



Screw-Retained Denture

(CAD/CAM Ti Bar / Acrylic Hybrid)

3

Implant Level Restoration

■ First Appointment

– Preliminary Impressions

- Utilizing a stock tray, take a preliminary impression, including the palate and vestibules (Fig. 1 and 2). This impression should be made at the implant level, as it will be used to fabricate an implant verification jig and a custom tray for an open-tray impression technique.
- Remove the healing abutments from the implants and seat impression copings (take a PA to verify seating).
- Take an implant level impression, including palate and vestibules, using a stock tray.
- Take an impression of opposing dentition as well as the denture to be replaced.
- Remove impression copings and replace the healing abutments.
- Send in the impressions with your lab Rx.

Note: If due to the implant inclinations, or if there is excessive soft tissue thickness, abutments may be required (please see the Screw-Retained Denture Abutment Level Restoration instructions).

■ Second Appointment

– Jaw Relation Records and Shade Selection

- To ensure a passive fit of your custom-milled framework, it is vital to obtain an accurate final impression. You will receive a bite block.

Jaw Relation Records

- Remove the healing abutments. Seat the bite block on the implants and tighten the cylinder screws (Fig. 3).
- With the patient sitting up**, use conventional denture technique to achieve accurate jaw relation records.
 - a. For maxillary cases, shape the rim for lip contour – place a small amount of vaseline on the labial aspect of the wax rim and confirm.
 - b. With the patient facing toward you, mark the midline, high lip line and corners of the mouth in the wax rim. Move the central incisors as necessary. From a profile view, evaluate the mid-face support.
 - c. Determine centric relation and (record passively) the vertical dimension of occlusion (VDO).

Note: The patient's existing denture should be evaluated and can be utilized as a benchmark in determining the new VDO. Please see wax rim checklist enclosed with case.

- i. Place a dot with indelible marker on the tip of the patient's nose and chin.
- ii. Have the patient lick their lips, swallow, then relax their jaw. Measure the distance between the two dots. Repeat this procedure 3-4 times until you obtain a consistent vertical dimension of rest measurement (VDR).
- iii. Have the patient bite together gently. The measurement should be approximately 3 mm less than the vertical measurement at rest. Adjust the rims, if necessary, so they meet evenly.
- iv. There should be a 2-4 mm speaking space between the rims when the patient pronounces "s" sounds (e.g., Mississippi, sixty, sixty-one, etc.). The incisal edges of the maxillary central incisors should lightly touch the top of the lower lip during "f" sounds (e.g., forty, forty-one, etc.).



Fig. 1 & 2 Preliminary implant level impression



Fig. 3 Seat screw-retained block



Fig. 4 Use bite registration material once occlusal dimensions are determined



Fig. 5 Trial denture try-in



Fig. 6 Luting sections of the implant verification jig

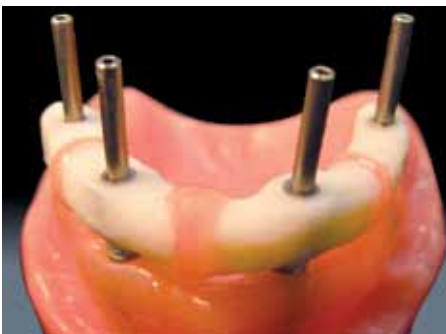


Fig. 7 Implant verification jig sections luted together

d. Once the VDO and a verifiable, repeatable CR are established, inject bite registration material onto the top of the wax rim and into the notches on the bite block. Have the patient bite together gently, but completely (Fig. 4).

- Remove the bite block(s).
- Reseat and tighten the healing abutments.

Shade Selection

- Select denture tooth shade and mould. The study model of the patient's existing denture can be used as a reference regarding the size and shape of the new teeth.

Note: We will match to VITA/Candulor Premium denture teeth unless otherwise directed. Indicate the selection on the lab Rx.

- Return the case to Glidewell enclosing all components, models.

Third Appointment

– Trial Set-Up Try-In

You will receive from Glidewell Laboratories a trial denture with temporary cylinders.

- Remove healing abutments.
- Seat the trial denture and tighten the prosthetic screws.
- Evaluate CR, VDO, occlusion, esthetics/shade, tooth arrangement and phonetics including “f” and “s” sounds as well as the midline (Fig. 5). Change the set-up if necessary or note the requested changes on the lab Rx. If CR is incorrect, a new bite registration should be taken.
- Please take photos per denture set-up checklist enclosed with case.
- Remove the trial denture and replace the healing abutments.
- Return the case to Glidewell.

Fourth Appointment

– Verification Jig, Final Impressions and Shade Selection

Custom tray and a verification jig that has been sectioned and numbered on a study model. Each acrylic section contains a non-engaging titanium cylinder. The following procedure should be followed to ensure an accurate final impression.

