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SANTA MONICA, Calif., Jan. 14 -- A new automatic flight control system similar to those used on supersonic missiles was placed in operation on the DC-8 Jetliner today following certification by the Federal Aviation Agency.

Heretofore, the big Douglas jets had been controlled only by the skilled hands of expert pilots.

Douglas Aircraft company described the newly-approved Sperry flight control system, including automatic pilot, as an important contribution to both the comfort and safety of flight.

The automatic pilot maintains a tighter rein on the four-engined Jetliner than a human pilot or any previous device. It keeps the transport rigidly on course, at precisely the desired altitude and snubs any tendency to roll, pitch or turn because of gusts.

Consequently, the automatic pilot assures a smoother and gentler ride during turbulence as well as under normal atmospheric conditions.

More accurate navigational guidance provided by the autopilot is also expected to reduce time on U.S. transcontinental flights by as much as 15 minutes.

The automatic flight control system, known as the SP-30, was designed and manufactured to exacting Douglas requirements by the Aeronautical Equipment Division of Sperry Gyroscope

Company. It was "custom tailored" for the DC-8 and developed concurrently with the aircraft, first commercial airliner to be equipped with the SP-30.

Paul Patten, Douglas test pilot in charge of demonstrating the new system to the F.A.A., was unstinting in his own approval.

"I've flown many types of aircraft with lots of different autopilots," he said, "but the one on the DC-8 beats them all.

"It will hold cruise altitude with a maximum change of only 10 feet, and loses no more than 20 feet in a coordinated turn.

"Some autopilots are certified for use only down to an altitude of 1,000 feet. The excellent autopilots on the DC-6 and DC-7 are good down to 250 feet.

"Although in general practice the DC-8 is not likely to be flown on instruments any lower than 200 feet, the autopilot actually is capable of following a glide path signal down to 50 feet -- the point where a pilot 'flares' or levels off to land."

Patten said the SP-30 system is certified to keep the DC-8 on instrument landing system glide slope, without retrimming, even if one engine is inoperative. To qualify for this condition, the automatic pilot had to be proved effective with the improbable condition of two engines out on the same side.

A secret to the SP-30's uncanny capabilities lies in the use of inertial devices -- called accelerometers -- to establish rates instead of degrees of change in the aircraft

flight controls. This requirement was specified by Douglas engineers as a result of their experience with missile guidance systems.

Reliability and safety also were prime requirements. One example: the SP-30 is designed to "police" its own operation. In the unlikely event of a malfunction, it automatically disengages itself and, before the aircraft can enter an undesirable maneuver, it notifies the pilot to take over and fly manually.

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