

REPLACING THE COMPOSITE HEEL

Heel stiffness is controlled entirely by the heel wedge. Replacing or removing the composite heel is only required in situations where a repair or maintenance is necessary.

- Using a 4 mm hex wrench, remove the shoulder bolts.
- Using a 4 mm hex wrench and a 7/16" or 11 mm open-end wrench, remove the M6 flat head screws.
- Remove the composite heel.
- Choose the appropriate length of M6 flat head screws (either 16 mm or 18 mm) based on the chart below.

Foot Size	Toe Spring Category					
	1	2	3	4	5	6
23-24	16	16	16	18	18	NA
25-26	16	16	18	18	18	NA
27-28	16	18	18	18	18	18
29-30	18	18	18	18	18	18
31	18	18	18	18	18	18

- Apply Loctite 242 (or equivalent) to the M6 flat head screws and shoulder bolts.
- Install the M6 special washers onto the M6 flat head screws.
- Install the M6 Heel T-Nuts into the new heel.
- Install the screws with the washers through the shank and into the Heel T-Nuts. Hand tighten.
- Install the shoulder bolts. Tighten the bolts to 9 ft-lbs (12 Nm). Be sure to fully engage the hex tool and avoid over-torquing the bolts.
- Look through the clearance holes in the foot plate and twist the assembly until the Heel T-Nuts are centered in the clearance holes.
- Tighten the screws to 9 ft-lbs (12 Nm).

ADJUSTING TOE-OUT ROTATION (Available with Rotating Pyramid Adapter)

- Loosen two adjacent setscrews on the pyramid receiver that is connected to the Rotating Pyramid.
- Rotate the foot pyramid to achieve the desired toe-out.
- Tighten the setscrews on the pyramid receiver according to the manufacturer's torque and threadlocker specifications.

COSMESIS

WillowWood's BK and AK Foam Covers are suitable for the Fusion Foot. Follow the directions included with the Foam Cover.

The foot shell is available in 3/8" and 3/4" heel heights. To adjust the heel height of the foot, replace a foot shell of one height with a foot shell of the other height.

USING THE TORSION RECEIVER (Optional)

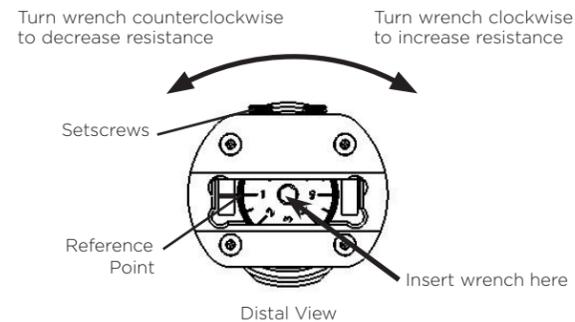
ASSEMBLY

Connect a pyramid component of your choice to the Torsion Receiver on the Fusion Foot. Apply Loctite 242 Removable Threadlocker (or equivalent) to the setscrews on the pyramid receiver. Tighten the setscrews on the pyramid receiver to 12 ft-lbs (16 Nm).

ADJUSTING THE RESISTANCE

- Remove the Torsion Receiver as shown in the "CUTTING THE SHANK" section.
- Insert a 4 mm hex wrench into the hex in the distal end of the adapter until the internal plunger is fully depressed, then continue to hold the plunger down while turning the wrench as follows:
 - Turn the wrench counterclockwise to decrease the resistance.
 - Turn the wrench clockwise to increase the resistance.

The full range of adjustment (level 1 through 6) is achieved with one complete rotation. Over-tightening past this limit in either direction could damage the Torsion Receiver.
- After making the adjustment, pull the wrench out to allow the plunger to pop back into place.
- Reinstall the Torsion Receiver as shown in the "CUTTING THE SHANK" section.



Refer to the "ACHIEVING MINIMUM CLEARANCE" section to obtain the minimum possible clearance shown below.

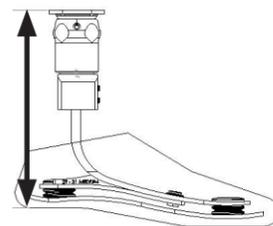
Be sure to remove and discard the Stair Guard, because it cannot be used when the clearance is less than 9.26" (235 mm), as measured from the bottom of the heel to the top of the Torsion Receiver.



