Drilling Down Into The Data

For the most part, accident analysis techniques used by the NTSB, the FAA and most industry organizations are misleading. They only reveal the final event(s) resulting in the smoking hole in the ground, rather than the real root cause of the accident. To get the whole picture on what causes fatal accidents, we need to delve deeper into the accident pilot's approach to risk management. When we do, we're likely to see some surprising results, which should cause us to re-think our approach to how we conduct our flight operations and train pilots.

For example, the Aircraft Owners and Pilots Association (AOPA) Air Safety Institute (ASI) issues its annual *Nall Report*. This report provides interesting data that basically slices and dices the NTSB probable causes. The ASI also maintains a user-friendly accident database, derived from NTSB reports, providing anyone with a convenient platform from which to perform their own analysis and evaluation.

The 2010 ASI Nall Report (covering data for 2009) is true to form and offers the same type of analysis as in previous annual reports. For example, the 2010 report analyzes accidents by "cause" (pilot-related, mechanical, and other), by type of aircraft and phase of flight, by NTSB causal factors, and by other parameters. The charts below and at right are adapted from the ASI's 2010 *Nall Report*.

Causes of Fixed-Wing General Aviation Accidents, 2009

	Non-Commercial		Commercial	
Major Cause	Accidents	Fatal Accidents	Accidents	Fatal Accidents
Pilot-related	829 70%	147 63%	50 62%	1 50%
Mechanical	203 17%	24 10%	23 28%	0 0%
Other or unknown	149 13%	62 27%	8 10%	1 50%

Pilots Involved in Non-Commercial Fixed-Wing Accidents, 2009

Certificate Level	Accidents	Fatal Accidents	Lethality
ATP	156 13%	31 13%	20%
Commercial	280 24%	58 25%	21%
Private	610 51%	132 56%	22%
Sport	27 2%	4 2%	15%
Student	94 8%	5 2%	5%
None	17 1%	3 1%	18%
Unknown or recreational	6 1%	3 1%	50%
Two pilots on board	153 13%	35 15%	23%
CFI on board*	248 21%	44 19%	18%
Instrument-rated pilot on board*	587 49%	130 55%	22%

* Includes single-pilot accidents