

More Accidents, Less Oversight

U.S. on-demand operations, with a far higher accident rate than scheduled commercial carriers, receive less attention from the FAA.

REPORTS

Counting Seats Is Not What Counts

On-Demand Operators Have Less Stringent Safety Requirements and Oversight Than Large Commercial Air Carriers

U.S. Department of Transportation, Office of Inspector General. AV-2009-066. July 13, 2009. 25 pp. Available via the Internet at <www.oig.dot.gov/item.jsp?id=2511>.

In the United States, on-demand — also called for-hire, air taxi, chartered and unscheduled — flights are conducted by more than 2,300 operators, compared with about 120 commercial air carriers. On-demand operators' aircraft, estimated at more than 9,000 total, are configured for 30 passengers or fewer or less than 7,500 lb of payload under U.S. Federal Aviation Regulations (FARs) Part 135. On-demand includes unscheduled passenger flights, cargo operations, commercial sightseeing, and air medical missions such as emergency medical services.

“The operators comprising the on-demand industry segment can range from a company with one pilot and one aircraft to a company with over 600 aircraft,” the report says. “On-demand aircraft range from small, two-seat piston engine aircraft to helicopters to turboprops and jets with 10 or more seats.”

As an example of the leaner oversight given to on-demand companies, the report cited an operator that offered “dozens of flights daily during the summer” for glacier viewing, in the course of which the aircraft landed and took off on skis. “This operator flies 17 aircraft and was inspected eight times by FAA [the U.S. Federal Aviation Administration] in 2008,” the report

says. “In contrast, a [FARs] Part 121 operator with 10 aircraft, overseen by the same FAA oversight office, received 199 inspections in 2008.”

The report's findings are summarized under three major headings.

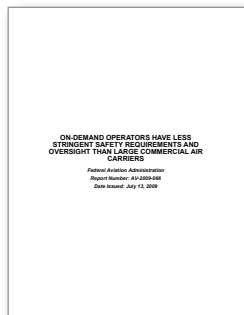
First, “On-demand operators have less stringent safety regulations than commercial operators.” The report says that the on-demand industry has changed, while regulations have not: “Many of the Part 135 provisions [which apply to on-demand operations] have not been updated since 1978.” Today, the use of jet aircraft is far more common, and operators fly internationally more frequently, than was the case decades ago.

“Current requirements for maintenance focus on the number of passenger seats [as a criterion for safety inspection] rather than the risk factors in an aircraft's operating environment,” the report says. For example, unlike Part 121 carriers, on-demand carriers are not required to have a maintenance program that includes required inspection items and a continuous analysis and surveillance system.

Crew resource management (CRM) training is not required for on-demand operators. “CRM for on-demand operators is one of the NTSB's [U.S. National Transportation Safety Board's] six most wanted aviation safety improvements,” the report says.

The FAA has issued a notice of proposed rule making that would expand CRM training requirements to Part 135 operators (ASW, 6/09, p. 45).

Other areas noted by the report under this heading are the lack of required safety training



for cabin attendants if the aircraft carries 19 or fewer passengers; the lack of a requirement for dispatchers who follow the flight and can inform the flight crew of conditions that might affect safety, such as adverse weather; no required aging-related aircraft inspections in on-demand service, although according to an FAA study, 60 percent of the on-demand passenger and cargo fleet is over 20 years old; that maintenance requirements for on-demand aircraft seating nine or fewer passengers are less demanding than those for larger aircraft; and that recommendations to strengthen Part 135 oversight, submitted in 2005 by the FAA Aviation Rulemaking Committee (ARC), have not resulted in any final rule making by the agency.

“We found that 16 NTSB recommendations resulting from on-demand operator accident investigations issued since June 2002 also remain open,” the report says. “For example, the NTSB has been concerned about the safety effects of fatigue on flight crews since 1989, and has recommended that operators set working-hour limits for flight crews based on fatigue research. ... Another key NTSB concern is reducing dangers to aircraft flying in icing conditions; this has been on the NTSB’s most wanted aviation safety improvements list since 1997. FAA’s response to this has been classified as ‘unacceptable’ by the NTSB.”

The FAA has recently amended the airworthiness standards applicable to transport category airplanes certificated for flight in icing conditions. The rule, effective Sept. 2, 2009, requires either that ice protection systems be automatically activated or that a means be provided to tell pilots when they should be activated.

The second major heading for the report’s findings is “on-demand operators have more inherent risks in their operations and more fatal accidents than commercial operators.”

