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CAST COPING

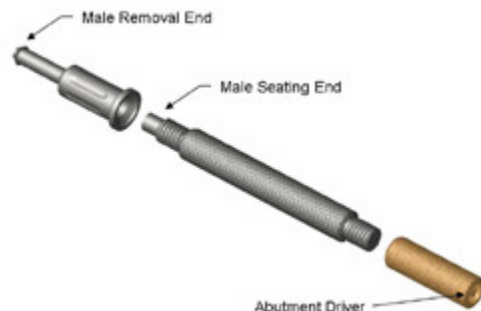
Cast To Female



#8924 Pilot Drill



#8922 Spotface Drill



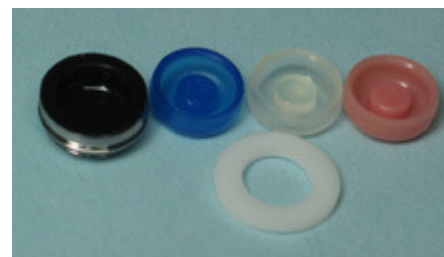
#8393 Core Tool



8528 Cast-to Female

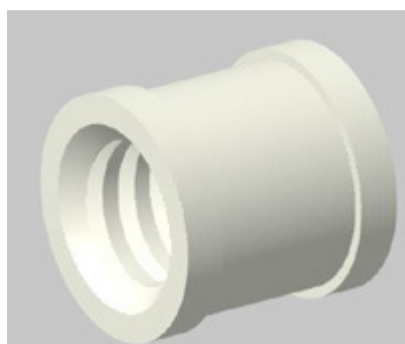


8517 Parallel Post



8519 Processing Male

Cast-to Threaded Insert



8013 Castable Insert



8589 Thread in Female



9104 2.0mm Tap

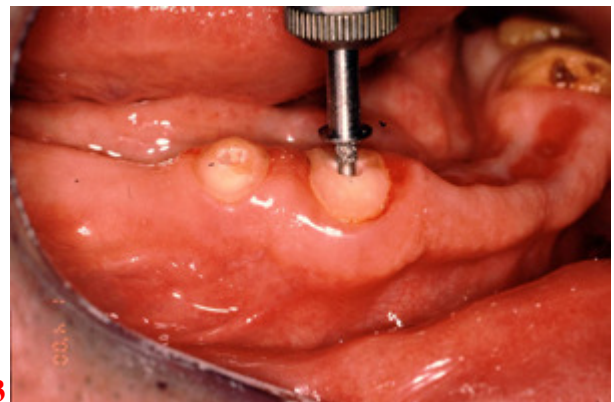
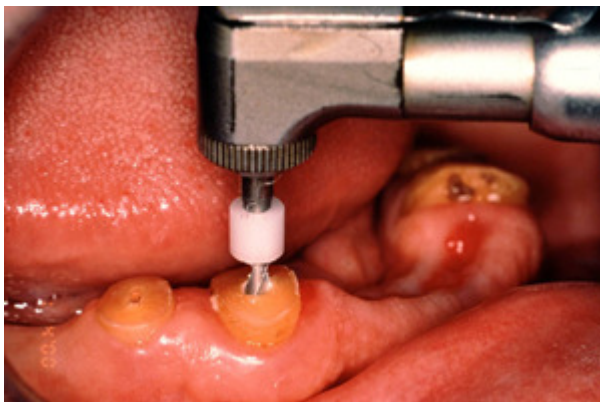
SINGLE-USE DEVICES

- **Locator Males:** The inadvertent re-use of Locator nylon males could cause loss of retention for the overdenture due to wear from previous use or damage during removal with the Locator Core Tool.
- **Locator Abutments:** The inadvertent re-use of Locator abutments could contain patient contamination build-up and subsequent wear of the retention bands. This would result in the device to perform with improper fit and function which would result in loss of retention for the prosthesis.

A special **Locator Cast-To Female** is used for cases where a gold coping is desired to cover and protect the root surface. The following procedure is recommended.

