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## Locator Bar Attachment System Instructions

### CLASSIFICATION

Universal hinge, resilient attachment for bar splinted endosseous implants.

### INDICATIONS

The Locator Bar Attachment System is designed for use with overdentures or partial dentures retained in whole or in part by bar splinted endosseous implants in the mandible or maxilla.

### CONTRAINDICATIONS

Not appropriate where a totally rigid connection is required.

### STERILIZATION

All components and instruments are supplied NON-STERILE. Tools and metal instruments may be sterilized following standard clinical procedures, prior to use.

### FEATURES

- **1. LOWEST VERTICAL HEIGHT:** The total height of the Locator Bar Attachment (abutment plus male) is only 2.5mm on a cast alloy bar.
- **2. LOCATING DESIGN:** Self-locating design allows a patient to easily seat their overdenture without the need for accurate alignment of the attachment components.
- **3. RETENTION INSIDE AND OUT:** The patented *Dual Retention* innovation provides the Locator Attachment with greater retention surface area than ever before available with other attachments. A combination of inside and outside retention ensures the longest lasting performance.
- **4. ROTATIONAL PIVOTING ACTION:** The design of the pivoting Locator Male allows a resilient connection for the prosthesis without any resulting loss of retention. The retentive nylon male remains completely in contact with the abutment socket while its metal denture cap has a full range of rotational movement over the male.
- **5. CHOICE OF THREE TECHNIQUES:** The Locator Bar Attachment can be placed by any of the three popular techniques used by Dental Laboratories to fabricate an implant retained bar with attachments:

1. *Drill and tap* the bar for a removable threaded Locator Bar Female connection.

2. *Laser weld* a Locator Laser Bar Female to the bar.

3. *Cast-to* the stainless steel Locator Cast-To Bar Female with gold alloy.

## PLACEMENT OF THE LOCATOR BAR ATTACHMENT

The Locator Bar Attachment can be placed by any choice of the three following techniques used by a Dental Laboratory to fabricate a bar with dental attachments.

**CAUTION:** The most critical consideration in the proper placement of the Locator Bar Attachment on a milled or cast bar is that **a minimum of 1.0mm of bar material remains between the edge of a screw retaining the bar and the Locator Bar Female**, or a minimum of 5.0mm between the edges of multiple placed Locator Bar Females that is required to avoid interference of the Locator Titanium Denture Caps. (Locator Bar Female = 4.0mm Diameter, Locator Denture Cap = 5.5mm Diameter).

### Technique to drill and tap a bar for a removable threaded Locator Bar Female

1. A) Parts needed - **New Case Drilling and Tapping the Bar:**

#8589 Locator Bar Female (2.0mm Thread)

#9102 1.7mm Bar Drill (2.0mm Thread)

#9104 2.0mm Bar Tap (2.0mm Thread)

B) Parts needed - **Replace TSB Ball Attachment:**

#8587 Locator Bar Female (2-56 Thread)

#9103 1.8mm Bar Drill (2-56 Thread)

#9105 2-56 Bar Tap (2-56 Thread)

**For new cases, Preat Corporation recommends using the Bar Drill to create a recess in the bar prior to casting. After casting, you can refine this recess with the bar drill and bar tap.**

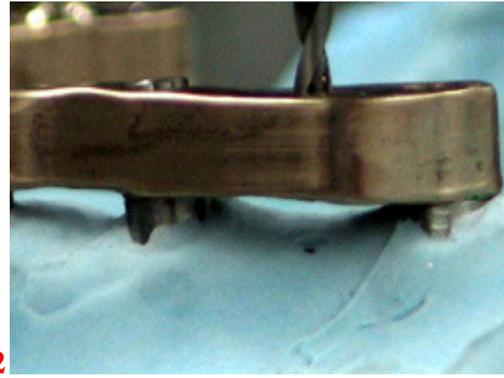


2. The 1.7mm Bar Drill #9102 and a 2.0mm Bar Tap #9104 are used for creating the threaded site in a titanium bar or cast alloy bar.

First use a round carbide bur to create a dimple into the top of the bar at the exact site of the planned preparation (**FIG 1**).



3. Use the 1.7mm Bar Drill (#9102) in a precision drilling device to create the exact size diameter hole to a depth of 2.8mm that is needed for tapping the site (**FIG 2**).



4. Place the 2.0mm Bar Tap into a drill chuck or tap handle to create internal threads within the drilled site (**FIG 3**).

When tapping threads, the cutting rotations should be performed by hand. The Drill and Tap Holder (#8016) allows the operator to rotate the tap while simultaneously applying steady downward pressure.