The report says that on-demand operators have more takeoffs and landings per aircraft; fly to many airports lacking control towers; use pilots who may be unfamiliar with routes; and have smaller aircraft than airlines. “Because

they fly at lower altitudes, on-demand aircraft are more vulnerable to sudden weather changes or other obstacles,” the report says. “We note that the high-end jet aircraft flown by some on-demand operators have the same advanced electronics as commercial aircraft. Many of the smaller operators, however, still have very basic equipment in their cockpits.”

On-demand operators have more fatal accidents as a result of the higher risks involved, the report says: “Between 2000 and 2008, the fatal accident rate for on-demand operators was 50 times higher than that of commercial carriers. Since January 2003, on-demand operators have been involved in 95 fatal accidents, which resulted in 249 deaths. ... The most fatalities for the period 2003 through 2008 occurred in the states of Alaska and Hawaii and in the Gulf of Mexico. In both Alaska and Hawaii, air tours are common, and small planes are a major source of transportation for people and cargo. In addition, there are numerous helicopter operations in the Gulf of Mexico delivering crews and supplies to oil rigs [platforms].”

The report lists other problems under the heading “FAA lacks a risk-based oversight strategy for on-demand operators.”

The FAA Air Transportation Oversight System, based on data-driven risk assessment, is the agency’s primary tool for overseeing commercial carriers. But, the report says, “oversight of on-demand operators is primarily based on required, pre-determined inspection items assigned to inspectors on a nationwide basis. These items are focused on compliance with regulations rather than where risk dictates.”

Required inspections, called “R-items,” for on-demand operators are based on the National Program Guidelines (NPG), assigned nationally without regard to specific operator factors. “Inspectors must complete all R-items and may add other inspections to their work plan (planned or P-items) for operators that they feel need additional oversight,” the report says. “However, some of the inspectors we spoke with did not complete P-items because they only had time to complete the R-items on their programs.”

“FAA lacks a risk-based oversight strategy for on-demand operators.”

Inspections are spread thinly, the report says: “Operations inspectors must conduct a ramp inspection on a minimum of 10 percent — a minimum of 25 percent for the Alaska region — of all on-demand operators that are certificated within their region. Surveillance of these operators must be rotated from year to year, meaning an operator could receive a ramp inspection from an operations inspector as seldom as once every 10 years.”

The operators flying the smallest aircraft get less attention. The report says, “We found that 78 percent of all fatal on-demand accidents between 2003 and 2008 involved aircraft seating nine or fewer passengers. Yet, the NPG require inspections for aircraft seating 10 or more passengers that are not required for aircraft seating nine or less. Single-engine aircraft and single-pilot operations have even fewer required inspections than operators categorized as [having] nine or fewer seats.”

A new, risk-based oversight method, the System Approach for Safety Oversight (SASO), is under development. But the FAA plans to wait until SASO is up and running — not expected before 2013 — rather than implement any interim prioritization process for on-demand aviation, the report says.

The report recommends that FAA revise its regulations and practices by:

- “Establishing milestones to track the implementation of recommendations made by the ARC and the NTSB that would enhance the safety and oversight of on-demand operators and reporting annually on progress toward those milestones to the Office of Inspector General;
- “Implementing an interim risk assessment oversight process for on-demand operators until the risk-based SASO approach is implemented; [and,]
- “Considering the inherent operational risk factors in on-demand operations in developing risk indicators for the new risk-based Part 135 oversight system.”

— Rick Darby

Handle With Care

Musculoskeletal Ill-Health Risks for Airport Baggage Handlers: Report on a Stakeholder Project at East Midlands Airport

Oxley, Laraine; Riley, David; Tapley, Sarah. Health and Safety Executive (HSE), United Kingdom. RR675. 106 pp. Available via the Internet at <www.hse.gov.uk/research/rrhtm/rr675.htm>.

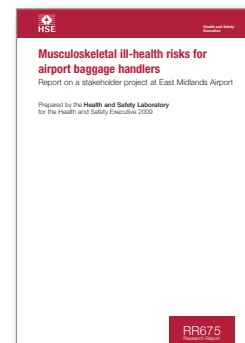
According to the results of an HSE questionnaire, 73 percent of airport baggage handlers reported having lower back trouble, 51 percent reported knee problems and 43 percent reported shoulder trouble in the previous three months. “Compared to other data from physically demanding tasks, baggage handling produced the highest prevalence rates for trouble experienced in the last three months/year,” the report says.

