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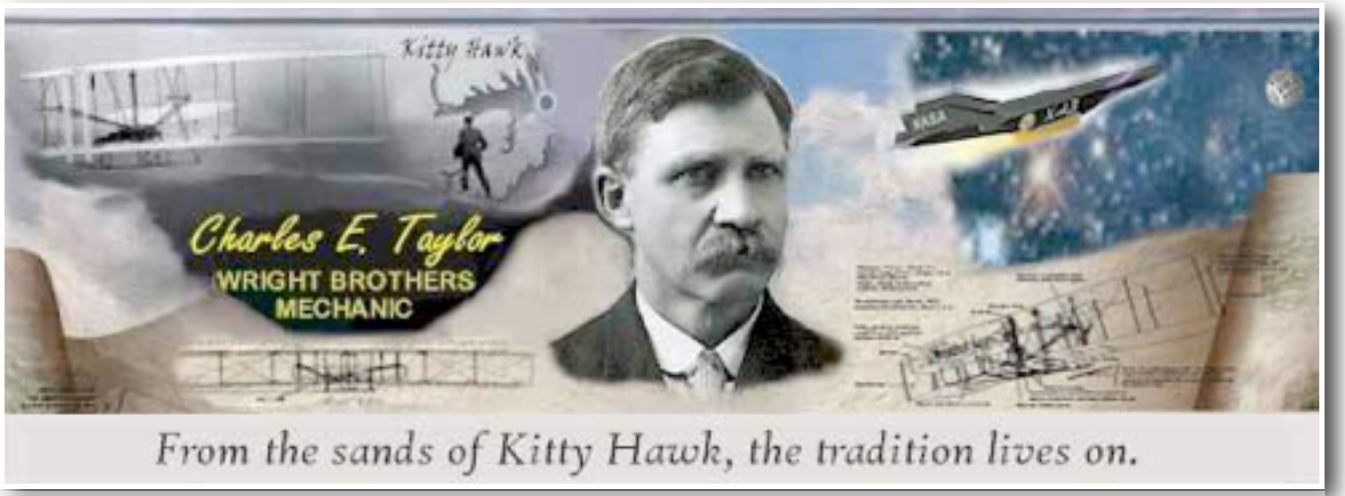