The use of tapping fluid while cutting the threads is required to reduce the chance of breaking the tap off in the preparation. A light lubricant also helps carry metal shavings out of the recess. (**FIG 4-5**). If a tap begins to bind, back the tap out to remove metal shavings. If the shavings are not removed by reversing the tap, you risk breaking the tap.

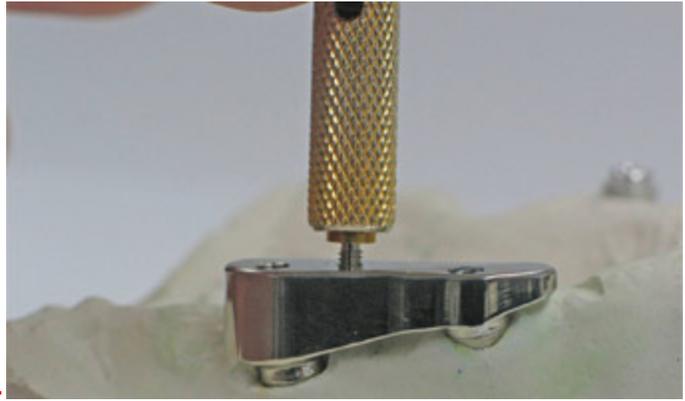
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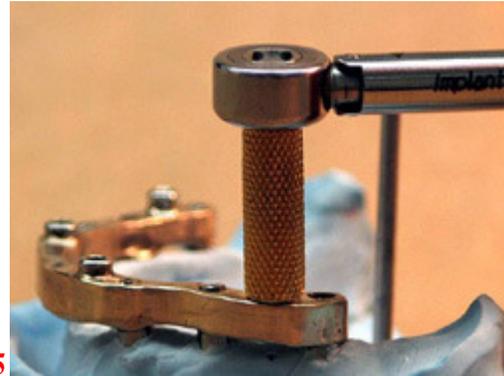
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5. A special Locator Gold-Plated Abutment Driver (contained in the Locator Core Tool #8393) is designed to engage the inside diameter of the threaded Locator Bar Female and thread it into the bar (**FIG 4**).



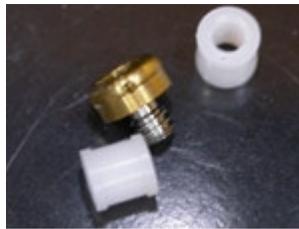
6. Final torque tightening of the Locator Bar Female to prevent screw loosening is achieved using a 20Ncm Torque Wrench (**FIG 5**). [Ceka Bond](#) adhesive will also stop any gradual unthreading of the Locator female.



### Technique with threaded castable insert for a removable threaded Locator Bar Female

1) Parts needed - **New Case with delrin threaded insert (2.0mm) :**

- #8589 Locator Bar Female (2.0mm Thread)
- #8014 Delrin Threaded insert (2.0mm Thread)
- #9104 2.0mm Bar Tap (2.0mm Thread)



2) Parts needed - **New Case with delrin threaded insert (2-56 thread) :**

- #8587 Locator Bar Female (2-56 Thread)
- #8013 Delrin Threaded Insert (2-56 Thread)
- #9105 2-56 Bar Tap (2-56 Thread)

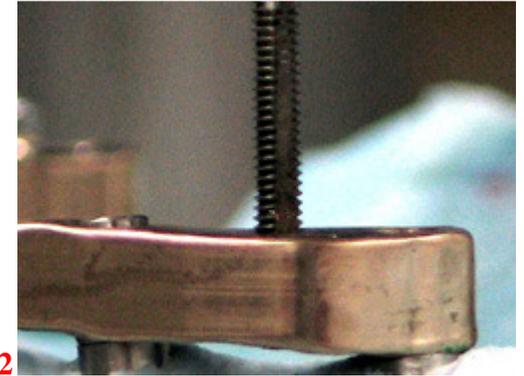
1) Incorporate the delrin threaded Locator insert into the waxup of the bar. Please be sure that a minimum of 1.0mm

of bar material remains between the edge of a screw retaining the bar and the Locator Bar Female, or a minimum of 5.0mm between the edges of multiple placed Locator Bar Females that is required to avoid interference of the Locator Titanium Denture Caps.



