NextDent 300

User Guide

Release Date: 7/24/2025

Original Instructions

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1 NEXTDENT 300 INTRODUCTION

The **NextDent 300** 3D printer system is a Multi-Jet Dental Printer. The solid imaging 3D printer produces digital dentures from 3D solid Computer-Aided Design (CAD) models and through the 3D printer system client software. The primary features of the printer are the user interface, build chamber including the print engine, and the material delivery module (MDM), which contains the materials and waste bag.

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FCC Notice

United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with these instructions, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

Canada

This Class A digital apparatus complies with Canadian ICES-003.

European Union

CAUTION: This is a Class A product. In a domestic environment, this product can cause radio interference in which case the user could be required to take adequate measures.

Korea

사용자안내문

사 용 자 안 내 문
이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

※ 사용자 안내문은 "업무용 방송통신기자재"에만 적용한다.

MATERIALS FOR NEXTDENT 300
Build: NextDent Jet Teeth HW
Build: NextDent Jet Teeth B4
Build: NextDent Jet Base LT
Support: VisiJet M2 SUP

2 NEXTDENT 300 IMPORTANT SAFETY INFORMATION

CAUTION: IMPORTANT SAFETY INSTRUCTIONS – READ AND FOLLOW THESE INSTRUCTIONS BEFORE OPERATING THE PRINTER SYSTEM.

Introduction

You must be properly trained and have read this manual before operating the NextDent 300 system. Also, anyone assisting you must be properly trained. After you are trained, always follow the safety guidelines and procedures in this section before operating the NextDent 300

Customer Safety Program

Before using the NextDent 300, customers must have a safety program in place. The safety program should do the following:

- Label and point out hazardous equipment, materials, and procedures.
- Explain what to do in an emergency situation.
- Provide information about the hazards of equipment and materials in the form of Safety Data Sheets (SDSs). The SDSs are provided with all materials supplied by 3D Systems.

The information in this chapter supplements the customer's existing safety program. It points out safety considerations that specifically concern the NextDent 300 system.

Levels of User

WARNING: DO NOT ATTEMPT TO PERFORM ANY PROCEDURES DESCRIBED IN THIS MANUAL UNLESS YOU HAVE READ THROUGH THE ENTIRE MANUAL FIRST.

WARNING: THE NEXTDENT 300 IS NOT SUITABLE FOR USE IN LOCATIONS WHERE CHILDREN ARE LIKELY TO BE PRESENT.

There are two levels of users of the NextDent 300, based on the amount and type of training the user has received. The two levels of users (operators and certified service personnel), are described below.

Operator

Operators are trained to operate the system and perform all the necessary tasks to build a part and perform basic preventative maintenance as outlined in this manual.

Safety Symbols and Definitions

Radiation: Invisible UV radiation is accessible in the vicinity of this sign or behind the panel. Radiation can cause eye injury or blindness, burn injury and/or fire. Access panels are for service only and should be opened only by certified service personnel.

Electrical Shock: High voltage electricity is accessible in the vicinity of this sign or behind the access panel. High voltage can cause severe burns or death, as well as fires. Access panels are for service only and should be opened only by certified service personnel or trained maintenance personnel.

Hot Surface: A hot surface is accessible in the vicinity of this sign or behind the access panel. Avoid contact. Hot surfaces can cause burn injury or fire. Allow surface to cool before touching. Access panels are for service only and should be opened only by certified service personnel or trained maintenance personnel.

Rotating Blades: KEEP FINGERS AWAY FROM FAN: Putting fingers in way of moving fan can cause serious injury.

Sharp Element: KEEP FINGERS AWAY FROM SHARP OBJECTS: Putting fingers in way of sharp objects can cause serious injury.

WARNING: INDICATES THE POSSIBILITY OF LOSS OF DATA OR DAMAGE TO EQUIPMENT.

DANGER: INDICATES THE POSSIBILITY OF INJURY OR DEATH TO PERSONNEL.

DANGER: THIS GLOBAL HARMONIZED SYSTEM LABEL FOR LOW LEVEL TOXICITY. THIS INCLUDES RESPIRATORY, SKIN, AND EYE IRRITATION, SKIN SENSITISERS AND CHEMICALS HARMFUL IF SWALLOWED, INHALED OR IN CONTACT WITH SKIN.

Hazardeous Material: This Global Harmonized System label for Corrosive chemicals, may cause severe skin and eye damage and may be corrosive to metals.

WARNING: THIS GLOBAL HARMONIZED SYSTEM LABEL IS FOR LOWER SYSTEMIC HEALTH HAZARDS

WARNING: THIS GLOBAL HARMONIZED SYSTEM LABEL WARNS HAZARDOUS TO AQUATIC LIFE AND THE ENVIRONMENT.

Wear Protective Gloves: Wear the appropriate gloves when required. For example, when touching surfaces that may contain or have been exposed to materials, wear nitrile gloves. Heat gloves are necessary when touching surfaces that may be hot to ensure burns don't occur. Ultra Violet Radiation: UV light hazard lab safety symbols will appear near ultraviolet (UV) light areas to warn personnel of the potential dangers.

Pinch Point: a mechanical hazard that occurs when two objects move toward each other, trapping or injuring a body part.

Electrical Shock: A dangerous situation that could lead to an electric shock, burn, or fire

Belt Entanglement: A situation where a person's hand gets caught in a machine's moving parts, belts, or chains.

Cutting Point: a situation where a person's fingers could be cut by a machine or tool with moving parts

Safety Guidelines

General

The 3D printer system is designed with built in safety features, improper use can cause injury to personnel.

Follow these safety guidelines when operating the printer:

- Read and follow all 3D printer system instructions. Printer should only be operated by trained personnel.
- Follow all safety rules and heed all cautions and warnings in this guide.
- Do not attempt to open top door while printing.
- Do not use any material without reviewing the Global Harmonized Standards/Safety Data Sheet (GHS/SDS).
- Dress power and communication cables behind printer to prevent tripping.
- Do not attempt to access, service, or adjust printer components or perform procedures without reviewing the documentation for user accessible maintenance routines unless specifically trained to do so.
- Only certified service personnel that have completed the 3D Systems service training may perform tasks they are authorized and certified to complete.
- Do not ignore warning signs posted during 3D printer system service operations. If an error message appears on the 3D printer system's User Interface refer to "Troubleshooting Section" within this guide depending on the error, before resuming operation.
- To prevent potential skin irritation and sensitization due to contact with waste material or uncured Part Material, follow all guidelines in the following sections.

Safety Notice

CAUTION: Use of controls or adjustments, or performance of procedures other than those contained in the operation, maintenance or any other manual provided with this machine may result in hazardous radiation exposure.

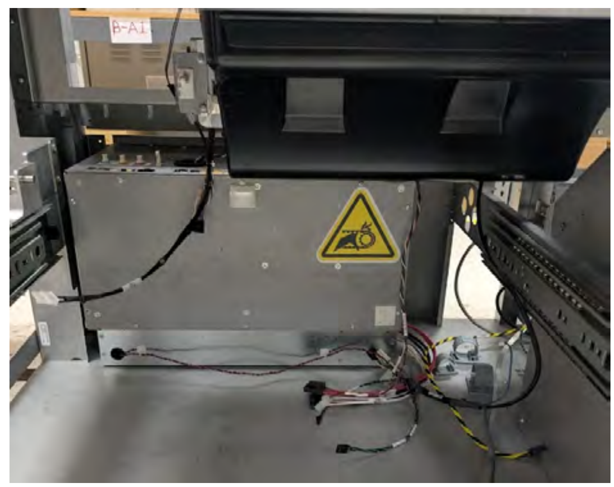
All service to the machine and other components requiring safety switch override shall only be performed by 3D Systems service personnel, their authorized agents, or personnel who have been service-trained by 3D Systems.

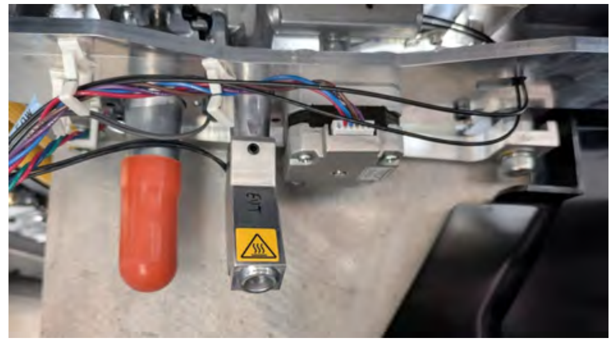
Label Installation Diagram

The machine has many warning labels throughout. This section details what those warning labels are, how many of each warning label is on the printer, and the locations of each type of label. It is important to use the machine with extreme caution to avoid situations that may be hazardous. The numbers in the **Item** column below correspond to the numbers in the images that follow.

The numbers in the **Item** column below correspond to the numbers in the images that follow.

ITEM	DESCRIPTION	QTY	LABEL	LOCATION
1	Product label - Contains system information and certification symbols	1		
2	Caution - Risk Group 2 - Possible hazardous optical radiation emitted from the product. Do not stare at operating lamp. May be harmful to the eyes.	1		
3	Hot Surface Warning - Hot surface in vicinity of sticker when machine is operating	1		25
4	Cutting of fingers - A situation where a person's hand gets caught in a machine's moving parts, belts, or chains.	1		
5	Cutting blade - A situation where a person's fingers could be cut by a machine or tool with moving parts.	1		

ITEM	DESCRIPTION	QTY	LABEL	LOCATION
6	Hot Surface Warning - Hot surface in vicinity of sticker when machine is operating	1		
7	Electrical Warning - Possible electrical hazard on or behind panel with sticker	1		
8	Hand Entanglement, Notched Belt Drive - A situation where a person's hand gets caught in a machine's moving parts, belts, or chains.	1		
9	Pinch Point Label - mechanical hazard that occurs when two objects move toward each other, trapping or injuring a body part.	1		

ITEM	DESCRIPTION	QTY	LABEL	LOCATION
	Hot Surface Warning - Hot surface in vicinity of sticker when machine is operating	1		

Protective Equipment/First Aid

Follow recommendations for protective equipment and general first aid procedures to minimize the risks from part material exposure. If professional medical attention is necessary, take the Global Harmonized Standards/Safety Data Sheet (GHS/SDS) for the exact material involved to the attending physician.

Note: Always wear 100% nitrile gloves and lab coats when handling any part or waste material. Latex gloves are not chemical-resistant and are not recommended.

Note: In the event of a leak or spill of uncured part material, wear safety glasses with side shields to provide eye protection.

CAUTION: Because of the 3D printer system's built-in engineering controls, respiratory protection is not necessary during normal operation. A NIOSH-approved (or equivalent) dust mask is recommended when dry sanding cured material parts.

CAUTION: Always wear protective sleeves or a lab coat when doing anything around the materials. When skin comes in contact with materials they can cause an allergic reaction that can be harmful to skin.

Health Hazards / Irritant

Irritant

- Any chemical may exert harmful effects if it contacts or enters the body. Uncured material is a sensitizer, and can cause allergic reactions if it comes in contact with skin. Always wear nitrile gloves when handling material. Refer to personal protection equipment for more information. To avoid sensitization, do not allow uncured material to contact skin. Consult the GHS/SDS for specific information about the sensitization potential.
- If skin comes in contact with uncured material immediately wash with cold water and soap.

Inhalation/Ingestion

- Under normal operation, inhalation is not an expected route of entry.
- Ingestion - Uncured part material is toxic if ingested.
- Because uncured material is toxic if ingested, it must not be present where food and drink are stored, prepared, or consumed. After handling materials, wash hands with soap and cold water before consuming or preparing food.

Handling Finished Parts

- Finished (cured) parts can be handled or disposed of the same as standard household plastic products. parts are not recyclable. materials are not intended for and cannot be used for medical implant, food or drink handling applications.
- Exposure control - The 3D printer system has a variety of built-in engineering controls which are designed to prevent operator exposure. Do not try to change or disable these controls.

Skin Contact

- Uncured part material is a sensitizer, and can cause allergic reactions if skin comes into contact. When handling any part or waste material, always wear 100% nitrile gloves and lab coats.
- Should skin come into contact with uncured part material, wash thoroughly with soap and cold water and immediately remove contaminated clothing and shoes. Do not use hot water or solvents to wash hands, as it will result in absorption through the skin. If skin is irritated, seek medical attention. Dry-clean contaminated clothing and discard contaminated shoes and leather products in accordance with applicable regulations.

Eye Contact

- Safety goggles with side shields should be worn to prevent accidental splashes into the eyes. If material comes in contact with the eye, flush immediately with large amounts of cold water for 15 minutes, avoid sunlight, fluorescent light, and other ultraviolet light, and obtain immediate medical attention. Eye wash facilities and a first aid kit should be readily available and close to the 3D printer system.

Contact Lenses

- Wearing contact lenses is not recommended if handling liquid materials. If material splashes into eyes when contact lenses are worn, flush eyes immediately with water. Verify that flushing has removed the contact lens from the eye(s). Protect eyes from light and obtain immediate medical attention. Discard contact lenses that come into contact with liquid material.

Fume Inhalation

- Under normal operation, inhalation is not an expected route of entry. Always work in a well ventilated area when using materials and avoid breathing vapors. If inhaled, remove the personal to fresh air. Give artificial respiration or cardiopulmonary resuscitation (CPR) if required. If breathing is difficult, give oxygen. Obtain immediate medical attention.

Ingestion

- Uncured part material is toxic if ingested. Obtain immediate medical attention.

Hygienic Practices

- Because uncured material is toxic if ingested, it must not be present where food and drink are stored, prepared, or consumed. After handling materials, wash hands with soap and cold water before consuming meals, breaks, smoking, applying cosmetics, using toilet facilities, and after work.
- Employees should be alerted of the need to clean and rinse off any contacted surface promptly in order to prevent further contamination. Ensure a convenient washroom location is provided with access to soap, water, and disposable paper towels.
- Tools contaminated with part material should be cleaned prior to reuse. Solvents such as denatured alcohol or Isopropyl Alcohol (IPA), are normally required to clean equipment and tools. Wash with soap and water to remove any traces of excess part material or solvent.

Material Handling and Safety

Prior to using the NextDent 300, users should be aware of potential hazards which may result in exposure to uncured part material, such as removal of the material waste bag and handling part material cartridges.

Emergency (GHS/SDS)

Chemtrec USA (800) 424-9300; Europe +1-703-527-3887

Consult the materials Global Harmonized Standards/Safety Data Sheets (GHS/SDS) for information on specific materials. For further information on this and related topics, consult the 3D Systems - Materials website at http://www.3dsystems.com/support/materials/msds.

Packaging Inspection

The material cartridges are packaged in shipping cartons. Upon receipt of material shipments, inspect cardboard carton exterior for signs of damage and leakage. If leakage is observed, DO NOT open carton, and contact 3D Systems's Technical Support Hotline.

	NEXTDENT 300 PART MATERIAL	SUP WAX SUPPORT MATERIAL
Shelf Life	2 Years	5 Years
Climate	Cool, dry area with adequate ventilation	
Temperature Range	60°F (16°C) to 80°F (27°C)	
Maximum Storage Temp	95°F (35°C)	
Environmental Conditions	No direct sunlight, heat, flames, or UV energy. Do not expose materials to heat at or above 230°F (110°C) , flames, sparks, or any source of ignition.	

Recertification Date

Always check material "Recertification Date" before use. If the cartridge has reached its Recertification Date, your 3D Systems certified Partners or 3D Systems Technical Support can assist with questions on material requiring recertification.

Support material is loaded on the left side of the material drawer (white). Build material is loaded on the right side of the material drawer (black). Before loading cartridges into 3D printer system, inspect the cartridges for signs of damage or leakage. Do not load a damaged or leaking cartridge. Dispose of material cartridge according to local regulations.

Material Drawer Front

Storing a Partially Used Material Cartridge

It is important not to lay material cartridges that are partially used on their side. Doing so will cause material to seep through the vent cap and clog cap. This will cause damage to the material cartridge if used for a later print. To store a partially used Material Cartridge, place it upright in a NextDent 300 Cartridge Holder and tighten the vent cap.

Material Storage

Material should be stored in their original containers, according to the guidelines given in the GHS/SDS included with the material. Protect material from sunlight and ambient room light.

CAUTION: Never mix different materials.

Disposal

Disposal of fully cured parts are not subject to regulations of any known agency worldwide. support material cartridges may be disposed of in ordinary office trash.

Support Material

Support material has no known regulatory requirements and may be disposed of in ordinary office waste.

Cured Part Material

Finished (cured) parts can be handled or disposed of the same as standard household plastic products. Printed parts are not recyclable. Materials are not intended for and cannot be used for medical implant, food, or drink handling applications.

Uncured Part Material and Waste

Uncured part material is classified as regulated, and in some areas hazardous; requiring special packaging, transportation, and disposal. The disposal of partially cured or uncured part material must comply with all local, state, and federal environmental safety regulations. Applicable part "waste" includes cartridges (empty or full) and waste pans. Any materials used to clean up uncured part material should be disposed of in the same manner as uncured part material.

Dispose of your uncured parts and waste materials according to your local environmental regulatory agency. If assistance is needed, contact 3D Systems certified Partners or 3D Systems Technical Support.

To find out facility disposal requirements, contact a local waste disposal provider. (Local environmental regulatory agency should have a list of qualified providers.) You will need to give disposal service provider a copy of the part material GHS/SDS (Global Harmonized Standards / Safety Data Sheets), and possibly other forms included in the Appendix of your Material Handling Guide, such as Waste Profile Worksheet and SNUR (Significant New Use Regulation - U.S. only). A report will be provided, indicating disposal requirements, as well as a quotation for regularly scheduled pickups. If assistance is needed locating a waste disposal provider, or completing a waste disposal form, contact your local 3D Systems certified reseller or 3D Systems Technical Support.

3D Systems assumes no liability or responsibility for proper disposal of uncured part material. Proper disposal of uncured part material is the sole responsibility of the user.

Spilled Material

Spills of material are HIGHLY UNLIKELY, and should NOT occur in normal operation of the 3D printer system. If a leak occurs, it is an indication of a serious 3D printer system malfunction.

The first priority is to protect users from inadvertently touching material. Spills of support material can be cleaned without use of protective gear, and disposed of as office trash. Handling uncured part material requires use of nitrile gloves and other personal protective equipment to ensure no direct contact with uncured part material. If you don't know which material it is, assume it to be uncured part material, and handle accordingly - with the recommended personal protective equipment.

Promptly remove spilled material, dispose of waste material, and clean up materials per local regulatory requirements. Suspend use of the 3D printer system until you contact 3D Systems Technical Support for a service visit to determine and repair the source of the leak.

Small spills of uncured liquid part material can be cleaned up using disposable towels, non-reusable rags, or absorbent materials such as sawdust, clay, diatomaceous earth, or activated charcoal. If spilled material is hot (liquid), wait until it cools before wiping up. After wiping up the spill, wipe surface with denatured or isopropyl alcohol and clean thoroughly with soap and water.

CAUTION: Never put sawdust, clay, diatomaceous earth, or activated charcoal inside the printer, doing so will damage the printer.

Consider avoiding placement of the 3D printer system over carpeting, or consider use of barriers to avoid the possibility of carpet damage if spills were to occur.

Advise service provider involved of the spilled material, and provide GHS/SDS and other material information prior to contact with the material. Advise them of disposal requirements for part material and clean-up products if part material (uncured) is the spilled material.

Tools contaminated with part material should be cleaned prior to reuse. Solvents such as denatured alcohol or Isopropyl Alcohol (IPA), are normally required to clean equipment and tools. Wash with soap and water to remove any traces of excess part material or solvent. Contact solvent suppliers for information on proper handling of solvents if used for clean-up.

Some cleaning solvents are highly flammable such as denatured alcohol and isopropyl alcohol. Before using solvents to clean and remove uncured part material, be sure read and follow the solvent supplier safety precautions and recommended usage.

Flammability Hazards

Though the U.S. Department of Transportation does not consider materials a "flammability hazard," they do classify them "combustible" based on flash points. Material containers may rupture when exposed to extreme heat. Use National Fire Protection Association Class B extinguishers such as carbon dioxide, dry chemical, or foam.

3 NEXTDENT 300 PRINTER FEATURES

Build Mode

The NextDent 300 3D Professional System features a single build mode and improved print speed to deliver high fidelity prototypes for a variety of applications. The build area is 518 x 381 x 299 mm (20.4 x 15 x 11.8 inches) (x, y, z).

- **HD Mode**: Allows the user to build high-resolution parts with exceptional surface finish and superior accuracy. HD mode prints at 800 x 900 x 800 micron layer thickness.

NEXTDENT 300 - PRINTER FEATURES			
Build Mode	**High Definition (HD)**		
Resolution (xyz)	800 x 900 x 790 DPI		
Build speed (in/hr) in Z	1 Lane: 0.29	2 Lanes: 0.22	3 Lanes: 0.14
mm/hr	1 Lane: 7.3	2 Lanes: 5.5	3 Lanes: 3.5
Build speed (hr/in) in Z	1 Lane: 3.5	2 Lanes: 4.5	3 Lanes :7.3
hr/mm	1 Lane: 0.14	2 Lanes: 0.18	3 Lanes: 0.29
Build Volume (xyz)	518 x 381 x 299 mm (20.4 x 15 x 11.8 inches) (x, y, z).		
Accuracy - per inch of part dimension typical	+/-0.004 inch per inch (+/-0.1016 mm for 25.4 mm) of part dimension		
Minimum Feature Size	500 µm		
Layer Thickness	32µm layers		
Build Material	NextDent Jet Teeth HW NextDent Jet Teeth B4 NextDent Jet Base LT		
Material	UV Curable Plastic		
Material Delivery	Part material is delivered in 1 kg. plastic bottles Support material is delivered in 1.75 kg Each MDM holds 8 bottles of material, allowing for a total of 2 bottles of support material and 6 bottles of build material.		
Support Material	VisiJet M2 SUP		
Part Stacking	YES		
No Enclosure	NO		
Application	High Definition printing mode provides a balance of speed and print quality. It is well suited for most general print jobs and is perfect for high fidelity prints of models for design verification, functional testing and other applications.		

Part Stacking and Nesting

Stacking: The user can utilize the entire build area by stacking parts vertically in the z-direction to fill up the entire build envelop with parts. The user can control the space between layers to minimize support material usage and build time. Hours can be saved by stacking parts and submitting single, long builds overnight and weekends. Nesting capability allows parts to be placed within the boundaries of one another but not overlapping the part structure itself.

Simultaneously use Two Materials for Part Building

The NextDent 300 provides the simultaneous use of two build materials along with a support material. The 3D printer system has a total of six material channels. Each MDM holds eight bottles of material, allowing for a total of two bottles of support material and six bottles of build material. Support material is loaded into the left side of the machine, while build material is loaded into the right side.

The following build materials are available for the NextDent 300:

NextDent Jet Teeth HW

NextDent Jet Teeth B4

NextDent Jet Base LT

The following support materials are available for the NextDent 300:

- VisiJet M2 SUP

Note: For more detailed information regarding NextDent 300 material characteristics please visit the material characteristics page in the customer support site.

