

# **Versa-Spray<sup>®</sup> Purge Adapter Kits**

## **Description**

Use a Nordson Versa-Spray purge adapter to remove powder buildup from an automatic or manual spray gun powder path. Three purge adapter kits are available for

- automatic powder spray guns
- manual powder spray guns used to apply non-metallic powders
- manual powder spray guns used to apply metallic powders

An optional low-flow inlet adapter is available for spray guns equipped with low-flow powder tubing.

### ***Automatic Purge Adapter Kit***

The Versa-Spray purge adapter plugs directly into the powder inlet body on an automatic powder spray gun. Both the purge air supply and triggering device are customer supplied.

### ***Manual Purge Adapter Kits***

The manual purge adapter kits contain a purge air control panel, purge adapter, and other hardware.

**NOTE:** Before selecting a manual purge adapter kit, consult the Material Safety Data Sheet (MSDS) for the coatings you are using, or the manufacturer, for information on the concentration of conductive materials in the coatings.

- Use the non-metallic powder manual purge adapter kit with powder coatings that contain less than 5 percent conductive materials.
- Use the metallic powder manual purge adapter kit with powder coatings that contain 5 percent or more conductive materials.

## Installation



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

### *Automatic Spray Gun Kit Installation*

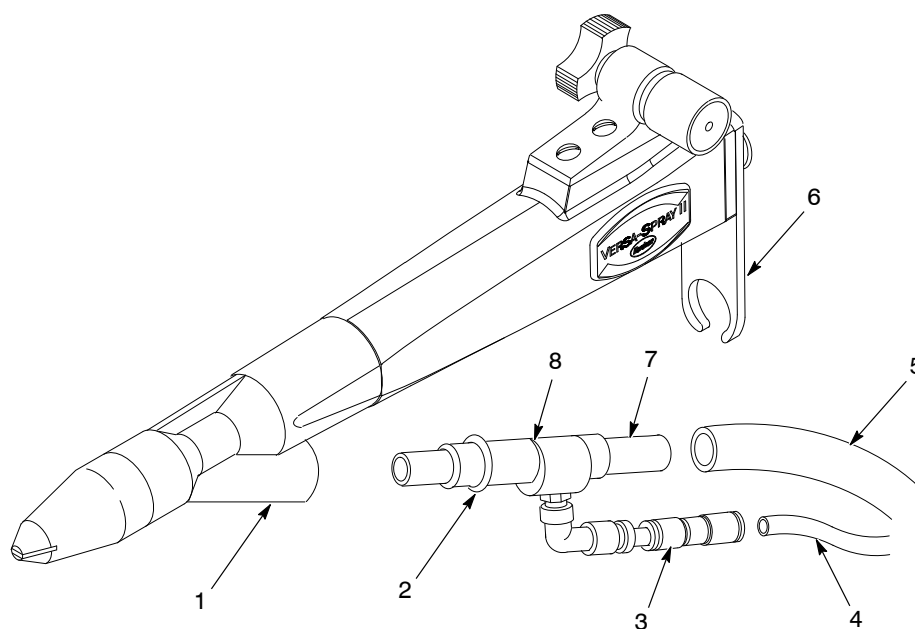
The purge air supply tubing and the air control components are customer supplied. Maximum supply air pressure must not exceed 7 bar (100 psi).

See Figure 1.

1. Remove the old inlet connector from the powder inlet body (1).
2. If low-flow powder feed hose is used, replace the purge adapter inlet adapter (7) with a low-flow inlet adapter.
3. Insert the purge adapter (8) into the powder inlet body.

**NOTE:** The O-ring (2) on the purge adapter body must face the powder inlet body. If it is installed incorrectly, the purge adapter will not function correctly.

4. Connect the powder feed hose (5) to the purge adapter's inlet adapter. Pinch the feed hose and slide it into the hose bracket (6).
5. Connect 6-mm air tubing (4) to the purge adapter check valve (3). Connect the tubing to the air supply with a 6-mm non-conductive tube fitting.



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Figure 1 Automatic Gun Purge Adapter Installation

- |                      |                     |                  |
|----------------------|---------------------|------------------|
| 1. Powder inlet body | 4. 6-mm Air tubing  | 7. Inlet adapter |
| 2. O-ring            | 5. Powder feed hose | 8. Purge adapter |
| 3. Check valve       | 6. Hose bracket     |                  |

## ***Manual Spray Gun Kit Installation***

Both manual spray gun kits include a purge control panel. This section is divided into purge control panel, non-metallic powder kit, and metallic powder kit installation procedures.

### **Purge Control Panel Installation**

The purge control panel is typically mounted on the operator platform. It can also be mounted on the booth. Maximum air supply pressure should not exceed 7 bar (100 psi). Typical purge air pressure is 2.75 to 4.13 bar (40 to 60 psi).