Hello all,
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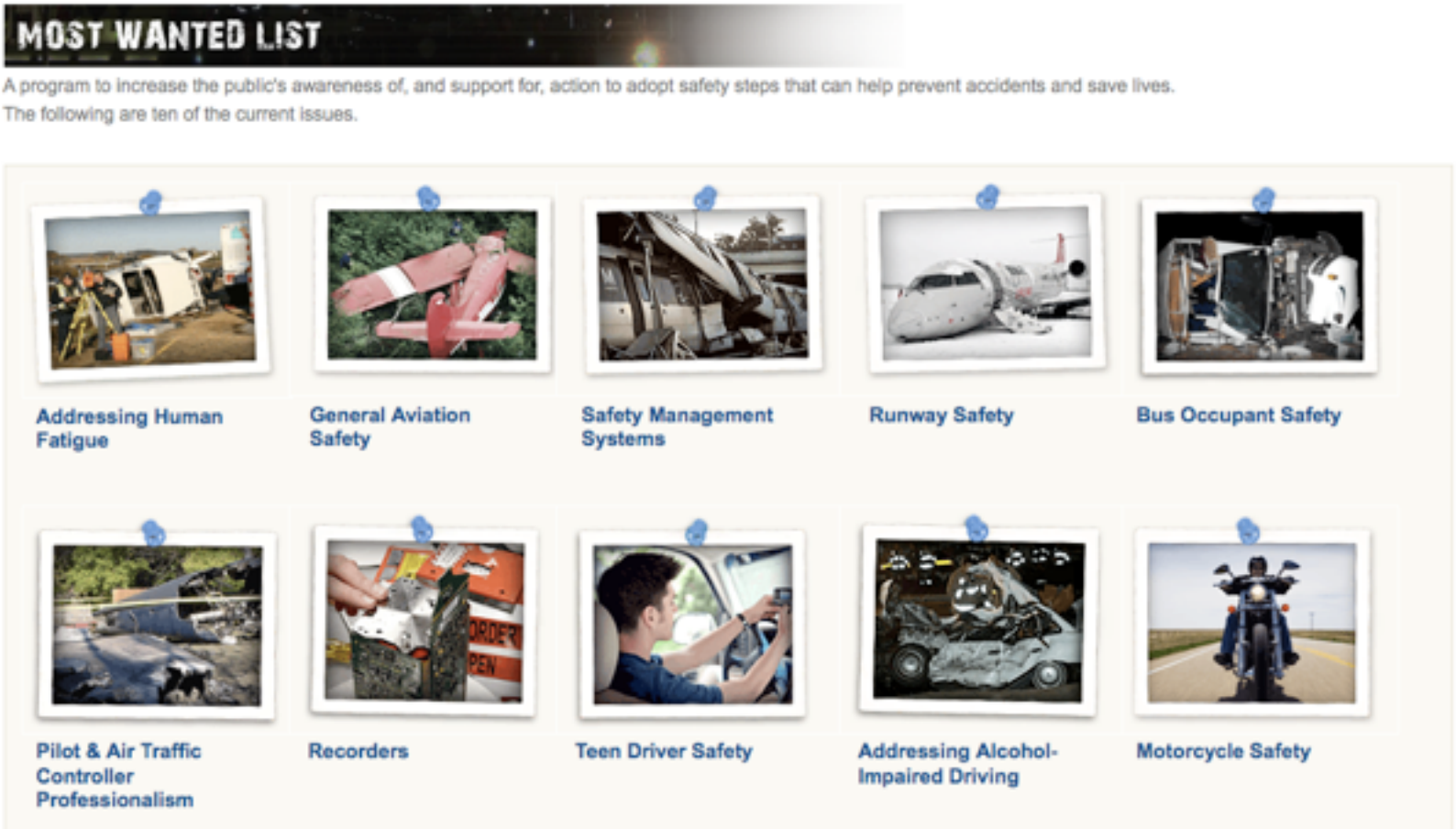
In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

Aviation Issues On NTSB 'Most Wanted' List

The National Transportation Safety Board (NTSB) last week announced its new "Most Wanted" list of critical transportation issues that the board said need to be addressed to improve safety and save lives.

Aviation issues on the list are: promote pilot and air traffic controller professionalism; address human fatigue; improve general aviation safety; require safety management systems (SMS); improve runway safety; and require image and onboard data recorders.

While the safety board has included SMS on its lists previously, the recommendations only applied to the maritime industry. The new list reflects a need for safety management systems across each mode of transportation.



http://www.ntsb.gov/safety/mwl.html#1

FAA: Airline rules to migrate to charter operations

Flight, duty and rest regulations currently being finalized for Part 121 airlines "can very well migrate over to the Part 135" on-demand sector, John Allen, head of the FAA's flight standards office, warned charter operators at last month's National Air Transportation Association Air Charter Summit.
"It's likely that future rulemaking efforts will propose extending Part 121 [regulations] to Part 135," he told attendees.

Allen pointed out that Congress "clearly established the FAA's priorities with passage of H.R. 5900, the Airline Safety and Federal Aviation Administration Extension Act of 2010." The bill focuses on pilot training, professionalism and professional development and came about as the result of the February 2009 crash of a regional turboprop just outside Buffalo, N.Y.

The legislation calls for eight rulemaking actions, as well as 11 studies, task forces or reports to Congress, along with one database. The first of the rulemakings dealt with an overhaul of air carrier crew training, issued as a supplemental notice of proposed rulemaking (SNPRM), which is currently out for public comment.

FAA Proposes $1.05 Million Civil Penalty Against Boeing

Cited For Failure To Correct B777 Passenger Oxygen Systems

The FAA is proposing a $1,050,000 civil penalty against the Boeing Company for allegedly failing to correct a known problem in production and installation of the central passenger oxygen system in its B-777 airliners.
The FAA based its proposed civil penalty on inspections of nine newly assembled aircraft between April and October, 2010.