4 NEXTDENT 300 AT A GLANCE

The NextDent 300 Printer

The NextDent 300 is a Dental Printer. The solid imaging 3D printer system produces plastic prototype parts from 3D solid Computer-Aided Design (CAD) models. File types include: .stl, .ctl, .obj, .ply, .zpr, .zbd, .amf, .wrl, .3ds, .fbx, .mjpddd, .bdz, .iges, .igs, .step, .stp and .slc, The primary components are the touchscreen, build chamber, material delivery modules (MDMs), and waste drawers.

The three dimensional solid parts built by the 3D printer system consist of one support material and one (or two) part materials. The support material is a wax based material providing adhesion to the print platform, as well as, providing supports for the part material to build the model.

The part material used to build parts is an ultraviolet (UV) curable material. After a layer of material is deposited in the build chamber, the part is exposed to a UV flash lamp. The UV energy is absorbed by the material converting the liquid build material to a solid polymer. When the build is complete the part is adhered to the print platform by means of the support material.

Specifications and Requirements

Total Machine Footprint (xyz)	1183mm x 740mm x1077mm 46.6" x 29.1 x 42.4"
Electrical Requirements	Each 3D printer system requires use of a dedicated circuit that will allow for 100-127 VAC, 50/60 Hz, 15A, single phase or 200-240 VAC, 50/60 Hz, 10A, single phase.
Network Ready	Built-in Ethernet - only used for 3D Systems' 3D Connect service. Built in USB Port

Touchscreen Control Panel

The NextDent 300 articulating touchscreen control panel provides a graphical user interface (GUI) for the user. With the exception of submitting print jobs, the touchscreen control panel provides full control of the 3D printer system including:

- Set up
- Selecting, starting, pausing and aborting print jobs
- Diagnostics
- Test prints and demo prints

The full functionality of the 10" touchscreen control panel is described later in this chapter.

Material Delivery Module (MDM) and Waste Bag

The 3D printer system has one material delivery module (MDM), shown open in the figure below. The MDM holds six bottles of material on the right side., and a total of 2 bottles of support material on the left side of the MDM.

The support material is delivered in 1.75 kg. plastic bottles and the part material is delivered in 1 kg. plastic bottles. The bottles are placed in the machine's MDM. The NextDent 300 allows for the simultaneous use of two different part materials.

The NextDent 300 has one waste bag. The waste bag can be accessed by opening the MDM.

Build Chamber

The figure below shows the NextDent 300 with the build chamber door open. The user will access the build chamber to install a print platform before each build and to remove the completed parts at the completion of a build. The build chamber door is equipped with an interlock which prevents the user from accessing the build chamber during a build. This prevents user access to moving parts and protects the user from exposure to the UV curing lamps.

3D SPRINT

3D SPRINT is a client workstation software package that is used to manipulate the .stl, .ctl, .obj etc. files that are subsequently sent to the NextDent 300 as print jobs. Print jobs cannot be submitted locally (at the 3D printer system itself), and must be submitted through 3D SPRINT.

5 NEXTDENT 300 3D SPRINT SOFTWARE

3D SPRINT™ is a client application that is offered for your printer. Please review the "help" section that covers the entire application and will also help you to fully utilize the power of 3D SPRINT.

If you are using this application for the first time, please read the "Help" document thoroughly to get a basic understanding about the application and its uses.

To open and use the help documentation, click here.

Shrink Compensation for Part Material

Material shrinkage occurs in thermoplastics as they transition from liquid state to solid (change in density). In the case of photo-polymers used in the Multi-Jet building process, this shrinkage can occur during the curing stage of printing. 3D Sprint has features built in to allow a user to compensate for the natural shrinkage of the material and also fine tune the accuracy of a part. The Material Shrink Compensation Tools are provided for this purpose. The kit includes instructions, a worksheet, two .STL files and will explain the process for entering shrink compensation and fine tuning part accuracy using scaling factors.

6 NEXTDENT 300 PRINTER SETUP

6.1 NextDent 300 Power On Printer

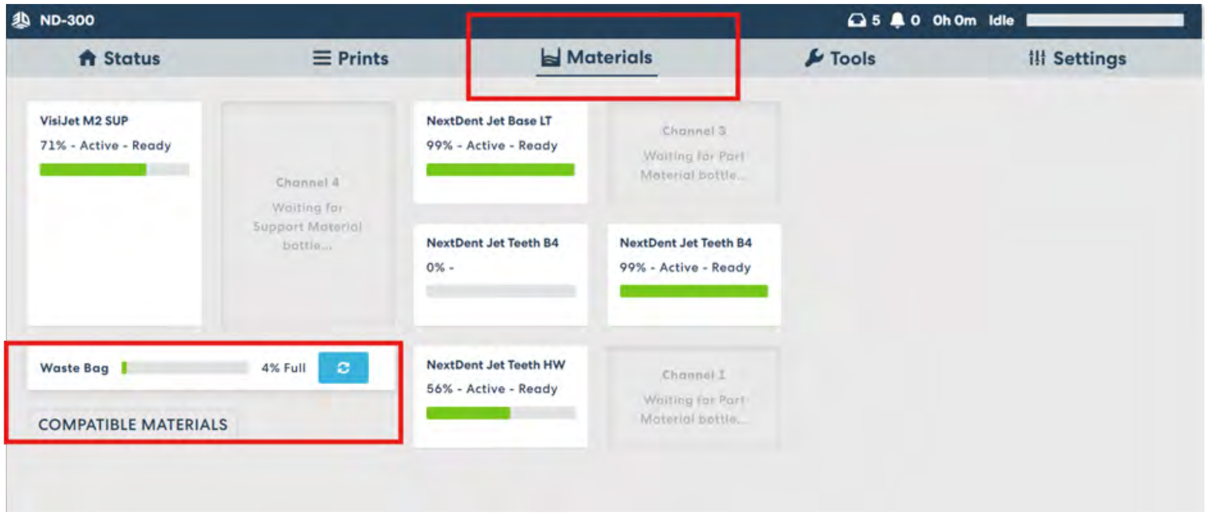
Switch power on located in the back of the printer to power on the device. Once the printer is switched on it should remain on unless it will not be used for a significant amount of time (>60 days). UI will begin to power up. This may take a minute or two for the screen to come on. When the UI is booted up the 3D Systems logo will appear and then the Status screen will appear.

6.2 NextDent 300 Changing Waste Bag

The UI will instruct the user when it is time to change the Waste Bag. Follow these steps to change the waste bag.

Note: Even though the waste bag may not appear full when the user is notified to change it, it is highly recommended to replace the waste bag when prompted to avoid unnecessary overflow and mess. When waste bag has been changed ensure you confirm the level has been reset to zero.

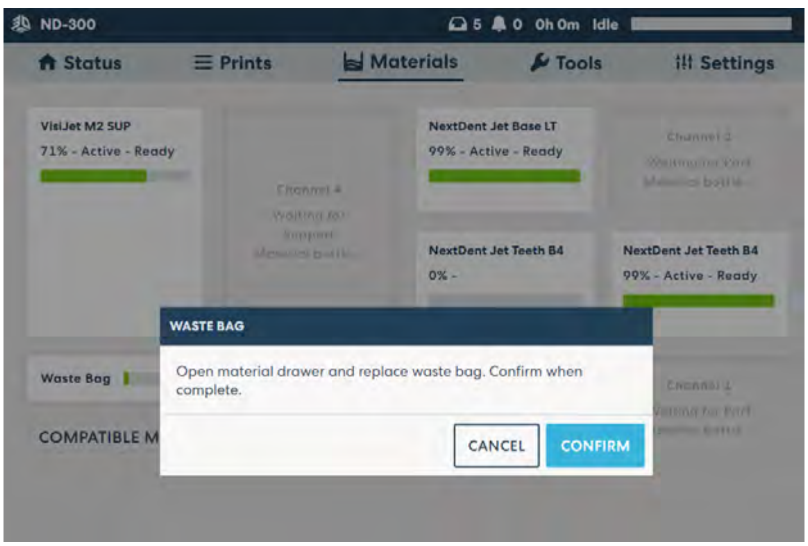
1. Verify that the printer is in READY.
2. Select Materials tab.



3. Wearing protective Nitrile gloves, open the MDM drawer.
4. Remove waste bag and dispose of bag according to local regulations.
5. Inspect the waste bin for any remaining waste. If necessary, wipe out any waste that exists with the lint free cloth and isopropyl alcohol.

Note: The waste bag is stuck to the liner when you attempt to remove it, replace the entire liner and bag to prevent the bag from tearing and causing material to leak into the receptacle. Waste bags can be ordered using part number 310248-00. With each order you will receive 30 bags and 1 liner.

6. Confirm on the printer UI when you have completed replacing the waste bag.



6.3 NextDent 300 Material Cartridge Removal and Installation

When a material cartridge is empty and needs to be replaced, or if a partially filled container needs to be replaced with a full container, perform the following procedure.

Note: It is important to verify the type of material currently in the MDM before proceeding with these steps.

Removing Material Cartridge

Note: Cartridges cannot be removed from a cold printer. The printer must be warm before drawer will open and cartridges can be removed.

Note: The software verifies that material cartridges are genuine to prevent possible compromised part quality and print head damage from the use of non-genuine material cartridges. Material cartridge information and certain printer performance parameters are collected, but no personal or design data are collected.

The MDM drawer is a push/push mechanism. Push to open drawer, push to lock drawer.

1. Open the MDM drawer by pushing in at the recessed dimple.

2. Pull the MDM drawer open.
3. Turn the material cap a 1/2 turn to clockwise to tighten the vent cap.

Material Drawer Front

4. Press the release button on the front. You will hear the cartridge release. Pull the cartridge out of the slot.
5. Dispose of the empty cartridge according to local regulations.

6. Wearing nitrile gloves and either protective sleeves or a lab coat to protect arms, use a disposable paper towel and wipe all material from the container seal assembly, if necessary you can use some isopropyl alcohol on the paper towel to wipe up the excess material.

   Note: It is important to always wear nitrile gloves and either protective sleeves or a labcoat to protect arms when coming in contact with materials to avoid getting materials on skin. Contact with skin may cause an allergic reaction.

Installing New Material Cartridge

Note: For optimal use, a new or unused NextDent material bottle should be rolled on a NextDent bottle roller for a minimum of 3 hours before being inserted into the printer. Additionally, bottles stored in the NextDent drawer for more than 2 weeks should be re-rolled for at least 15 minutes before reinsertion.

What happens if you ignore bottle rolling guidance?

Pigmentation settling in the bottle and uneven color results.

Note: Support Cartridges cannot be installed into a cold printer. The printer must be warm before drawer will open and cartridges can be installed.

To place a material cartridge into the MDM, perform the following steps:

1. Obtain a new material cartridge ensuring that it is the same material as currently installed in the MDM.

2. If drawer is not already open, push to unlock drawer.
3. Pull open the MDM drawer.

Note: The steps to install a support cartridge are the same as installing a part cartridge.

Note: To install cartridges into the MDM drawer properly ensure that the small cap be installed away from the user.

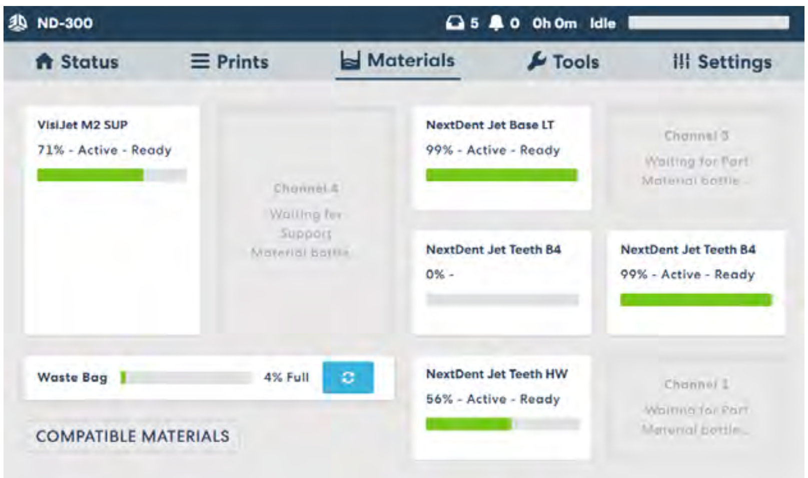
CAUTION: It is important to verify the cartridges have been audibly clicked into place, have material in them, and the cartridge caps properly ventilated; otherwise the printer may not be able to pull material from the bottles, potentially resulting in the following fault codes: 93-134 thru 137 - cartridge check needed

4. Place cartridge in slot and push down until you hear it click in place.

Material Drawer Front

5. Vent each cartridge by loosening the material cap by a 1/2 turn counterclockwise.
6. Close the MDM drawer by pushing in the dimple at the top until it's latched securely.

7. Check the material level under the Materials tab (C) on the UI to ensure cartridge is seated properly into MDM and ready to print.

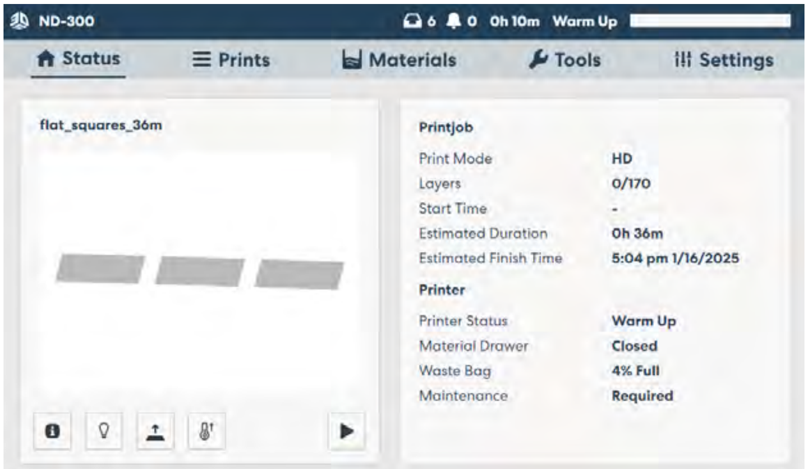


Note: Contact certified reseller partner or 3D Systems Customer Support when the UI continues to report an empty cartridge even though the cartridge is non-empty and is seated properly in the MDM. Contact your certified reseller partner first or contact 3D Systems Customer Support, whose contact information can be found here.

6.4 NextDent 300 Print Platform Removal and Installation

Note: Make sure you are wearing Nitrile gloves and protective clothing before performing any of the following procedures. Always protect yourself from possible exposure to materials. Always wash hands thoroughly with soap and water after handling parts and/or material. Never eat or drink without washing hands first.

1. Ensure the printer is turned on and the Printer State is in Ready or Standby mode.



2. Select the **Access Platform** button next to the light bulb icon on the printer touch screen.

Note: The Access Platform button will not be available to select if the printer is not ready for the user to access the print platform.

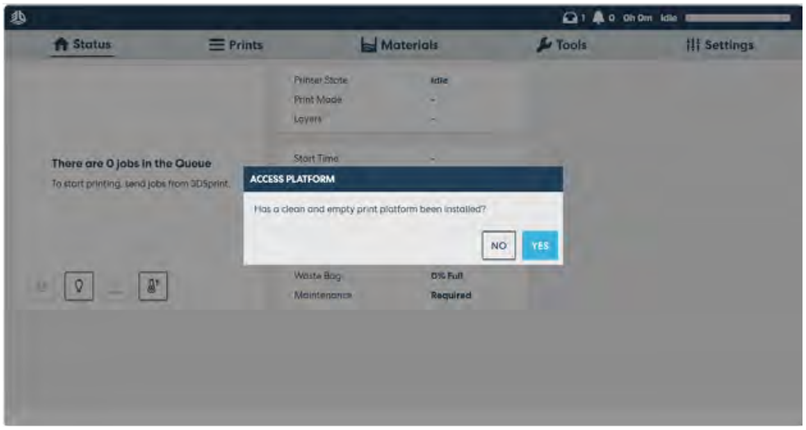
Note: When selecting the Access Platform button, if the printer is completing maintenance, there may be a delay in accessing the platform. The printer will notify the user when the top door is unlocked and access is allow

3. The printer will move into position in order to allow access to the print platform. When prompted, open the door to access the print platform.
4. Lift to remove the platform.

5. Install clean print platform. Close top door. If it is placed correctly the platform will automatically lower and clamp the print platform in place.

6. A message will display (see below) asking user to confirm that the platform is clean, verify the platform is clean.

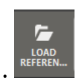
Note: Always be sure you are installing a room temperature print platform that is clean on both sides to avoid any printing issues. Also, confirm that the print platform is free from damage due to any drops or dings. Protruding metal on the platform may come in contact with the printhead and cause severe damage.



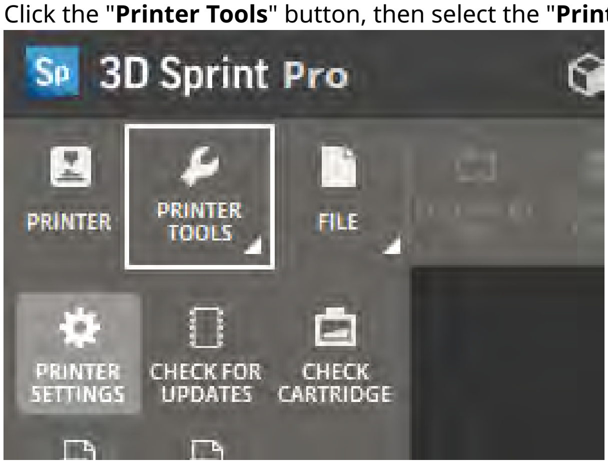
6.5 NextDent 300 Scale and Offset Wizard

For each M2 material, the "General" build styles in 3D Sprint are designed to give you accurate prints right out of the box. Please use the "General" build style first and foremost to achieve part accuracy. However, if after measuring your parts you find that you have issues achieving accuracy, you may use the "Scale and Offset Wizard" in 3D Sprint to troubleshoot such issues.

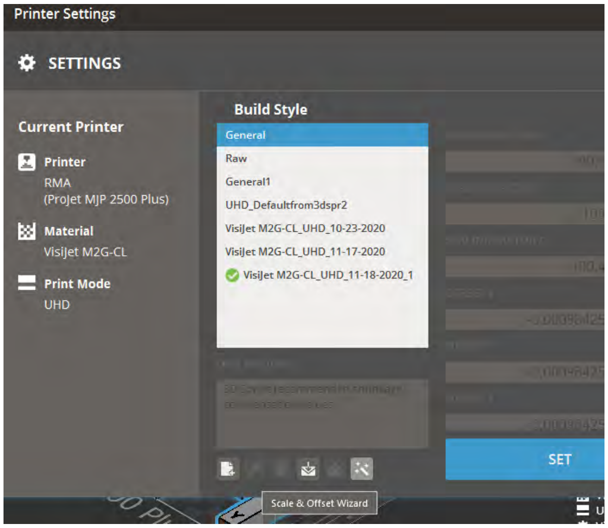
Each NextDent 300 printer will vary slightly in accuracy. If you have multiple printers, you may need to set the accuracy for each one separately. To do this, click the "Printer" icon in the upper left corner, connect to a specific printer, and run the steps in this section for each printer. Additionally, you will need to run the wizard for each Material,Print Mode, and Build Style combination you use.

1. Click the "**Load Reference**" button to load the accuracy models that will be printed. 

2. Print the reference build on your NextDent 300, then post process the parts.
3. Click the "**Printer Tools**" button, then select the "**Printer Settings**" button.

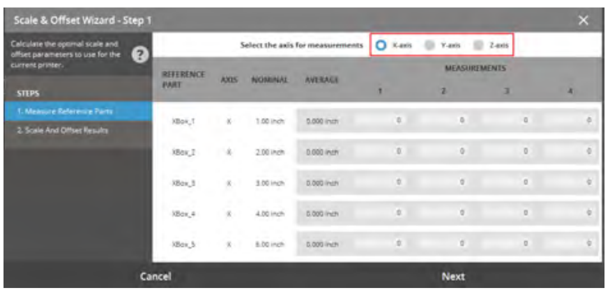


4. In the "**Printer Settings**" window, select the build style you used to print the reference build, then select the "**Scale and Offset Wizard**" button.

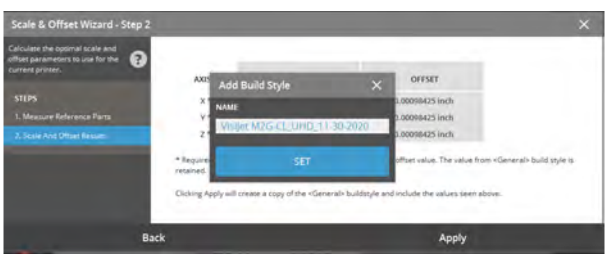


5. Measure each part using calipers, micrometer, or height gauge, then input the measurement values to corresponding boxes in the "**Scale and Offset Wizard**". Each measurement is repeated 4 times. Be sure to input the values for parts labeled with X, Y, and Z before selecting the "**Next**" button.

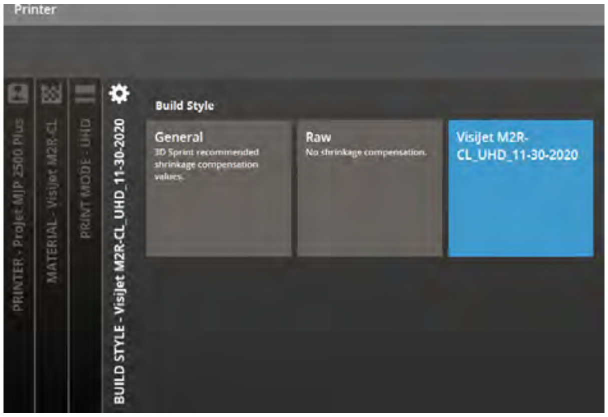
Note: Before measuring, wipe each end of the measurement part with a paper towel to remove excess wax remaining after post processing. Also be sure to wipe clean your measurement device before measuring.



6. Once all measurements are complete, select the "**Next**" button.
7. You can now see the calibrated slope and offset values. If you calculate a corrected slope and offset on your own, be aware that the offset range will be limited to [0, -0.002] inches.
8. Select "**Apply**", and 3D Sprint will allow you to change the name of your new "Build Style". By default, the syntax includes build material, print mode, and the date. You may add to the printer name as well if you have more than one NextDent 300 printer.



9. Be sure to press the "**Set**" button instead of closing the printer settings window. Pressing "**Set**" will not only set this new build style for your current 3D Sprint build, it will also save the build style for future use.
10. You will now be able to select this style from the "**Build Style**" menu going forward, allowing you to build with these scale factors at any time.
11. Remember that the Build Style is tied to the build material and print mode you are using. If you use a different print mode, build material, or printer, you will need to run this wizard again for that combination. The software will automatically create "**name the new build style**", but you can click the "**Rename**" button to rename it.



