

Ion Collector Kit for Encore[®] Automatic Guns

Description

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 reduces the rate of charge buildup in the powder deposited on the part, which may reduce defects in the cured coating such as pin-holing and orange peel.

This kit can be used on Encore and Encore HD automatic bar-mount and tube-mount powder spray guns.

Installation

After installing the ion collector, adjust the collector rod position for best results as described in *Adjusting the Ion Collector Rod*.

NOTE: Part numbers for items 1–7 in the following illustrations are listed on page 4.

Bar-Mount Gun

See Figure 1.

1. Insert the collector rod (1) into the grounding plate and secure it with the M5 x 8 set screw (5).
2. Attach the multi-point tip (6) to the collector rod (1) using the M3 x 8 screw (7).

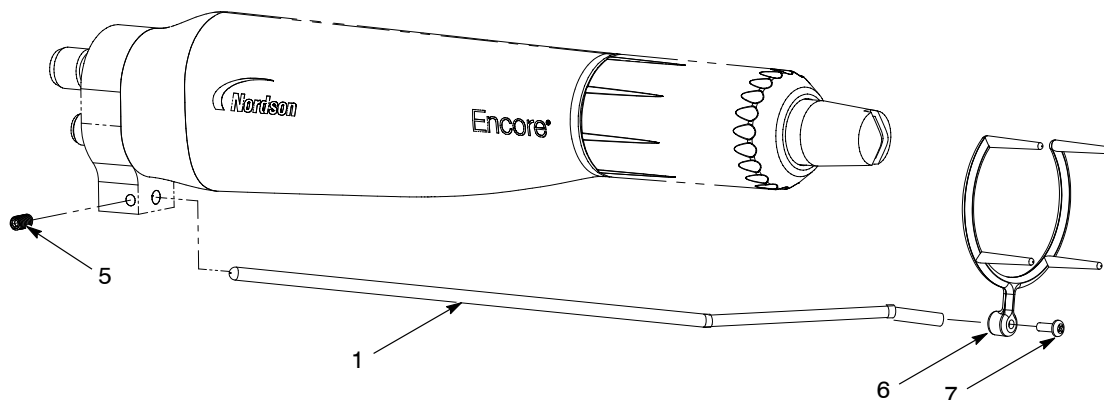
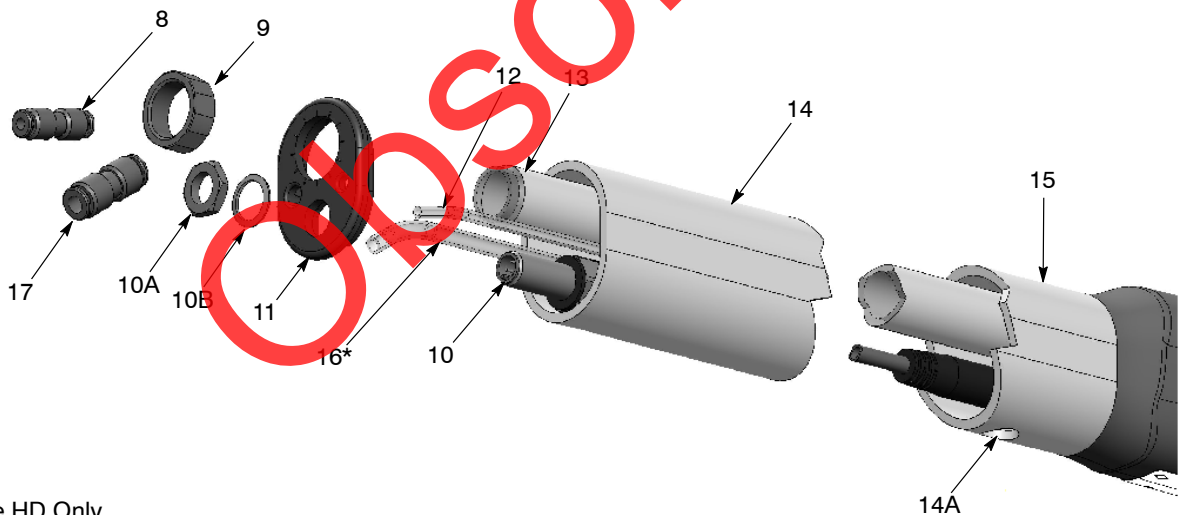


Figure 1 Ion Collector Installation – Bar-Mount Gun

Tube-Mount Gun

NOTE: The mounting hole must remain plugged for optimal performance. If ion collector is ever removed, replace with the appropriate plug. The mounting plug part number is listed in your Encore gun manual.