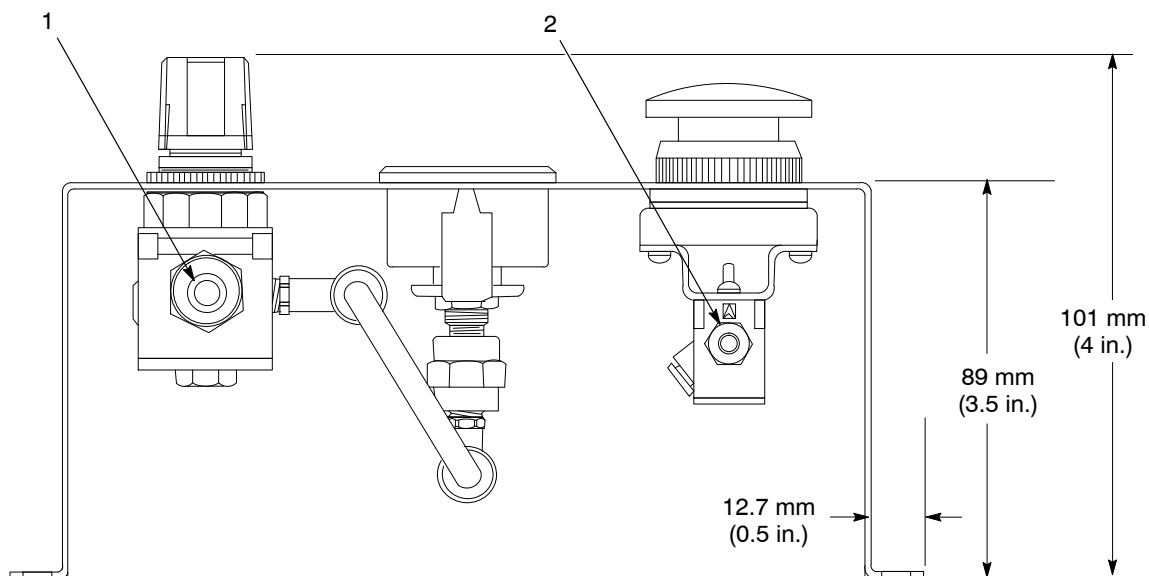
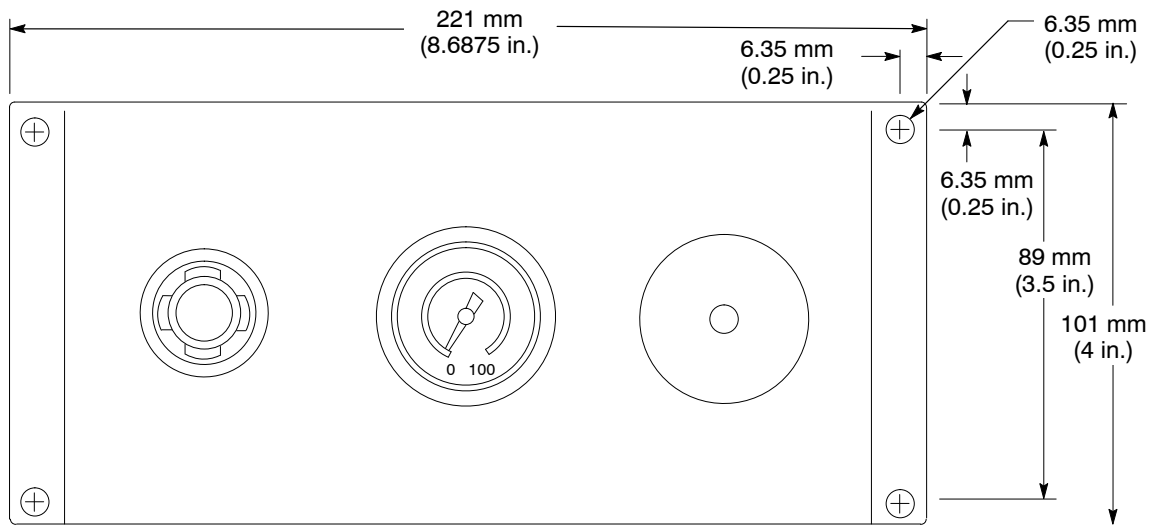


**WARNING:** Ground the purge air control panel. Failure to do so could result in a severe electrical shock.

See Figure 2.

1. Mount the purge control panel in a location close to the manual operator's station. Use  $\frac{1}{4}$ -in. fasteners.
2. If the surface you mount the control panel to is not grounded, connect a ground wire from the panel to a true earth ground.
3. Connect  $\frac{3}{8}$ -in. supply air tubing to the air inlet (1).
4. Connect  $\frac{1}{4}$ -in. air tubing to the air outlet (2).

