



# A-JU

## Automatic Spray Gun

### OPERATING INSTRUCTIONS AND REPLACEMENT PARTS

#### DESCRIPTION:

The A-JU- Automatic Spray Gun, is a compact air actuated production spray gun, ideal for operation in close quarters. It will spray a wide range of modern materials. 1/4 to 3 C.F.M. @ 45 P.S.I. required. **When using Extensions, material must be pressure fed for proper application.**

#### CONNECTIONS:

Connections to the gun are: Air Inlet 1/4" N.P.T. (M) and Fluid Inlet 1/4" N.P.T. (M). A-JU Automatic Spray Gun dimensions are: 4-1/2" (L) x 1-3/16" (D)

#### PACKING WASHERS:

Standard washers are leather and treated in oil. For PTFE Packings see parts list, Page 3.

#### OPERATION:

1. Mount Gun in desired position.
2. Before installing, blow out air hoses with compressed air to remove foreign particles.
3. Connect hose from air supply to air inlet.
4. Connect fluid hose to fluid inlet.
5. Tighten all hose connections securely.
6. Adjust air pressure to required P.S.I. at the Air Regulator.
7. Adjust fluid volume by turning the U-1460 Fluid Adjusting Nut to the left or right.

**NOTE: DO NOT USE U-1460 FLUID ADJUSTING NUT AS A SHUT-OFF BY TURNING ALL THE WAY DOWN - IT MAY SPLIT THE TIP.**

8. For **AU-7DA** Fluid Body adjust air volume by turning U-166A Needle Valve screw to the left or right.

#### TIP REMOVAL:

1. Turn off Air and Fluid Pressure.
2. Release Needle pressure from the seat of Tip, by backing

**WARNING:** Spray materials may be harmful if inhaled or allowed to come into contact with the skin or eyes. Consult the product label and Material Safety Data Sheet supplied for the spray material. Follow all safety precautions.  
**CAUTION:** Well Ventilated Area Required to remove fumes, dust or overspray. Secure airhose and fluid hose wrench tight for safety and to prevent leaks.  
**Maximum Air Pressure 100 P.S.I.**  
**Maximum Fluid Pressure 45 P.S.I.**

off the U-1460 Fluid Adjusting Nut approximately 5 turns, then taking off U-3047 Rear Cap Assembly.

3. Loosen AU-12 Aircap Nut and remove Multiplehead Assembly. **Leave Needle in place.**
4. Unscrew AU-Tip. Place New AU-Tip in position.
5. To replace reverse above procedure.

#### MAINTENANCE:

Requirements of the A-JU- Automatic Spray Gun have been reduced to a minimum. The leather packing washers should be lubricated once a month with a light oil. Old Packing Washers cause leakage of Air or Fluid. PTFE Packings are self-lubricating.

#### CLEANING:

Flush clean solvent through the Fluid passages of the Spray Gun and Wipe off the outside with clean solvent. Never leave the entire Spray Gun immersed in solvent. Dirty Aircaps and Tips should be cleaned by soaking in solvent and blown clean with air.

**NOTE:** Never use wire or sharp instruments to clean Fan Ports as permanent damage to the Air Ports will result in destroying uniformity of the fan pattern!

#### MATERIAL & NEEDLE SETTING:

Material should be mixed to consistency recommended by manufacturer and should always be strained through a lint free cloth or fine mesh strainer before using.

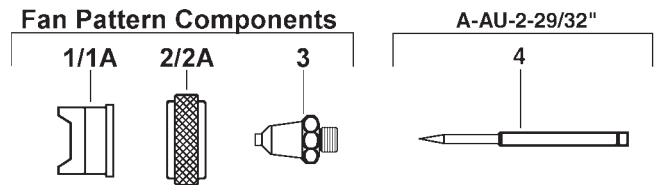
Item U-3060 Piston Assembly has a needle chuck which locks the needle in position. The single groove on the shank of the needle indicates location at which to lock the piston. Lock piston slightly below mark for use with very light fluids and slightly above mark (nearer blunt end) for heavier materials.