Inspectors discovered that spacers in the oxygen delivery system distribution tubing on the aircraft were not installed correctly. Improper installation could result in the system not supplying oxygen to passengers should depressurization occur.

"There is no excuse for waiting to take action when it comes to safety," said Transportation Secretary Ray LaHood. "We will continue to insist on the highest levels of safety from our aircraft manufacturers."

"The FAA has strict regulations when it comes to the maintenance and installation of aircraft systems that all manufacturers and operators must follow," said FAA Administrator Randy Babbitt.

Boeing has 30 days from the receipt of the FAA's enforcement letter to respond to the agency.

Dropped camera may have led to rally ace Colin McRae helicopter crash, inquiry told

A dropped camera may have led to the helicopter crash in which former world rally champion Colin McRae died.

A probe into the accident heard that an attempt to retrieve the handheld camera could have caused McRae's friend Graeme Duncan to interfere with the aircraft's controls. Geoffrey Connolly, a flight instructor, said it was possible the controls had been nudged while the copter was flying low in a valley.

He was speaking at the fatal accident inquiry into the crash which claimed the lives of McRae, his son Johnny, five, and family friends Ben Porcelli, six, and Graeme, 37.

The chopper came down in a wooded valley near 39-year old McRae's home at Jerviswood, by Lanark, in September 2007.

Lanark Sheriff Court heard that the dual controls on McRae's Eurocopter Squirrel had not been removed before the flight, increasing the risk of passenger interference.

Mr. Connolly, 60, a former RAF pilot, said McRae was trying to recover from a problem he had encountered in the valley when the aircraft struck trees and plunged to the ground.

Decision to fly plane with deficiencies, engine power loss blamed for fatal Okla. City crash

The National Transportation Safety Board says a pilot's decision to operate an airplane with known deficiencies partly contributed to a crash that killed him and left four others injured. An NTSB probable cause report also concluded that the loss of engine power played a role in the July 25, 2009, accident.

Ron Meyer died after his Beech V35B crashed in a ditch near the Northwest Expressway.

The NTSB report says Meyer didn't have a mechanic examine why the plane's engine lost power days before the crash because he believed switching to a main fuel tank would correct the problem.

Investigators said Meyer was taking medication for various ailments, but noted it wasn't possible to determine whether distraction or impairment had a hand in his decision-making after the engines lost power.

THE FIXATION FACTOR

Distracted Driver

Intent on locating hazardous debris on a runway at night, a Ramp Vehicle Operator inadvertently crossed an active runway.

■ ...On duty as Ramp One, I received a call from Tower [regarding] possible debris on Runway 9L due to a tire blowout.... Tower cleared me to inspect Runway 9L and directed me to hold short of intersecting Runway 13.... I proceeded onto Runway 9L westbound doing a shallow “S” pattern to cover as much area as possible.... [During] the inspection Tower advised that I had crossed Runway 13….

Later I spoke to the Tower supervisor to confirm that an unauthorized movement across an active runway had indeed transpired. I fixated on accomplishing my task and tunnel vision caused me to miss the intersecting runway....

FAA inspections fault Philippine repair station

Safety experts say U.S. inspection records of an aircraft repair station in the Philippines show a pattern of stubborn problems that underscore concerns about the airline industry's outsourcing of maintenance to facilities in developing countries. The Federal Aviation Administration inspection records of Lufthansa Technik Philippines in Manila said the facility had repeated difficulties in following U.S. regulations on matters ranging from record-keeping to calibrating tools used to make repairs.

Also cited were recurring problems with training workers to FAA standards and unfamiliarity by Lufthansa Technik Philippines in-house inspectors with U.S. regulations. The records cover inspections from 2008 through last month.

Lufthansa said none of the problems cited in the inspections affected safety.

