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## Technique for the Spacer (bonding) Retention Cap

### Benefits:

- Provides option to veneer directly to the removable partial denture metal frame for improved esthetics. The first tooth of the removable partial denture looks like a tooth and blends with the abutment crowns.
- The Spacer (bonding) retention system is very technique sensitive, and **the instructions must be thoroughly followed.**



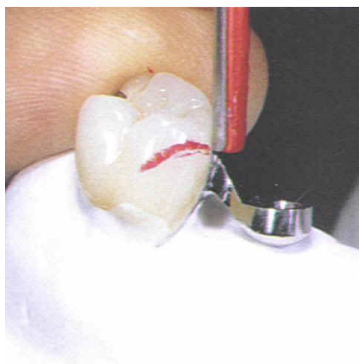
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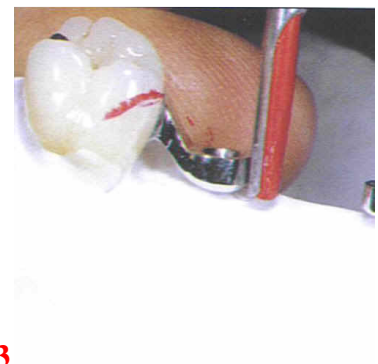
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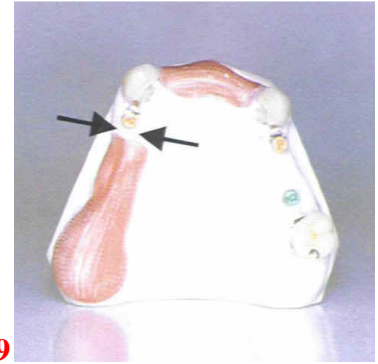
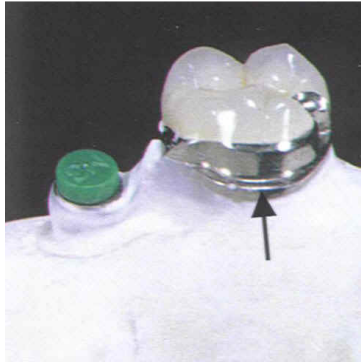


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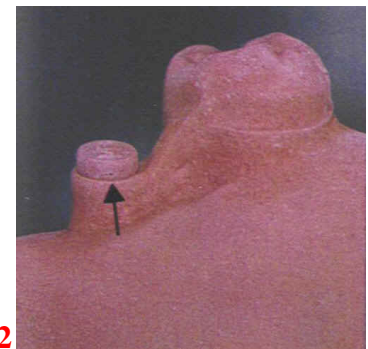
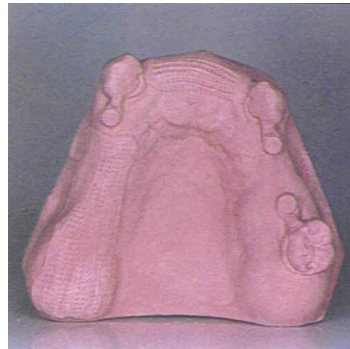
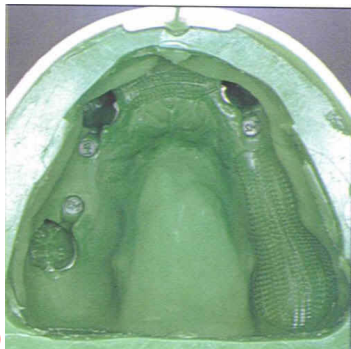
Glaze porcelain and finish all metal (**FIG 1**). Using a surveyor mark any undercuts where the metal frame could make contact (**FIG 2**), and block out these areas. Block out any undercuts of the attachment female (**FIG 3**).



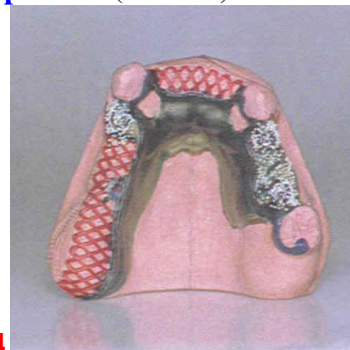
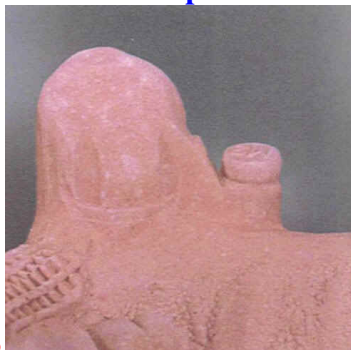
Place the space maintainer on the female (FIG 4). A duplicating dummy--Orange=M2, Green=M3--is supplied with each package (FIG 5). The colored duplicating dummy creates the necessary space for the titanium retention piece to be bonded in to the cast metal frame (FIG 6).



