

Recommended Protocol: rebonding fusion brackets

If a bracket is lost or broken during lingual treatment, there are various alternatives to rebonding the bracket and to continuing the treatment without having to perform a replacement scan. Nevertheless, in this situation you should assume that there will be a small positional difference from the target setup for the affected tooth. This difference can be potentially ignored in the posterior buccal tooth area. The doctor must use his or her clinical judgement to decide if acceptable results can be achieved when rebonding without a new scan.

Before you begin, remove the archwire and completely clean the bonding area of all remaining adhesive.

Rebonding Brackets Using a Transfer Tray and Light-curing Adhesive:

1. Cut out the required tooth area from the transfer tray in such a way that a single-tooth transfer tray will be created (Fig. 1).
2. Insert a new bracket into the single-tooth transfer tray. (Make sure you close the bracket door before inserting the bracket into the tray.) (Fig. 2)
3. Try on the tray in the patient's mouth (Fig. 3).
4. Clean the bracket base with acetone (Fig. 4).
5. Dry the bracket base and press composite onto the base (Figs. 5-6).
6. Sandblast the tooth surface (e.g., using CoJet™ Prep or CoJet™ Sand).
7. Condition artificial surfaces like gold, amalgam, ceramic, and plastic by using an adhesion promoter (e.g., Silane).
8. Etch the tooth surface (Fig. 7).
9. Spray and dry the tooth surface.
10. Coat the tooth surface with resin and light cure (Fig. 8).
11. Put the bracket transfer tray onto the teeth and apply light pressure on the tray.
12. Light-cure the tooth for 15 seconds. Press gently on the tray while light-curing (Fig. 9).
13. Starting from the posterior, carefully peel the soft tray away from the teeth with a labial-to-lingual movement.
14. After the transfer tray has been removed, post-cure with light for 15 seconds (Fig. 10).

Bracket Rebond by Tray - Light Curing

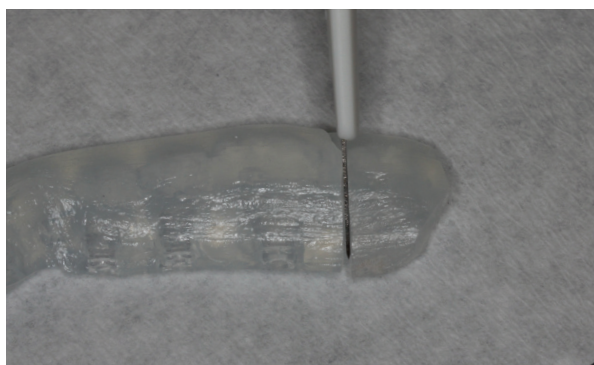


Fig. 1 Cut out tooth area from bracket tray



Fig. 2 Close the bracket door and replace bracket in tray



Fig. 3 Try on tray with bracket

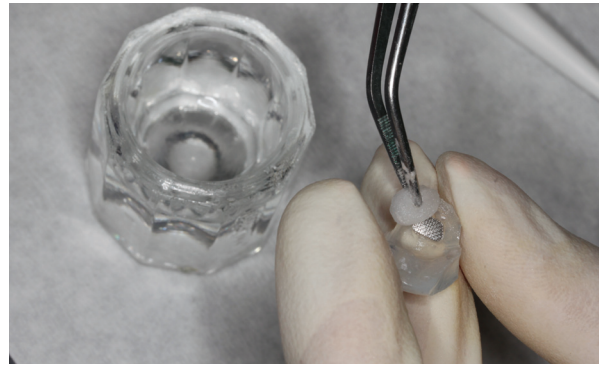


Fig. 4 Clean bracket base with acetone



Fig. 5 Dry the bracket base, apply composite

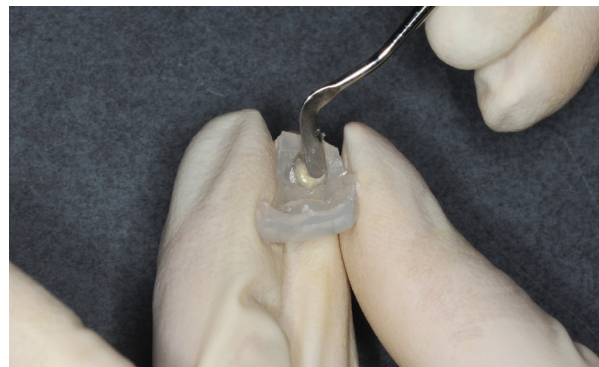


Fig. 6 Press composite into base



Fig. 7 Prepare lingual tooth surface (sandblast, condition artificial surfaces; etch, rinse and dry)



