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Landing Gear Systems

OF ALL THE SYSTEMS ON AN AIRCRAFT, LANDING GEAR CAN certainly be the most embarrassing. It has the ability to quickly cause extensive damage by the pilot simply forgetting to move a single switch. And never be lulled into thinking the landing gear warning horn will prevent you from making that costly mistake.

A military pilot—who successfully got his single-engine fighter back to an airport after the engine had failed some distance away—proceeded to land gear up, doing extensive damage to an otherwise unblemished aircraft. During the inquiry he was asked how such a thing could happen after his successful effort to make it back to the airport in the crippled aircraft. He told the board of inquiry that he was under enormous stress and couldn't think clearly because of a loud horn blasting in the cockpit as he approached the runway. It was the gear-up warning horn.

Interestingly, landing gear was an afterthought. The Wright Flyer used skids and a rail system. Dr. Samuel Langley's ill-fated Aerodrome was to be launched from a houseboat floating down the Potomac River, then landed on the water. Putting tires on an airplane wasn't seriously considered until 1909, when the U.S. Army purchased its first aircraft and specified that it should have landing gear with inflatable tires.

Modern landing gear, while certainly more sophisticated than ever, is still fairly straightforward. Nonretractable landing gear are still common on many light,