Cover the inclined arm of the female with 0.5mm of wax. Be sure to keep the colored duplicating dummy free of wax (FIG 7). The area underneath the milled shoulder is conical and is kept free of wax or block out material (FIG 8). Stop the relief wax short of the attachment to provide a beading strip for the acrylic resin of the removable prosthesis (arrows). No relief wax is necessary on the tissue between the cuspid and molar (FIG 9).

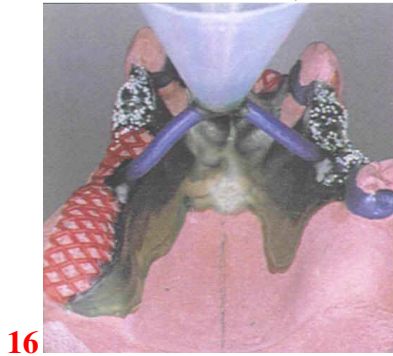


Accurately duplicate the master cast (FIG 10). The duplicate/refractory model (FIG 11). **The reproduction of the duplicating dummy and the undercut (arrow) between it and the attachment female is extremely important. Do not proceed unless this is present (FIG 12).**



The reproduction of the milled lingual shoulder must also be very accurate (FIG 13). Complete the wax pattern

for the cast metal frame (FIG 14). The completed wax-up (FIG 15).



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*H10 Carbide Bur*

Sprue and cast (FIG 16). **Protect the space and ledge in the cast frame with rubber or wax prior to sandblasting or electro-finishing (FIG 17).** The (RE) H10 carbide bur is used to finish the inside of the metal sleeve (FIG 18).

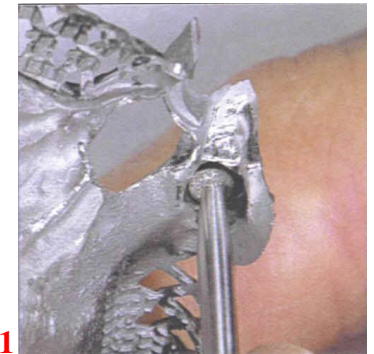


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*H20 Diamond bur*



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**The stop on the (RE)H10 bur protects the ledge, or shelf, in the casting (FIG 19).** The H20 diamond is used to finish inside the space (FIG 20). Any defects are removed with the diamond (FIG 21).



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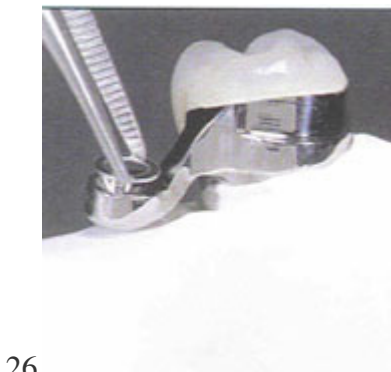
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*H16 Soldering Tool*

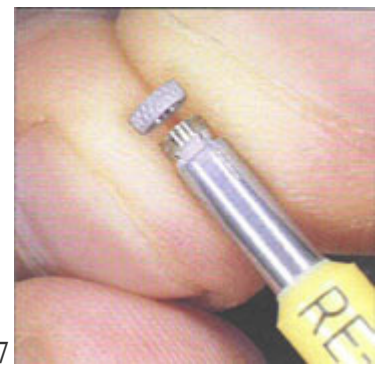


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The space is blasted with 110u aluminum oxide for improved bonding (FIG 22). The H16 soldering accessory (FIG 23) is used here as a holder during sandblasting to improve bonding (FIG 24). Steam cleaning is recommended after blasting.



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Use the H16 to check if the retention pieces fit into the space (FIG 25). Position the metal space maintainer

when preparing for bonding (**FIG 26**). Thread the spring pin fully into the retention piece (**FIG 27**).



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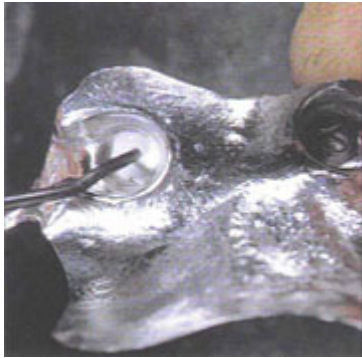


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The original male, space maintainer, and retention piece in the female (**FIG 28**). Clean the retention cap by steam cleaning. The male must be fully seated with the space maintainer, and be stabilized (**FIG 29**). Mix a sufficient amount of **Ceka Site** (1:1 ration) (**FIG 30**).



