Agilix L-Code Technical Testing Report

Introduction

Freedom Innovations' Agilix prosthetic foot was tested according to the American Orthotic and Prosthetic Association (AOPA) test specifications published in September 2010 of *AOPA Prosthetic Foot Project Report.* The Agilix exceeds all required thresholds necessary to recommend the Healthcare Common Procedure Coding System (HCPCS) codes L5987 and L5986. All tests were conducted using a standard 27 cm left foot for an adult 80 kg (176lb) patient. Abbreviated test descriptions and results are described below.

L5987 (All lower extremity prosthesis, shank foot system with vertical loading pylon)

In order to use code L5987, the prosthetic foot must meet the Dynamic Keel threshold of Keel Test, and must meet the Dynamic Heel threshold of Heel Test, and must meet threshold of Vertical Loading Test described in *AOPA Prosthetic Foot Project Report.*

The Keel Test involves loading the toe of the prosthetic foot at an angle of 20° with a force of 1230 N and determining the displacement while under that load and percent of energy returned by calculating area between loading and unloading curves. Based on the test results the Keel can be classified as Rigid, Flexible, or Dynamic based on the classification criteria below.

Keel Type	Displacement @ 1230 N	% Return
Rigid	<25 mm	NA
Flexible	≥25 mm	<75%
Dynamic	≥25 mm	≥75%

For the Agilix, the actual displacement exceeded 25 mm and the percent of energy returned exceeded 75% which meets the criteria for the Dynamic Keel threshold of the Keel Test.

The Heel Test involves loading the heel of the prosthetic foot at an angle of 15° with a force of 1230 N and determining the displacement while under that load and percent of energy returned by calculating area between loading and unloading curves. Based on the test results the Heel can be classified as Dynamic or Cushioned based on the classification criteria below.

Heel Type	Displacement @ 1230 N	% Return
Dynamic	≥13 mm or pass % Return	≥82% or pass Displacement
Cushioned	Does not meet displacement and % Return Criteria for Dynamic	

For the Agilix, the actual displacement exceeded 13 mm which meets the criteria for the Dynamic Heel threshold of the Heel Test.

The Vertical Loading Test involves loading the prosthetic foot vertically with the appropriate heel height block under the heel to a load of 1230 N while measuring the vertical displacement. To meet the threshold for Vertical Loading Test, the prosthetic foot must have a minimum of 10 mm of displacement.

The Agilix actual displacement exceeded 10 mm, which meets the threshold of the Vertical Loading Test.

The Agilix exceeds all of the thresholds for all three tests needed to be eligible for L5987 according to AOPA's test specifications.

L5986 (All lower extremity prosthesis, multi-axial rotation)

In order to use code L5986, the prosthetic foot must meet the thresholds of the Multi-axial Test described in *AOPA Prosthetic Foot Project Report.*

This test includes three separate tests all of which must be passed in order to recommend L5986. They include: Sagittal Dorsiflexion Test, Sagittal Plantarflexion Test, and Coronal Inversion Test. The Sagittal Dorsiflexion Test requires the heel of the foot to contact the 10° test fixture when a force of 1230 N is applied to the foot. The Sagittal Plantarflexion Test requires the toe of the foot to contact the 8° test fixture when a force of 1230 N is applied to the foot. The Coronal Inversion Test requires a minimum of 8° of inversion when a force of 1230 N is applied as specified in report previously mentioned.

For the Agilix, the heel contacted the test fixture during the Sagittal Dorsiflexion Test, the toe contacted the test fixture during the Sagittal Plantarflexion Test, and the actual inversion exceeded 8°. All three thresholds were met or exceeded making this foot eligible for L5986.