

Axxis backrest shells

Important information on the deployment and durability of Axxis backrests

Axxis concept:

At its launch, Axxis was a new concept in backrest support providing extensive options in size, shape, support and resilience. It can also be configured to suit complex spine profiles and significant asymmetry.

Another unique feature is the central mounting of the backrest which allows the backrest to flex laterally to accommodate functional and preferential movement and provide a sense of freedom.

Structural failures:

The inherent flexibility was designed into the structure of the shell and, despite the analysis of internal stresses at the design stage, and extensive pre-production trials and routine tests, a small number of failures have been reported. The historical rate of failure is **less than 4 shells per 1,000**. This is reducing due to design improvements and wider experience with selection and installation.

Investigation and remedies:

The nature and location of each failure has been thoroughly investigated in order to improve the safe and long term performance of the shells. Design and material changes have been made and monitoring of the performance of shells continues in order to evaluate the effect of the changes. Feedback from users indicates that the modifications have been effective and a significant fall in the incidence of failures is likely.

If a backrest shell fails:

It is not a catastrophic failure of the whole shell or backrest installation. Some of the support function such as a lateral support wing will be impaired and some additional flexibility and loss of support will be evident. The supporting hardware is immensely strong; this structure is not affected in any way and provides a robust safeguard against catastrophic failure.

However, the backrest will not perform as designed and will need replacing in the interests of safety, comfort and long term health.

Replacement and warranty procedures:

Although some reported breakages have been due to abuse or incorrect specification, all breakages have been dealt with, promptly, as warranty claims. The company's policy is to immediately issue a replacement, to request information regarding the circumstances in which the failure occurred and request the return of the failed item for examination.

Monitoring and analysis:

All information is collated and examined, along with each backrest, to strict protocols in order to classify the cause, nature, location and severity of the failure and to incorporate that information into the remedial process, either immediately or as part of the company's periodic design review.

Guidance on Backrest selection:

The Axxis concept is unique in its range of shape, size and flexibility. However, as with all modular systems, it is possible to create configurations which exceed the design limits of the system. A **User**



Manual is issued with every backrest and provides extensive information on the way in which the system should be configured and deployed and the techniques for ensuring safe installations.

Integral or External lateral supports?

There have been instances where too small a backrest has been specified, resulting in overloading of the shell. In other instances, the integral lateral supports of the backrest shell have been relied on where external lateral supports would have been more appropriate for the forces and areas involved.

Blending Axxis backrests with V-Trak external lateral supports is a routine procedure and specific guidance on choosing between integral and external lateral supports is available from our web site at www.v-trak.com/safetyupdates/IntegralorExternalLateralSupports. Further extensive guidance on installing and adjusting V-Trak lateral supports is available in the Help Manual from our web site at www.v-trak.com/manuals

Your feedback will help others:

Performance Health Products maintains a high level of supervision of its products' performance in the marketplace in 22 countries and is committed to a process of continuous improvement by responding to market feedback. Users, specifiers and all those interested in improving the quality and performance of all seating products can contact us with comments, criticisms and suggestions through our web site www.v-trak.com/email. All comments will be acknowledged, read, assessed and assimilated into our design processes.

Performance Health Products Ltd
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