1. See Figure 2. Verify that the ion collector mounting hole (14A) is installed towards the front of the gun as shown in Figure 1. If the ion collector hole is installed towards the far rear, follow the instructions below to position the mounting hole towards the front of the gun. Proper orientation must be implemented to allow access to the grounding plate in the rear body assembly (15). **If mounting hole does not require reorientation, skip to step 9.**
2. If mounting hole requires reorientation, disconnect the gun cable, powder feed hose, and air wash tubing from the gun.
3. Disconnect the 4 mm union (8) from the clear 4 mm tubing (12).
4. For Encore HD Only: Disconnect the 6 mm union (17) from the blue 6 mm tubing (16).
5. Unscrew the clamping tube nut (9) from the clamping tube (13).
6. Remove the nut and lockwasher (10A, 10B) from the cable receptacle (10).
7. Pull the end cap (11) off the mounting tube (14).
8. Pull the mounting tube (14) off the rear body assembly (15) and reverse it, then re-assemble the gun.



*Encore HD Only

Figure 2 Mounting Tube Disassembly Procedure

- | | | |
|----------------------------|-----------------------|------------------------|
| 8. 4 mm Union | 11. End cap | 14A. Mounting hole |
| 9. Clamping tube nut | 12. Clear 4-mm tubing | 15. Rear body assembly |
| 10. Cable receptacle | 13. Clamping tube | 16. Blue 6 mm tubing* |
| 10A. Receptacle nut | 14. Mounting tube | 17. 6 mm union* |
| 10B. Receptacle lockwasher | | |

9. See Figure 3. Remove the plug from the mounting hole (14A) if applicable.
10. Insert the post (2) through the mounting hole (14A) and secure it to the grounding plate in the rear body assembly (15) with the socket head

screw (3).

11. Insert the collector rod (1) into the post and secure it with the M10 x 10 nylon-tipped set screw (4).
12. Attach the multi-point tip (6) to the collector rod (1) with the M3 x 8 screw (7).

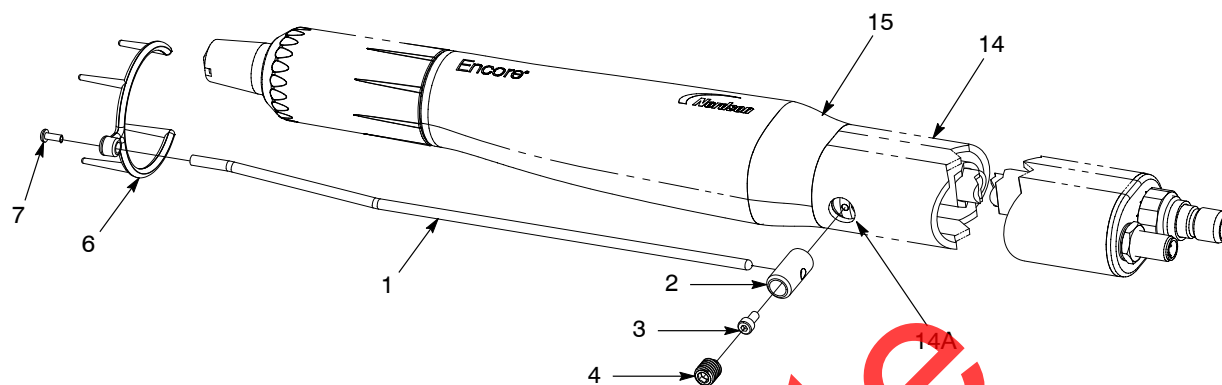


Figure 3 Ion Collector Installation – Tube-Mount Gun

- | | | |
|----------------------|--------------------------|------------------------|
| 1. Collector rod | 4. M10 x 10 set screw | 14. Mounting tube |
| 2. Post | 6. Multi-point tip | 14A. Mounting hole |
| 3. Socket head screw | 7. M3 x 8 Pan head screw | 15. Rear body assembly |

Adjusting the Ion Collector Rod

The ion collector rod should be mounted so that the tip at the end of the rod is the optimum distance from the tip of the electrode for the application.

- If the tip at 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 tip at the end of the rod is too close to the tip of the electrode, powder particles may not be charged efficiently and the powder transfer efficiency may be reduced.