Verification Jig

- Seat each section of the jig onto the appropriate implant and tighten the guide pin.
 - a. The sections should not be in contact. If necessary, remove one section, minimally trim it with a disc and reseat it. Each section should have a gap about the thickness of a business card. Final check of the gap should be done with floss.
- Lute the sections together with a suitable material (e.g., Triad® DuaLine®-DENTSPLY; Zapit®- Dental Ventures of America or ADDS-IT- American Diversified Dental Systems) (Fig. 6 and 7).
 - a. Allow the material to flow through, and completely around, the gaps.
 - b. Ensure the material is completely cured.
- Loosen and remove all the guide pins. Remove jig as one unit for visible inspection.
- Very important** – Replace the cured jig back onto the implants. Tighten a single guide pin into one of the distal cylinders. No lifting of the jig should occur. Check for a passive fit by visually inspecting completely around each cylinder for complete seating. Repeat this process for each implant.
 - a. If any section has a cylinder-implant interface that is subgingival, a periapical radiograph must be taken to verify complete seating.
 - b. If any cylinder is not completely seated, the jig must be sectioned in that area, reluted and rechecked until a passive fit is obtained.

Final Impression

- Seat the verification jig on the implants and tighten all the guide pins.
- Check the custom impression tray for fit. (No contact with the jig or cylinders.)
- Using medium body material, take the final impression with an open-tray technique.
 - a. Inject impression material under and around the jig to capture the ridge and all anatomical landmarks as for a full denture (Fig. 8).
 - b. Seat the filled impression tray ensuring the heads of the guide pins are exposed through the tray (Fig. 9).
 - c. Once the material has set, remove guide pins and carefully pull the impression.

Note: The verification jig is picked up in the impression. Inspect the impression for the required detail.

Fifth Appointment

– Framework/Trial Set-Up Try-In

You will receive from Glidewell Laboratories a trial denture set up on the titanium framework.

- Remove healing abutments.
- Seat the trial prosthesis.
- Evaluate the fit of framework. Tighten one screw and verify a passive fit on all implants (no lifting of the framework). Remove the screw and repeat the process for each implant (Fig. 10).
- Re-evaluate the VDO, CR, occlusion, esthetics/shade, tooth arrangement, phonetics and midline.
- Remove the trial prosthesis and replace the healing abutments.
- Return the case to Glidewell.

Sixth Appointment

– Delivery of Final Prosthesis

You will receive from Glidewell Laboratories the final prosthesis and a complimentary night guard.

- Remove healing abutments.
- Seat the prosthesis on the implants (or abutments).
- Hand-tighten the prosthetic screws, alternating from one side to the other.
- Tighten the screws to the appropriate torque. Wait approximately 5 minutes and retorque the screws.
- Check the occlusion. Make adjustments as necessary (Fig. 11).
- Place a cotton pellet or piece of gutta percha over the head of the screws and seal the openings with composite or acrylic.

One Week Follow-Up Check

- Check occlusion.
- Review oral hygiene instructions.
- Set recall schedule.



Fig. 8 Inject impression material under jig



Fig. 9 Take an open-tray impression



Fig. 10 Framework try-in



Fig. 11 Delivery of final prosthesis



Lab Fees

Predictable implant lab fees and no hidden costs

Removable and Fixed-Removable

Price includes: CAD/CAM precision-milled titanium bars; Locator attachments from Zest Anchors; Kenson Teeth (Locator Implant Overdenture) or premium denture teeth from VITA (Ti Bar Locator Overdenture); all labor, model and die work; analogs, set-ups, bite blocks, try-ins and verification jigs.

Removable

- Locator® Implant Overdenture (2 implants per case)
- GL CAD/CAM Ti Bar Locator Overdenture (unlimited implants per case)
- CAD/CAM Ti Bar Locator Overdenture (5 implants per case)

Price includes: CAD/CAM precision-milled titanium bars; premium denture teeth from VITA (Acrylic Hybrid) or individual zirconia crowns and composite gingival architecture (Ceramic Hybrid); all labor, model and die work; analogs, set-ups, bite blocks, try-ins and verification jigs.

Fixed-Removable

- GL CAD/CAM Ti Bar/Acrylic Hybrid (unlimited implants per case)
- CAD/CAM Ti Bar/Acrylic Hybrid (5 implants per case)
- CAD/CAM Ti Bar/Ceramic Hybrid (8 implants/12 crowns per case)

Quick Reference

	Doctor	Glidewell
1st Appointment	Take preliminary impressions of edentulous arch and opposing dentition as well as the denture to be replaced.	Pour models; fabricate bite block. 3-5 days
2nd Appointment	Obtain jaw relation records, select denture tooth shade and mould.	Pour master cast, articulate models, set denture teeth in wax. 5 days
3rd Appointment	Trial denture set-up try-in and photos.	Fabricate implant verification jig and custom tray 2-4 days
4th Appointment	Lute verification jig, and take final impression.	Fabricate titanium framework, reset denture teeth on framework. 4-15 days
5th Appointment	Combination framework/set-up try-in.	Process acrylic and denture teeth to the framework. 6-4 days
6th Appointment	Final delivery of prosthesis and night guard.	
One Week Post-Delivery Check	Check occlusion.	