Spray Heads for the A-JU- Automatic Spray Guns are available in several different styles, some of which are available with Stainless Steel components. The C.F.M. requirements range from .25 to 3 C.F.M. @ 30 lbs. air pressure. NOTE: When either fluid Tip or fluid Needle is worn and requires replacement, it is recommended that both items be changed for best results. All Tips and Needles are made using 303 Stainless Steel. Carbide Tips and Needles are available for use with abrasive materials.

- **Sizes:** 000,/0, 1, 2 or 3
- **Application:** Apply materials in small or confined areas.
- **Fluid Viscosity:** Thin to Medium
- **Atomization:** External

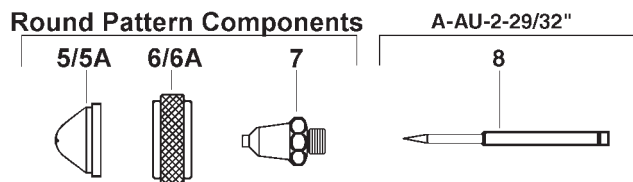
#### EXTERNAL - FAN PATTERN

1. **ANFA-** Fan Aircap (Select Size above)
- 1A. **ANFAS-** Stainless Fan Aircap (Select Size)
2. **AU-12** Aircap Nut
- 2A. **AUS-12** Stainless Aircap Nut (Optional)
3. **AU-** Stainless Tip (match aircap size)
4. **A-AU-2-29/32** Stainless Needle



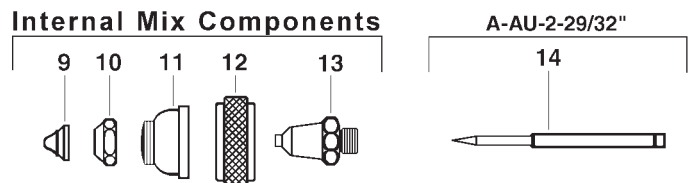
#### INTERNAL - ROUND PATTERN

5. **AR-15-** Round Aircap (Select Size above)
- 5A. **ARS-15-** Stainless Round Aircap (Select Size)
6. **AU-12** Aircap Nut
- 6A. **AUS-12** Stainless Aircap Nut (Optional)
7. **AU-** Stainless Tip (match aircap size)
8. **A-AU-2-29/32** Stainless Needle



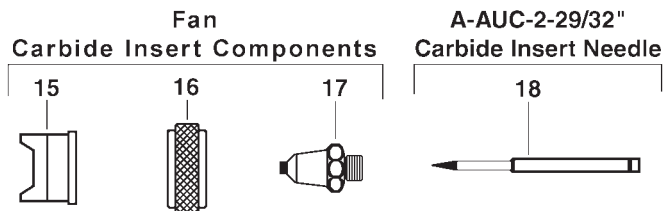
#### INTERNAL MIX- FAN PATTERN

- **Size:** 1 only
  - **Application:** Broad Coverage
  - **Fluid Viscosity:** Light
  - **Fluid Pressure:** Fluid pressure must be 5 to 10 P.S.I. lower than air atomizing pressure.
9. **ASC-1** Slotted Cap
  10. **AU-6** Aircap Nut
  11. **ARA-1** Aircap
  12. **AU-12** Aircap Nut
  13. **AU-1** Stainless Tip
  14. **A-AU-2-29/32** Stainless Needle



