**Indications**

- The Locator Root Attachment is designed for use with overdentures or partial dentures, retained in whole or in part by endodontically treated roots in the mandibular or maxilla.

**Contraindications**

- Not appropriate where a totally rigid connection is required.

**Sterilization**

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

**Features**

- Locating Design: Self Locating design allows a patient to easily seat their overdenture without the need for accurate alignment of the attachment components.
- Retention inside and outside: The unique 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.
- Choice of angles and retention: The LOCATOR attachment is an extra-radicular design which consists of the choice of a straight post and two angels (10° and 20°) to accommodate divergent roots. Three different retentive males allow for your choice of regular, heavy, or extra-heavy retention according to the needs of the patient.
- 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 female socket while its metal denture cap as a full range of rotation movement over the male.
Placement of the LOCATOR Female

1. Prepare and measure study casts to determine the space available in the root for the LOCATOR female. Width of root surface must equal or exceed 4.0mm.

2. Decoronate the root and perform endodontic therapy. Remove the desired depth of gutta percha following standard clinical procedures.

3. Finish the contouring of the roots. The final reduction should place the root surface supragingivally within 1mm of the gingiva. When divergent roots are selected, the occlusal root surfaces should be prepared along the same plane, perpendicular to the intended path of insertion.

4. Set the plastic Depth Reference Ring on the Pilot Drill to a depth slightly exceeding the length of the female post (FIG 1). The post can be shortened if desired.

5. 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.
6. 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 3-5). 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 4-6).

**IMPORTANT NOTE:**

The majority of the outer surface (minimum 1.5mm) on the base of the LOCATOR Female must remain above the face of the root to allow the male to snap in without interference (Fig 7).

7. A portion of the original depth from the Pilot Drill canal preparation will be lost due to countersinking. Re-establish the full depth of the canal preparation by re-preparing with the Pilot Drill using the original Depth Reference Ring setting.
8. Using the LOCATOR Parallel Post as a handle, Place a 0° Female into each of the completed preparations to visually approve the proper fit and the parallel alignment of the multiple attachments.

If the alignment of any of the attachments can be improved, select the most suitable angled female (10° or 20°) and rotate it in the preparation to determine its position of optimum parallelism (FIG 8).

9. Cement the LOCATOR females in place with composite resin cement or a strong adhesion material of your choice (FIG 9).

10. After the cement has set, round off and polish the root surface from the metal flange to the tissue. The Parallel Post can be placed over the female to protect it during the polishing (FIG 10).

**LOCATOR Male Placement by the Dentist**

1. Cementing of the LOCATOR Females and the final root contouring has been completed.
2. Place a White block-Out Spacer over the head of each cemented female (FIG 1). The spacer is used to block out the remaining exposed surfaces of the root, so that when the self-curing acrylic is added and cured, it will not come in contact with the root. The space created between the root and denture base will allow the full resilient function of the pivoting metal denture cap over the LOCATOR male.

3. Insert a LOCATOR Black Processing Cap male into each cemented female, leaving the White Block-Out Spacer beneath it (FIG 2). The Black Processing Male will maintain the overdenture in the upper limit of its vertical resiliency during the processing procedure.

4. Prepare a recess in the denture to accommodate the protruding processing Cap Male. There must be no contact between the denture and the stainless steel cap. If the denture rests on the metal cap, excess pressure on the root will be the result.

5. Light cure bond the Processing cap Male into the denture (FIG 3 & 4) or mix a permanent self-curing acrylic and place a small amount in the recess of the denture and around the metal cap of the Processing Cap Male.

NOTE: It is always recommended that a vent, or "escape vent", is cut into the lingual side of the prosthesis to allow any excess acrylic to escape.

6. Insert the denture into position in the oral cavity. Guide the patient into occlusion, maintaining a proper relationship with the opposing arch. Maintain the denture in a passive condition, without compression of the soft tissue while the acrylic sets. Excessive occlusal pressure during the setting time may cause tissue recoil against the denture base and could contribute to dislodging and wear of the nylon males.

7. After the acrylic resin has cured, remove the denture and discard the white spacer. Use a bur to remove excess acrylic and polish the denture base before changing to the final male.

8. Use the LOCATOR Male Removal Tool to remove the Black Processing Male from the metal denture cap. Loosen the new (8397) Male Removal Tool a full 3 turns counter clockwise (you will see a visible gap). Insert the new tip into the cap/male assembly and push straight in to the bottom of the nylon male. Tilt the tool so that the sharp edge of the tip will grab hold of the male and pull it out of the cap.

Discard the nylon male by pointing the tool down and away from you and thread the new Male Removal Tool clockwise back onto the Core Tool. This will activate the removal pin and dislodge the nylon male from the tip (FIG 7).

9. Use the LOCATOR Male Seating Tool is used to firmly push a LOCATOR Replacement Male into the empty metal denture cap. The replacement male must seat securely into place, level with the rim of the cap.

