

Child Restraint Devices in Commercial Aircraft:

I recommend moving the seat belt anchor to the seat back recline pivot bolt in order to increase the performance of child restraint devices (CRDs) in commercial air transport. According to a CAMI 1994 dynamic test (16Gpk/44 ft/sec), by moving the seat belt anchor point on the passenger seat aft to the seat back recline pivot bolt, a more effective load path for restraining the CRDs was demonstrated. Head excursions were significantly reduced with the modified anchor point. No head contact resulted for all three CRDs tested with the new anchor point. This modified belt installation also reduced the difficulties of installing a CRD in the confined space of a passenger seat.

Airplane seats differ from automobile passenger seats in anchor point geometry, tension adjustment, and buckle hardware. These differences can grossly affect the performance of a CRD designed primarily for the automobile interior. The airplane seat structure and close seat pitch placement in the economy class cabin are additional reasons for unsatisfactory performance with some CRDs (CAMI 1994).

---Kay Fortinberry
Orlando, FL