TrueDent™ and TrueDent-D™ Repair and Reline Dental Appliances

Best Practice

This document describes how to repair and reline a TrueDent™ denture, printed with TrueDent™ or TrueDent-D™ materials.

- Overview
- Repairing a TrueDent Denture
- Relining a TrueDent Denture

Overview

TrueDent and TrueDent-D are light curable resins for the fabrication of dental appliances. For information about working with these materials, refer to the relevant material page in the Support Center:

- TrueDent material
- TrueDent-D material

Repairing a TrueDent Denture

This procedure illustrates a repair for a denture with a midline fracture. The same principles may be applied to all types of common denture repairs.

Required Tools and Materials

- Self-cure acrylic:
  - Self-cure liquid monomer (monomer)
  - Self-cure powder auto-polymerizing denture acrylic (polymer powder)
- Sticky wax
- Plaster or VPS putty (plaster) — for the index
- Pressure pot
- Cosep™ Separator
- Burs
- Rag wheels

Repairing a Denture with a Midline Fracture –Example

1. Before repairing the dental appliance, all surfaces should be cleaned and primed with a monomer.

   This ensures optimal bonding of the repair material to the surfaces of the appliance. This also improves the results of finishing and polishing.
2. Match the pieces in the correct orientation and join them together with sticky wax.

3. Apply separator to the tissue side surface.
   This separates the acrylic and stone.

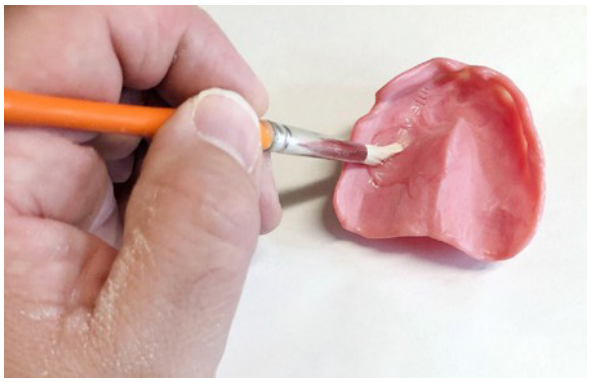

Figure 1: Applying separator

4. Make a plaster index to record the relationship.

Figure 2: Making an index and recording the relationship with the index

5. Remove the denture from the index.
6. Prepare both halves of the break by grinding a V-shaped trough.
   Make sure that both surfaces are clean.

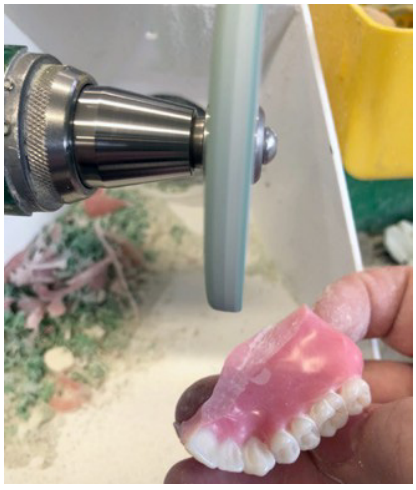

Figure 3: Preparing the halves before placing them on the index

7. Apply separator to the plaster index.

8. Dry the separator according to the manufacturer's instructions.
   Wait until the separator is dry.
9. Place both halves of the denture back on the plaster index.

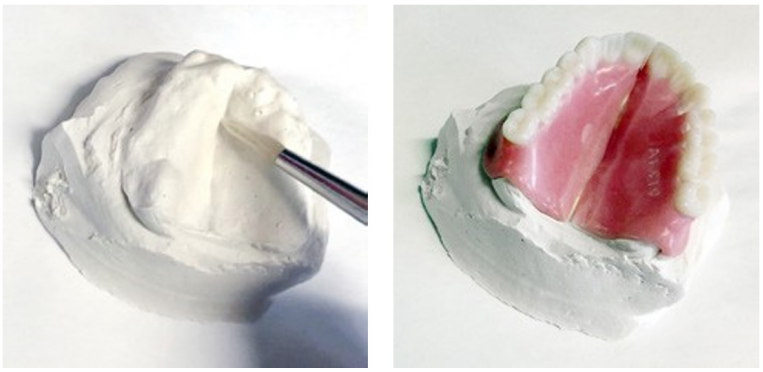

Figure 4: Applying separator to the index (left); Placing halves on the index (right)