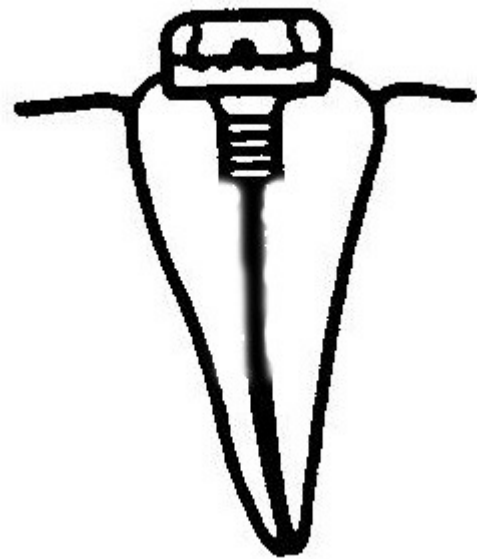


1. The endodontic treatment is completed and the remaining tooth structure is reduced to the level of the gingiva. It is desirable that the root be prepared with a beveled shoulder or chamfer margin.
2. Set the plastic Depth Reference Ring on the **Pilot Drill** to a depth slightly exceeding the length of the Cast-To Female Post (**Fig 1**).



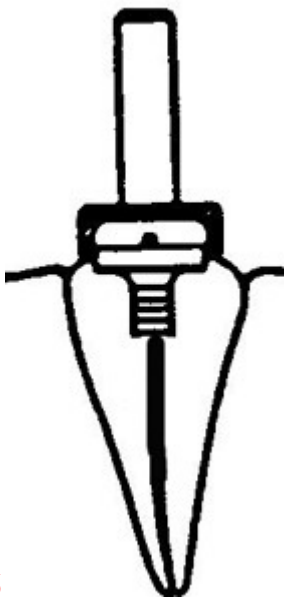
3. Size the canal with the Pilot Drill (**Fig 2**). The alignment of this initial preparation will generally follow the direction of the canal. On a non-parallel root, the resulting divergence can be corrected by using an angled LOCATOR female. Countersink the root using the Countersink (**Spotface**) Diamond Bur to a depth where a full 360° recessed seat appears on the occlusal surface of the root (**Fig 3**). When making the countersink preparation into a divergent root, the depth of the countersink will vary across the surface of the root. On the shallow side of the preparation, create a minimal recessed seat using the Countersink Diamond Bur (**Fig 4**).

4. Complete the preparation of the site with dental burs of preference to ensure that the cast gold coping will completely surround the LOCATOR cast-to female. NOTE: The majority of the outer surface on the base of the LOCATOR Cast-to female (**MINIMUM 1.5MM**) must remain above the level of the coping to allow the male to snap in without interference (**Fig 5**).



5. An impression is taken being sure to include other attachments, or enough anatomy to show the path of insertion of the denture. The master cast and dies are prepared.

6. Using a surveyor, place the plastic **Parallel Post** with attached Cast-To Female parallel with other LOCATOR attachments (**Fig 6**).



7. Wax the **Cast-To Female** directly into the die. The wax should be built up to the bottom corner on the base of the female, leaving the majority of the outer surface on the base above the level of the coping (**Fig 7**). Wax must surround the entire area of the 3mm length stainless steel post in order to provide mechanical retention of the Locator inside the casting. If this is not possible, please fabricate the coping with a 4.5 diameter top, level/parallel it, and then consider incorporating either the Laser Weld or Drill and Tap Locator females after casting.

8. Remove the Parallel Post, leaving the stainless steel attachment open for investment material to flow into.

9. **Spruing.** Run the sprue at a 45° angle to the Cast-To 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, which could possibly dislodge it when casting.

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

11. **Investing.** The most successful castings have been accomplished by using Ceramigold investment by Whip mix Corp., or an equivalent High Heat Investment.

12. Mix a liquid/powder ratio of Ceramigold using a 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.

13. **Burnout.** Place ring in a cold furnace (sprue side down) and raise the temperature 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).

14. **Casting.** Use only precious or semi-precious alloys for casting root copings. Base metal alloys should not be used. Cast the coping using recommended temperatures of the alloy manufacturer. The stainless steel 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 female.

