

Pinning The Sectioned Die Model Video Series

Overview Full Length Running Time: 1 hr 35 min

There are 16 videos in this series ranging from 2 to nearly 13 minutes covering all the steps necessary to measure, choose pins for, mark, drill and pin a sectioned die model. It includes an introduction describing the criteria for choosing pins and introduces the ways to lay out the die model for proper pin placement. The use of the included Pinning Guide for choosing pins that are proportionate to the die is also outlined.



The segments can be viewed individually, easily paused or rewound and each segment progresses in logical steps. Important points are frequently detailed at the start of a step and most procedures are accompanied by clear reasons for proceeding in a particular way. It would be very easy to proceed through the measuring steps and then choose a drilling method and pin of choice to produce a properly pinned Pro-Model™ by the end. Included are techniques for several pins, drilling devices and methods as well as advice for pinning atypical tooth relationships. The segments mention brand names of materials and equipment used to allow the viewer to follow up on items of interest. The following paragraphs describe the contents of each of the individual segments.

Introduction to Pin Selection 7:40 min

The three principles for pin selection are presented and emphasized throughout the section. These are: always use the largest pin possible, one that is proportional to the die and choose pins for the entire case that are the same length. Various dowel pins are presented.

The Pinning Guide 4:30 min

The Pinning Guide is introduced and it is shown how to use the measured dimensions to choose dowel pins for particular arches or parts of the arch. It is emphasized that different pins may be used as long as they are the same length. The pins are categorized using the Pinning Guide and the brand names of these pins are mentioned.

Trim the Palate and Facial Edge 8:00 min

First, it is shown how to trim the palate of the die model with the Milo Pro Arch Trimmer. The proper measurements for each die dimension are discussed in detail and a colored perio probe is used to measure the various dimensions. A method is described for marking the dimensions on the model, gross cutting the excess and then refining and smoothing the cut to the marked dimensions with continuous bur contact.

Next the facial edge is properly tapered using a tapered fissure bur in a similar manner. Cautions are spelled out to protect the integrity of the model and a clear technique is set out to produce the cleanest cuts.

Mark the Die Section Cuts 12:55 min

A standard is described for the proper die dimensions. Single dies and dies that will be bridge abutments are marked and the different criteria for each spelled out. A blue marker is used to mark the outside parameters of the die sections and the lines extended to the base with an emphasis on proper markings to protect the margins in later steps. Visualizing the proper die dimensions when placing the lines is emphasized. All markings are demonstrated for facials, linguals and the base using a straight-edge where necessary.

Mark Pin Positions 5:30 min

Once the models are properly trimmed and the perimeters of the dies are marked, it is shown how simple it is to place the pins properly. The centers of each die segment are located and marked with red for future use in the drilling process.

TopSpin Drilling Machine Introduction 2:30 min

The Renfert TopSpin Dowel Pin Drill is introduced and its flexibility for the standing or seated technician is demonstrated. Its features, such as the laser indicating light, depth adjustment guide and the rubber cover and dust collector are shown.

Drill and Check the Standard Case 6:15 min

A procedure for checking the proper drilling depth for different dowel pins using a flat block of plaster is discussed. Each die is then drilled, showing how to determine the proper placement using the laser and the previously established die dimensions. A final check with the chosen dowel pin is recommended to check proper fit and depth. A reamer is used to make adjustments where necessary.

The Protruded Case 3:20 min

An atypical tooth relationship case is depicted showing the best way to determine pin placement based on the established die dimensions. A Wells Quick Chuck Pin Setter is demonstrated with a description of how to use the previously established pin markings to guide the drilling.

Pindex Pins 2:00 min

The proper drill set up for the stepped Pindex Pin is demonstrated. It is shown that the depth of the drilled hole must be predetermined to be sure the pin is not set too deeply or too shallowly, conditions which could affect the die removal for the finished model.

Mainstay Pins 4:30 min

The proper depth and placement is demonstrated by drilling test holes in a plaster block. It is shown that the hole must produce a flush step so the corresponding sleeve fits tightly against the model base. The gluing process is shown in detail in a later segment 'Pin the Standard Case'. The Positioning Groove Bur is then demonstrated to show the proper placement and depth of the positioning groove when using the Mainstay Pins.

Wells Drill the Standard Case 6:20 min

The Pin Setter Attachment is fitted to the Wells Quick Chuck. This device has an adjustable table stop screw that can be used to limit how far the table travels and ultimately how deep the pin hole is drilled. It has a table opening that allows visual contact with the red pin placement markings. Since all of these markings are established prior to drilling, it is very easy to neatly drill the required holes with this device.

Wells Drill Mixed Pin Case 8:30 min

The technique for drilling a case including medium and small knurled dowel pins is demonstrated. The standard drill is used first to drill all the medium pin holes and then the new drill is introduced and tested for the smaller pins. It is shown how to adjust the Wells drill for these different requirements and how a small pilot hole placed at the point of drilling helps to keep the drilling bur from chattering as it drills the hole. The standard fit checks and reaming are also reviewed at the end.

Prepare to Set Pins 6:15 min

Three important criteria for setting the pins are listed. They include checking the adhesive for the proper bond, placing the flat side of the pin toward the mesial and checking to be sure the pins seat properly in the model. A technique for making disposable adhesive reservoirs is also detailed.

Pin the Standard Case 7:00 min

A very detailed technique for setting the pins is demonstrated. It is shown how to fill the hole with adhesive and absorb the excess carefully at the end. The criteria for proper placement are reviewed and problems that can occur during pin setting and after adhesives set are discussed. An adhesive with a spray accelerator is demonstrated.

Cut Position Grooves in the Standard Case 3:30 min

The importance of the position groove is discussed. The Position Groove Bur is demonstrated showing the proper position, depth and length of each groove in relation to the dowel pin.

The Bi Pin Case 8:00 min

This segment is divided into two sections, the actual pinning using the Renfert Bi Pin and a review of placing the position grooves. It is shown how to place the pins parallel to the drawn cut lines and properly glue and remove excess adhesive. The proper orientation of the legs of the pin is also shown.

The pin sleeves are placed using an included instrument and checked to be sure they fit tightly against the base of the model. Position grooves are then properly placed in relation to the glued pins.

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