

About the Commentary: The Commentary addresses selected issues within the AVIATORS' MODEL CODE OF CONDUCT (AMCC) to elaborate on their meaning, provide interpretive guidance, and suggest ways of adopting the AMCC. It is intended primarily for implementers, policy administrators, aviation association management, and pilots who wish to explore the AMCC in greater depth. Please send your edits, errata, and comments to <PEB@secureav.com>. Terms of Use are available at <<http://secureav.com/terms.pdf>>.

COMMENTARY TO AMCC III.c – TRAINING AND PROFICIENCY

c. act with vigilance and avoid complacency,

Constant vigilance¹ and the avoidance of complacency are essential to flight safety. There are many positive steps pilots can take to avoid complacency, from rigorously following Standard Operating Procedures (SOPs) and checklists to consistently rechecking and challenging themselves with “what ifs.”² Pilots, including flight instructors, should invite other pilots and flight instructors to thoroughly check their work. “Complacency could also be related to advancements in technology that have made flying easier and safer. Too much trust in the technology may lead pilots to believe, for example, that instrument crosschecks to confirm aircraft position or altitude are unnecessary or can be done less often.”³ Or, for example, “[m]onitoring the autopilot in a low-stimulus environment . . . will easily lead to a state of ‘automation complacency’.”⁴

Consider these comments on complacency by various aviation experts:

- “Aviation safety is achieved by hard work and constant *vigilance* to prevent accidents . . .”⁵
- “The pilot’s skills and airmanship, which includes *constant vigilance* and complete preparation, are the bottom line.”⁶
- “Complacency . . . encourage[s] taking things for granted, errors for which aviation can be mercilessly intolerant.”⁷
- “Complacency [is] self-satisfaction that can result in non-vigilance based on an unjustified assumption of satisfactory system state.”⁸
- “One of the negative aspects of accumulating a great number of hours is that such a pilot might begin to believe his own *press releases*. The result can be a fatal form of complacency.”⁹
- “The greatest enemies of situational awareness are complacency and the tendency to get into a hurry.”¹⁰
- “An insidious aspect of complacency is that it most affects those with the greatest experience.”¹¹
- “If 50 years of experience across the Atlantic has taught us anything, it’s that you can’t rest on 50 years of experience.”¹²
- “Don’t get complacent during instruction!”¹³

To prevent complacency, maintain constant situational awareness, adhere to checklists, conduct mental rehearsals, review accident and incident reports, conduct self-critiques, asking the question “what if?”, and focus on improving your training regime.¹⁴

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¹ “The Government and the Safety Regulation Group recognise that aviation safety needs *constant vigilance* by regulators and industry alike.” Department of Transportation, UK, at < http://www.dft.gov.uk/stellent/groups/dft_aviation/documents/divisionhomepage/031488.hcsp > (emphasis added). See FAA, *Extra Vigilance: Is There Such a Thing?*, Air Traffic Bulletin (Sept. 2002), at < <http://www.faa.gov/atpubs/atbarc/02-4.htm#3> > (defining vigilance). Since the TWA Flight 800 (1996) and 9/11 (2001) tragedies, “vigilance” in aviation has been focused increasingly on security matters. See, e.g., NPRM – Special Air Traffic Rules, 70 Fed. Reg. 45252 (Aug. 4, 2005), available at < <http://web.nbaa.org/public/ops/airports/dca/FAA-2003-17005.pdf> > (urging “continued need for aviation security vigilance”). See also AMCC IV.b, *Remain vigilant and immediately report suspicious, reckless or illegal activities*.

² “Avoid complacency. Once you’ve completed a thorough preflight and are airborne don’t let your guard down.” Frederisk Scheffel, *The 10 Commandments of Safely Flying a Powered Parachute*, EAA SPORT PILOT, Aug. 2004, pp. 28, 31. See generally E. L. Wiener, *Complacency: Is the term useful for air safety?*, Proceedings of the 26th Corporate Aviation Safety Seminar, Flight Safety Foundation, Inc. (Denver 1981), pp. 116-125.

³ See RICHARD L. COLLINS, *THE PERFECT FLIGHT 162-163* (MacMillan Publ’g Co. 1994); see also NBAA *Training Guidelines, Single Pilot Operation of Very Light Jets and Technically Advanced Aircraft* (Jan. 2005), p. 4, available at < http://web.nbaa.org/public/ops/safety/vlj/VLJ_TrainingGuide.pdf%20 > (urging “single pilot adherence to checklists” in response to the risks of “complacency resulting from simplicity of VLJs”); EARL L. WIENER, IN WIENER, ET AL., *HUMAN FACTORS IN AVIATION 452* (Elsevier 1988) (“boredom and complacency . . . [and] a strong sense of being ‘out of the loop’.”).

