

VIREO / Day13 / Flight27

TEST: Closed-loop control law validation. Right elevon stuck at 5 deg trailing-edge up with TECS and single surface controller (Design A). Autoland successful.

RESULT: Good flight for control law validation. However, the aircraft crash-landed and the forward cusp in the fuselage - that holds down the leading edge of the wing root - broke on impact. This will require repair.

EVENTS:

1. This was a right elevon-hold flight. The throttle tracked total energy. The left elevon tracked the roll angle.
2. We tuned the L1 period and roll tracker gains.
3. We performed an aborted autoland in bravo mode. The aircraft dropped below the virtual runway altitude of 100 ft. In addition, a manual go-around could not be attempted in time. As a result, the aircraft came in hard and crash landed. During the crash, the forward cusp in the fuselage - that holds down the leading edge of the wing root - broke on impact.
4. The plan is to fix the broked piece and resume flight testing.