12. When you select this build style in the future, you can verify that this is the style with scale factors applied by looking at the scale and offset fields in the "**Printer Settings**" window.
13. Print your next build using this new build style. The accuracy of your parts should now be slightly closer to perfection.

7 NEXTDENT 300 PRINTER POWER OPTIONS

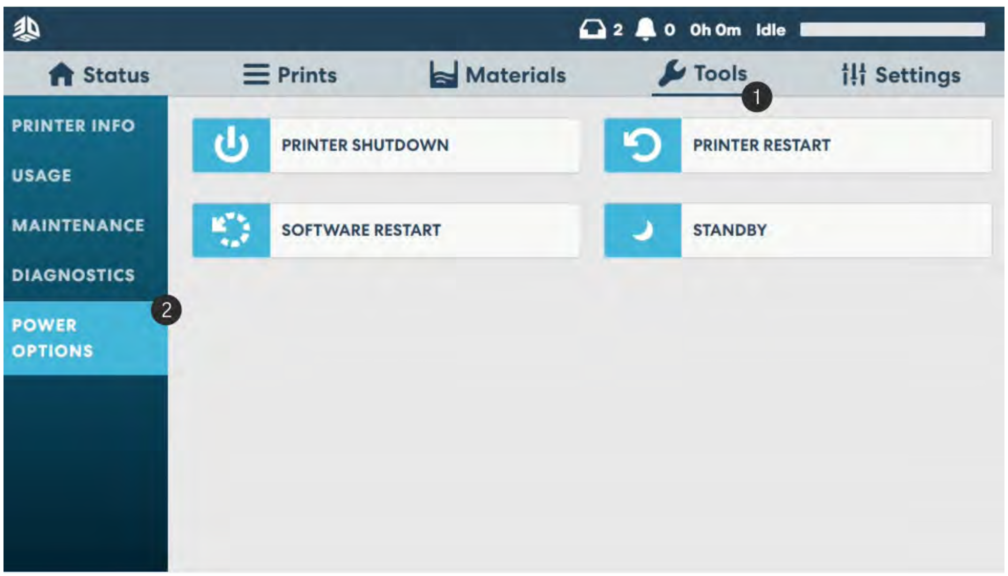
The NextDent 300 printers will go into lower power modes when it has been idle for a period of time. After 120 minutes, the printer will enter Standby mode. After 9 hours, the printer will enter Conserve mode. The UI status will display as in Standby during this time. Sending a print job or interacting with the front panel will start warming up the printer. The printer can be placed in conserve mode by selecting "Standby" in the Tools > Printer Shutdown tabs.

NEXTDENT 300	STANDBY	CONSERVE
Low power mode (idle state)	120 minutes	9 hours
Ready State (from low power mode)	8 minutes	20 minutes

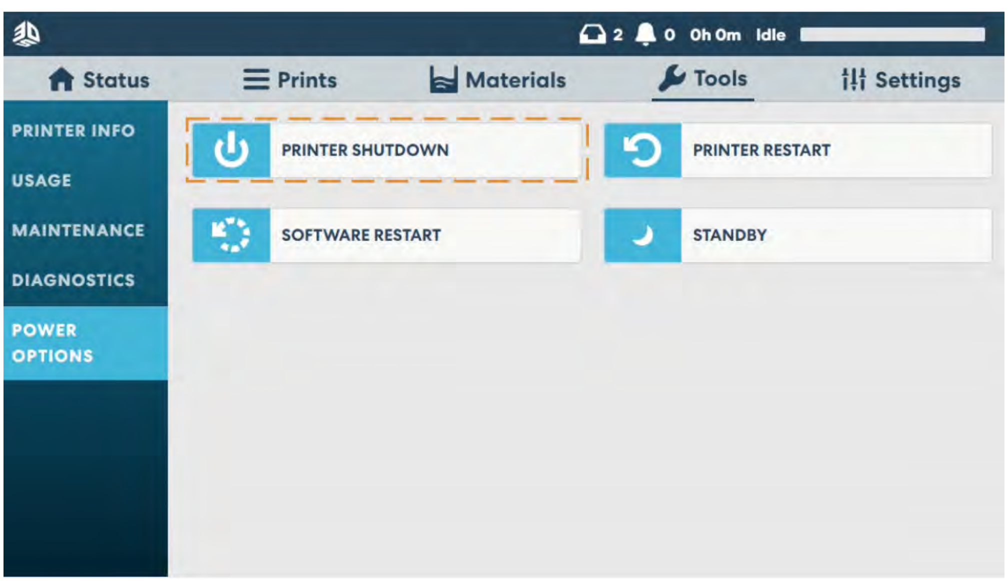
Printer Shutdown

If you do not plan on operating the 3D printer system on a regular basis and want to shut it down for an extended period of time, follow these steps:

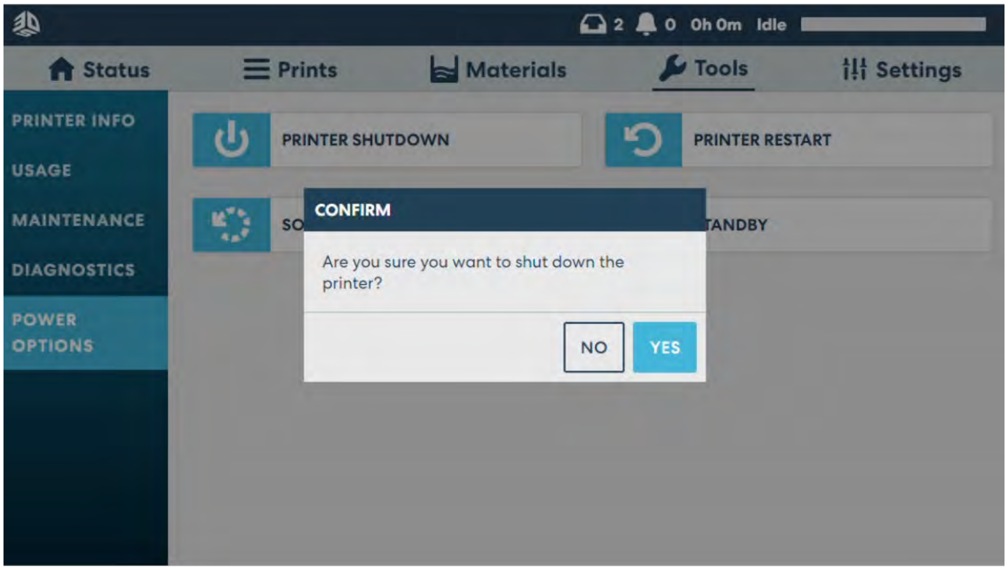
1. Verify that the printer is not building.
2. Select Tools (1) from the top tool bar.
3. Select Power Options (2) on the Tools side panel screen.



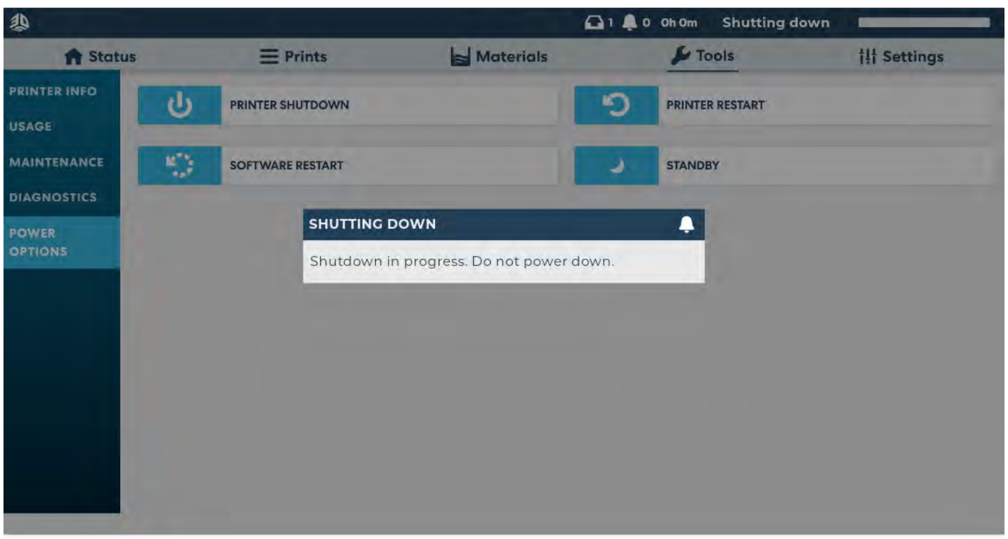
4. Next, select Printer Shutdown.



5. The next message that pops up is asking to confirm if you want to shutdown the printer. Select SHUT DOWN.

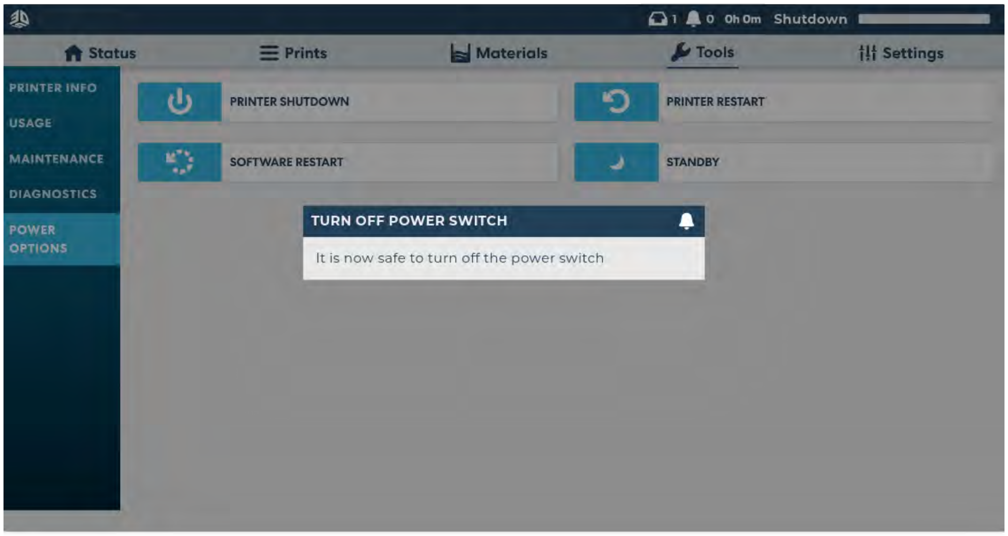


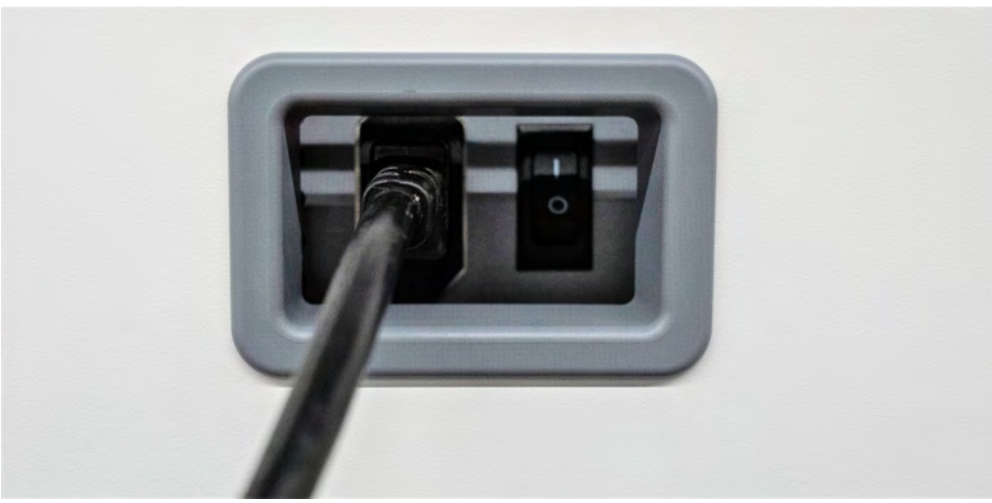
6. The SHUTTING DOWN screen will appear next. This lets the user know that the printer is shutting down and not to take any action.



7. A message will then come up that states it is now safe to turn the power switch off. Turn off the printer switch on the back of the printer.

Note: Unless the printer will be idle for an excessively long time (>60 days) it is not necessary to shut it down. Shutting down the printer will cause longer wait times for warming from a cold state.

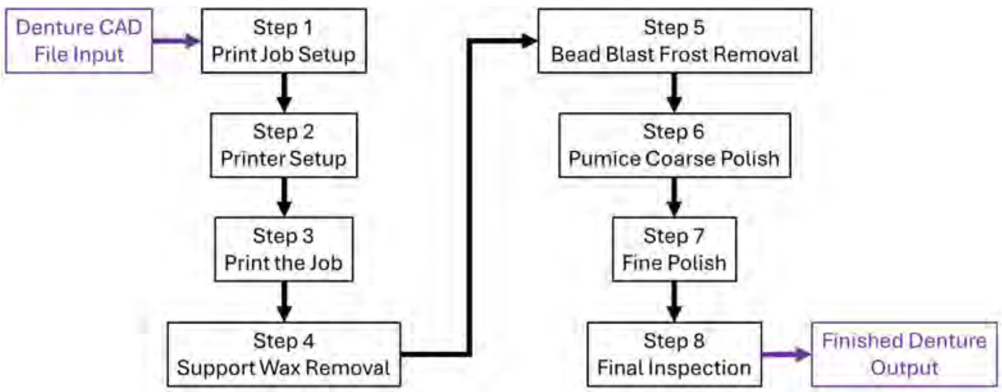




Note: Whenever the printer is powered down, wait 60 seconds before toggling the power switch back on.

8 NEXTDENT 300 DENTURE PRINT & POST PROCESS PROCEDURE

Overall Process Workflow Description



Equipment and Materials List

Printer Setup:

- NextDent 300 Printer
- Starter Kit
    - 1 kg bottle NextDent Gum LT
    - 1 kg bottle NextDent Tooth White
    - 1 kg bottle NextDent Tooth Yellow
    - 1.4 kg bottle VisiJet M2 SUP wax support

Resin Bottle Roller

- NextDent LC-3D Mixer
- 3D Systems P/N: NMACNDLCMIXER3

Support Wax Removal:

- Freezer
- • Magic Chef 3.0 cu. Ft. Upright Freezer
- Oven
    - Thermo Scientific Heratherm OMS60 Convection Oven
    - P/N: 51028121
- Heated Ultrasonic Cleaner by Sharpertek
    - Model: SH500-15 L
- Mineral Oil 5 gallon pail
    - White Mineral Oil Light by W.S. Dodge Oil
    - W.S.Dodge Oil – An Independant Family Owned Business

Bead Blasting Process:

- Vapor Honing Technologies Wet Bead Blaster
    - Model: VH800P FL
    - VH800P FL Closed Loop - Vapor Honing Technologies
- 25um Aluminum Oxide Media
    - P/N: 98201 – 55lb/pkg
    - Aluminum Oxide Sandblasting Media 25 Micron (360 Grit) - 55Lbs - 98201 - Vaniman
- 8mm Boron Carbide Nozzle
    - Wet Blasting Equipment - Vapor Honing Technologies

Pumice Process:

- Navajo Brand Pumice
    - Grade: 0-1/2 (0.04mm to 0.2mm – 80 to 325 mesh)
- Hatho Special Lath Brushes

- 1 ¾” Diameter, 12/pkg
- P/N: 75339353
- Palatinal Brush
  - SKU: 1670152
- Keystone #B20 Lathe Brush with Plastic Hub
  - 2.5” Diameter
  - P/N: 1170200
- Muslin Buff Wheel
  - 4” Diameter, 30 Ply
  - P/N: 70910505
- 26A Red Wing Lathe
  - ¼ HP, 2 Speed (1725/3450 RPM)
  - Model: 26A (120V/60Hz)

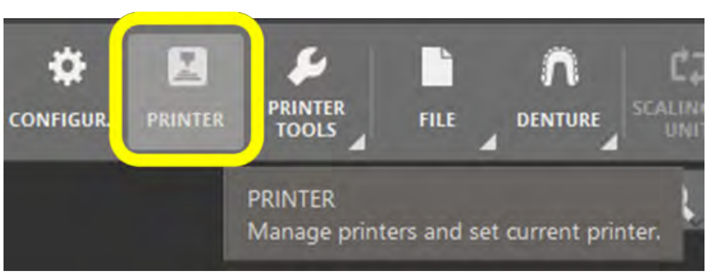
Fine Polishing Process

- Renfert Universal Polishing Paste
  - P/N: 5131000
- Muslin Buff Wheel
  - 4” Diameter, 30 Ply
  - P/N: 70910505
- 26A Red Wing Lathe
  - ¼ HP, 2 Speed (1725/3450 RPM)
  - Model: 26A (120V/60Hz)

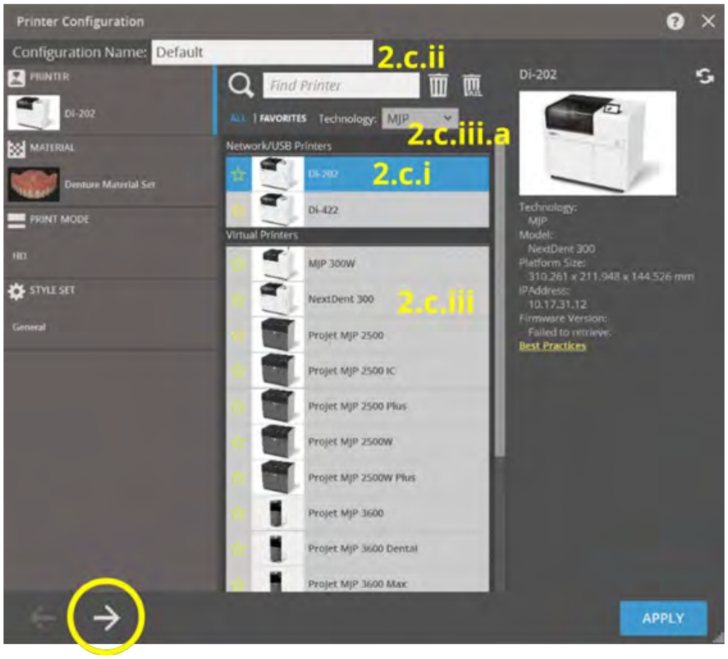
8.1 NextDent 300 Print Job Setup

1. **3D Sprint Software:**
   - Ensure 3D Sprint version 2025.2.0.1094 or newer has been installed (along with the appropriate Expose NextDent 300 patch file applied) and launched.
2. **Selecting Printer:**
   a. Select the “Print” tab along the top of the 3D Sprint window.

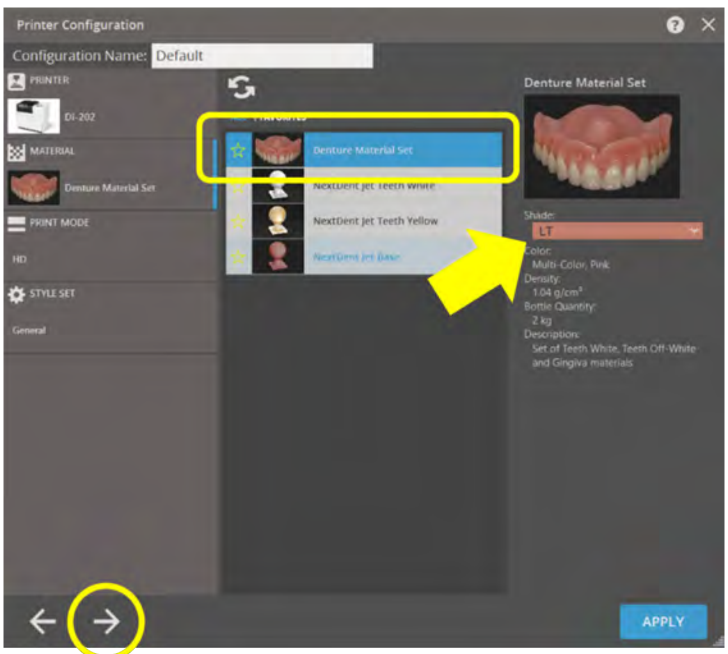
   b. Select “Printer” from the Dynamic Tool bar ribbon menu.



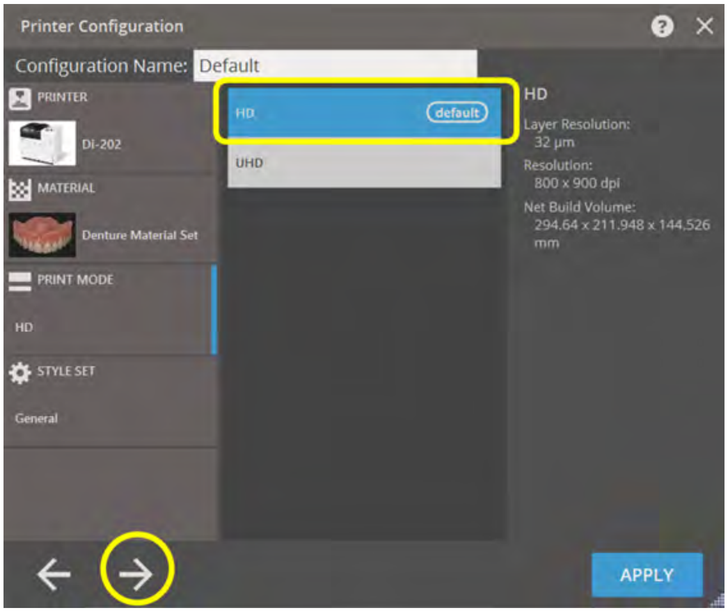
   c. Within the “Printer Configuration” window, do one of the following:
      i. Select a pre-added printer
      ii. Add a NextDent 300 printer via IP address in the “Find Printer” section
      iii. Select a NextDent 300 Virtual Printer.
         - Set the Technology filter to “MJP” to more quickly find the NextDent 300 Virtual Printer.
   d. Select either your network added printer (or the NextDent 300 Virtual printer) then click the right arrow. arrow.



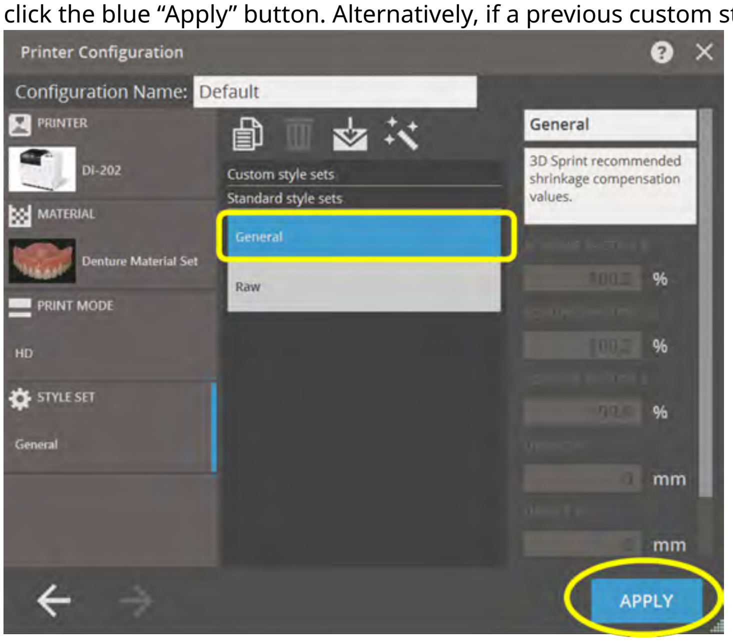
e. Ensure that the “Denture Material Set” is selected (highlighted blue) and that the Shade selection in the far right says “LT”, then click the right arrow.