## Purge Control Panel Installation *(contd)*



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Figure 2 Purge Control Panel Installation

1. 3/8-in. Air inlet

2. 1/4-in. Air outlet

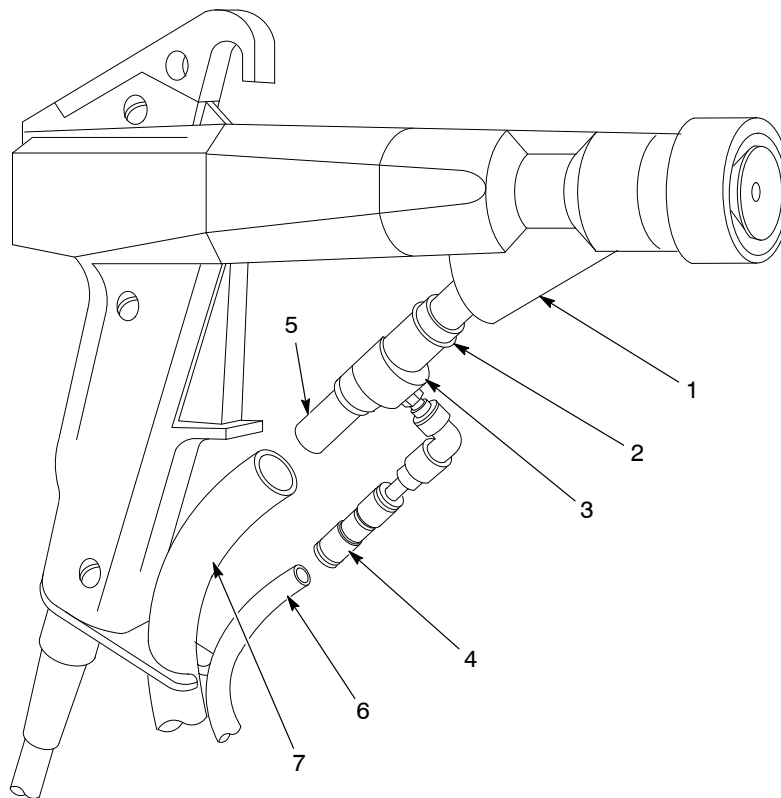
## Non-Metallic Powder Purge Adapter Kit Installation

See Figure 3.

1. Remove the old inlet connector from the manual powder spray gun's powder inlet body (1).
2. If low-flow powder feed hose is used, replace the inlet adapter (5) on the purge adapter with a low-flow inlet adapter.
3. Connect the powder feed hose (7) to the inlet adapter on the purge adapter (3).
4. Insert the purge adapter into the powder inlet body.

**NOTE:** The O-ring (2) on the purge adapter outlet must face the powder inlet body.

5. Connect the 6-mm air tubing (6) from the purge control panel to the check valve (4) on the purge adapter.



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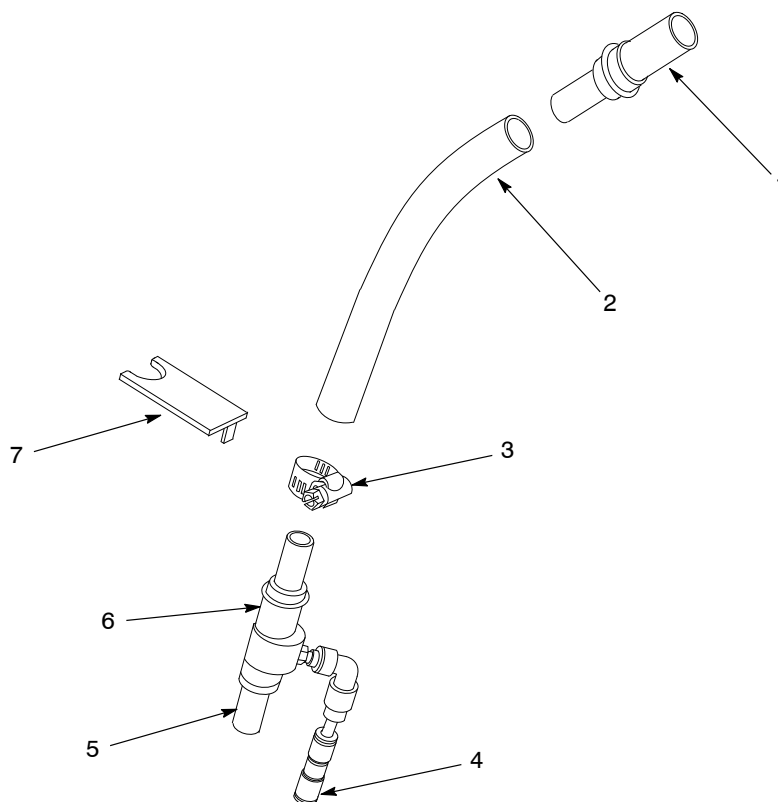
Figure 3 Non-Metallic Powder Purge Adapter Kit Installation

- |                      |                  |                     |
|----------------------|------------------|---------------------|
| 1. Powder inlet body | 4. Check valve   | 6. 6-mm Air tubing  |
| 2. O-ring            | 5. Inlet adapter | 7. Powder feed hose |
| 3. Purge adapter     |                  |                     |

## Metallic Powder Purge Adapter Kit Installation

See Figure 4.

