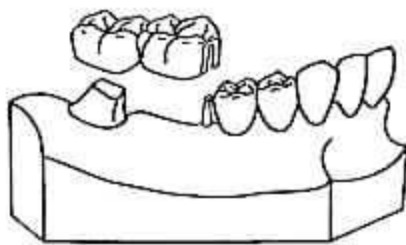




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FR Attachment Instructions

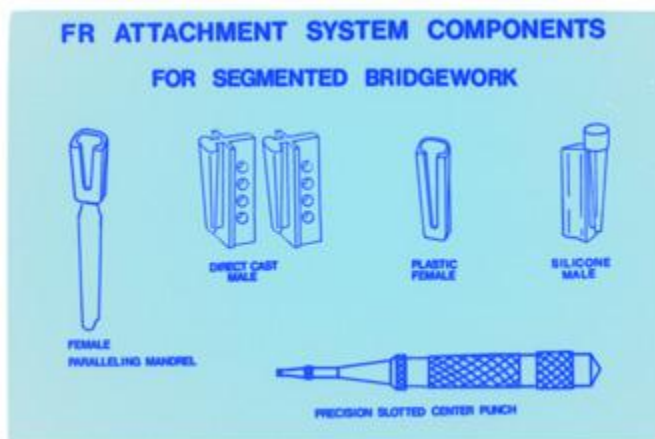
Bridgework

Segmented bridgework or non-parallel abutments in bridgework

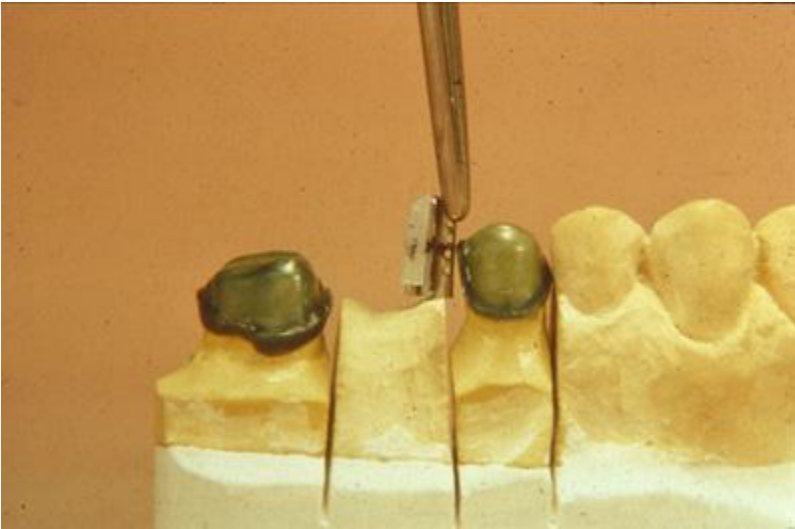
The FR attachment is ideally suited for non-parallel abutments or segmented bridgework as the small size of the attachment is most advantageous when space is at a premium. The FR attachment saves time and labor in investing, investment removal, porcelain application, and finishing. Esthetics are improved as no metal shows on the occlusion.

FR Inverted or Extracoronal

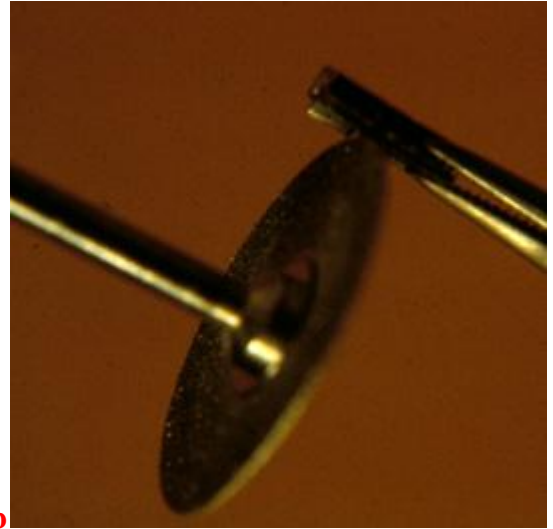
The small size and tapered or conical shape of the FR attachment provide for the male to be inverted in an extracoronal position (outside the crown), eliminating the need for additional tooth reduction. This also provides for full porcelain coverage on the occlusal for improved esthetics.



