Unity PURJet 30XT/300XT Dispensing System

Customer Product Manual
Part 1128349_01
Issued 8/19

This document contains important safety information. Be sure to read and follow all safety information in this document and any other related documentation.

NORDSON CORPORATION • DULUTH, GEORGIA • USA
www.nordson.com

For CE Declaration, refer to equipment documentation.

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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Unity PURJet 30XT/300XT Dispensing System

Safety

Read this section before using the equipment. This section contains recommendations and practices applicable to the safe installation, operation, and maintenance (hereafter referred to as “use”) of the product described in this document (hereafter referred to as “equipment”). Additional safety information, in the form of task-specific safety alert messages, appears as appropriate throughout this document.

WARNING! Failure to follow the safety messages, recommendations, and hazard avoidance procedures provided in this document can result in personal injury, including death, or damage to equipment or property.

Safety Alert Symbols

The following safety alert symbol and signal words are used throughout this document to alert the reader to personal safety hazards or to identify conditions that may result in damage to equipment or property. Comply with all safety information that follows the signal word.

WARNING! Indicates a potentially hazardous situation that, if not avoided, can result in serious personal injury, including death.

CAUTION! Indicates a potentially hazardous situation that, if not avoided, can result in minor or moderate personal injury.

CAUTION! (Used without the safety alert symbol) Indicates a potentially hazardous situation that, if not avoided, can result in damage to equipment or property.

Responsibilities of the Equipment Owner

Equipment owners are responsible for managing safety information, ensuring that all instructions and regulatory requirements for use of the equipment are met, and for qualifying all potential users.

Safety Information

- Research and evaluate safety information from all applicable sources, including the owner-specific safety policy, best industry practices, governing regulations, material manufacturer's product information, and this document.
- Make safety information available to equipment users in accordance with governing regulations. Contact the authority having jurisdiction for information.
- Maintain safety information, including the safety labels affixed to the equipment, in readable condition.

Instructions, Requirements, and Standards

- Ensure that the equipment is used in accordance with the information provided in this document, governing codes and regulations, and best industry practices.
- If applicable, receive approval from your facility's engineering or safety department, or other similar function within your organization, before installing or operating the equipment for the first time.
- Provide appropriate emergency and first aid equipment.
- Conduct safety inspections to ensure required practices are being followed.
- Re-evaluate safety practices and procedures whenever changes are made to the process or equipment.

User Qualifications

Equipment owners are responsible for ensuring that users:

- receive safety training appropriate to their job function as directed by governing regulations and best industry practices
- are familiar with the equipment owner's safety and accident prevention policies and procedures
- receive equipment and task-specific training from another qualified individual

  NOTE: Nordson can provide equipment-specific installation, operation, and maintenance training. Contact your Nordson representative for information

- possess industry- and trade-specific skills and a level of experience appropriate to their job function
- are physically capable of performing their job function and are not under the influence of any substance that degrades their mental capacity or physical capabilities

Applicable Industry Safety Practices

The following safety practices apply to the use of the equipment in the manner described in this document. The information provided here is not meant to include all possible safety practices, but represents the best safety practices for equipment of similar hazard potential used in similar industries.

Intended Use of the Equipment

- Use the equipment only for the purposes described and within the limits specified in this document.
- Do not modify the equipment.
- Do not use incompatible materials or unapproved auxiliary devices. Contact your Nordson representative if you have any questions on material compatibility or the use of non-standard auxiliary devices.

Instructions and Safety Messages

- Read and follow the instructions provided in this document and other referenced documents.
- Familiarize yourself with the location and meaning of the safety warning labels and tags affixed to the equipment. Refer to *Safety Labels and Tags* at the end of this section.
- If you are unsure of how to use the equipment, contact your Nordson representative for assistance.

Installation Practices

- Install the equipment in accordance with the instructions provided in this document and in the documentation provided with auxiliary devices.
- Ensure that the equipment is rated for the environment in which it will be used. This equipment has not been certified for compliance with the ATEX directive nor as nonincendive and should not be installed in potentially explosive environments.
- Ensure that the processing characteristics of the material will not create a hazardous environment. Refer to the Safety Data Sheet (SDS) for the material.
- If the required installation configuration does not match the installation instructions, contact your Nordson representative for assistance.
- Position the equipment for safe operation. Observe the requirements for clearance between the equipment and other objects.
- Install lockable power disconnects to isolate the equipment and all independently powered auxiliary devices from their power sources.
- Properly ground all equipment. Contact your local building code enforcement agency for specific requirements.
- Ensure that fuses of the correct type and rating are installed in fused equipment.
- Contact the authority having jurisdiction to determine the requirement for installation permits or inspections.

Operating Practices

- Familiarize yourself with the location and operation of all safety devices and indicators.
- Confirm that the equipment, including all safety devices (guards, interlocks, etc.), is in good working order and that the required environmental conditions exist.
- Use the personal protective equipment (PPE) specified for each task. Refer to *Equipment Safety Information* or the material manufacturer's instructions and SDS for PPE requirements.
- Do not use equipment that is malfunctioning or shows signs of a potential malfunction.

Maintenance and Repair Practices

- Allow only personnel with appropriate training and experience to operate or service the equipment.
- Perform scheduled maintenance activities at the intervals described in this document.
- Relieve system hydraulic and pneumatic pressure before servicing the equipment.
- De-energize the equipment and all auxiliary devices before servicing the equipment.
- Use only new Nordson-authorized refurbished or replacement parts.
- Read and comply with the manufacturer's instructions and the SDS supplied with equipment cleaning compounds.

  NOTE: SDSs for cleaning compounds that are sold by Nordson are available at www.nordson.com or by calling your Nordson representative.

- Confirm the correct operation of all safety devices before placing the equipment back into operation.
- Dispose of waste cleaning compounds and residual process materials according to governing regulations. Refer to the applicable SDS or contact the authority having jurisdiction for information.
- Keep equipment safety warning labels clean. Replace worn or damaged labels.

Equipment Safety Information

This equipment safety information is applicable to the following types of Nordson equipment:

- hot melt and cold adhesive application equipment and all related accessories
- pattern controllers, timers, detection and verification systems, and all other optional process control devices

Equipment Shutdown

To safely complete many of the procedures described in this document, the equipment must first be shut down. The level of shut down required varies by the type of equipment in use and the procedure being completed.
If required, shut down instructions are specified at the start of the procedure.
The levels of shut down are:

Relieving System Hydraulic Pressure

Completely relieve system hydraulic pressure before breaking any hydraulic connection or seal. Refer to the melter-specific product manual for instructions on relieving system hydraulic pressure.

De-energizing the System

Isolate the system (melter, hoses, applicators, and optional devices) from all power sources before accessing any unprotected high-voltage wiring or connection point.

1. Turn off the equipment and all auxiliary devices connected to the equipment (system).
2. To prevent the equipment from being accidentally energized, lock and tag the disconnect switch(es) or circuit breaker(s) that provide input electrical power to the equipment and optional devices.

   NOTE: Government regulations and industry standards dictate specific requirements for the isolation of hazardous energy sources. Refer to the appropriate regulation or standard.

Disabling the Applicators

NOTE: Adhesive dispensing applicators are referred to as “guns” in some previous publications.

All electrical or mechanical devices that provide an activation signal to the applicators, applicator solenoid valve(s), or the melter pump must be disabled before work can be performed on or around an applicator that is connected to a pressurized system.

1. Turn off or disconnect the applicator triggering device (pattern controller, timer, PLC, etc.).
2. Disconnect the input signal wiring to the applicator solenoid valve(s).
3. Reduce the air pressure to the applicator solenoid valve(s) to zero; then relieve the residual air pressure between the regulator and the applicator.

General Safety Warnings and Cautions

Table 1 contains the general safety warnings and cautions that apply to Nordson hot melt and cold adhesive equipment. Review the table and carefully read all of the warnings or cautions that apply to the type of equipment described in this manual.

Equipment types are designated in Table 1 as follows:

HM = Hot melt (melters, hoses, applicators, etc.)

PC = Process control

CA = Cold adhesive (dispensing pumps, pressurized container, and applicators)

Table 1 General Safety Warnings and Cautions

Equipment Type	Warning or Caution
HM	**WARNING!** Hazardous vapors! Before processing any polyurethane reactive (PUR) hot melt or solvent-based material through a compatible Nordson melter, read and comply with the material's SDS. Ensure that the material's processing temperature and flashpoints will not be exceeded and that all requirements for safe handling, ventilation, first aid, and personal protective equipment are met. Failure to comply with SDS requirements can cause personal injury, including death.
HM	**WARNING!** Reactive material! Never clean any aluminum component or flush Nordson equipment with halogenated hydrocarbon fluids. Nordson melters and applicators contain aluminum components that may react violently with halogenated hydrocarbons. The use of halogenated hydrocarbon compounds in Nordson equipment can cause personal injury, including death.
HM, CA	**WARNING!** System pressurized! Relieve system hydraulic pressure before breaking any hydraulic connection or seal. Failure to relieve the system hydraulic pressure can result in the uncontrolled release of hot melt or cold adhesive, causing personal injury.

Continued...

Table 1 General Safety Warnings and Cautions *(contd)*

Equipment Type	Warning or Caution
HM	**WARNING!** Molten material! Wear eye or face protection, clothing that protects exposed skin, and heat-protective gloves when servicing equipment that contains molten hot melt. Even when solidified, hot melt can still cause burns. Failure to wear appropriate personal protective equipment can result in personal injury.
HM, PC	**WARNING!** Equipment starts automatically! Remote triggering devices are used to control automatic hot melt applicators. Before working on or near an operating applicator, disable the applicator's triggering device and remove the air supply to the applicator's solenoid valve(s). Failure to disable the applicator's triggering device and remove the supply of air to the solenoid valve(s) can result in personal injury.
HM, CA, PC	**WARNING!** Risk of electrocution! Even when switched off and electrically isolated at the disconnect switch or circuit breaker, the equipment may still be connected to energized auxiliary devices. De-energize and electrically isolate all auxiliary devices before servicing the equipment. Failure to properly isolate electrical power to auxiliary equipment before servicing the equipment can result in personal injury, including death.
HM, CA, PC	**WARNING!** Risk of fire or explosion! Nordson adhesive equipment is not rated for use in explosive environments and has not been certified for the ATEX directive or as nonincendive. In addition, this equipment should not be used with solvent-based adhesives that can create an explosive atmosphere when processed. Refer to the SDS for the adhesive to determine its processing characteristics and limitations. The use of incompatible solvent-based adhesives or the improper processing of solvent-based adhesives can result in personal injury, including death.

General Safety Warnings and Cautions (contd)

Table 1 General Safety Warnings and Cautions *(contd)*

Equipment Type	Warning or Caution
HM, CA, PC	**WARNING!** Allow only personnel with appropriate training and experience to operate or service the equipment. The use of untrained or inexperienced personnel to operate or service the equipment can result in injury, including death, to themselves and others and can damage to the equipment.
HM	**CAUTION!** Hot surfaces! Avoid contact with the hot metal surfaces of applicators, hoses, and certain components of the melter. If contact can not be avoided, wear heat-protective gloves and clothing when working around heated equipment. Failure to avoid contact with hot metal surfaces can result in personal injury.
HM	**CAUTION!** Some Nordson melters are specifically designed to process polyurethane reactive (PUR) hot melt. Attempting to process PUR in equipment not specifically designed for this purpose can damage the equipment and cause premature reaction of the hot melt. If you are unsure of the equipment's ability to process PUR, contact your Nordson representative for assistance.
HM, CA	**CAUTION!** Before using any cleaning or flushing compound on or in the equipment, read and comply with the manufacturer's instructions and the SDS supplied with the compound. Some cleaning compounds can react unpredictably with hot melt or cold adhesive, resulting in damage to the equipment.
HM	**CAUTION!** Nordson hot melt equipment is factory tested with Nordson Type R fluid that contains polyester adipate plasticizer. Certain hot melt materials can react with Type R fluid and form a solid gum that can clog the equipment. Before using the equipment, confirm that the hot melt is compatible with Type R fluid.

Other Safety Precautions

- Do not use an open flame to heat hot melt system components.
- Check high pressure hoses daily for signs of excessive wear, damage, or leaks.
- Never point a dispensing handgun at yourself or others.
- Suspend dispensing handguns by their proper suspension point.

First Aid

If molten hot melt comes in contact with your skin:

1. Do NOT attempt to remove the molten hot melt from your skin.
2. Immediately soak the affected area in clean, cold water until the hot melt has cooled.
3. Do NOT attempt to remove the solidified hot melt from your skin.
4. In case of severe burns, treat for shock.
5. Seek expert medical attention immediately. Give the SDS for the hot melt to the medical personnel providing treatment.

Safety Labels and Tags

Figure 1 illustrates the location of the product safety labels and tags affixed to the equipment. Table 2 provides an illustration of the hazard identification symbols that appear on each safety label and tag, the meaning of the symbol, or the exact wording of any safety message.

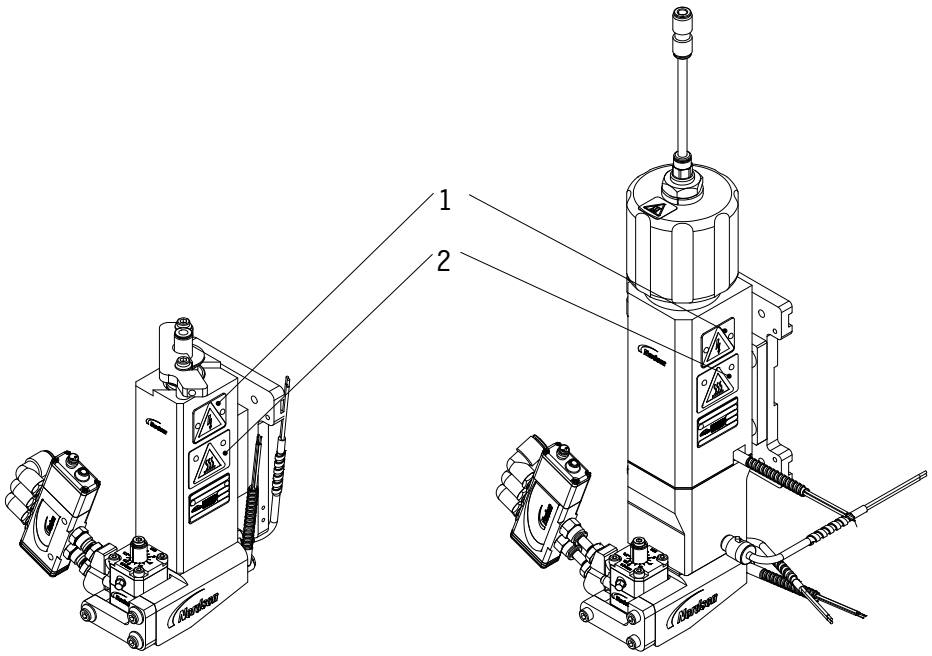
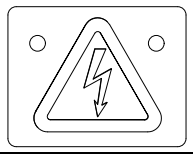
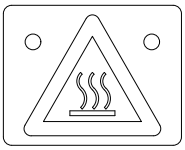


Figure 1 Safety labels and tags

Table 2 Safety Labels and Tags

Item	Part	Description
1.	- - - - - -	 Sign, power
2.	- - - - - -	 Sign, hot

Description

This manual describes the installation and use of the Nordson Unity PURJet 30XT/300XT dispensing system. When necessary, the reader is referred to the documentation supplied with other Nordson products or products supplied by third parties.

The Unity PURJet 30XT/300XT dispensing system liquifies solid-form polyurethane reactive (PUR) hot melt adhesive contained in 30/300-cc cartridges and maintains the adhesive at the desired temperature. When the system is activated, it uses compressed air and jetting to dispense adhesive as a series of joined dots onto the surface of a product or into a product feature, usually in a small to mid-sized electronics assembly application. The adhesive dots may be as small as 0.35 mm (0.01 in.) in width. The system includes:

- the Unity controller
- the Unity PURJet 30XT/300XT applicator
- the Unity PURJet 30XT jet dispensing module
- a remote air treatment and muffler assembly (hereafter referred to as the air kit)
- a Nordson Corporation or customer-supplied robot for use with the Unity controller and applicator

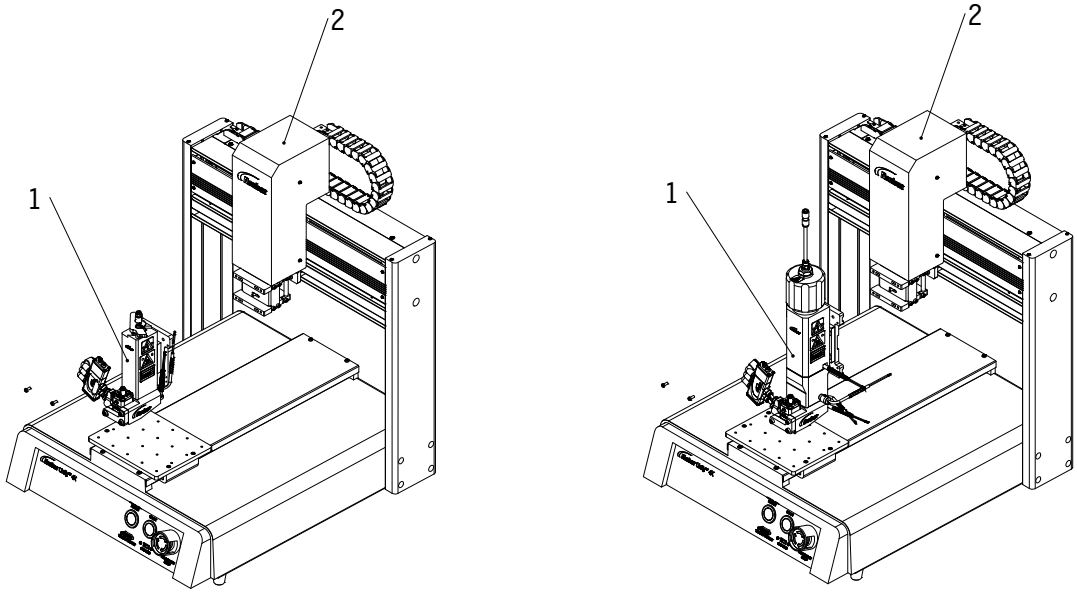


Figure 2 Unity PURJet 30XT/300XT dispensing system

1. Applicator with jet module
2. Robot (Nordson Corporation robot shown)

Intended Use

Unity Series dispensing systems are specifically designed to:

- Melt and pump solid-form PUR hot melt adhesives contained in cartridges that are engineered to be liquified and extruded at temperatures below 200 °C (392 °F)
- Be used with compatible equipment manufactured by Nordson Corporation
- Be used in non-explosive environments

The Unity PURJet 30XT300XT dispensing system is virtually complete, but is intended to be incorporated into machinery or assemblies by an integrator. The equipment must not be placed into use in a member state of the European Union until the parent machinery or assemblies have been declared by the integrator to be in conformity with the applicable directives of the European Commission.