1. Assemble the purge adapter kit as shown. Use the clamp (3) to secure the new hose bracket (7) onto the conductive tubing (2).
2. If low-flow powder feed hose is used, replace the inlet adapter (5) on the purge adapter with a low-flow inlet adapter.

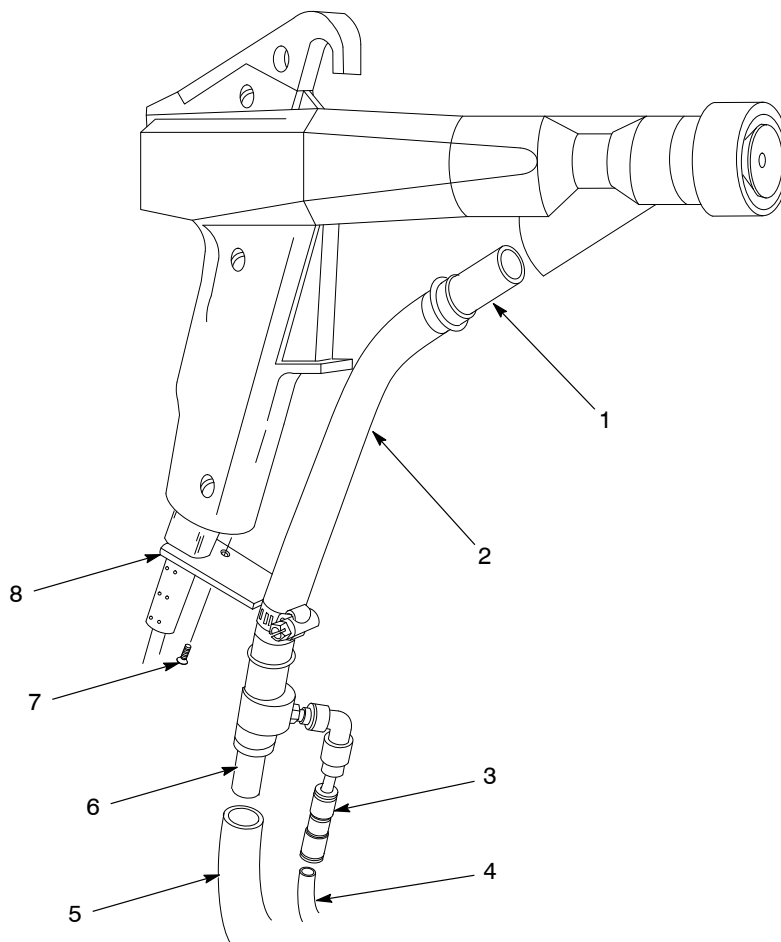


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Figure 4 Metallic Powder Purge Adapter Kit Assembly

- |                             |                  |                  |
|-----------------------------|------------------|------------------|
| 1. Conductive inlet adapter | 4. Check valve   | 6. Purge adapter |
| 2. Conductive tubing        | 5. Inlet adapter | 7. Hose bracket  |
| 3. Clamp                    |                  |                  |

3. See Figure 5. Remove the old inlet connector from the manual spray gun's powder inlet body.
4. Remove the old hose bracket from the spray gun. Save the mounting screw (7).
5. Install the purge adapter assembly onto the spray gun as shown in Figure 5.
6. Insert the inlet adapter (1) into the powder inlet body and carefully bend the conductive tubing (2) until the hose bracket (8) can be secured to the handle. Use the screw removed in step 4 to fasten the mounting bracket to the handle.
7. Connect the powder feed hose (5) to the purge adapter's inlet adapter (6).
8. Connect the 6-mm air tubing (4) from the purge control panel to the check valve (3).



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Figure 5 Metallic Purge Adapter Kit Installation

- |                      |                     |                 |
|----------------------|---------------------|-----------------|
| 1. Inlet adapter     | 4. 6-mm Air tubing  | 7. Screw        |
| 2. Conductive tubing | 5. Powder feed hose | 8. Hose bracket |
| 3. Check valve       | 6. Inlet adapter    |                 |

## Operation



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

This section covers automatic spray gun purging, manual spray gun purging, and cleaning.

### *Automatic Spray Gun Purging*



**CAUTION:** Do not set the purge air pressure above 4.13 bar (60 psi) when using spray guns equipped with a deflector. Pressure above 4.13 bar (60 psi) will damage the deflector.

