

# Ion Collector Kits for Manual Guns (Versa-Spray® and Versa-Spray® II)

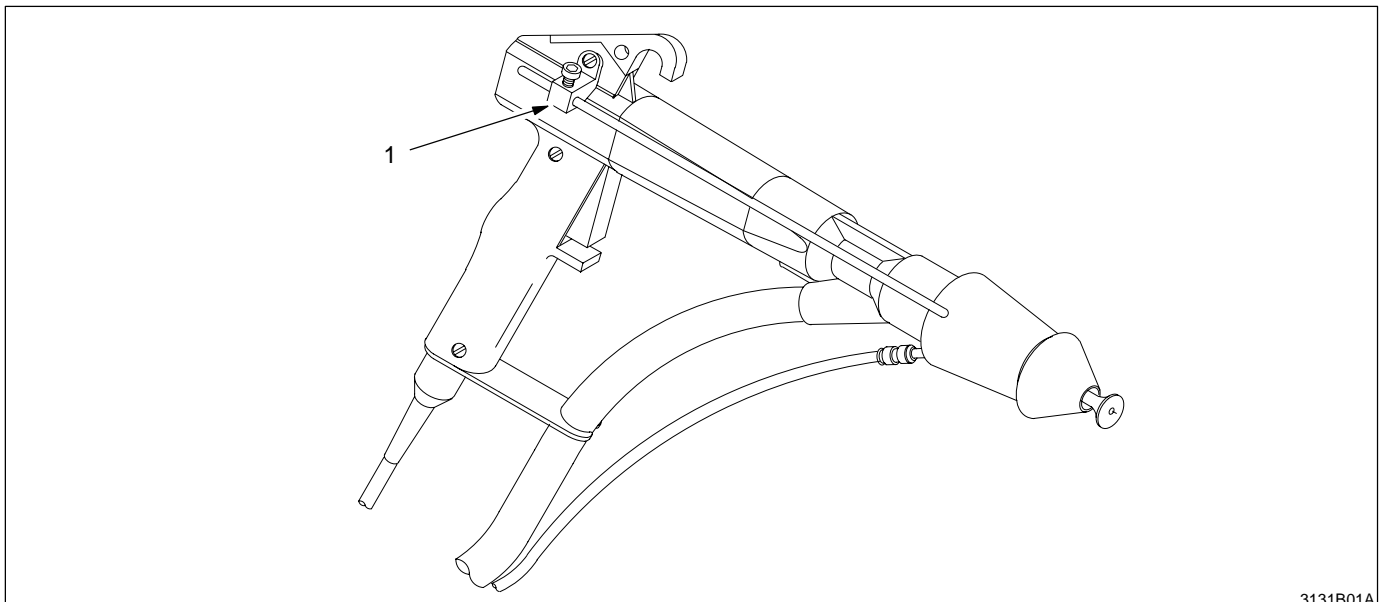
## 1. Description

This instruction sheet covers the ion collector kits for Versa-Spray and Versa-Spray II manual guns. One kit is for standard guns with or without nozzle extensions; the others are for guns with 150- and 300-mm lance extensions, with or without nozzle extensions.

189 492	Kit, manual gun, ion collector
189 493	Kit, 150-mm lance, ion collector
189 494	Kit, 300-mm lance, ion collector

The ion collector can improve the smoothness and appearance of cured powder coatings. It collects ions emitted from the gun's charging electrode instead of allowing them to deposit on the part. This can reduce the rate of charge buildup in the powder deposited on the part, which may reduce defects in the cured coating such as "pinholing" and "orange peel".

The standard gun kit consists of a bracket, screws, and a 11-in. (279-mm) collector rod. The kits for the lance extensions add clips that attach to the extensions to support the longer rods required. The distance from the end of the rod to the end of the gun is adjusted by sliding the rod through the clips and bracket. The rod is electrically grounded through the gun cable and control unit.



