

# OPERATOR'S MANUAL

# 651511-X

INCLUDING: SERVICE KITS, TROUBLESHOOTING, PARTS LIST,  
DISASSEMBLY & REASSEMBLY.

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REVISED: 10-7-13  
(REV. E)

## AUTOMATIC DISPENSING VALVE 651511-X



**READ THIS MANUAL CAREFULLY BEFORE INSTALLING,  
OPERATING OR SERVICING THIS EQUIPMENT.**

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.

### 651511 EXTRUSION

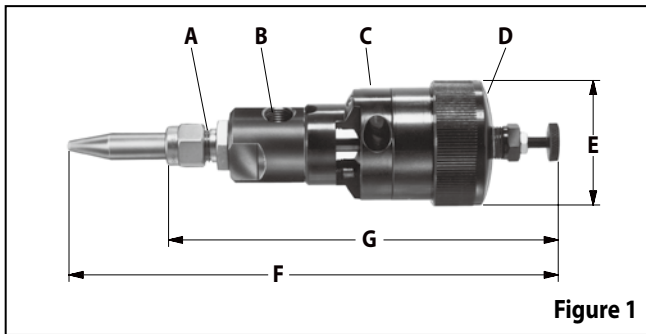


Figure 1

### 651511-1 AIRLESS SPRAY

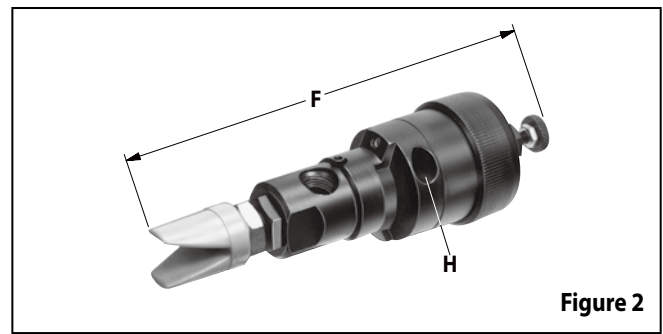


Figure 2

### GENERAL DESCRIPTION

651511 Extrusion  
651511-1 Airless Spray

Automatic Valve with the following features.

- The ball and valve seat are made of tungsten carbide for maximum resistance to erosion and wear.
- The (3) 90565 packings are made of PTFE for maximum wear and resistance to solvents.
- This unit has a 2" diameter air cylinder. The 72842 piston is made of Buna "N".
- It has a 1/2" mounting hole.
- Both air inlets are 1/8 - 27 NPTF (female).
- Air operated opening and closing.

### OPERATING INSTRUCTIONS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- HEED ALL WARNINGS.

**⚠ WARNING** HIGH PRESSURE DEVICE. Improper usage of this equipment could result in serious injury. The possibility of injection into the flesh is a potential hazard. Never allow any part of the human body to come in front of, or in direct contact with, the material outlet. An injection injury can be serious. If injection should occur, contact a qualified physician for immediate treatment of such injuries.

- **SERVICING.** Before servicing or removing fluid hose or valve from a unit that has been used, be sure to disconnect air lines and carefully bleed pressure off of the system.
- **PREVENT FIRES.** When pumping, flushing or recirculating volatile solvents, the area must be adequately ventilated.
- Keep solvents away from heat, sparks and open flames. Keep containers closed when not in use.

**⚠ CAUTION** The maximum working pressure for the automatic dispensing valve assembly is 5000 p.s.i. (345 bar).

### SPECIFICATION DATA

#### REF.

- A - Material Outlet 11/16" - 16 UN-2A
- B - Material Inlet (2) 3/8" PTF
- C - Air Inlet 1/8" NPTF (Return or "Closing")
- D - Air Inlet 1/8" NPTF (Actuating)
- E - Width Dia. 2-1/2" (63.5 mm)
- F - Overall Length Approx. 8.937" (227 mm)
- G - Body Length Approx. 7-1/2" (190 mm)
- H - Mounting Hole 1/2" dia.

### MAINTENANCE

With proper care, this unit will give long reliable service. To maintain this performance, it should be "flushed thoroughly" with solvent immediately following each application period if equipment is to be idle for a long period of time.

- If material leakage occurs between valve housing (25) and body (19), check gasket (24).
- If material leakage occurs at orifice of gun, check ball and ball seat for dirt or foreign substance. Inspect ball and ball seat (23).
- If material leakage occurs around piston rod (21) in opening of air cylinder head (13) check tightness of retainer (15) or worn packings (17).
- If air leakage occurs around the air cylinder, check for damaged or worn "O" rings. (Indicated on the drawing (12), (11), and (4)).

