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**Title** Estimation of LCA PV1(SG), TD1(SG) and TD2(SG) Derivatives from Flight Test Data

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**Abstract**

The document presents the estimation results obtained from the analysis of flight test data from LCA PV1 (SG), TD1 (SG) and TD2 (SG) with zero and full / auto slat. The aircraft derivatives are estimated using SOEM and OEM approach. Typical time history matches for model estimation and model validation are presented. Results show that pitch damping and aileron control effectiveness in flight are generally lower than that predicted by wind tunnel database. Plots of the estimated values of  $C_{l\beta}$  and  $C_{lp}$ , with and without slat, show an increase in the aircraft dihedral stability and a decrease in roll damping with slat.