Limitations of Use

Use Unity Series dispensing systems only for the purpose for which they are designed. Unity Series dispensing systems should not be used:

- to melt or pump any material that creates a health or safety hazard when heated
- in environments that will require the system to be cleaned using a water wash or spray

Additional Limitations of Use for PUR Adhesives

When the maximum level of harmful substance concentration is exceeded, use a gas mask and air purifying equipment.

Unit Identification

See Figure 3. You will need the model and part number of the applicator when requesting service or ordering spare parts and optional equipment. The applicator model and part number are indicated on the equipment identification plate.

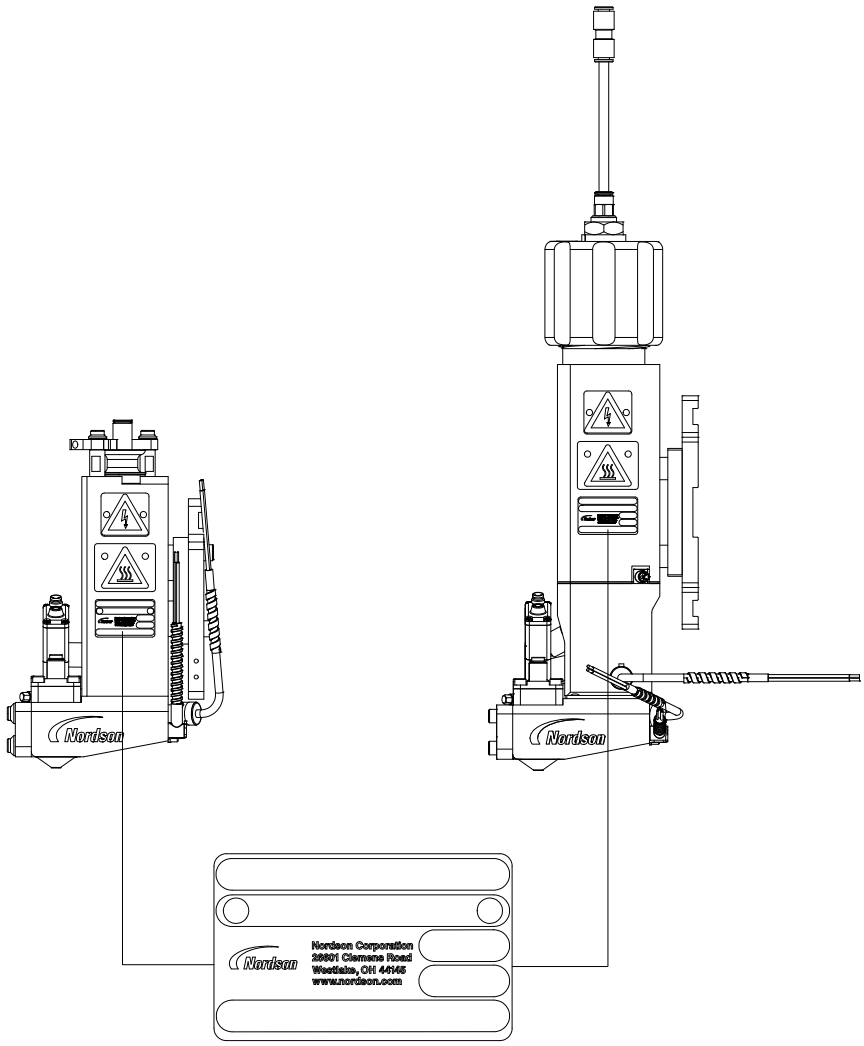


Figure 3 Applicator equipment identification plate

Key Components

Figures 4-6 provide the name and the location of key system components.

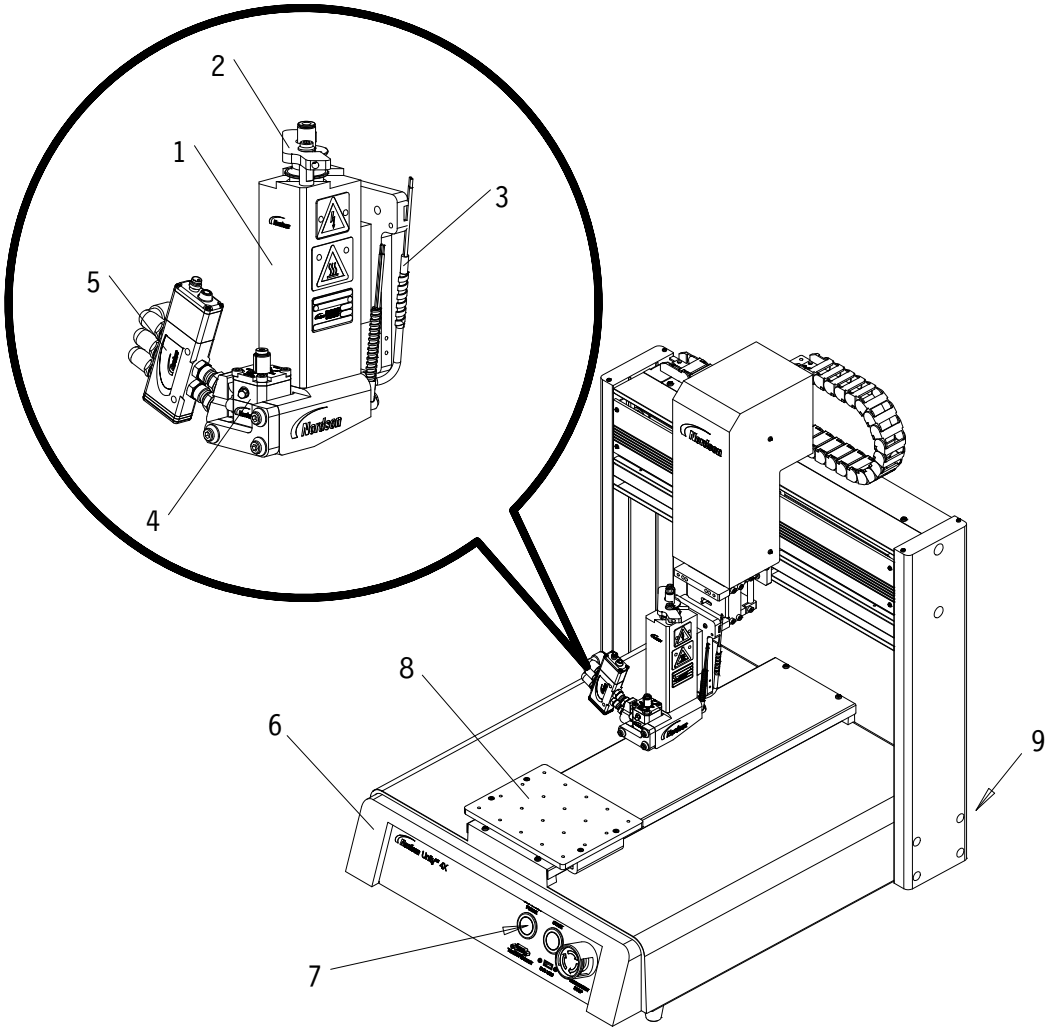


Figure 4 Key components of the applicator and robot assemblies – PURJet 30XT

1. Applicator body
2. End cap
3. Applicator heater block cordset
4. Jet module (nozzle not visible)
5. Solenoid valve
6. Robot
7. Robot controls
8. Moving plate
9. Robot power switch (on back of unit)

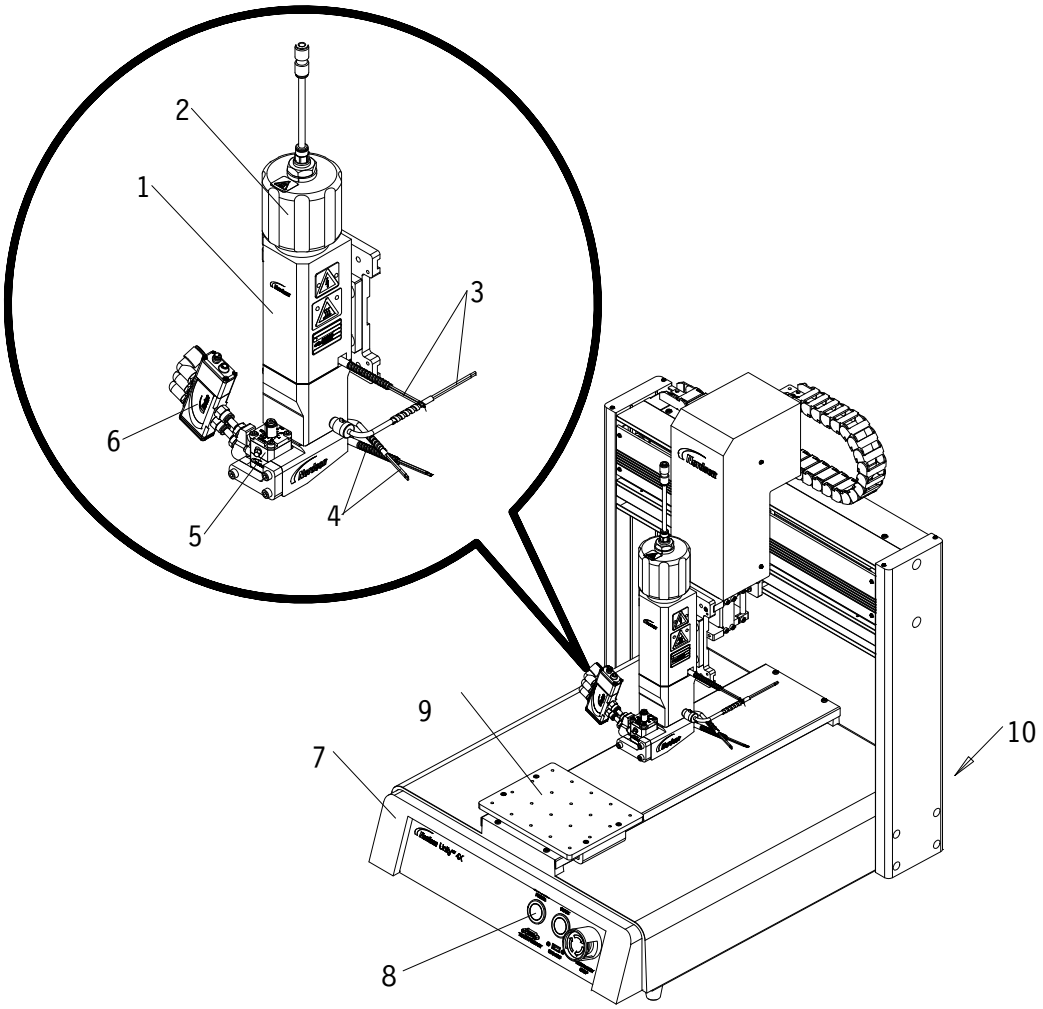


Figure 5 Key components of the applicator and robot assemblies – PURJet 300XT

1. Applicator body
2. End cap
3. Applicator manifold cordset
4. Applicator heater block cordset
5. Jet module (nozzle not visible)
6. Solenoid valve
7. Robot
8. Robot controls
9. Moving plate
10. Robot power switch (on back of unit)

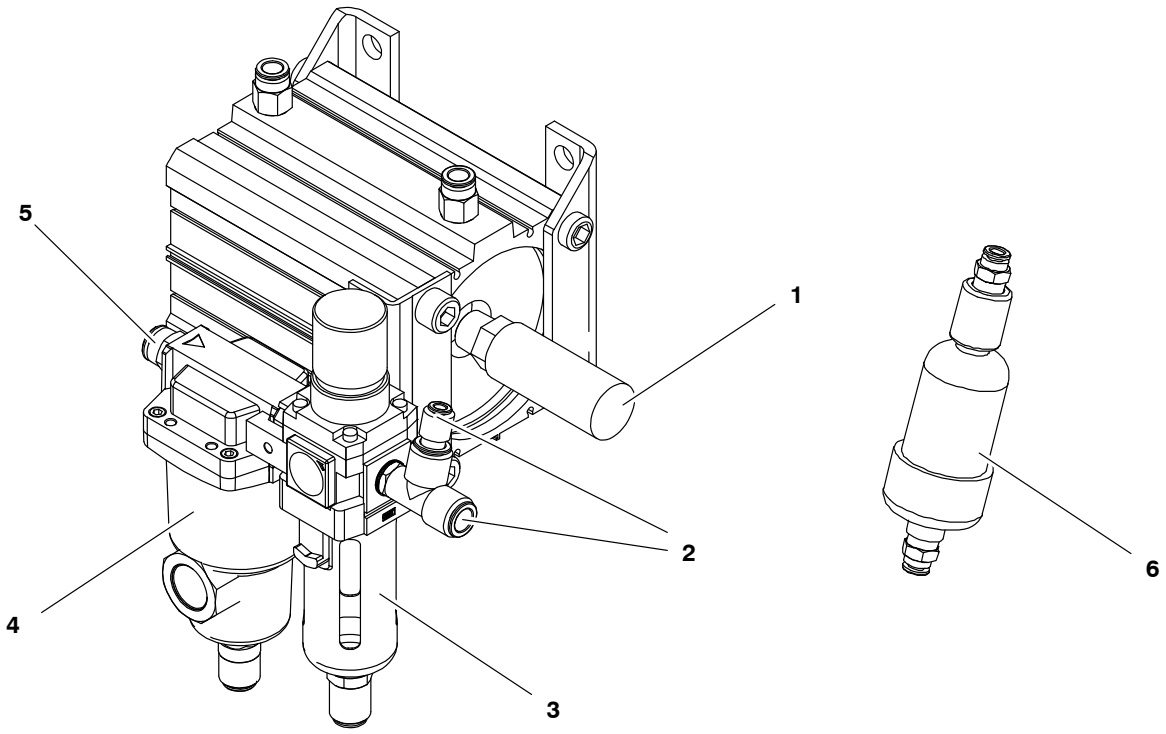


Figure 6 Key components of the air kit

1. Muffler
2. Air output ports
3. Air pressure regulator and gauge
4. Water separator filter
5. Air supply input
6. Air dryer

Installation

Installation involves placing the system in the desired location and making the electrical and hydraulic connections.

Electro-Magnetic Compliance Information

This system is classified as Class A, Group 2 under the European standard for limits and methods of measurement, EN 55011.

Experience of Installation Personnel

The instructions provided in this section are intended to be used by personnel who have experience in the following subjects:

- Hot melt application processes
- Industrial power and control wiring
- Industrial mechanical installation practices
- Basic process control and instrumentation

Customer-Supplied Installation Components

In addition to the components provided by Nordson Corporation, installation of the Unity PURJet 30XT/300XT dispensing system requires the following customer-supplied components:

- 240 VAC power supply
- Nordson Corporation or customer-supplied robot and all associated components (computer, RS-232 cable, etc.) required to program the robot
- appropriate guarding and signage as required to prevent personal injury during operation and service activities

Position the Robot

1. Unpack and place the robot assembly at the desired location. Consider the following when locating the robot assembly:
   - The plant's electrical service must be rated to handle the power required by the system.
   - The operator must be able to safely reach and accurately monitor moving parts and controls.
   - The equipment must be installed near a supply of clean, dry, regulator, unlubricated compressed air.
   - The equipment must be installed away from areas with strong drafts or where sudden temperature changes occur.
   - The equipment must be installed where it will be in conformance with the ventilation requirements specified in the Material Safety Data Sheet for the hot melt being used.
2. Install appropriate guarding and signage as required to prevent personal injury (due to pressurized material, hot surfaces, pinch points, etc.) during operation and service activities.

Install the Applicator on the Robot

See Figure 7. Use the mounting block and screws supplied with the applicator to install the applicator on the robot.