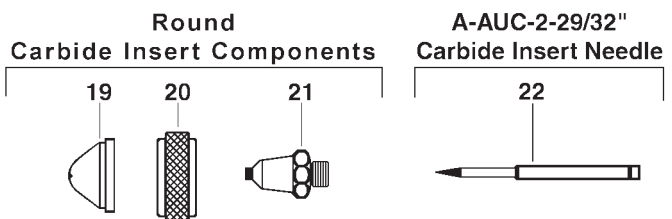
#### CARBIDE INSERT- FAN PATTERN

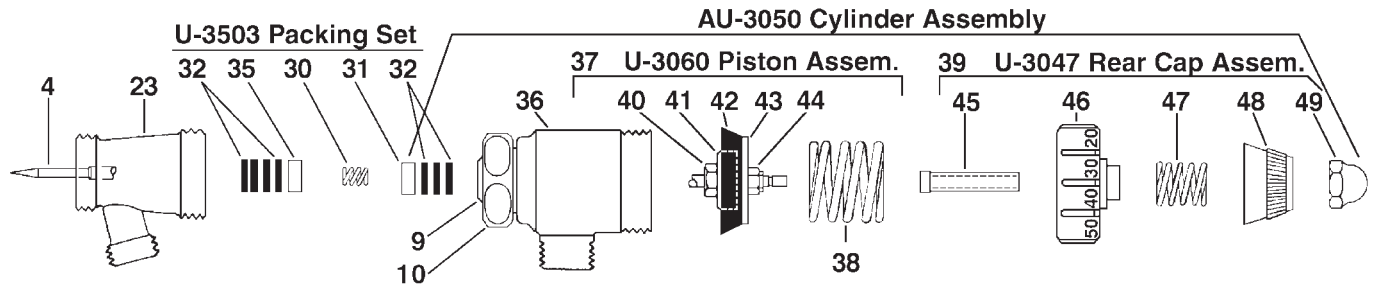
- **Size:** 4 only
  - **Application:** Gritty, Abrasive Material
  - **Fluid Viscosity:** Light Abrasives
15. **ANFAC-4** Fan Aircap (for Carbide Tip)
  16. **AU-12** Air Cap Nut
  17. **AUC-4** Carbide Insert Stainless Body Tip
  18. **A-AUC-2-29/32** Carbide Insert Stainless Needle



#### CARBIDE INSERT- ROUND PATTERN

- **Size:** 4 only
  - **Application:** Gritty, Abrasive Material
  - **Fluid Viscosity:** Light Abrasives
19. **ACR-15-4** Aircap (for Carbide Tip)
  20. **AU-12** Aircap Nut
  21. **AUC-4** Carbide Insert Stainless Body Tip
  22. **A-AUC-2-29/32** Carbide Insert Stainless Needle





**U-3503 Packing Set**

- 32. **U-28-12** Packing Washers (1 Dozen/12)
- 35. **U-29** Gland
- 30. **DU-30** St. St. Spring
- 31. **U-203** Gland
- 41. **U-3058** Piston Leather

**AU-3050 Cylinder Assembly**

- 36. **U-3045** Cylinder Shell
- 9. **U-3632** Small "O" Ring
- 10. **U-3633** Large "O" Ring
- 37. **U-3060** Piston Assembly
- 38. **U-3049** St. St. Piston Spring
- 39. **U-3047** Rear Cap Assembly
- 4. **A-AU-2-29/32** St. St. Needle
- 31. **U-203** Packing Gland
- 32. **U-28-12** Packing Washers (1 Dozen/12) (3 Required)

**U-3060 Piston Assembly (Included w/AU-3050)**

- 40. **U-3056** Needle Chuck
- 41. **U-3057** Inner Bushing
- 42. **U-3058** Piston Leather
- 43. **U-3059** Disc
- 44. **U-3061** Locknut

**U-3047 Rear Cap Assembly (Included w/AU-3050)**

- 45. **U-1458** St. St. Needle Stop
- 46. **U-3048** Cap
- 47. **U-3352** St. St. Spring
- 48. **U-1460** Adjusting Nut
- 49. **U-1495** Locknut

**59-30 Set Automatic PTFE Needle Packings**

- 50. **59-24** 1/8" PTFE Packings (4)
- 51. **U-3353** Packing Follower (2)
- 52. **59-25B** 1/8" Expanders (2)
- 30. **DU-30** St. St. Spring

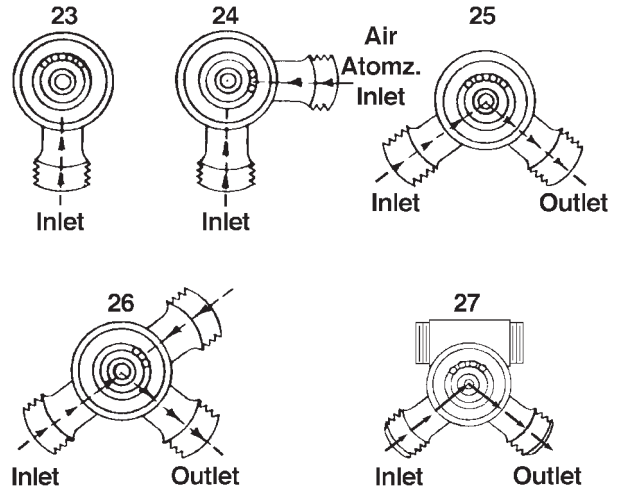
**U-3209 PTFE Piston Assembly (Items 53 thru 55 Only)**

