

CAST PARTIALS

Saddle-Lock®

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Twenty-first century materials and techniques have made the creation of partial dentures easier and more reliable than ever before. Aurum Ceramic's proven Saddle-Lock® "Hidden Clasp" cast partials eliminate visible metal display without the aid of cast crowns or expensive precision attachments. And now, with the improved handling characteristics of the newly formulated Vitallium® 2000 and Vitallium® 2000 Plus alloys, it is possible to create smaller, lighter partial dentures with extraordinary strength and superior fracture resistance while supplying improved esthetics and greater patient comfort.

Proven Retention

Utilizing the more pronounced natural mesial and distal undercut planes of the abutment teeth adjacent to the denture saddle, the clasp emergence is back at the casting finish line providing proper resiliency. The clasp terminals are positioned at the end of the denture saddle, effectively locking the segment to the ridge. This flexible design can be used with completely tooth-borne removable partial dentures and with both unilateral and bilateral distal extension appliances.



Completely tooth-borne Saddle-Lock® "Hidden Clasp" Vitallium® 2000 Cast Partial.



Unsightly conventional clasps.



The Materials



Natural Management of Oral Stresses

Each abutment tooth has a comfortable, yet positive load. Stress is shared by the adjoining teeth as forces are distributed in an anterior-posterior direction. Saddle-Lock also handles inadequate retention and instability in free-end saddle cases. The retentive clasp form located in the distal undercuts transmits its stabilizing effect into the loose end segment of the denture resisting dislodging forces during mastication.



Crafted with Vitallium® 2000

Manufactured in a unique, quality controlled process that produces a purer alloy, Vitallium® 2000's improved handling characteristics and advanced physical properties offer guaranteed strength, function and fit. Vitallium® 2000 premium biocompatible nickel and beryllium free chrome cobalt alloys have double the elongation of original Vitallium, resulting in clasps that adjust like gold. And, they have a lower Vickers hardness making each partial less abrasive to opposing dentition and restorations.

Features and Benefits

- Superior fit utilizing hidden natural mesial and distal undercut planes of abutment teeth adjacent to denture saddle.
- Accurate measurement and paralleling of planes using "Retentoscope" (a precise survey and design instrument).
- No visible clasps.
- Extraordinary strength, superior fracture resistance and smaller, lighter design applications – guaranteeing patient comfort and acceptance.
- Partials seat quickly and easily with fingertip pressure, yet there is strong resistance to dislodgement.
- Metal surfaces retain luster and resist plaque.
- Clasps adjust like gold.
- Vitallium® 2000 tensile strength over 855 MPa's. Lower Vickers hardness minimizes abrasion on opposing dentition. Coupled with high yield strength of over 600 MPa's, resists permanent deformation.

Indications:

- Where esthetics are a concern.

Contraindications:

- Where maximum retention is required.
- If edentulous areas do not exist allowing clasps to be hidden (i.e., single central or single lateral).

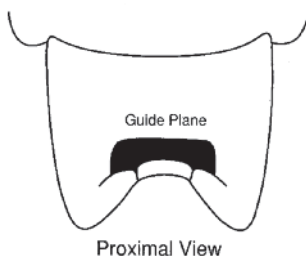
Case Planning:

- It is suggested that study models be sent to laboratory for pre-planning and computerized prosthesis design.
- You will be provided with a duplicate model on which a survey and design has been outlined with rest preparation suggestions highlighted in a green color. You can request that a custom tray be provided along with the survey and design recommendation.

Preparation:

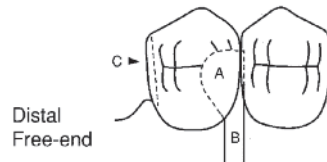
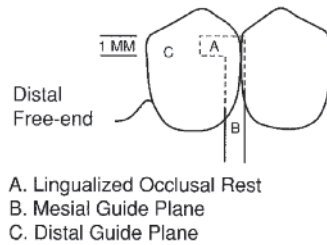
A. Tooth Borne Designs

1. Place occlusal rests on the tooth surface of the anterior and posterior abutments adjacent to the saddle area, using an oval or football shaped diamond. Rest preparations should be spoon shaped.
2. Prepare a guide plane gingival to the occlusal rest on the proximal surface by flattening the occlusal $\frac{1}{3}$ of the proximal wall without eliminating the necessary undercut (Figure 1).



B. Posterior Distal Free-End Saddle

1. Prepare a spoon shaped occlusal rest in the mesial fossa of the abutment tooth. This preparation should be "lingualized" (i.e., remove the lingual portion of the mesial marginal ridge adjacent to the prepared rest) so the minor connector will not contact the tooth immediately anterior to the abutment where the appliance is seated.
2. Prepare a guide plane on the mesial surface that connects with the prepared rest (Figure 2).



The buccal extension of the guide plane should stop at the buccal extension of the occlusal rest. The mesial guide plane is prepared without breaking contact with the adjacent teeth. Buccal-lingual $\frac{1}{3}$ contact is maintained.

3. On the distal surface, just over the marginal ridge, prepare a guide plane by slightly flattening the occlusal $\frac{1}{3}$ of the distal proximal surface (Figure 2).
4. If resiliency is desired, it can be accomplished by eliminating the distal occlusal rest. The mesial rest remains.

Impressions:

1. Take a single phase vinyl polysiloxane impression (e.g., Panasil or 3M Imprint). A stock tray is satisfactory but use plenty of material. A light-bodied wash of the prepared teeth is helpful in providing more detail.
2. Take and pour an alginate impression of the opposing arch. Provide an accurate interocclusal record (Futar Occlusion or Regisil).
3. Ensure impression extends into the retro-molar areas of distal extension cases. Before final impressions are recorded, minor tooth preparation is recommended. Slightly flatten the occlusal $\frac{1}{3}$ of the proximal wall of abutments, adjacent to the edentulous saddle, to enhance guide planning. Also allows the technician to place the clasp further apically and closer to the rotational axis of abutment.

Recommended Auxiliary Materials

For Preparation

- Oval or football shaped diamond for rest preparations, fine grit tapered diamond for guide preparation
- 556 Bur
- Finishing Disks

For Impressions

- Panasil Vinyl Polysiloxane impression material
- Futar Occlusion bite registration material
- Full arch impression trays