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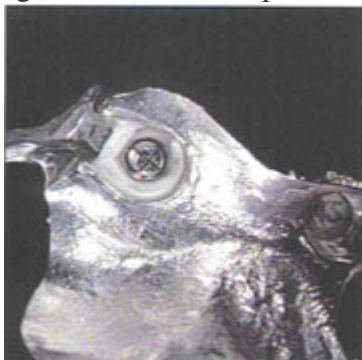


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Place the Ceka Site in a totally clean, sandblasted, dry space. Preferably the space is also steam cleaned. The use of solvents or degreasing agents will prevent a complete setting of the composite (**FIG 31**). Seat the frame and hold under light finger pressure for 10 seconds. Allow a full 10 minutes for the complete setting of Ceka Site (**FIG 32**). The excess composite that was exposed to air will not set up and is easily removed (**FIG 33**). Remember to make a separate mix for each attachment, as the material on the pad will not have set, but the working time will have expired.



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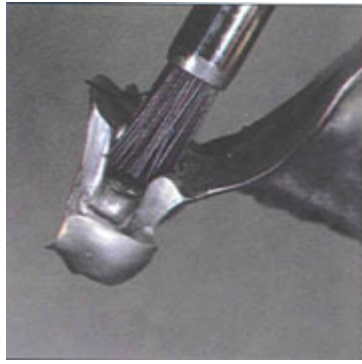


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Be sure to remove the metal space maintainer (**FIG 34**). Use the REH5 Lab Key (**FIG 35**) to remove the spring pin and complete the polishing of the space (**FIG 36**).



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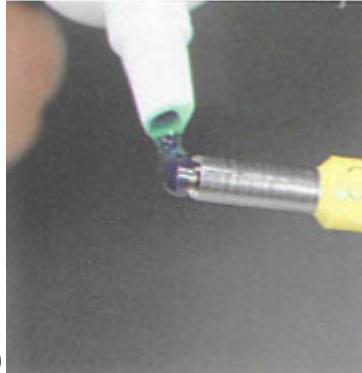


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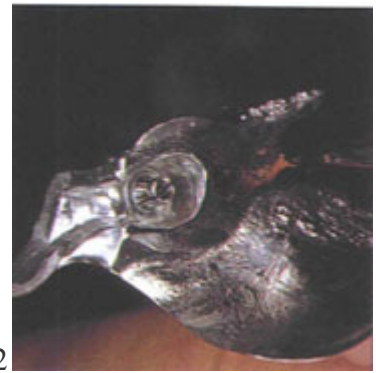
Polish the cavity to a high shine with cup pattern brushes and polishing paste (FIG 37). The accurate fit of the retention piece (FIG 38) will guarantee a strong joint (FIG 39).



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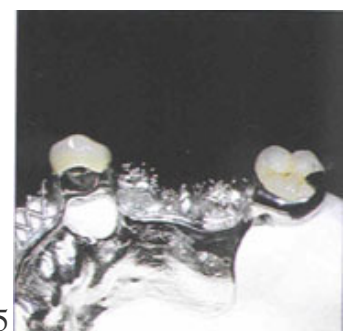
**Ceka Bond** is an adhesive specifically designed to prevent the spring pin from gradually unthreading from the retention piece (FIG 40). Thread the spring pin fully in to the retention piece without using any pressure (FIG 41). The bonded connection is resistant to the heat of denture base resin polymerization (FIG 42).



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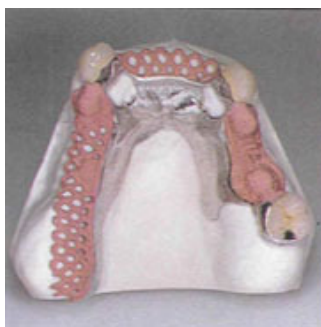


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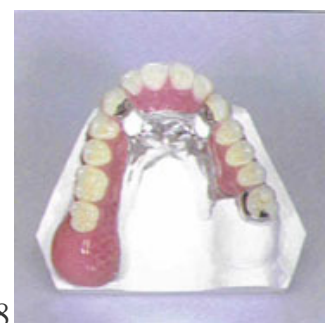
The cast frame must leave the embrasure open for good hygiene and esthetics (FIG 43). The metal frame must have a good fit (FIG 44). The cast frame should provide for good hygiene (FIG 45).



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If the cast frame is opaqued and processed at approximately 400F degrees, it must be completed prior to bonding and fixing the spring pin (FIG 46). By reducing the female keeper, the "cleft" appearance of canines is avoided (FIG 47). Make sure that distoproximal canine areas do not become visible with front view. The finished prosthesis (FIG 48).