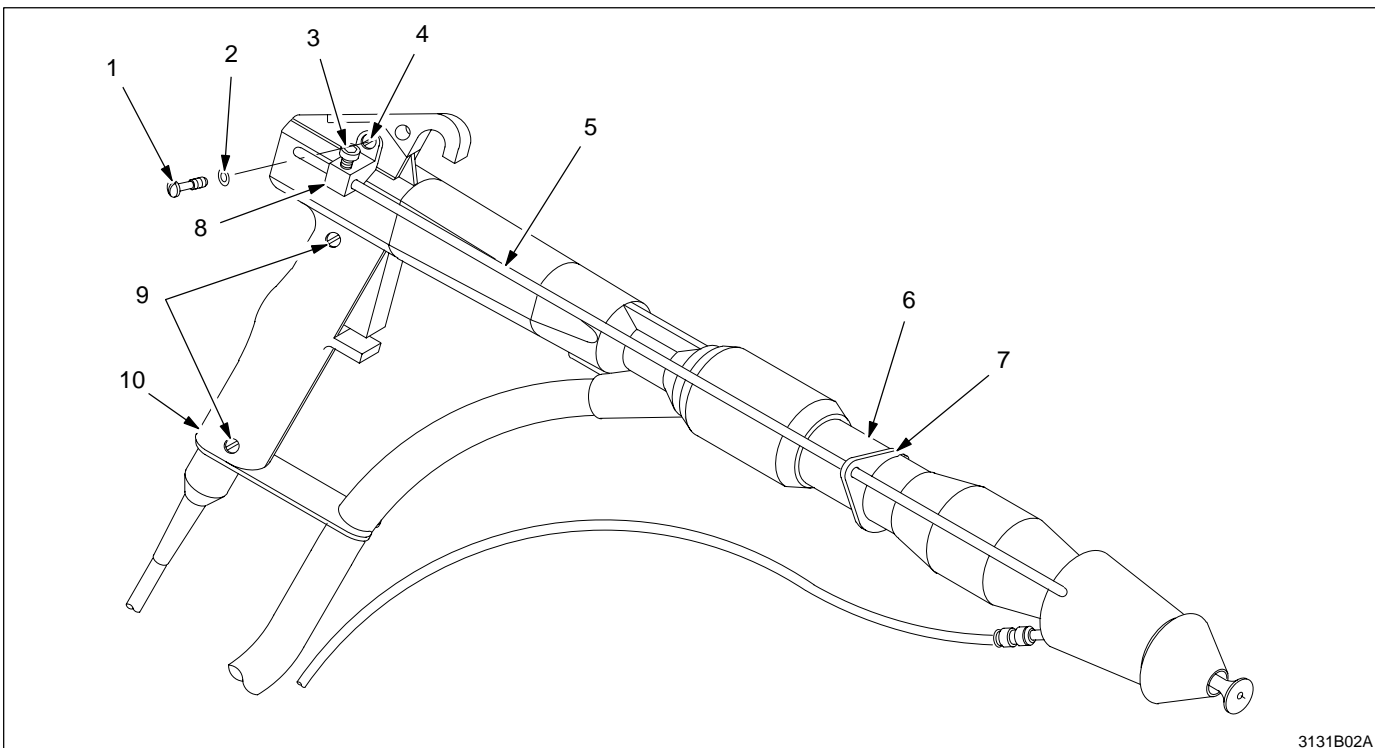
3131B01A

*Fig. 1 Ion collector kit (installed on a Versa-Spray II manual gun with a nozzle extension)*

1. Ion collector kit

### 2. Installation

1. Perform step 1 under *Adjusting Rod Length* on the following page.
2. See Figure 2. Loosen the captive screws (1 and 9) from the handle cover and remove the handle cover (10).
3. Remove the O-ring (2) from the top captive screw (1). Remove the captive screw.
4. Reinstall the handle cover and tighten the two lower captive screws (9).
5. Install the ion collector bracket (8) on the gun with the pan-head screw (4) included in the kit.
6. If installing a kit for a gun with a lance extension, snap an extension bracket (7) onto the lance extension (6) as shown. Use one bracket for a 150-mm lance extension and two for a 300-mm extension.
7. Slip the rod (5) through the holes in the extension bracket(s) and the ion collector bracket. Install the socket-head cap screw (3) in the ion collector bracket.



3131B02A

Fig. 2 Installing the ion collector kit (Versa-Spray II gun with 150-mm lance extension shown)

- |                                       |                                   |                                       |
|---------------------------------------|-----------------------------------|---------------------------------------|
| 1. Captive screw                      | 5. Rod <sup>1</sup>               | 8. Ion collector bracket <sup>1</sup> |
| 2. O-ring                             | 6. Lance extension                | 9. Captive screws                     |
| 3. Socket-head cap screw <sup>1</sup> | 7. Extension bracket <sup>1</sup> | 10. Handle cover                      |
| 4. Pan-head screw <sup>1</sup>        |                                   |                                       |

Note: 1 – Kit components

---

### **3. Adjusting Rod Length**

---

After the ion collector kit is installed, the distance from the end of the ion collector rod to the tip of the gun's charging electrode must be adjusted. If the end of the rod is too far away from the tip of the electrode, the ion collector will not collect any ions or improve the appearance of the cured coating.

If the end of the rod is too close to the end of the gun, powder particles may not be charged efficiently and the powder transfer efficiency may be reduced. Finding the optimum location for the rod end requires some experimentation.

