# A20A Automatic Electric Airless Spray Gun

Customer Product Manual
Part 108182-03
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**For parts and technical support, call the Industrial Coating Systems Customer Support Center at (800) 433-9319 or contact your local Nordson representative.**

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Nordson Corporation welcomes requests for information, comments, and inquiries about its products. General information about Nordson can be found on the Internet using the following address: http://www.nordson.com.

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# A20A Automatic Electric Airless Spray Gun

## Safety

Read and follow these safety instructions. Task- and equipment-specific warnings, cautions, and instructions are included in equipment documentation where appropriate.

Make sure all equipment documentation, including these instructions, is accessible to persons operating or servicing equipment.

### *Qualified Personnel*

Equipment owners are responsible for making sure that Nordson equipment is installed, operated, and serviced by qualified personnel. Qualified personnel are those employees or contractors who are trained to safely perform their assigned tasks. They are familiar with all relevant safety rules and regulations and are physically capable of performing their assigned tasks.

### *Intended Use*

Use of Nordson equipment in ways other than those described in the documentation supplied with the equipment may result in injury to persons or damage to property.

Some examples of unintended use of equipment include

- using incompatible materials
- making unauthorized modifications
- removing or bypassing safety guards or interlocks
- using incompatible or damaged parts
- using unapproved auxiliary equipment
- operating equipment in excess of maximum ratings

### *Regulations and Approvals*

Make sure all equipment is rated and approved for the environment in which it is used. Any approvals obtained for Nordson equipment will be voided if instructions for installation, operation, and service are not followed.

## *Personal Safety*

To prevent injury follow these instructions.

- Do not operate or service equipment unless you are qualified.
- Do not operate equipment unless safety guards, doors, or covers are intact and automatic interlocks are operating properly. Do not bypass or disarm any safety devices.
- Keep clear of moving equipment. Before adjusting or servicing moving equipment, shut off the power supply and wait until the equipment comes to a complete stop. Lock out power and secure the equipment to prevent unexpected movement.
- Relieve (bleed off) hydraulic and pneumatic pressure before adjusting or servicing pressurized systems or components. Disconnect, lock out, and tag switches before servicing electrical equipment.
- While operating manual spray guns, make sure you are grounded. Wear electrically conductive gloves or a grounding strap connected to the gun handle or other true earth ground. Do not wear or carry metallic objects such as jewelry or tools.
- If you receive even a slight electrical shock, shut down all electrical or electrostatic equipment immediately. Do not restart the equipment until the problem has been identified and corrected.
- Obtain and read Material Safety Data Sheets (MSDS) for all materials used. Follow the manufacturer's instructions for safe handling and use of materials, and use recommended personal protection devices.
- Make sure the spray area is adequately ventilated.
- To prevent injury, be aware of less-obvious dangers in the workplace that often cannot be completely eliminated, such as hot surfaces, sharp edges, energized electrical circuits, and moving parts that cannot be enclosed or otherwise guarded for practical reasons.



### High-Pressure Fluids

High-pressure fluids, unless they are safely contained, are extremely hazardous. Always relieve fluid pressure before adjusting or servicing high pressure equipment. A jet of high-pressure fluid can cut like a knife and cause serious bodily injury, amputation, or death. Fluids penetrating the skin can also cause toxic poisoning.

If you suffer a fluid injection injury, seek medical care immediately. If possible, provide a copy of the MSDS for the injected fluid to the health care provider.

The National Spray Equipment Manufacturers Association has created a wallet card that you should carry when you are operating high-pressure spray equipment. These cards are supplied with your equipment. The following is the text of this card:

**WARNING:** Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor that you suspect an injection injury.
- Show him this card
- Tell him what kind of material you were spraying

MEDICAL ALERT—AIRLESS SPRAY WOUNDS: NOTE TO PHYSICIAN

Injection in the skin is a serious traumatic injury. It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with some exotic coatings injected directly into the bloodstream.

Consultation with a plastic surgeon or a reconstructive hand surgeon may be advisable.

The seriousness of the wound depends on where the injury is on the body, whether the substance hit something on its way in and deflected causing more damage, and many other variables including skin microflora residing in the paint or gun which are blasted into the wound. If the injected paint contains acrylic latex and titanium dioxide that damage the tissue's resistance to infection, bacterial growth will flourish. The treatment that doctors recommend for an injection injury to the hand includes immediate decompression of the closed vascular compartments of the hand to release the underlying tissue distended by the injected paint, judicious wound debridement, and immediate antibiotic treatment.



## *Fire Safety*

To avoid a fire or explosion, follow these instructions.

- Ground all conductive equipment. Use only grounded air and fluid hoses. Check equipment and workpiece grounding devices regularly. Resistance to ground must not exceed one megohm.
- Shut down all equipment immediately if you notice static sparking or arcing. Do not restart the equipment until the cause has been identified and corrected.
- Do not smoke, weld, grind, or use open flames where flammable materials are being used or stored.
- Do not heat materials to temperatures above those recommended by the manufacturer. Make sure heat monitoring and limiting devices are working properly.

## *Fire Safety (contd)*

- Provide adequate ventilation to prevent dangerous concentrations of volatile particles or vapors. Refer to local codes or your material MSDS for guidance.
- Do not disconnect live electrical circuits when working with flammable materials. Shut off power at a disconnect switch first to prevent sparking.
- Know where emergency stop buttons, shutoff valves, and fire extinguishers are located. If a fire starts in a spray booth, immediately shut off the spray system and exhaust fans.
- Shut off electrostatic power and ground the charging system before adjusting, cleaning, or repairing electrostatic equipment.
- Clean, maintain, test, and repair equipment according to the instructions in your equipment documentation.
- Use only replacement parts that are designed for use with original equipment. Contact your Nordson representative for parts information and advice.

### Halogenated Hydrocarbon Solvent Hazards

Do not use halogenated hydrocarbon solvents in a pressurized system that contains aluminum components. Under pressure, these solvents can react with aluminum and explode, causing injury, death, or property damage. Halogenated hydrocarbon solvents contain one or more of the following elements:

| Element | Symbol | Prefix |
|---|---|---|
| Fluorine | F | “Fluoro-” |
| Chlorine | Cl | “Chloro-” |
| Bromine | Br | “Bromo-” |
| Iodine | I | “Iodo-” |

Check your material MSDS or contact your material supplier for more information. If you must use halogenated hydrocarbon solvents, contact your Nordson representative for information about compatible Nordson components.



## *Action in the Event of a Malfunction*

If a system or any equipment in a system malfunctions, shut off the system immediately and perform the following steps:

- Disconnect and lock out system electrical power. Close hydraulic and pneumatic shutoff valves and relieve pressures.
- Identify the reason for the malfunction and correct it before restarting the system.

## *Disposal*

Dispose of equipment and materials used in operation and servicing according to local codes.

## *Safety Labels*

See Figure 1 for the location of the safety label on the applicator. The safety label is provided to help you operate and maintain your equipment safely. The label reads:

**WARNING:** Do not open when an explosive gas atmosphere is present. Max ambient temperature: 140 °F (60 °C)

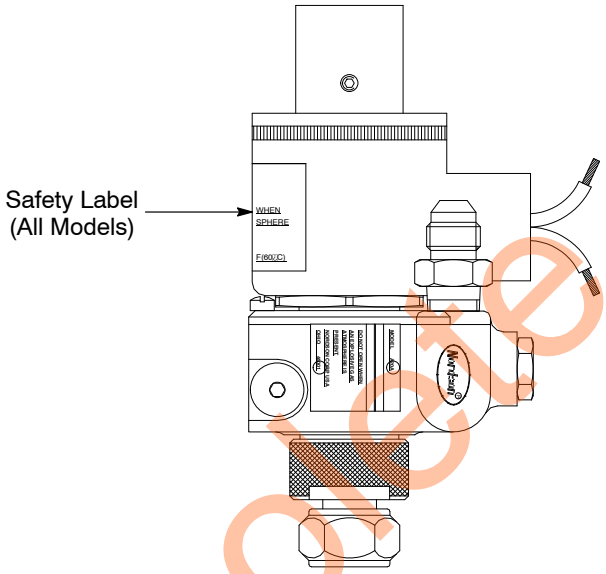



Figure 1 Safety Label Location

# Description

The A20A Electric Spray Gun is a fast cycle, airless automatic spray gun designed for use in high-speed container coating applications. The gun can be used with the Nordson iTrax System or the Flow Sentry System.