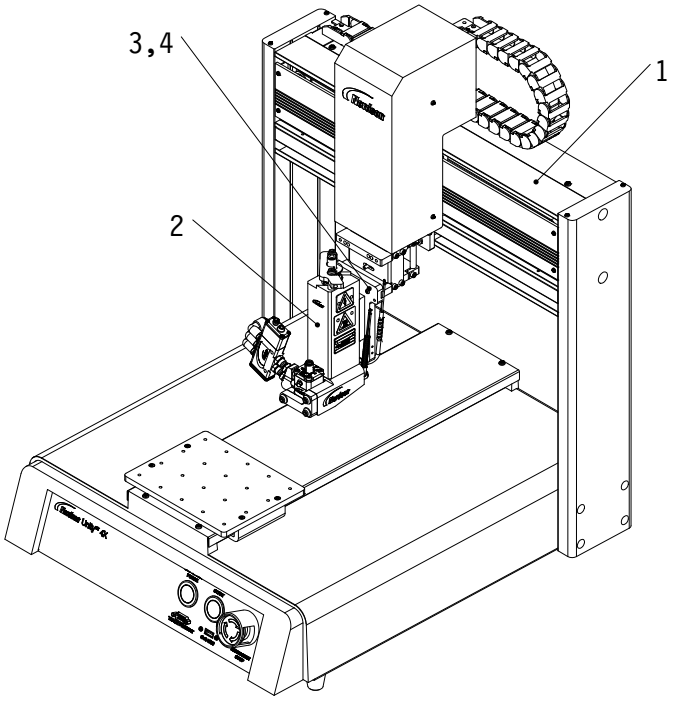


Figure 7 Installing a PurJet 30XT applicator on a robot

1. Robot
2. PJ30XT applicator
3. 983401, WASHER, LK, M, SPT, M5, STL, ZN
4. 982046, SCR, HEX, CAP, M5 X 14, BL

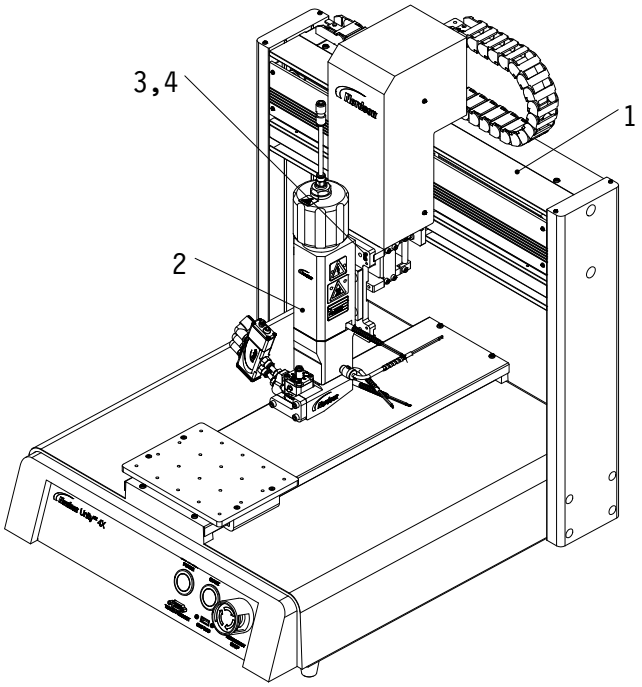


Figure 8 Installing a PurJet 300XT applicator on a robot

1. Robot
2. PJ300XT applicator
3. 983401, WASHER, LK, M, SPT, M5, STL, ZN
4. 982046, SCR, HEX, CAP, M5 X 14, BL

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Make the Air Supply Connections

See Figure 9 and 10. Using the air kit, make the air supply connections shown in Table 3 and Figure 9 and 10. The air supply must be clean, dry, regulated, unlubricated compressed air. Set the operating air pressure to 4.1 bar (60 psi).

Table 3 Air Supply Connections

Item No. in Fig. 9	Pneumatic Connection	Connect to...	Then connect to...
1	Main air supply input	Main air supply	Air regulator input port
2	Air supply to applicator solenoid valve	Air kit output port	Top air input port (3) on applicator solenoid valve
3	Air supply to applicator solenoid valve	Air kit output port	Bottom air input port (5) on applicator solenoid valve
4	Air supply through air dryer to controller	Air kit output port (T-fitting)	Air dryer input/output ports and controller air input port
5	Air supply to applicator solenoid valve	Air kit output port (T-fitting)	Middle air input port (1) on applicator solenoid valve
6	Air supply to applicator adhesive cartridge	Air output port on top of controller	Air fitting on top of applicator adhesive cartridge

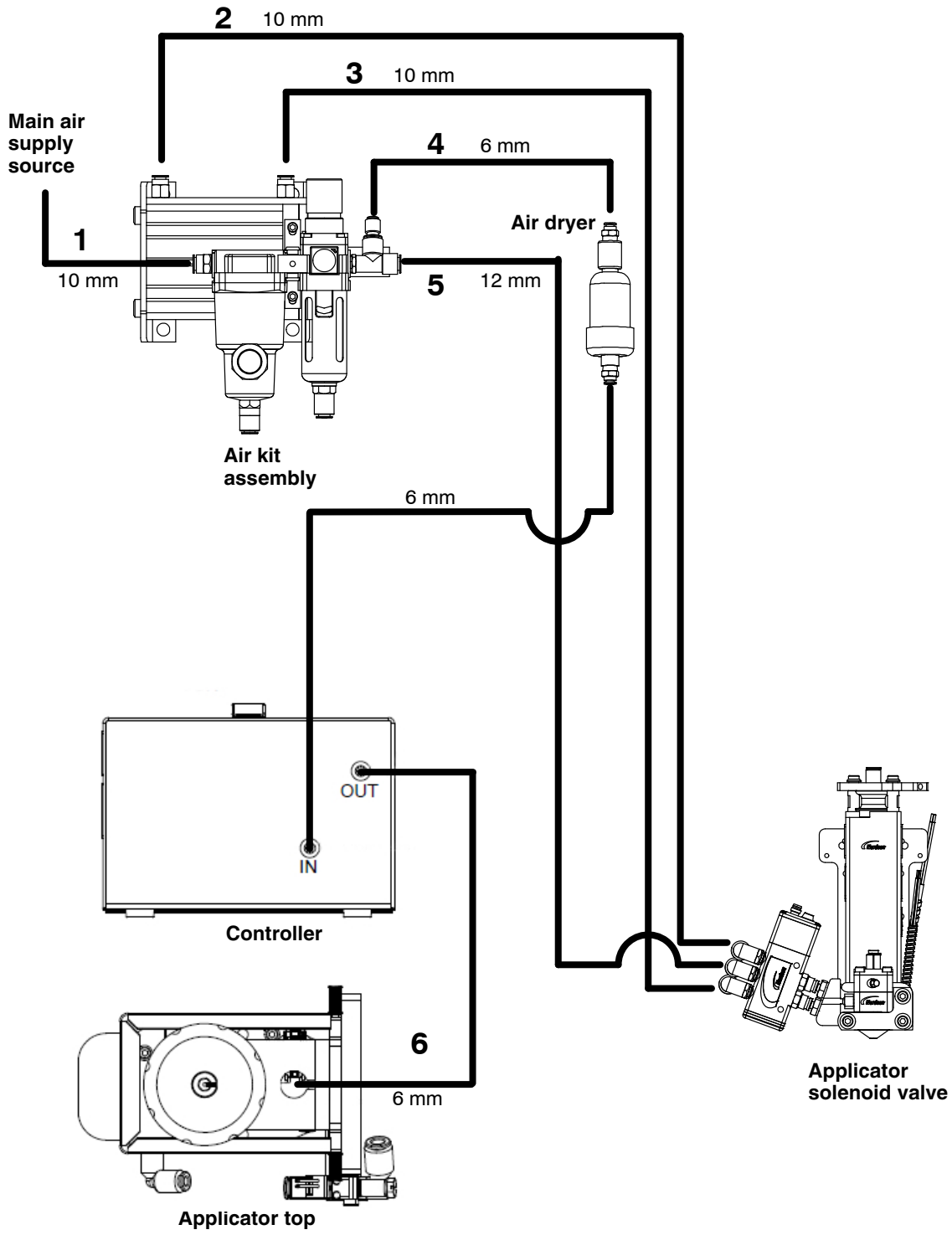


Figure 9 Air supply connections – PURJet 30XT (refer to Table 3)

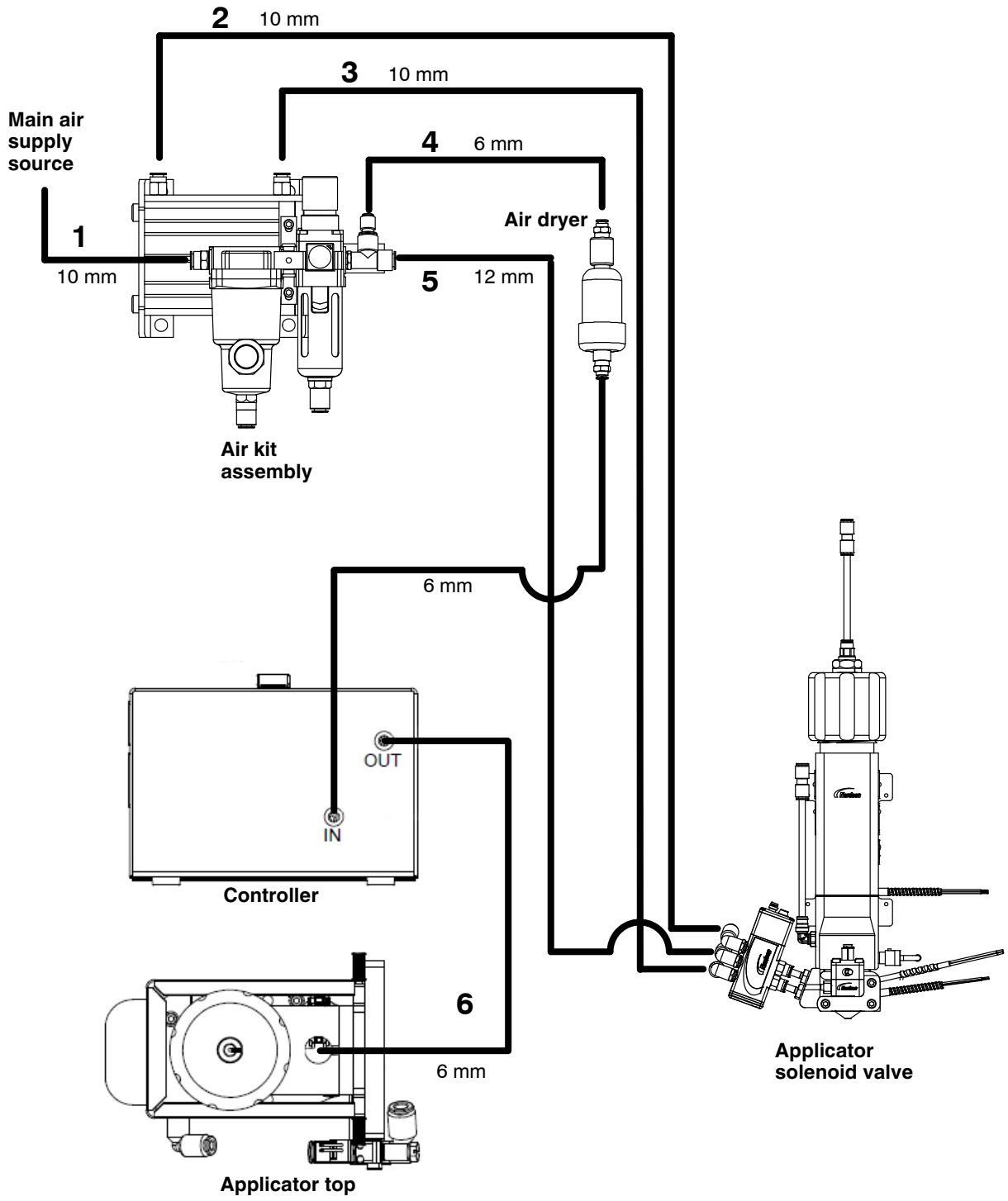


Figure 10 Air supply connections – PURJet 300XT (refer to Table 3)

Connect Cables

Refer to the Unity Controller manuals for more information.

Install Software

Install any required software. Refer to the robot manual and/or any other applicable documentation.

Perform Initial System Power On

See Figures 4-6 as needed for the location of controls.

1. Turn on the robot.
2. Turn on the controller. The controller display will go through the startup screens.
3. Turn on the air supply.

PURJet 30XT

1. Load a flush syringe in the applicator as follows (See Figure 11):
   a. Open the adhesive syringe latch (1) and remove the air cap (2).
   b. Remove the factory-installed adhesive syringe.
   c. Insert the new syringe into the applicator
   d. Reinstall the air cap and close the adhesive syringe latch.

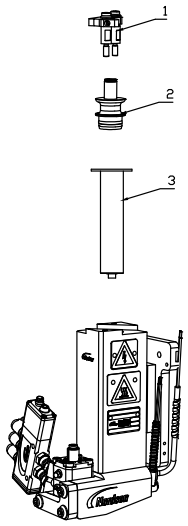


Figure 11 Loading a Flush Syringe – PURJet 30XT

1. Adhesive syringe latch
2. Air cap
3. Syringe

2. Place the product on the moving plate and press the START button on the robot to run products.

PURJet 300XT

1. Load a flush cartridge in the applicator as follows (See Figure 12):
   a. Remove the caps from both ends of a 300-cc flush cartridge (2).
   b. Install the check valve (3) on one end of the cartridge.
   c. Remove the applicator end cap (1).
   d. Insert the cartridge in the applicator, with the check valve end pointing down.
   e. Reinstall the applicator end cap.

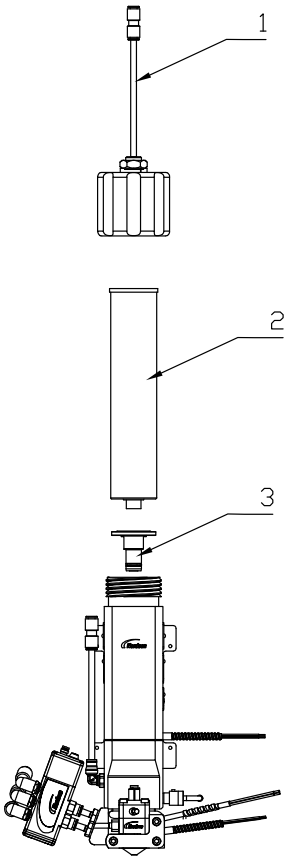


Figure 12 Loading a flush cartridge – PURJet 300XT

1. End cap
2. Cartridge
3. Check valve

Note: Check valve included in ship-with kit.

2. Place the product on the moving plate and press the START button on the robot to run products.

Operation

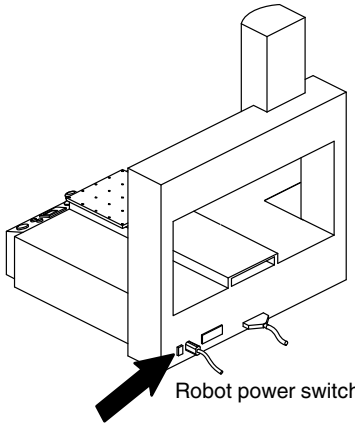
Before operating the system for the first time, ensure that you have completed the procedures in the *Installation* and *Setup* sections.

Special Operating Considerations for PUR Adhesive

Because the viscosity of PUR adhesive increases significantly when the system is at operating temperature, the applicator should be heated only for operation or cleaning. If the applicator is held at operating temperature longer than the life of the PUR adhesive, then the risk of cured material inside the applicator increases.

However, even in the best operating scenario it is still likely that over time the PUR will occlude the inner adhesive passages, requiring the applicator to be cleaned. When the applicator is cleaned, is it critical to remove cured PUR adhesive from all adhesive passages (see Figure 21), not just the adhesive passages inside the module. Refer to *Applicator Cleaning* under *Maintenance*.

Daily Startup and Operation



1. Turn on the robot.
2. Turn on the controller. The controller display will go through the startup screens.
3. Turn on the air supply.
4. Allow the system to reach application temperature.
5. If a cured adhesive warning exists at startup, reset the Elapsed Time parameter to 0.
6. Verify that the temperature settings are at the desired value.
7. When the READY light turns on, place the controller purge switch in the on position until the rest of the material in the flush cartridge (used during shut down) is dispensed.

Daily Startup and Operation *(contd)*

PURJet 30XT

1. Load an adhesive syringe in the applicator as follows (see Figure 13):
   a. Open the adhesive syringe latch and remove the air cap (1).
   b. Remove the caps from both ends of the adhesive syringe and insert the syringe into the applicator.
   c. Reinstall the air cap and close the latch.

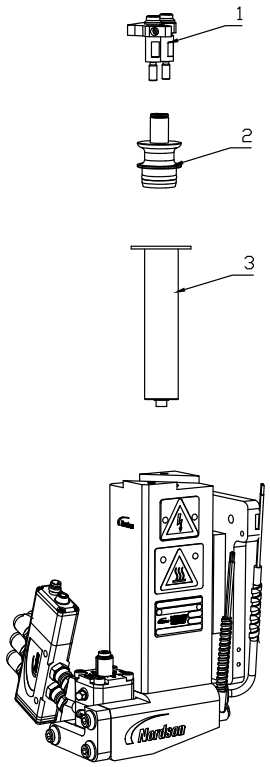


Figure 13 Loading a Syringe – PURJet 30XT

1. Adhesive syringe latch
2. Air cap
3. Syringe

2. Place product on moving plate and press START button to run products.

PURJet 300XT

1. Load an adhesive cartridge in the applicator as follows (See Figure 14):
   a. Unscrew the adhesive cartridge end cap (1).
   b. Heat the flush cartridge. Nordson Corporation recommends using an adhesive cartridge pre-warmer.
   c. Slide the cartridge and check valve into the applicator manifold.
   d. Reinstall the cartridge end cap and tighten it until it bottoms out. The end cap will pierce the end of the cartridge.

