SAFETY ALERT 025

NTSB National Transportation Safety Board

May 2013, Rev. December 2015

AVIATION
HIGHWAY
MARINE
RAILROAD
PIPELINE

Distracting Devices? Turn Them Off!

Avoid Nonoperational Use of Portable Electronic Devices (PEDs) Before and During Flight

The problem

Nonoperational use of PEDs by pilots (including cell phones, smart phones, tablets, and laptop computers) can divert attention from activities necessary for safe operations, both in the air and on the ground.

- Nonoperational use of PEDs has been documented during
  - preflight planning and preparation,
  - cruise, and
  - maneuvering flight.
- PED-related distraction has played a role, or at least been present, in accidents involving improper fuel management, loss of positional awareness, loss of automation mode awareness, collision with obstacles, and loss of control.

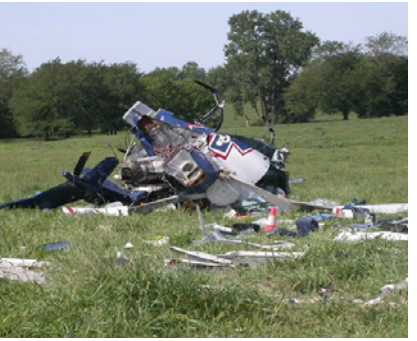

Figure 1. Photograph of the accident site. (CEN11FA599)

Related accidents

- On August 26, 2011, a Eurocopter AS350 B2 helicopter, N352LN, impacted terrain following an engine failure near the airport in Mosby, Missouri. The helicopter experienced fuel exhaustion because the pilot departed without ensuring that the helicopter was adequately fueled. **The investigation determined that the pilot engaged in frequent personal texting, both before and during the accident flight.** The pilot and a flight nurse, flight paramedic, and patient were killed. (CEN11FA599)[1]

1 The report for this accident, which includes concurring and dissenting statements, is accessible at http://www.ntsb.gov/investigations/AccidentReports/Reports/AAR1302.pdf. The reports for the other accidents referenced in this safety alert are accessible by NTSB case number at http://www.ntsb.gov/_layouts/ntsb.aviation/index.aspx. Each accident's public docket is accessible at http://www.ntsb.gov/investigations/SitePages/dms.aspx.

- On October 21, 2009, a commercial airline flight was operated with no radio communications for 1 hour 17 minutes and overflew its destination when the flight crewmembers neglected to tune in to a new radio frequency as directed by air traffic control and missed numerous company messages advising them of the problem. **Evidence indicated that the flight crewmembers became distracted, in part, by their simultaneous use of personal laptop computers and conversations and activities unrelated to the operation of the flight.** No one was injured in this incident. (DCA10IA001)

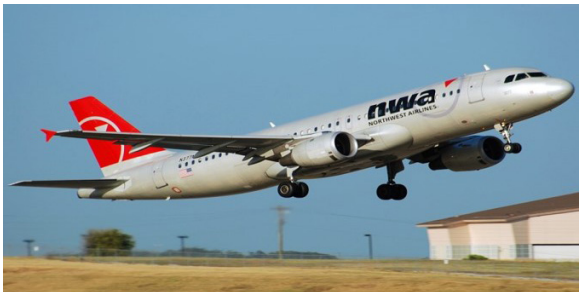

Figure 2. Northwest Airlines Flight 188. (DCA10IA001)

- On December 30, 2007, a Cirrus Design SR-22 impacted terrain during a low-altitude fly-by of a friend's residence. The pilot was speaking on his cell phone during the fly-by when he encountered turbulent wind conditions and initiated a rapid climb; the airplane experienced an accelerated stall, resulting in loss of control. **The NTSB found that the pilot's diverted attention while using his cell phone contributed to this accident.** The pilot was killed. (LAX08FA043)
- On February 23, 2006, a Cessna 182D collided with power lines, located 100 feet above ground level, while flying over an interstate highway in night visual meteorological conditions. **Evidence indicated that the pilot was speaking by cell phone with the driver of a nearby tractor-trailer, a friend, who was traveling on the highway in the same direction as the airplane.** The pilot was killed. (NYC06LA073)

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or at least been present, in accidents involving

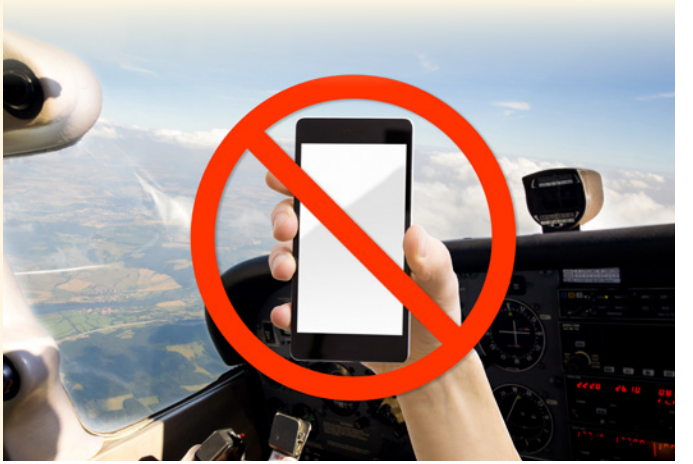
improper fuel management, loss of positional awareness,

loss of automation mode awareness,

collision with obstacles, and loss of control.

What can pilots do?

- **Recognize the potential for distraction arising from nonoperational use of PEDs.**
- **Avoid nonoperational use of PEDs during preflight planning and preparation to focus your attention on these critical tasks.**
- **Turn PEDs off before engine start if they have no operational purpose during the flight.** Ensure that PEDs that are used in flight are not used for purposes other than those intended to support the flight.
- **Establish your own sterile cockpit procedures to reduce distractions.** Avoid the nonoperational use of PEDs when the sterile cockpit applies.



Interested in more information?

On February 12, 2014, the Federal Aviation Administration (FAA) issued a final rule, titled **"Prohibition on Personal Use of Electronic Devices on the Flight Deck,"** to prohibit flight crewmembers in Part 121 operations from personal use of PEDs while at their duty station on the flight deck while the aircraft is being operated. The final rule can be found at http://www.gpo.gov/fdsys/pkg/FR-2014-02-12/pdf/2014-02991.pdf.

On April 26, 2010, the FAA issued an Information for Operators (InFO) bulletin, titled **"Cockpit Distractions,"** addressing this issue. This InFO bulletin can be found at http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/media/2010/InFO10003.pdf.

The NTSB's Aviation Information Resources web page, www.ntsb.gov/air, provides convenient access to NTSB aviation safety products. This Safety Alert and others can be accessed from the Aviation Safety Alerts link at www.ntsb.gov.

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The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—highway, marine, railroad, and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. For more information, visit **www.ntsb.gov.**