1. Stop production.
2. Set the purge air regulator to 2.75–4.13 bar (40–60 psi). Effective purge pressure depends upon the application.
3. Purge the spray gun for 1 to 2 seconds. This should be long enough to clean the powder path.

### *Manual Spray Gun Purging*



**CAUTION:** Do not set the purge air pressure above 4.13 bar (60 psi) when using spray guns equipped with a deflector. Pressure above 4.13 bar (60 psi) will damage the deflector.

1. Stop triggering the spray gun.
2. Set the purge air regulator to 2.75–4.13 bar (40–60 psi). Effective purge pressure depends upon the application.
3. Point the spray gun into the booth and press the purge air pushbutton for 1 to 2 seconds. This should be long enough to clean the powder path.



## Cleaning

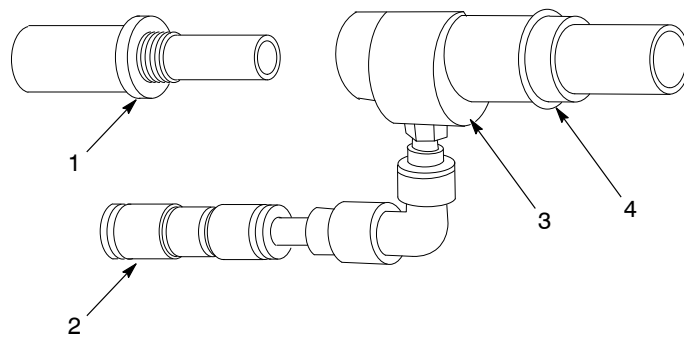


**WARNING:** Before attempting the following procedure, shut off all power at a disconnect switch or breaker ahead of the gun control unit. Ground the gun electrode. Failure to observe this warning could result in an electrical shock.

See Figure 6.

1. Unscrew the inlet adapter (1) from the adapter body (3). Use 100-grit sandpaper to grip the inlet adapter if it slips in your fingers.
2. Clean the inlet adapter and purge adapter with compressed air and a clean cloth. Do not use a knife or other sharp object to scrape off fused powder (impact fusion). Powder will quickly build up in any surface scratches.

**NOTE:** If necessary, use a clean cloth dampened with isopropyl alcohol to clean the adapter parts. Remove the O-ring (4) first. Do not use other solvents, or immerse the purge adapter in alcohol.



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Figure 6 Cleaning the Purge Adapter

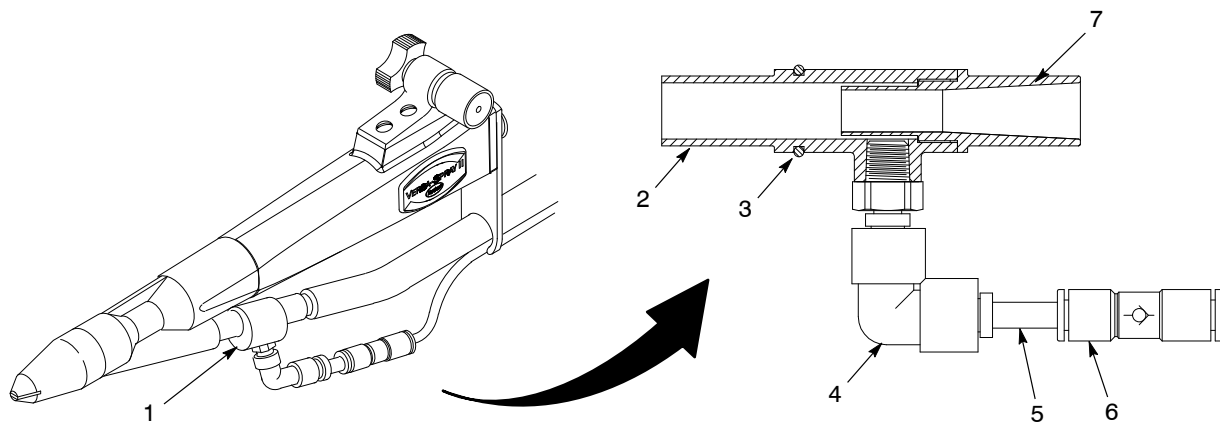
- |                  |                 |
|------------------|-----------------|
| 1. Inlet adapter | 3. Adapter body |
| 2. Check valve   | 4. O-ring       |

## Parts

### Automatic Gun Purge Adapter Kit

See Figure 7.

| Item            | Part    | Description  | Quantity | Note |
|-----------------|---------|--|----------|------|
| 1               | 157094  | ADAPTER, purge, Versa-Spray                          | 1        |      |
| 2               | 155179  | • ADAPTER, purge, outlet                             | 1        |      |
| 3               | 940163  | • O-RING, silicone, 0.625 x 0.750 x 0.062 in.        | 1        |      |
| 4               | 183456  | • FITTING, swivel, elbow, 6-mm tubing x 1/8-in. BPST | 1        |      |
| 5               | 900586  | • TUBING, polyurethane, 6-mm OD x 4-mm ID, blue      | AR       |      |
| 6               | 1021472 | • VALVE, check, 6-mm tube x 6-mm tube                | 1        |      |
| 7               | 155178  | • ADAPTER, purge, inlet                              | 1        |      |
| AR: As Required |         |  |          |      |