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# ARO

**IR** Ingersoll Rand  
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## PARTS LIST / 651511-X

Item	Description (size)	Qty	Part No.
1	"O" Ring (1/16" x 5/16" o.d.)	(1)	Y325-8
2	Adjusting Screw (includes item 1)	(1)	65958
3	Cap	(1)	90995
4	"O" Ring (3/32" x 2-5/16" o.d.)	(1)	Y325-138
5	Piston Retainer	(1)	90555
6	Piston Washer	(1)	90586
7	Air Cylinder	(1)	90556
8	Piston	(1)	72842
9	Piston Washer	(1)	90559
10	Retaining Screw	(1)	90562
11	"O" Ring (1/16" x 3/8" o.d.)	(1)	Y325-10
12	"O" Ring (3/32" x 2-1/16" o.d.)	(1)	Y325-134
13	Air Cylinder	(1)	90994
14	Set Screw (1/4" - 20 x 5/16")	(1)	Y29-43-C
15	Retainer	(1)	79255
16	Washer	(1)	F174-9
17	Packing	(3)	90565
18	Washer	(1)	F15-64
19	Spray Gun Body	(1)	92332
20	Screw (#8 - 36 x 1/4")	(1)	Y191-82
21	Piston Rod	(1)	90732
22	Roll Pin (1/8" o.d. x 7/16")	(1)	Y178-36
23	Ball and Socket Assembly	(1)	65774
24	Washer	(1)	72851
25	Valve Seat Assembly	(1)	65853
26	Washer	(1)	75815

### DISASSEMBLY / REASSEMBLY

If it becomes necessary to disassemble this unit, proceed in the following manner:

1. Place gun in vise, holding at air cylinder head (13).
2. Unscrew screw assembly (2).
3. Unscrew cap (3).
4. Unscrew valve housing assembly (25).
5. The ball and socket assembly (23) will now be exposed. By putting a wrench on the flats of the ball and socket (23) and on the hex of the piston retainer (5), you can unscrew the piston retainer (5).
6. Remove piston washer (6), piston (8) and piston washer (9).
7. Push piston rod forward (towards spray tip end of gun), this will remove the piston rod (21), roll pin (22) and ball and socket (23).
8. Unscrew retaining screw (10) from air cylinder head (13) and check "O" ring (11).
9. Unscrew set screw (20) from spray gun body (19).
10. Unscrew spray gun body (19) from air cylinder head (13), this will allow you to unscrew retainer (15) from spray gun body (19) and inspect washer (16), packings (17) and washer (18).
11. Reverse above procedure for assembly.

#### SPRAY - FOR MODEL 651511-1

Spray Tip (Must be ordered separately by customer. See tip chart for desired size).

TIP NO.	ORIFICE	PATTERN WIDTH
TC-1850	0.018"	10"
TC-2140	0.021"	8.5"
TC-2150	0.021"	11.5"
TC-2640	0.026"	9"
TC-2650	0.026"	12"

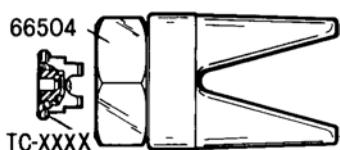


Figure 4

Included but not shown  
93140 wrench.

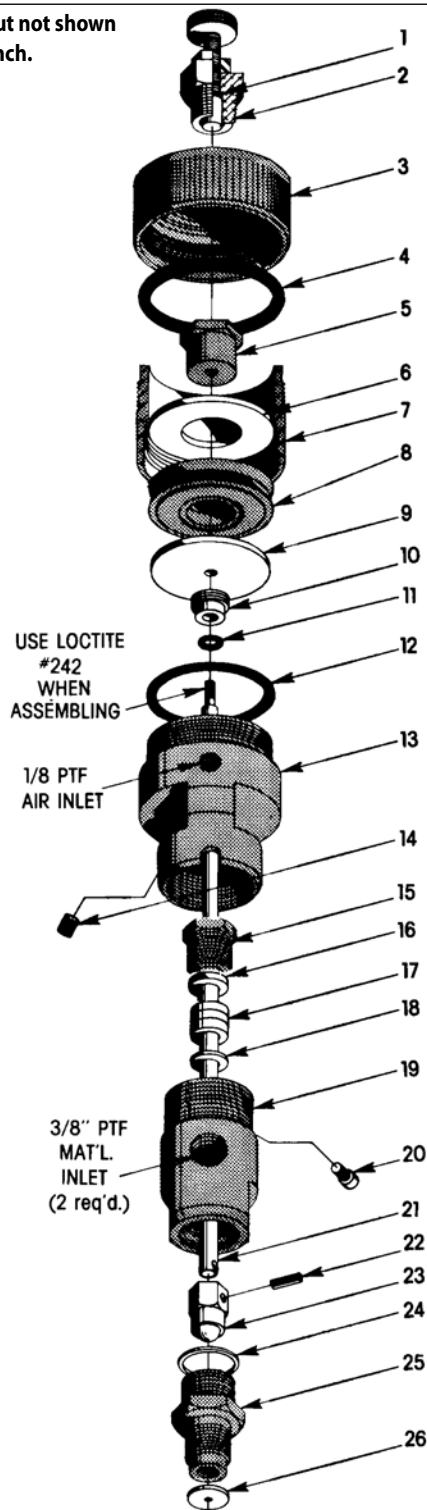


Figure 3

#### EXTRUSION - FOR MODEL 651511

Extrusion Nozzle and Retaining Nut Assembly. (Not included and must be ordered separately)

TIP NO.	ORIFICE DIA.
66541-03	0.031"
66541-04	0.046"
66541-06	0.063"
66541-09	0.093"
66541-12	0.125"
66541-15	0.156"
66541-17	0.172"
66541-18	0.187"
66541-25	0.250"
66541-37	0.375"

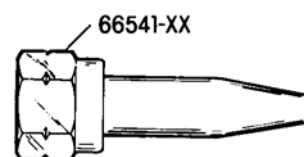


Figure 5

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