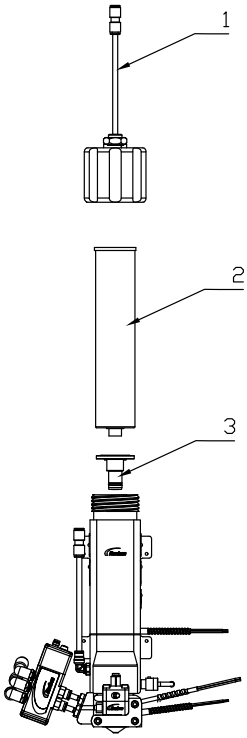


Figure 14 Loading an Applicator – PURJet 300XT

1. End cap
2. Cartridge
3. Check valve

Note: Check valve included in ship-with kit.

2. Place product on moving plate and press START button to run products.

Responding to Alarms

Refer to *Troubleshooting* for a list of alarms and recommended corrective actions.

Placing the System in Setback

Refer to the Unity Controller manuals for more information.

Monitoring the System

Refer to the Unity Controller manuals for more information.

Shutdown

Because PUR adhesive reacts with moisture in the air, exposure of the PUR adhesive in the system to air must be minimized. The procedures below represent the best practices for overnight or long-term (longer than overnight) shutdown.

Overnight Shutdown

1. Shut down the system and allow the applicator to cool, leaving the current cartridge in the applicator. This will retain the seal and minimize the exposure to air.
2. The next morning, follow the *Daily Startup and Operation* procedure earlier in this section to install a new cartridge.

Long-Term Shutdown

1. Place a large collection pan under the applicator.

WARNING! Risk of burns. When the last drops of adhesive are being purged, the pressurized air will cause some adhesive spray. Ensure that the collection pan is large enough to shield the operator from the spray.

2. Place the controller purge switch in the on position until all adhesive is dispensed from the cartridge, then place the switch in the off position.

Long-Term Shutdown *(contd)*

CAUTION! Ensure that the flushing material is compatible with the PUR adhesive being used. Refer to the SDS for both the adhesive and the flushing material.

1. Prepare the applicator as follows:

PURJet 30XT

   a. Open the applicator latch and, without putting pressure on the syringe, remove the air cap.

   b. Use a pick to remove any hardened adhesive from the syringe.

   c. Install the air cap and close the applicator latch.

PURJet 300XT

   a. Open the end cap.

   b. Remove the check valve from the cartridge.

   c. Use a pick to remove any hardened adhesive from the retainer nut and needle.

   d. Reinstall the end cap.

2. Purge again until a clean flow of flush material is achieved. Leave some flush material in the cartridge.
3. Remove the applicator nozzle and purge again to ensure that all adhesive is dispensed.

CAUTION! Ensure that the flushing material is compatible with the PUR adhesive being used. Refer to the SDS for both the adhesive and the flushing material.

4. Load a flush syringe/cartridge into the applicator.
5. Purge again until a clean flow of flush material is achieved. Leave some flush material in the syringe/cartridge.
6. Reinstall the nozzle and purge the system again to flush all PUR adhesive out of the nozzle. Leave some flush material in the syringe/cartridge.
7. Turn off the air supply.
8. Turn off the controller.
9. Turn off the robot.

Maintenance

This section contains a recommended maintenance schedule and procedures. Attempting any other maintenance procedures can result in equipment damage, improper system operation, or personal injury.

Recommended Maintenance Schedule

Table 4 provides recommended maintenance activities and a schedule for performing those activities. Base how often you perform maintenance on your operating conditions.

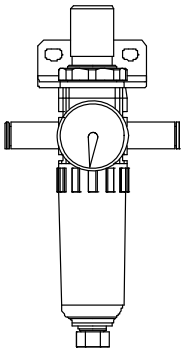
Table 4 Recommended Maintenance

Component	Activity	Interval	Procedure
Robot and applicator	Inspect for external damage	Daily	When damaged parts pose a risk to the operational safety of the unit and/or safety of personnel, switch off the system and have the damaged parts replaced by qualified personnel. Use only original Nordson spare parts.
	Clean the exterior	Daily	Remove adhesive residue only with a cleaning agent recommended by the adhesive supplier. Heat with an air heater if necessary. Remove dust, flakes, etc. with a vacuum cleaner or a soft cloth. Do not damage or remove warning labels. Replace any damaged or removed warning labels.
	Replace the air supply desiccant tube	When all material inside the tube has turned pink	Relieve system pressure (refer to *System Pressure Relief* in this section) and replace the used desiccant tube, ensuring that all fittings are secure. Refer to *Parts* for the replacement desiccant tube part number.

System Pressure Relief

System pressure must be relieved before you can safely proceed with many troubleshooting and service-related activities. Follow this procedure whenever you need to relieve system pressure.

WARNING! Risk of burns. Failure to relieve system pressure can cause hot material to spray from a connecting point. Relieve system pressure before loosening or removing a hose, module, or any other part of a hot melt system. Wear heat-protective clothing, safety goggles (ANSI Z87.1 or equivalent), and safety gloves.



Air pressure regulator

1. Shut off the main air supply or set the air pressure regulator to zero (0).
2. Momentarily activate the purge switch on the controller.
3. When the service activity is completed, restore the system to normal operation.

Nozzle Cleaning

Nozzles should be cleaned weekly or as needed to prevent clogging. You will need the following items:

- Appropriate tools, including a torque wrench
- Cleaning supplies (refer to Table 5)
- Drain pans and disposable rags

1. To ease nozzle removal, ensure that the adhesive in the system is heated at least to the softening point.
2. Stop the melter and applicator pumps.
3. Shut off the module-actuating air.
4. Relieve system pressure. Refer to the melter manual as needed.
5. Remove the nozzle.
6. Clean the nozzle using one of the Nordson-recommended methods shown in Table 5. Use only cleaning agents recommended by the adhesive supplier.

WARNING! Risk of explosion or fire. Follow the safety guidance and heating recommendations on the SDSs for your adhesives and nozzle-cleaning solutions.

WARNING! Risk of explosion or fire. Use a controlled heating device, such as a thermostatically controlled hot plate, to heat cleaning fluid, including Nordson Type-R fluid.

CAUTION! Risk of equipment damage. Do not use a wire brush (or a brush with bristles harder than the nozzle) to clean nozzles.

Table 5 Nozzle Cleaning Methods

Cleaning Method	Procedure
Electric heat gun/hot air knife **NOTE:** This is the most thorough method.	a Heat the nozzles with a flameless electric heat gun or hot air knife. b Scrub the nozzles with a soft, non-metallic brush to remove debris.

Continued...

Table 5 Nozzle Cleaning Methods *(contd)*

Cleaning Method	Procedure
Ultrasonic tank	a Place the nozzles in an alkaline solution heated to the appropriate temperature (refer to the SDS) in an ultrasonic tank. Soak the nozzles for approximately 10 minutes. b Scrub the nozzles with a soft, non-metallic brush to remove debris. c Gently blow air through the nozzle orifices from the mounting side of the nozzle.
Oven **NOTE:** This method will cause discoloration of unplated brass nozzles. This discoloration is cosmetic only and will not adversely affect nozzle performance. **NOTE:** This method is not recommended for color-coded nozzles (such as Saturn and CF steel unibody nozzles) because it will remove the color from the nozzles.	**WARNING**: Risk of explosion, fire, or toxic vapor release. Depending on the type of adhesive and/or organic solvent used with the nozzles, heating them in an oven can cause a hazardous event. Before using an oven to clean nozzles, consult with the oven manufacturer about the viability of this method and the safety risks. Follow the manufacturer's recommendations. **WARNING**: Use the oven heating controls to keep the oven at the desired temperature. Do not use an oven that does not have heating controls. **WARNING**: The heating temperature and time may need to be adjusted based on the oven type, the adhesive type, and the amount of char buildup on the nozzles. Nordson Corporation recommends testing this procedure on discarded nozzles prior to using it on good nozzles. **CAUTION:** Risk of equipment damage. Remove O-rings before cleaning nozzles in an oven. Failure to do so can cause a chemical reaction that will permanently damage the nozzles. a Ensuring that O-rings have been removed from the nozzles, place them in an electric oven heated to approximately 385 °C (725 °F). Allow the nozzles to bake for approximately 3-4 hours. b Turn off the oven and allow the nozzles to cool; then remove the nozzles. **WARNING**: Risk of fire. Use a heat-proof cloth to clean nozzles. Even cotton can burn in high-temperature conditions. **WARNING**: Risk of equipment damage. Handle nozzles carefully to avoid denting the orifices, which can degrade the adhesive pattern. c Wipe the nozzles with a soft cloth and then gently blow air through the nozzle orifices from the mounting side of the nozzle.

Nozzle Cleaning *(contd)*

7. If there is any remaining char buildup on the nozzles, gently scrape the char from the nozzle.
8. Reinstall the nozzles.
9. Restore the system to normal operation.

Applicator Cleaning

The applicator adhesive passages should be cleaned as needed to prevent clogging. You will need the following items:

- Appropriate tools, including a torque wrench
- Flush cartridge
- Heater lubricant
- High-temperature grease
- Drain pans, disposable shop rags, and cotton swabs

NOTE: Visit http://www.youtube.com/user/NordsonAdhesiveSyst/videos to view a video of the applicator cleaning procedure.

Prepare for Applicator Cleaning

1. To ease component removal, ensure that the adhesive in the system is heated at least to the softening point.
2. Stop the melter and applicator pumps.
3. Relieve system pressure. Refer to the melter manual as needed.
4. Place a large drain pan under the applicator.

WARNING! Risk of burns. When the last drops of adhesive are being purged, the pressurized air will cause some adhesive spray. Ensure that the collection pan is large enough to shield the operator from the spray.

5. Place the controller purge switch in the on position until all adhesive is dispensed from the cartridge, then place the switch in the off position.

CAUTION! Ensure that the flushing material is compatible with the PUR adhesive being used. Refer to the SDS for both the adhesive and the flushing material.

6. Load a flush cartridge in the applicator as follows:

PURJet 30XT

a. Open the applicator latch and, without putting pressure on the syringe, remove the air cap.

b. Use a pick to remove any hardened adhesive from the syringe.

c. Install the air cap and close the applicator latch.

PURJet 300XT

a. Open the end cap.

b. Remove the check valve from the cartridge.

c. Use a pick to remove any hardened adhesive from the retainer nut and needle.

d. Reinstall the end cap.

7. Purge again until a clean flow of flush material is achieved (at least one minute).
8. Remove the flush cartridge.
9. Shut off the module-actuating air.
10. Engage the purge switch one last time to remove any remaining system pressure.
11. Disconnect the air supply and cable connections from the applicator solenoid valve.

Remove the Module

1. If you have not already done so, remove the nozzle from the module and clean it. Refer to *Nozzle Cleaning*.

See Figure 15 and 16.

2. Loosen the screws that secure the front plate (3) and remove the module (2) from the applicator.
3. Remove the pins that secure the solenoid assembly (1) to the module and then separate the solenoid assembly from the module.

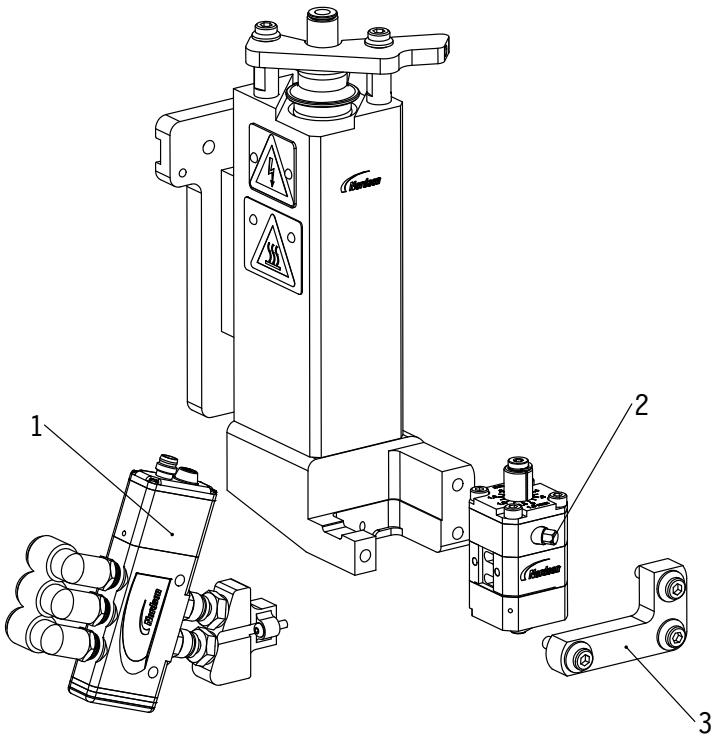


Figure 15 Removing the module - PURJet P30XT

1. Solenoid assembly
2. Module
3. Front plate

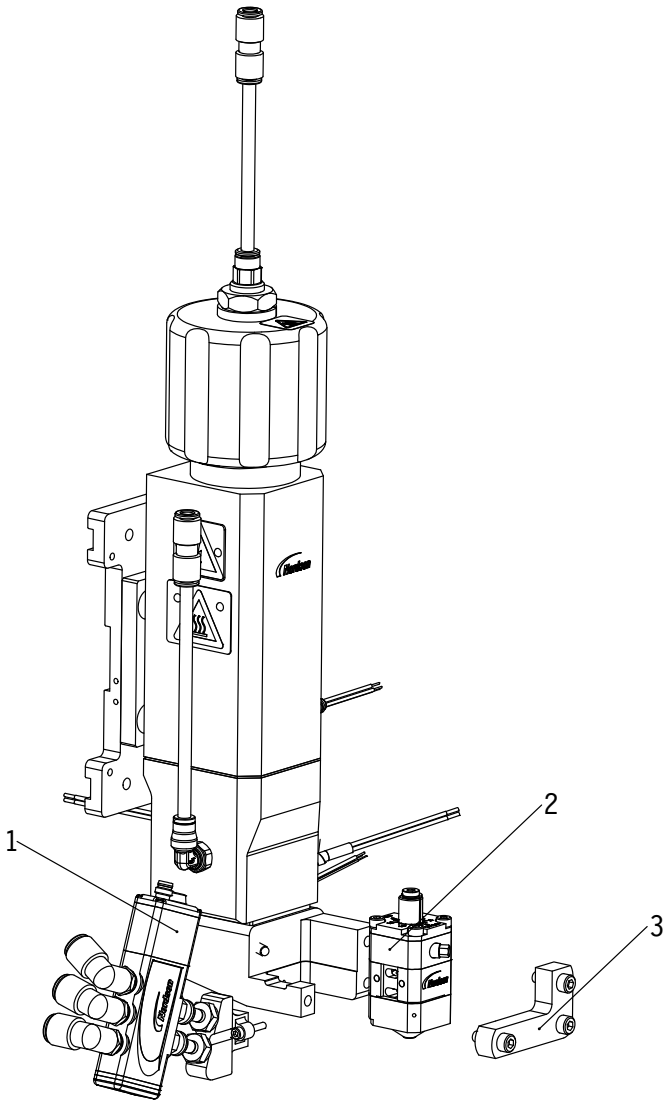


Figure 16 Removing the module - PURJet P300XT

1. Solenoid assembly
2. Module
3. Front plate

Disassemble and Clean the Module

See Figure 17.

1. Remove the air cap (1) and its attached O-ring(s). Use shop rags or towels to wipe the air cap clean of any adhesive residue.
2. Holding the module body (2), push the piston assembly components (4) and seal pack (5) out through the bottom of the module.
3. Use a clean shop rag to wipe the interior and exterior of the module clear of any adhesive residue.
4. Clean the exterior of the seal pack with shop rags and cotton swabs and wipe the piston clean of any adhesive.
5. Clear any adhesive residue from the module's adhesive feed hole (3).

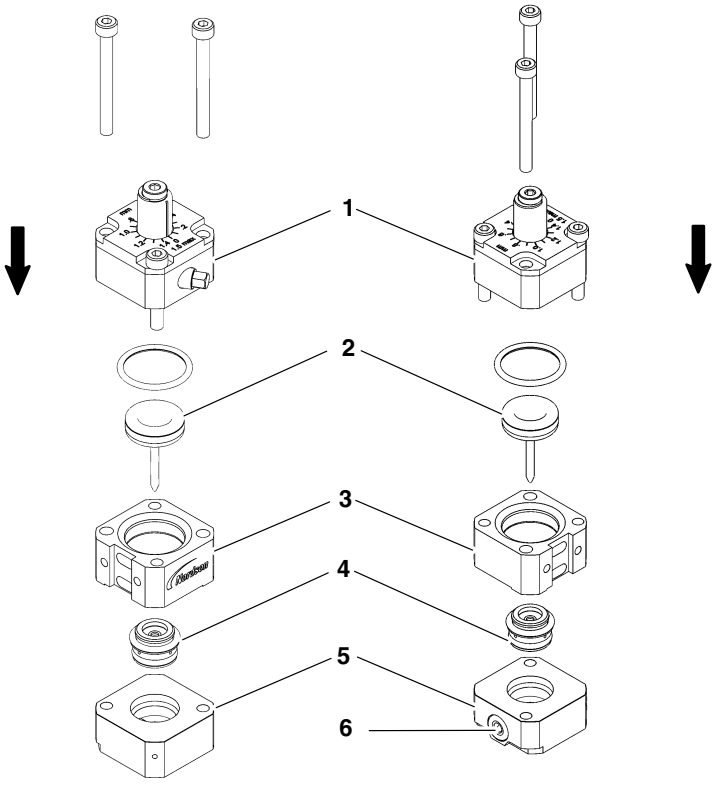


Figure 17 Module disassembly (left-side image: front iso view; right-side image: back iso view)

1. Stroke adjuster assembly
2. Piston assembly components
3. Pneumatic module body
4. Seal pack
5. Nozzle assembly
6. Adhesive feed hole

Clean the Applicator Manifold

1. Turn off the controller and disconnect the heater cable from the controller or heater block.

See Figure 18.