10. Mix the monomer with the polymer powder according to the manufacturer's instructions.
    The following tips may produce improved results:
    - Stir to the desired consistency.
    - Vibrating the container may allow bubbles to come to the surface and produce a better result.

Figure 5: Preparing the monomer and the polymer powder

11. Prime the surfaces of the break with a monomer.
    This improves the coverage of the areas where the repair material is to be applied.

Figure 6: Prime surface with the monomer

12. Apply self-cure acrylic to the break.

    Ensure that the repair area is fully filled, and all excess material is removed.

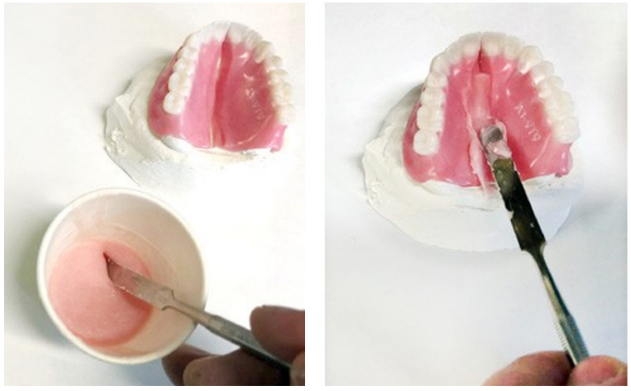

Figure 7: Applying the self-cure acrylic

Figure 8: Appearance after applying self-cure acrylic

13. Place the repaired denture in the pressure pot filled with warm water.

> **Important:**
> Do this as soon as possible to ensure a quality surface.

14. Set the pressure pot to 20 psi (13.8 N/cm2) and leave the repaired denture in the pressure pot for 5 -10 minutes.

Figure 9: Denture submerged in water in the pressure pot

15. Remove the denture from the pressure pot and plaster index.
16. Trim, finish, and polish the denture using the traditional burs and rag wheels.

    The results should be a strong repair with a good blending of the materials.

Figure 10: Burs and rag wheels

If blending was not perfect, one possible reason may be contamination. This is best resolved by carefully cleaning all parts with monomer in future repairs.

Figure 11: Final repair

Relining a TrueDent Denture

Relining a TrueDent denture is simple using traditional methods. This procedure shows relining a TrueDent denture using a self-cure acrylic and a simple same-day reline jig.

Required Tools and Materials

- Self-cure acrylic:
  - Brushes (Figure 8)
  - Medium Scotch-Brite® brush (A)

> For best results, you can use the following alternative self-cure acrylic materials for soft and hard relining:
>
> - GC RELINE™ by GC
> - GC RELINE™ II Soft by GC
> - COE-SOFT™ by GC
> - BOSWORTH TRUSOFT™ by Keystone®

- Same-day reline jig
- Plaster—for the index
- Buff stone—for pouring the model of the reline impression
- Cosep™ separator
- Burs
- Rag wheels

