# NDX®

# Clear Duplicate Bridge Protocol: Post-Integration



# FIRST RESTORATIVE APPOINTMENT: Definitive Prosthesis

There are two scenarios for luting the temporary cylinders to the Clear Duplicate Bridge after the implants have integrated.

All restorative appointment photos are courtesy of Dr. Marko Kamel, Woodbury, Minnesota.

**IMPORTANT:** During these steps, the goal is to maintain the VDO and the patient's corrected/adjusted bite (CO). The clinician will need to decide which option is most appropriate based upon the relationship/contact of the Long Term Provisional to the crest of the alveolar ridge. This "space/gap" varies, based upon how the patient's bone and tissues have healed/remodeled after surgery.

#### **SCENARIO ONE:**

There is a <u>SPACE/GAP</u> between the crest of the alveolar ridge and the intaglio side of the Long Term Provisional. To properly position the Clear Duplicate Bridge for luting the temporary cylinders, a type of positioning jig needs to be fabricated chairside by the doctor.

#### SCENARIO TWO: Refer to page 2

There is <u>NO SPACE/GAP</u> between the crest of the alveolar ridge and the intaglio side of the Long Term Provisional. The Clear Duplicate Bridge should rest directly onto the alveolar ridge. In using the patient's occlusion, the Clear Duplicate Bridge can be accurately positioned for luting the second set of temporary cylinders to it without the need for a positioning jig.

#### **IMPORTANT TO NOTE:**

- To ensure a proper transition line from the Definitive Prosthesis to the alveolar ridge, it may be necessary to follow STEP 6.
- The final steps for SCENARIO TWO are the same as the final steps for SCENARIO ONE (Steps 4 through 8).

The following are step-by-step instructions if the Clear Duplicate Bridge was not used to capture the position of the implants on the day of surgery.

#### **AS A REMINDER**

The Clear Duplicate Bridge is designed to provide the laboratory with the necessary information to begin fabrication of the Definitive Prosthesis. The Clear Duplicate Bridge functions as a verification jig, bite block, set-up/try-in and final impression, reducing the number of Restorative Chairside Appointments.



**Clear Duplicate Bridge** 



Clear Duplicate Bridge luted to temporary cylinders



Clear Duplicate Bridge seated for radiographic verification, final impression and occlusal adjustments

#### MATERIALS/INSTRUMENTS CHECKLIST:

- Sequence<sup>®</sup> Clear Duplicate Bridge
- Second set of temporary cylinders with prosthetic screws (provided with original purchase of the nSequence Fully Guided Prosthetics<sup>®</sup> kit)
- Medium body PVS impression material
- Bisacrylic material (self-cure or dual-cure)

- Appropriate driver (may be specific to each implant manufacturer)
- Articulating paper and preferred burs for adjusting acrylic
- Bite registration material (Blu-Mousse<sup>®</sup> is recommended)
- nSequence RX for fabricating the Definitive Prosthesis (available at www.nsequence.com)

# **SCENARIO ONE**

## STEP 1: There is a gap/space of at least 1-2mm

#### Create a PVS Seating Jig for Positioning of the Clear Duplicate Bridge

Prior to Removing the Long Term Provisional Inject medium body PVS impression material between the buccal and lingual/palatal borders and into the intaglio surface area of the Long Term Provisional. The purpose is to create a seating jig/positioning jig to help place the Clear Duplicate Bridge into the proper position for picking-up/luting the temporary cylinders.



**TIP:** Apply enough PVS material onto the buccal shelf to ensure a definitive and full seating area for the Seating Jig.

**D** Remove the Long Term Provisional and the new PVS Seating Jig.



The PVS seating jig will seat onto the alveolar ridge and over the new temporary cylinders and will help to position the Clear Duplicate Bridge into the proper position



The PVS Jig will provide an in-mouth seating position of the Clear Duplicate Bridge to the alveolar ridge

## STEP 2: Seat Temporary Cylinders and the PVS Seating Jig

A second set of customized temporary cylinders are included with the nSequence Fully Guided Prosthetics<sup>®</sup> Kit for the day of surgery. The implanting surgeon needs to send these to the restorative doctor for this protocol.

- Seat the second set of customized temporary cylinders using the small prosthetic screws and tighten with finger pressure. If using a torque wrench, do not torque beyond 10 Ncm.
- Place the PVS Seating Jig over the temporary cylinders and onto the edentulous ridge.





#### **IMPORTANT TIPS:**

- If the opposing dentition is a denture or partial, apply a light coat of petroleum jelly to the occlusal surfaces to prevent any excess bisacrylic material from bonding to the opposing dentition.
- Block out the occlusal of the temporary cylinders with medium (or light) body PVS material.
- Placing a rubber dam over the temporary cylinders may be helpful to prevent locking the acrylic onto the Multi-Unit Abutments.

