

	The following minimum set of required upset recovery maneuvers must be evaluated in this manner and made available to the instructor/evaluator. Other upset recovery scenarios as developed by the FSTD sponsor must be evaluated in the same manner: (1) A nose-high, wings level aircraft upset; (2) A nose-low aircraft upset; and (3) A high bank angle aircraft upset. Upset Scenarios: IOS selectable dynamic airplane upsets must provide guidance to the instructor concerning the method used to drive the FSTD into an upset condition, including any malfunction or degradation in the FSTD's functionality required to initiate the upset. The unrealistic degradation of simulator functionality (such as degrading flight control effectiveness) to drive an airplane upset is generally not acceptable unless used purely as a tool for repositioning the FSTD with the pilot out of the loop. Instructor Operating System (IOS): The simulator must have a feedback mechanism in place to notify the instructor/evaluator when the simulator's validated aerodynamic envelope and aircraft operating limits have been exceeded during an upset recovery training task. This feedback mechanism must include: (1) FSTD validation envelope. This must be in the form of an alpha/beta envelope (or equivalent method) depicting the "confidence level" of the aerodynamic model depending on the degree of flight validation or source of predictive methods. The envelopes must provide the instructor real-time feedback on the simulation during a maneuver. There must be a minimum of a flaps up and flaps down envelope available; (2) Flight control inputs. This must enable the instructor to assess the			one or more of the following conditions: ▪ Pitch attitude greater than 25 degrees, nose up ▪ Pitch attitude greater than 10 degrees, nose down ▪ Bank angle greater than 45 degrees ▪ Flight at airspeeds inappropriate for conditions. FSTDs used to conduct upset recovery maneuvers at angles of attack above the stall warning system activation must meet the requirements for high angle of attack modeling as described in section 2.m. Special consideration should be given to the motion system response during upset prevention and recovery maneuvers. Notwithstanding the limitations of simulator motion, specific emphasis should be placed on tuning out motion system responses.
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