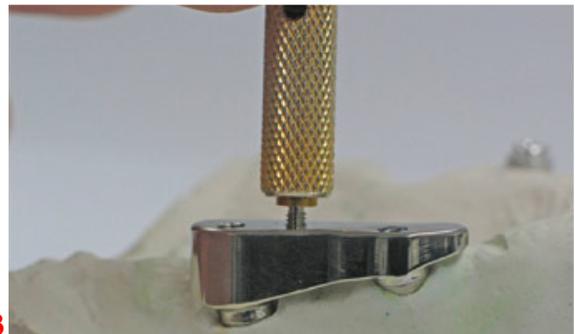
2) Tips for better casting of the threaded insert:

- Two stage investment procedure is recommended. Slowly flow investment into the threads of the base ring and let it benchset for approximately 30 minutes. The proceed to invest the rest of the waxup.
- Do NOT sandblast to deinvest. Use a [PREAT Brass pencil](#) to remove investment from the threads. The Brass pencil will not alter the threads

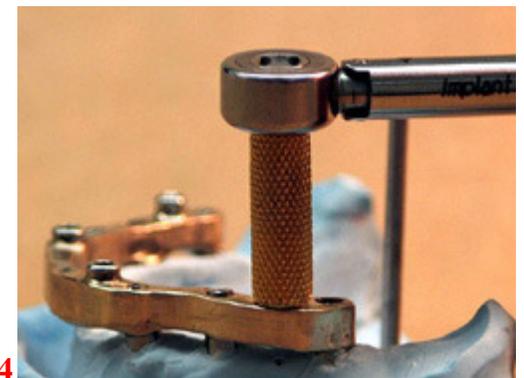


3) Place the 2.0mm Bar Tap into a drill chuck or tap handle to refine the casting of the threads. (**FIG 2**)

4) A special Locator Gold-Plated Abutment Driver (contained in the Locator Core Tool #8393) is designed to engage the inside diameter of the threaded Locator Bar Female and thread it into the bar (**FIG 3**).



5) Final torque tightening of the Locator Bar Female to prevent screw loosening is achieved using a 20Ncm Torque Wrench (**FIG 4**). [Ceka Bond](#) adhesive will also stop any gradual unthreading of the Locator female.



### Technique to laser weld a Locator Laser Bar Female on top of a bar

1. A)Parts needed - Laser welding to a **titanium bar**:

#8588 Locator Laser Bar Female (Titanium)

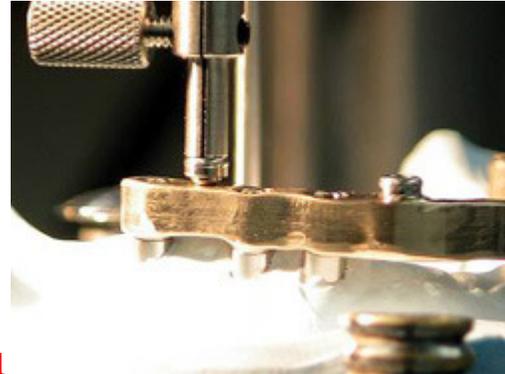
#9107 Locator Paralleling Mandrel

B) Parts needed - Laser welding to a **cast gold alloy bar**:

#8590 Locator Laser Bar Female (Stainless Steel)

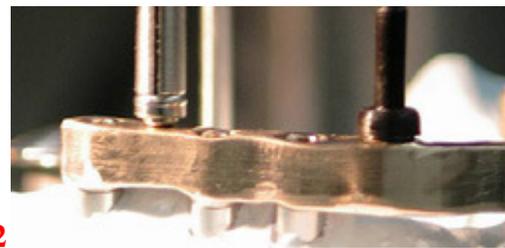
#9107 Locator Paralleling Mandrel

2. Use the Locator Paralleling Mandrel (#9107) in a surveyor to place the Laser Bar Female into position (**FIG 1**). Insert the split end of the Paralleling Mandrel into the socket of the Laser Bar Female and tighten the knurled set screw to spread the split portion of the mandrel that will secure the Laser Bar Female to the mandrel.



1

3. Tack the Laser Bar Female into place on top of the bar by placing a spot of laser weld on opposite sides of the female (**FIG 2**). Please make sure it is a flat section of the bar; do not make a "trough" for the attachment.



2

4. Remove the Paralleling Mandrel by loosening the knurled set screw. Form a bead of weld around the entire base circumference of the Laser Bar Female, welding the attachment to the top of the bar (**FIG 3**).



3

5. Snap a Locator Processing Cap Male onto the welded Laser Bar Female to make sure the laser weld does not interfere with the seating of the Locator Denture Cap Male.

**Due to the additional space allowed for laser welding, the total height of the Laser Bar Attachment is slightly higher (2.75mm) than the other types of Locator Bar Attachments at 2.5mm**

The laser welding process does not affect the wear resistant titanium nitride coating on the Locator Laser Bar Female.