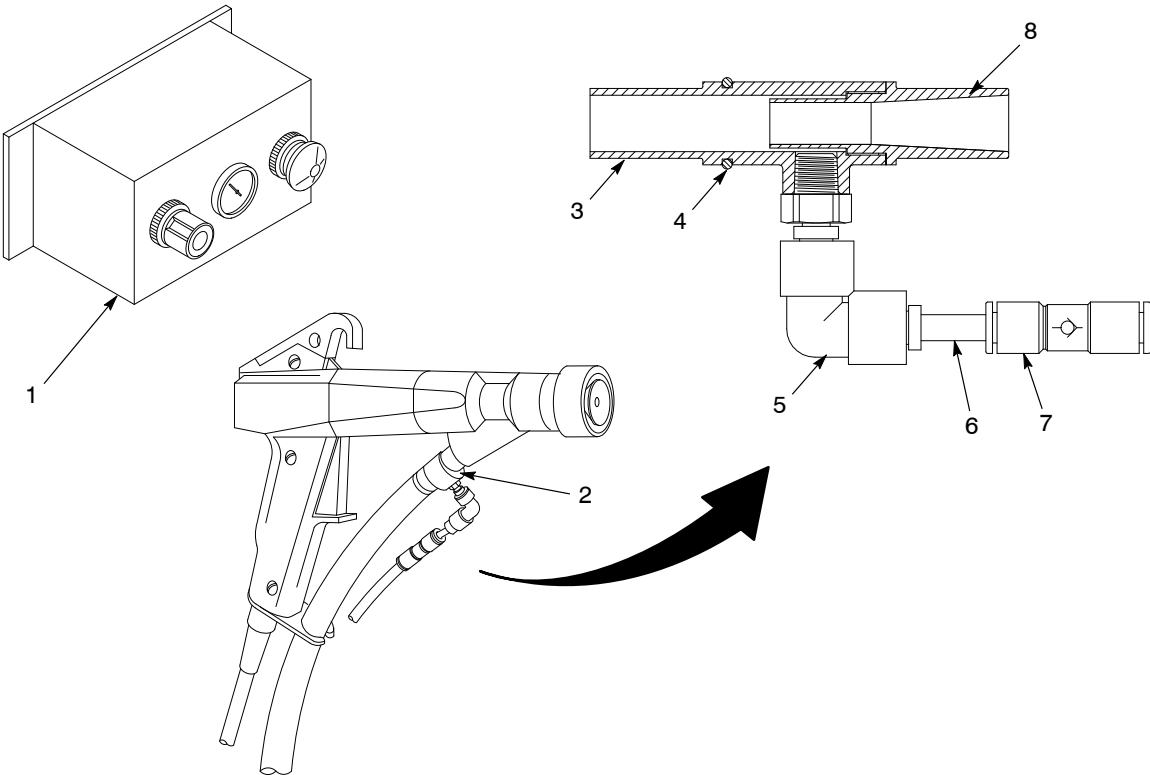
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Figure 7 Automatic Gun Purge Adapter Kit

# Non-Metallic Powder Manual Gun Purge Adapter Kit

See Figure 8.

| Item  | Part    | Description  | Quantity | Note |
|---|---------|--|----------|------|
| —   | 157085  | SERVICE KIT, handgun, purge, Versa-Spray, non-conductive | 1        |      |
| 1   | 153830  | • PANEL, control, purge                                  | 1        | A    |
| 2   | 157094  | • ADAPTER, purge, Versa-Spray                            | 1        |      |
| 3   | 155179  | • • ADAPTER, purge, outlet                               | 1        |      |
| 4   | 940163  | • • O-RING, silicone, 0.625 x 0.750 x 0.062 in.          | 1        |      |
| 5   | 183456  | • • FITTING, swivel, elbow, 6-mm tubing x 1/8-in. BPST   | 1        |      |
| 6   | 900586  | • • TUBING, polyurethane, 6-mm OD x 4-mm ID, blue        | AR       |      |
| 7   | 1021472 | • • VALVE, check, 6-mm tube x 6-mm tube                  | 1        |      |
| 8   | 155178  | • • ADAPTER, purge, inlet                                | 1        |      |
| NOTE A: Refer to <i>Purge Control Panel Parts</i> for a breakdown of the parts included in this assembly. |         |  |          |      |
| AR: As Required   |         |  |          |      |