## *Features*

- On-line removable valve/seat module
- Integral electric solenoid
- No packing cartridge or moving seals
- Stainless steel construction of wetted parts
- Compatibility with a wide range of wide range of water-based and solvent-based lacquers
- Uses Nordson Controlled Pattern or Cross-Cut nozzles
- Can be used in dead-end or circulating systems

## *Models*

See Figure 2. The A20A applicator is available in the following models:

| Part | Description | Approvals |
|---|---|---|
| 135576 | Short Standard | FM |
| 141426 | Short ATEX | CE/ATEX |
| 135575 | Extended Standard | FM |
| 141425 | Extended ATEX | CE/ATEX |
| 144466 | 8 in. Extended | None |

The CE/ATEX approved models have a covered solenoid end.



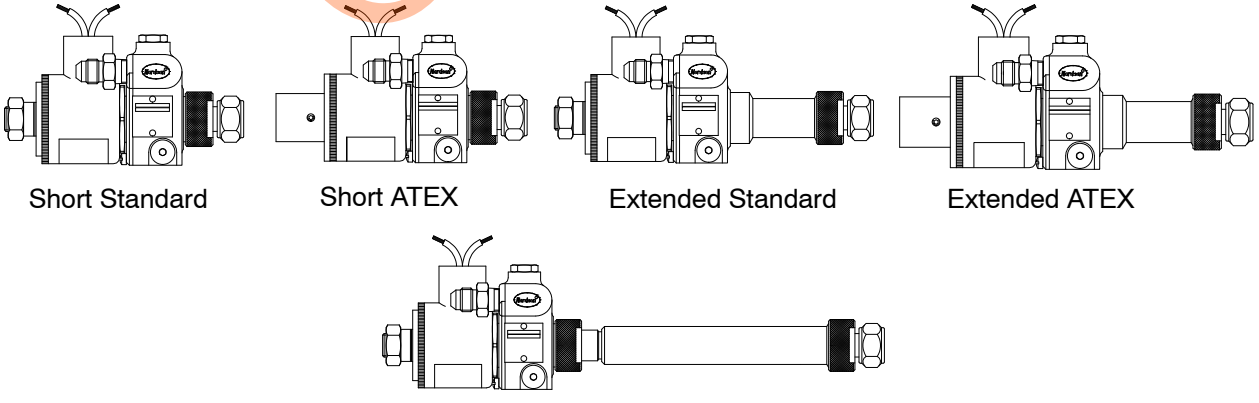


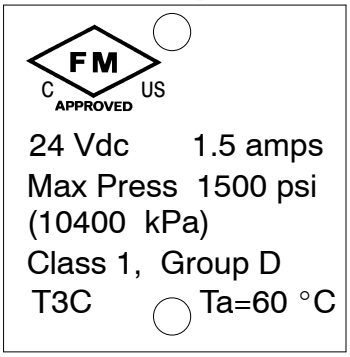

Figure 2 A20A Models

# Specifications

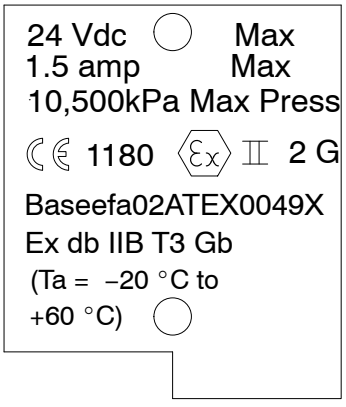
| Dimensions and Weight | |
|---|---|
| Length: | |
| • Short Standard | 124 mm (4.88 in.) |
| • Short ATEX | |
| • Extended Standard | 168 mm (6.62 in.) |
| • Extended ATEX | |
| • 8 in. Extended | |
| Width | 75 mm (2.94 in.) |
| Height | 67 mm (2.62 in.) |
| Weight: | |
| • Short Standard | 1.13 kg (2.5 lbs) |
| • Short ATEX | |
| • Extended Standard | 1.25 kg (2.75 lbs) |
| • Extended ATEX | |
| • 8 in. Extended | |
| **Electrical** | |
| Driver requirements | 24 Vdc, 1.5 amps |
| Connection | 1/2-in. NPT female conduit fitting |
| **Fluid** | |
| Maximum fluid pressure | 104 bar (1500 psi) |
| Maximum fluid temperature | 60 °C (140 °F) |
| Connection | 1/2-20 JIC elbow fittings |



## *Ratings and Label Information*




FM – US and Canada Approved




CE/ATEX Approved

Figure 3 Ratings and Label Information

# Installation

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

**WARNING:** The purchaser should make the manufacturer aware of any external effects or aggressive substances that the equipment may be exposed to.

## *Mounting*

Mount the gun to any mounting plate, using the two #10–32 x 2.5 in. screws shipped with the gun and the two holes in the body. Refer to the *Specifications* for gun dimensions.

## *Fluid Connections*

**WARNING:** An approved pressure relief device set at 104 bar (1500 psi) must be installed in the fluid line to the gun. The fluid hoses connected to the gun must have a minimum burst pressure of 104 bar (1500 psi).

The supply and return hoses can be connected to either one of the fluid fittings on the gun. The fittings are $^1/_2$-20 JIC male connectors.

If using the gun in a dead-end system, replace the unused fitting with a $^1/_4$ in. NPT stainless steel plug.

## *Electrical Connections*

The gun can be connected to any 24 Vdc driver that supplies a minimum of 1.5 amps (such as a Nordson FET-1 or FET-2 timer). The solenoid housing has a $^1/_2$-in. NPT female thread for connection to an electrical conduit.

The solenoid housing can be rotated by loosening or removing the jam nut and housing nut, or on CE approved models, the set screw and housing nut.

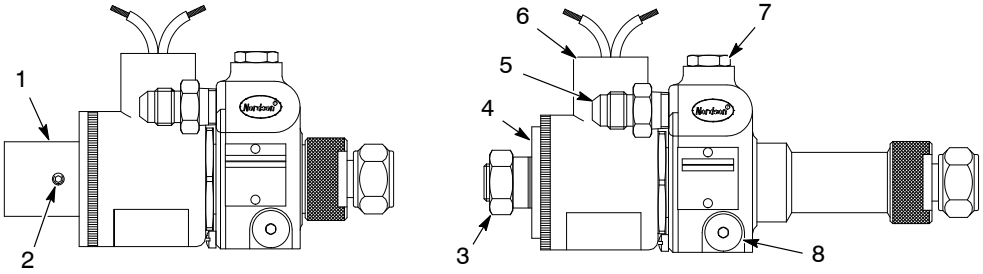



Figure 4 Installation

1. Housing nut (CE)
2. Set screw (CE)
3. Jam nut
4. Housing nut
5. Fluid fittings
6. Conduit connection
7. CO-plate plug
8. Transducer plug

## *Baseefa Special Conditions for Safe Use*

1. The permanently attached cables shall be suitably terminated and protected against impact.
2. The supply to the solenoid coil must be protected with a fuse rated up to 2A.
3. It is considered the responsibility of the user/installer to provide an earth connection facility at the termination point of the solenoid coil leads and provide continuity between this facility and the external termination facility on the spray gun.

## *Spray Monitor System Installation*

To use the A20A spray gun with the Nordson iTrax System or the Flow Sentry System, a CO-plate and pressure transducer must be installed in the gun. These devices allow the systems to detect an abnormal changes in spray pressure that could cause rejects.

### Transducer Installation

See Figure 4. Remove the transducer plug (8). Install the transducer or swivel assembly into the transducer port. Refer to the *Canworks Pressure Transducer/Swivel Assembly* instruction sheet for installation procedures.

### CO-Plate Installation

Refer to Table 1 to select the correct CO-plate for your application.

