The Distal Jet’s success, as with any laboratory appliance, is determined by the base it is built on: An accurate and detailed working model with correctly placed and sized bands is absolutely essential for proper fit and performance of the finished appliance.

KEY ELEMENTS

LINGUAL SHEATHS
- Position with entry as close as possible to the center of resistance (CR).

TRANSPALATAL CONNECTOR
- Extend anteriorly to contact the middle of the cuspid or slightly beyond.
- Maintain a 1mm clearance from the palate for acrylic.

BAYONET AND DIRECTORS
- Parallel, as closely as possible, to the arch form at the level of the centers of resistance of the posterior teeth.
- IMPORTANT: When viewed from the occlusal, the bayonet assembly — bayonets and bayonet directors — should be positioned with a 5° diversion away from the arch form and toward the palatal midline to avoid expansion of the molar during distalization.
- Incorporate the maximum tube length and extend as anteriorly as possible, but do NOT cross the transpalatal connector.

NANCE BUTTON
- Extends anteriorly to the incisive papilla without impinging on it.
- Laterally extends to and parallels the bayonets and directors. The lateral border should prevent “rolling” of the activation lock for easy access to the activation screws.
- Ends at the distal of the second bicuspid or deciduous second molar teeth.
- Should be as smooth and thin as possible to provide maximum patient comfort.

NOTES:
- All elements follow natural anatomical contours, connect together passively, and do not impinge soft tissues at any time.
- Anchorage options: 1st bicusps, 2nd bicusps, 2nd deciduous molars (mixed dentition case with 2nd deciduous molars shown).

STEP-BY-STEP
1. Form the transpalatal connector (check key elements). Wax in place.
2. Solder and polish. Reposition on model.
3. Paint separating medium on palate.
4. Bend bayonets, insert in sheaths (check key elements). Adjust and cut to length as necessary.
5. Place directors on bayonets, bend wire section, adjust and cut to length.
6. All cut ends of the bayonets and directors must be smooth and burr free. Check for free sliding movement without friction.
7. Salt and pepper acrylic Nance button.
8. Trim and polish.
9. Add stops, springs and locks; tighten screws lightly. Lock and screws should be positioned for easy access in the mouth. Springs should NOT be compressed.
10. Tie elements together as one unit with ligature wire or floss from mesial of the lock to the vertical arm of the bayonet.

SPECIAL NOTES:
- Molar rotations must be corrected before they are distalized.

This is easily accomplished in the lab by bending rotational compensation into the double-back sections of the bayonets.

Seat and cement as above, do not activate, and recall in one month.

Begin activation after molars are corrected.

SPECIAL NOTE: The precalibrated 180 gm spring should be used in mixed dentition, and the 240 gm spring if second molars have erupted.

<table>
<thead>
<tr>
<th>Spring A - 240 gm.</th>
<th>012 x .055</th>
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<tbody>
<tr>
<td>Compression (mm)</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Maximum Force</td>
<td>32 62 101 140 172 205 240</td>
</tr>
<tr>
<td>Minimum Force</td>
<td>21 55 90 125 158 196 239</td>
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</table>

<table>
<thead>
<tr>
<th>Spring B - 180 gm.</th>
<th>012 x .055</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compression (mm)</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Maximum Force</td>
<td>20 40 62 76 105 126 140</td>
</tr>
<tr>
<td>Minimum Force</td>
<td>17 33 52 69 94 115 130</td>
</tr>
</tbody>
</table>

APPLIANCE FABRICATION

APPLIANCE PLACEMENT AND ACTIVATION
1. Remove separators and clear any debris from the interproximal areas.
2. Mix cement, load bands and cement the appliance as a single unit, in the customary manner.
3. After cement clean-up, remove the stabilizing floss or wire prior to activation.
4. The appliance is activated initially after cementation and at four week intervals by complete compression of coil spring with the activation lock (see special note below).
5. After distalization is complete, convert the Distal Jet to a retainer.
6. Peel the spring from the appliance with a Weingart plier.
7. Slide the lock firmly against the stop and tighten the screw. Fig. 1
8. Squeeze the end of the lock tightly onto the bayonet wire. Important: this prevents the appliance from becoming loose. Fig. 2
9. An alternative option is to tie the lock and bayonet wire/ molar sheath together with a steel ligature or elastic chain or thread. Figs. 3 and 4.
We encourage and invite your comments and suggestions regarding the Distal Jet.

REFERENCES AND CONTACT INFORMATION

The following offer a detailed discussion of the Distal Jet development, underlying bio-mechanics and applications.


• The front cover page of this booklet depicts the classic, standard version of the appliance as originally developed.
• The back cover page of this booklet identifies the kit contents visually as well as by name, part number, and quantity.
• The contents of this kit are sufficient for the fabrication of five (5) bilateral appliances.
• Typical clinical situations for the Distal Jet are:
  — Class II subdivision (multivariate) cases
  — Class II, molar retrogression requiring forward shifting of bicuspid or mesial molar
  — Class II, molar overretention requiring forward shifting of bicuspid or mesial molar

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