

Summary of the FAA's Commuter Airplane Crashworthiness Program

Abstract: The Federal Aviation Administration (FAA) is evaluating the adequacy of current certification standards for seat and restraint systems for small commuter category airplanes (14 CFR Part 23 and small Part 25). The FAA William J. Hughes Technical Center has conducted full-scale vertical drop tests of four commuter airplanes to characterize their impact response. The structural response of the airframes, seats, and anthropomorphic test dummies (ATDs) were measured for each test. The data obtained will be used to supplement existing databases. The airplanes tested were a 19-passenger Fairchild Metro III, a 19-passenger Beechcraft 1900C, a 30-passenger Short Brothers 3-30, and a 42-passenger ATR 42-300. The presentation will include an overview of the four tests, results, and conclusions.