2. Remove the screws that secure the heater block (2) to the manifold and remove the heater block.
3. Clear the heater block adhesive feed passage of any residue. Use a shop rag to wipe off the heater block.
4. Gently remove the seal insert (1) from the manifold and wipe the seal clean with a rag or towel.
5. Insert a clean shop rag or cloth into the top of the manifold to clean the interior chamber and accessible surfaces.
6. Reinstall the seal insert (1) in the bottom of the manifold.
7. Dip the heater block screws into a lubricant and reinstall the heater block (2) on the manifold.

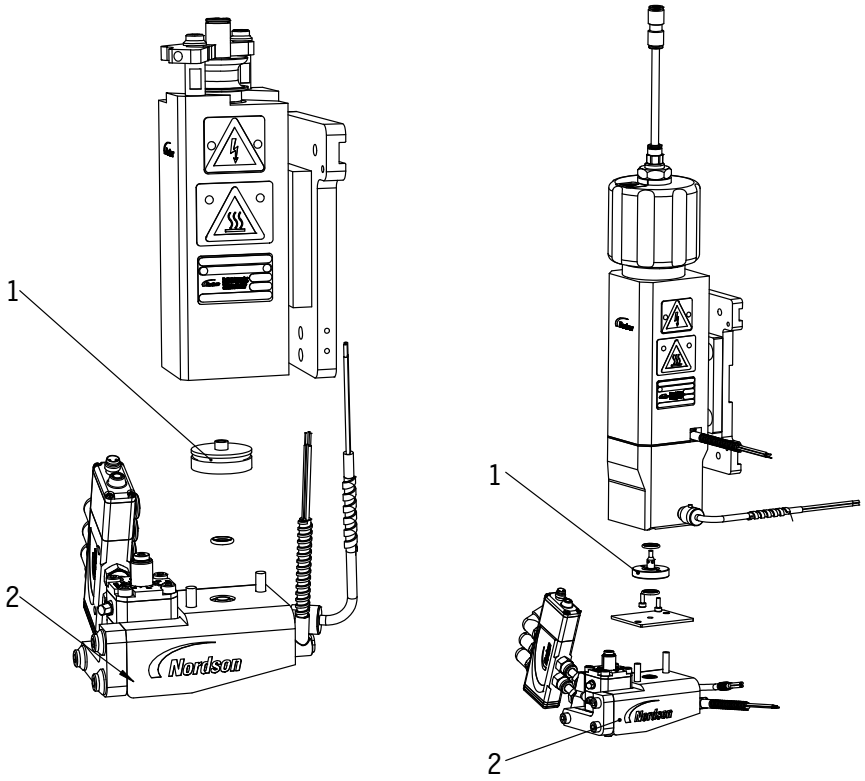


Figure 18 Heater block components and location of adhesive passages

1. Seal insert
2. Heater block and O-ring

Reassemble the Module

See Figure 19.

1. Insert the piston (2) into the seal pack (4) and use a cartridge and small needle to fill the seal pack with high-temperature grease just until the grease starts coming out of the hole on the opposite side of the seal pack.
2. Wipe off the excess grease.
3. Remove the piston from the seal pack.
4. Push the seal pack (4) into the bottom of the nozzle assembly (5) until it snaps and seats at the bottom of the bore.
5. Insert the pneumatic module body (3)over the seal pack (4) and align with proper orientation, as shown.
6. Insert the piston into the seal pack through the top of the module, being careful to keep the piston at a 90-degree angle with the seal pack.
7. Insert the stroke adjuster assembly (1) along with the O-ring over the module and install bolts.

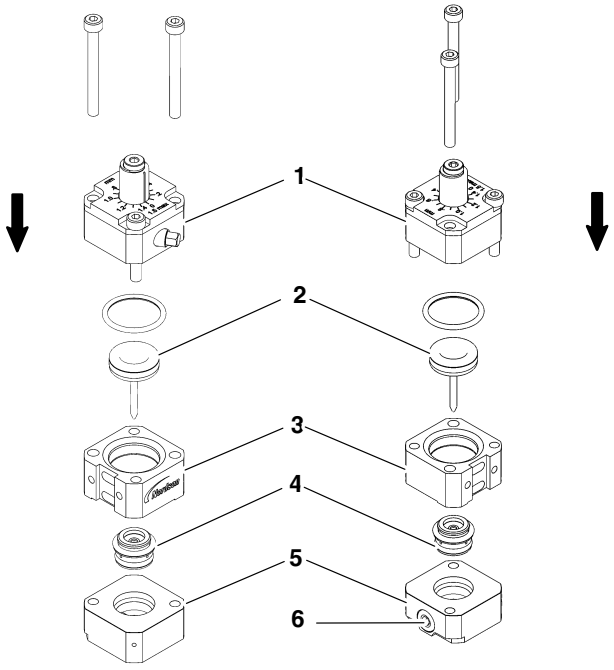


Figure 19 Module reassembly (left-side image: front iso view; right-side image: back iso view)

1. Stroke adjuster assembly
2. Piston assembly components
3. Pneumatic module body
4. Seal pack
5. Nozzle assembly
6. Adhesive feed hole

Reinstall the Solenoid and Module

See Figure 20.

1. Reinstall the solenoid assembly (1) on the module, ensuring that the pins are fully inserted for a secure connection between the module and solenoid.
2. Position the module (2) on the the heater block dowel pin (4) and secure the front plate (3) to the heater block, tightening the screws evenly.

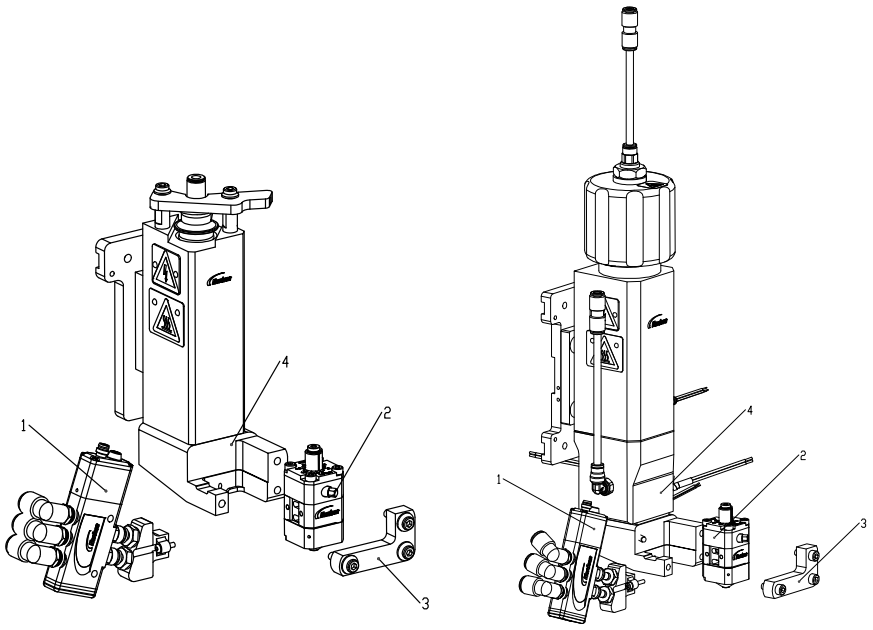


Figure 20 Reassembling the applicator

1. Solenoid assembly
2. Module
3. Front plate
4. Heater block dowel pin

3. Reconnect the air supply and cable connections to the applicator solenoid valve.
4. Install an adhesive cartridge.
5. Restore the system to normal operation.

Troubleshooting

Troubleshooting begins when the flow of adhesive from the applicator stops or diminishes unexpectedly or when a control system alerts you of a problem through an alarm or visual display. This section covers only the most common problems you may encounter. If you cannot solve a problem with the information given here, contact your local Nordson representative for help.

For additional troubleshooting information, refer to the manuals provided with the other equipment used in the hot melt system.

General Troubleshooting

Refer to this table for general system troubleshooting.

Problem	Possible Cause	Corrective Action
1. Applicator does not heat	System power not on	Verify that the system power is turned on.
	Loose electrical connection	Verify that all electrical connections (cordsets and cables) at the controller and the applicator are secure.
	Broken or missing electrical pins	Check for broken or missing pins at all electrical connections. Repair or replace damaged components.
	Applicator temperature setpoint too low	Increase the temperature setpoint. Refer to *Set Up the Unity Controller* under *Setup* as needed.
	Incorrect configuration switch settings	
2. Applicator underheats or overheats	System in setback (standby) mode	Take the system out of the setback mode.
	Applicator temperature setpoints too low or too high	Increase or decrease the temperature setpoint. Refer to *Set Up the Unity Controller* under *Setup* as needed.
	Failed heater or sensor	Check the applicator heater or sensor. Refer to *Checking the Applicator Heater* or *Checking the Applicator Sensor* later in this section.
	Incorrect configuration switch settings	

Continued...

General Troubleshooting *(contd)*

Problem	Possible Cause	Corrective Action
3. Erratic bead width (from part to part)	Nozzle size incorrect	Change the nozzle size to the appropriate diameter for the bead width.
	Applicator temperature setpoint too low	Increase the temperature setpoint. Refer to *Set Up the Unity Controller* under *Setup* as needed.
	Old PUR adhesive in system	Clean or replace the nozzle, clean the adhesive passages (see Figure 21), and/or replace the module. Refer to *Nozzle Cleaning* and/or *Applicator Cleaning* under *Maintenance*.
	Adhesive leaking under the cartridge flange	Check the cartridge seal and clean the interface as needed.
	Top of adhesive cartridge plugged	Remove the cured layer of adhesive from the top of the adhesive cartridge.
4. Bead too small	Low input air supply	Ensure that the input air pressure is greater than 3.4 bar (50 psi).
	Old PUR adhesive in system	Clean or replace the nozzle, clean the adhesive passages (see Figure 21), and/or replace the module. Refer to *Nozzle Cleaning* and/or *Applicator Cleaning* under *Maintenance*.
	Applicator temperature setpoint too low	Increase the temperature setpoint. Refer to *Set Up the Unity Controller* under *Setup* as needed.
	Damaged parts	Clean, inspect, and replace parts as needed.

Continued...

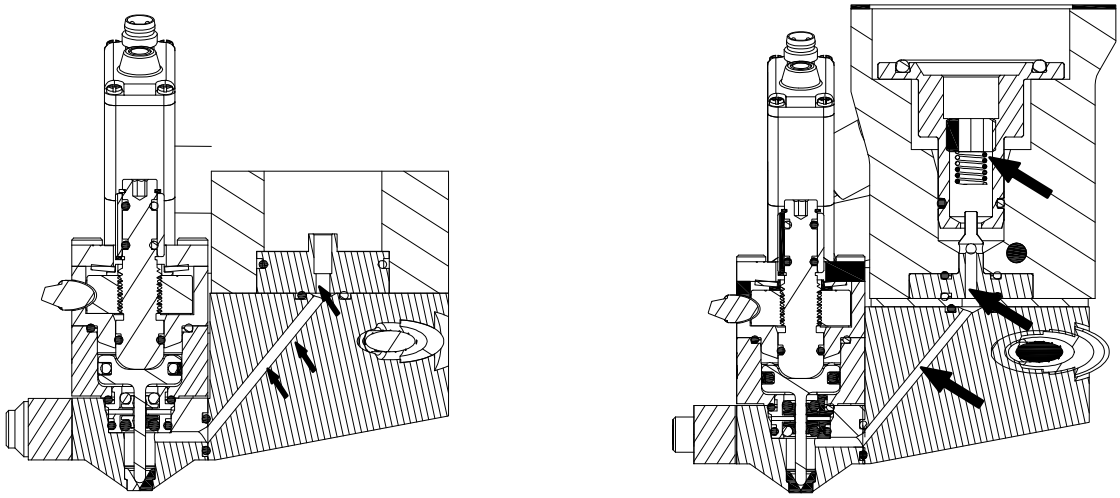


Figure 21 Location of adhesive passages

Problem	Possible Cause	Corrective Action
5. Bead width changes on the part	Robot speed inconsistent	Check the program speed settings. Refer to the robot documentation.
	Applicator position too high/low	Check the program height settings and/or check the height of the product. Refer to the robot documentation.
6. No adhesive output	Low or no input air supply	Ensure that the input air pressure is greater than 3.4 bar (50 psi).
	No signal from robot	Test the signal using the robot purge switch. If the applicator purges, the problem is in the robot. Refer to the robot documentation to troubleshoot the robot. If the applicator does not purge, check the setup. Refer to *Installation* as needed.
	Solenoid connection lost	Check the red light on the solenoid valve. If the red light is not illuminated, replace the solenoid.
	Old PUR adhesive in system	Clean or replace the nozzle, clean the adhesive passages (see Figure 21), and/or replace the module. Refer to *Nozzle Cleaning* and/or *Applicator Cleaning* under *Maintenance*.
	Cured material inside of applicator	Clean or replace the nozzle, clean the adhesive passages (see Figure 21), and/or replace the module. Refer to *Nozzle Cleaning* and/or *Applicator Cleaning* under *Maintenance*.
	Applicator temperature setpoint too low	Increase the temperature setpoint. Refer to *Set Up the Unity Controller* under *Setup* as needed.
	Module needle stroke too short	Increase the needle stroke to 2 mm (4 turns). Refer to the needle stroke adjustment steps in *Set Up the Unity PURJet 30XT/300XT Applicator* under *Setup* as needed.
7. Leaks at bleed hole on module	Adhesive seal failure	Replace the module.
8. Controller does not power on	Open fuse	Replace the open fuse. Refer to *Parts* for fuse part numbers.

Continued...

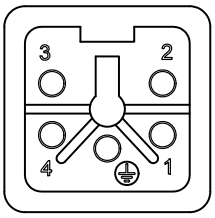
General Troubleshooting *(contd)*

Problem	Possible Cause	Corrective Action
9. Air leakage through the exhaust when the valve is idle	Piston shifted (pinched by housing)	Test the piston seal as follows: 1 Connect a pressure gauge to the lower exhaust on the solenoid valve. 2 Close (de-energize) the solenoid valve and observe the pressure change. The pressure change should be less than 0.14 MPa/min (20 psig/min) at a gauge fixture volume of 13 mL (0.8 $in.^3$) to 16 mL (1.0 $in.^3$). Replace the blue piston seal as needed. Refer to the instruction sheet provided in the seal pack service kit.
10. Dots jetting in random directions	Applicator temperature setpoint too low	Increase the temperature setpoint.
	Nozzle obstructed	Clean the nozzle. Refer to *Nozzle Cleaning* under *Maintenance*.
11. Adhesive building up on nozzle	Applicator temperature setpoint too low	Increase the temperature setpoint.
	Nozzle obstructed	Clean the nozzle.
	Module needle stroke too short	Increase the needle stroke.

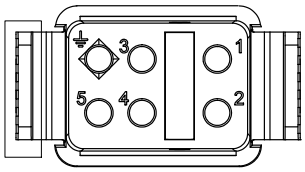
Checking the Applicator Heater

NOTE: Cordsets for applicators with a platinum sensor are customer-supplied. Refer to other documentation as needed.

1. Disconnect and lock out electrical power to the system.
2. Disconnect the applicator cordset.
3. See Figure 22 for nickel-sensor cordsets. Use an ohmmeter to check the heater resistance and continuity at the heater pins on the cordset:
   - If you measure low resistance, the heaters are operating normally. Return to the procedure that referenced this check.
   - If you measure high resistance or if an open circuit is indicated, there may be a broken wire, a loose connection, or a defective heater. Continue to the next step.



Pin	Connection
1	Heater
2	Heater
3	RTD
4	RTD
5	Ground



Pin	Connection
1	Heater
2	Heater
3	RTD
4	Not used
5	RTD
6	Ground

Figure 22 Pin positions on a square nickel applicator cordset

4. Remove the appropriate cordset connector hood and inspect the heater wiring. Make sure there are no broken wires or loose connections and that the heaters are wired correctly.
   - If any wiring problems are found, correct the problems and restore the system to normal operation.
   - If no wiring problems are found, the heater is probably defective. Replace the heater.

Checking the Applicator Sensor

NOTE: Cordsets for applicators with a platinum sensor are customer-supplied. Refer to other documentation as needed.

NOTE: You will need to know the temperature of the sensor to properly perform this check.

1. Disconnect and lock out electrical power to the system.
2. Disconnect the applicator cordset.
3. See Figure 22 for nickel-sensor cordsets. With the sensor at a known temperature, use an ohmmeter to measure the sensor resistance at the sensor pins on the cordset.
4. See Figure 23 (for nickel sensors) to determine the correct resistance of the sensor based on its temperature:
   - If the measured resistance is correct, the sensor is operating properly. Return to the procedure that referenced this check.
   - If the measured resistance indicates an open circuit, continue to the next step.
5. Remove the appropriate cordset connector hood and check for loose sensor wires or wire connections. Tighten any loose connections.
6. Check the sensor resistance again. If the resistance is normal, the sensor is now operating properly. If it is not, continue to the next step.
7. Disconnect the sensor wires, measure the resistance across them, and compare the results to Figure 23:
   - If the measured resistance is within the appropriate range, reconnect the sensor wires, reinstall the cordset connector hood, and return to the procedure that referenced this check.
   - If the measured resistance is not within the appropriate range, replace the sensor.