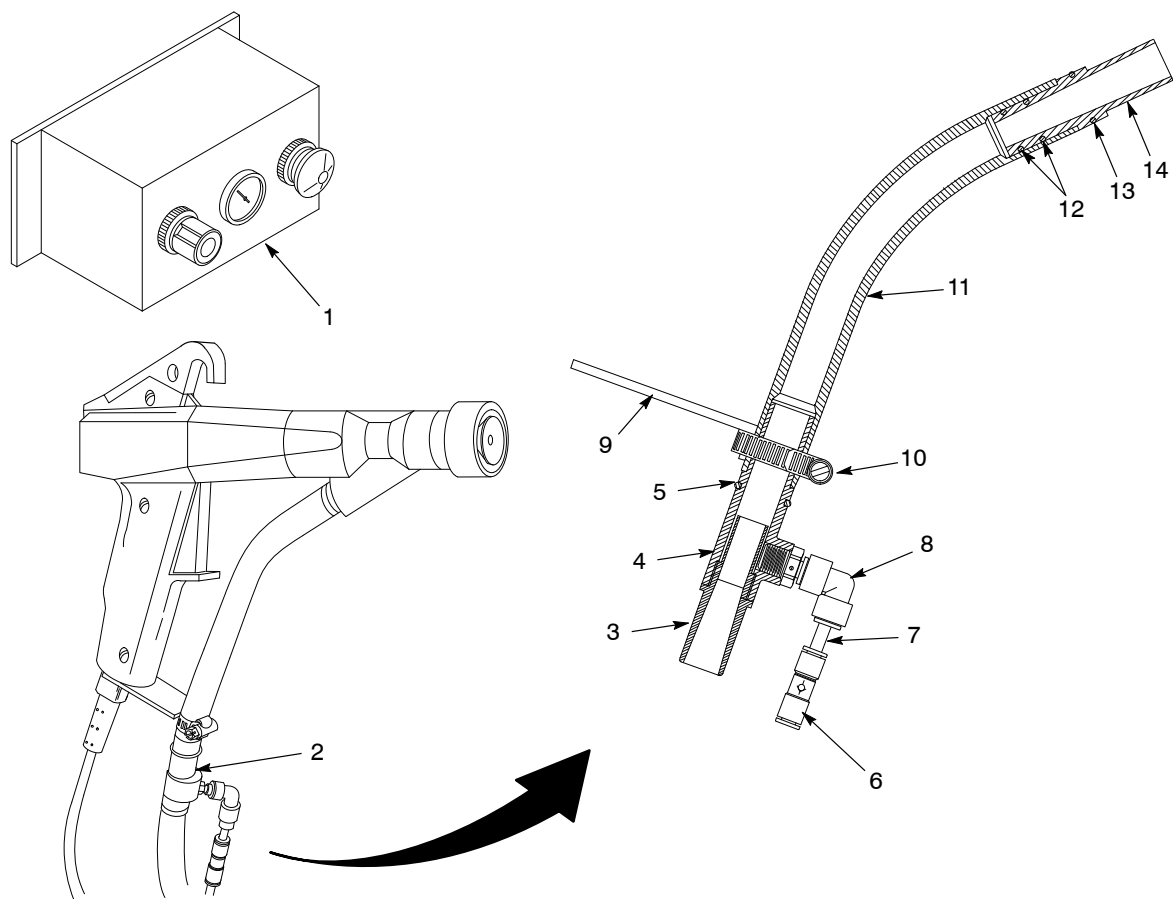
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Figure 8    Non-Metallic Powder Manual Gun Purge Adapter Kit

**Metallic Powder Manual Gun Purge Adapter Kit**

See Figure 9.

| Item  | Part    | Description   | Quantity | Note |
|---|---------|---|----------|------|
| —   | 153832  | CONVERSION KIT, handgun, purge, Versa-Spray, conductive | 1        |      |
| 1   | 153830  | • PANEL, control, purge                                 | 1        | A    |
| 2   | 157094  | • ADAPTER, purge, Versa-Spray                           | 1        |      |
| 3   | 155178  | • • ADAPTER, purge, inlet                               | 1        |      |
| 4   | 155179  | • • ADAPTER, purge, outlet                              | 1        |      |
| 5   | 940163  | • • O-RING, silicone, 0.625 x 0.750 x 0.062 in.         | 1        |      |
| 6   | 1021472 | • • VALVE, check, 6-mm tube x 6-mm tube                 | 1        |      |
| 7   | 900586  | • • TUBING, polyurethane, 6-mm OD x 4-mm ID, blue       | AR       |      |
| 8   | 183456  | • • FITTING, swivel, elbow, 6-mm tubing x 1/8-in. BPST  | 1        |      |
| 9   | 156204  | • BRACKET, hose, purge adapter                          | 1        |      |
| 10  | 140290  | • CLAMP, tubing, worm drive, 0.906–0.500 in.            | 1        |      |
| 11  | 156203  | • TUBE, inlet, conductive PTFE                          | 1        |      |
| 12  | 940142  | • O-RING, silicone, 0.500 x 0.625 x 0.063 in.           | 2        |      |
| 13  | 940163  | • O-RING, silicone, 0.625 x 0.750 x 0.063 in.           | 1        |      |
| 14  | 972368  | • ADAPTER, conductive, inlet tube                       | 1        |      |
| NOTE A: Refer to <i>Purge Control Panel Parts</i> for a breakdown of the parts included in this assembly. |         |   |          |      |
| AR: As Required   |         |   |          |      |