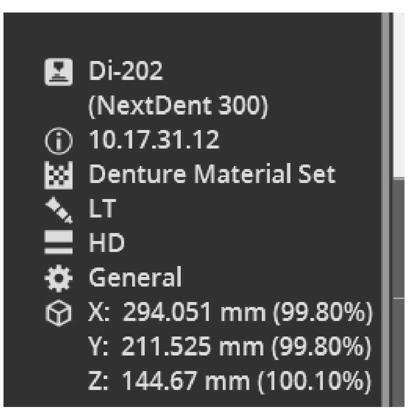
f. Ensure that “HD” mode is selected then click the right arrow.



g. Ensure that the Standard style set "General" is selected (which contains pre-selected scaling factors for accuracy) and then click the blue "Apply" button. Alternatively, if a previous custom style set was created you may select it at this time.

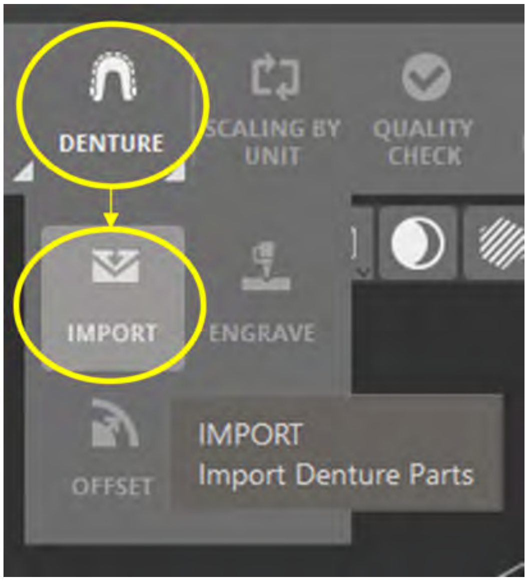


h. The main print platform window will now be visible where the previously selected settings can be verified in the lower right hand corner:

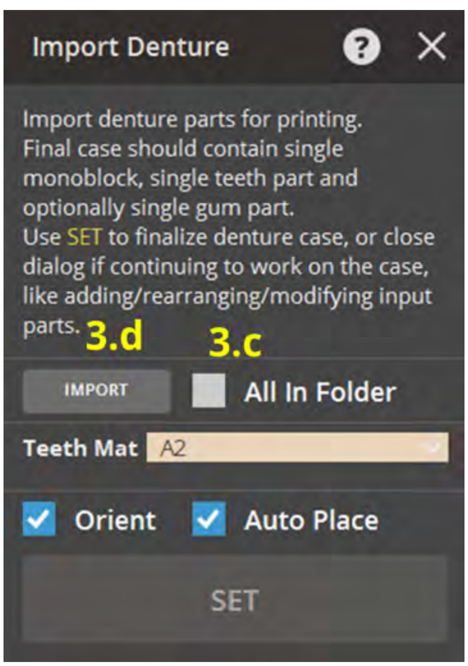


3. **Importing Dentures**

a. There are three main denture CAD file parts (Teeth, Gum [aka Base], and Monoblock). Preferred files for creating dentures are Teeth and Monoblock files. However, if only Teeth and Gum files are available, they can be used in the Import Denture Tool to create a Monoblock file..

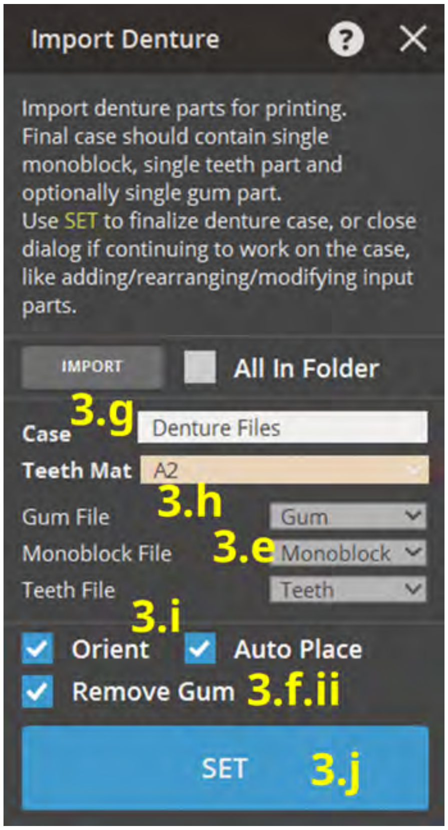


b. Note that the Import Denture Tool window will change depending on which options have been selected and what files are available.
c. It is recommended that the “All In Folder” check box option (below image) be left unchecked for most cases.
   i. Checking this box can be useful if there are multiple files for each component (eg. Teeth), however checking this box will import ALL supported files including those in sub-folders.
d. Select the “Import” button on the Import Denture Tool dialog window to open a File Explorer style interface to select your denture files. Alternatively, once the Denture Tool window is active you can drag and drop your files from your PC directly to the 3D Sprint main print platform window.
   i. Select the Teeth and Monoblock files and click Open.
   ii. Alternately, if only the Teeth and Gum (Base) files are available, select these two files and click Open.



e. Ensure that the Denture Tool has correctly identified the CAD files as the correct denture parts, otherwise you may change them with the drop down options.
f. If the Monoblock is needed (Teeth and Gum files only), then do the following:
   i. Click the “Create Monoblock” button (not shown here).
   ii. Once the Monoblock has been created, ensure that the Remove Gum check box is now selected as the gum file is no longer needed OR under the Gum dropdown choose “None.”

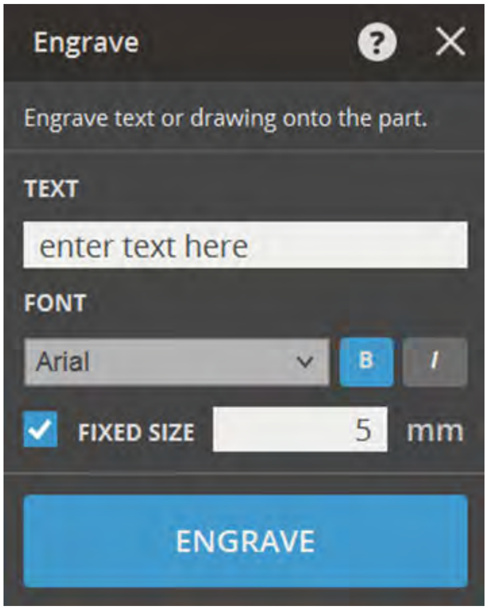
g. The Case name uses the folder name of the imported files, but if needed can be changed in this Denture Tool window or can be changed later in the "Parts List" window.
h. The Teeth Material color can be selected in the "Teeth Mat" drop down or it can be assigned later.
i. Checking the "Orient" and "Auto Place" boxes help automatically position the denture on the plate and is highly recommended.



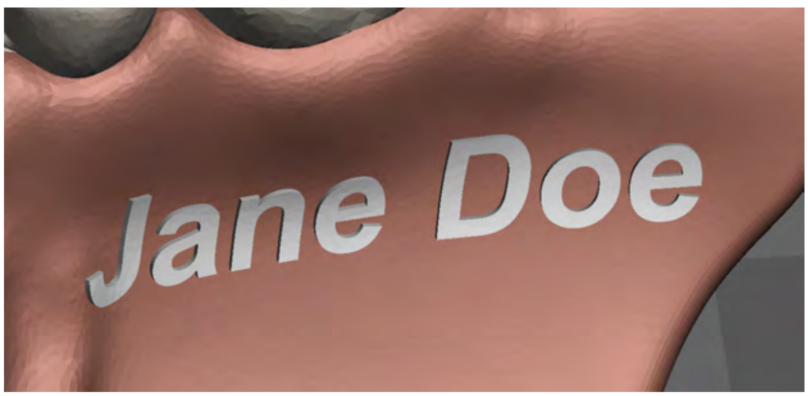
j. Click the "Set" button when everything in the Denture Tool window looks correct.
k. The denture will be placed flat on the build plate in an optimized position.
l. If importing additional dentures, ensure that there are no parts selected before returning to "Denture" -> "Import" as it will try to merge the new files with any parts which have inadvertently been selected.

4. **Denture Labelling**
   a. If desired, one can now label the imported denture using inlaid text with the denture engrave tool.

   b. Simply select the information, place the box over the region in the desired denture and click enter. The default label color is "BL" which gives the best contrast for most situations. However the color can be manually changed in the denture at a subsequent step.



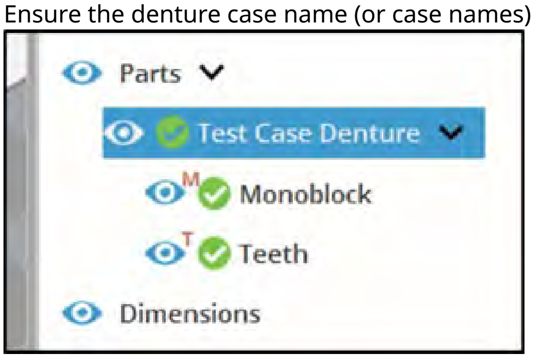
c. The labelling will now be shown on your denture with a slight offset from the surface of the denture. It is raised only to emphasize the text while within 3D Sprint but will be printed flush with the surface of the denture.



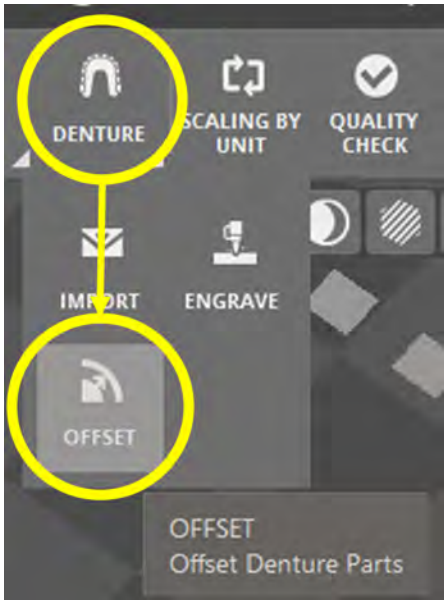
5. **Offsetting Dentures**

a. Dentures can either be offset one at a time or batch offset. Offsetting does take a few minutes per denture (depending on CAD complexity) so be prepared if doing several at once.

b. Ensure the denture case name (or case names) is selected (highlighted blue) in the "Parts List" window.



c. Select "Denture" -> "Offset" in the Dynamic Tool bar ribbon menu.



d. In the “Offset Denture” window, use the following default recommended settings:

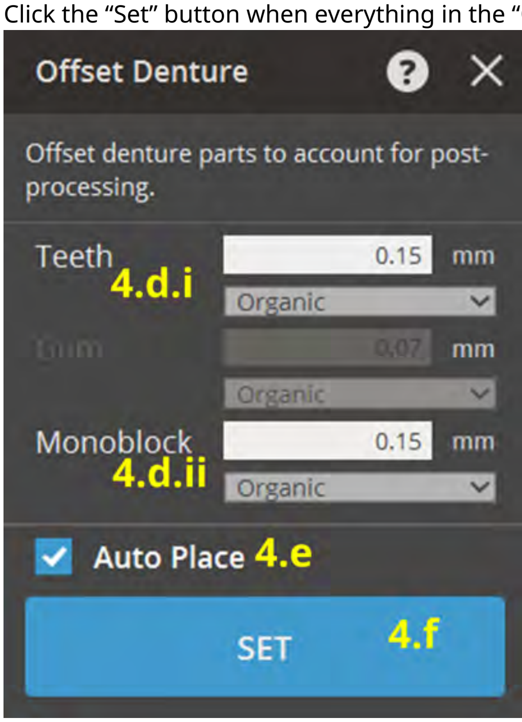
  i. i. Teeth = 0.15 mm, Organic (from drop down)

  ii. ii. Monoblock = 0.15 mm, Organic (from drop down)

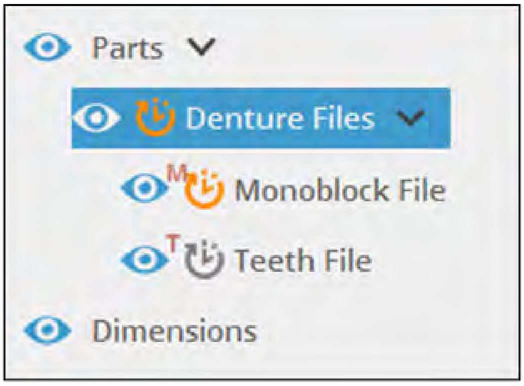
 **Note: These offset values can be manually changed if desired according to your own determined values.**

e. It is recommended that the “Auto Place” be checked as this will ensure that the part is placed within the printer area of the platform after offsetting.

f. Click the “Set” button when everything in the “Offset Denture” window looks correct.



g. 3D Sprint will begin offsetting the denture(s) as seen by a progress bar at the bottom of the window and progress clocks next to the parts in the “Parts List” window.



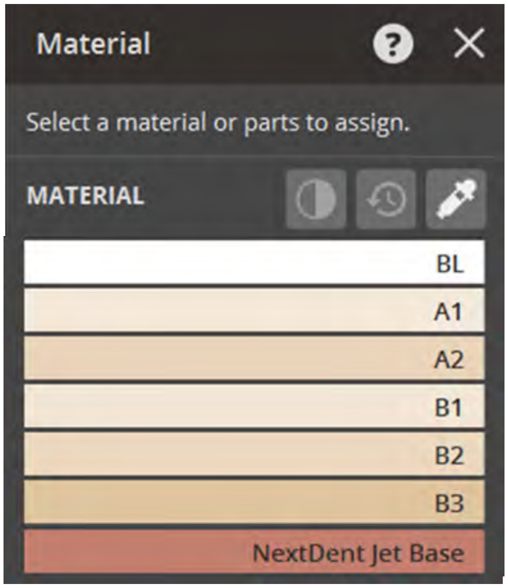
h. Note that when offsetting is complete, the denture teeth may appear “mottled” with the gum/base material. This is only an imaging artifact as the printed teeth will be the selected shade.

i. Currently it is recommended that dentures be printed teeth “down” (for both upper and lower dentures) with the front teeth positioned toward the front of the build platform (for upper dentures only). If the auto-place has not placed them in this orientation, please use the “Transform” tool on the ribbon tool to manually adjust the parts.

6. Material Assignment

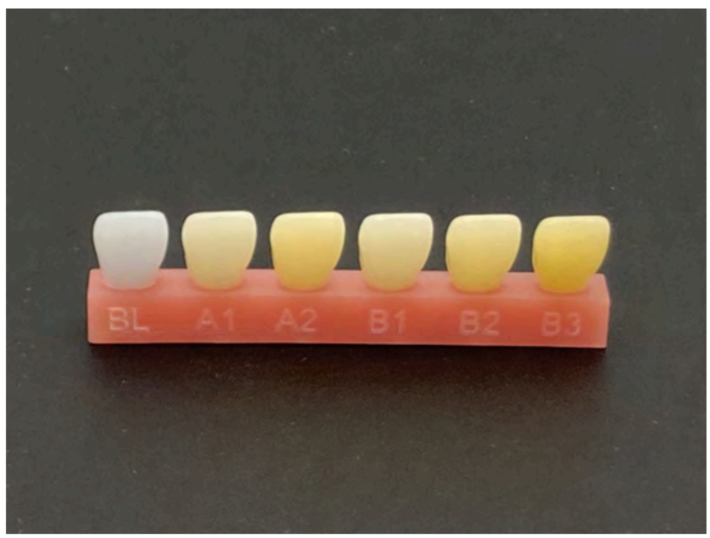
a. If further material assignment is needed, the “Material” button on the Dynamic Tool bar ribbon menu can be selected.

b. This allows for a range of teeth colors to be chosen and assigned to the denture(s) if desired.



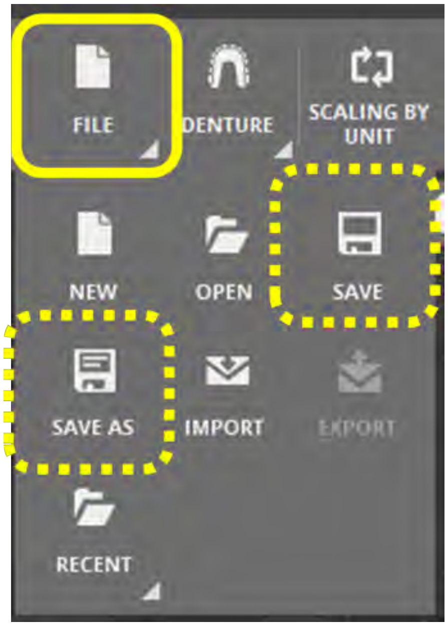
c. Clicking on the eyedropper and placing it over a part will indicate what the material is assigned to that part.
d. Clicking on a material name will change the eyedropper to a paint bucket which can be used on the parts to assign that material.
e. Advanced features of the Material Palette allows for user color adjustment of the teeth shades.

Note: Based on the selections made in the Material Selection tab, the expected shade outcome is indicated below.



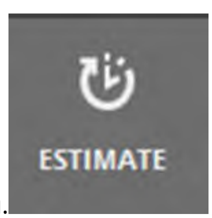
7. Saving

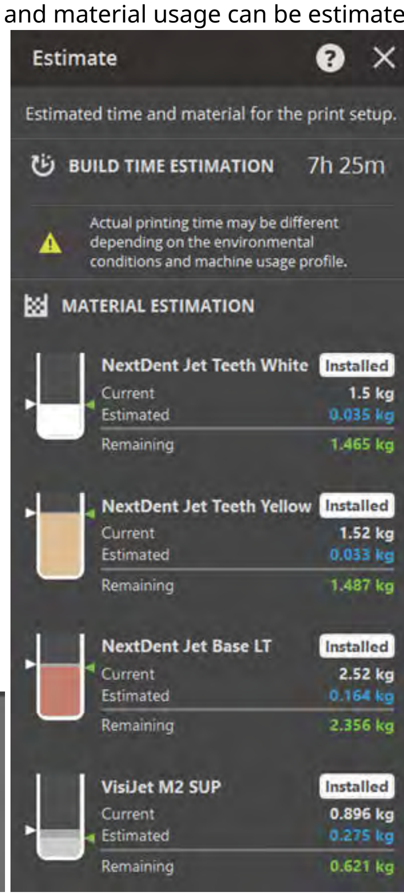
a. Save your file often by going to the “File” -> “Save” or “Save As” options on the Dynamic Tool bar ribbon menu.



8. Printing and Queue

a. When satisfied with the denture plate, the build time and material usage can be estimated using the “Estimate” button on the Dynamic Tool bar ribbon menu.

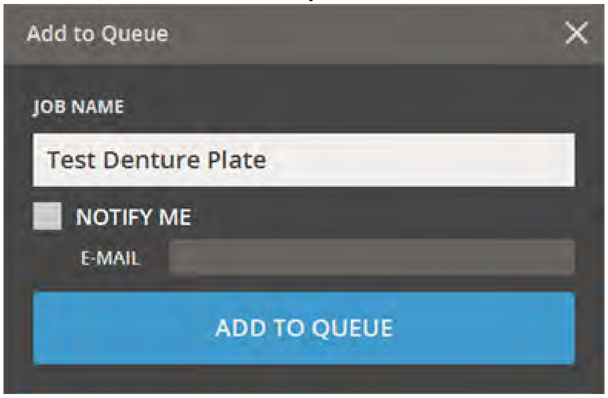




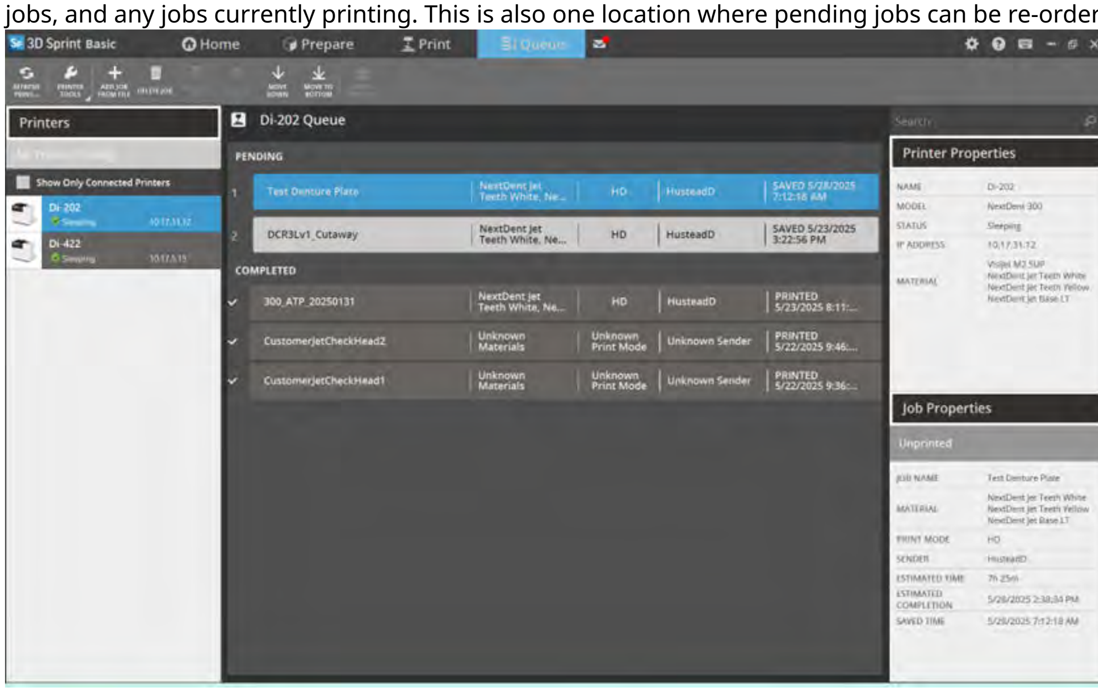
b. To send the build job to a printer, click the “Add to Queue” button to your previously selected printer.

Note: This cannot be done if using a Virtual printer.

c. In the “Add to Queue” dialog box the job name can be modified if desired and a job notification e-mail option is available. If satisfied, click the “Add to Queue” button.