1. See Figure 4. Remove the CO-Plate plug (7).
2. Make sure the O-ring is in place on the CO-plate.
3. Loosely thread the CO-plate onto the CO-plate puller (shipped with the gun).
4. Insert the puller into the port and push it to seat the O-ring.
5. Partially unscrew the puller from the CO-plate, then push it again to make sure the CO-plate is seated.
6. Unscrew the puller from the CO-plate.
7. Make sure the O-ring is in place on the CO-plate plug. Install the CO-plate plug and tighten it securely.

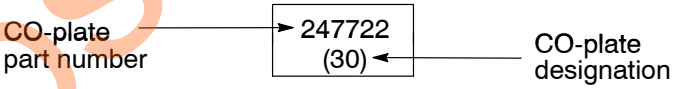
## CO-Plate Selection

Cross-reference your nozzle size with your spray pressure to find the CO-plate part number.

Table 1 CO-Plate Selection

| Spray Pressures | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Nozzle Size (in.)** | **27 Bar (400 psi)** | **34 Bar (500 psi)** | **41 Bar (600 psi)** | **48 Bar (700 psi)** | **55 Bar (800 psi)** | **62 Bar (900 psi)** | **69 Bar (1000 psi)** | **76 Bar (1100 psi)** |
| **0.015** | 247707 (015) | 247707 (015) | 247708 (02) | 247708 (02) | 247708 (02) | 247709 (025) | 247709 (025) | 247709 (025) |
| **0.03** | 247709 (025) | 247710 (03) | 247710 (03) | 247711 (04) | 247711 (04) | 247711 (04) | 247712 (05) | 247712 (05) |
| **0.04** | 247710 (03) | 247711 (04) | 247711 (04) | 247712 (05) | 247713 (06) | 247713 (06) | 247713 (06) | 247714 (075) |
| **0.06** | 247712 (05) | 247713 (06) | 247713 (06) | 247714 (075) | 247714 (075) | 247715 (09) | 247716 (105) | 247716 (105) |
| **0.075** | 247713 (06) | 247714 (075) | 247714 (075) | 247715 (09) | 247716 (105) | 247717 (12) | 247718 (14) | 247718 (14) |
| **0.09** | 247714 (075) | 247715 (09) | 247716 (105) | 247717 (12) | 247717 (12) | 247718 (14) | 247718 (14) | 247719 (16) |
| **0.12** | 247716 (105) | 247717 (12) | 247718 (14) | 247719 (16) | 247719 (16) | 247720 (20) | 247720 (20) | 247720 (20) |
| **0.14** | 247717 (12) | 247718 (14) | 247719 (16) | 247719 (16) | 247720 (20) | 247720 (20) | 247721 (25) | 247721 (25) |
| **0.20** | 247719 (16) | 247720 (20) | 247721 (25) | 247721 (25) | 247722 (30) | 247722 (30) | | |
| **0.30** | 247721 (25) | 247722 (30) | | | | | | |

**NOTE:** The CO-plate designation is on the front of the CO-plate.



# Operation

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

**WARNING:** This equipment can be dangerous unless it is used in accordance with the rules laid down in the manual.

The A20A gun operation is controlled by the timer or pattern controller and driver used to trigger the spray gun. Refer to controller and driver manuals for operation procedures.

**CAUTION:** The gun is designed for high-cycle applications. It is not designed to be triggered ON for long periods of time. Damage to the solenoid coil may occur. When flushing the fluid system, the gun should not triggered ON for more than 5 seconds.

# Maintenance

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

- Flush the gun periodically with a solvent or cleaning solution compatible with your coating material. The interval required depends on the application.
- Clean the nozzle daily.
- Leave the system full of coating material on overnight shutdowns.
- For longer shutdowns, flush the system and leave it full of solvent or cleaning solution.

# Troubleshooting

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

| Problem | Possible Cause | Corrective Action |
|---|---|---|
| **1. Gun fails to trigger** | Poor electrical connection | Check the gun, driver, and timer electrical connections. |
| | Ball and seat module installed incorrectly | Remove, clean, and reinstall the ball and seat module. Refer to *Ball and Seat Module Replacement*. |
| | Failed solenoid coil | Disconnect the coil wires and check the coil resistance with an ohmmeter. The reading should be approximately 18 ohms. Replace the coil if the resistance check fails. Refer to *Solenoid Coil Replacement*. |
| **2. Fluid is spitting or leaking from nozzle** | Dirty or worn ball and seat module | Clean or replace the ball and seat module. Refer to *Ball and Seat Module Replacement*. |
| **3. Fluid is leaking around nozzle nut** | Dirty or damaged metal sealing surfaces | Clean or replace the nozzle, nozzle nut, or ball and seat module. Refer to *Ball and Seat Module Replacement*. |
| **4. Fluid leaks between gun body and solenoid housing and/or seat** | Damaged O-rings | Replace the O-rings. Refer to *Ball and Seat Module Replacement* and *Armature Replacement*. |

# Repair

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

## *Ball and Seat Module Replacement*

**WARNING:** To prevent serious injury to personnel and damage to equipment, relieve system fluid pressure and disconnect and lock out system electrical power before repairing the spray gun.

**CAUTION:** If you disassemble the ball and seat module for inspection and cleaning, mark the ball tip pin location so you can install the ball tip in the same position it was in when it was removed. If you install it 180° out of position, the ball tip will no longer seal against the seat, allowing fluid to leak from the nozzle.

See Figure 5. Use the ball and seat service kit to replace the ball and seat module. You do not have to remove the gun from its mounting.

### Removal

1. Relieve system fluid pressure. Disconnect and lock out system electrical power.
2. Remove the nozzle nut (1) and the nozzle (2).
3. Remove the retaining nut (3).
4. Unscrew the ball and seat module (4) from the armature shaft.

### Installation

1. Install a new O-ring (5) in the gun body or extension groove. The O-ring is included in the ball and seat service kit.
2. Carefully thread the new ball and seat module (4) onto the armature shaft (6) until it bottoms out on the armature shaft flange. Tighten the module finger tight. Do not apply more than 0.56 N•m (5 in.-lbs) of torque.
3. Rotate the seat housing (8) counterclockwise ($^1/_4$ turn maximum) until the first set of slots engage with the gun body pins (7). Do not loosen the threaded connection to engage the slots with the body pins.
4. Place the retaining nut over your finger. Using this finger to hold the ball and seat module tight against the gun body, screw the retaining nut onto the gun body or extension. Tighten the retaining nut to 14–20 N•m (10–15 ft-lbs).
5. Install the nozzle and nozzle nut. Tighten the nozzle nut to 34 N•m (25 ft-lbs) maximum.

## *Ball and Seat Module Replacement* *(contd)*

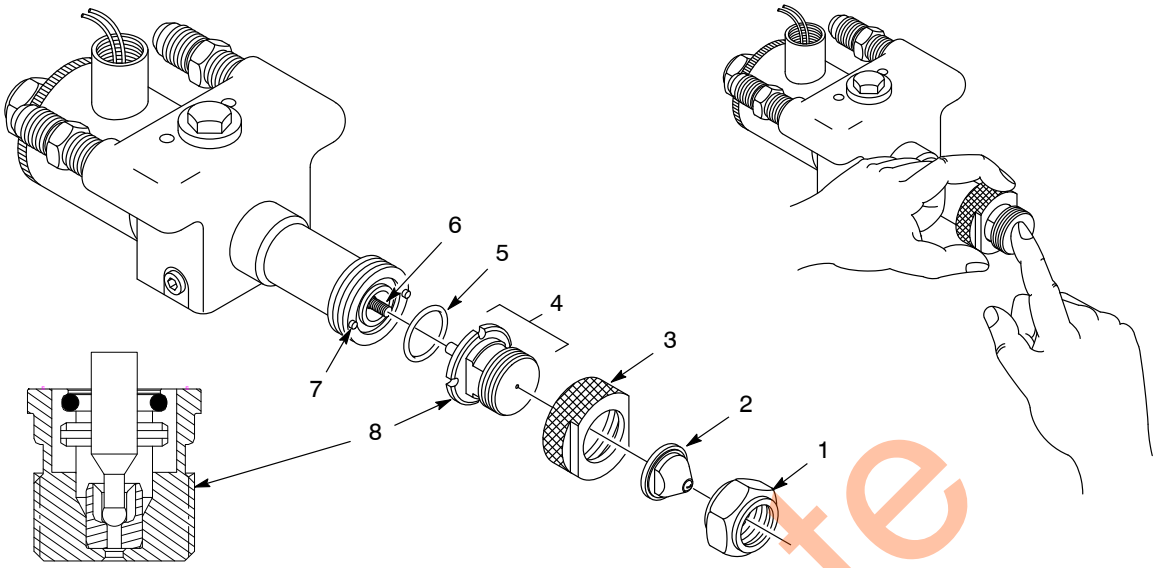



Figure 5 Ball and Seat Module Installation

1. Nozzle nut
2. Nozzle
3. Retaining nut
4. Ball and seat module*
5. O-ring*
6. Armature shaft
7. Body pins
8. Seat housing

*Note:* Parts marked with * are included in ball and seat kit.