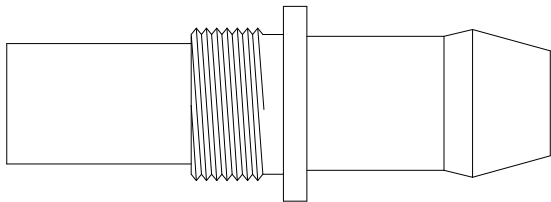
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Figure 9 Metallic Powder Manual Gun Purge Adapter Kit

**Low-Flow Inlet Adapter**

See Figure 10. This adapter replaces the standard inlet adapter included with the purge adapter.

| Item | Part   | Description                               | Quantity | Note |
|------|--------|---|----------|------|
| —    | 140907 | ADAPTER, purge, inlet, low-flow, packaged | 1        |      |



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Figure 10 Low-Flow Inlet Adapter

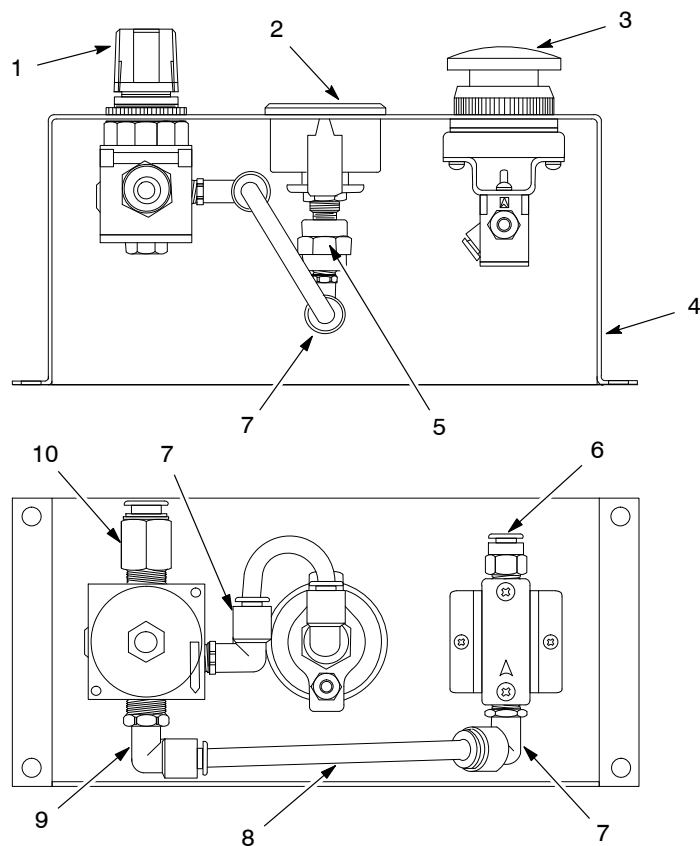
## Purge Control Panel

See Figure 11.

| Item | Part   | Description   | Quantity | Note |
|------|--------|---|----------|------|
| —    | 153830 | PANEL, control, purge                               | 1        |      |
| 1    | 901444 | • REGULATOR, air, 5–125 psi, 1/4-in. NPT            | 1        |      |
| 2    | 901260 | • GAUGE, air, 0–100 psi, 0–7 bar                    | 1        |      |
| 3    | 155180 | • VALVE, mechanical, 2-way, 1/8-in. NPT, pushbutton | 1        |      |
| 4    | -----  | • HOUSING, purge adapter, painted                   | 1        |      |
| 5    | 973572 | • COUPLING, pipe, hydraulic, 1/8 in., steel, zinc   | 1        |      |
| 6    | 972716 | • CONNECTOR, 1/4-in. tube x 1/8-in. NPT             | 1        |      |
| 7    | 972119 | • ELBOW, male, 1/4-in. tube x 1/8-in. NPT           | 3        |      |
| 8    | 900558 | • TUBING, synflex, 0.250 x 0.035 in.                | AR       | A    |
| 9    | 971266 | • ELBOW, male, 1/4-in. tube x 1/4-in. NPT           | 1        |      |
| 10   | 971177 | • CONNECTOR, male, 3/8-in. tube x 1/4-in. NPT       | 1        |      |

NOTE A: Order in increments of one foot.

AR: As Required



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Figure 11 Purge Control Panel

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