

### Mold Preparation

1. Evaluate cast for proper heel height. With the heel height required ensure the cast is neutral. If correction is required do so by cutting and bending.
2. Evaluate the toe rocker. A toe rocker of 5-10 degree is required. If correction is required do so by cutting and bending.
3. Use standard processes for cast filling and rectification.
4. Mark Plaster model with all trim lines.

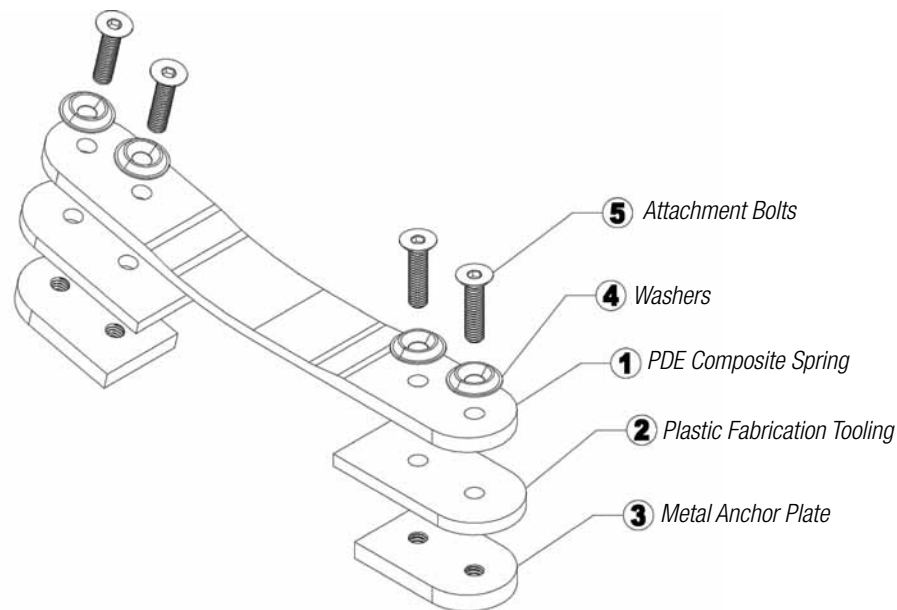
### Additional Items:

Additional items required for the fabrication process include: Pluseries Composite One Adhesive, 12k 480gsm 0/90 weave 6" carbon fiber tape and a high quality epoxy resin.

### Fabtech Product Items:

- **Pluseries Composite One Adhesive:** Item#: C1L
- **Fabtech 12K 6" Carbon Tape:** Item#: CT6 (Sold in 10ft, 50ft and 150ft lengths)
- **Restech Epoxy Resin:** Item#: RES1