Fusion Foot with Torsion Receiver

(height calculated using Magnum Titanium 4-Hole Pyramid, Part No. MHD-PA-4, sold separately)

Minimum Clearance to Heel:
– For 3/4" heel: 8.11" (206 mm)
– For 3/8" heel: 8.51" (216 mm)



PATIENT ADVISORY WARNING

The attached Patient Advisory Warning enables you, the prosthetist, to effectively notify your patients of the limitations of the components in their prosthesis, and of the need to monitor their weight and activity levels. Please review the Patient Advisory Warning with the patient upon delivery of a prosthesis with a Fusion Foot. The patient and the prosthetist should then sign the Patient Advisory Warning to acknowledge that it has been reviewed and understood by both parties. Give one signed copy to the patient and place one copy in the patient's file.

If a patient's weight or activity level increases after receiving a prosthesis with a Fusion Foot, the patient should immediately contact the prosthetist to determine whether replacement components are necessary. If a patient continues to use a prosthesis with a Fusion Foot after experiencing an increase in weight and/or activity level, the foot could fail with the possibility of serious injury to the patient.

To ensure that the correct components are selected for each patient, the prosthetist should weigh the patient on scales in the prosthetist's office. Do not rely on the patient's estimate of his/her own weight. Instruct the patient to monitor his/her weight weekly to ensure that it remains in a range appropriate for the prosthetic components being used.

WARRANTY

The warranty for the Fusion Foot is 36 months from date of invoice, the warranty for the Torsion Adapter is 24 months from date of invoice, and the warranty for the foot shell is nine months from date of invoice. Use of the Fusion Foot or Torsion Adapter for amputees whose modified body weight is more than 300 lbs (135 kg) or who engage in extremely high and abusive activity is against WillowWood's recommendations and will void the warranty. Modified body weight is defined as the weight of the amputee plus any loads carried by the amputee. "Extremely high and abusive activities" are defined as activities such as skydiving, karate, and judo; activities that could result in injury to an individual's natural feet; activities that expose the prosthesis to corrosives such as salt water; and activities that submerge the Torsion Receiver in water.

WARRANTY DISCLAIMER

Willow Wood warrants that each product manufactured will, at the time of delivery, be of workmanlike quality and substantially free of defects. WILLOWWOOD MAKES NO OTHER WARRANTY, IMPLIED, OR EXPRESSED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. This warranty shall terminate immediately upon an action to combine our products with other materials or in any manner to change the nature of our products. The sole remedy is replacement of the products or credit for the products. WillowWood's liability shall not exceed the purchase price of the product. WillowWood shall not be liable for any indirect, incidental, or consequential damage.

WILLOWWOOD RETENTION OF RIGHTS

WillowWood retains all intellectual property rights reflected or incorporated in its physical products, regardless of the transfer of the physical products to another party or parties.

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WillowWood
FUSION® FOOT

Instructions



WHAT'S IN THE BOX

- Fusion Foot (assembled with 2 small diameter Snubbers)
- 2 large diameter Snubbers
- Pyramid Receiver, Rotating Pyramid or Torsion Receiver
- Loctite 242
- Foot Shell
- Spectra Sock
- 2 Heel Wedges with Adhesive
- Instructions
- Patient Advisory

CARE AND MAINTENANCE

The Foot Shell can be cleaned with body soap and a damp cloth.

If you expose the Fusion Foot with the Rotating Pyramid or Pyramid Receiver to Sand or Salt Water:

- Remove the Foot Shell and Spectra Sock.
- Clean out the sand.
- Clean the Fusion Foot, the Foot Shell, and the Spectra Sock with body soap and water.
- Allow the Foot Shell and Spectra Sock to dry before reassembling.

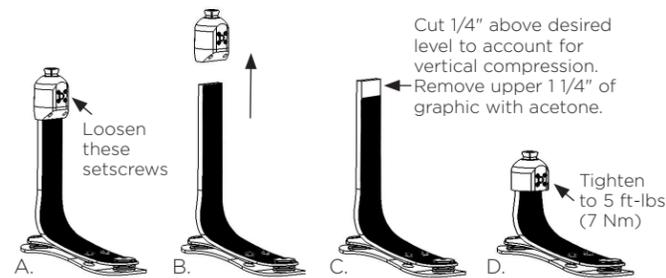
If you expose the Torsion Receiver to rain or other moisture, be sure to dry off the Torsion Receiver. Do not submerge the Torsion Receiver in water. Submerging the Torsion Receiver in water will damage the component and will void the warranty.