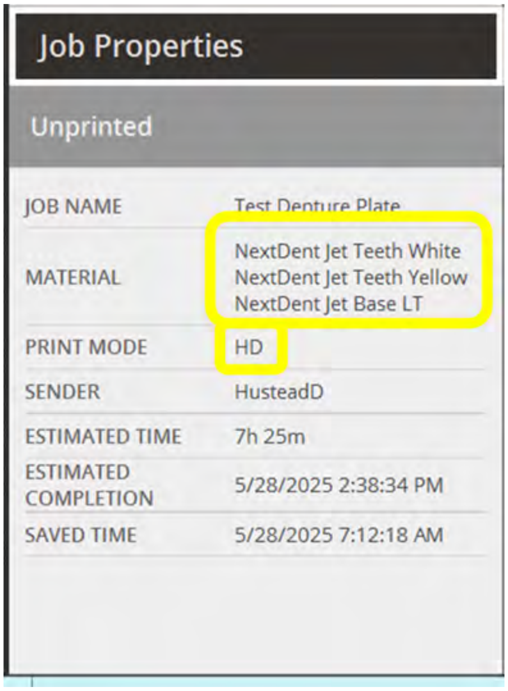


d. After spooling the job, 3D Sprint will switch to the “Queue” tab and will display any other pending build jobs, completed build jobs, and any jobs currently printing. This is also one location where pending jobs can be re-ordered or deleted as necessary.



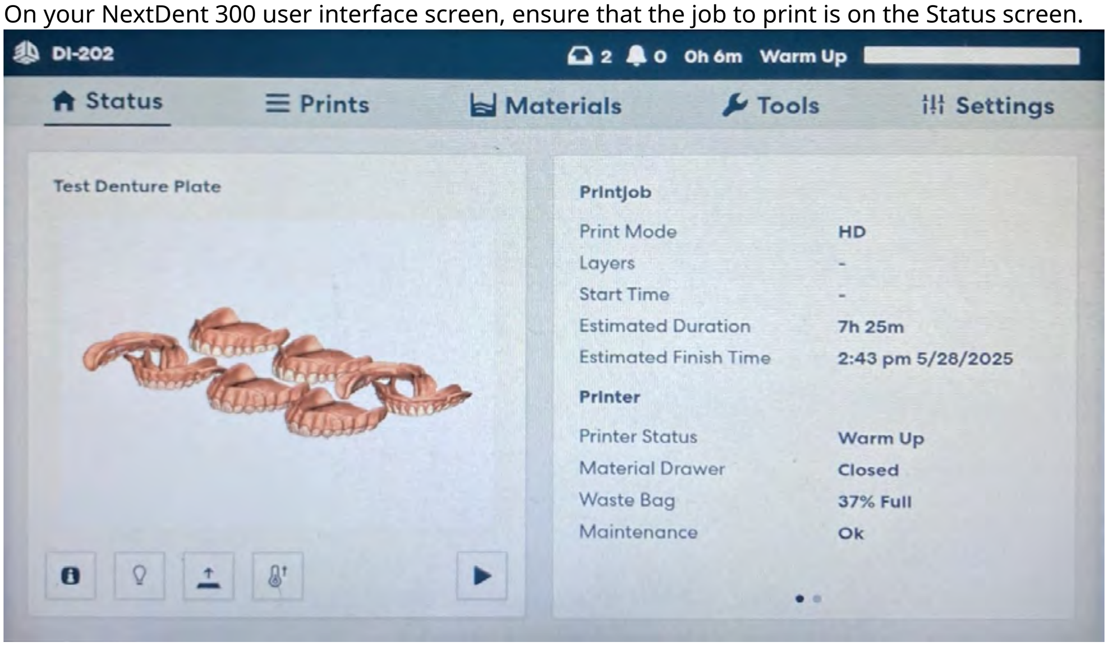
e. Clicking on any of the jobs in the queue will display additional information on the right side of the window about that specific job.

Note: Ensure that the material set contains all three denture materials and is the correct print mode!

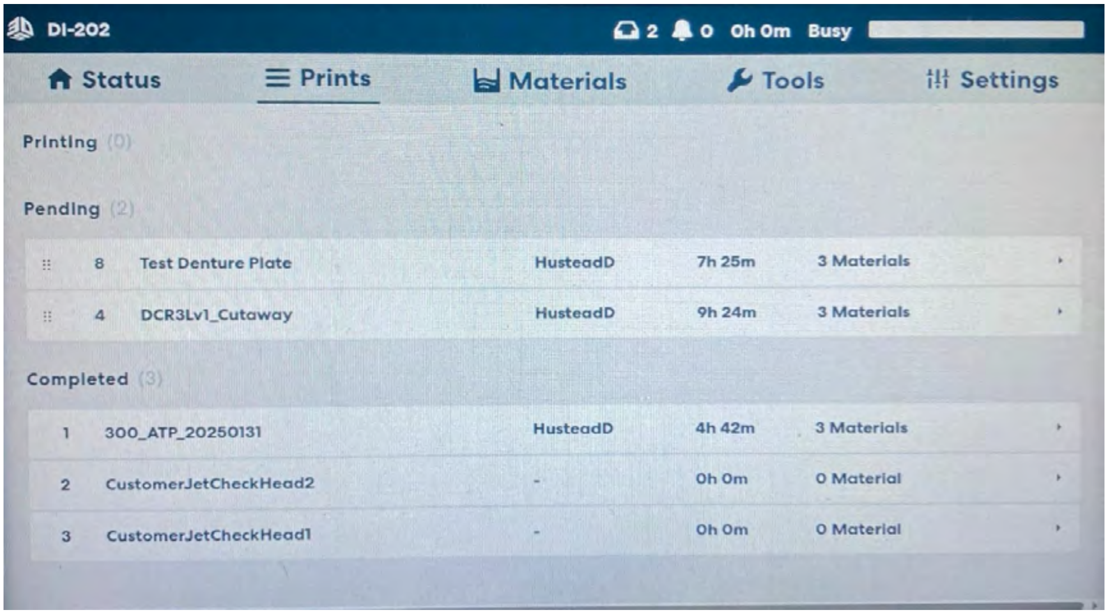


9. Printer Setup and Print Job

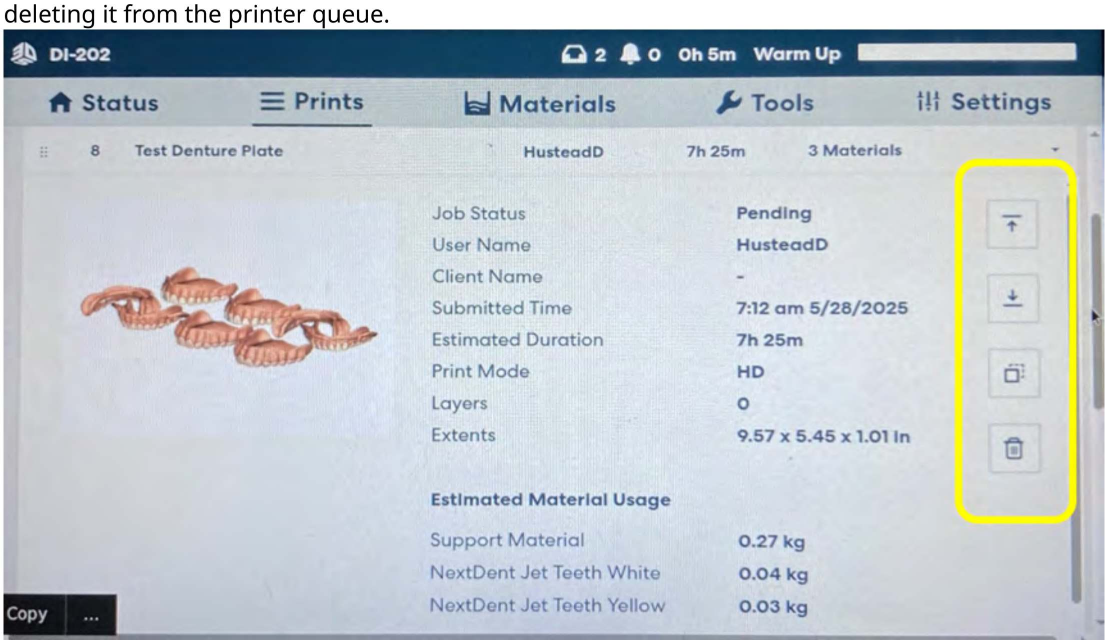
a. On your NextDent 300 user interface screen, ensure that the job to print is on the Status screen.



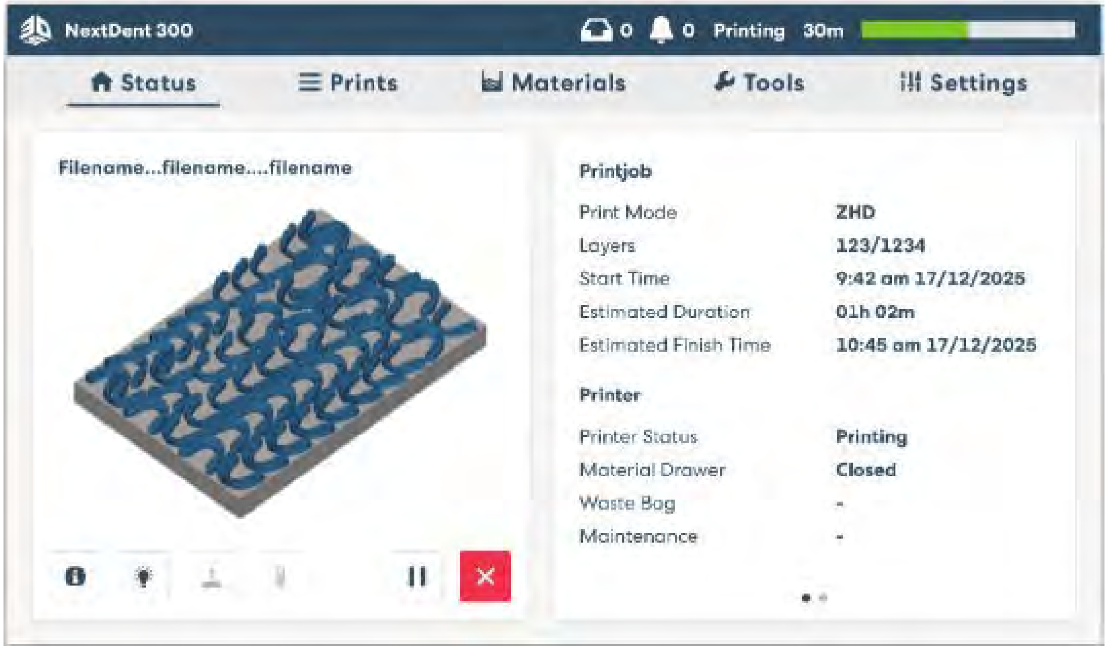
b. If this is not the job which is desired to be printed, click on the “Prints” tab and then select the job of interest.



c. Use the tools at the far right to move the job up or down as needed. Tools are available for duplicating the job file and deleting it from the printer queue.



d. Return to the Status screen and when ready to start the job, press the triangular "Start" button in the lower middle portion of the Status screen.



e. When the build job is complete, the Status screen will appear as below. Press the “Access Platform” button and wait until instructed to remove the plate from the printer.

8.2 NextDent 300 Support Wax Removal

1. Deplating Parts:

a. After removing the build platform from the printer, place the entire plate in a freezer, preferably on a pre-cooled metal plate to facilitate cooling. It will take about 15 minutes for the parts to separate from the build plate, but you can check them in 5 minute increments to see if they have released sooner from the build plate.

   b. Prior to returning the build plate to the printer, any residual support material should be carefully cleaned off the plate using a combination of scrapers (without scratching the anodization), towels and isopropyl alcohol. Both sides of the plate surfaces should not contain any residue which can interfere with print part adhesion and plate leveling within the printer.

2. Bulk wax removal:

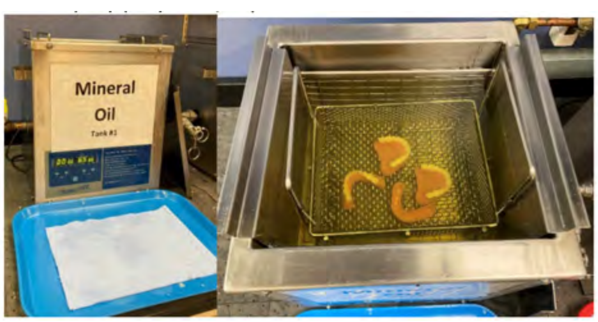
   a. Place deplated parts in a basket in a 70C forced air oven to remove bulk support wax and for 2 hours for optimal gum color.

   b. Parts should be oriented in the basket to allow for better wax flow off parts and to not pool in denture geometries.
   c. Baskets and catch basins are used to encourage air flow, separate, catch, and contain the molten support wax for later disposal, and for subsequent processing.

3. Fine Wax Removal:

   a. Parts are placed in a 65C sonicating mineral oil bath to remove any residual support wax and for 20 minutes for optimal gum color.

Note: The same baskets used in the bulk wax removal steps are also beneficial in the mineral oil step.



4. Oil Removal:

   a. Parts can now be rinsed and soaked in hot (~<70C) soapy (Dawn dish liquid detergent) water bath to remove oil residue.

- **b.** Typically three hot soapy tub rinses are performed:
    - **i.** an initial soapy rinse (~1 minute)
    - **ii.** a soak in fresh soapy water (~10 minutes)
    - **iii.** a final rinse in fresh, soapy water (~1 minute)
- **c.** Lastly, parts are rinsed with plain hot tap water (~30 seconds).
- **d.** Parts are allowed to cool on low lint/lint free towels before subsequent processing.
- **e.** When cool to touch, continue to the next section "Bead Blasting Frost Removal."

8.3 NextDent 300 Bead Blasting Frost Removal

- For this process you will use a Vapor Honing Technologies wet bead blaster with an 8mm nozzle and 25um Aluminum Oxide Media. Place the denture inside the bead blasting cabinet within reach of the gloves. Place your hands inside the gloves and pick up the denture. Depress the foot pedal to start the bead blaster. Holding the denture firmly with both hands, continually rotate the denture in a small circular motion, while moving up and down, bead blasting the denture in this order:
    - Right buccal flange and teeth (~1min)
    - Anterior flange and teeth (~1min)
    - Left buccal flange and teeth (~1min)
    - Occlusal surface of teeth (~30sec)
    - Palate (if upper denture) or lingual flanges (if lower denture) (~30sec)
    - Intaglio surface (~1min)

- Remove the denture from the bead blasting cabinet and rinse with clean water. Blow dry with compressed air, and check for areas with residual frost. Mark remaining frost with a black Sharpie marker. Place the denture back into the bead blasting cabinet and blast the marked areas until Sharpie and frost are completely removed. Remove the denture from the bead blaster and recheck for remaining frost. Repeat as necessary. Allow the denture to dry thoroughly for any remaining frost to be fully revealed as moisture can inhibit and mask its visibility.

8.4 NextDent 300 Pumice Coarse Polishing

- Once all frost has been removed from the denture, prepare your work area for wet pumicing. In the lathe's pumice pan, mix Navajo (grade 0-1/2) pumice with water; consistency should be loose and watery. Place a wet muslin buff wheel on the lathe chuck. On low speed, apply wet pumice to the denture and gently polish in the same order it was bead blasted. Because the bead blaster creates a stippled texture, the facial and lingual surfaces of the teeth must be polished in addition to the base. Do not polish the occlusal surface of the teeth or the intaglio surface of the denture.

- Use a wet B20 lathe brush to polish the denture's interproximal areas between teeth. Keep the denture wet and moving constantly to avoid burning.

- Rinse the denture with clean water and blow dry with compressed air. Inspect for any remaining stippling on denture base and teeth. Repeat polishing as necessary.

8.5 NextDent 300 Fine Polishing

- Place a dry muslin buff wheel on the lathe chuck. On low speed, apply Renfert Universal Polishing Paste to the wheel until it is saturated with polish. Gently polish the denture in the same order it was bead blasted and pumiced, and in every direction, until it reaches a high shine. This process may reveal areas that need to be re-pumiced as the polish tends to adhere to rough, textured areas.

- Once the denture reaches an overall high shine, scrub the appliance with Dawn dish soap and a denture brush under hot water to remove any remaining polish.

8.6 NextDent 300 Final Inspection

- Under good lighting, inspect the denture for any remaining frost, and stippled, rough, or dull areas. If frost remains, it must be removed by bead blasting. If stippling, roughness, or dullness remain, this can be removed with wet pumicing, followed by high-polishing. The denture is complete once it is frost-free with a consistent high shine throughout.

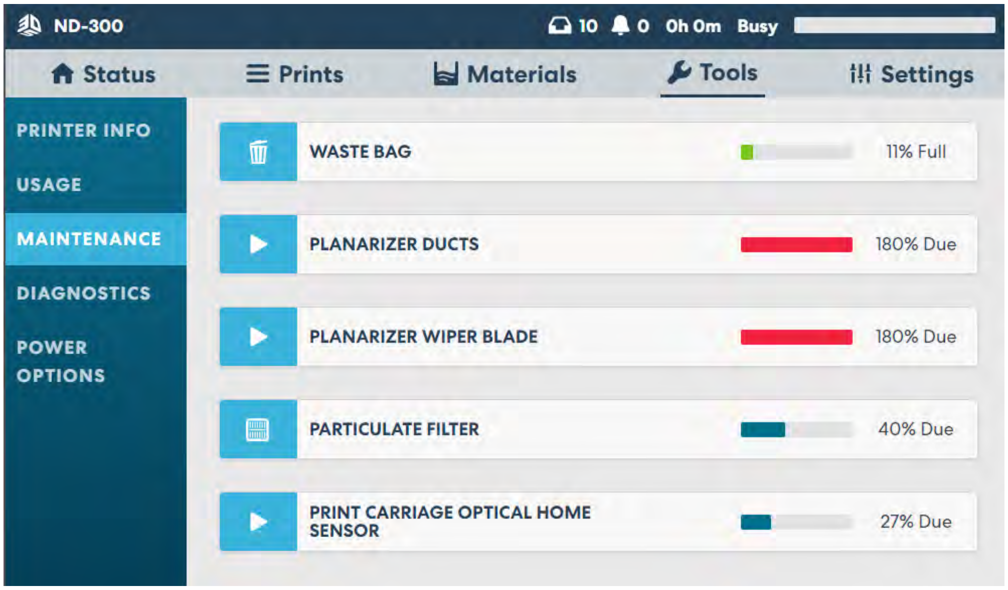
9 NEXTDENT 300 MAINTENANCE

Operator Maintenance

For optimal print quality it is critical to follow the operator maintenance routines outlined below at the recommended interval.

The UI provides reminders when routine maintenance is required.

Note: The printer must be at a Ready state and a clean print platform installed before performing any of the routines below (excluding the Waste Bag function):



There are several ways a user can tell if maintenance needs to be performed on the printer.

- A pop up will appear on the UI letting the user know
- The user can select Tools > Operator Maintenance from the UI and see when the next maintenance procedure will need to be performed
- If the user sets up email alerts, an email alert will tell the user maintenance needs to be performed

Use the following procedures to perform maintenance when needed.

9.1 NextDent 300 Operating Environment Recommendations for Best Performance

Operating Temperature Range:	18-28°C (64-82°F)
Optimal Temperatures Range:	18-24°C (64-75°F)
Humidity:	Maintained at 30 to 70% RH

9.2 NextDent 300 Replacing the Particulate Carbon Filter

Replacing the Particulate Carbon Filter

The carbon filter is designed to remove particulates, odors, and gasses from the build area.

Access to this filter is from the front of the machine on the right hand side. Open door, loosen the thumb screw on the door containing the filter, remove the filter, insert new filter, close door, tighten thumb screw.

Note: This is a customer replaceable item. Particulate Filter with Handle - P/N 310259-00.

Photo below illustrates a filter that needs to be changed.

Photo below illustrates a filter that is clean and new.

9.3 NextDent 300 Cleaning Filter Screen V1

Cleaning Filter Screen

There is a screen that is placed above the particulate filter to add extra filtering protection for the filter. This screen will need to be checked or cleaned weekly.

1. Open the compartment holding the filter screen by loosening the two thumb screws above the particulate filter compartment (1).

2. Wearing Nitrile gloves, lift panel up and pull out screen.

3. If more than 50% of the screen is blocked, clean the screen by holding over an approved waste disposal receptacle and brushing off loose particles from screen. Screen may then be wiped clean using a paper towel with water.

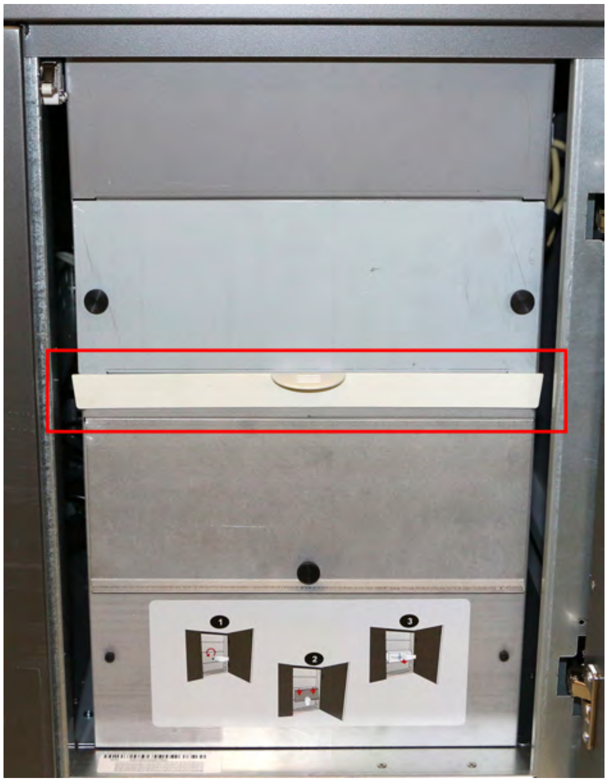
4. Close panel and tighten thumb screw.

9.4 NextDent 300 Cleaning Filter Screen V2

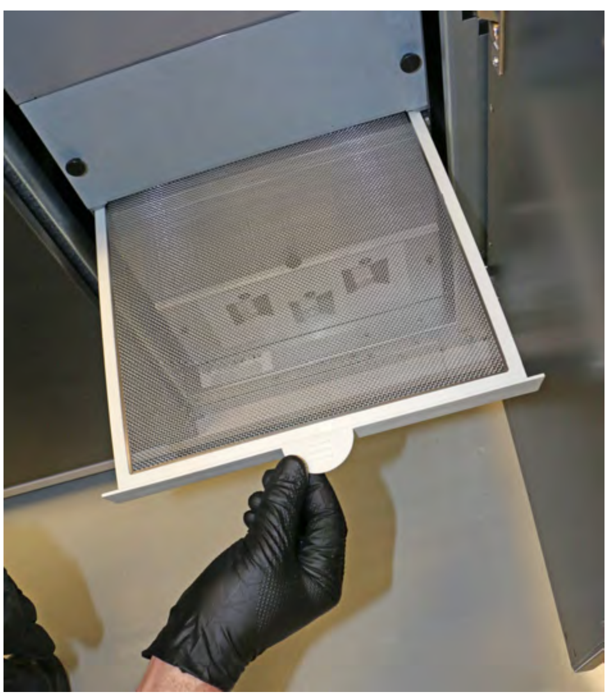
Cleaning Filter Screen

There is a filter screen that is placed above the particulate filter to add extra filtering protection for the filter. This screen will need to be checked or cleaned weekly.