## *Solenoid Coil Replacement*

**WARNING:** To prevent serious injury to personnel and damage to equipment, relieve system fluid pressure and disconnect and lock out system electrical power before repairing the spray gun.

See Figure 6. Use the coil service kit to replace the solenoid coil.

1. Relieve system fluid pressure. Disconnect and lock out system electrical power.
2. Remove the gun from its mounting if necessary.
3. Disconnect the coil wires (4) from the driver or driver cable.
4. Disconnect the conduit from the solenoid housing (4). Pull the coil wires from the conduit.

5. Unscrew the jam nut or loosen the set screw (5 or 6). Unscrew the housing nut (3) and remove the solenoid housing from the solenoid sleeve (1). Discard the parts you removed.
6. Slide the new solenoid housing over the solenoid sleeve.
7. Thread the new housing nut on the sleeve and tighten securely.
8. Thread the new jam nut on the sleeve and tighten securely, or install and tighten the set screw securely.
9. Run the new coil wires through the conduit. Reconnect the conduit and coil wires.

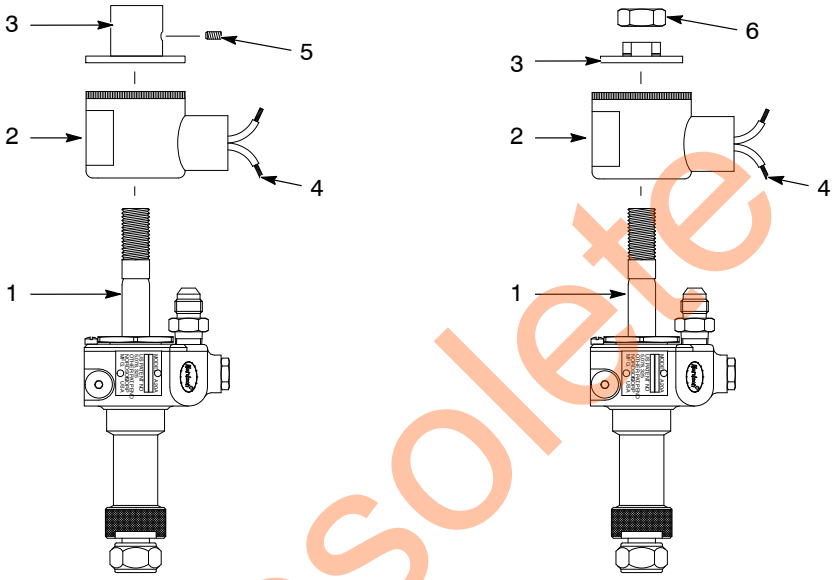



Figure 6 Solenoid Coil Replacement

1. Solenoid sleeve
2. Solenoid housing and coil*
3. Housing nut*
4. Coil wires
5. Set screw (CE approved models)*
6. Jam nut*

*Note:* Parts marked with * are included in the coil service kit.



## *Armature Replacement*

**WARNING:** To prevent serious injury to personnel and damage to equipment, relieve system fluid pressure and disconnect and lock out system electrical power before repairing the spray gun.

See Figure 7. Use the armature service kit to replace the armature.

1. Relieve system fluid pressure. Disconnect and lock out system electrical power.
2. Remove the gun from its mounting.

## *Armature Replacement* *(contd)*

3. Remove the nozzle nut, nozzle, and ball and seat module. Refer to *Ball and Seat Replacement* in this section.

**NOTE:** On guns with 8-in. extensions, you do not have to remove the extension assembly.

4. Remove the solenoid coil. Refer to *Solenoid Coil Replacement* in this section. You do not have to disconnect the solenoid wires or conduit.
5. Unscrew the fillister-head screw (not shown) and solenoid sleeve (1). Remove the long and short springs (2, 3).
6. Pull the armature (4) and fluid guide (6) out of the body. If it cannot be removed by hand, turn the gun upside down and tap on the threaded end of the armature with a small diameter brass rod or other soft tool.
7. Insert the armature into the body, making sure the pins on the shaft go into the slots in the body. Press the fluid guide into the body with your fingers.
8. Rebuild the gun, using the rest of the new parts from the armature kit. Tighten threaded parts securely. Refer to *Solenoid Coil Replacement* and *Ball and Seat Replacement* in this section.

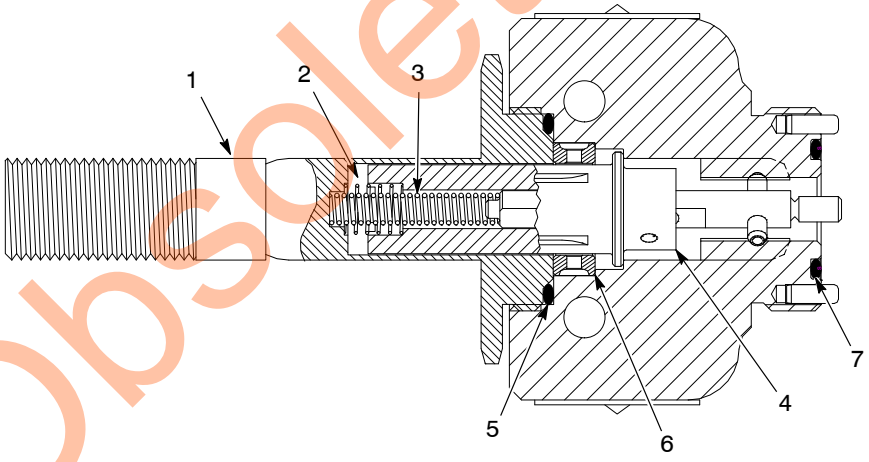



Figure 7 Armature Replacement

1. Solenoid sleeve
2. Short outer spring*
3. Long inner spring*
4. Armature*
5. O-ring*
6. Fluid guide
7. O-ring*

*Note:* Parts marked with * are included in the armature service kit.

# Parts

To order parts, call the Nordson Finishing Customer Support Center at (800) 433–9319 or your local Nordson representative. Use these parts lists and illustrations to locate and describe parts correctly.

## *Gun Models*

Refer to the indicated pages for the model parts lists.

| Part | Description | Page |
|---|---|---|
| 135576 | GUN, A20A standard (FM) | 18 |
| 135575 | GUN, A20A, extended (FM) | 18 |
| 141426 | GUN, A20A standard, ATEX | 20 |
| 141425 | GUN, A20A, extended, ATEX | 20 |
| 144466 | GUN, A20A, extended, 8-inch | 22 |

## *Service Kits*

Keep one of each type of service kit for your gun on hand to reduce downtime.

| Part | Service Kit | Gun Models | | | | | |
|---|---|---|---|---|---|---|---|
| | | 135576 | 135575 | 141426 | 141425 | 144466 | Page |
| 135557 | Ball and seat | X | X | X | X | X | 24 |
| 106300 | Coil, standard | X | X | | | X | 24 |
| 141447 | Coil, ATEX | | | X | X | | 24 |
| 135560 | Armature, standard | X | | X | | | 25 |
| 135559 | Armature, extended | | X | | X | | 25 |
| 144704 | Armature, 8-inch extended | | | | | X | 25 |
| 135558 | Buna-N soft goods | X | X | X | X | X | 25 |
| 334842 | EPR soft goods | X | X | X | X | X | 25 |