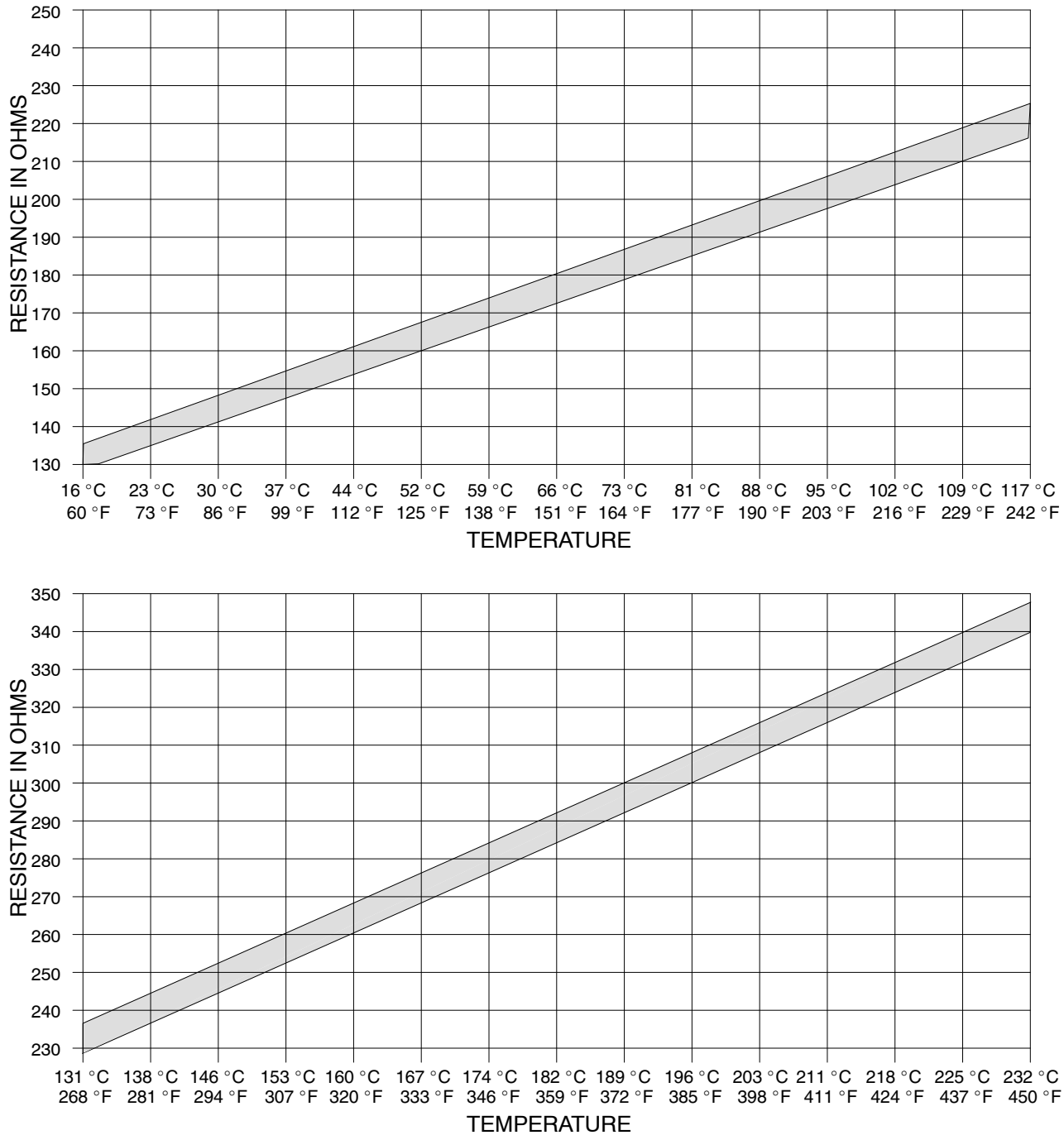


Figure 23 Nickel sensor resistance vs. sensor temperature

Parts

To order parts, call the Nordson Customer Service Center or your local Nordson representative. Use these five-column parts lists, and the accompanying illustrations, to describe and locate parts correctly. The following chart provides guidance for reading the parts lists.

The number in the *Item* column corresponds to the circled item number in the parts list illustration. A dash in this column indicates that the item is an assembly.

The number in the *Part* column is the Nordson part number you can use to order the part. A series of dashes indicates that the part is not saleable. In this case, you must order either the assembly in which the part is used or a service kit that includes the part.

The *Description* column describes the part and sometimes includes dimensions or specifications.

The *Note* column contains letters that refer to notes at the bottom of the parts list. These notes provide important information about the part.

The *Quantity* column tells you how many of the part is used to manufacture the assembly shown in the parts list illustration. A dash or AR in this column indicates that the amount of the item required in the assembly is not quantifiable.

Item	Part	Description	Quantity	Note
—	0000000	Assembly A	—	
1	000000	• Part of assembly A	2	A
2	- - - - - -	• • Part of item 1	1	
3	0000000	• • • Part of item 2	AR	
NS	000000	• • • • Part of item 3	2	

NOTE A: Important information about item 1

AR: As Required

NS: Not Shown

Unity PURJet 30XT/300XT Dispensing System Assemblies

See Figure 24 and 25.

PURJet 30XT system configuration

Item	Part	Description	Quantity	Note
1	7412900	UNITY C CONTROLLER	1	A
NS	7402976	UNITY,TOUCH,CONTROLLER,S	—	A
NS	7402620	UNITY,TOUCH,DISPLAY,S,DESKTOP	—	A
NS	7402621	UNITY,TOUCH,DISPLAY,S,PANEL	—	A
2	7404309	GUN,UNITY,PJ30XT	1	B
3	------	Module	1	C
4	1120888	KIT, SHIP WITH,PUREJET30	1	

NOTE A: Refer to *Unity Touch/Unit C manual*.
B: Refer to *Unity PJ30XT Parts*.
C: Refer to *Jet Module Parts* later in this section.
NS: Not Shown

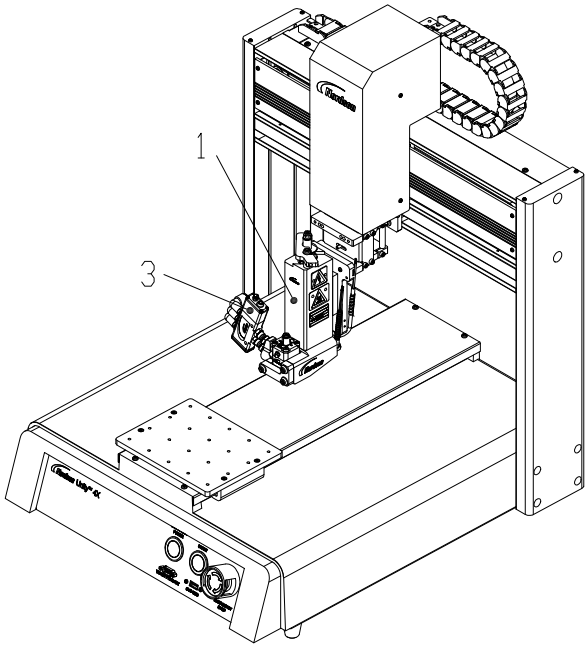


Figure 24 Unity PURJet 30XT dispensing system assemblies

PURJet 300XT system configuration

Item	Part	Description	Quantity	Note
1	7412900	UNITY C CONTROLLER	1	A
NS	7402976	UNITY,TOUCH,CONTROLLER,S	—	A
NS	7402620	UNITY,TOUCH,DISPLAY,S,DESKTOP	—	A
NS	7402621	UNITY,TOUCH,DISPLAY,S,PANEL	—	A
2	7404313	GUN,UNITY,PJ300XT	1	B
3	------	Module	1	C
4	1107104	KIT, SHIP WITH,PUREJET30	1	

NOTE A: Refer to *Unity Touch/Unit C manual*.
B: Refer to *Unity PJ300XT Parts*.
C: Refer to *Jet Module Parts* later in this section.
NS: Not Shown

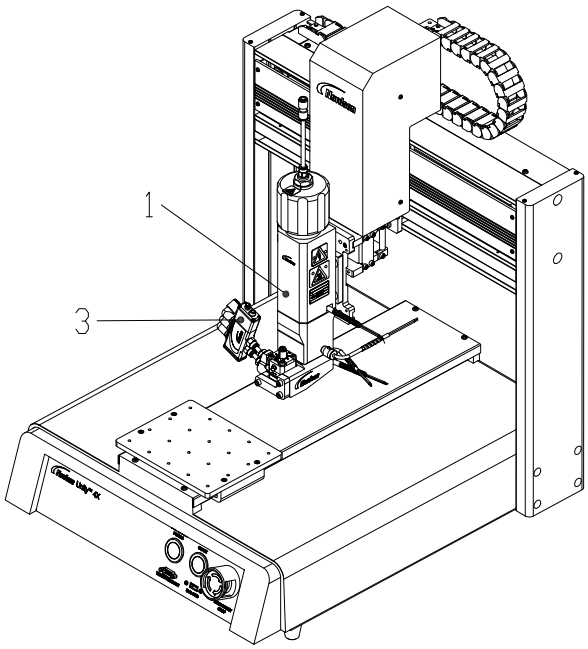


Figure 25 Unity PURJet 300XT dispensing system assemblies

Unity PURJet 30XT/300XT Applicator Parts

PJ30XT Applicator Parts

See Figure 26.

Item	Part	Description	Quantity	Note
1	------	SCR,SKT,M5X16,BL	3	
2	1126472	CLAMP, MODULE, PJ30XT	1	
3	1126471	BLOCK, HEATER, PJ30XT	1	
4	940211	O RING,VITON, .938X1.063X.063-021	1	
5	------	SCR,SKT,M5X10,ZN	1	
6	940111	O RING,VITON,.301ID X .070W,BR, 10411 SB	1	
7	------	RETAINER,CLIP,HEATER,SHORT	1	
8	------	INSERT,SEAL,30CC SYRINGE,PJ30	1	
9	------	CORDSET,UA,T-STYLE,NI120,240V,200W	1	
10	------	SCR,SKT,M6X30,SSTL	2	
11	------	PIN,DOWEL,.250X1.000,H&G	2	
12	------	BRACKET, GUN MOUNT, JR2403	1	
13	------	INSULATOR,MANIFOLD/BRACKET,3M SYRINGE	1	
14	1104308	MANIFOLD,30CC SYRINGE,PJ30	1	
15	------	CAPSCRM,SOC HD/FLANGED,M5X10,STL,BLK	2	
16	1086857	LATCH,SWING,3M SYRINGE	1	
17	------	STANDOFF, SWING LATCH,3M SYRINGE	2	
18	------	SETSCRM,M4 X 9,BALL,SPRING PLUNGER,STL	1	
19	------	PLATE,CF,WARNING,CE,HOT	2	
20	------	sign,dangerous voltage	2	
21	------	SCR,DRIVE,RD,2X .187,ZN	10	
22	------	TAG,STAMPING,W/ADDRESS INFO	1	
23	------	SCR,SKT,M5X30,ZN	2	
24	------	ADAPTER,BAYONET,1/8NPT,1.0-IN	1	
25	------	SEALANT,PASTE,NSF-H1,FOOD GRADE	1	
26	------	LUBRICANT,NEVER-SEEZ,NSF-H1,FOOD GRADE	1	

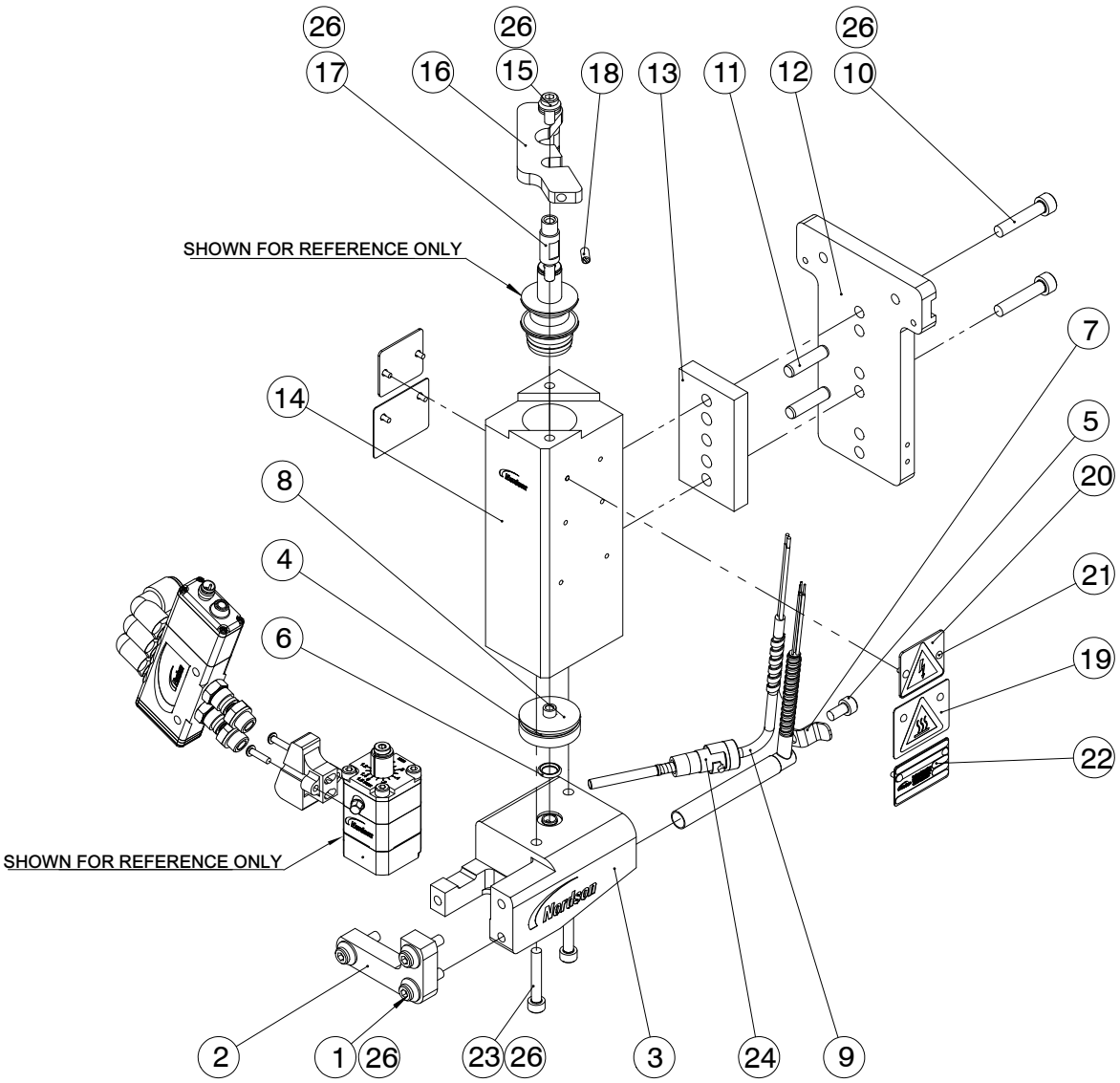


Figure 26 Unity PURJet 30XT applicator parts

Unity PURJet 30XT/300XT Applicator Parts *(contd)*

PJ300XT Applicator Parts

See Figure 27.