## STEP 3: Seat the Temporary Cylinders, the PVS Seating Jig and the Clear Duplicate Bridge

- Seat/position the Clear Duplicate Bridge onto the PVS Seating Jig.
- Have the patient close slowly and gently into centric and check for correct occlusion/position.

**TIP:** If the opposing dentition is a denture or partial, apply a light coat of petroleum jelly to the occlusal surfaces to prevent any excess bisacrylic material from bonding to opposing dentition.



# **SCENARIO TWO**

- Seat/position the Clear Duplicate Bridge directly over the second set of temporary cylinders.
- Have the patient close slowly and gently into centric and check for correct occlusion/position.
- G Follow SCENARIO ONE, STEPS 4, 5, 6 (this may be optional), 7 and 8 (without using a positioning jig).



**CAUTION:** Do not have the patient bite too hard and compress the tissues. This will result in a poor recording of the occlusion.

## STEP 4: Lute Temporary Cylinders to the Clear Duplicate Bridge

Inject luting material from either the occlusal or through the buccal injection holes into at least two implant sites (or all if you prefer) and hold the patient in the correct position until the material is set/cured.

IMPORTANT TIP: Be careful to not inject too much material as the excess could cover the occlusal of the temporary cylinder, requiring additional chairtime to remove. The excess may also flow into the sulcus area of the Multi-Unit Abutment(s), potentially "locking" the Clear Duplicate Bridge in place. Ideally, placing a rubber dam will help to prevent this.



Injecting luting material into two sites from the occlusal





Injecting luting material into two sites from the buccal injection holes



Before the luting material sets or is light cured, verify that the Clear Duplicate Bridge is still in the desired position. If not, reposition it to the most ideal position. Final occlusal adjustments will be done in **STEP 5**. If only two sites were initially luted, go ahead and lute the remaining sites.

## STEP 5: Adjust Occlusion and Capture a New Bite

Make final occlusal adjustments and take a new full arch impression.



#### STEP 6: Record the Final Impression (Clear Duplicate Bridge to Alveolar Ridge)

It is necessary to record the final anatomy of the healed ridges for the fabrication of the Definitive Prosthesis. Light body PVS material is recommended for this step.



For best results, it may be necessary to remove the Clear Duplicate Bridge and create a space of at least 1-2mm between the alveolar ridge and the intaglio side of the Clear Duplicate Bridge, to avoid restricting the flow of the impression material. Apply tray adhesive to the intaglio side of the Clear Duplicate Bridge.

Inject light body PVS material from the buccal, completely through to the palatal/lingual surfaces of the Clear Duplicate Bridge. If any changes were made to the opposing dentition, take a new impression of the opposing arch.

#### **STEP 7:** Note Any Desired Aesthetic Changes

For example, if the midline needs correcting, physically mark this on the Clear Duplicate Bridge. The shade, tooth mould and/or tooth arrangement can be modified prior to the next try-in appointment.

#### STEP 8: Complete the RX Form and Send New Records to the NDX nSequence® Laboratory

- Provide any notes pertaining to specific aesthetic changes or any additional modifications you would like incorporated into the Definitive Prosthesis.
- **b** Return the following records:
  - The Clear Duplicate Bridge with bonded impression material
  - The new Blu-mousse® bite
  - The new impression of opposing dentition
  - The Multi-Unit Abutment Analogs (these were included with the original nSequence kit)
  - The new RX, along with any photos, models, etc. that will help the laboratory fabricate the ideal Definitive Prosthesis





#### Wax Set-Up for Try-in

From the new records/data the clinician sent in with the Clear Duplicate Bridge, the laboratory will fabricate a screw-retained wax set-up for try-in. This wax set-up will have at least two temporary cylinders incorporated to allow the try-in to be screw-retained during this procedure.

## **STEPS** for Wax Set-up Try-in

- Remove the Long Term Provisional and seat the wax set-up. Confirm the occlusion and aesthetics and make any adjustments as necessary.
- Return the try-in to the laboratory for fabrication of the Definitive Prosthesis. If a second try-in is needed, note the comprehensive details of the changes on the prescription.

**TIP: Request a night guard** as this can be advantageous for all definitive prostheses. This is especially important with the Denture Teeth and Acrylic on a titanium bar Definitive Prosthesis option.



# **THIRD RESTORATIVE APPOINTMENT: Definitive Prosthesis**

#### **Deliver Definitive Prosthesis**

Regardless of the type of Definitive Prosthesis, the steps for delivery are very similar and may need to be modified based upon the design/material of the Definitive Prosthesis.

#### **STEPS** for Delivering Definitive Prosthesis

- Remove the Long Term Provisional and seat the Definitive Prosthesis. Many clinicians will place new prosthetic screws when delivering the Definitive Prosthesis.
- Follow standard protocols for delivering the Definitive Prosthesis.







**NOTE:** The Long Term Provisional will be an excellent backup prosthesis should the Definitive Prosthesis need to be sent to the laboratory for repair or future modifications.





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