

F.A.A. Authorizes Airlines to Collect Data

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in agreements with the airlines and the pilots' union.

The data will be maintained by the airlines themselves, but the F.A.A. will have access to it. The agency plans to use the information for safety studies.

F.A.A. officials said the agreement came about as a result of a meeting, the so-called safety summit, of Federal regulators, airline executives, representatives of pilot unions and other industry officials held last month after a run of crashes in 1994. David R. Hinson, the agency's administrator, called the move a "landmark agreement."

European airlines have collected and analyzed this data for years, using computers attached to the black boxes. They say they have made important safety progress as a result. But in the United States, black boxes are generally only analyzed after an accident or crash.

The working sessions at last month's meeting were closed to the public, but one participant, David Stempler, of the International Air Line Passengers Association, said he was present in a workshop on data analysis where Federico F. Peña, the Transportation Secretary, appeared surprised to learn that the roadblock to gathering the data was the pilots' refusal until the F.A.A. promised immunity. Mr. Peña said yesterday that the purpose of the meeting was to insure that "we are applying our expertise, our training, and our technology fully."

Analysis of data from routine flights might have prevented the crash of a Northwest AirlinK commuter plane in Hibbing, Minn., in December 1993, officials said. The plane in that crash was attempting what pilots call a "slam-dunk" landing, descending far more rapidly than the manufacturer recommended. Investigators said after the crash that the airline's pilots often landed that way. But the pattern had never been detected.

Better data might have tipped off safety officials to problems before two other recent crashes, experts say. One is the crash near Pittsburgh last September, of a Boeing 737 flown by USAir. The National Transportation Safety Board has been looking for malfunctions of the rudder controls of Boeing 737's, but it has been using data from an Air France 737, because American flag carriers generally do not have similar data.

The other crash, in Roselawn, Ind., on Oct. 31, involved an ATR-72 flown by American Eagle. Investigators focused on the tendency of ATR-72's to roll in icing conditions, and the safety board ordered a black box pulled from another ATR-72 that flew into Chicago that night, a step it takes only a few times a year. But having a bigger data base on the performance of that kind of plane in icing conditions could have given stronger clues to the problem, experts say.

European airlines have already found such data useful. For example, Captain Ken E. Hansen, the manager of flight analysis, at Scandina-

only American buyer, he said, was Pan American World Airways.

The system looks for whether the aircraft made an abnormally hard landing, which would require an inspection. It measures flap settings, heading changes, power levels, rates of descent and other parameters.

"If they fly more than 50 knots above the operating speed of the aircraft, or if they fly below 500 feet of altitude when they are not on an approach for landing, or if they fly at a descent rate of more than 2,500 feet per minute when they are below 1,000 feet, we can go in and make a special analysis," Captain Hansen said.

In the early 1990's, he said, the airline bought Fokker-50 turboprops for use in Scandinavia. The flight data showed, he said, that 40 percent of the pilots flew faster than the maximum recommended operating speed.

"They were jet pilots; they hadn't flown a turboprop for many years," he said. When the data-analysis system found the problem, and the pilots were alerted, the speeding problem disappeared, he said.

Only about half of the approximately 4,000 transport aircraft in the United States have the wiring and sensors in place for computerized data collection. The ATR-72 in the Roselawn crash, for example, was heavily computerized, with over 100 parameters already going into the black box, while the 737 in Pittsburgh collected only 13 channels of data.

The F.A.A. is not proposing that any new wiring or sensors be added. This is a continuing point of disagreement between the agency and the safety board, which has repeat-

A Federal grant of immunity that will save erring pilots their jobs.

vian Airlines System, said in a telephone interview that his airlines' planes have a computer that stores 50 hours of data on a 3.5-inch disk. In comparison, the black box, which the airline also carries, stores half an hour of data. The black box is crash-worthy, and the S.A.S. recorder is not.

Every three or four days, the disk is removed from the plane and inserted in a computer that scans it for abnormal readings, using software developed by S.A.S., which the airline has sold to numerous European airlines, Captain Hansen said. The

FRIDAY, SATURDAY

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on Mistakes

edly made clear its dissatisfaction with the old flight data recorders.

But airlines that own newer planes are likely to collect the data, industry experts said, because even without considering accidents, it could lower their operating costs, identifying, for example, if pilots were wasting fuel by starting their descents at the wrong time.

At the Air Line Pilots Association, Capt. J. Randolph Babbitt, the president, said he favored use of the data if it was handled correctly. "We're not trying to protect anybody; we just want to make sure it's used for the right thing," he said.

He added that if a recorder showed an unusual maneuver, like a sudden dive or a rapid descent to landing, safety experts should look to see if the maneuver was required to avoid another aircraft, or to drop rapidly through a layer of atmosphere where icing might occur.

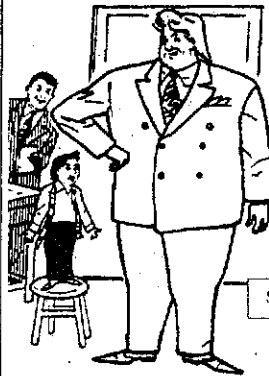
The agreement on data was one of several developments reported by Mr. Peña today, a month after the meeting on safety. The F.A.A. also agreed to accelerate or expand several safety initiatives that were already under way.

One is on runway incursion, one of the four issues listed by the safety board as most urgent. The F.A.A. promised to issue a plan for improvements by next month; previously it had planned to do so by the end of the year. The plan will be high-tech and low. For example, the agency plans to issue specifications on paint to be used in runway markings and issue a request for proposals for new radar systems.

In all, the officials listed 173 initiatives, most of which were under way before the safety meeting.

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