Item	Part	Description	Quantity	Note
0001	------	SCR,SKT,M5X35,SS,GB70.1	2	
0002	1126471	BLOCK, HEATER, PJ30XT	1	
0003	7407792	CORDSET,T-STYLE,NI120,240V,400W,PJ300	1	
0004	------	SCR,SKT,M5X20,ZN	6	
0005	------	SCR,SKT,M3X8,BL	2	
0006	1126472	CLAMP, MODULE, PJ30XT	1	
0007	------	SCR,SKT,M5X16,BL	3	
0008	------	ELBOW, MALE,6 MM TUBE X G 1/8	1	
0009	------	BRACKET,ROBOT MOUNT,PJ300	1	
0010	7407527	MANIFOLD,MOUNT,BLOCK/SLEEVE	1	
0011	7407768	CORDSET,UA,T-STYLE,NI120,240V,200W	1	
0012	------	ADAPTER,BAYONET,1/8NPT,1.0-IN	2	
0013	940111	O RING,VITON,.301ID X .070W,BR, 10411 SB	1	
0014	7407660	INSULATOR,MANIFOLD/BLOCK,PTFE	1	
0015	940133	O RING,VITON,.426ID X .070W,BR,10413	2	
0016	7407528	PISTON INSERT,SEAL,FLANGE PLATE	1	
0017	7407533	INSULATOR,SLEEVE/MANIFOLD,PTFE	1	
0018	7407529	SLEEVE,HEATED,PJ300	1	
0019	------	TAG,HOT SURFACE	1	
0020	1120244	CONNECTOR,MALE,6MM,TUBEXG1/8,VITON	1	
0021	7407966	CAP,END,REACTIVE ADHESIVE	1	
0022	------	INSULATOR,MANIFOLD/BRACKET,PTFE	1	
0023	------	PIN,DOWEL,.250X1.000,H&G	2	
0024	------	sign,dangerous voltage	2	
0025	------	SCR,DRIVE,RD,2X .187,ZN	10	
0026	------	PLATE,CF,WARNING,CE,HOT	2	
0027	------	TAG,STAMPING,W/ADDRESS INFO	1	
0028	------	SCR,SKT,M5X10,ZN	1	
0029	------	RETAINER,CLIP,HEATER,SHORT	1	
0031	------	LUBRICANT,NEVER-SEEZ,NSF-H1,FOOD GRADE	1	
0032	------	SEALANT,PASTE,NSF-H1,FOOD GRADE	1	
0034	------	COMPOUND,HEAT SINK,5 OZ TUBE,11281	1	
0035	------	LUBRICANT,O-RING,NSF-H1,FOOD GRADE,4L	1	

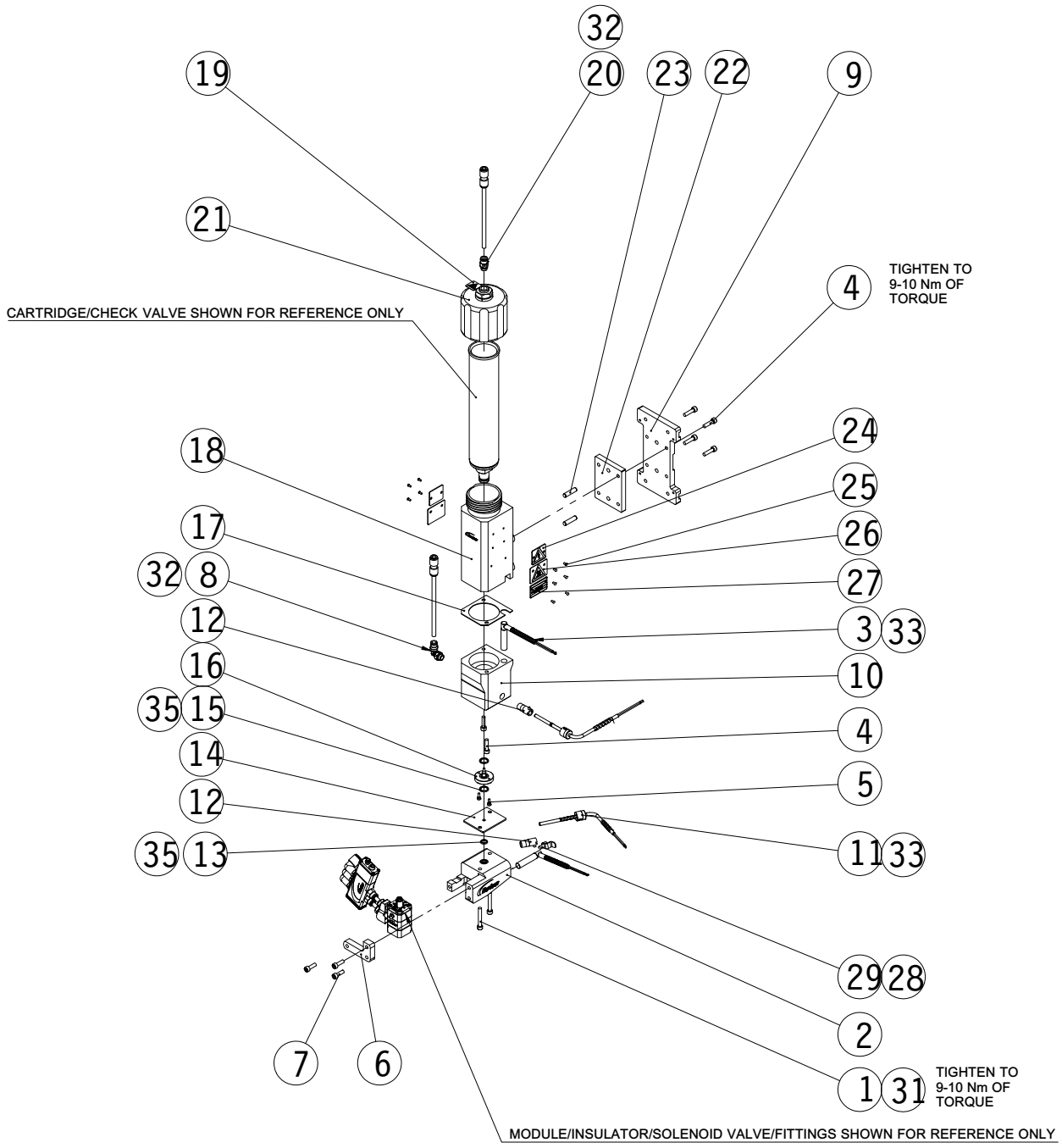


Figure 27 Unity PURJet 300XT applicator parts

Ship-With Kit Parts

PJ30XT

Item	Part	Description	Quantity	Note
1	------	AIR CAP,ASS,30CC	1	
2	------	UNION,STRAIGHT,6MM T	1	
3	------		8	
4	------	TUBING,PFA,6MM ODX 1 MM WALL	1	
5	7402541	CORDSET,SOL,PJ,UNITY TOUCH	1	
6	1120201	LUBRICANT,O-RING,NSF-H1,10 ML TUBE	1	
7	------	BAG,POLY,KITS,ROLLS,3 1/2X5 1/2	4	
8	------	BAG,POLYETHYLENE,6X15	1	
9	1123561	CONN,MALE,6MM T X 1/8 UNI	2	
10	1123560	FITTING,TUBE,STEM,G1/8 TO 6MM	2	
11	1121358	SOLENOID,SATURN,BARE,4WAY,24VDC	1	
12	1121958	CONN,MALE,ELBOW,8MM T X 1/8UNI	3	
13	1126478	ADAPTER, SOLENOID, PJ30XT	1	
14	------	SCR,SKT,M3X12,BL	2	

PJ300XT

Item	Part	Description	Quantity	Note
01	- - - - - -	UNION,STRAIGHT,6MM T	2	
02	- - - - - -	TUBING,PFA,6MM ODX 1 MM WALL	1	
03	1126478	ADAPTER, SOLENOID, PJ30XT	1	
06	- - - - - -	SCR,SKT,M3X12,BL	2	
07	1123560	FITTING,TUBE,STEM,G1/8 TO 6MM	2	
08	- - - - - -	SCR,HEX,CAP,M5X14,BL	2	
09	- - - - - -	WASHER,LK,M,SPT,M5,STL,ZN	2	
10	1120201	LUBRICANT,O-RING,NSF-H1,10 ML TUBE	1	
11	- - - - - -	BAG,POLY,KITS,ROLLS,5X7	1	
13	1123561	CONN,MALE,6MM T X 1/8 UNI	2	
14	1121358	SOLENOID,SATURN,BARE,4WAY,24VDC	1	
15	1121958	CONN,MALE,ELBOW,8MM T X 1/8UNI	3	
16	- - - - - -	BAG,POLY,KITS,ROLLS,3 1/2X5 1/2	4	
17	7407652	CHECK VALVE,SYRINGE, ASSY,PJ300	1	
18	7402541	CORDSET,SOL,PJ,UNITY TOUCH	1	
19	7407763	HARNESS,SPLITTER, 2 CH LOWPWR,PJ300	1	

Check Valve Service Kit Parts

See Figure 28.

Item	Part	Description	Quantity	Note
—	7407794	KIT,SERVICE,CHECK VALVE ASSY,300CC	—	
01	- - - - - -	• BODY,SYRINGE,CHECK VALVE	1	
02	- - - - - -	• COMPRESSION SPRING,0.97X7.62X15.75	1	
03	251143	• O-RING 30X3 VITON	1	
04	- - - - - -	• HOLLOW SOCKET SCREW,CHECK VALVE	1	
05	- - - - - -	• BALL, 8 MM, SS 316	1	
06	313742	• O-RING 12x2 VITON	1	

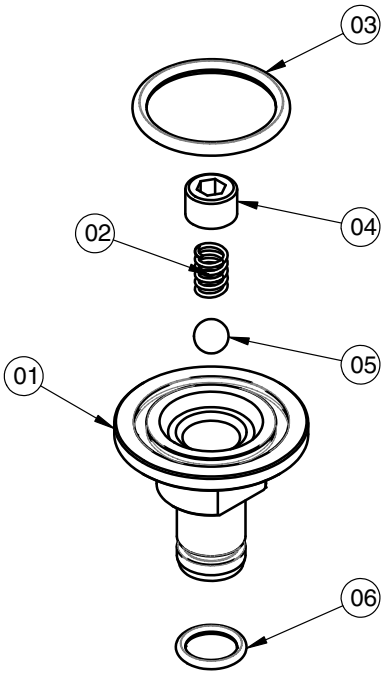


Figure 28 Check valve service kit parts

Air Kit Parts

See Figure 29.

Item	Part	Description	Quantity	Note
—	1107104	KIT,REG,SEP,FILTER,COMBO,AIR KIT, PURJET30	—	
01	1107101	• ACCUMULATOR,MUFFLER,PJ30	1	
02	971105	• CONN,MALE,12MM X 3/8UNI	1	
03	971102	• CONN,MALE,10MM T X 3/8UNI	2	
04	1107125	• CONN,MALE,RUN TEE,12MM T X 3/8UNI	1	
05	1107126	• REDUCER,12MM STEM X 6MM T	1	
06	1107102	• FILTER REG,3/8 PORTS,W/GAUGE	1	
07	1107127	• FILTER,WATER SEPARATOR,3/8NPT, MODULAR	1	
08	1107103	• BRACKET,CAST,REGULATOR,Y30T	1	
09	1082141	• MUFFLER,R1/2,40 dB	1	
10	1107100	• BRACKET,L-SHAPE,AIR KIT,PJ30	1	
11	1064886	• SCR,SKT,M6x14,ZN	2	
12	1051220	• SCR,SKT,1/2-13X1.000,BL	2	
NS	1107130	• TUBING,SOFT NYLON,12MMX1.5MM,BLUE	3 m	A
NS	1107128	• ADAPTER,8MM OD TUBE TO 9MM ID BARBED	1	A
NS	1107131	• TUBING,SOFT NYLON,10MMX1.25MM,BLUE	6 m	A
NS	1107129	• ADAPTER,8MM OD TUBE TO 7.5MM ID BARBED	2	A
NS	1094186	• DRYER,AIR,DESICCANT,INLINE,1/4NPT	1	A
NS	971100	• CONN,MALE,6MM T X 1/4UNI	2	A
NS	973500	• COUPLING,PIPE,HYD,1/4,STL,ZN	1	A

NOTE A: These items are shipped with the air kit and installed when the air supply connections are made.

NS: Not Shown

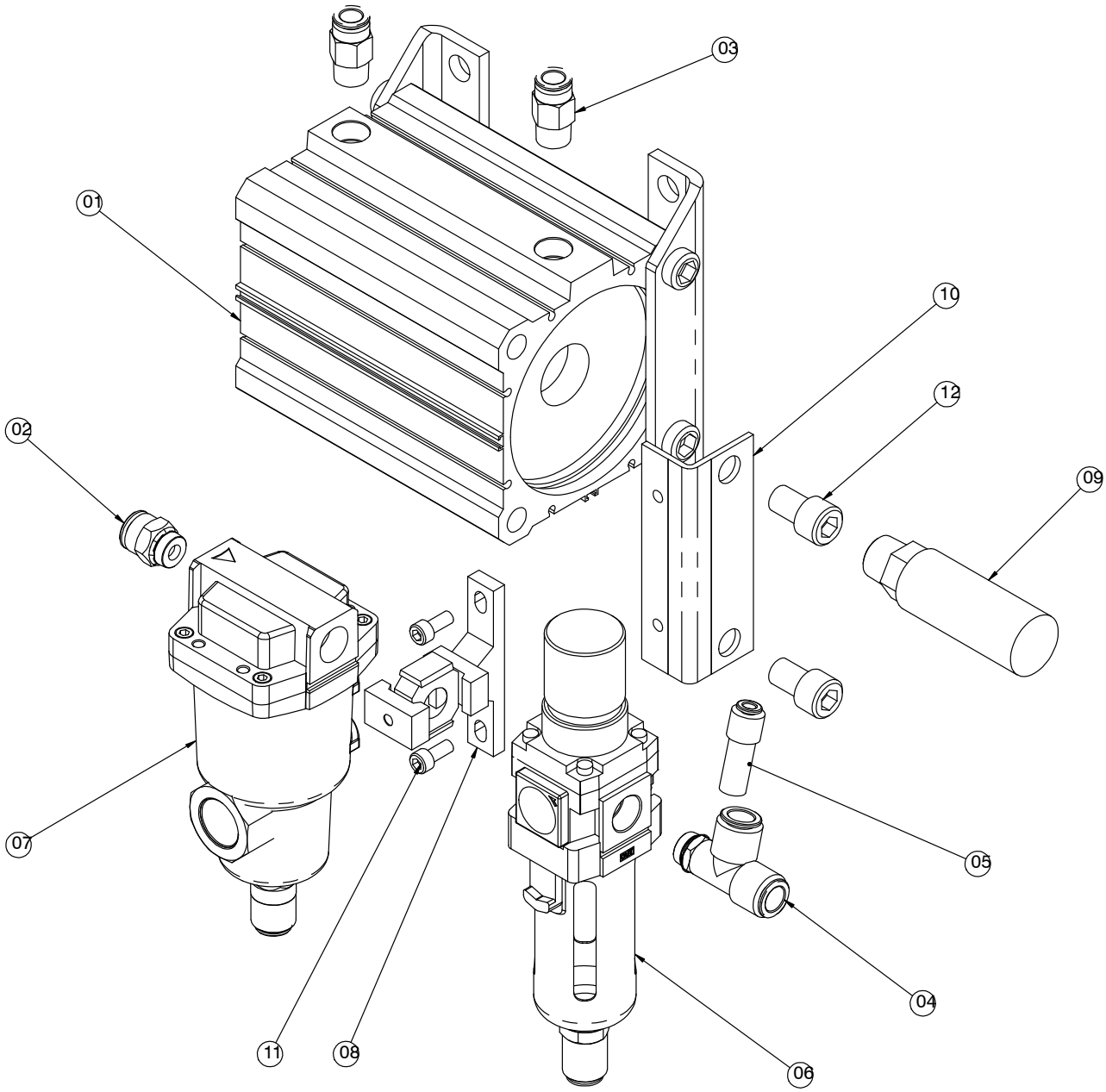


Figure 29 Air kit parts

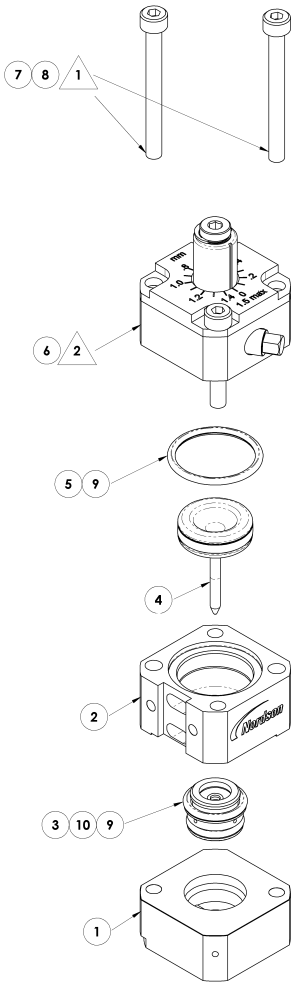
Jet Module Parts

One of three modules may be present on the applicator: an adjustable-stroke module with a 0.004” orifice nozzle; an adjustable-stroke module with a 0.007” orifice nozzle; an adjustable-stroke module with a nozzle adapter for linear pumping.

Module Assembly 4 Mil with Adjustable Stroke

See Figure 30.

Item	Part	Part	Description	Quantity	Note
—	—	1126536	MODULE, ASSEMBLY, 4 MIL 1MM, PJ30XT	—	
01		- - - - - -	• NOZZLE, ASSEMBLY, 0.004, PJ30XT	1	PC
02		- - - - - -	• BODY, PNEUMATIC, PJ30XT	1	PC
03		- - - - - -	• SEAL, ASSEMBLY, CARTRIDGE, PJ30XT	2	PC
04		- - - - - -	• NEEDLE ASSEMBLY, 1MM, PJ30XT	1	PC
05		- - - - - -	• O RING,VITON,.813 X 938 X .063	1	PC
06		- - - - - -	• ADJUSTER, STROKE, ASSEMBLY, PJ30XT	1	PC
07		- - - - - -	• SCREW,SOC,HD,M4X.7X40MMLG.	2	PC
08		- - - - - -	• LUBRICANT,NEVER-SEEZ,NSF-H1,FOOD GRADE	1	PC
09		- - - - - -	• LUBRICANT,O-RING,NSF-H1,FOOD GRADE,4L	1	PC
10		- - - - - -	• HIGH-TEMP GREASE GLS 595/N2 TUBE 250G	1	PC



NOTES:

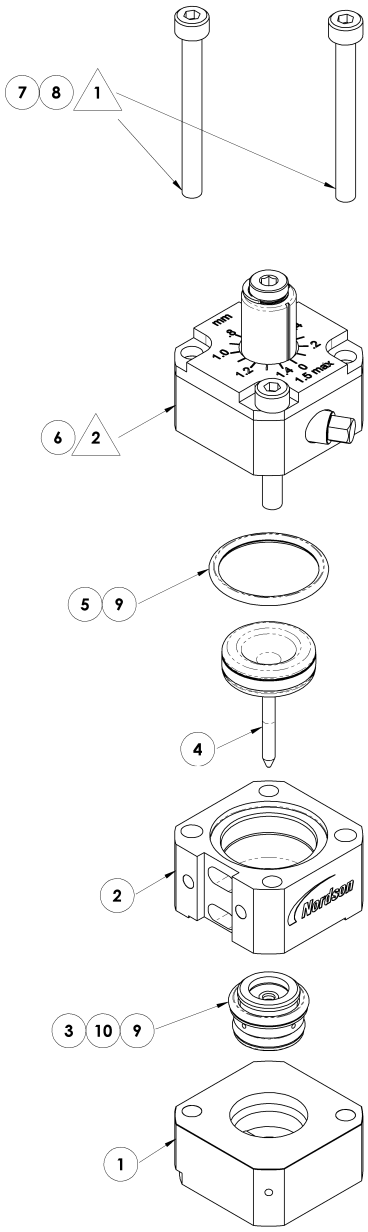
1. TIGHTEN TO TORQUE SPEC OF 5.85 N m(50 IN LB)
2. TIGHTEN TO TORQUE SPEC OF 5.85 N m(50 IN LB)
3. APPLY (ITEM 8) TO ALL FASTENERS
4. APPLY (ITEM 9) TO ALL O-RINGS
5. STANDARD 1MM BALL NEEDLE SHOWN, OTHER NEEDLE AND NOZZLE CONFIGURATIONS EXIST
6. AFTER (ITEM 3) IS INSERTED INTO ITEM 1, FILL GREASE (ITEM 10) INTO WEEP HOLE, ENSURE GREASE DOES NOT EXIST IN PISTON BORE
7. THREAD COUNTERCLOCKWISE BEFORE INSERTING STROKE ADJUSTER ASSEMBLY (ITEM 6) INTO PISTON BORE
8. SET STROKE TO 0.5MM DURING FINAL ASSEMBLY AND TEST MODULE

Figure 30 Fixed jet module with nozzle seat parts

Module Assembly 7 Mil with Adjustable Stroke

See Figure 31.