## *Standard Short and Extended A20A Spray Guns*

See Figure 8. This parts list covers the standard short and extended models. The only difference between the short and extended models is the length of the gun body and the armature.

| Item | Part | Description | Quantity | Note |
|---|---|---|---|---|
| – | 135576 | GUN, A20A standard | 1 | |
| – | 135575 | GUN, A20A, extended | 1 | |
| 1 | 984171 | • NUT, hex, jam, $^1/_2$-20, steel, zinc | 1 | A |
| 2 | 247641 | • RETAINER, CO-Plate | 1 | |
| 3 | 945020 | • O-RING, hotpaint, $^3/_{16}$ in. tube | 1 | C |
| 4 | 123200 | • NUT, nozzle, anti-foul, stainless steel | 1 | |
| 5 | 135571 | • NUT, retaining | 1 | |
| 6 | 973299 | • PLUG, O-ring, straight thread, $^3/_8$–24 | 2 | |
| 7 | - - - - - - | • BODY, A20A standard or extended gun | 1 | |
| 8 | 981022 | • SCREW, fillister head, #6–32 x 0.375 in., slotted, zinc | 1 | C, D |
| 9 | - - - - - - | • HOUSING, solenoid | 1 | A |
| 10 | 246067 | • CAP, solenoid housing | 1 | A |
| 11 | 246066 | • NUT, housing | 1 | A |
| 12 | - - - - - - | • MODULE, ball & seat | 1 | B |
| 13 | 940150 | • O-RING, hotpaint, 0.563 x 0.688 x 0.063 in. | 1 | B, C, D |
| 14 | - - - - - - | • ARMATURE, standard or extended | 1 | D |
| 15 | 135562 | • GUIDE, fluid | 1 | |
| 16 | 940190 | • O-RING, hotpaint, 0.813 x 0.938 x 0.063 in. | 1 | C, D |
| 17 | 246051 | • SLEEVE, solenoid | 1 | |
| 18 | 972029 | • CONNECTOR, male, 37°, $^1/_2$–20 x $^1/_4$ in. NPT, stainless steel | 2 | |
| 19 | 270863 | • SPRING, compression, 0.415 x 0.247 OD x 0.015 in. | 1 | D |
| 20 | 270905 | • SPRING, compression, 1.00 x 0.157 OD x 0.022 in. | 1 | D |
| 21 | 901109 | • COIL, solenoid | 1 | A |
| 22 | 983604 | • SPRING, washer, curved | 1 | A |
| NS | 981116 | • SCREW, fillister head, #10–32 x 2.50 in., steel, zinc | 2 | E |
| NS | 983120 | • WASHER, lock, split, #10, steel, nickel | 2 | E |
| NS | 247638 | • PULLER, CO-Plate | 1 | |
| NS | 247646 | • CARD, medical alert, injection | 1 | |
| NS | 152999 | • WRENCH | 1 | |
| NS | 901905 | • BRUSH | 1 | |
| NS | 149237 | • COVER, CleanSleeve, mini, 500 pieces | 1 | |

NOTE A: Included in standard coil service kit.
B: Included in ball and seat service kit.
C: Included in soft goods service kit. To replace with EPR O-rings refer to EPR Soft Goods kit on page 25.
D: Included in standard and extended armature service kit.
E: Use for mounting gun.
NS: Not Shown

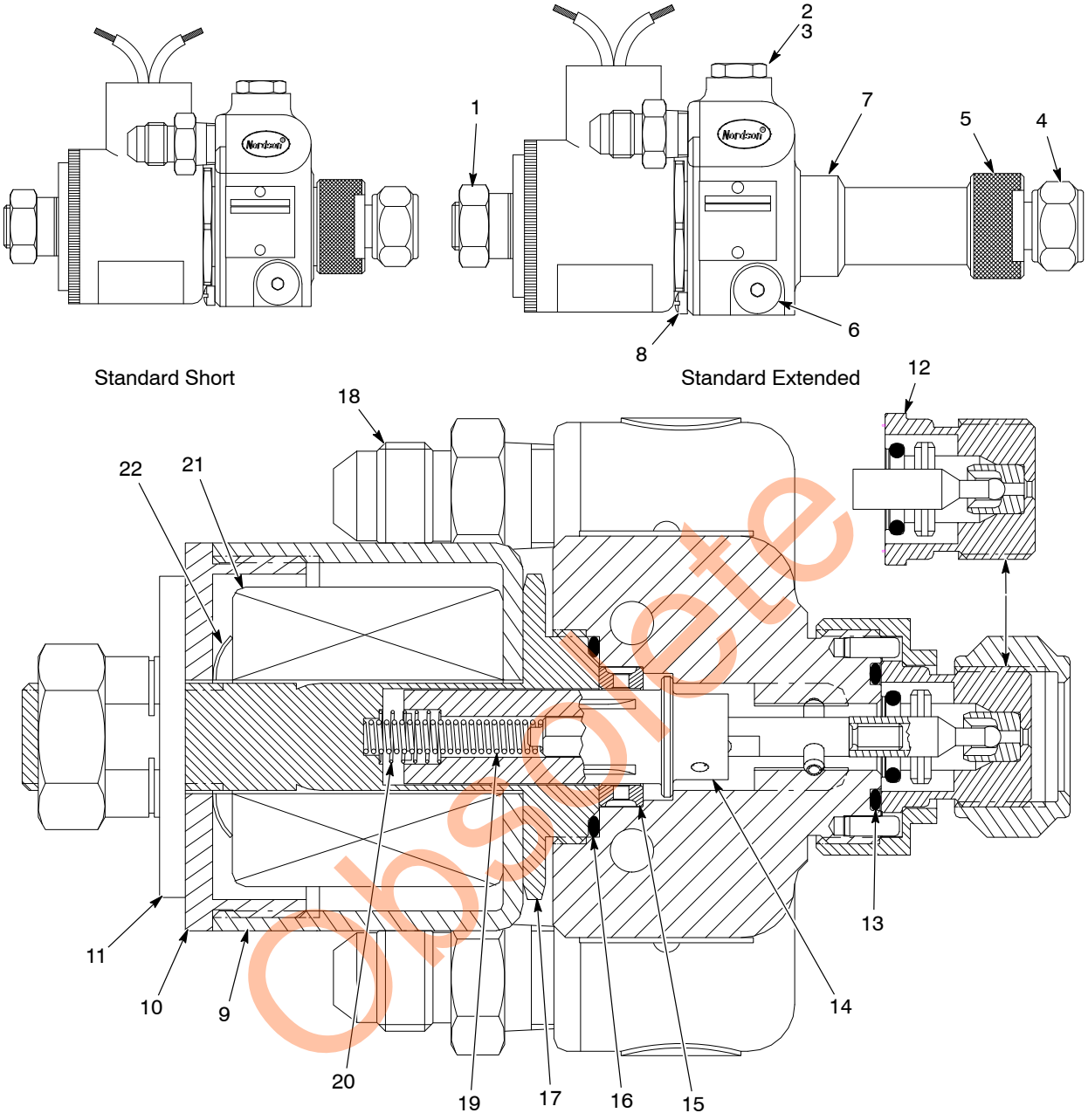



Figure 8 Standard Short and Extended A20A Spray Guns

## *CE/ATEX Short and Extended A20A Spray Guns*

See Figure 9. This parts list covers the CE/ATEX short and extended models. The only difference between the short and extended models is the length of the gun body and the armature.