NOTE: The replacement male will not stay on the tool when it is turned upside down due to the varying sizes of males available. It is best to hold the denture with the base side down and snap the male into the metal denture cap.
10. Instruct the patient in the path of insertion. Have the patient insert and remove the appliance several times.

**LOCATOR Male Placement by the Laboratory**

**In the Operatory:**

1. Cementing of the LOCATOR Females and the final root contouring has been completed.

2. Insert a LOCATOR Cap with Black Processing Male into each cemented female—or if you choose the #8505 impression analogue (FIG 1). The built in spacer of the Black Processing Male will maintain the overdenture in its upper limit of vertical resiliency during the processing procedure.

3. Take an impression using a firm body impression material, exercising caution not to compress the soft tissue (FIG 2). When the impression is withdrawn, the Processing Cap Males will remain in the cemented females.

4. Remove the Processing Cap Male from each female and snap it into a LOCATOR Female Analogue (FIG 3) #8516. Reposition this assembly back into the impression making sure it is fully seated (FIG 4).

**In the Laboratory:**

5. Pour the master cast. Upon separation, the Female Analogue is part of the master cast replicating the position of the cemented LOCATOR female in the oral cavity.
6. Before waxing and processing the appliance, place a LOCATOR Cap with Black Processing male into each Female Analogue in the master cast (above). Make sure the male is fully seated.

7. Set the teeth and wax the appliance. Proceed with the processing technique of your choice through the boil-out step.

8. After the boil-out, remove the Processing Cap male. Place a White Block Out Spacer over the head of each Female Analogue (FIG 6). The spacer is used to block out the remaining exposed surfaces of the root, so that the processed acrylic will not come in contact with the root. The space created between the root and denture base will allow the full resilient function of the pivoting metal denture cap over the LOCATOR male.

9. Re-insert the LOCATOR Black Processing Cap Male into each Female Analogue, leaving the White Block Out Spacer beneath it. The Black Processing Male will maintain the overdenture in the upper limit of its vertical resiliency during the processing procedure.

10. Complete the processing and discard the white spacer. Avoid damaged to the final male by polishing the denture base before changing to the final male.
8. Use the LOCATOR Male Removal Tool to remove the Black Processing Male from the metal denture cap. Loosen the new (8397) Male Removal Tool a full 3 turns counter clockwise (you will see a visible gap). Insert the new tip into the cap/male assembly and push straight in to the bottom of the nylon male. Tilt the tool so that the sharp edge of the tip will grab hold of the male and pull it out of the cap.

Discard the nylon male by pointing the tool down and away from you and thread the new Male Removal Tool clockwise back onto the Core Tool. This will activate the removal pin and dislodge the nylon male from the tip (FIG 7).

12. Use the LOCATOR Male Seating Tool is used to firmly push a LOCATOR Replacement Male into the empty metal denture cap. The replacement male must seat securely into place, level with the rim of the cap.

**NOTE**: The replacement male will not stay on the tool when it is turned upside down due to the varying sizes of males available. It is best to hold the denture with the base side down and snap the male into the metal denture cap.

**Patient Care**

Good oral hygiene is vital to implant success. The Locator Implant Abutment must be thoroughly cleaned daily. The use of a soft nylon bristle or end-tufted toothbrush, and superfloss to polish the abutments should be taught. A non-abrasive gel toothpaste, and an irrigation system is recommended to keep the socket of the Locator Abutment clean.

Patients should maintain a three to four month recall for cleaning and implant evaluation. The sulcus area around the implant abutment is the primary area of concern. Use plastic instruments for scaling the abutments. Do not use metal instruments which may create scratches on the abutment surface. Examine patients for signs of inflammation around the implant abutments, and for implant mobility. Use the Locator Abutment Driver to make sure the Locator Implant Abutment is tight before dismissal.

**How to change the Locator Male**

1. The Locator Core Tool, which contains a Locator Male Removal Tool and Locator Male Seating Tool, is used to remove the existing nylon male from the metal denture cap and replace it with a new Locator Replacement Male.

2. Use the Male Removal Tool to remove the nylon male from the denture cap.

3. The Male Seating Tool is used to firmly push a Replacement Male into the empty metal denture cap. The replacement male must seat securely into place, level with the rim of the cap.

**NOTE**: The replacement male will not stay on the tool when it is turned upside down due to the varying sizes of males available. It is best to hold the denture with the base side down and snap the male into the metal denture cap.

**Reline and Rebase**

1. Remove each existing nylon male from its metal denture cap following the steps in "How to Change the Locator Male." Replace them with Black Processing Males. The built in spacer of the Black Processing Male will maintain the overdenture in its upper level of vertical resiliency during the reline process.

2. Take a reline impression using the existing overdenture as a tray. The Black Processing Males will engage the Locator Implant Abutments and hold the prosthesis in place while the impression material sets.
3. After the impression is withdrawn, snap a Locator Abutment Analogue into each Black Processing Male and pour a master model.

4. Process the reline following the same steps as outlined in "Locator Male Placement by the Laboratory."

5. After processing the reline and polishing the denture base, replace the Black Processing Males with the final Locator Replacement Males.

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