One expert on aircraft maintenance said developing countries may not have enough experienced aircraft mechanics to meet demand.

Weak Flybe MRO procedures led to Dash 8 dual-engine oil leak

UK investigators recommended the tightening of maintenance procedures at Flybe Aviation Services after determining that several weaknesses led to a Bombardier Dash 8-100 suffering a serious in-flight oil leak in both engines last year. Having been dormant in Greece for eight months the Olympic Air aircraft had been flown to Exeter for a C-check, during which both oil coolers were removed - unnecessarily, as it turned out - and refitted incorrectly, resulting in O-ring seals being damaged.

This operation had not been identified as safety critical, says the UK Air Accidents Investigation Branch.

"If a person makes an error while disturbing the oil system on one engine, and then repeats the error on the other engine, the safety of flight of a twin-engined aircraft can be compromised," it adds.

The Dash 8, registered SX-BIO, was then flown to East Midlands for repainting. But 10 min into the return flight to Exeter on 24 April 2010 the crew observed a "major" oil leak from the right engine. As the oil pressure fell the pilots shut the engine down.

The left engine's oil pressure then began to fluctuate a few minutes later, and it also showed evidence of an oil leak. After declaring an emergency the crew diverted to Bristol.

Examination of the aircraft showed that its right engine had lost 5.5 litres of oil and the left had lost 3.5 litres. The engines each had a 19-litre capacity, and had contained 17 litres on departure.

AAIB investigators found that requirements for a leak check had been omitted from the maintenance job card at Exeter, and while there was evidence of leaking oil during subsequent tests, the problem went undetected.

"Incorrect diagnosis that the slow oil seepage from both engine nacelles was residual oil from a previous leak led to the source of the leaks not being fully investigated at East Midlands, says the AAIB.

"It is important that the source of any oil leak, even if seemingly very minor, is correctly identified and rectified."

In its report into the incident the AAIB also hints that fatigue within the maintenance organisation may have contributed.

Road Map to discharge

It was a normal night-check routine during a seven-month deployment. I went to work for another night of Flight Ops and maintenance aboard USS Harry S. Truman (CVN-75). While doing the nightly tool check, my LPO told me aircraft 306 went “down on deck” for failing the APU fire-light test.

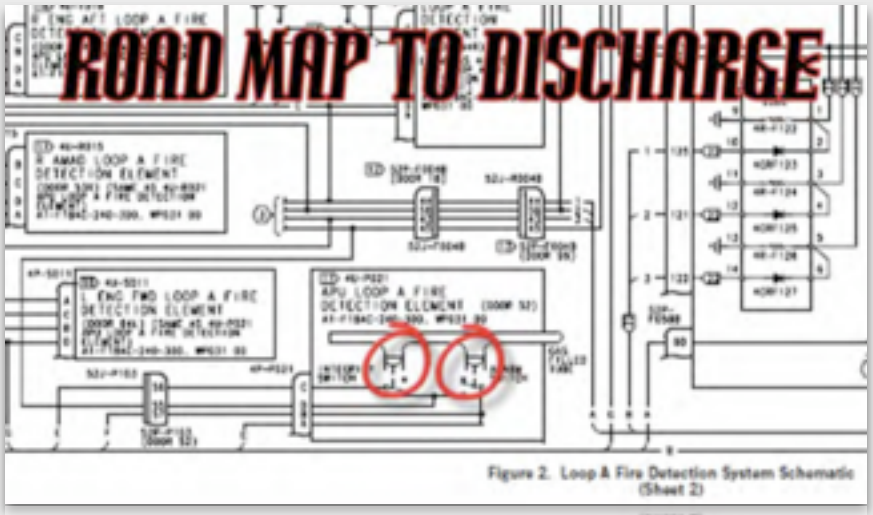


Figure 2. Loop A Fire Detection System Schematic (Sheet 2)

Day-check personnel already had changed the fire-detection control-unit with no joy. After removing a panel to gain access to the APU bay, the power- plants work center removed the APU. Our day-check crew then replaced both APU fire-sensing elements.

