

solution scale = 0.1290E+02

PA= 1.00000E+01 PB= 0.00000E+00 PX= 0.00000E+00

step 459 strains, ex, layer 1, outer fiber

Fig.a1 nonlinear axial strain - outer fiber; case=allflat

Minimum value = -3.42858E-03, Maximum value = 2.00470E-03

Θ x 24.00
Θ y -22.00
Θ z 30.00

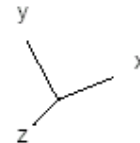


Fig. a1 STAGS prediction of outer fiber axial strain in the flat panel skin at the design load, PA = 10.0 (Nx = -1000 lb/in). In the STAGS model the value of skin end shortening at x=0 at the third stringer, numbering stringers from the bottom right-hand edge, is 0.023172 inch at the design load, PA = 10.0. This end shortening corresponds to an average axial strain, $\text{epsx(ave)} = 0.023172/9.7793 = 0.0023694$. This value of epsx(ave) seems a bit too small when compared with the average of outer fiber ex along x at the midwidth of the region where the finite elements are concentrated in the expanded insert.