1a



1b



1. Determine the proper height of the FR attachment.

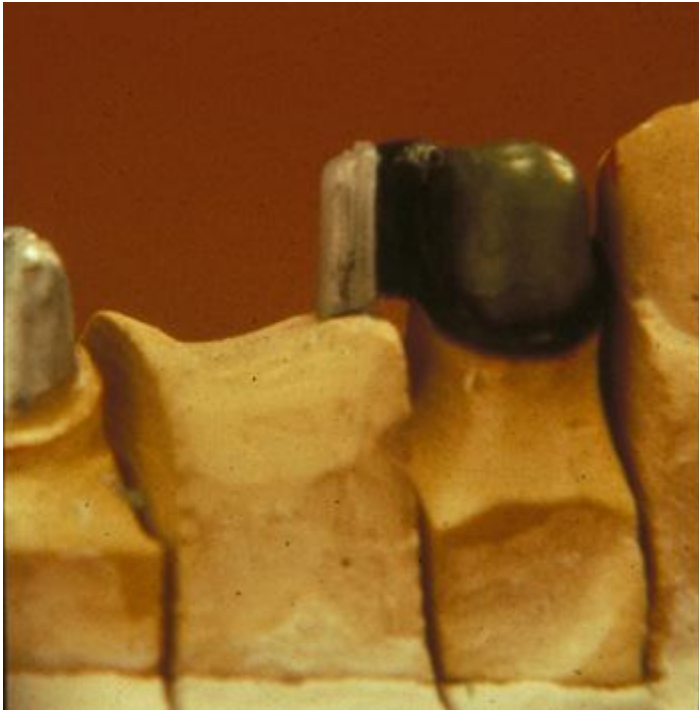
Adjust or reduce the length of the FR Direct Cast male attachment according to the space available. All reduction is done on the larger end of the male (bottom of this picture). Reduction is best accomplished by holding the FR male in the Female Paralleling Mandrel.



2

2. Select the proper angle of insertion for the FR attachment compatible with the insertion of both or all the bridge segments. Remove the red sleeve and position the male FR Direct Cast attachment in the Female Paralleling Mandrel in an inverted position. Place in the wax coping or crown as close to the abutment as possible. It may be necessary to remove part of the perforated retention flange. Complete waxing the abutment crown or coping.

3a



3b



3. Reduce the plastic FR female to fit the FR male that is in the abutment. Lubricate the proximal walls of the abutment containing the male attachment.

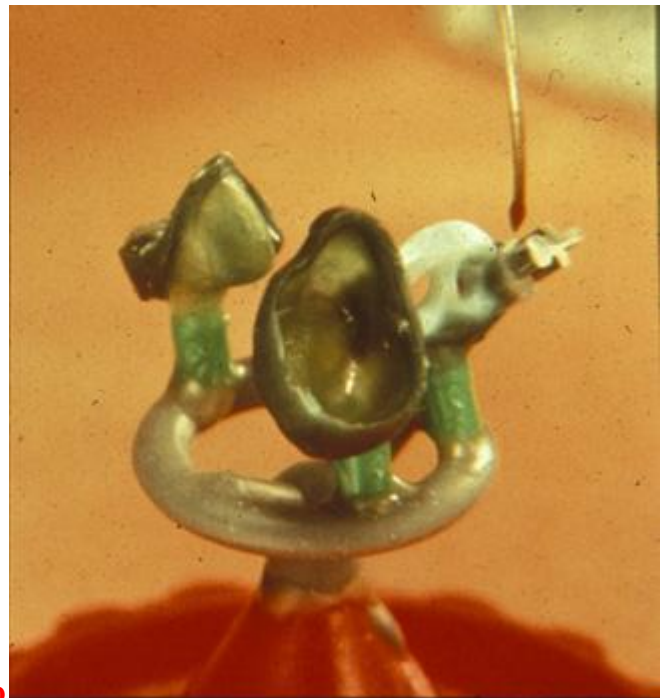
Seat the adjusted FR female on the male, and wax the pontic or abutment restoration over the **inverted** female. Complete waxing the segment of the bridge.

Attach approximately 2.5mm sprues to the units parallel to the angle of insertion of the attachments.

4a



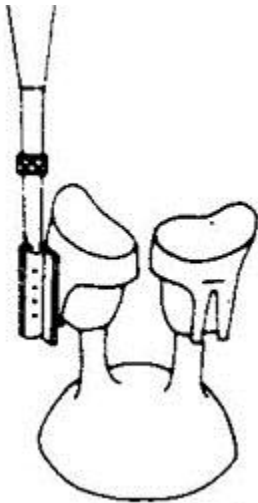
4b



Two male FR attachments will be used in this step.

4. Carefully separate the unit containing the female FR attachment. **Insert another male into the female** and seal it with cyanocrolate (super glue) to prevent the male attachment from dislodging during the investment process. Do not use sticky wax or acrylic resin.

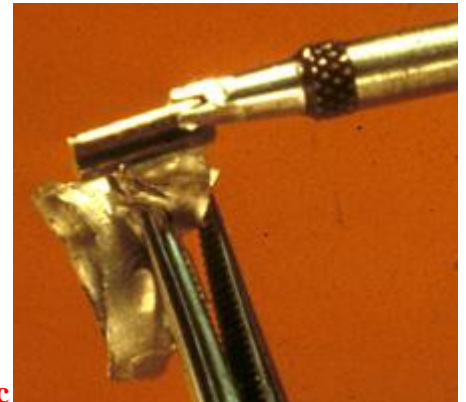
If the Direct Cast male is used, remove the red sleeve. Carefully remove the section or segment containing the male FR attachment from the die.



