I

108TH CONGRESS
1ST SESSION

H. R. 2632

To direct the Secretary of Transportation to issue a regulation requiring the installation of 2 combination cockpit voice recorder and digital flight data recorder systems in each commercial passenger aircraft, currently required to carry each of those recorders, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 26, 2003

Mr. DUNCAN introduced the following bill; which was referred to the Committee on Transportation and Infrastructure

---

A BILL

To direct the Secretary of Transportation to issue a regulation requiring the installation of 2 combination cockpit voice recorder and digital flight data recorder systems in each commercial passenger aircraft, currently required to carry each of those recorders, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Safe Aviation and Flight Enhancement Act''.

SEC. 2. FINDINGS.

Congress finds the following:

(1) The events of September 11, 2001, demonstrated that the United States needs to do more to ensure the survivability and quick retrieval of critical flight data and cockpit voice recording units aboard commercial aircraft.

(2) Increased national security threats to commercial airliners demand that the United States do everything possible to better secure the safety of our passengers by ensuring the quick and complete recovery of critical flight data from commercial air disasters for immediate analysis of potential terrorism and to avoid unnecessary grounding of our commercial air fleet.

(3) In light of new commercial aviation advances, including increased polar flights, increased air traffic overwater, and the onset of free flight, there is increased potential for more difficult location and recovery of fixed flight recorder and cockpit voice recorder units.

(4) Hundreds of millions of dollars are unnecessarily expended to locate and recover ''black boxes'', especially in underwater investigations, despite existing deployable recorder technology currently used by the United States Armed Forces, which would allow us to avoid such unnecessary and wasteful costs.

(5) It is in the public's best interest to accomplish these improvements by implementing the March, 9, 1999, recommendations A–99–16 through A–99–18 of the National Transportation Safety Board, in addition to incorporating a combined cockpit voice recorder and digital flight data recorder system designed to eject from the rear of the aircraft at the moment of an accident, so that the system will avoid the direct impact forces of the crash, avoid becoming ensnarled in the wreckage or fire intensity of the crash site, and float indefinitely on water.

(6) The Navy's successful experience since 1993 with deployable technology indicates that transfer of this technology into the commercial sector provides an obvious way to help us meet our goals to increase the survivability and retrieval of recorders while reducing the time and cost of a mishap, investigation, search, rescue, and recovery.

(7) Valuable time is lost searching for fixed flight data recorders in the wreckage of a crash site, especially at the bottom of the ocean, and critical data is unnecessarily lost in incidents in which the aircraft's electrical supply is prematurely interrupted or the black boxes do not survive the crash cir-

cumstances, as is evident in reviewing some of our most recent and devastating air incidents, the including the following:

(A) Neither flight data or cockpit voice recorder was recovered from American Airlines Flight 11 and United Airlines Flight 175 that were used in the World Trade Center attacks on September 11, 2001.

(B) It took 3 days to recover the flight data and cockpit voice recorders from American Airlines Flight 77 that was used in the Pentagon attack on September 11, 2001. In addition, the cockpit voice recorder was damaged beyond repair, rendering no information.

(C) It took 13 days to locate the cockpit voice recorder and 9 days to recover the flight data recorder from the air disaster involving Egypt Air Flight 990 in the vicinity of Nantucket, Massachusetts, air disaster on October 31, 1999.

(D) With respect to Swiss Air Flight 111 International in Halifax, Canada, on September 2, 1998, the cockpit voice recorder stopped nearly 6 minutes before the airplane hit the water, and it took search teams 9 days to locate

the cockpit voice recorder and 4 days to recover the flight data recorder.

(E) The cockpit voice recorder and flight data recorder stopped about 40 to 50 seconds before the Valuejet Flight 592 crashed on its way back to the Miami, Florida, airport on May 11, 1996. It took 15 days to recover the cockpit voice recorder, and 2 days to recover the flight data recorder from such flight because the underwater locator beacon failed.

