

TECHNICAL LITERATURE UPPER STEELS GROWTH KIT E19796

During clinical practice it has been found that the most frequent growth adjustment which is needed to an ARGO Junior is extension of the thigh sections.

The lower steels do not usually require replacement as height changes of the lower leg can be accommodated by re-positioning the Steel at the time of AFO replacement.

The Upper Steels kit comprises:

One left and one right upper steel complete with lock lever and four M4x10 pan head slot screws (NSC0040).

The maximum recommended length of the Upper Steel is 275mm measured from the knee joint centre to the lower end of the Yoke. The side steel joints are operated with a posterior release lever and this is shortened as required, it may also be shaped for individual applications. Spare soft push-on covers are provided in the Cosmetic Cover Kit (E19669) together with a supply of Shrink Tubing.

Upper Steel maximum length hip centre to knee centre = 305mm

Measurement and Cutting the Upper Steels

Referring to the recorded measurement, the Upper Steels are marked out using the hip to knee measurement less 30mm to give the cutting off point. The end of the steel is cut square and all burrs are removed. The two securing holes are marked for drilling using the yoke as a guide. The holes are 'spotted' with a suitable centre punch. The steels are then removed from the yoke and cleared using sharp 4.2mm twist drill. The use of drilling jig (B19676) will reduce the risk of error.

When slight hip flexion contracture is present, 5° can be accommodated by removing the hip driving link from the hip assembly and flipping it over. The lock engagement slots allow two settings, 180° and 175°. Further slight flexion can be accommodated by antero-posterior bending of the steel. As the angle increases however, care must be taken to avoid excessive pressure at the knee strap as the compensatory bend which must be made in the Lower Steel will cause the user to 'kneel' in the orthosis. A reduction in the AFO leg/foot angle to less than 90° will also be required.

Knee Joints

When re-assembling the knee joints, first check the Pivot Screw for wear. If these are damaged it is likely that the complete Side Steel should be replaced. The Pivot Screw is tightened so that the knee lock operates correctly and the Lower Steel swings freely. No lateral movement is permissible. Loctite NUTLOCK, or a similar anti-vibration compound, must be used on the Pivot Screw to prevent loosening.

Fitting Checks

Check that the hip joints are at the correct level and that there is sufficient clearance over the trochanters. In cases where the hip height is unequal the usual practice is to place the joint centre at a height which is equidistant between the two levels.

If additional support is required at the hips the pads provided in the straps kit can be used. However, allowance should be made for the additional hip width when sitting.

Ensure that the knee joints are correctly aligned and positioned. That the feet are toed out by 5-8 degrees and that the track is sufficiently wide to ensure the user can move their centre of gravity without falling to the side and clear the ground during ambulation.

General

The orthosis should be clean and all sharp edges and rough surfaces removed. Fit the operating lever with its push on cover. Shrink tube of the appropriate colour is also fitted to the Upper Steels prior to mounting them into the yokes. The threads of all screws refitted during assembly must be cleaned and prepared with Loctite 222e (NAD0064). Excess Loctite must be wiped away.

Clinical Maintenance

It is essential that an appropriate recall system be set up for the review of users and orthoses. It is recommended that this be approximately every three months, but may be more frequent if the user is especially active.

Safety

For safety of other users, and with the view to continual review of the design, please notify RSL Steeper immediately of any potential faults which may be found – whatever the cause.

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