However, the problem remained. At the night-check maintenance meeting, aircraft 306 became my No. 1 priority for the evening. I returned to the work center and updated the rest of the crew on the night’s priorities. My LPO and I then reviewed the schematic to develop a game plan; we knew it would involve running wires, a tedious but necessary step in electrical-system troubleshooting.

We went to the aircraft and began troubleshooting the wires leading to the fire detection system, following the schematics like a road map. After approximately two hours of unsuccessful troubleshooting, I began to fear that we were heading down the “could not duplicate on deck” path. We discussed an alternate procedure; the integrity of the alarm circuit by “jumping” two pins on the APU connector (highlighted in the wire diagram). With battery power applied, we actuated the fire-lights check.

We immediately heard a loud “Boom!” come from the aft engine-bay.

Stunned, we looked at each other, amazed at what had just happened. After a brief inspection, we realized we had discharged the fire bottle. The technician in the cockpit climbed out and verified our unfortunate discovery. After securing the aircraft, I immediately told Maintenance Control about the discharge.

After further review of the schematics, we found our mistake: When we jumped the alarm circuit, we gave the system actual fire indications, which in turn activated the fire bottle.

We could have seriously injured a Sailor or damaged the aircraft. Our AMEs should have disconnected the fire bottle from the circuit, removing an inadvertent discharge from the equation. But as a professional, I should have taken the extra time to familiarize myself with the system.

As it stands, the original discrepancy became much more costly to repair after our mistake. The aircraft didn’t fly for two more days while the squadron continued to support combat operations in Afghanistan.

Corporate aviation safety management systems - a case study

SCE&G, a US-based energy utility company with a fairly new corporate flight department operating corporate services under Part 91, recently presented its own experience of setting up and operating a safety management system and operating according to industry best practice. This was done through a presentation at last year's Flight Safety Foundation Corporate Aviation Safety Seminar, which illustrated the synergies between all sectors of the company - including the flight department - because it operates in an industry with a high exposure to risk.

SCE&G's flight department head Spike Boyer says: "Today, perhaps more than ever, corporate aviation is under the magnifying glass of customers,

stockholders, fellow employees and board members." His point is that every aspect of the flight department's operation will be subject to scrutiny, and it should be able to justify, in detail, why it operates the way it does.

Boyer says the company's fledgling flight department began to organize itself in 2004-05 by creating a flight operations manual based on the IS-BAO (International Standards for Business Aircraft Operation) generic FOM. In 2006 it carried out an operational risk management assessment, and in 2007 the safety management expertise from different Scana Group corporate sectors was brought together in a safety leadership council that included managers in charge of general facilities, the nuclear energy department and the flight department. The benefit was the clarification of total corporate top-down commitment to safety management in all areas, and a determination to win employee buy-in.

Boyer's general advice runs like this:

- "Know that nothing happens quickly in a large corporation and you simply can't impose the SMS on everyone, because if it is to succeed, they must do it for themselves.
- "The good news is that time is on your side and what may appear to be 'baby steps' to us can be huge mental shifts in how others inside our companies view safety.
- "Continue to stress best practices and seek them in your company (not just the flight department)."

The National Business Aircraft Association itself has drawn up a "prototypical" business aviation safety manual that harmonises with the principles Boyer sets out, and emphasises that an SMS without a company safety culture is an empty vessel. The NBAA's description of the characteristics of a working culture on which to base an SMS includes these principles:

- Unqualified commitment by top management to safety as a behavioral pattern and way of life.
- Unambiguous expectations by each level of management and peer group that, for all employees, safe life patterns and work habits are normal practice, both on and off duty.
- There are clear, easily understood operating procedures that people follow.
- There is a trusted system for collecting, analyzing, exchanging and communicating safety incident data.
- Retribution does not follow reporting of safety incident data, but retraining without penalty or stigma may follow if appropriate.
- There is a system for tracking incident and accident data, the analysis of trends, followed by corrective action and monitoring the results of that action.

NBAA