The report describes work undertaken to better understand musculoskeletal risks of baggage handling and to appraise the efficacy of new extending belt loader (EBL) technology. Data were collected on site visits to East Midlands Airport, Bristol Airport and Stansted Airport, England.

Loading baggage onto aircraft is performed according to two basic methods: direct-to-hold, where the baggage is transferred manually from a cart to the hold door, and mechanically assisted, using some form of equipment, mainly belt loaders. Unloading uses similar methods in reverse.

In its recommendations, the report says that “EBL-type technology significantly reduces musculoskeletal risks through the mechanization of the transfer of bags down the hold and improvements in posture and lifting.” It adds, “For the external on- and off-load of bags, the vertical level and lift distance of the bags is more favorable when using a belt loader ... compared to direct-to-hold loading from the ramp.”

— Rick Darby

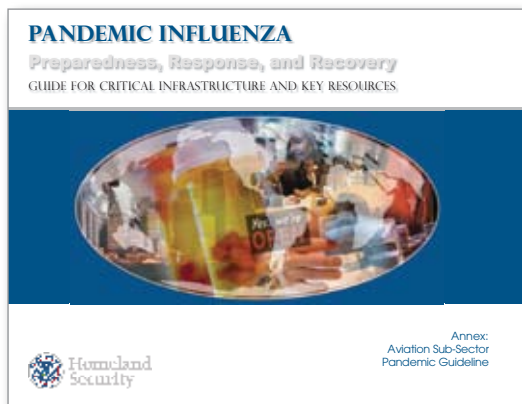


WEB SITES

Flu Planning

Pandemic Influenza: Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources. Annex: Aviation Sub-Sector Pandemic Influenza Planning Guidelines, <www.dot.gov/pandemicflu/pdf/aviation.pdf>

One would have to be living under a rock to be unaware of news reports of the latest threat of pandemic influenza virus. Most



governments provide information and guidance to individuals and businesses about planning and operations in anticipation of, and during, an outbreak. The U.S. Department of Homeland Security (DHS) issued an 84-page guide in 2006 saying,

“Eighty-five percent of critical infrastructure resources reside in the private sector, which generally lacks individual and systemwide business continuity plans specifically for catastrophic health emergencies such as pandemic influenza.” DHS said that most existing contingency plans for businesses are tailored for diverse natural and manmade disasters that “do not account for the extreme health impact assumptions and containment strategies projected for a severe pandemic influenza.”

In March 2008, DHS issued a 16-page annex to the initial report, tailored specifically to aviation. “Organizations that fail to prepare for such a prolonged and potentially catastrophic event may find themselves without the staff, equipment or supplies necessary to continue providing essential transportation services for their customers and the nation,” the annex says.

The annex is a non-prescriptive reference to help owners, operators and planners evaluate and augment their emergency response plans to include pandemic health events. DHS identified seven key areas of vulnerability with related questions and actions to consider. Noting that individual airports, airlines and other aviation businesses will be affected differently in a pandemic environment and act or react differently, the annex says guidelines “are designed simply to represent a starting point to stimulate thinking about further actions and options.”

Seven key action areas and examples of questions to consider are these:

Identify and assess essential services, supporting functions and processes. How can your business adapt to support a community or the nation?

Review assets and equipment critical to support essential functions. Unlike a natural disaster, a health pandemic will not directly damage physical assets and infrastructure, but could recurring maintenance requirements be met during a pandemic lasting three months?

Review materials and supplies to sustain functions and equipment for up to 12 weeks. How would critical materials such as parts and fuel be affected? How vulnerable are contractors and suppliers?

Identify types and numbers of workers needed to sustain essential functions; policies and procedures that ensure safe workplaces and minimize disease transmission; and actions to protect and sustain essential workers. “A severe pandemic influenza scenario may result in absentee rates as high as 40 percent among all worker groups,” says the DHS.

Identify interdependent relationships and actions to sustain mutual support. Which businesses does your organization most depend upon (such as communications, food, power generation or trucking), inside or outside of aviation?

Identify regulatory and government policy issues that may affect business operations. What issues might arise for your business if temporary regulatory waivers or new government restrictions are imposed?

Identify and assess consequences resulting from community mitigation strategies. How will local community quarantines and nonessential travel restrictions affect your business?

The annex and the initial report contain numerous references and links to other resources, documents and Web sites with information on influenza; occupational health and safety; public and media relations; internal communications; and other aspects of response planning, preparation and recovery. The initial report may be accessed directly at <www.flu.gov/plan/pdf/cikrpanicinfluenzaguide.pdf>. 🌐

— Patricia Setze