Fig. 8 Apply resin



Fig. 9 Place the tray, applying light pressure and light-cure for 15 sec. Carefully remove the transfer tray



Fig. 10 Post-cure bracket for 15 sec. after tray removal

Rebonding Brackets Using a Transfer Tray and Self-Curing Adhesive:

For this procedure, the lost bracket must still be available and the composite adhesive bases must be fully or almost intact on the bracket base:

1. Cut out the required tooth area from the quadrant tray, to create a single-tooth transfer tray (Fig. 11).
2. Insert the available bracket into the single-tooth transfer tray.
3. Try on the tray in the patient's mouth.
4. Sandblast the composite base of the bracket using CoJet™ system.
5. Clean the bracket base with acetone (Fig. 12).
6. Press composite in the tray and press the bracket into the tray (Fig. 13).
7. Dry the bracket base and apply resin (Fig. 14).
8. Sandblast the tooth surface (e.g., CoJet™ Prep or CoJet™ Sand).
9. Condition artificial surfaces like gold, amalgam, or ceramic by using an adhesion promoter (such as Silane).
10. Etch the tooth surface.
11. Spray and dry the tooth surface and coat with resin.
12. Have your assistant place the remaining resin on the mixing block and push it together to form a mass. Observe the characteristics of this mass to indicate when to remove the transfer tray.
13. Seat the bracket transfer tray onto the teeth and apply constant slight pressure to the tray.
14. When the resin on the mixing block has turned golden yellow and is cool to the touch, start from the posterior and carefully peel the soft tray away from the teeth with a labial-to-lingual movement.
15. Use a scaler and dental floss to remove excess adhesive.

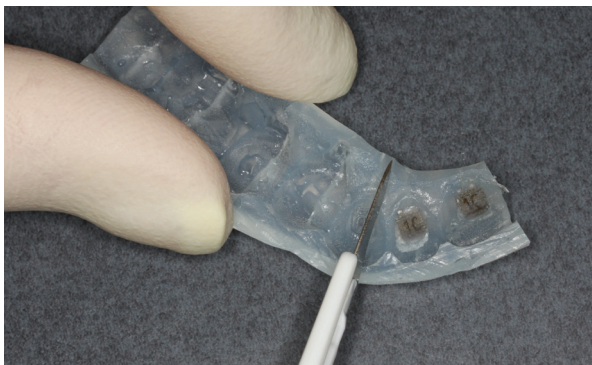


Fig. 11 Close the bracket door and replace bracket in tray



Fig. 12 Clean bracket base with acetone

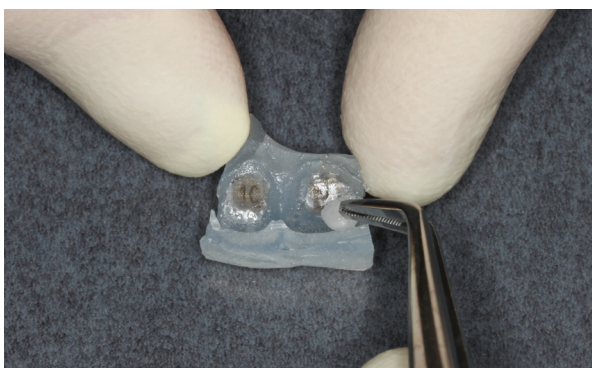


Fig. 13 Press composite into base



Fig. 14 Dry bracket base and apply resin

Rebonding using a Direct Bonding Technique

While not recommended, you can perform direct lingual bracket bonding after bracket loss (as shown in Figures 15 to 23). In addition, direct lingual bracket bonding may be used to integrate newly erupted teeth.

Direct Bonding Protocol - Brackets on the lingual side of the teeth are mounted the same way as on the labial side. To enhance the shearing strength, roughen the surface of the teeth using a sandblaster (e.g., CoJet™ Prep and CoJet™ Sand) for approximately 1 second per tooth. For artificial surfaces such as gold, amalgam, ceramic, and plastic, use a conditioner (e.g., Silane). When you are ready to bond the bracket, apply adhesive onto the bracket base and place the bracket as accurately as possible.

NOTE: Since this is a direct bonding procedure, you must rescan the area to capture updated bracket positions. Capture teeth adjacent to the rebonded tooth to include a minimum of three teeth in a scan.



Fig. 15 Sandblast for 1 second and rinse



Fig. 16 Etch enamel surface



Fig. 17 Rinse and dry



Fig. 18 Apply bonding



Fig. 19 Softly blow dry



Fig. 20 Select bracket; clean base



Fig. 21 Apply adhesive



Fig. 22 Place bracket and remove surplus adhesive



Fig. 23 Light-cure bracket



CONTENT CONTRIBUTED BY:

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