Item	Part	Part	Description	Quantity	Note
—	—	1126537	MODULE, ASSEMBLY, 7 MIL 2.6MM, PJ30XT	—	
01		- - - - - -	• NOZZLE, ASSEMBLY, 0.007, PJ30XT	1	PC
02		- - - - - -	• BODY, PNEUMATIC, PJ30XT	1	PC
03		- - - - - -	• SEAL, ASSEMBLY, CARTRIDGE, PJ30XT	2	PC
04		- - - - - -	• NEEDLE ASSEMBLY, 1MM, PJ30XT	1	PC
05		- - - - - -	• O RING,VITON,.813 X 938 X .063	1	PC
06		- - - - - -	• ADJUSTER, STROKE, ASSEMBLY, PJ30XT	1	PC
07		- - - - - -	• SCREW,SOC,HD,M4X.7X40MMLG.	2	PC
08		- - - - - -	• LUBRICANT,NEVER-SEEZ,NSF-H1,FOOD GRADE	1	PC
09		- - - - - -	• LUBRICANT,O-RING,NSF-H1,FOOD GRADE,4L	1	PC
10		- - - - - -	• HIGH-TEMP GREASE GLS 595/N2 TUBE 250G	1	PC



NOTES:

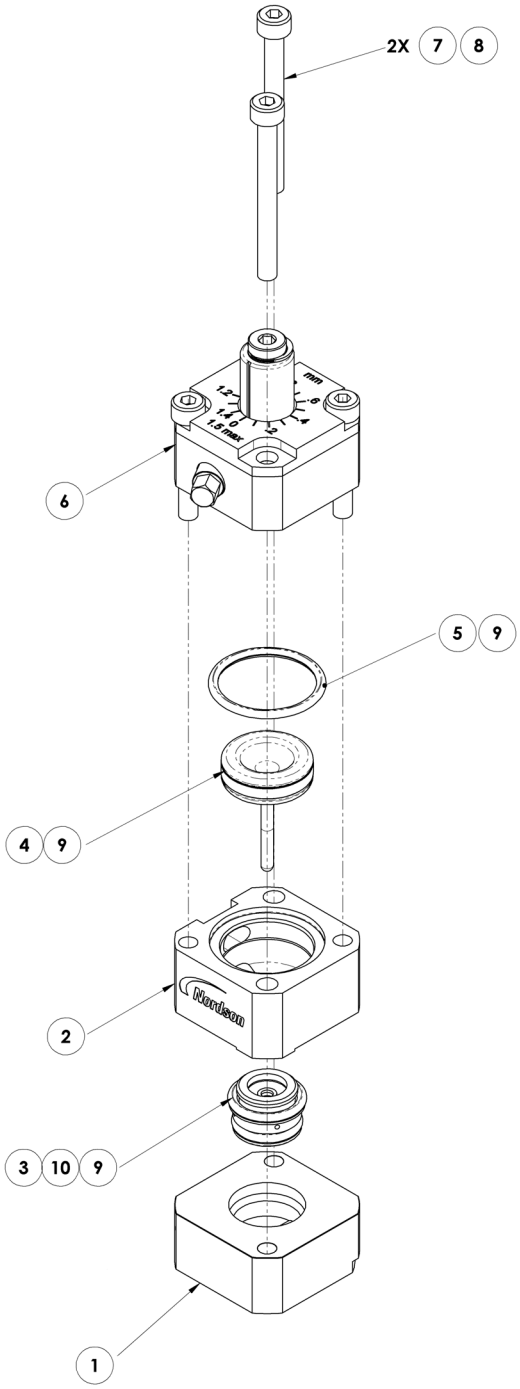
1. TIGHTEN TO TORQUE SPEC OF 5.85 N m(50 IN LB)
2. TIGHTEN TO TORQUE SPEC OF 5.85 N m(50 IN LB)
3. APPLY (ITEM 8) TO ALL FASTENERS
4. APPLY (ITEM 9) TO ALL O-RINGS
5. STANDARD 1MM BALL NEEDLE SHOWN, OTHER NEEDLE AND NOZZLE CONFIGURATIONS EXIST
6. AFTER (ITEM 3) IS INSERTED INTO ITEM 1, FILL GREASE (ITEM 10) INTO WEEP HOLE, ENSURE GREASE DOES NOT EXIST IN PISTON BORE
7. THREAD COUNTERCLOCKWISE BEFORE INSERTING STROKE ADJUSTER ASSEMBLY (ITEM 6) INTO PISTON BORE
8. SET STROKE TO 0.5MM DURING FINAL ASSEMBLY AND TEST MODULE

Figure 31 Fixed jet module with nozzle adapter parts

Module Assembly with Nozzle Adapter Linear Pumping

See Figure 32.

Item	Part	Part	Description	Quantity	Note
—	—	1126573	MODULE, ASSEMBLY, LP, PJ30XT	—	
01		- - - - - -	• SEAT, ASSEMBLY, LP, PJ30XT	1	PC
02		- - - - - -	• BODY, PNEUMATIC, PJ30XT	1	PC
03		- - - - - -	• SEAL, ASSEMBLY, CARTRIDGE, PJ30XT	2	PC
04		- - - - - -	• NEEDLE ASSEMBLY, 2.6MM, PJ30XT	1	PC
05		- - - - - -	• O RING,VITON,.813 X 938 X .063	1	PC
06		- - - - - -	• ADJUSTER, STROKE, ASSEMBLY, PJ30XT	1	PC
07		- - - - - -	• SCREW,SOC,HD,M4X.7X40MMLG.	2	PC
08		- - - - - -	• LUBRICANT,NEVER-SEEZ,NSF-H1,FOOD GRADE	1	PC
09		- - - - - -	• LUBRICANT,O-RING,NSF-H1,FOOD GRADE,4L	1	PC
10		- - - - - -	• HIGH-TEMP GREASE GLS 595/N2 TUBE 250G	1	PC



NOTES:

1. TIGHTEN TO TORQUE SPEC OF 5.85 N m (50 IN LB)
2. APPLY (ITEM 19) TO ALL FASTENERS
3. APPLY (ITEM 20) TO ALL O-RINGS
4. AFTER (ITEM 3) IS INSERTED INTO ITEM 1, FILL GREASE (ITEM 10) INTO WEEP HOLE, ENSURE GREASE DOES NOT EXIST IN PISTON BORE
5. SET STROKE TO 0.5MMDURING FINAL ASSEMBLY AND TEST MODULE

Figure 32 Adjustable jet module parts

Cable Part Numbers

The cables shown below are for use only in systems using 120-ohm nickel sensors. Cables for systems using 100-ohm platinum sensors are customer-supplied.

Part	Description	Note
7402541	CORDSET,SOL,PJ,UNITY TOUCH	PJ to Unity Touch S cable
7403236	HARNESS,ADPTR,12P/6S,T-STYLE,5M	PJ30XT extension cable, 5m
7407763	KIT,HARNESS,SPLITTER, 2 CH LOWPWR,PJ300	PJ300XT extension cable, 5m
7407768	KIT,SERVICE,CORDSET,NI120,240V,200W	PJ30XT/300XT cordset
7407792	KIT,SERVICE,CORDSET,NI120,240V,400W	PJ300XT cordset

Optional Pre-warmers

Part	Description	Note
7402627	PREWARMER,30CC,1 UNIT	30cc 1pocket, without controller (Need to collaborate with Unity Touch S)
7844093	PW30-IV 30CC PT100,220V,3C	30cc 4pockets, with controller
7844098	PW300-II 300CC PT100,220V,3C	300cc 2pockets, with controller
7844161	PW300-I-M 300CC NI120,220V,3C	300cc 1pocket, without controller(Need to collaborate with Unity Touch S)
7403899	PW30-IV 30CC PT100,110V,3C	30cc 4pockets, with controller, 110V
7403900	PW300-II 300CC PT100,110V,3C	300cc 2pockets, with controller, 110V

Recommended Spare Parts and Supplies

Equipment	Part	Item	Note
PJ30XT/ 300XT Applicator	7407768	KIT,SERVICE,CORDSET,NI120,240V,200W	
	7407792	KIT,SERVICE,CORDSET,NI120,240V,400W	ONLY FOR PJ300XT
	7402541	CORDSET,SOL,PJ,UNITY TOUCH	
	941161	O RING,VITON, .750X .938X.094, -11	
	940111	O RING,VITON,.301ID X .070W,BR, 10411 SB	
	1094186	DRYER,AIR,DESICCANT,INLINE,1/4NPT	
	1023441	COMPOUND,THERMAL,NTE303,1 GRAM	
	1120201	LUBRICANT, O-RING, NSF-H1, 10 ML TUBE	
	7407794	KIT,SERVICE,CHECK VALVE ASSY,300CC	ONLY FOR PJ300XT
	394769	HIGH-TEMP, GREASE GLS 595/N2 CAN:10g	
Jet Modules	1126536	KIT, MODULE, ASSEMBLY, 4 MIL, PJ30XT	
	1126537	KIT, MODULE, ASSEMBLY, 7 MIL, PJ30XT	
	1126573	KIT, MODULE, ASSEMBLY, LP, PJ30XT	Linear pump module
PJ30XT/ PJ300XT Modules	1128134	KIT, NOZZLE, LP, PJ30XT	Linear pump adapter
	1126502	KIT, NOZZLE, 0.004, PJ30XT	4 mil nozzle
	1126503	KIT, NOZZLE, 0.007, PJ30XT	7 mil nozzle
	1126504	KIT, NEEDLE, 2.6MM, W/ SEAL, PJ30XT	2.6 mm needle
	1126505	KIT, NEEDLE, 1MM, W/ SEAL, PJ30XT	1 mm needle
	1126513	KIT, SEAL, HEATER BLOCK, PJ30XT	Heater block
	1126514	KIT, SEAL, PISTON, PJ30XT	The seal on the needle
	1126515	KIT, SEAL, CARTRIDGE, PJ30XT	Cartridge seal assembly
	1126516	KIT, O-RING SET, PJ30XT	Includes: 940111,940090x2,940191, 940081x2,940133,940141
	1127358	COLLAR, LOCKING, STROKE, PJ30XT	Stroke lock
	1127815	ADJUSTER, STROKE, ASSEMBLY, PJ30XT	Adjustable stroke assembly
Supplies	1108369	SEALANT, PASTE, NSF-H1, FOOD GRADE	
	1108371	LUBRICANT, NEVER-SEEZ, NSF-H1,FOOD GRADE	
	900298	COMPOUND,HEAT SINK,5 OZ TUBE,11281	
	1120201	LUBRICANT, O-RING, NSF-H1, 10 ML TUBE	
	783959	HIGH-TEMP. GREASE GLS 595/N2 TUBE:250G	
	394769	HIGH-TEMP.GREASE GLS 595/N2 CAN:10G	

Technical Data

Unity PURJet 30XT/XT300XT Dispensing System Specifications

Component	Item	Specification
System	Transport temperature	-45-75 °C (-49-167 °F)
	Storage temperature	-45-75 °C (-49-167 °F)
	Ambient temperature	0-50 °C (32-122 °F)
	Humidity	10-95% non-condensing
Unity PURJet 30XT/300XT applicator	Weight (without adhesive cartridge)	PJ30XT: 1.6 kg (3.5 lb) PJ330XT: 3.36 kg (7.4 lb)
	Material compatibility	Rated for use with all commercially available pressure sensitive and EVA hot melt adhesives and polyurethane reactive (PUR) adhesives, excluding any compound that contains polyamides
	Adhesive viscosity	Varies depending on nozzle size and flow rate
	Solenoid valve air flow	15 scfm minimum

Electrical Specifications

Component	Item	Specification
Unity PURJet 30XT/300XT applicator	Supply voltage	PJ30XT: 200-240 VAC,250 W (supplied from controller) PJ300XT: Applicator manifold: 200–240 VAC, 1-phase, 50/60 Hz, 400 W (supplied from controller) Applicator heater block: 200–240 VAC, 1-phase, 50/60 Hz, 250 W (supplied from controller)
	Sensor type	120-ohm nickel

Applicator Component Expected Life

Applicator Component	Expected Life (number of cycles)
Solenoid valve (see Note)	30 million
Stroke adjustment pin	100 million
Module body	100 million
Piston needle	30 million
Piston seal	30 million
Seal pack	10 million
Nozzle	50 million
NOTE: To preserve solenoid life, Nordson Corporation recommends setting the values for APPLICATOR ON TIME and APPLICATOR OFF TIME at 7 ms or greater.	

Applicator Dimensions

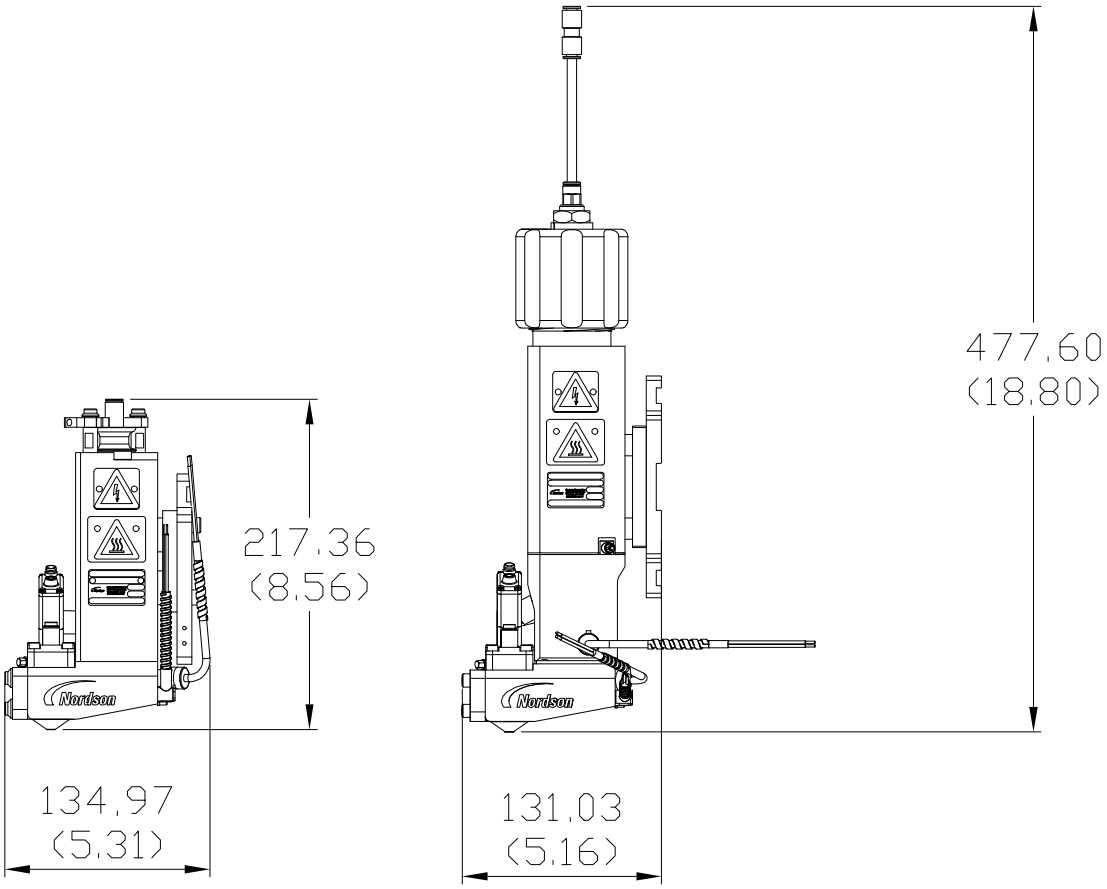
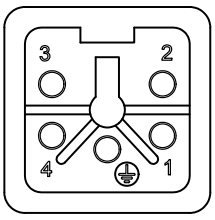
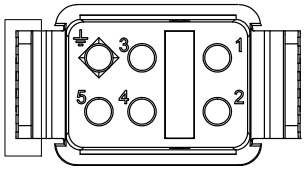


Figure 33 Unity PURJet 30XT/300XT applicator dimensions, [mm] in

Applicator Cordset Pin Positions



Pin	Connection
1	Heater
2	Heater
3	RTD
4	RTD
5	Ground



Pin	Connection
1	Heater
2	Heater
3	RTD
4	Not used
5	RTD
6	Ground

Figure 34 Pin positions on a nickel applicator cordset