



**HVLP AIR CAP AND FLUID NOZZLE CHART**

MODEL NO.	AIR CAPS	Press / Siphon	*MAX GUN INLET PRESS. FOR HVLP	FAN CONTROL ORIFICE	SCFM @ MAX GUN INLET	AIR CAP RING	AVAILABLE FLUID NOZZLES TIPS	NEEDLES / marking on needle
A300H	23-1008	pressure	40**	60-617	13.5	Included	33-0208 0.8mm (.022")	40-A308 (308)
	23-1010	pressure	40**		13.5		33-0210 1.0mm (.040")	40-A310 (310)
	23-1012	pressure	40**		13.5		33-0212 1.2mm (.046")	40-A312 (312)
	23-1013	pressure	40**		13.5		33-0213 1.3mm (.052")	40-A313 (313)
	23-1014	pressure	40**		13.5		33-0214 1.4mm (.055")	40-A314 (314)
	23-1015	pressure	40**		13.5		33-0215 1.5mm (.059")	40-A315 (315)
	23-1017	pressure	40**		13.5		33-0217 1.7mm (.070")	40-A317 (317)
	23-1019	pressure	40**		13.5		33-0219 1.9mm (.075")	40-A319 (319)
	23-1022	pressure	40**		13.5		33-0222 2.2mm (.086")	40-A322 (322)

Actual fluid nozzle and air cap combinations are determined by application (see application chart page 4)

\*Note: Air cap test gages are available to confirm HVLP compliance.

\*Gun inlet pressures may vary as required by application

\*\*When using optional gun regulator, inlet pressure changes to 45psi



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# Operation and Maintenance Instructions for *A300H* Spray Guns

## Gun Mounting

A 1/2" dia. x 5" lg. rod is provided for mounting. The gun can be mounted from the left or right side or from the bottom. Thread the mounting rod (9) into one of the three holes that best suit the mounting location for the application. Tighten the locknut (10) to secure the gun in the position desired. Do not plug the remaining holes as they are used as drain holes in the event of a needle seal leak.

## Operation: Connections and Adjustments

The automatic gun requires two separate regulated air supply lines.

1. Connect one air line to the fitting marked "CYL", this actuates the gun on and off and is usually connected through an air solenoid.
2. Connect the second air line to the fitting marked "ATM", this provides atomizing and fan air.
3. Connect a pressurized fluid supply to the gun fluid inlet.
4. Fluid flow can be controlled using the fluid control knob, this restricts flow by limiting needle travel. It is best to control fluid flow by proper selection of fluid orifice size and use the fluid control knob to "fine tune flow rate".
5. Fan width can be adjusted using the fan control knob. Turning the knob clockwise narrows the fan.

## Maintenance: Needle Seal Replacement

IMPORTANT! Routine cleaning and maintenance is essential to insure proper gun operation.

Before beginning needle seal replacement, it is recommended kit no. 10-107 be on hand.

Several states prohibit spraying solvent into the atmosphere and require the use of covered gun cleaner.

1. Remove fluid control knob (36), needle return spring (34), and needle assembly (33).
2. Remove end cap (32) and piston return spring (31).
3. Piston (29) can be removed with pliers by carefully gripping the hub on the rear of the piston.
4. Remove the air control spool (22) using an 11/16" socket to unscrew it from the body.
5. The needle seal can be removed using a 7/16" socket with a short extension. Install a new needle seal and torque to approx. 2 ft.-lbs.
6. It is recommended that the o-rings on the air control spool (22) and piston (29) be replaced and lubricated before reassembling the gun.

**NOTE: Gun head disassembly is not recommended for normal cleaning and maintenance.**

## Gun head disassembly and reassembly instructions:

Have repair kit # 10-107 available before gun disassembly.