Technique for Casting a Locator Cast-to Bar Female into a gold alloy bar

1. A) Parts needed - **New Case:**

#8586 Locator Cast-to Bar Female

#9107 Locator Paralleling Mandrel

2. Use the Locator Paralleling Mandrel (#9107) in a surveyor to place the Cast-To Bar Female into the waxed bar in a position that is parallel with other Locator Bar attachments. Insert the split end of the Paralleling Mandrel into the socket of the Cast-To Bar Female and tighten the knurled set screw to spread the split portion of the mandrel that will secure the Cast-To Bar Female to the mandrel (**FIG 1**).



The Black Parallel Post fits directly into the surveyor and covers the attachment portion of the Locator. An hourglass shape on the stainless steel female will lock it into the cast bar (**FIG 2**).

**Note:** For accurate positioning of the Cast-To Bar Female the Locator Paralleling Mandrel is preferred to be used in place of the plastic Parallel Post that comes with the attachment.



3. Wax the Cast-to Bar Female directly into the bar (**FIG 3**). The wax should be built up to the bottom outside corner on the base of the female, leaving the majority of the outer surface on the base above the top level of the bar.



4. The Locator Cast-to Bar Female is waxed into the bar pattern up to the point where the plastic parallel post meets the stainless steel (**FIG 4**). Remove the Paralleling Mandrel by loosening the knurled set screw, leaving the stainless steel attachment open for investment material to flow into (**FIG 5**).



6



7

The low profile of the Locator Bar Attachment provides the space necessary to position the denture teeth directly over the supporting bar structure (**FIG 6**).

5. Spruing. Run the sprue at a 45 degree angle to the Cast-To Bar Female so the molten gold will flow down along one side of the female, around and up to the other side. The sprue should not be directed at the female that could possibly dislodge it when casting (**FIG 7**).

6. It is recommended to use debubbler to reduce surface tension during investing procedures.

7. Investing. The most successful castings have been accomplished by using Ceramigold Investment by Whip Mix Corp. or an equivalent High Heat Investment.

8. Mix a liquid/powder ratio of Ceramigold using 12ml to 60 grams of powder for each packet of mix needed. Hand mix for 15 seconds and vacuum mix for 90 seconds at 350-450 RPM. The investment material should be carefully painted into each attachment cavity to avoid trapping bubbles and to prevent gold from going inside the female. The remainder of the investment poured into the ring will stabilize the female during burnout. Place the ring in a water bath for one hour, then bench set for a half hour.

9. Burnout. Place ring in a cold furnace (sprue side down) and raise the temperature to 1500° F maximum. Use a rate of climb of 0° F to 1500° F maximum over a time period of one hour. Hold at 1500° F maximum until burnout is complete. (Refer to investment manufacturer's instructions for suggested burnout duration.)

10. Casting. Use only precious or semi-precious alloys for casting the stainless steel female into a bar. **Non-precious alloys should not be used.** Cast the bar using recommended temperatures of the alloy manufacturer. The stainless steel Cast-To Bar Female will withstand a temperature of up to 2000° F without any dimensional change. **Do not allow casting temperature to raise above 2000° F which will melt the stainless steel Bar Female!**

11. Divesting. After casting, allow the casting to bench cool for 20 minutes. Be careful to push out the casting and investment with proper tools. It is not recommended to hammer or bang on rings that may distort the castings. To remove the investment material from the Cast-To Bar Female without damage to the stainless steel, use an acid-free investment and porcelain remover solution in an ultrasonic unit for a period of 30-45 minutes. **(Do not use a bur to remove the investment, sandblasting with aluminum oxide, or an acid pickling solution, all of which can damage the retention surfaces of the Bar Female attachment.)** Clean the bar containing the Locator Cast-To attachment in an ultrasonic cleaner solution, shell blast, bead blast, or use a [Fiberglass or Brass Pencil](#).

12. Finishing and Polishing. When polishing with a rubber wheel, use caution not to damage the Cast-To Bar Female attachment. Polish the surface of the bar to make a smooth surface. The Locator Parallel Post can be placed on the female to protect the attachment while polishing. [If additional polishing of the female attachment is required, it is recommended to only use glass beads at a low pressure (40 PSI) or a fiberglass or bristle polishing brush.]

13. After polishing the bar, place a Locator Processing Cap Male onto each Cast-To Bar Female and check for proper fit. Clean again in an ultrasonic solution and deliver to the dental office.



### Processing the Males

Processing the males is the same as for the Locator stud overdenture cases. Block out the undercuts, specifically between the bar and the tissue



Place the white blockout spacers over the female attachments. Snap on the Locator metal housing with the yellow processing insert. Proceed on to setting the teeth, boil out, and packing/processing procedures as normal for Locator attachments.



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