

statement is made: "Comments to Docket Number 2003-NM-01-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2003-NM-01-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

On October 25, 1999, a Learjet Model 35 series airplane operating under 14 CFR 135 departed Orlando International Airport *en route* to Dallas, Texas. Air traffic control lost communication with the airplane near Gainesville, Florida. Air Force and National Guard airplanes intercepted the airplane, but the flightcrews of the chase airplanes reported that the windows of the Model 35 series airplane were apparently frosted over, which prevented the flightcrews of the chase airplanes from observing the interior of the Model 35 series airplane. The flightcrews of the chase airplanes reported that they did not observe any damage to the airplane. Subsequently, the Model 35 series airplane ran out of fuel and crashed in South Dakota. To date, causal factors of the accident have not been determined. However, lack of the Learjet flightcrew's response to air traffic control poses the possibility of flightcrew incapacitation and raises concerns with the pressurization and oxygen systems.

Recognizing these concerns, the FAA initiated a special certification review (SCR) to determine if pressurization and oxygen systems on Model 35 series airplanes were certificated properly, and to determine if any unsafe design features exist in the pressurization and oxygen systems.

The SCR team found that there have been several accidents and incidents that may have involved incapacitation of the flightcrews during flight. In one case, the airplane flightcrew did not activate the pressurization system or don their oxygen masks and the airplane flew in excess of 35,000 feet altitude. In another case, the airplane flightcrews did not don their oxygen masks when the cabin altitude aural warning was activated. Further review by the SCR team indicates that the Airplane Flight Manual (AFM) of Learjet Model 35/36 series airplanes does not have an emergency procedure that requires donning the flightcrew oxygen masks when the cabin altitude aural warning is activated. Additional review has found that the AFMs of Model 35A and 36A series airplanes also do not contain

appropriate flightcrew actions when the cabin altitude aural warning is activated. However, the AFMs do contain an abnormal procedure that allows the flightcrew to troubleshoot the pressurization system prior to donning the oxygen masks after the cabin altitude warning sounds. Troubleshooting may delay donning of the oxygen masks to the point that flightcrews may become incapable of donning their oxygen masks.

The SCR findings indicated that the most likely cause for incapacitation was hypoxia (lack of oxygen). The only other plausible cause of incapacitation is exposure to toxic substances. However, no evidence was found to support the existence of toxic substances.

Delayed response of the flightcrew in donning oxygen masks as a first and immediate action upon the activation of the cabin altitude warning horn could lead to incapacitation of the flightcrew.

A review of the emergency procedures in the AFM for Model 1124 and 1124A series airplanes revealed that the procedures for the flightcrew to don emergency oxygen masks is not the first and immediate step, but rather the second step when the warning horn sounds. Time spent troubleshooting the pressurization system following a cabin altitude alert may result in the flightcrew's incapacitation and consequent inability to continue to control the airplane before they are able to don oxygen masks. Therefore, these airplanes may be subject to the identified unsafe condition.

Explanation of Relevant Service Information

Israel Aircraft Industries has issued Temporary Revision (TR) No. 3 to the 1124 Westwind Airplane Flight Manual (AFM) and TR No. 5 to the 1124A Westwind AFM. Both TRs are dated January 16, 2001. The TRs advise the flightcrew to don oxygen masks as a first and immediate step following a cabin altitude alert to prevent incapacitation of the flightcrew due to lack of oxygen. (Previously the AFMs advised the flightcrew to check the cabin altitude and differential pressure gauge before donning oxygen masks.) Accomplishment of the AFM revision is intended to adequately address the identified unsafe condition. The Civil Aviation Administration of Israel (CAAI), which is the airworthiness authority for Israel, approved these TRs and issued Israeli airworthiness directive 21-02-07-01, dated July 22, 2002, which mandates compliance with the TRs to ensure the continued airworthiness of these airplanes in Israel.

FAA's Conclusions

These airplane models are manufactured in Israel and are type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the CAAI has kept the FAA informed of the situation described above. The FAA has examined the findings of the CAAI, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Explanation of Requirements of Proposed Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design registered in the United States, the proposed AD would require an AFM revision to advise the flightcrew to don oxygen masks as a first and immediate step following a cabin altitude alert.

Cost Impact

The FAA estimates that 198 airplanes of U.S. registry would be affected by this proposed AD, that it would take approximately 1 work hour per airplane to accomplish the proposed actions, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the proposed AD on U.S. operators is estimated to be \$11,880, or \$60 per airplane.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this proposed AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations proposed herein would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this proposal