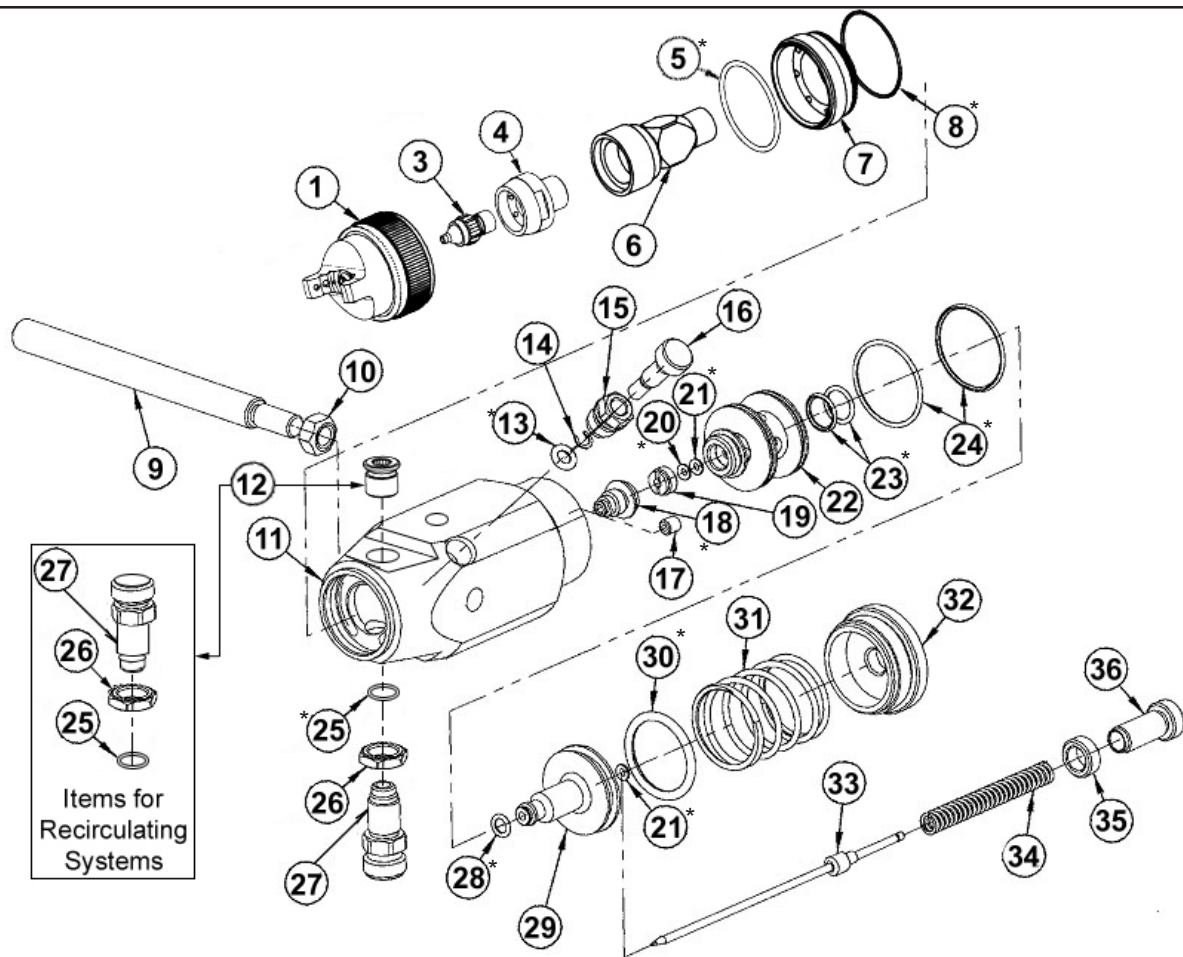
### Gun head disassembly

To remove the nozzle carrier (6) and air cap adapter (7):

1. Remove the air cap (1), fluid nozzle tip (3), fluid nozzle body (4), and needle (33).
2. Remove the needle seal cartridge (18) as described above.
3. Loosen the locknut (26) using 11/16" wrench and remove fluid inlet (27) using a 5/8" open-end wrench.
4. The nozzle carrier (6) and air cap adapter (7) will now slide forward from the gun body (11).