CUTTING THE SHANK

Unless you have purchased the Precut Fusion, which has already been cut to its minimum height, you may trim the shank as follows:

- Using an M3 hex wrench, loosen the four setscrews on the anterior surface of the proximal adapter (A).
- Remove the proximal adapter (B).
- Using a hacksaw with a metal cutting blade, carefully cut the shank to the desired length as follows (C):
 - Use a vise if desired, but do not over-tighten the vise.
 - Use a square to mark the shank to ensure that the cut is perpendicular to the long axis of the shank. Add 1/4" to the desired height to account for the vertical compression of the foot/shank system.
 - Do NOT cut below the line indicated by the label on the back of the shank.**
- Debur the cut edge. Clean the shank with water or glass cleaner. Dry the shank.
- To allow the adapter to clamp onto the shank and not onto the Fusion graphic, use acetone to remove 1 1/4" of the graphic from the cut edge down.**
- Apply Loctite 242 Removable Threadlocker (or equivalent) to the setscrews. Reinstall the proximal adapter and tighten the setscrews to 5 ft-lbs/7 Nm (D).

The shank MUST bottom out inside the adapter.



ASSEMBLY

Fusion Foot with a Rotating Pyramid:

Connect a pyramid receiver component of your choice to the rotating pyramid on the Fusion Foot. Tighten the setscrews using the torque and threadlocker specifications provided by the manufacturer of the pyramid receiver.

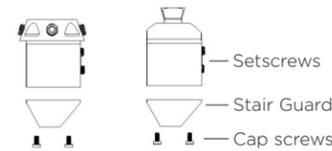
Fusion Foot with a Pyramid Receiver:

Connect a pyramid component of your choice to the pyramid receiver on the Fusion Foot. Apply Loctite 242 Removable Threadlocker (or equivalent) to the setscrews on the pyramid receiver. Tighten the setscrews on the pyramid receiver to 12 ft-lbs (16 Nm).

ACHIEVING MINIMUM CLEARANCE

The minimum possible clearances, as shown below, can be achieved as follows:

- Using a 2 mm hex wrench, remove the four cap screws holding the stair guard to the proximal adapter.



- Remove the stair guard from the proximal adapter. Discard the stair guard, because it cannot be used when the clearance is less than 7.6" (193 mm), as measured from the bottom of the heel to the top of the Pyramid Adapter/Receiver.

- Cut the pylon to length as described in the "CUTTING THE SHANK" section of this document.

Do NOT cut below the line indicated by the label on the back of the shank.

To allow the adapter to clamp onto the shank and not onto the Fusion graphic, use acetone to remove 1 1/4" of the graphic from the cut edge down.

- Apply Loctite 242 Removable Threadlocker (or equivalent) to the setscrews. Reinstall the proximal adapter with the setscrews oriented to the anterior of the shank. Tighten the setscrews to 5 ft-lbs/7 Nm.

Note: the shank MUST bottom out inside the adapter.

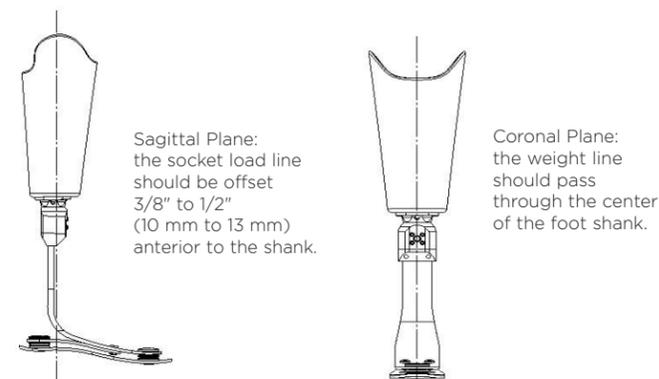
Fusion Foot with Rotating Pyramid
(height calculated using Magnum Titanium 4-Hole Pyramid Receiver, Part No. MHD-PR-4, sold separately)

Minimum Clearance to Heel:
 - For 3/4" heel: 6.45" (164 mm)
 - For 3/8" heel: 6.85" (174 mm)