- 53. **U-3207** Aluminum Piston
- 54. **U-3208** PTFE Piston Rings (2)
- 55. **U-3206** St. St. Expander Spring
- 40. **U-3056** Needle Chuck (Sold Separately)
- 44. **U-3061** Locknut (Sold Separately)

**Independent Atomizing Needle Valve Body Assembly**  
• (Also in Stainless Steel)

- 28. **U-166A** Needle Valve
- 29. **U-167** Nut
- 30. **DU-30** St. St. Spring
- 31. **U-203** Gland (2)
- 32. **U-28-12** Packing Washers (1 Doz.) (2 Required)
- 33. **AU-7DA** Fluid Body
- 34. **AUS-7DA** St. St. Fluid Body
- 34. **U-551** Cap Nut

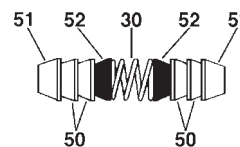
**A. Fluid Bodies**



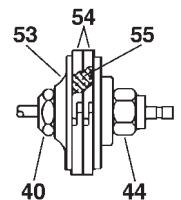
**AU- Fluid Bodies**

- 23. **AU-7B** Standard
- AUS-7B** Standard Stainless Steel
- 24. **AUA-7B** Independent Atomizing
- AUSA-7B** Independent Atomizing Stainless Steel
- 25. **AUG-7B** Circulating Fluid
- AUSG-7B** Circulating Fluid Stainless Steel
- 26. **AUAG-7B** Circulating Fluid Separate Atomizing
- 27. **AUG-7DA** Circulating Fluid Body for Needle Valve
- AUSG-7DA** Circulating Fluid Body Stainless Steel for Needle Valve

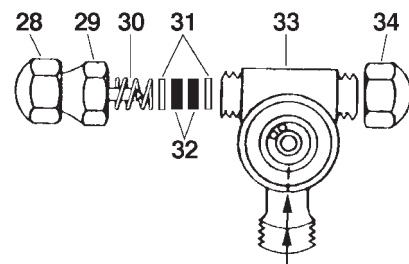
**59-30 PTFE Needle Packings**



**U-3209 PTFE Piston Assembly**



**Independent Atomizing Needle Valve Body**



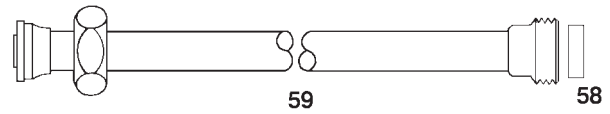
**Accessories for A-JU Automatic Spray Gun**

- 56. **AEN-45** 45° Elbow
- 57. **AEN-90** 90° Elbow
- 58. **AN** Nylon Washer



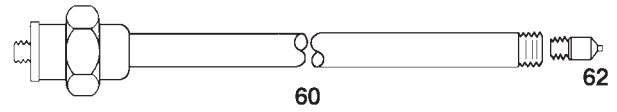
**AE- Extensions (ANF- and AR- Heads only)**

- Length Sizes: -3, -6, -12, -18, -24
- 59. **AE-** Extension L/Needle (Select Size)



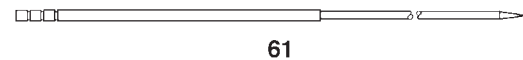
**AX- Stainless Steel Extensions (AX- Aircaps only)**

- Length Sizes: -3, -6, -12, -18, -24, -36, -48
- 60. **AX-** St. St. Extension L/Needle (Select Size)



