

# Passenger Airliners Undergo Regular Inspection for Assurance of Safety

Editor's note: This is the third in a series of five articles dealing with air traffic safety and congestion in the United States.

By ROBERT J. SERLING  
United Press Correspondent

Washington (U.P.)—The oldest commercial airliner in service today is mechanically as new as an automobile with only 6,000 miles on its speedometer.

That fact exemplifies the care that goes into the construction and maintenance of America's 1,600-plane commercial air fleet.

New planes are tested for thousands of hours before they are officially certified as safe for carrying passengers. Airlines already in service are subjected to regular and frequent inspection. After every 8,000 hours of flight time, they literally are rebuilt.

All these safety measures, however, have never completely eliminated the "bugs" that seem to plague all types of aircraft. Almost every transport plane used by U. S. airlines since 1946 has suffered some kind of major mechanical malfunction that was undetected in all the pre-certification testing. And some of these difficulties have caused fatal crashes.

**Tape Tote Loose**  
For example:

DC-4—The nation's first four-engined airliner was flown for hundreds of thousands of hours as a wartime transport. Yet all this operational experience failed to uncover a small but vital weakness—a piece of bonding tape on the tail which, when worked loose, ballooned into the wind and created what amounted to a giant air brake. This defect sent one Eastern Airlines DC-4 to its death, killing 50 persons. The Eastern crash, on May 30, 1948, was an unsolved mystery until another DC-4, almost three years later, went into a sudden dive and recovered only a few hundred feet from the ground. Examination of this aircraft revealed the culprit—the ripped bonding tape.

Constellation—This sleek, triple tailed beauty was grounded temporarily a few years ago when a mid-air fire and subsequent crash revealed inherent weaknesses in the plane's electrical system.

**Fuel Transfer Blamed**

DC-6—In 1947, a United Airlines DC-6 caught fire over Utah and crashed. Cause of the blaze

was unknown until an American DC-6 also caught fire but managed to land safely. Investigators found a flaw in the plane's system for transferring fuel from one wing tank to another. Under certain conditions, overflowing gas would leak into the ducts of the cabin heater and ignite. Every DC-6 was grounded for modification of the fuel tank system.

Martin 202—In 1948, one of these twin-engined transports operated by Northwest Airlines fell apart in a thunderstorm near Winona, Minn. One wing was found some distance from the rest of the wreckage and investigators suspected structural failure—which had not occurred on a scheduled airliner since 1931. Examination of Northwest's entire 202 fleet revealed fatigue cracks in the wings of five planes. The 202 was grounded until the weakness, an inadequate wing "flange," was corrected.

Stratocruiser—Several crashes involving this Boeing-built giant were blamed on failure of a new type of propeller.

DC-7—In its early months of service, this fastest of piston-engined transports suffered an embarrassing number of in-flight engine failures until technicians solved a fuel mixture problem.

**Bolts Were Faulty**

Viscount—A few weeks ago, one of these British-made turboprop planes crashed in England. The accident was caused by faulty bolts in the wing flaps. Later models of the airliner, used in this country by Capital Airlines, were immediately inspected to make sure they did not have a similar flaw. They didn't.

"We could test every new type of plane for 200,000 hours or more to see what bugs develop," a Civil Aeronautics Administration official said. "But such lengthy testing would be the economic ruin of every airplane manufacturer who has millions tied up in tooling. Every certified plane must pass difficult tests and meet or surpass rigid performance specifications—such as ability to climb safely even when an engine fails on takeoff. The public never hears about the hundreds of so-called bugs that are eliminated by these tests."

In addition to this elaborate pre-certification testing, the government requires every carrier to follow certain maintenance standards. These include:

**Plane Taken Apart**  
—Visual inspection of a plane after every landing, with emphasis on correcting complaints reported by crews.

—Basic inspections performed every 130 hours or sooner, including installation of new spark plugs and opening up engine nacelles for a closer check than in step 1.

—Regular overhaul of engines. Newer types must be pulled out and overhauled after every 800 hours of operation. Older, more proven engines may go as long as 1,000 hours between overhauls.

—Every 8,000 hours, an airliner is taken completely apart and literally rebuilt. This involves not only brand-new engines, but may even mean new wings, new fuselage and other major parts.

That is why the CAA can say "There is no such thing as an old airplane."

Tomorrow—Jet planes will be safer.

## 4-H CLUB NEWS Grange Notes

**Busy Bees Sewing Club**

The Busy Bees Sewing club held their Mothers Tea Friday in the Methodist church. Miss Marge Hatton, county extension agent, was present as well as all the mothers; the fourth grade teachers, Mrs. Stabler and Mrs. Jacobson; Mrs. Throne and Mrs. Thompson from the school cafeteria; Mrs. Jones, our 4-H leader; and two grandmothers, Mrs. Robert Pugh and Mrs. Joe Lewis. The girls will take part in the program, demonstrating the things they have learned to do. After the program the girls served mothers and visitors refreshments.

Peggy Dye, Reporter

**WHICH CAME FIRST?**

Denver, Colo. (U.P.)—State Rep. Palmer Burch admits he is stumped when it comes to taxing turkeys. "On assessment day, Feb. 1, the turkey isn't even an egg," Burch said. "And at the end of the year, when taxes are due, he's hash."

**Shady Cove Grange**

The regular monthly business meeting of Shady Cove Grange was held Wednesday, April 10, in the school music room.

Mr. and Mrs. Ernie Segessen were voted into the Grange by demit from the Upper Rogue Grange.

Reports were given from the following committees: HEC, legislative, youth, fire, roads, flood control, safety and insurance. Those attending the lecturer's school in Ashland were Mrs. T. M. Littlefield, lecturer; Mrs. C. Kee, secretary, and Mrs. Ed Houston, HEC chairman.

The lecturer's program was put on by the agriculture chairman, Mrs. Ed Stothers.

Attendance pins were presented to seven members.

The next regular meeting will be April 24 with a potluck supper at 6:30 p.m. in the Shady Cove school cafeteria.

D. A. Littlefield, Publicity Chairman

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