (15). Damaged or loose fluid tip (4).	Fill tank. Flush hose. Clean. Lubricate, replace or tighten packing, see Pg. 1, "Lubrication". Replace or tighten.
Will not spray	No pressure at gun. Cylinder pressure too low. Fluid adjusting screw (28) not properly adjusted.	Check air and material lines or valves. Increase to 60 psi minimum (at the gun inlet). See Pg. 1 under "Operation".
Fluid leakage from gland (15)	Gland (15) loose. Packing (13) worn or dry.	Tighten, check needle for free movement. Lubricate or replace, see Pg. 1 "Lubrication" or "Parts replacement".
Dripping from fluid tip.	dry packing (13). Sluggish needle (16). Tight packing gland (15). Fluid tip (4) or needle (16) worn. Wrong automatic air valve set up.	See Pg. 1 "Lubrication" See Pg. 1 "Lubrication". Adjust, see Pg. 2 "Parts Replacement". Replace, see Pg. 4 "Parts Replacement". See "Installation", Fig. 2, Pg. 1.
Air leakage from air adjusting valve (6)	Dry packing (8). Worn packing (8).	Luricate. See Pg. 1, "Lubrication". Replace. See Pg. 2, "Parts Replacement".

ACCESSORIES

 AGA-415 Universal Clamp	Attaches to gun stud, clamps onto 3/4" rod, turns to any angle.
 42882-214-K5 42884-215-K10 Cleaning Brushes	These brushes are helpful in cleaning threads and recesses of gun body.
 SSL-10 Gun Lube (2 oz bottle)	Compatible with all paint materials; contains no silicone or petroleum distillates to contaminate paint. M.S.D.S. available upon request.
 QMGZ SolventSaver™ Hose/Gun Cleaner	2 Gal. 8.5 liters) galvanized tank used to clean the inside of hose and material passages of the gun. Available in U.S. only.
 HD-503 SolventSaver™ Hose/Gun Cleaner	2 Qt. (2.1 liters) Hose/Gun Cleaner used to clean the inside of hose, fluid passages of gun & other paint equipment. Available in U.S. only.
 HFRL-511 Filter-Regulator	Use in the line between the source of air supply and the gun for the purpose of extracting dirt and entrained water and oil. Will also enable users to regulate and control atomization air pressure to the gun.

SERVICE BULLETIN REVISIONS

Refer to the following chart for literature/part number changes.

Old Part No.	New Part No.	Interchangeability	Literature Changes
AGF-24 Mounting Stud	AGF-20 Mounting Stud	Directly	

WARRANTY

This product is covered by DeVilbiss's 1 Year Limited Warranty. See SB-1-000 which is available upon request.

WORLDWIDE SALES AND SERVICE - www.devilbiss.com

DeVilbiss has authorized distributors throughout the world. **FOR TECHNICAL ASSISTANCE, CALL TOLL FREE 1-800-338-4448 (U.S.A. & CANADA ONLY). FOR LOCAL CALLS, SEE LISTING BELOW.**

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