1. Open the Filter Door.

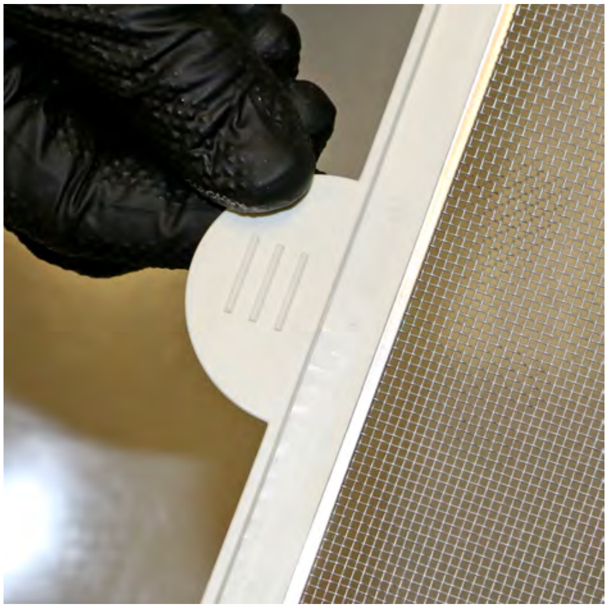


2. Wearing Nitrile gloves, slowly pull filter screen out from VOC.



3. If more than 50% of the screen is blocked, clean the screen by holding over an approved waste disposal receptacle and brushing off loose particles from screen. Screen may then be wiped clean using a paper towel with water.
4. Reinstall the filter screen with the three line markings are face up.

5. Close Filter Door.



9.5 NextDent 300 Inspecting and Cleaning Planarizer Ducts

Inspect and Clean Planarizer Ducts

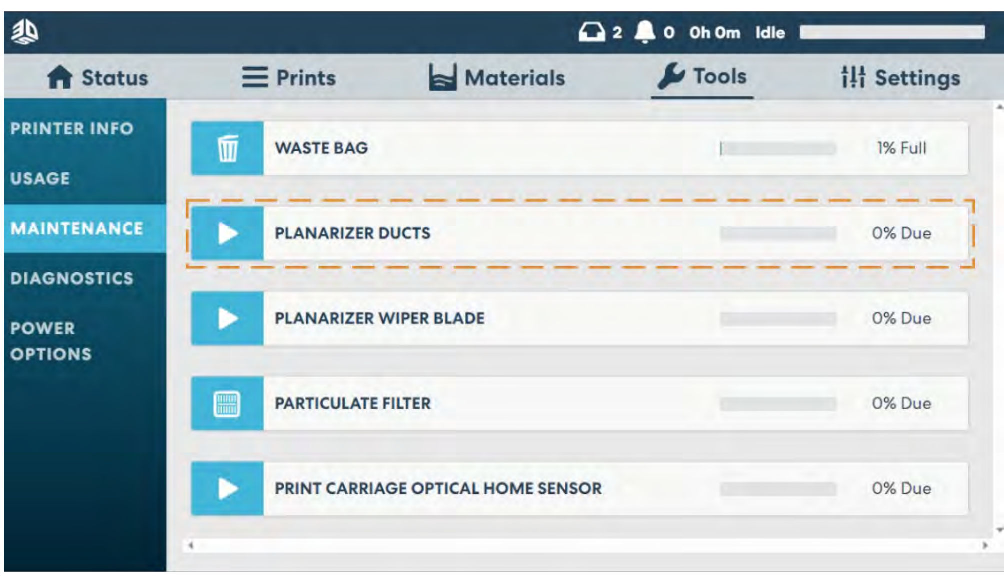
Material can get trapped and built-up in the ducts of the planarizer. It is important to periodically inspect and clean these areas. Follow these steps to inspect and clean the planarizer ducts.

Note: Always wear nitrile gloves when inspecting and cleaning planarizer ducts.

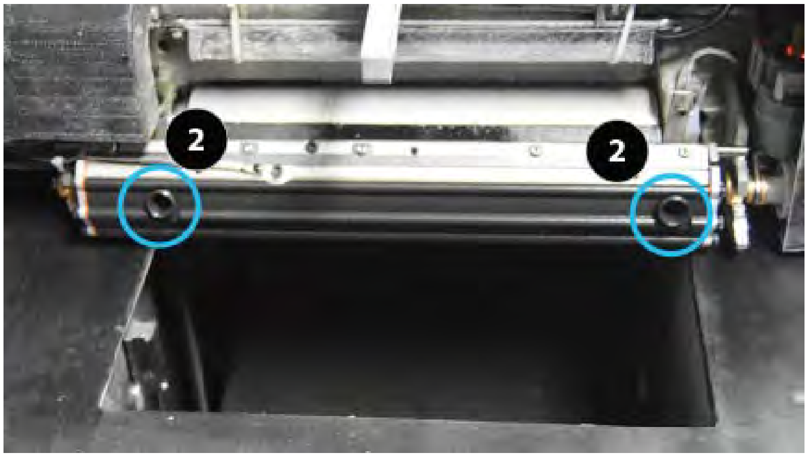
Note: It is recommended to inspect the planarizer blade after each print job

To inspect and clean planarizer ducts:

1. Click on Tools > Maintenance > Inspect Planarizer Ducts .

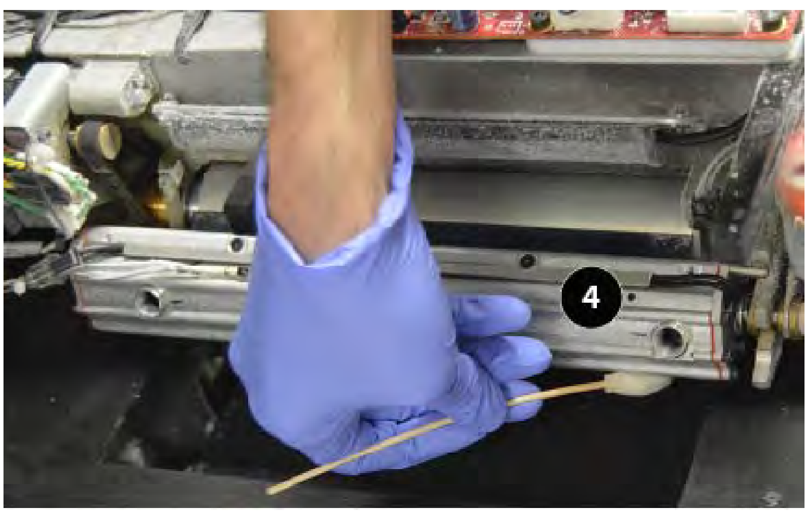


2. Carriage will move out of the way and planarizer assembly will tilt, allowing access to the ducts (2).



3. Open planarizer cover to access the planarizer cover to access the planarizer assembly and ducts.
4. Take a foam swab with some Isopropyl alcohol on it and wipe in and around the ducts, taking care to remove all excess material.

5. Open Top Door.
6. Inspect planarizer housing and if necessary, wipe excess material off with foam swab (4).



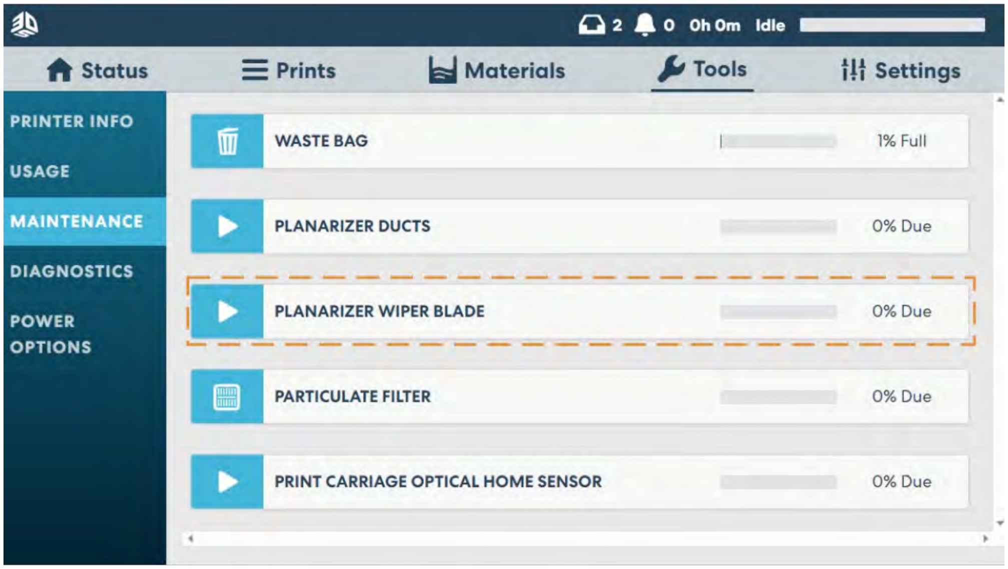
7. Using a foam swab, gently wipe out excess material from holes. For stubborn areas, use a bit of isopropyl alcohol on the foam swab before wiping.
8. When all material has been cleaned up, close top door and carriage will return to Home position.
9. Dispose foam swabs in proper disposal container.
10. On the user interface, click on Tools>Operator Maintenance>Planarizer Ducts>click Yes, that they have been cleaned.

9.6 NextDent 300 Inspect Planarizer Blade

Inspect Planarizer Blade

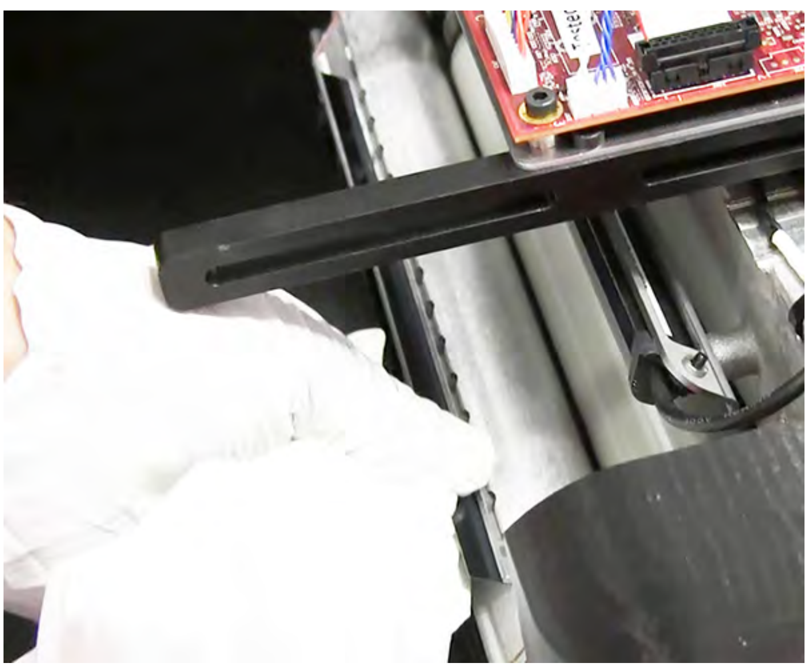
The planarizer blade will need to be inspected periodically and wiped off. Excess material can build up over time.

1. In the UI click on Tools > Diagnostics > Inspect Planarizer Wiper Blade



2. Carriage will move out of the way and planarizer assembly will tilt, allowing access to the blade.
3. Lift top door.
4. Open planarizer cover to access wiper blade assembly.
5. Wearing nitrile gloves, take a paper towel with isopropyl alcohol and wipe off excess buildup off of blade.

CAUTION: Blade is sharp, wipe blade with care.



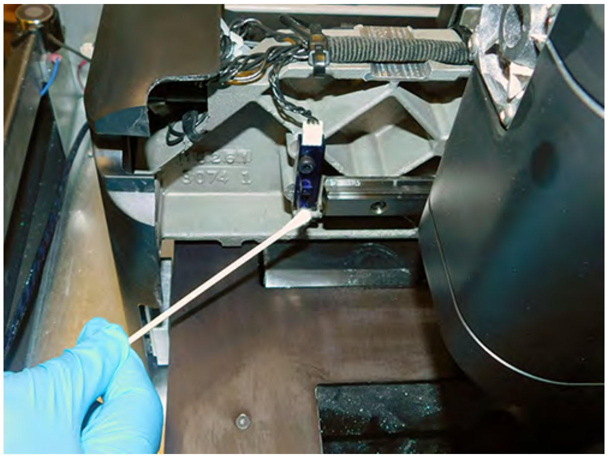
6. Close Planarizer access cover.
7. Close top cover, carriage will return to home position.
8. On the user interface, select Tools>Operator Maintenance>Planarizer Wiper Blade>Yes, that it has been cleaned.

9.7 NextDent 300 Clean Print Carriage Optical Home Sensor

Clean Print Carriage Optical Home Sensor

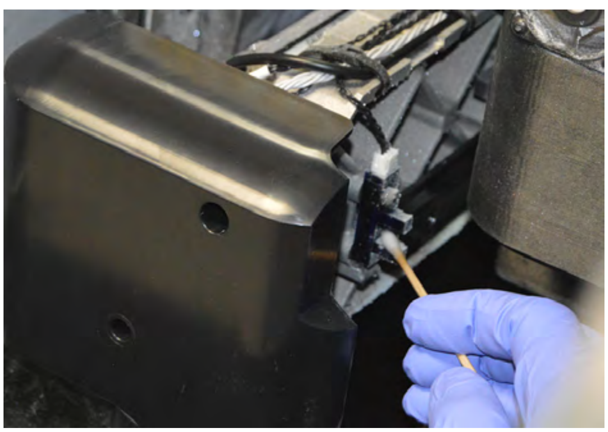
Pixie Dust Removal from Opto Sensors

Over time pixie dust will accumulate on the Opto sensors and will need to be cleaned off. Follow this procedure for cleaning the Opto sensors.



Note: Always wear Nitrile gloves when cleaning the Opto sensors.

1. From the UI Select Tools > Diagnostics > Inspect Print Carriage Home Sensor. This will move the carriage into position.
2. Open Top Door.
3. Lift the carriage cover to gain better visibility of the sensors.
4. Push y-carriage to move flag away from sensor in order to clean inside of the sensor.
5. Take a foam swab with isopropyl alcohol on it and gently wipe around the Opto sensors removing all the pixie dust from them.



6. After all the excess pixie dust is cleaned off the sensors, close the carriage cover.
7. Close the Top Door and carriage will move back into position.

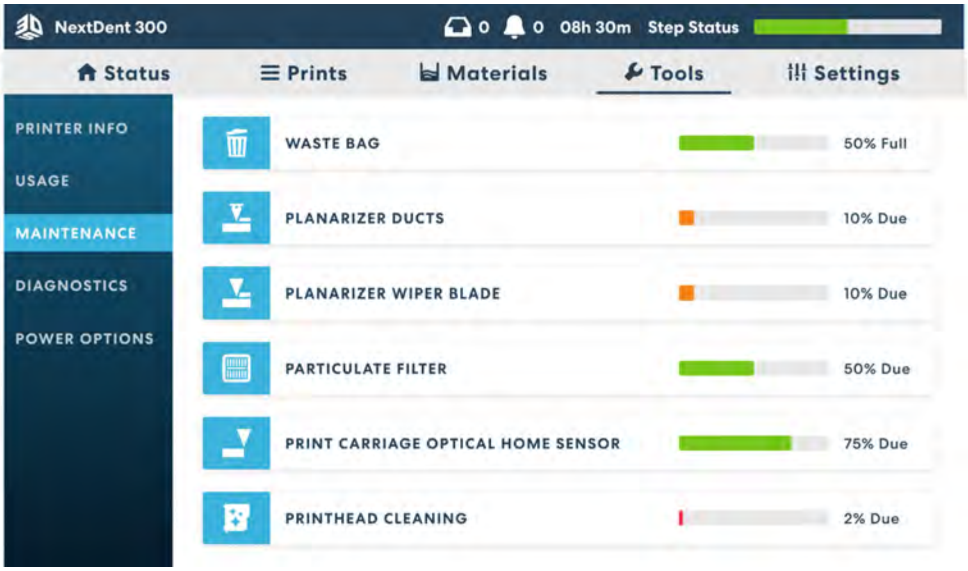
9.8 NextDent 300 - Printhead Cleaning

The Printhead requires regular inspection and cleaning. This procedure may take up to 10 minutes.

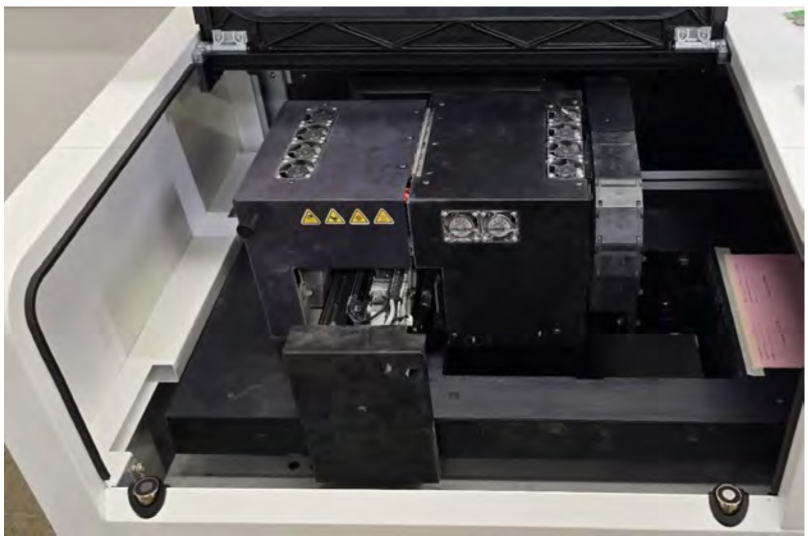
Note: Make sure that a clean Print Platform has been installed before starting the cleaning procedure.

CAUTION: Printhead is hot! Use provided cleaning tool and wipes.

1. Begin “Printhead Cleaning” Maintenance Routine from UI.

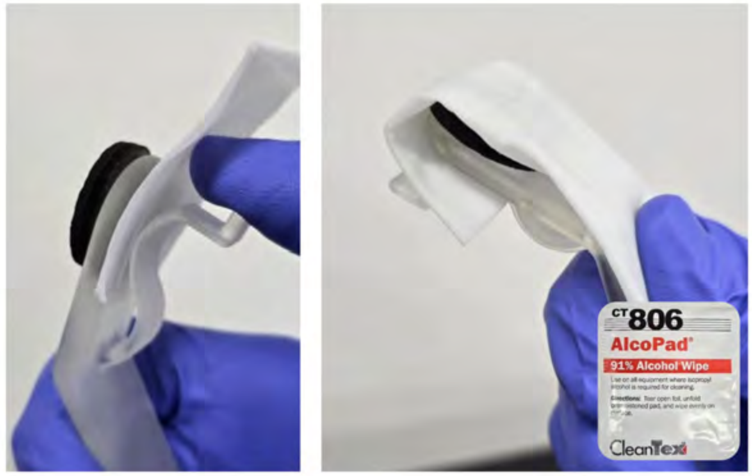


2. Carriage will move over to the position below to allow for inspection. When prompted, open top door.



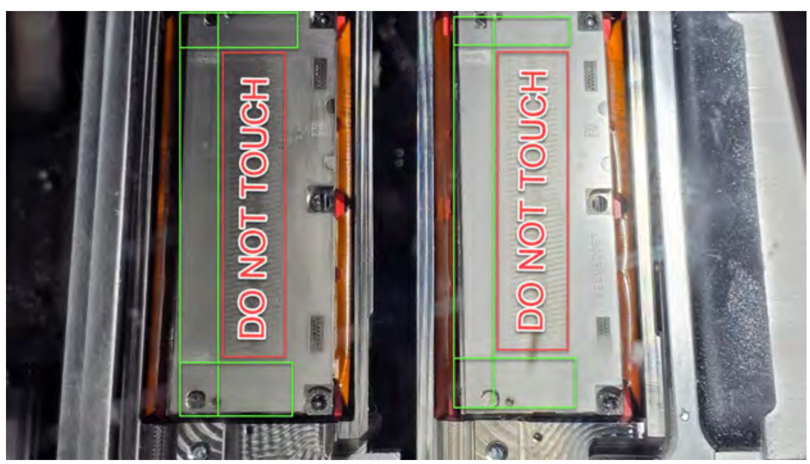
3. Place mirror and flashlight in build plate so both heads are visible.

4. Wearing nitrile gloves, open provided pack of presaturated wipe. Unfold it once and slide one end underneath clip on bottom of cleaning tool. Wrap the wipe around the bumper on top side of tool and hold it in place with your thumb.

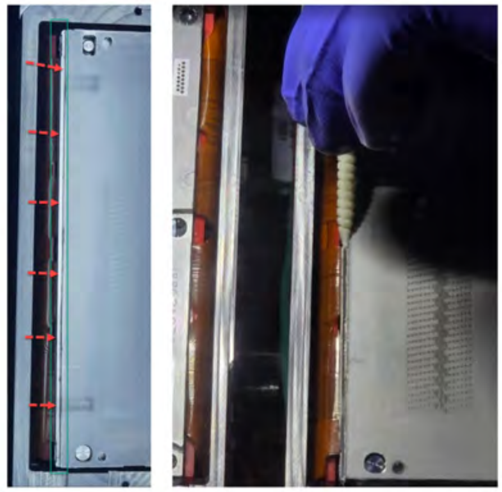


5. Using wipe on cleaning tool, gently clean printhead faceplates. Use caution as print head surfaces are hot and head faceplates fragile.
    a. Areas within green are safe to clean lightly with provided wipe on cleaning tool. Do not wipe towards or on the jetting array (red circled area). Fold wipe or use a new one once it has picked up residue or some residue has been knocked loose on the faceplate.

CAUTION: Printhead is hot! Use provided cleaning tool and wipes. Do not touch or attempt to clean the area circled in red. Any contact in this zone may damage the printhead

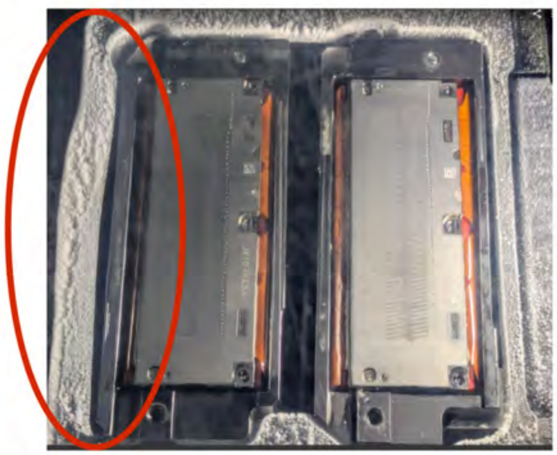


6. Inspect edges on left side of print heads. Use foam q-tip wet with IPA to remove material.



7. Once complete, remove tools and close top door.

Note: The carriage picks up pixie dust and should also be inspected and cleaned when needed during the head cleaning routine. The same tool provided can be used to assist.