| Item | Part | Description | Quantity | Note |
|---|---|---|---|---|
| – | 141426 | GUN, A20A standard, ATEX | 1 | |
| – | 141425 | GUN, A20A extended, ATEX | 1 | |
| 1 | 981089 | • SCREW, socket set, #8–32 x 0.50 in., cup, zinc | 1 | A |
| 2 | 247641 | • RETAINER, CO-Plate | 1 | |
| 3 | 945020 | • O-RING, hotpaint, $^{3}/_{16}$ in. tube | 1 | C |
| 4 | 123200 | • NUT, nozzle, anti-foul, stainless steel | 1 | |
| 5 | 135571 | • NUT, retaining | 1 | |
| 6 | 973299 | • PLUG, O-ring, straight thread, $^{3}/_{8}$–24 | 2 | |
| 7 | - - - - - - | • BODY, A20A standard gun | 1 | |
| 8 | 981022 | • SCREW, fillister head, #6–32 x 0.375 in., slotted, zinc | 1 | C, D |
| 9 | - - - - - - | • HOUSING, solenoid | 1 | A |
| 10 | - - - - - - | • CAP, solenoid housing | 1 | A |
| 11 | - - - - - - | • NUT, housing | 1 | A |
| 12 | - - - - - - | • MODULE, ball & seat | 1 | B |
| 13 | 940150 | • O-RING, hotpaint, 0.563 x 0.688 x 0.063 in. | 1 | B, C, D |
| 14 | - - - - - - | • ARMATURE, standard | 1 | D |
| 15 | 135562 | • GUIDE, fluid | 1 | |
| 16 | 940190 | • O-RING, hotpaint, 0.813 x 0.938 x 0.063 in. | 1 | C, D |
| 17 | 247603 | • SLEEVE, solenoid | 1 | |
| 18 | 972029 | • CONNECTOR, male, 37°, $^{1}/_{2}$–20 x $^{1}/_{4}$ in. NPT, stainless steel | 2 | |
| 19 | 270863 | • SPRING, compression, 0.415 x 0.247 OD x 0.015 in. | 1 | D |
| 20 | 270905 | • SPRING, compression, 1.00 x 0.157 OD x 0.022 in. | 1 | D |
| 21 | 901109 | • COIL, solenoid | 1 | A |
| 22 | 983604 | • SPRING, washer, curved | 1 | A |
| 23 | 983010 | • WASHER, flat, 0.188 x 0.375 x 0.040 in., zinc | 1 | |
| 24 | 983111 | • WASHER, lock, split, #8, steel, zinc | 1 | |
| 25 | 981073 | • SCREW, fillister head, #8–32 x 0.375 in., slotted, zinc | 1 | |
| 26 | 343991 | • STRAP, ground, w/wire | 1 | |
| NS | 981116 | • SCREW, fillister head, #10–32 x 2.50 in., steel, zinc | 2 | E |
| NS | 983120 | • WASHER, lock, split, #10, steel, nickel | 2 | E |
| NS | 247638 | • PULLER, CO-Plate | 1 | |
| NS | 247646 | • CARD, medical alert, injection | 1 | |
| NS | 152999 | • WRENCH | 1 | |

*Continued...*

| Item | Part | Description | Quantity | Note |
|---|---|---|---|---|
| NS | 901905 | • BRUSH | 1 | |
| NS | 149237 | • COVER, CleanSleeve, mini, 500 pieces | 1 | |

NOTE A: Included in coil service kit.

B: Included in ball and seat service kit.

C: Included in Buna-N soft goods service kit. To replace with EPR O-rings refer to EPR Soft Goods Kit on page 25.

D: Included in standard and extended armature service kit.

E: Use for mounting gun.

NS: Not Shown

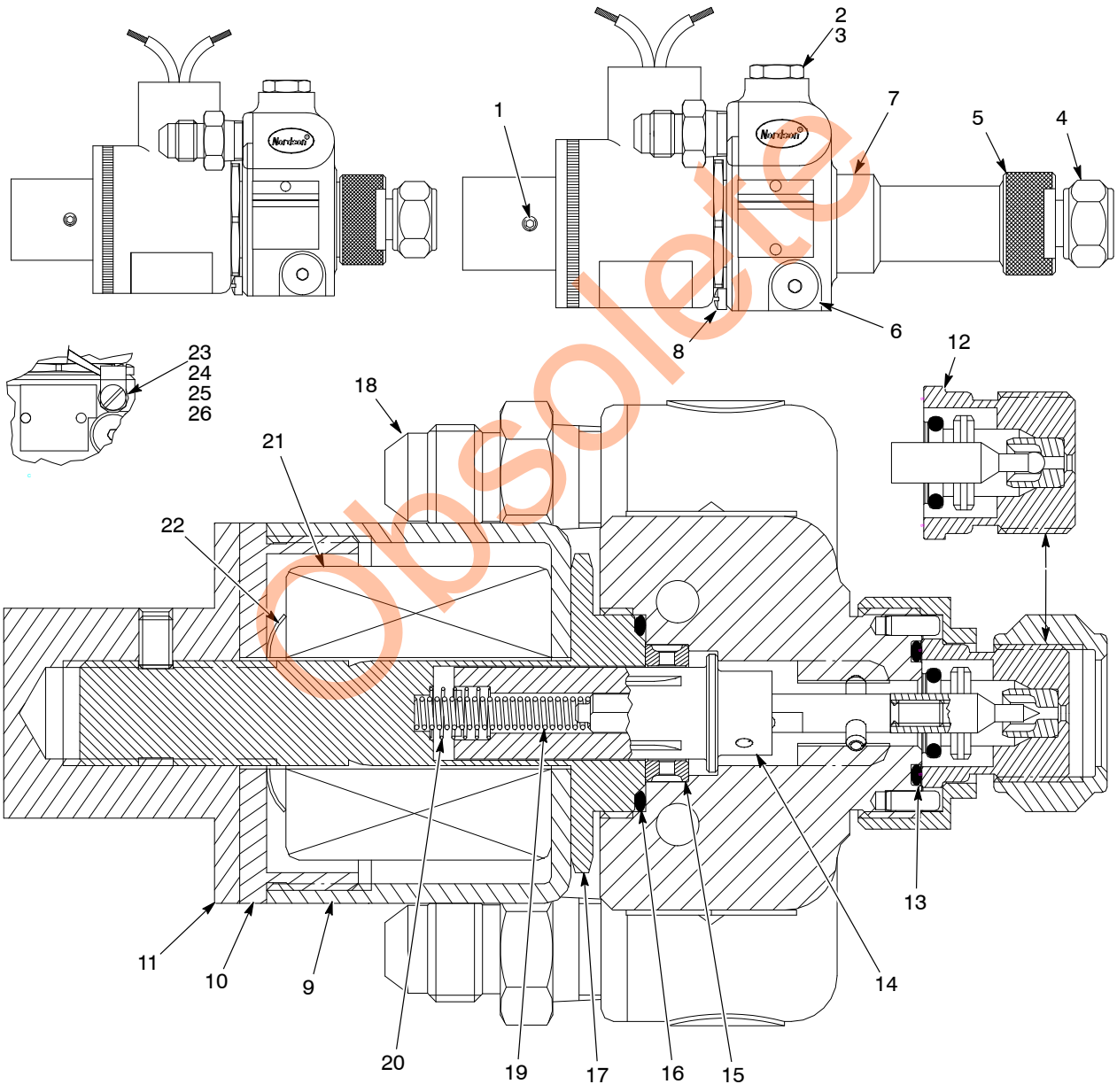



Figure 9 CE/ATEX Short and Extended A20A Spray Guns

## *8-Inch Extended Standard A20A Spray Gun*

See Figure 10.