1. Before installing the ion collector kit on the gun, coat several parts. Note the current ( $\mu\text{A}$ ) shown on the control unit display when coating the parts. Cure the coatings.
2. Install the ion collector kit on the gun as described previously.
3. Loosen the socket-head cap screw (3, Fig. 2) and slide the rod through the ion collector bracket until the end of the rod is far away from the front end of the gun.
4. While coating parts, slide the rod forward until the current shown on the control unit display is 5 to 7  $\mu\text{A}$  higher than that displayed in step 1.
5. Cure the coating on the test parts. Compare the surface finish on these parts with the finish on the parts coated in step 1 (before the ion collector kit was installed).
6. If the desired improvement in the surface finish has not been obtained, loosen the socket-head cap screw and slide the rod forward approximately 1-in. Tighten the cap screw.
7. Repeat steps 5 and 6 until the desired improvement in surface finish is obtained.

## 4. Parts Lists

### Standard Gun Kit

See Figure 3.

Item	Part	Description	Quantity	Note
—	189 492	Kit, manual gun, ion collector	1	
1	189 482	• Rod, ion collector, 11 in.	1	
2	982 628	• Screw, socket, M5 x 10, stainless steel	1	
3	189 487	• Bracket, manual gun, ion collector	1	
4	982 069	• Screw, pan head, M4 x 16	1	
NS	982 278	• Screw, set, cup, M5 x 8, black	1	A
NOTE A: Optional, replaces item 2. NS: Not Shown				

### 150-mm Lance Extension Kit

See Figure 3.

Item	Part	Description	Quantity	Note
—	189 493	Kit, 150-mm lance, ion collector	1	
1	189 483	• Rod, ion collector, 15 in.	1	
2	982 628	• Screw, socket, M5 x 10, stainless steel	1	
3	189 487	• Bracket, manual gun, ion collector	1	
4	982 069	• Screw, pan head, M4 x 16	1	
5	189 485	• Bracket, lance extension, ion collector	1	
NS	982 278	• Screw, set, cup, M5 x 8, black	1	A
NOTE A: Optional, replaces item 2. NS: Not Shown				

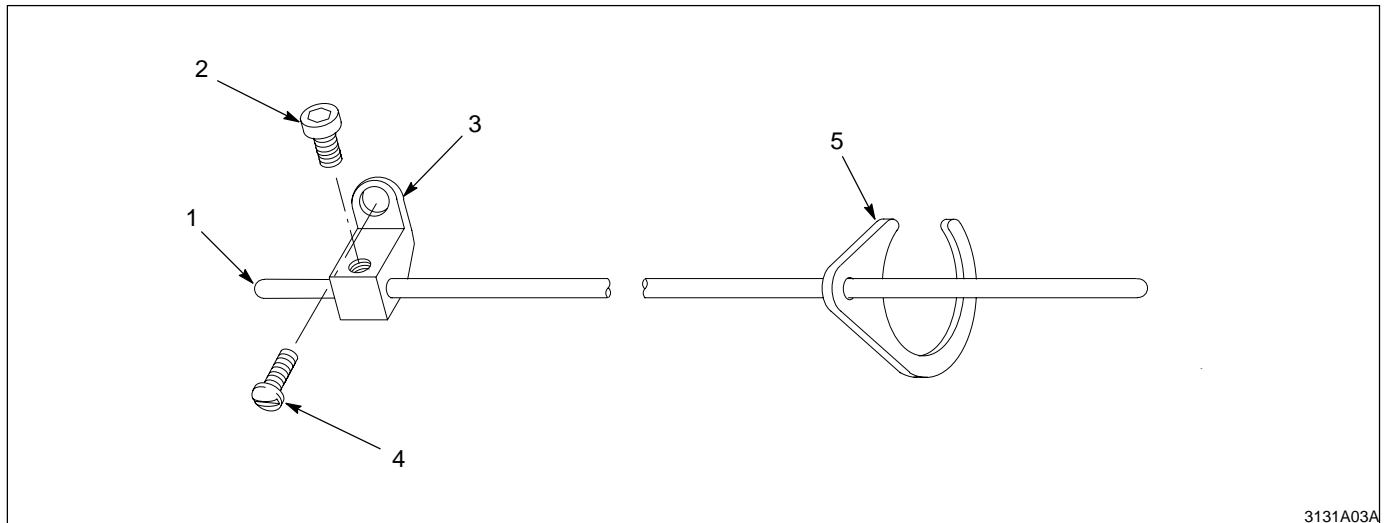
**300-mm Lance Extension Kit**

See Figure 3.

Item	Part	Description	Quantity	Note
—	189 494	Kit, 300-mm lance, ion collector	1	
1	189 484	• Rod, ion collector, 21 in.	1	
2	982 628	• Screw, socket, M5 x 10, stainless steel	1	
3	189 487	• Bracket, manual gun, ion collector	1	
4	982 069	• Screw, pan head, M4 x 16	1	
5	189 485	• Bracket, lance extension, ion collector	2	
NS	982 278	• Screw, set, cup, M5 x 8, black	1	A

NOTE A: Optional, replaces item 2.

NS: Not Shown



3131A03A

Fig. 3 Ion collector kits

Nordson, the Nordson logo, and Versa-Spray are registered trademarks of Nordson Corporation.