Use this procedure to position the end of the ion collector rod. Note:

1. Remove the rod and multi-point tip, then coat several parts. Note the current (μA) shown on the control unit display when coating the parts. Cure the coatings.
2. Install the rod and multi-point tip on the gun.
3. Loosen the set screw and move the end of the rod far away from the end of the gun.
4. Turn on the electrostatic voltage and spray powder with a part in front of the gun. Slide the rod forward until the current shown on the control unit display is 5 to 7 μA higher than that displayed in step 1. Tighten the set screw to secure the rod.
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 set screw and slide the rod forward approximately 1-in. Tighten the set screw.
7. Repeat steps 4 and 5 until the desired improvement in surface finish is obtained.

Parts

To order parts, call the Nordson Industrial Coating Systems Customer Support Center at (800) 433-9319 or contact your local Nordson representative.

Item	Part	Description	Quantity	Note
–	1602357	KIT, collector, ion, Encore HD	1	
–	1097505	KIT, collector, ion, Encore		
1	-----	• ROD, ion collector, offset	1	
2	1097547	• POST, collector, ion	1	
3	105800	• SCREW, socket head, M4 x 0.7 x 8 mm	1	
4	1097696	• SCREW, set, nylon tip, M10 x 10, black	1	
5	1097543	• SCREW, set, nylon tip, M5 x 8, black	1	
6	-----	• TIP, ion collector, multi-point	1	
7	982017	• SCREW, pan, rec, M3 x 8, zinc	1	

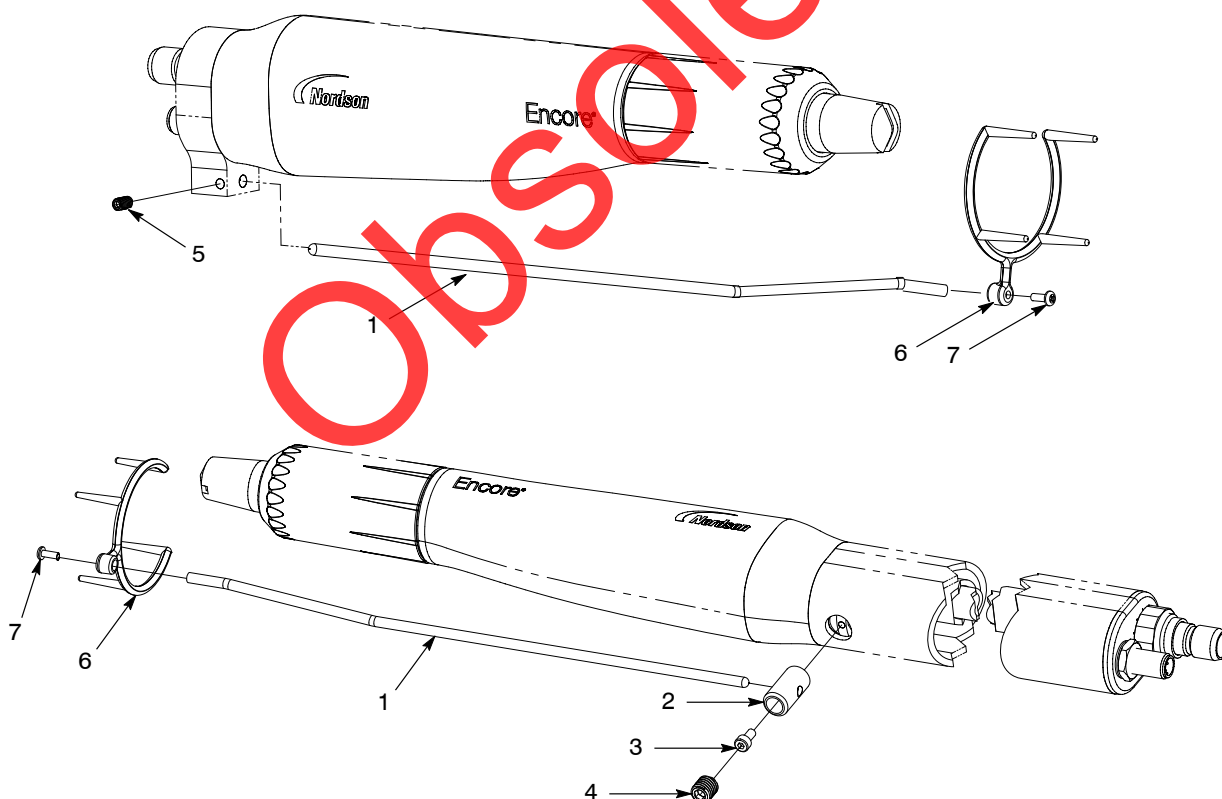


Figure 4 Ion Collector Kit Parts

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