5a



5b



5c

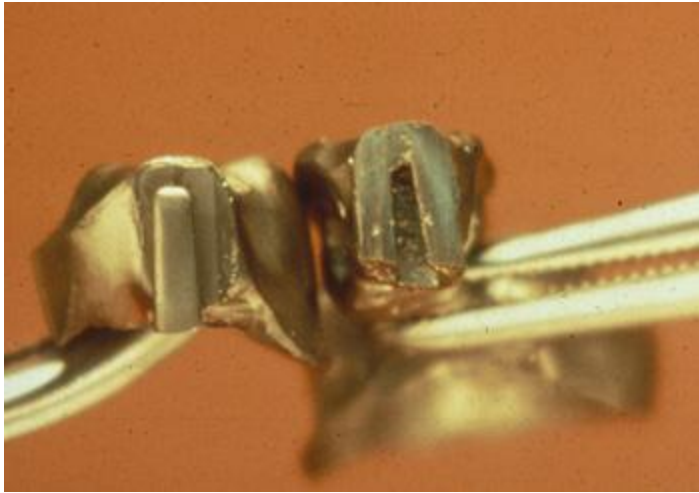
5. Sprue, invest, and cast all sections simultaneously in the alloy of choice. Do not use a carbon containing investment. Burnout at 1700F degrees with a one hour heat soak. When using a high palladium alloy, be careful not to overheat the alloy.

Use an oxygen setting of 10psi when torch melting.

Leave the casting attached to the casting button. Immerse the castings in a rust-removing solution such as liquid wrench for ten minutes.

Use the precision slotted Center Punch to separate the male from the female. The precision slotted tip of the punch fits over the bottom of the male attachment.

The FR center punch should be adjusted to medium action.

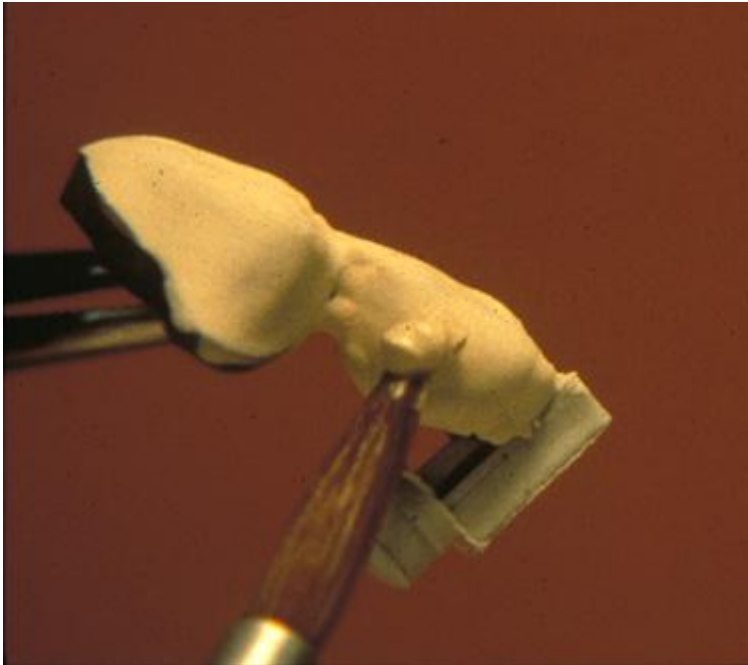


6. Remove the castings from sprues and proceed with metal finishing in a routing manner. Be careful in the inter-proximal area of the male and female of the attachment to preserve the bucco-lingual integrity (or stability) of the male and female proximal walls.

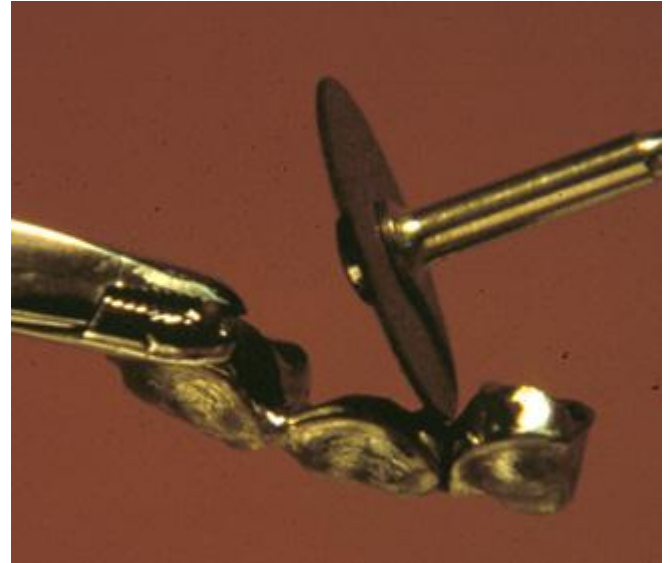
Remove the controlled oxidation on the male with a fiberglass pencil, glass beads, or a rubber point.

6

7a



7b



7. Insert the silicone male into the female prior to opaque and porcelain application in order to keep the female totally free from porcelain. Remove the silicone male prior to firing.

Any final embrasure adjustment of the male and female attachment is the easiest completed after porcelain application.