Separately, consider the tension between remaining vigilant and technology-oriented human factors. “The first option (reminding pilots to be vigilant) is a ‘motherhood’ recommendation which obliquely addresses human performance. The second option (system procedures re-design) proposes clear safety action to address human performance issues and it builds upon evidence hard enough to eventually withstand legal scrutiny.” Capt. Daniel E. Maurino, ICAO, *Aviation Human Factors and the Safety Investigation Process*, Conference of the Int’l Society of Air Safety Investigators, Anchorage, Alaska (Oct. 15, 1997), p. 3.

“Complacency usually results from too little stress . . . [it] often occurs when a pending mission element is perceived as relatively undemanding or ‘routine.’ Inattention, dropping your guard, and unnatural trust in someone else’s abilities also fall into the ‘complacency’ category. Complacency could also be related to advancements in technology that have made flying easier and safer. Too great a trust may lead one to believe that instrument crosschecks to confirm aircraft position or altitude don’t need to be done as often (or that they’re unnecessary).” Charles Goodman, *Factors Affecting the Decision to Eject*, USAF School of Aerospace Medicine (lecture materials), p. 5, at < http://www.brooks.af.mil/web/af/courses/amp/AMP_Online/AMP_Lectures/factors_affecting_the_decision_to_eject.doc >. Compare, “Use technology to mitigate this (complacency). In the CPPP (Cirrus Pilot Proficiency Program) we try to turn the technology and automation into something that actually promotes this cross-checking behavior. We ask our pilots to conduct a ‘5-P’ check at key points - prior to takeoff, upon reaching cruise, then hourly, and prior to descent for landing. The five ‘Ps’ are: The Plan, The Plane, The Pilot, The Passengers, and The Programming. The latter refers to the automation, including the autopilot. Then, to close the automation loop, we program ‘5P Check’ into the avionics as a regularly scheduled reminder message that alerts us at appropriate times during the flight. We thus endeavor to use the automation itself to periodically ‘jolt’ us into an active thinking mode.” Email from Michael Radomsky, Pres., Cirrus Owners and Pilots Ass’n (Oct. 18, 2005).

⁴ Ray Leis, *Sleep When You’re Dead*, IFR, June 2005, p. 18. See P. Colquhoun, *Psychological and Psychophysiological Aspects of Work and Fatigue*, *ACTIVITAS NERVOSA SUPERIOR* (1976), pp. 18, 257-263, cited in Samuel Strauss, DO, MPH, NASA, *Pilot Fatigue*, available at < http://aeromedical.org/Articles/Pilot_Fatigue.html >.

⁵ Gregory A. Feith, *Aircraft Accident Investigation and Prevention – The National Transportation Safety Board Perspective*, LPBA J. 29, 33 (Spring 2003) (emphasis added).

⁶ Email from Gordon Henrie, MCFI, Author/Lecturer (Sept. 26, 2005).

⁷ BARRY SCHIFF, FLYING WISDOM: PROFICIENT PILOT VOL. 3 251 (Aviation Supplies & Academics 1997).

⁸ Lawrence J. Prinzel III, *The Relationship of Self-Efficacy and Complacency in Pilot-Automation Interaction*, NASA, NASA/TM-2002-211925 (Sept. 2002), available at < <https://repository.lanl.gov/retrieve/200/NASA-2002-tm211925.pdf> >.

⁹ Barry Schiff, *Total Time*, AOPA PILOT, Dec. 2003, p. 44.

¹⁰ Gordon C. Henrie, MCFI, *Awareness level*, NAFIMENTOR, Sept. 2005, p. 8.

¹¹ BARRY SCHIFF, FLYING WISDOM: PROFICIENT PILOT VOL. 3 268 (Aviation Supplies & Academics 1997).

¹² Barry Schiff, *Airmanship – Proficient Pilot*, AOPA PILOT, Oct. 2003, p. 46.

¹³ Travis Air Force Base, *Collision Avoidance Tips*, available at < http://public.travis.amc.af.mil/public/maca/Local_Concerns.htm >.

¹⁴ Richard S. Jensen, *Pilot Judgment and Crew Resource Management* (Aldershot, UK: Avebury Aviation 1995), cited in TONY KERN, REDEFINING AIRMANSHIP 339 (McGraw-Hill 1996). Complacency in almost any aviation task can diminish flight safety. For example, “[h]ow many GA pilots understand that they are rolling the dice whenever they place a fuel request and are not actually in attendance when the aircraft is fueled?” Email from Gary L. Evans, Esq., COATS & EVANS, P.C. (Oct. 1, 2003). One survey found that only 37% of pilots oversee their aircraft fueling and that 60% believe they are not responsible for ensuring that the proper fuel grade is used. Joe A. Stamm, *Avoiding a Most Unpleasant Come Down*, FAA AVIATION NEWS, Jul./Aug. 2005, at 15-16. Another survey found that only 14% of pilots completed the annual checklist to update their IFR charts. Jane Garvey, *Don't Sweat Updates*, IFR (Nov. 2004), p. 20.