| Item | Part | Description | Quantity | Note |
|---|---|---|---|---|
| – | 144466 | GUN, A20A extended, 8-inch | 1 | |
| 1 | 984171 | • NUT, hex, jam, 1/2–20, steel, zinc | 1 | A |
| 2 | 247641 | • RETAINER, CO-Plate | 1 | |
| 3 | 945020 | • O-RING, hotpaint, 3/16 in. tube | 1 | C |
| 4 | 123200 | • NUT, nozzle, anti-foul, stainless steel | 1 | |
| 5 | 135571 | • NUT, retaining | 1 | |
| 6 | 973299 | • PLUG, O-ring, straight thread, 3/8–24 | 2 | |
| 7 | - - - - - - | • BODY, A20A standard | 1 | |
| 8 | 981022 | • SCREW, fillister head, #6–32 x 0.375 in., slotted, zinc | 1 | C, D |
| 9 | - - - - - - | • HOUSING, solenoid | 1 | A |
| 10 | 246067 | • CAP, solenoid housing | 1 | A |
| 11 | 246066 | • NUT, housing | 1 | A |
| 12 | - - - - - - | • MODULE, ball & seat | 1 | B |
| 13 | 940150 | • O-RING, hotpaint, 0.563 x 0.688 x 0.063 in. | 2 | B, C, D |
| 14 | - - - - - - | • ARMATURE, extended, 8-inch | 1 | D |
| 15 | 135562 | • GUIDE, fluid | 1 | |
| 16 | 940190 | • O-RING, hotpaint, 0.813 x 0.938 x 0.063 in. | 1 | C, D |
| 17 | 246051 | • SLEEVE, solenoid | 1 | |
| 18 | 972029 | • CONNECTOR, male, 37°, 1/2–20 x 1/4 in. NPT, stainless steel | 2 | |
| 19 | 270863 | • SPRING, compression, 0.415 x 0.247 OD x 0.015 in. | 1 | D |
| 20 | 270905 | • SPRING, compression, 1.00 x 0.157 OD x 0.022 in. | 1 | D |
| 21 | 901109 | • COIL, solenoid | 1 | A |
| 22 | 983604 | • SPRING, washer, curved | 1 | A |
| 23 | 144660 | • EXTENSION, barrel assembly, 8 inch | 1 | |
| 24 | 144702 | • • ADAPTER, extension barrel | 1 | |
| 25 | 135571 | • • NUT, retaining | 1 | |
| NS | 981116 | • SCREW, fillister head, #10–32 x 2.50 in., steel, zinc | 2 | E |
| NS | 983120 | • WASHER, lock, split, #10, steel, nickel | 2 | E |
| NS | 247638 | • PULLER, CO-Plate | 1 | |
| NS | 247646 | • CARD, medical alert, injection | 1 | |
| NS | 152999 | • WRENCH | 1 | |
| NS | 901905 | • BRUSH | 1 | |
| NS | 149237 | • COVER, CleanSleeve, mini, 500 pieces | 1 | |

NOTE A: Included in standard coil service kit.

B: Included in ball and seat service kit.

C: Included in Buna-N soft goods service kit. To replace with EPR O-rings refer to EPR Soft Goods kit on page 25.

D: Included in 8-inch extended armature service kit.

E: Use for mounting gun.

NS: Not Shown

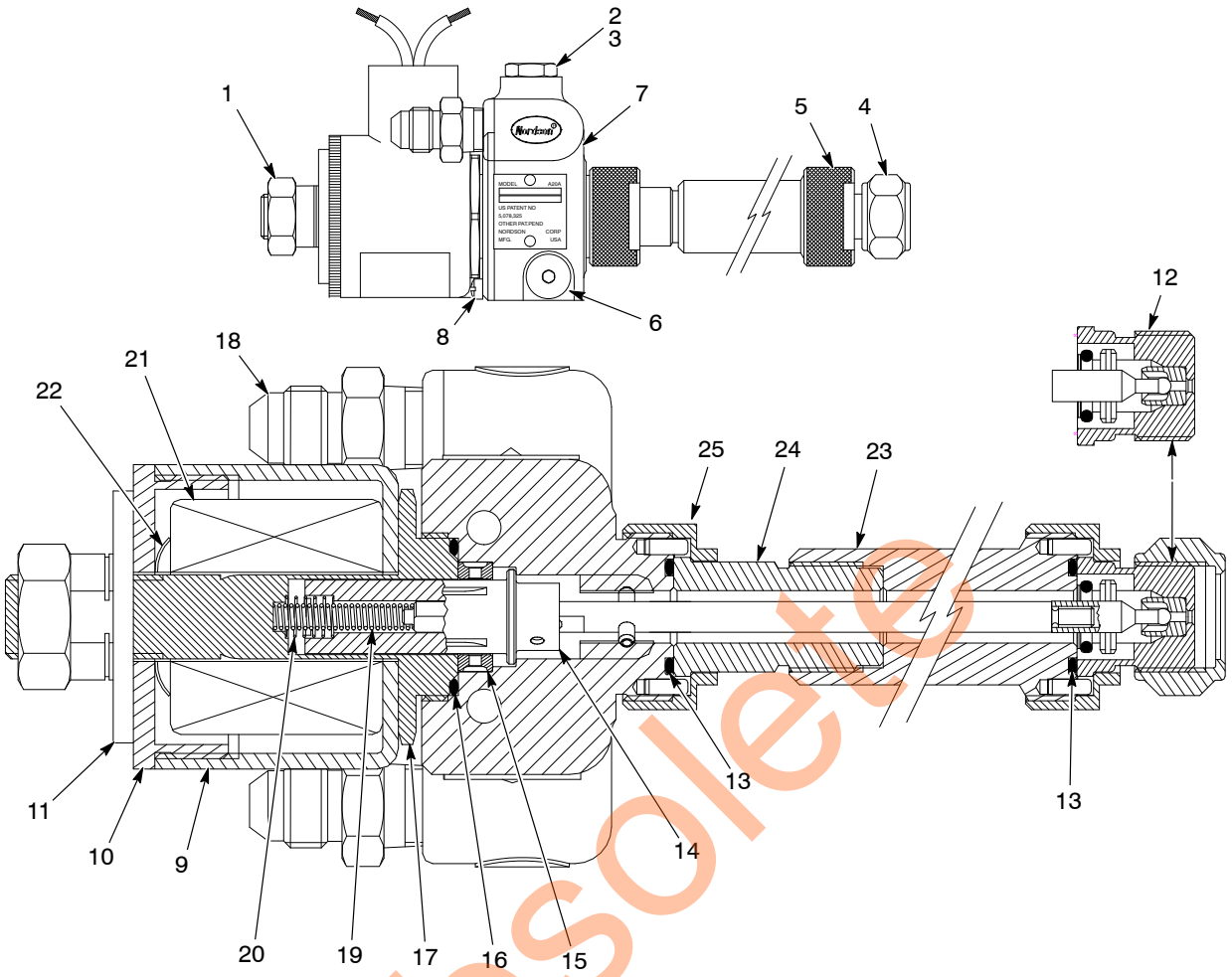



Figure 10 8-Inch Extended Standard A20A Spray Gun

## *Service Kits*

See Figures 8, 9, and 10 for item numbers.

### Ball and Seat Kit

Use for all models. See Figures 8, 9, and 10.

| Item | Part | Description | Quantity |
|---|---|---|---|
| – | 135557 | SERVICE KIT, ball and seat | 1 |
| 12 | - - - - - - | • MODULE, ball & seat | 1 |
| 13 | 940150 | • O-RING, hotpaint, 0.563 x 0.688 x 0.063 in. | 1 |

### Standard Coil Kit

Use for standard (FM and 8-inch extended) models. See Figures 8 and 10.

| Item | Part | Description | Quantity |
|---|---|---|---|
| – | 106300 | SERVICE KIT, coil | |
| 1 | 984171 | • NUT, hex, jam, $^1/_2$–20, steel, zinc | 1 |
| 9 | - - - - - - | • HOUSING, solenoid | 1 |
| 10 | 246067 | • CAP, solenoid housing | 1 |
| 11 | 246066 | • NUT, housing | 1 |
| 21 | 901109 | • COIL, solenoid | 1 |
| 22 | 983604 | • SPRING, washer, curved | 1 |



### CE/ATEX Approved Coil Kit

Use for CE/ATEX short and extended models. See Figure 9.

| Item | Part | Description | Quantity |
|---|---|---|---|
| – | 141447 | SERVICE KIT, coil, ATEX | 1 |
| 1 | 981089 | • SCREW, socket set, #8–32 x 0.50 in., cup, zinc | 1 |
| 9 | - - - - - - | • HOUSING, solenoid | 1 |
| 10 | - - - - - - | • CAP, solenoid housing | 1 |
| 11 | - - - - - - | • NUT, housing | 1 |
| 21 | 901109 | • COIL, solenoid | 1 |
| 22 | 983604 | • SPRING, washer, curved | 1 |

## Armature Kits

See kit description for usage. All armature kits have the same parts except for the armature. See Figures 8, 9, and 10.