**Figure 1**

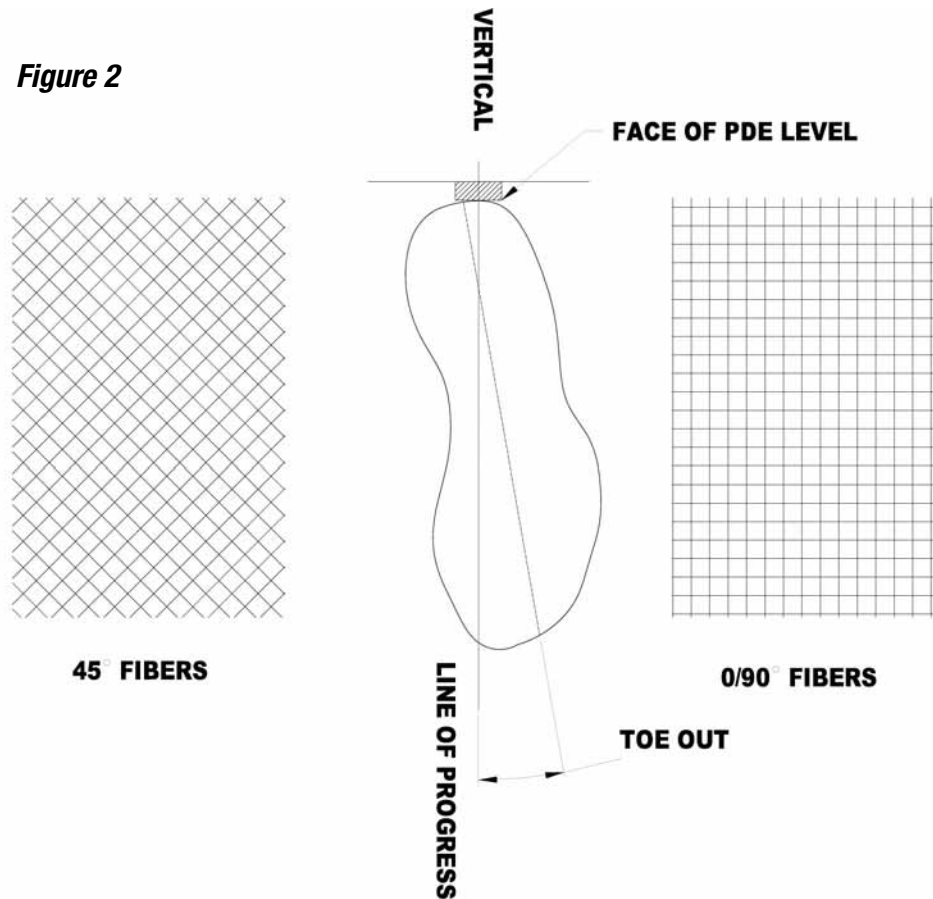


### Brace Fabrication

1. Using a 1/8" thick soft plastic interface material (Proflex© with silicone) Pull the proximal posterior cuff. Be sure to make this section large enough to extend 1 1/2" past midline join of anterior shell and posterior cuff. Label this piece with patient information and set aside for finishing.
2. Using a 1/8" thick semi dense soft foam (Black Puff) pull a seamless boot for the entire foot section. Label this piece with patient information and set aside for finishing.
3. Using 1/8" thick polypropylene pull the entire model using the same technique you would use for a standard plastic AFO. Ensure there are no wrinkles or excessive stretch within the trim lines. Keep the plastic join as clean and straight across the shin section as possible. Trim away all excess plastic.
4. Using grinding and buffing equipment smooth the plastic join on the shin section focusing on the area within the trim lines
5. Assemble PDE spring system as shown in. (**fig.1**)  
**\*\*\*Note correct placement\*\*\***
6. Using a sharpie marker, mark the Achilles region at the lowest point that could be obtained outside the shoe. Typically this is approx. 3" from the plantar surface of the foot.
7. In a horizontal holder orient the model in a toe down position and set toe out. This will leave the line of progression in a vertical orientation.
8. Using, Pluseries Adhesive (Item# C1L) adhesive bond the PDE assembly (**fig.1**) on the posterior side of the model. The placement should be proximal of the mark created in step 6. The upper surface of the PDE system should be level and plumb (perpendicular to the line of progression)
9. Remove screws from the PDE assembly (**fig.1**) leaving only the anchor plates bonded to model.
10. Apply BOA Closure at this step referring to the instructions included in the BOA kit.
11. Insert the set screws from kit into the anchor plate until they bottom out. Be sure the set screws are treated with a mold release of some type and after the installation the Allen wrench holes are filled with clay.

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**Figure 2**



12. The initial layup for the foot section is comprised of 5 layers of 12k carbon fiber tape. (Fabtech Item# CT6) All layers run from the end of the toe plate to proximal of the distal mounting plate. All materials are run over the attachment plate and need to be kept even and flat on that surface. The carbon tape fabric will be applied in two differing orientations. A 45° degree orientation and 0/90° orientation to the line of progression see (fig.2).

Apply the carbon in the following order using a light application of spray adhesive:

- 2 layers oriented at 45° degrees
- 2 layers oriented at 0/90° degrees
- 1 layer oriented at 45° degrees

13. The Proximal cuff will be laid up in the same style of alternating fiber orientation of 12k material and consists of 2 full layers and 3 partial layers. All partial layers run across the posterior stopping at the coronal plane on each side.

**\*\*\*Important Note\*\*\*** All materials are run over the attachment plate and need to be kept even and flat on that surface. Apply the carbon in the following order using a light application of spray adhesive.

- 1ea layer oriented at 45° degrees
- 3ea "PARTIAL" layers oriented at 0/90°
- 1ea layer oriented at 45° degrees

14. Fit the plastic lamination tooling, from the kit over both the distal and proximal anchor plate. The set screws will pass through the holes in the anchor plate.
15. Cover the entire model with a layer of 12k carbon braid oriented 45° degrees.
16. Laminate the entire job using epoxy resin. (Item# RES1)
17. Trim the finished laminate to the intended trim lines.
18. Grind the plastic lamination tooling and remove from the job.
19. Remove the set screws.
20. Using 242 Loctite, bolt the PDE spring to the brace using the supplied hardware and finish washers.

