CONTROLLING YAW

The vertical stabilizer and the fuselage sides—aft of the airplane's center of gravity (CG)—are prime contributors to stability about the vertical axis, or yaw. Presuming the tail and its vertical stabilizer are properly aft of the CG, the fuselage and tail act as a weather vane, pointing into the relative wind.

If the airplane is in straight-and-level cruising flight and a sideward gust impacts it, the tendency is to create a yawing motion about the vertical axis, into the relative wind, also known as a "skid." This tendency is dampened by increased aerodynamic pressure on the vertical stabilizer from the gust, which resists the yaw. However, the skid persists and the airplane likely will remain in its skidding attitude until the pilot applies corrective rudder pressure.

Above, the vertical stabilizer from American Airlines Flight 587 is recovered. The Airbus A300 crashed shortly after departing KJFK on November 12, 2001, when its vertical stabilizer and rudder separated in flight and fell into Jamaica Bay.