

Academy Tech Tips

Creating a Build-Up on the Socket for Genium® and X2 Knee Joints

In order to avoid damaging the Genium and X2 prosthetic knee joints, it is important that the knee joint is set up such that the socket and distal adapter cannot come in contact with the hydraulic unit. We recommend building up a portion of the socket to act as a flexion stop that will contact the carbon fiber frame only.

If the socket and adapter do come in contact with the hydraulic unit, the following problems may occur while sitting, kneeling, or during initiation of the stairs or obstacles feature: complete loss of flexion resistance, leaking hydraulic fluid, malfunction of the flexion valve, knee angle sensor failure, damage to the piston, damage to the hydraulic unit, bending of the knee axis, or damage to the carbon frame. The warranty in Genium and X2 does not cover improper set-up of the knee. The photos below provide one example of a knee that is hitting the hydraulic unit and a solution to rectify this problem. In this Tech Tip we'll describe how to best set up the knee joint to prevent this issue.

Following Genium and X2 bench alignment, the knee must be placed into maximum flexion to ensure the user is not hitting the hydraulic unit. This should be done before the user attempts to stand on the prosthesis.



The photo to the left provides an example of incorrect bench alignment. Note that the carbon fiber of the socket is hitting the hydraulic unit.

If the socket does contact the hydraulic unit, we recommend that you build up a flexion stop on the posterior distal aspect of the socket.



The photos to the left provide one example of how building up a flexion stop on the posterior and distal aspect of the socket prevents the socket from contacting the hydraulic unit or piston.



Once the build-up has been applied, fully flex the knee to ensure no part of the socket or adapters are contacting the hydraulic unit. The socket should only contact the frame.

If you have any further questions, please contact Ottobock at 800 328 4058 and ask to speak with a member of our Professional and Clinical Services department.