(F) With respect to TWA Flight 800 which exploded and crashed in the vicinity of Moriches, New York, on July 17, 1996, the cockpit voice recorder and flight data recorder stopped at the time of the explosion, even though the airplane did not hit the water for another 40 to 50 seconds, and it took 7 days to recover such recorders.

SEC. 3. REGULATIONS REQUIRING DEPLOYABLE RECORDERS AND OTHER PURPOSES.

(a) IN GENERAL.—Chapter 447 of title 49, United States Code is amended by adding at the end the following:

"§ 44727. Installation of additional flight recorders

''(a) REGULATIONS.—

''(1) IN GENERAL.—Not later than 90 days after the date of enactment of this section, the Secretary of Transportation shall issue regulations that require in accordance with this section all commercial aircraft that must carry both a cockpit voice recorder and digital flight data recorder to be equipped with 2 combination cockpit voice and digital flight data recording systems. One system shall be located as close to the cockpit as practicable, and the other shall be mounted as far rear on the airframe as practicable and shall be a deployable recorder system.

''(2) MINIMUM CAPABILITIES.—Both recording systems shall be capable of recording all mandatory data parameters covering the previous 25 hours of operation and all cockpit audio, including controller-pilot data link messages for the previous 2 hours of operation.

''(3) COCKPIT SYSTEM.—The system located near the cockpit shall be powered by the electrical bus to provide the second highest reliability for operation without jeopardizing service to essential or emergency loads. In addition, such system shall be provided with an independent power source that is located with the combination recorder and that auto-

matically engages and provides 10 minutes of operation whenever normal aircraft power ceases.

''(4) REAR SYSTEM.—The rear system shall be powered by the electrical bus to provide the maximum reliability for operation without jeopardizing service to essential or emergency loads. In addition, such system shall be provided with an independent power source that is located with the combination recorder and that automatically engages and provides 10 minutes of operation whenever normal aircraft power ceases.

''(b) SCHEDULE FOR INSTALLATION OF DUAL COMBINED SYSTEMS.—The regulations shall require the installation of front combination fixed recorder systems and rear combination, deployable recorder system required under this section on commercial aircraft that are ordered by an air carrier on or after January 1, 2005.

''(c) DEFINITIONS.—In this section, the following definitions apply:

''(1) COMMERCIAL AIRCRAFT.—The term 'commercial aircraft' means—

''(A) a jet aircraft with 10 or more seats or greater than 12,500 pound maximum takeoff weight; and

''(B) a propeller driven aircraft with greater than 19 seats or greater than 19,000 pound maximum takeoff weight.

''(2) DEPLOYABLE RECORDER SYSTEM.—The term 'deployable recorder system' means a digital flight data recorder, cockpit voice recorder and emergency locator transmitter housed as one unit within an assembly that is designed to be mounted conformal to the surface of the airframe, eject from the aircraft upon accident and fly away from the crash site, and float indefinitely on water.''.

(b) CONFORMING AMENDMENT.—The analysis for such chapter is amended by adding at the end the following:

''44727. Installation of additional flight recorders.''.

SEC. 4. PURCHASE OF FIXED AND DEPLOYABLE RECORDER SYSTEMS.

The Secretary of Transportation shall purchase and make available, at no cost, to an air carrier (as defined in section 40102 of title 49, United States Code) such fixed recorder systems and deployable recorder systems as may be necessary for the air carrier to comply with the regulations issued under section 44727 of such title.

SEC. 5. REIMBURSEMENT OF AIRCRAFT MANUFACTURERS.

The Secretary of Transportation shall reimburse aircraft manufacturers owned or controlled by a citizen of

the United States (as defined in section 40102 of title 49, United States Code) for engineering, certification, and installation costs they incur in developing and installing fixed recorder systems and deployable recorder systems to comply with the regulations issued under section 44727 of such title.

○