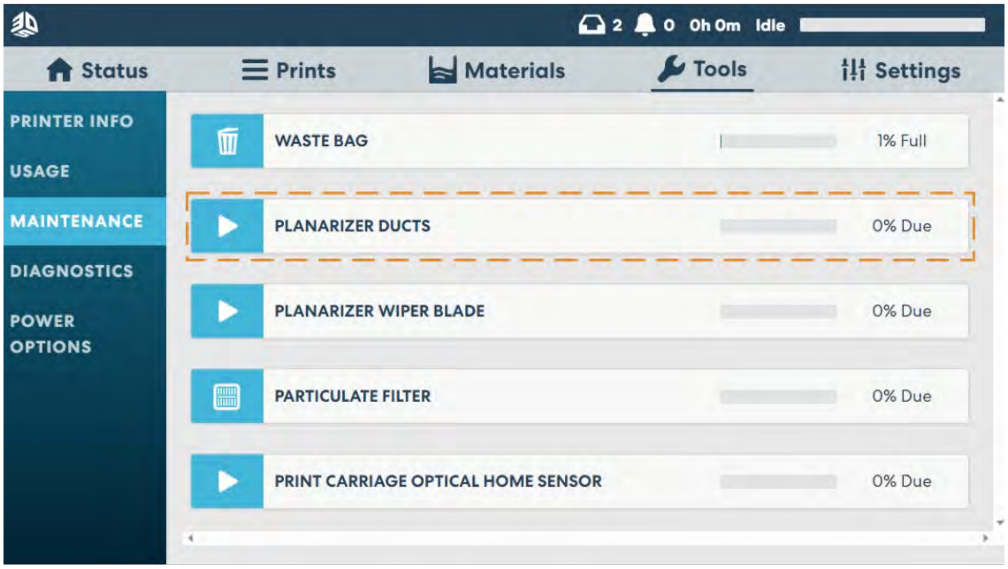
9.9 NextDent 300 Removing Pixie Dust from UV Assemblies (left and right)

Removing Pixie Dust from UV Assemblies (right and left)

Over time, the UV assemblies accumulate a buildup of pixie dust (light coating of material particles) that will need to be wiped off with a lint free cloth and isopropyl alcohol.

Right UV Assembly

1. Select Tools > Maintenance > Planarizer Ducts.



2. The print engine will be centered over the platform allowing user access to the UV lamp assembly.
3. Place a paper towel underneath carriage to catch any material that is loosened during the wiping process.
4. Reach underneath to the right UV lamp assembly and wipe pixie dust using a lint free cloth moistened with isopropyl alcohol.

Note: Always wear nitrile gloves and either a protective sleeve or lab coat when performing this procedure to protect skin from exposure to uncured materials.

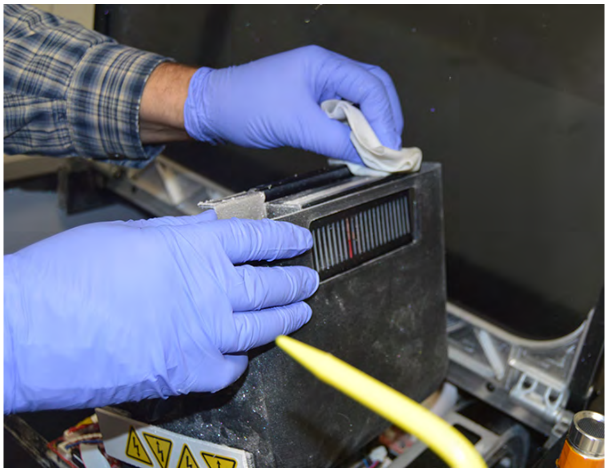
Note: When wiping the right UV assembly use care not to touch printhead.

Note: It may be helpful to shine a flashlight where you are wiping for better visibility.

When material is removed, carefully remove the paper towel and dispose of properly.

Left UV Assembly

1. Lift left UV lamp cover up and gently wipe the entire underside of the UV Assembly with a lint free cloth moistened with isopropyl alcohol.
2. When finished, close cover and top door.



9.10 NextDent 300 Confirm Jets

Jet Check Routine

Perform this procedure to confirm that all printhead jets are working properly if:

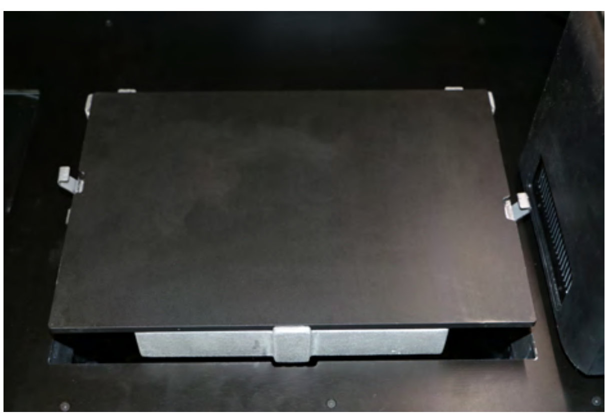
- You are installing the printer for the first time, or
- The machine has not recently completed a print, or
- Completed prints appear to be missing material (support or part material)

Items Needed:

- (1) Clean print platform.
- Nitrile Gloves

Note: Jet Check Routine can take several minutes to complete.

1. Purge the printhead by selecting Tools > Diagnostics > Head Maintenance Cycle (1) through the UI.
2. Next select Test Jets (2). If not platform is in the printer, you will be prompted to Access the Platform and install and confirm a clean platform.
3. Once the print platform is installed, close the cover to the printer and the jet check routine will execute.



4. Otherwise Select CONFIRM to start the test.
5. Once the routine finishes, access the print platform to evaluate the printed image against the **Jet Check Evaluation Criteria** on the next page.
6. If the image is acceptable (Pass), the printer is ready to start a build.
7. If the image is unacceptable (Fail) repeat steps 1-4.
8. If Jet Check Print does not pass after the third attempt, the printer will need to be serviced.
9. Clean the print platform using the Cleaning Print Platform instructions.

There are a number of possible causes for jetting issues which would cause a failed result, some but not all are:

- Thermal issues in the material delivery system
- Cabling
- Electronics and circuit boards
- Head maintenance system
- Printhead issues

Jet Check Evaluation Criteria

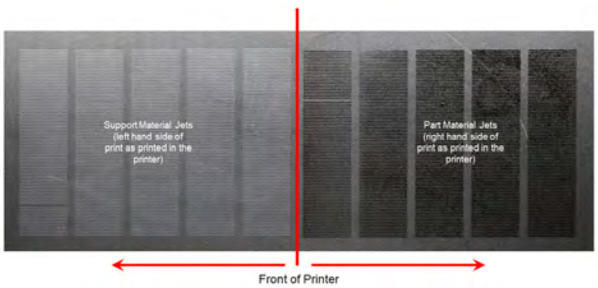
There are three criteria in which to evaluate the Jet Check Test Print. A fail in any of the three criteria results in a fail for the Jet Check and will require the procedure to be repeated or the printer to be serviced.

Evaluation Criterion 1 of 3: What is the total count of gaps in the part and/or support material side of the print?

Part Material Pass: If there are 10 or less gaps in the part material side of the print

Support Material Pass: If there are 5 or less gaps in the support material side of the print

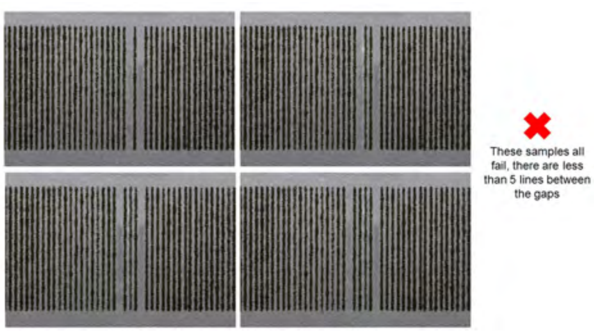
If both the part and support material pass, proceed to the second evaluation.



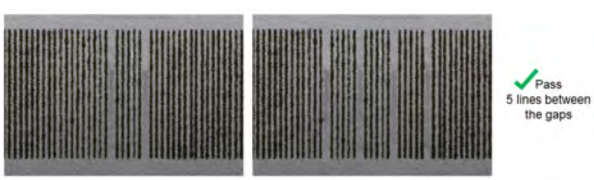
Evaluation Criterion 2 of 3: Are there 5 lines between the gaps in the same row of part or support material?

p

Fail Samples



Pass Samples

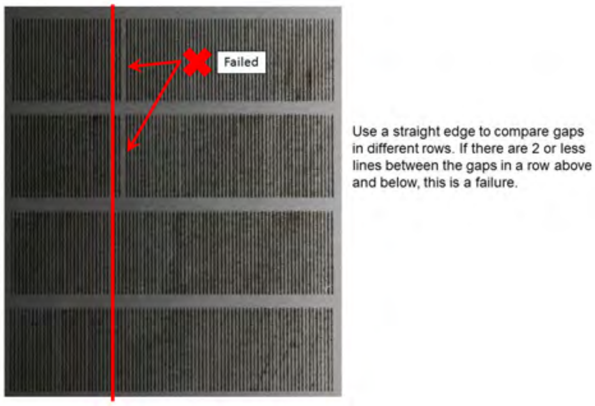


If all gaps within a single row have 5 lines or more between them, proceed to the third evaluation.

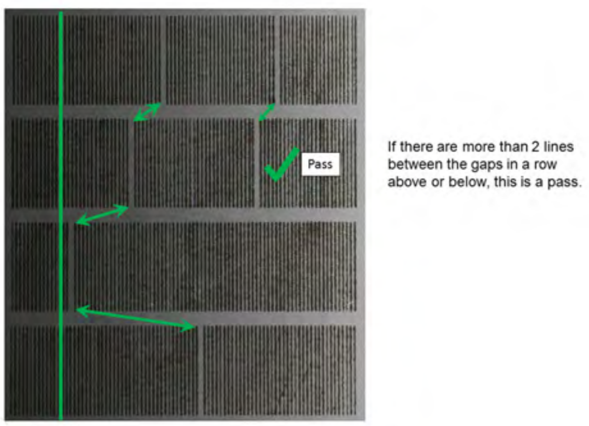
Evaluation Criterion 3 of 3: Are there at least 2 lines between a gap in a row above or below?

When performing this evaluation, only compare rows of part material to other rows of part material and only compare rows of support material to other rows of support material.

Fail Sample



Pass Sample



9.11 NextDent 300 Cleaning Exterior Surfaces

Do not remove any outer panels when cleaning the printer. Panels must only be removed by qualified 3D Systems Technical Support Representatives.

Remove dust from outer surfaces of printer by wiping with a clean, dry, lint-free cloth.

Remove dirt and grease from printer outer surface by spraying all-purpose cleaner on a clean cloth and gently wiping it down.

CAUTION: Use 50% IPA and 50% water with a soft cloth to clean surfaces. Do not use all-purpose cleaners containing petroleum-based polishing agents such as liquid wax.

Note: Before cleaning, the 3D printer system must be idle to avoid aborting a build.

9.12 NextDent 300 Cleaning Polycarbonate Top Door

Polycarbonate Top Door should be cleaned with a non-abrasive cleaning and damp cloth. Gently wipe surface using dampened cloth to remove debris.

CAUTION: Do not use cleaners such as Windex™ and paper towels to clean polycarbonate surfaces. Use 50% IPA and 50% water with a soft cloth. Using anything else will scratch the polycarbonate surface.

9.13 NextDent 300 Cleaning Print Platform

Any time parts are processed, it is a good practice to clean the print platform and re-insert it into the printer. Follow these steps for cleaning the platform:

1. Use a flat razor blade or putty knife to scrape any excess support material off of the platform. Be careful not to scratch the black coating on the platform.

2. Spray the platform with isopropyl alcohol (IPA) and wipe with paper towels.
3. When cleaning the print platform, always clean both sides.

Note: The print platform should be clean and at room temperature before installing and using it in the printer.

9.14 NextDent 300 Cleaning the User Interface

Remove any printed parts before cleaning the user interface. This will prevent the printer from initiating any actions if controls are accidentally pressed.

Spray a water-based solvent such as Simple Green onto a lint-free soft cloth; do not wipe with a dry cloth or spray cleaner directly onto touch screen.

Gently wipe dirt and part material residue from touch screen using an ammonia-based glass cleaner on a clean, lint-free cloth.

Do Not Use:

- A dry cloth on the touch screen
- Any cleaning products that contain acetone, MEK or alcohol
- Any abrasive cleaning products
- Using these cleaning products can damage the touch screen.

9.15 NextDent 300 MDM Maintenance

The following general maintenance procedures provided must be accomplished to help maintain high part yield and to reduce the printer down time.

When changing material cartridges, material may be present in the MDM receptacle after the cartridge is removed. If a large pool of material is present (bottom is submerged and walls of the cartridge receptacle are reached), do not place a clean material cartridge into the receptacle, call your reseller/partner.

CAUTION: The MDM cartridge receptacle and material will be warm; avoid touching the sides of the holder during the cleaning process. Wear heat resistant gloves and goggles.

Cleaning the MDM Drawer

Using Isopropyl Alcohol and a lint free cloth, dampen cloth with the alcohol and clean around the cartridge receptacle.

9.16 NextDent 300 Routine Maintenance

It is necessary to keep the printer clean and free of debris by cleaning up any dust that has collected around the printhead and the surrounding areas. Depending on the printer usage, it is recommended to clean every week for light usage and every print for heavy usage.

Items needed

- Nitrile gloves
- Lint free paper towels or a damp cloth
- Isopropyl alcohol or similar non-abrasive cleaner
- Vacuum or compressed air hose

Items to clean

- Beauty plate
- Inside and outside of Planarizer cover
- Outside of printer

WARNING: DO NOT CLEAN THE UNDERSIDE OF THE PRINTHEAD (JET STACK). DOING SO WILL CAUSE SEVERE DAMAGE.

10 NEXTDENT 300 TROUBLESHOOTING

The Troubleshooting section is designed to help the user diagnose any anomalies that is happening with the printer before having to call for service. Most of the everyday things that can occur are listed in this section. If this section does not answer the question or solve the problem, contact your Certified Partner for service.

10.1 NextDent 300 Printer Status and Fault Code Recovery

The NextDent 300 Series uses codes to identify various fault or status conditions with the printer:

- Status about the device, for example, cartridges are low on material
- User-clearable faults, by the user performing cleaning procedures
- Printer-clearable faults, where the printer is automatically attempting recovery
- Service required faults, which can only be resolved by a certified partner

Check the Printer Status envelope for current printer conditions.

Codes listed below describe user-clearable and printer-clearable faults:

PRINTER STATUS CODE	ISSUE DESCRIPTION	CUSTOMER TROUBLESHOOTING STEPS
• 90-122 - Part Quality May Be Compromised	The printer may have of had an error or a delay of over 30 minutes (recovery from an error, waiting for user intervention) which could impact part quality.	**1.** Check the Fault History list for errors that may have cause the delay to resolve any outstanding issues. **2.** Set up email alerts to be notified when the printer needs user intervention (new material, empty the waste bag).
• 92-113 - Print Platform front sensor intermittent • 92-114 - Print Platform rear sensor intermittent	Print Platform sensors may be dirty and require cleaning.	**1.** Access Platform from the UI > Status Tab **2.** Open top door **3.** Remove Print Platform **4.** Inspect the plate sensors and clean any debris on or around them **5.** Replace print platform **6.** Close top door **7.** Reboot machine from UI > Tools Tab > Shutdown > Printer Reboot **8.** If this does not solve the problem call your Certified Partner for service
• 92-152 Planarizer motor stall	If the print platform is installed incorrectly or has material on the bottom, it allows the print platform to be higher than the printer thinks it is and a minor impact could occur, stalling the motor.	**1.** Access Platform from the UI > Status Tab **2.** Open top door **3.** Remove Print Platform **4.** Clean both sides of the print platform **5.** Replace print platform **6.** Close top door **7.** Reboot machine from UI >Tools Tab > Shutdown > Printer Reboot
• 93-120 thru 123 • 93-130 thru 133 Support/part cartridge 1/2 fill timeout • 93-134 thru 137: Support/part • 93-168 - 171 - cartridge should not be empty cartridge 1/2 check needed	93-120 thru 123 & 93-130 thru 133 - When these errors are detected, the support and build materials are trying to recover from filling errors 93-134 thru 137 - filling errors Printer thinks there should still be material in the cartridge	**1.** Check the affected cartridge and verify: **2.** Cartridge has material **3.** Cartridge is fully inserted **4.** Cartridge vent cap has been loosened 1/2 turn counter-clockwise and is clear of material.

PRINTER STATUS CODE	ISSUE DESCRIPTION	CUSTOMER TROUBLESHOOTING STEPS
		The printer may delay for several minutes while it is trying to recover, if no material is available for printing.
• 93-111/ 93-113 - Support / Build Head Res max dose count exceeded	Printer is having issues dosing the printhead	**1.** The printer will try to recover automatically from this issue **2.** The printer may go through several Error states and reboot in its recovery process. **3.** If it is not able to ultimately recover, it will reboot into a Diagnostics mode for the user to call service.
• 93-114 - Unable to fill the printhead for purging	Not enough material available	The printer may not have enough material to perform standard maintenance, like purges. Please verify. • Cartridge has material • Cartridge is fully inserted • Cartridge vent cap has been loosened a 1/2 turn counter-clockwise and is clear of material. If Cartridges have just been inserted and are cold, it may take 60-90 minutes to warm to an operational temperature.
• 93-200, 93-201 Excessive support/part material used	Printer is using more material than can be accounted for.	Check the printer for any material leakage and contact a Certified Partner for service.
• 93-295-296 - Insufficient material	Insufficient material use in the printhead. Printer keeps printing but no material is being put down.	Call service
• 94-203 Planarizer Contact Calibration Failed	Planarizer Contact Calibration Failed prior to printing, the printer calibrates the planarizer gap. If it fails, the printer will wait fo the user to remove and re-position the plate.	**1.** Access Platform from the UI > Status Tab **2.** Open top door **3.** Remove print platform **4.** Clean both sides of the print platform **5.** Replace print platform **6.** Close top door
• 94-104 Printer Slowing Down • 95-118 Build Chamber Too Hot	Printer slowing down to cool. Build Chamber Too Hot while printing, if the printer shows slowing down to cool, the build chamber is above optimal temperature. If it continues to exceed temp, the printer will pause printing until the temperature goes down.	**1.** Check ambient temperature, optimal temperature range is 18°-24°C (64°-75°F). **2.** Verify that the particulate filter and the screen above the filter are not plugged. Replace as necessary. **3.** Make sure the printer is not next to a window in direct sunlight. **4.** Make sure the back of the printer is 12" from the wall.
• 92-157 Y Axis Motor Cannot Home • 94-207 Clean Print Carriage and Optical Home Sensor	Sensor may be dirty.	Clean Print Carriage Optical home sensor. See Cleaning and Maintenance section for cleaning sensors.
• 94-301 - 307 - Job Aborted: **Image Slicer Abort reasons:**	The printer detected an issue requiring the job to be aborted.	Review cause for the aborted reason and retry the print job. Call service if required.

PRINTER STATUS CODE	ISSUE DESCRIPTION	CUSTOMER TROUBLESHOOTING STEPS
• 101 - An internal error has been detected in the Image Slicer service • 102 - A slicer error has been detected • 103 - An error was detected in the slicer while processing a layer image Contact service for information on resolving these issues. • 301 - Print Job Aborted: The build chamber was too hot to continue job. Check ambient temperature and filter. • 302 - Print Job Aborted: Z-axis and layer count mismatch. Call service to inspect z-axis if error occurs again. • 303 - Print Job Aborted: The top door was opened while printing. • 304 - Print Job Aborted: The planarizer cover was opened while printing. • 305 - Print Job Aborted: The rear service panel was removed while printing. • 306 - Print Job Aborted: Issue detected with the carriage board. Call service to inspect carriage board and cabling. • 307 - Print Job Aborted: Issue detected with the PDAC board. Call service to inspect PDAC board and cabling.		

10.2 NextDent 300 Non-Fault Code Recovery

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
The printer will not power up	The UI is off and there are no sounds coming from the printer.	**1.** Turn the power switch off **2.** Wait for 30 seconds **3.** Unplug the power cord **4.** Wait for 10 seconds **5.** Make sure the power switch is off **6.** Plug in the power cord **7.** Wait for 2 seconds **8.** Turn the power switch on **9.** The UI should be powered on and the printer should start making turn on initialization sounds within the next minute. If this does not happen please contact your local service provider
The UI displays a message "Printer Disconnected"	The printer lost its connection and is non-responsive.	**1.** Turn the power switch off **2.** Wait for 30 seconds **3.** Unplug the power cord **4.** Wait for 10 seconds **5.** Make sure the power switch is off **6.** Plug in the power cord **7.** Wait for 2 seconds

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
		8. Turn the power switch on **9.** The UI should be powered on and the printer should start making turn on initialization sounds within a minute or so. **10.** The UI should be ready and communicating with the printer in 2 to 3 minutes. If this does not happen please contact your local service provider
User Interface		
Powered up, non-responsive.	The UI appears to be hung, the printer is powered on, the UI is displaying a screen (not blank), but is non-responsive.	**1.** Turn the power switch off **2.** Wait for 30 seconds **3.** Unplug the power cord **4.** Wait for 10 seconds **5.** Make sure the power switch is off **6.** Plug in the power cord **7.** Wait for 2 seconds **8.** Turn the power switch on **9.** The UI should be powered on and the printer should start making turn on initialization sounds within a minute or so. **10.** The UI should be ready and communicating with the printer in about 2 to 3 minutes. If this does not happen please contact your local service provider
UI stuck in a specific routine	The UI appears to be stuck in a specific routine, such as aborting a job, accessing the platform, etc., for at least 1 minute.	**1.** Turn the power switch off **2.** Wait for 30 seconds **3.** Unplug the power cord **4.** Wait for 10 seconds **5.** Make sure the power switch is off **6.** Plug in the power cord **7.** Wait for 2 seconds **8.** Turn the power switch on **9.** The UI should be powered on and the printer should start making turn on initialization sounds within a minute or so. **10.** The UI should be ready and communicating with the printer in about 2 to 3 minutes. If this does not happen please contact your local service provider
UI black, machine powered on	The machine is powered on, fans and other machine noises are observed.	**1.** Turn the power switch off **2.** Wait for 30 seconds **3.** Unplug the power cord **4.** Wait for 10 seconds **5.** Make sure the power switch is off **6.** Plug in the power cord **7.** Wait for 2 seconds **8.** Turn the power switch on

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
		9. The UI should be powered on and the printer should start making turn on initialization sounds within a minute or so. **10.** The UI should be ready and communicating with the printer in about 2 to 3 minutes. If this does not happen please contact your local service provider
Material Delivery/Material Cartridges		
Excessive material in the cartridge receptacle	A visible amount of material remains in the cartridge receptacle	**1.** Do not insert a new material cartridge. **2.** Call your local service provider.
Cannot insert material cartridges	The material receptacle will not allow a bottle to be inserted.	**1.** Do not attempt to load support material cartridges into the printer until it has warmed up for 20 minutes. **2.** Verify that the material cartridge is fully inserted. The cartridge should click into place. **3.** If the problem persists, contact your local service provider.
Cartridge cannot be removed from the machine	The release button is pushed, but the cartridge can't be removed.	**1.** Confirm that your machine is warm, do not attempt to remove cold material cartridges, if the printer is at ready state and the problem persists, contact your local service provider.
Material delivery drawer won't open	The material delivery drawer locks during material delivery maintenance or to protect the machine from damage caused by inserting or removing cold material bottles	**1.** This is normal behavior. **2.** The material delivery drawer will unlock when it is safe to do so.
Material cartridge leaks material	When the material cartridge is removed from the printer, material leaks out	**1.** Prior to removing the cartridge, rotate the cap clockwise to close. **2.** Push the cartridge release button, then remove the cartridge. Note that pushing the button while removing the cartridge could result in material leaking from the cartridge. **3.** If there is excess material found in the bottom of the material receptacle, contact your local service provider.
Waste bag stuck to liner	The waste bag cannot be removed from the waste bag liner	**1.** Remove the rigid waste bag liner from the machine. **2.** To avoid a mess, remove the liner over a container that is designated for waste material. Use caution, removing the bag may result in a tear and material may leak out of the waste bag. **3.** To continue printing, install two waste bags. **4.** Contact your local service provider and order a rigid liner replacement.