Fusion Foot with Pyramid Receiver
(height calculated using Magnum Titanium 4-Hole Pyramid, Part No. MHD-PA-4, sold separately)

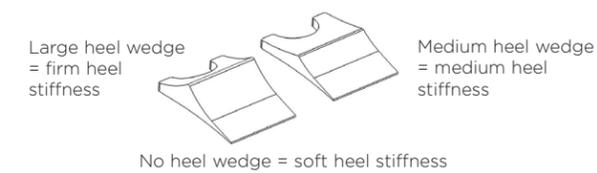
Minimum Clearance to Heel:
 - For 3/4" heel: 6.3" (160 mm)
 - For 3/8" heel: 6.7" (170 mm)

BENCH ALIGNMENT



ADJUSTING THE HEEL RESISTANCE

The Fusion Foot is supplied with two optional heel wedges for use in controlling the stiffness of the heel. Using the larger heel wedge creates a stiffer heel.



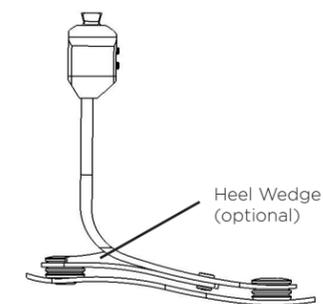
TO CHANGE THE HEEL RESISTANCE:

- Walk the patient to determine whether the stiffness of the heel is appropriate.
- If desired, snap a heel wedge into place between the shank and the head of the heel shoulder bolt. Walk the patient again.

Note: for this step, it is not necessary to apply the adhesive that is supplied with the foot. The heel is held in place firmly enough to suffice for a temporary fitting situation.

- To increase the stiffness of the heel, insert a larger heel wedge; to decrease the stiffness, insert a smaller heel wedge.
- Once the appropriate heel wedge has been determined, clean the heel wedge and carbon heel with acetone, then permanently attach the heel wedge to the carbon heel (but not to the shank) using the instant adhesive that was provided with the foot.

Avoid getting acetone on the Fusion graphic on the shank. Acetone will destroy the graphic.



ADJUSTING THE M/L ANKLE RESISTANCE

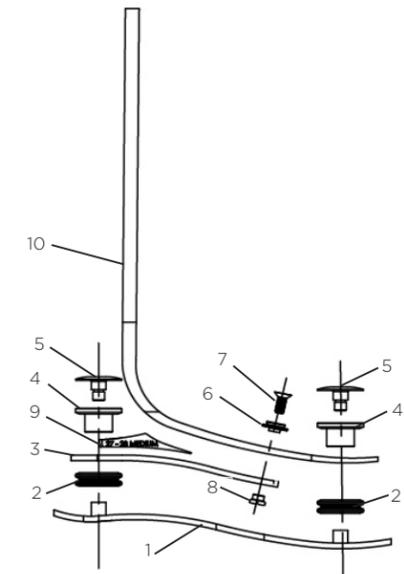
M/L ankle resistance is controlled by the snubbers that are installed between the composite plates. Two diameters of snubbers are available.



The foot is shipped with the smaller diameter snubbers installed. This configuration provides the most M/L compliance and is appropriate in most cases.

If the patient requires greater M/L ankle resistance, install the larger diameter snubbers as follows:

- Using a 4 mm hex wrench, remove the shoulder bolts.
- Remove the small diameter snubbers.
- Install the large diameter snubbers.
- Apply Loctite 242 (or equivalent) to the shoulder bolts.
- Install the shoulder bolts. Tighten the bolts to 9 ft-lbs (12 Nm). Be sure to fully engage the hex tool and avoid over-torquing the bolts.



- Composite Foot Plate: FFP-XXXX
- Snubbers: FFA-1005 (Small), FFA-1006 (Large)
- Composite Heel: FFH-XXXXX
- Bumpers: FFA-1007
- Special M8 Shoulder Bolts: FFA-1008
- Special M6 Flathead Washer: FFA-1010
- M6 Flat Head Screw: 700-B106 (M6x16), 700-B135 (M6x18)
- M6 Heel T-Nut: FFA-1011
- Optional Heel Wedge: FFA-1001 (23-26 cm), FFA-1002 (27-28 cm), FFA-1003 (29-31 cm)
- Composite Shank: FFS-XXXX-X