

## General Impression Tips and Instructions for a Custom Below Tarsus Prosthetic



- **How much of the hind limb do I need to mold for a below tarsus prosthetic?**
  - Begin molding from the center of the knee.
  - End your impression around the bottom of the stump.
    - OrthoPets will need to see entire surface and contour of the bottom aspect of the residual limb segment. This will ensure a proper fit of the device.
- **Is there a specific angle at the tarsal joint that I need to achieve when I mold?**
  - It is recommended to hold the tarsus joint in a natural standing angle.
    - The natural standing position will provide the patient with an appropriate alignment of the limb to allow for sitting, standing, running, etc...
  - On your notes that you will include with your impression, please identify the standing angle on the contra-lateral tarsal joint as a comparison to the molded limb we are working on.
    - This will allow us to compare your mold to your measured angles to ensure we have achieved an appropriate alignment of the affected limb.
- **Before I apply the fiberglass material, do I wrap the limb with cast padding, multiple layers of stockinet, or roll of elastic self adhesive bandages to protect the limb?**
  - **NO!** Make sure that you use the Glad brand "Press-n-Seal" plastic wrap between the patient's limb and the fiberglass material.
    - This is similar to the old Saran wrap. However, the new "Press-N-Seal" plastic wrap has a tacky backing to it.
    - The tacky backing will allow you to compress down the fur to expose bony landmarks.
    - It will also ensure that the plastic wrap stays in place during your impression procedure.
- **Do I Bi-Valve the mold to remove it from the limb?**
  - No, because you will only have made your mold with one roll of fiberglass casting material. You can simply cut down the cut strip and slide the mold off.
    - Your well fused fiberglass impression will retain its shape and define bony landmarks better this way than a Bi-Valved mold would otherwise.
  - If you have an OrthoPets fiberglass impression kit, you will place the yellow rubber cut strip down the cranial (Anterior) aspect of the limb. If you do not have an OrthoPets fiberglass impression kit, you could substitute the cut strip with a 1/4" surgical tubing or drip line. This will serve the same function and ensure that the limb is protected from your cutting tool.





- As you do not have any cast padding or stockinet, the cut strip or tube will provide a place to cut the mold off the limb without coming into contact with the patient's skin.
- **Does the animal need to be sedated for the impression?**
  - OrthoPets does not sedate any patients.
  - It will take me approximately 5-7 minutes to complete the impression process.
  - Since your mold will be made thin, it will cure quickly and can be removed promptly.
  - It is very difficult to obtain a mold of the upper leg that will accurately represent how the musculature presents when the patient is weight bearing.

## Specific Casting Instructions

We have stated several times about the thickness of the impression along with the necessity to mold the patient's joints in a normal corrected weight bearing position. These two points are what will make this project successful or not. The quality of the mold OrthoPets receives will in-part determine the fit and function of the device OrthoPets fabricates. Please call our office (303-953-2545) with any questions before your scheduled fiberglass impression appointment.

1. Begin by wrapping the limb with "Press-N-Seal" plastic wrap. Present the plastic wrap at the center of the stifle to ensure you have the limb protected from the fiberglass.
2. Tape the OrthoPets provided Cut Strip, or your ¼" rubber tube on the cranial aspect of the limb.
  - Ensure the cut strip or rubber tube present beyond the end of the residual limb and extends proximal of the stifle joint.
3. Remove casting material from pouch, submerge in room temperature water for 5-8 seconds and gently squeeze material to ensure complete water saturation. Remove roll from water and gently squeeze out excess water.
4. Apply the fiberglass material with a double wrap at the center of the stifle.
5. Spiral wrap fiberglass material down the limb being careful to **only overlap 1/2** of the previous layer.
  - This will create the 2 layer thick mold that will fuse well together and define bony landmarks without becoming overly thick and difficult to cut off.
  - Be careful not to wrap too tightly and compress or bind the Achilles Tendon.
6. Continue wrapping down the limb until the entire stump, including the bottom aspect, has been included.

7. Cut any excess fiberglass material off and discard.
8. Begin rubbing the layers of fiberglass material together.
  - This will ensure that the layers are bonding together and ensuring the casting material is conforming around any bony landmarks.
9. Spend extra time rubbing the fiberglass material around the tarsal joint to define this region. This is critical to achieve a good initial fit.
  - Define the following bony landmarks in the mold:
    - Medial and lateral malleoli
    - The Calcaneus
    - The calcaneal tendon
    - Distal tip and plantar surface of stump

10. As the fiberglass material begins to harden, ensure the positioning of the tarsal joint. This position should present in as normal a standing angle as possible.

11. Once the fiberglass material has hardened, cut through the fiberglass casting material over the cut strip or rubber tube.

- If you have an OrthoPets fiberglass impression kit, you can utilize the hook blade. Start a 1" cut at the proximal end of the mold with bandage scissors. Then simply "pull" the hook blade down the cut strip. The blade will easily and smoothly cut the hardened fiberglass mold. Remove cut strip.

12. Next, using bandage scissors, cut through the "Press-N-Seal" plastic wrap.

13. Now gently remove the impression from the limb by sliding the mold caudally.

14. Please remove any "Press-N-Seal" plastic wrap and tape from inside the fiberglass cast.

15. Lastly, immediately tape the impression back together to allow the material to completely cure without losing any if the shape.

16. Write on the impression the patients first and last name, and left or right.



It may seem like a difficult process, but you will find that by making a well fused thin fiberglass impression, the process will only take a few minutes and will turn out great!