Relining a Denture–Example

1. Use the reline impression and denture to pour a buff-stone model.

Figure 12: Model created for a reline impression

2. Mix the plaster and place it on the jig.

3. Place the denture and buff-stone model in the plaster to make an index.

Figure 13: Indexing the denture and buff-stone model

4. Finish the mounting by applying plaster to the top of the model and tighten the reline jig securely.

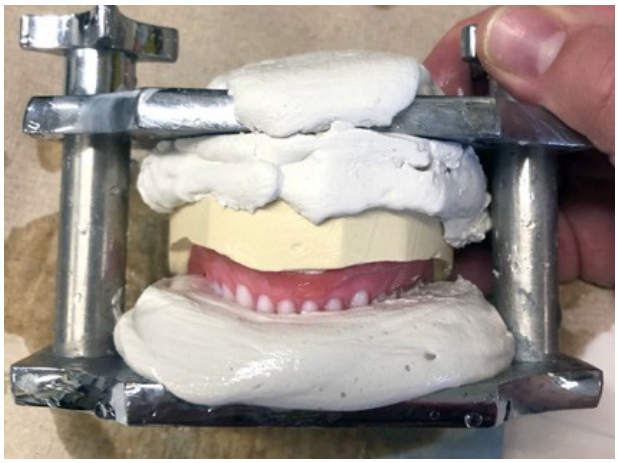

Figure 14: Tightening the reline jig and buff-stone model

5. After the plaster sets, separate the parts and remove the impression material.

Figure 15: Separated parts

6. Roughen the denture by grinding it to make a fresh, clean surface.

Figure 16: Roughening and grinding the denture (left); Tools for cleaning the tissue side (right)

7. Apply separator to the buff-stone model and allow it to dry completely.

   This may take about 3-5 minutes.

8. Clean the denture with monomer liquid and a soft bristle brush.

   This cleans the dust and chemically primes the surface to ensure it has a secure bond with the new material and no visible seams.

9. Place the clean denture on the plaster index.

Figure 17: Plaster index and clean denture

10. Mix the self-cure acrylic.
11. Apply self-cure acrylic to the model and the denture and reassemble the reline jig.
12. Place the reline jig in the pressure pot with warm water.

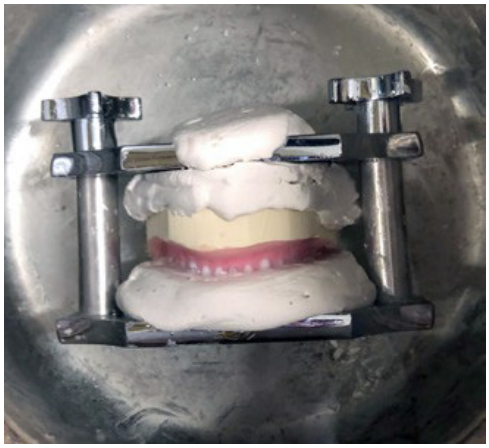

Figure 18: Secured reline jig submerged in water in the pressure pot

13. Apply 20 psi (13.8 N/cm2) of air and wait 10 minutes for the self-cure acrylic to harden.
14. Remove the reline jig from the pressure pot, disassemble the jig, and remove the denture from the model.

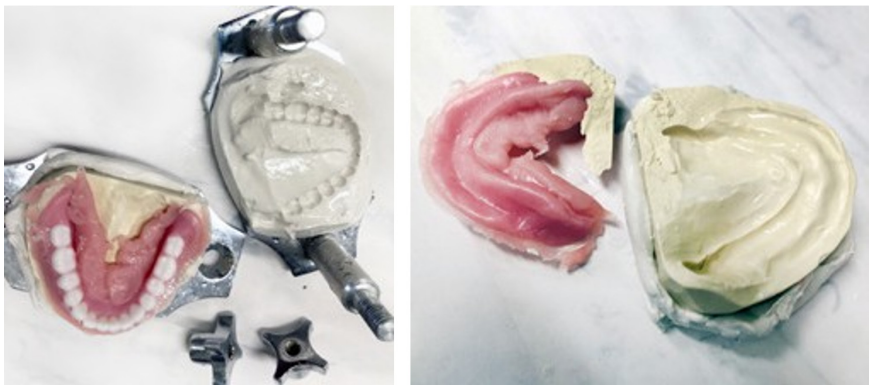

Figure 19: Disassembling the reline jig (left); The denture is removed from the model (right)

15. Trim, finish, and polish the denture using traditional burs and rag wheels.

Figure 20: Traditional trimming, finishing, and polishing tools

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