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
Material cartridge inserted, not recognized by printer	The material cartridge is inserted, but not detected. The material identification tag can be missing or is damaged.	**1.** Confirm that the material cartridge identification tag is still in place. The label is located on the front of the cartridge. **2.** Using the same material type, insert a different bottle into the material receptacle (swap cartridges if another cartridge is loaded in the other slot. If the new cartridge is detected by the printer, there is something wrong with the RFID tag on the non-detectable cartridge. Replace the material cartridge. If the new cartridge is not detected contact your local service provider.
Status envelope - Print platform has material on it	A print job was completed and a new print platform has been installed. The next print job will not start, status envelop reports "Print platform has material on it"	**1.** Select Access Platform from the printer UI. **2.** Remove the print platform **3.** Re-install the print platform. Verify that the platform is not skewed and is placed flat in the printer. **4.** If you were not prompted with a message that a new platform was installed, contact your local service provider.
Other		
Machine noise-loud clicking	The machine occasionally makes a loud, rapid clicking noise.	**1.** This is normal behavior. The material delivery system is moving material throughout the printer.
Machine odor-unpleasant	After printing for a period of time, an odor from the printed part material can be detected.	**1.** Replace the printer Particulate Filter. **2.** Increase the air exchange rate of room where the machine is operated. **3.** Move the printer to a more ventilated open area.
Print platform not detected	The print platform is installed, but not detected.	**1.** Access Print Platform from the UI **2.** Remove the installed print platform, and reinstall. Confirm that the platform is not skewed and is placed flat in the printer **3.** If the problem persists, contact your local service provider.
Printer will not come out of Warming State	The printer seems to be stuck in the warming state	**1.** If the machine was recently powered up, it will take just over an 1 hour to fully warm the printer up and transition to the Ready State. **2.** If the printer has been warming for more than an hour, confirm that material bottles are loaded in the printer and that they contain material. Both support and part material is required, the machine will stay in the Warming state until both types of material are detected and

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
		warmed to the appropriate printing temperatures. **3.** If material has been loaded and the problem persists, contact your local service provider.
The printer has slowed down while printing	The printer is printing, but at a reduced speed	**1.** The optimal ambient printing temperature range is 18-24 C (64-75 F), verify that the room in which the printer is installed is within this range, reduce the room temperature as needed. **2.** Verify that the printer has 12" of clearance behind the machine to ensure proper ventilation. **3.** If the printer is located next to a window or exposed to direct sunlight, relocate the printer, if the problem persists, contact your local service provider.

Machine Powered On, UI Blank/Black

Issue: The printer has power, fans are on, umbilical thermals are working, LED lights can be observed on the circuit boards, but the UI is blank/black and appears dead.

Probable Causes: The UI is not powered, software issue, UI SD card missing/not inserted, cable issue.

When the UI receives power, it will flash on and then appear to go blank, but if it is powered, there will be a small amount of visible light in/around the display.

Troubleshooting Steps

Power cycle the printer, if the UI doesn't come up Contact a Certified Partner for service.

10.3 NextDent 300 Part Quality Issue Recovery

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
Missing Material:		
Missing Jets: Missing material in part (left to right)	Part has groove(s) of material missing often in the in the shape of a line from the left to right direction. If the part is across multiple lanes (front to back) missing material will occur across each lane in the same relative location and width.	**1.** Perform Confirm Jets procedure **2.** If the jets do not clear after three attempts, contact certified partner for service.
Dragging: Missing material in part (left to right)	Part and verification wall look as if something has been dragged across the surface of the part. There may be missing material in the part and/or extra material dragged or smudged outside the part in the areas of missing material.	**1.** Look for material buildup on the bottom of the print engine by looking horizontally across the surface, see At a Glance section for print engine location. Clean any material that is hanging down from underneath the print engine. Use the Inspect Planarizer Blade routine to clean the planarizer access cover. See Inspect Planarizer section for assistance. **2.** Wearing nitrile gloves, rotate the planarizer access cover so that the

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
		planarizer blade is accessible. Clean off the edge of the planarizer blade, See Inspect Planarizer section for assistance. If additional dripping and/or material buildup remains on the bottom of the print engine, contact your certified partner for service. **3.** Clean any material off the bottom of the print engine including the planarizer waste trough, the printhead mount, the air plenum's, the UV lamp or anywhere else. Always keep the printer clean.
Horizontal line or appearance of missing layer	The printed part has a horizontal line through the entire part or appears to have a missing layer of material.	**1.** A pause longer than 10 minutes during a print job may result in this defect. To eliminate, promptly remove full waste bag and load new part and support material cartridges when requested. **2.** Email alerts can be set up to provide notification of close to full/full waste bags as well as low/empty material cartridges. See User Interface section for directions to set up email alerts.
Gap in material	The printed part has a gap in the material 1/3 and/or 2/3 of the way across the part (front to back when standing in front of the printer).	The printer is out of calibration, contact your certified partner for service.
Extra Material:		
Smearing: Support material extends beyond part or is present on surfaces of part after post processing	Parts have observable support material extended beyond where the part should be in the left to right direction. Extra material described as "flames" or "spurs" of material.	**1.** Make sure the planarizer is clean. Perform the Inspect Planarizer Blade procedure found in this manual. **2.** Look for material buildup on the bottom of the print engine by looking horizontally across the surface, see ''At A Glance'' section for print engine location. Clean any material that is hanging down from underneath the print engine. **3.** The extra support material can often be removed with a nylon brush or by simply rubbing the surface with a soft cloth. **4.** Orientating the parts at a different angle can reduce or eliminate the issue until your service provider arrives. **5.** If the problem persists, contact your certified partner for service.
Dripping	Material has dripped on the part or in the build chamber area.	**1.** Perform the Inspect and Clean Planarizer Ducts routine. **2.** It is recommended to clean more frequently for M2E elastomeric and M2S specialty material families.

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
		3. If the problem persists, contact your certified partner for service.
Snow: Snow like material in the build chamber	The development of "snow" within the build chamber is normal.	**1.** To reduce the amount of snow within the build chamber, increase the frequency of printer maintenance. See the Troubleshooting and Maintenance Best Practices Section of this manual for information. **2.** If the part has been damaged from a buildup of snow, contact your certified partner for service.
Bump	The part has a bump or a ridge of extra material 1/3 and way 2/3 of the across print platform (orientation front to back).	Contact your certified partner for service.
Discoloration:		
Blotches: Clear or white material has yellow discoloration areas or spots	Clear material appears to have yellow spots.	**1.** Reposition the part so that tall sections and short sections of the print job are in different lanes (front to back when standing in front of the machine). **2.** Position tall parts towards one end (left ot right) of the platform and shorter parts on the other end. This will avoid the shorter parts being over exposed to the UV Lamps during the build of the taller parts. **3.** For smaller parts, position the parts in the center of a printing lane. The UV lamp intensity overlaps at the edge of printing lane boundaries and can increase yellowing in these locations. **4.** For smaller parts that did not take long to post process, yellowing can sometimes be reduced by putting the parts back into the oven at 65°C to 70°C for a few hours. **5.** Always make sure the UV Lamp are clear of excess material.
Color mixing	The printed material appears to have small areas of lighter or darker color.	**1.** Inserting a different part material color can result in a small amount of color mixing which may show up on the printed part. This will clear on its own. **2.** If you are concerned with mixing on your next printed part, perform a Material Change Wizard routine to flush the unwanted material.
Printed part changes shade	The top portion of the part does not have the same shade as the bottom portion of the part.	Part material has a small amount of lot to lot variation. Prior to printing, confirm that all part material needed for the job has the same lot code.
Part color fades	The printed part fades from clear to yellow (when printing with clear material	Parts can fade or change color over time. To reduce the change in color, limit part exposure to light and heat sources.

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
	or black to gray) when printing with black material.	
Permanent marks on part after post processing	The finished part has an outline and discoloration in the shape of another post processed part.	Avoid stacking or overlapping parts when post processing.
Surface Finish:		
Top surface shine and matte	The top horizontal surface of the printed part has some areas that are shiny (glossy appearance) and some areas that have a matte finish.	In **3D SPRINT**, position the part at a slight right angle to the horizontal surface prior to sending to the printer.
Side surface vs. top/bottom surface	The top/bottom surfaces appears smooth while the side surfaces appear to be rough or have steps of material.	The printer encapsulates support (wax) material when printing which will cause the sides to have a matte finish. Horizontal surfaces may have a glossy appearance due to the print process. To eliminate gloss, position the part in **3D SPRINT** so that horizontal surfaces are minimized.
Degraded fine details	The surfaces appear degraded and fine details are either missing or not completed as designed.	**1.** Make sure the part has followed the MJP general designee rule: i.e., fine details are not too small (<200 microns). **2.** Check if defects are associated with other failures such like 'Surface mottle, visual non-uniformity, or too hot' or 'the printer has a limitation when printing up facing engraved text or lines.'
Surface mottle, visual non-uniformity or too hot.	The surface of parts appears spotty or mottle in texture. Sharp corners may be rounded - especially the upward facing features.	**1.** Check ambient temperature, optimal temperature range is 18°- 24°C (64°-75°F). **2.** Verify that the particulate filter and the screen above the filter are not plugged. Replace as necessary. **3.** Make sure the printer is not next to a window in direct sunlight. **4.** Make sure the back of the printer is 12'' from the wall. **5.** Print parts with large flat surfaces vertically on the print platform.
Part Distortion:		
Upward part curl on flat surfaces relative to the build plate.	Part is bowed or curled and surface is no longer flat. Curling occurs in the z-axis (vertical direction) from the print platform. The curls occurs prior to post processing the part.	**1.** Check ambient temperature, optimal temperature range is 18°-24°C (64°-75°F). **2.** Verify that the particulate filter and the screen above the filter are not plugged. Replace as necessary. **3.** Make sure the printer is not next to a window in direct sunlight. **4.** Make sure the back of the printer is 12" from the wall and has good ventilation.

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
		5. Rotate the parts 90°such that parts with large flat surfaces are 90° relative to the print platform. **6.** It is recommended to print in M2G materials.
General part distortion during or after post processing	Part is bowed, curled or warped and/or surface is no longer flat after post processing the part.	**1.** Lower the oven temperature for parts with large flat surfaces. **2.** Complete all post processing steps of the part. **3.** It is recommended to lay the part flat everywhere at any time during post processing: oven, rinse,cleaning,cooling,drying. For irregular parts, it is recommended to use a fixture to hold the part flat. **4.** After post processing and cleaning the part, clamp the part against or between a flat surface and place back in the oven to flatten. Once the part is flat, remove from the oven, keep the clamp on the part until cool. **5.** Consider using a more rigid material (Rigid Tan vs Engineering Armor) for thin features that tend to distort during post processing. Parts can be placed back into the oven after post processing and they will often return to their printed shape. **6.** Additional supporting structures can be used for fragile overhanging parts that sag under their own weight. Cool the parts in their desired shape.
Dimensional accuracy	The completed part does not match the size desired.	**1.** See the Shrinkage Compensation Procedure to determine the Shrinkage Compensation values. See Shrink Compensation section of the User Manual for assistance. **2.** Input new values into **3D SPRINT** and reprint the part.
Other:		
Part won't adhere to the print platform	The printed part is not building correctly on the print platform, the support (wax) material won't adhere to the print platform.	**1.** Never print with a cold print platform. When using a print platform where a part was just removed, allow the print platform to warm up to room temperature prior to starting the print job. **2.** The print platform must be completely clean prior to use. Scrape any residual wax from the print platform and wipe with IPA prior to use. It is important that both sides of the print platform are clean. **3.** Remove any debris from the printer prior to installing the print platform. Debris under the print platform may cause the print platform to sit at an

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
		angle resulting in a collision between the print engine and the part.
Verification wall tipped/broken near base	The verification wall has tipped/broken off near the base and fallen onto the printed part. Sprayed material appears on the right side of the build chamber. A pause in the print job may result in the verification wall cooling and becoming brittle. Upon resuming the print job, the planarizer contact may cause the verification wall to fall over onto the print job.	To avoid, do not allow pauses in the print job such as waste bag replacements or empty material cartridges.
Tall and thin part(s) fall over during printing	Very tall and /or thin parts placed vertical in the z-direction appear to have been partially printed and then broke off the build plate. Debris from the printhead may be seen in the build area or on the verification wall from the part material being jetted into the build area instead of onto the broken part.	**1.** Rotate the parts so that the part long dimensions is not directed in the z-axis **2.** Rotate the parts to reduce the z-height and add more support for stability. **3.** Place multiple thin parts close to each other so that they support each other during the build process. **4.** Add additional sacrificial parts to the build near the tall parts for improved stability.
The printer has a limitation when printing up facing engraved text or lines.	All edges are not sharp but beveled when the fine features are printed upward facing.	**1.** Print the same part with the engraved text or lines in a rotated angle against XY plane or facing downward(as printed).
Printhead Misalignment: This condition should only be observed on the teeth, as proper alignment between the support structures and the gums is essential.	**1.** On Plate: Teeth have blisters around them or a shadowy coating. This is a directional artifact and when present will appear on the same side of the affected parts  **2.** De Waxed: With support removed, this leaves an atypical shininess to the teeth where there was significant separation between the support and the teeth material.	Please contact 3DSystems directly to schedule service visit. Our team will assist you in arranging the appropriate support.

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
	 3. Bead Blasted: Even with bead blasting, there is a ledge/lip still remaining, and accuracy is compromised. 	
Printhead Misalignment: This condition should only be observed on the teeth. It can be seen as extremely white encapsulation on-plate	1. De Waxed: Shiny Teeth   2. Bead Blasted: Surface Roughness	Please contact 3DSystems directly to schedule service visit. Our team will assist you in arranging the appropriate support. 1. Shiny Teeth: Since this appears to be a head-to-head alignment sensitivity, results may vary slightly between lanes. Lane 2 often provides the most consistent output due to its calibration role, with Lanes 1 and 3 typically following Additionally, printing teeth in a downward orientation has been shown to help minimize common artifacts such as surface shine and triangular distortions.

PROBLEM	DESCRIPTION	TROUBLESHOOTING STEPS
		

11 NEXTDENT 300 PARTNER - CUSTOMER SUPPORT

Note: Whenever you have a problem or a question it is best to contact your reseller directly first.

If the certified partner cannot help you then there is a Customer Support Hotline you can use. If you receive an unrecoverable error message, or if you need to contact us for another problem, you may contact our Customer Support Hotline. Before you call Customer Support with a problem or question, please make sure that you have the following information:

- The serial number of your NextDent 300 is printed on a label inside the filter door or by accessing the UI and selecting Tools > Printer Info.
- A brief description of the problem, including the exact error message.
- When the problem occurred; for example, when you submitted a job, during the beginning or the end of a print, or after power off recovery, etc.

Customer Support Hotline

General

NextDent 300 service procedures must be performed only by a 3D Systems-certified service technician unless this guide explicitly states otherwise. If your 3D printer system needs service, contact 3D Systems Technical Support at the following numbers:

- In the United States or Canada, call 800-793-3669
- In Europe, call +49-6151-357357

You can also contact your local 3D Systems representative.

3D Systems' support portal is located at http://www.3dsystems.com/support

12 NEXTDENT 300 LEGAL NOTICES

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End User Software License Agreement

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13 NEXTDENT 300 BASIC REGULATIONS

3D Systems has tested this printer to electromagnetic emission and immunity standards. These standards are designed to mitigate interference caused or received by this printer in a typical office environment.

FCC Class A Digital Device

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense.

Changes or modifications not expressly approved by 3D Systems could void your authority to operate this equipment.

RFID Radio Compliance – FCC / ISED / EU

This product generates **13.56 MHz** using an inductive loop system for radio frequency identification (RFID). The RFID system complies with the following regulations:

- FCC Part 15
- ISED RSS-210 and RSS-Gen
- European Directive 2014/53/EU (RED)
- And all other applicable local regulations

Operation of this device is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC & IC Transmitter Identification

This device contains a certified RFID transmitter module:

- **FCC ID:** 2ADGF-NEXTDENT
- **IC ID:** 12666A-NEXTDENT

Access to the transmitter is available to authorized service technicians via standard enclosure access methods (e.g., use of common tools and removal of covers).

RF Exposure & Occupational Use Notice

This equipment is intended for use by **trained personnel in occupational or controlled environments only**. It complies with FCC and ISED RF exposure limits for such environments. This device is **not intended for use by the general public**.

To comply with RF exposure requirements, a **minimum separation distance of 20 cm** must be maintained between the equipment and all persons during operation.

Industry Canada (ISED) Notice

English:

This Class A digital apparatus complies with Canadian ICES-003.

This device complies with Innovation, Science and Economic Development Canada licence-exempt RSS standards. Operation is subject to the following two conditions:

(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation.

Français:

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Le présent appareil est conforme aux normes CNR d’Industrie Canada applicables aux appareils radio exempts de licence. Son fonctionnement est soumis aux deux conditions suivantes : (1) l’appareil ne doit pas produire de brouillage; (2) l’utilisateur de l’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

European Union

CAUTION: This is a Class A product. In a domestic environment, this product can cause radio interference in which case the user could be required to take adequate measures.

In order to allow the equipment to operate in close proximity to Industrial, Scientific and Medical (ISM) equipment, the external radiation from the ISM equipment may have to be limited or special mitigation measures taken.

Changes or modifications to this equipment not approved by 3D Systems can void the authority of the user to operate this equipment.

14 NEXTDENT 300 GLOSSARY

Print Platform - Removable platform on which parts are built. Support material adheres the part to the print platform and is removed from the printer once the job is complete.

Part Material - Is an ultraviolet (UV) curable material used to build the parts. Always wear nitrile gloves, lab coat and safety glasses when handling any uncured part material.

Top Door - The chamber door prevents harmful UV radiation from escaping the build chamber during the build process. The chamber door must be closed prior to starting or resuming a build job and is locked when a build is in progress.

Log - A log file is a zip file of logs used by service for resolving potential problems that may occur with the 3D printer system.

Head Maintenance Station (HMS) - The head maintenance station cleans the printhead by allowing it to purge into the waste bin as well as wipe the printhead clean from any remaining material.

Job Scale Percentage (Job Scale %) - This is used to re-size parts during the build process.

Material Change Wizard - A process used to switch from one part material type to another. The existing part material that was last used from the printer must be removed, and the material cleaned from the printer before adding a different part material type.

Material Delivery Module (MDM) - Stores and feeds the materials to the printer during the build process. The MDM holds two support cartridges and two part cartridges.

Post Processing (Finishing) - Is the final process to remove support material from parts and clean the parts to a smooth finish prior to surface finishing and coating.

Print Engine - The Print Engine contains major systems such as the Printhead, Planarizer, and UV Lamp Assembly.

Print Process - Three dimensional solid parts printed by the printer consist of two materials (support material and part material). The support material is a wax based material providing adhesion to the print platform, as well as, providing material used to produce supports required to build the model. The part material used to build the parts is an ultraviolet (UV) curable material. After a layer of material is deposited on the build chamber, the part is exposed to a UV flash lamp. The UV energy is absorbed by the material converting a liquid part material to a solid polymer. When the build is complete the part (consisting of the two materials) is adhered to the print platform by means of the support material.

Build Chamber -The area designated for the part to be built in.

Sensitizer - Uncured part material is a sensitizer, and can cause allergic reactions if it contacts skin without personal protection. Always wear nitrile gloves, lab coat and safety glasses when handling any uncured part or waste material. Sensitization can build up over time and what originally may not have caused an allergic reaction could begin to cause a reaction with over-exposure to part material.

Shrink Comparison Percentage (Shrink Comp %) - Used to adjust for expected shrinkage during the build so actual part dimensions more closely match actual dimensions.

Support Material - Wax based material that provides adhesion to the build platform and support for down facing surfaces and open volumes within the parts.

User Interface (UI) - User Interface is built into the top of the printer. Various features can be controlled and checked by the UI, such as the status of a print job, materials in the printer, shutdown the printer and well as checking on certain settings within the printer.

UV Lamp Assembly - The UV Lamps cure the part and support material as the printer is building a part.

Waste Bag - Plastic bag designated to catch the waste material from the building process. The waste bag is located in the MDM behind the Support Material. Always wear nitrile gloves, lab coat, and safety glasses when handling any uncured part or waste material.

Waste Material - Any uncured support and/or part material generated during a build process. Always wear nitrile gloves, lab coat, and safety glasses when handling any waste material.

X-Axis - The orientation of the part from left to right on the build platform.

Y-Axis - The orientation of the part from front to back on the build platform.

Z-Axis - The orientation of the part height on the build platform.

.stl File - The files created using a three-dimensional solid Computer-aided design (CAD) software. These files are used to produce parts.

.3dprint File - Files that have been created and saved by the client software **3D SPRINT**.

3D SPRINT - The client software used to create parts and send them to the printer.

15 NEXTDENT 300 DECLARATION OF CONFORMITY (DOC) AND DATA LABEL

EC Declaration of Conformity (DoC)

Data Label

3D Systems, Inc. 333 Three D Systems Circle Rock Hill, SC 29730
www.3dsystems.com