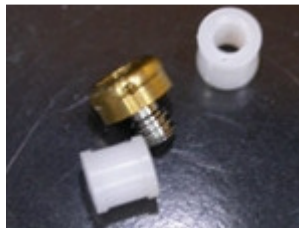
15. **Divesting.** After casting, allow all castings to bench cool for 20 minutes. Be careful to push out the casting and investment with proper tools. It is not recommended to hammer or bang on rings, which may distort the castings. To remove the investment material from the Cast-To Female without damage 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 internal socket of the female attachment--use [PREAT's Fiberglass pencil](#)). Clean the coping containing the LOCATOR Cast-To Female attachment in an ultrasonic cleaner solution.

16. **Finishing and Polishing.** When polishing with a rubber wheel, use caution not to damage the Cast-to Female attachment. Polish the surface of the coping 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 socket is required, it is recommended to only use glass beads at a low pressure (40 PSI) or a [PREAT fiberglass](#) or bristle polishing brush).

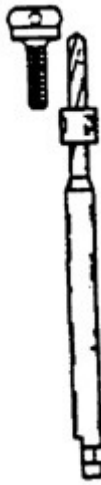
17. After polishing the coping, place a LOCATOR **Processing Male** into each Cast-To Female and check for proper fit. Clean again in ultrasonic solution and deliver to the dental office.

18. The finished copings containing the LOCATOR Cast-To Female are cemented in place intra-orally on the prepared tooth root.

19. Snap a locator Black Processing Cap Male into each cemented coping for chairside pickup into the denture--[Locator Male Placement by the Dentist](#). If processing of the denture component by the laboratory is desired, follow steps in "[Locator Male Placement by the Laboratory](#)."



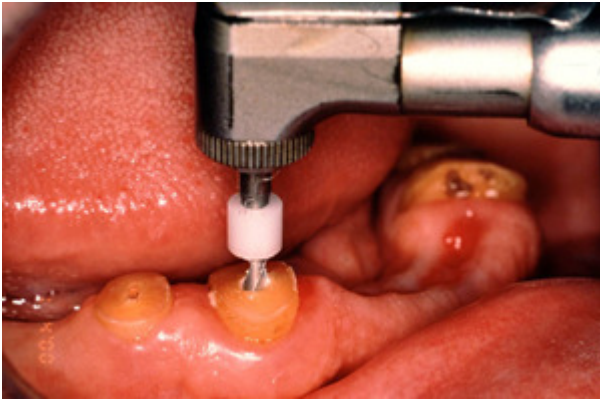
A special **Locator Cast-To Threaded insert** is used for cases where a gold coping is desired to cover and protect the root surface. The following procedure is recommended.



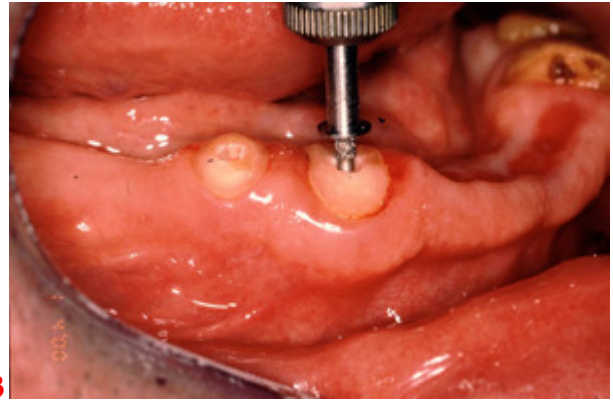
1. The endodontic treatment is completed and the remaining tooth structure is reduced to the level of the gingiva. It is desirable that the root be prepared with a beveled shoulder or chamfer margin.

2. Set the plastic Depth Reference Ring on the **Pilot Drill** to a depth slightly exceeding the length of the Cast-To Female Post (**Fig 1**).