**A-AJ- Extension Needles (AE- & AX- Extensions)**

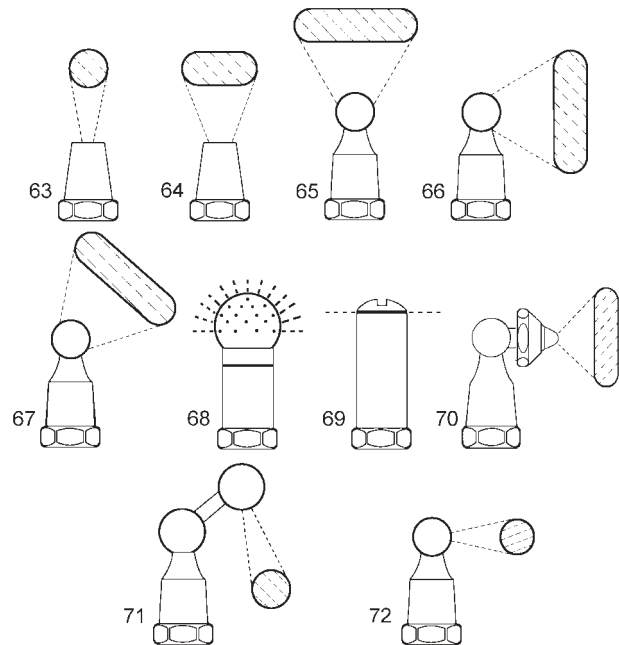
- Length Sizes: -3, -6, -12, -18, -24, -36, -48
- 61. **A-AJ-** St. St. Extension Needle (Select Size)



→ All AX Aircaps must use a Pressure Feed Cup or Pressure Tank to feed material being sprayed. Always adjust atomizing air pressure higher than fluid air pressure.

**AX- Style Tips and Aircaps (AX- Extensions Only)**

- 62. **AX-1** Tip
- 63. **AXR** Aircap External Round Pattern
- 64. **AXF** Aircap External Fan Pattern
- 65. **AXIF** Aircap Internal Fan Pattern
- 66. **AXIF-90** Aircap Internal Fan Pattern
- 67. **AXIF-45** Aircap Internal Fan Pattern
- 68. **AXIB** Aircap Spherical Pattern
- 69. **AXI-360** Aircap Radial Pattern
- 70. **AXIF-90A** Aircap Internal Fan Pattern
- 71. **AXIR-15** Aircap Internal Round Pattern
- 72. **AXIR-90** Aircap Internal Round Pattern



**TROUBLE SHOOTING SPRAY PATTERNS:**

- (A) **A ROUGH OR STIPPLE FINISH** is due to low or restricted flow of air pressure or too heavy materials being applied with spray gun too close to surface.
- (B) **A WET OR SAGGING FINISH** is due to low air pressure or restricted flow of air, material being too thin, applied too close to the surface.
- (C) **A SPATTERING SPRAY** is caused by air leaking into fluid line or can be caused by a loose fluid tip, a broken or split tip, lumpy material, a clogged vent hole in cover of material cup, air leak at fluid pipe attached to inside of tank cover, or a clogged paint strainer.  
**TO CORRECT:** Tighten tip securely or replace. Strain materials and clean strainer. Spattering might also be caused by worn packing washers, or worn or scored needle.
- (D) **AN ARCHED FAN SPRAY PATTERN** is caused by dried material accumulated in one fan port of the multiplehead distorting the pattern.  
**TO CORRECT:** Dissolve material inside fan port with suitable solvent applied with a small brush.

**NOTE: Never use wire or sharp instruments to clean fan ports as permanent damage to the air ports will result in destroying uniformity of the fan pattern.**

- (E) **UNBALANCED FAN SPRAY PATTERN**, heavy on one side, may be caused by material collecting around outside of the fluid tip and aircap, or by a loose aircap.  
**TO CORRECT:** Remove aircap and clean fluid tip and aircap with solvent, dry with air pressure. Always be sure fan aircap and aircap body is tightened securely.
- (F) **A HEAVY CENTER** in a fan pattern is caused by insufficient air pressure at the fan port. Rough or shady edges are also caused by low air pressure.  
**TO CORRECT:** Increase air line pressure.
- (G) **A SPLIT FAN SPRAY PATTERN** heavy on each end and light in the center, is caused by excessive air pressure.  
**TO CORRECT:** Reduce air pressure.

Trouble Shooting Spray Patterns

