

Dental Anatomy and Occlusion: Maxillary Central Wax-Up

Armamentarium

PK Thomas #1
PK Thomas #2
PK Thomas #4
Tooth colored wax
Sticky wax
Typodont
Striker
Alcohol lamp
Alcohol

Step 1: Apply Sticky Wax

We have replaced the tooth #9 with a prepared tooth. The marginal outline extends all the way around the tooth from the labial to the lingual surfaces including the proximal surfaces. For demonstration purposes, we will outline the margins of the tooth with a darker color wax, and use tooth colored-wax to complete the wax-up of the coronal portion.

To make sure that the wax does not drip off of the tooth, we must first apply a thin layer of "sticky wax" over the entire surface of the tooth that will be receiving wax, while leaving the margin completely exposed. Using a PK Thomas #2, apply the sticky wax in the same manner used with conventional wax.

Step 2: Outline the Margin

Outline the margin using conventional wax. Don't worry too much about going over the margin with the wax; remember you can always carve it back down once the wax has hardened. Use the PK #4 to carve the margins back before continuing with the wax-up. When the margins are completed you should have achieved zero emergence profile. The finished margin should be one smooth line that continues from the root into the anatomical coronal portion of the tooth. There should be no step or discontinuation, between the wax and the tooth.

Step 3: Apply Wax

The next step is to wax the entire coronal portion of the tooth, beginning with the labial surface of the tooth, from one proximal to the other. Use the PK #1 to apply wax to the surface; in order to allow the wax to dry, alternate between the distal and mesial surfaces. Remember that the aim in this step is simply to fill the entire coronal area with wax; excess wax can always be removed during the carving stage.

Step 4: Carve the Wax

Once enough wax has been placed and allowed to cool, use the PK #4 to begin carving the wax. During carving, our aim is to establish esthetic value in both the length of the tooth and the overall labial appearance. Begin by finishing the margins and the labial contour of the tooth. If necessary, use the PK #2 to add more wax in small amounts and continue carving. To move around any of the wax that has already been applied, heat up the #1 or #2 instruments and simply touch it to the wax and reposition it.

Step 5: Evaluate

When you are satisfied with the shape and form of the surfaces, take a moment to evaluate the functional value. The key at this stage is to establish the length, by placing both halves of the model in the protrusive position, where both centrals are touching at the same time. Be sure to also check the vertical stop on the lingual surface of the anterior teeth. In the incisal guidance, the two centrals should provide the protrusive guidance for the mandible.

Step 6: Finishing Touches

Continue finishing the teeth until both esthetic and functional value have been established.

Step 7: Final Evaluation

When the tooth is completely finished, evaluate the overall esthetic and functional value of the tooth. First check that the mesial marginal line angle aligns with that of #8. Likewise, the distal marginal ridge of #9 should mirror that of #8. Contact areas on both sides should be symmetrical. Again, determine the length of the incisal edge utilizing the protrusive movement. (In the clinic, the dentist establishes length both by phonetics and by the lip line; the alignment of the interior teeth should be parallel to the line of the lower lip when the patient is smiling.) Verify that #9 and #10 come into occlusal contact; and check that the tooth is aligned with the adjacent teeth from both the distal and mesial line angles. Lastly check alignment from the incisal edge.