### Gun head reassembly

1. Install a new o-rings (5 & 8) on the air cap adapter (7).
2. Install the thread locknut (26) onto the fluid inlet (27) as far as possible.
3. Install a new fluid inlet seal (25) into the recess area on the nozzle carrier (6) inlet port.
4. Slide the nozzle carrier (6) into air cap adapter (7) and insert into the gun body (11) as far as possible. Be sure the nozzle carrier (6) extends into the hole at the back of the gun head. Install the needle seal (18) but do not tighten.
5. Rotate the nozzle carrier (6) until the fluid inlet port in the nozzle carrier (6) is aligned with the threaded hole in the body. While in this position, insert the fluid inlet (27) and tighten firmly.
6. Tighten the needle seal (18) to approx. 12 ft.-lb. torque.
7. Tighten the fluid inlet (27) to approx. 25 ft.-lb. torque.
8. Tighten the locknut (26) to approx. 33 ft.-lb. torque.



ITEM NO.	PART NO.	DESCRIPTION	ITEM NO.	PART NO.	DESCRIPTION
1	See Air Cap Chart	Air Cap**	20	98-8006	O-Ring (Teflon)*
3	See Air Cap Chart	Fluid Tip**	21	98-7006	O-Ring (Viton) 2 Required*
4	33-1201	Fluid Nozzle Body	22	60-603	Air Control Spool
5	98-8026	O-Ring (Teflon)*	23	98-7014	O-Ring (Viton) 2 Required*
6	60-L31H	Nozzle Body Carrier (Standard)	24	98-7027	O-Ring (Viton) 2 Required*
	60-A31H-R	Nozzle Body Carrier (Recirculating)	25	60-124	Seal*
7	60-34H	Air Cap Adapter	26	60-128	Locknut
8	60-131	O-Ring (Teflon)*	27	60-126	Fluid Inlet
9	60-614	Mounting Rod	28	98-8010	O-Ring (Teflon)*
10	98-0115	Locknut (3/8-16)	29	60-602	Piston
11	60-621	AutoCAT Gun Body HVLP	30	98-7217	O-Ring (Viton)*
12	60-136	Plug	31	66-246	Piston Return Spring
13	98-8108	O-Ring (Teflon)*	32	60-601	End Cap
14	98-0108	Circlip	33	See Air Cap Chart	Needle Assembly
15	60-605	Fan Control Housing	34	60-613	Needle Return Spring
16	60-606	Fan Control Stem	35	60-612	Locknut - Fluid Control Knob
17	See Air Cap Chart	Fan Control Orifice**	36	60-608	Fluid Control Knob
18	60-1400	Needle Seal Assembly*	37	53-551 (Not Show n)***	Cylinder Air Fitting 1/8 NPT x 1/4 NPS
19	60-604	Seal Cap	38	53-552 (Not Show n)***	Atomz. Air Fitting 1/4 NPT x 1/4 NPT

\*Indicates part included in repair kit # 10-107

\*\*See air cap selection chart on page 1

\*\*\*Air inlet fittings are available in 90 degree elbow . 90 degree elbow tubing "push on" style fittings

P/N 53-520 1/8 NPT x 1/4" OD Tube

P/N 53-521 1/4 NPT x 3/8" OD Tube

Recirculating setups require: Item 6 (recirculating) & items 25, 26, 27 in place of item 12

# FLUID NOZZLE / AIR CAP SELECTION CHARTS

## AUTOCAT Series 300H - Pressure Feed Guns

### A300H HVLP AUTOMATIC SPRAY GUN

MATERIAL TYPE	FLUID ORIFICE x AIR CAP	MAXIMUM PATTERN WIDTH	PRESS. / SIPHON
<b>Very Thin</b> less than 16 sec. Zahn #2 inks , dyes, solvents, stains	1.0 mm x 1010	12	P
<b>Thin</b> 16 to 20 sec. Zahn #2 lacquers, enamels, primers, sealers	1.0 mm x 1010 1.3 mm x 1013	12 12	P P
<b>Medium</b> 21 to 30 sec. Zahn #2 automotive base coat enamels, primers epoxies, urethanes automotive clear coat	1.3 mm x 1013 1.5 mm x 1015 1.7 mm x 1017	12 12 12	P P P
<b>Heavy</b> over 30 sec. Zahn #2 heavy body primers high solid enamels high solid automotive coatings adhesives	1.5 mm x 1015 1.7 mm x 1017 1.9 mm x 1019 2.2 mm x 1022	12 12 12 12	P P P P