1



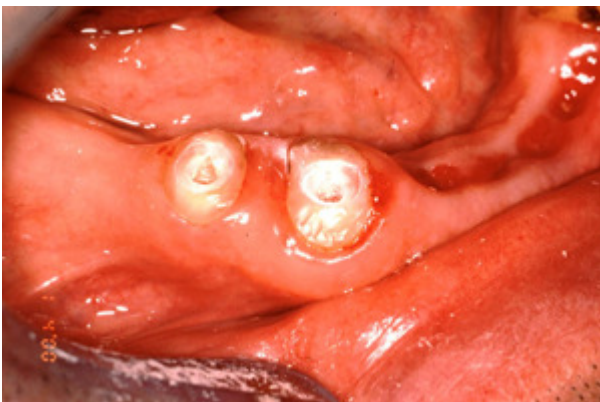
2



3

3. Size the canal with the Pilot Drill (**Fig 2**). The alignment of this initial preparation will generally follow the direction of the canal. On a non-parallel root, the resulting divergence can be corrected by using an angled LOCATOR female. Countersink the root using the Countersink (**Spotface**) Diamond Bur to a depth where a full 360° recessed seat appears on the occlusal surface of the root (**Fig 3**). When making the countersink preparation into a divergent root, the depth of the countersink will vary across the surface of the root. On the shallow side of the preparation, create a minimal recessed seat using the Countersink Diamond Bur (**Fig 4**).

4. Complete the preparation of the site with dental burs of preference to ensure that the cast gold coping will completely surround the LOCATOR cast-to female. NOTE: The majority of the outer surface on the base of the LOCATOR Cast-to female (**MINIMUM 1.5MM**) must remain above the level of the coping to allow the male to snap in without interference (**Fig 5**).



4



5

5. An impression is taken being sure to include other attachments, or enough anatomy to show the path of insertion of the denture. The master cast and dies are prepared.

6. Using a surveyor, place the plastic **Parallel Post** with attached Cast-To Female parallel with other LOCATOR attachments.
7. **Spruing.** Run the sprue at a 45° angle to the Cast-To insert 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, which could possibly dislodge it when casting.
8. It is NOT recommended to use debubbler during investing procedures.
9. **Investing.** The most successful castings have been accomplished by using Ceramigold investment by Whip mix Corp., or an equivalent High Heat Investment.
10. Mix a liquid/powder ratio of Ceramigold using a 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.
11. **Burnout.** Refer to investment manufacturer's instructions for suggested burnout duration.
12. **Casting.** Use only precious or semi-precious alloys for casting root copings. Base metal alloys should not be used. Cast the coping using recommended temperatures of the alloy manufacturer.
13. **Divesting.** After casting, allow all castings 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, which may distort the castings. To remove the investment material from the threaded Female without damage to the threads, 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 threads of the female attachment--use [PREAT's Fiberglass pencil](#)). Clean the coping containing the LOCATOR Cast-To Female attachment in an ultrasonic cleaner solution.
16. **Finishing and Polishing.** When polishing with a rubber wheel, use caution not to damage the threads. Polish the surface of the coping to make a smooth surface, using glass beads at a low pressure (40 PSI) or a [PREAT fiberglass](#) or bristle polishing brush.
17. After polishing the coping, place a LOCATOR **Processing Male** into each Cast-To Female and check for proper fit. Clean again in ultrasonic solution and deliver to the dental office.
18. The finished copings containing the LOCATOR Cast-To Female are cemented in place intra-orally on the prepared tooth root.
19. Snap a locator Black Processing Cap Male into each cemented coping for chairside pickup into the denture--[Locator Male Placement by the Dentist](#). If processing of the denture component by the laboratory is desired, follow steps in "[Locator Male Placement by the Laboratory](#)."



15. After polishing the coping, thread a LOCATOR **Threaded Female** in to the coping to assure fit. Next, snap a **LOCATOR Processing Male** onto each Threaded Female and check for proper fit.
16. The finished copings containing the LOCATOR Female are cemented in place intra-orally on the prepared tooth root.
17. Snap a locator Black Processing with Denture Cap Male into each cemented coping for chairside pickup into the denture--[Locator Male Placement by the Dentist](#). If processing of the denture component by the laboratory is desired, follow steps in "[Locator Male Placement by the Laboratory](#)."