| Item | Part | Description | Quantity |
|---|---|---|---|
| – | 135560 | SERVICE KIT, standard armature (standard, CE/ATEX) | 1 |
| – | 135559 | SERVICE KIT, extended armature (extended standard, CE/ATEX) | 1 |
| – | 144704 | SERVICE KIT, armature, 8-inch extension | 1 |
| 8 | 981022 | • SCREW, fillister head, #6–32 x 0.375 in., slotted, zinc | 1 |
| 13 | 940150 | • O-RING, hotpaint, 0.563 x 0.688 x 0.063 in. | 1 |
| 14 | - - - - - - | • ARMATURE, (standard, extended, or 8-inch extended) | 1 |
| 16 | 940190 | • O-RING, hotpaint, 0.813 x 0.938 x 0.063 in. | 1 |
| 19 | 270863 | • SPRING, compression, 0.415 x 0.247 OD x 0.015 in. | 1 |
| 20 | 270905 | • SPRING, compression, 1.00 x 0.157 OD x 0.022 in. | 1 |

## Buna-N Soft Goods Kit

Replaces standard O-rings used on all models. See Figures 8, 9, and 10.

| Item | Part | Description | Quantity | Note |
|---|---|---|---|---|
| – | 135558 | SERVICE KIT, soft goods, Buna-N | 1 | |
| 3 | 945020 | • O-RING, hotpaint, $^{3}/_{16}$ in. tube | 3 | |
| 8 | 981022 | • SCREW, fillister head, #6–32 x 0.375 in., slotted, zinc | 1 | |
| 13 | 940150 | • O-RING, hotpaint, 0.563 x 0.688 x 0.063 in. | 1 | |
| 16 | 940190 | • O-RING, hotpaint, 0.813 x 0.938 x 0.063 in. | 1 | |
| NS | 940083 | • O-RING, Viton ETP, 0.188 x 0.313 x 0.063 in. | | A |

NOTE A: Use with optional transducer.

NS: Not Shown



## EPR Soft Goods Kit

Use on all models, for applications using harsh solvents such as MEK. See Figures 8, 9, and 10.

| Item | Part | Description | Quantity |
|---|---|---|---|
| – | 334842 | SERVICE KIT, soft goods, EPR | 1 |
| 3 | 945087 | • O-RING, EPR, $^{3}/_{16}$ in. tube | 3 |
| 8 | 981022 | • SCREW, fillister head, #6-32 x 0.375 in., slotted, zinc | 1 |
| 13 | 940159 | • O-RING, EPR, 0.563 x 0.688 x 0.063 in. | 1 |
| 16 | 334840 | • O-RING, EPR, 0.813 x 0.938 x 0.063 in. | 1 |

# EU DECLARATION of CONFORMITY

**Product:** A20A

**Models:** Standard Length A20A

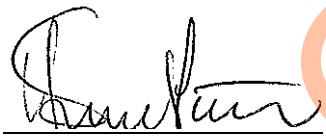
**Description:** Compact airless automatic spray applicator electrically triggered, for use with flammable or non-flammable materials.

**Applicable Directives:**
2014/34/EU (ATEX equipment for use in potentially explosive atmospheres)
2006/42/EC (Machinery Directive)

**Standards Used for Compliance:**
EN60204 (2006) EN60079-0 (2012)
EN12100 (2012) EN60079-1 (2014)

**Principles:**
This product has been designed and manufactured to the directive and standards / norms described above.

**Certificates:**
ATEX Quality Notification – SGS Baseefa (1180) (Buxton, Derbyshire, UK)
SGS Baseefa (Buxton, Derbyshire, UK) – Baseefa02ATEX0049X
Markings - Ex II 2 G Ex db IIB T3 Gb (Ta -20°C to + 60°C)
DNV ISO9001



Date: 01March2017

Hallie Smith - Petee
Engineering Manager
Industrial Coating Systems
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**Nordson Authorized Representative in the EU**
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Industrial Coating Systems
Nordson Deutschland GmbH
Heinrich-Hertz-StraBe 42-44
D-40699 Erkrath

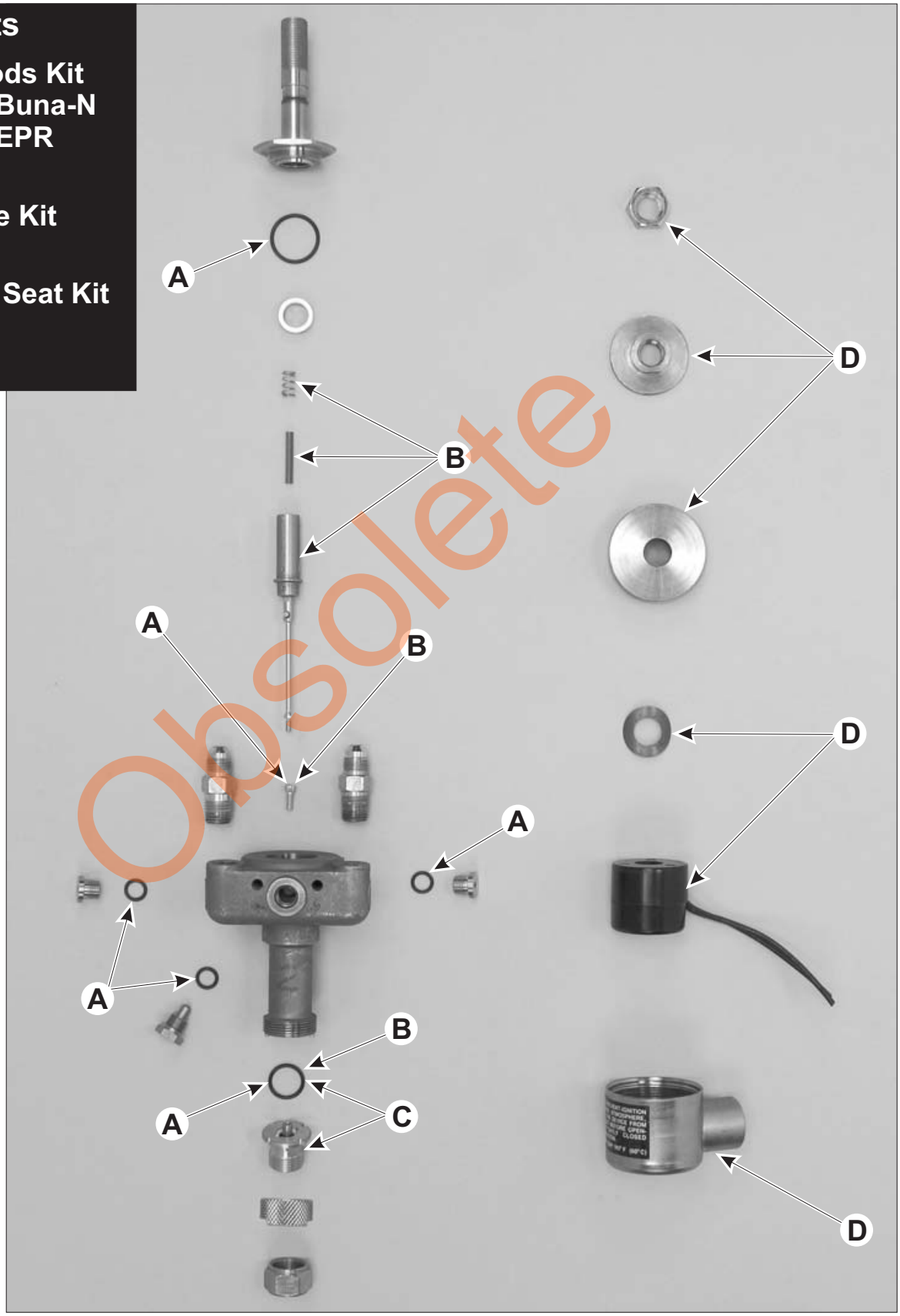
# A20A Spray Gun

Refer to the A20A Spray Gun manual 108182 for complete service and parts information.

For parts and technical support call (800) 433-9319.

## Service Kits

| | | |
|---|---|---|
| A - | Soft Goods Kit<br>135558 Buna-N<br>334842 EPR | |
| B - | 135559<br>Armature Kit | |
| C - | 135557<br>Ball and Seat Kit | |
| D - | 106300<br>Coil Kit | |



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