

DAHER HOMESAFE EMERGENCY AUTOLAND SYSTEM IS CERTIFIED ON THE TBM 940

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Daher HomeSafe is certified on its TBM 940, authorizing the availability of this emergency autoland system that would automatically bring the aircraft to a runway touchdown if the pilot becomes incapacitated. HomeSafe received its approval from both the European Aviation Safety Authority (EASA) and U.S. Federal Aviation Administration (FAA) airworthiness authorities.

“This is a game-changing step that expands flight safety from pilots to the passengers themselves, and it comes at a time when the value of life is more important than ever,” said Nicolas Chabbert, the Senior Vice President of Daher’s Aircraft Division. “Daher’s innovation has taken us to this turning point, and we are committed to providing the highest safety and protection to pilots, their families and passengers. Without a doubt, HomeSafe™ will become an aviation standard.”

Chabbert thanked the airworthiness authorities for their support in certifying HomeSafe™, adding that Daher is the first aircraft manufacturer to receive simultaneous dual certification from EASA and the FAA.

This certification clears the way for new deliveries of Daher's top-of-the-line TBM 940 very fast turboprop version that are factory-equipped with the emergency autoland system. For TBM 940s already delivered in 2020, the aircraft will be upgraded at TBM service centers. Additionally, the system will be available for retrofit on all earlier production TBM 940 aircraft at an introductory price of \$85,000.

HomeSafe™ is the ultimate step of the TBM e-copilot® concept evolution, after the autothrottle introduction on the TBM 940. It is based on Garmin's Emergency Autoland system – available as a part of the G3000 integrated flight deck – and has been under development for the TBM since 2017 by the airplane systems department at Daher's Aircraft Division. This work included software implementation and an intensive flight test campaign that included two hundred automated landings.

The system is activated manually by an easily recognizable orange button atop the cockpit instrument panel, or semi-automatically if the Emergency Descent Mode (EDM) has been engaged. Its software integrates weather and terrain information to select the best airport for landing, taking into account fuel range and runway length.

When HomeSafe™ is activated, occupants of the aircraft are briefed by a safety video on the cockpit's multifunction display. Air traffic control is informed of the situation by an automated message, and the transponder automatically is set to the emergency squawk code. The system provides inputs to the aircraft's flight controls and adjusts engine power settings through the touchdown phase. During the landing rollout, HomeSafe™ will simultaneously activate the landing gear brakes and shut down the engine.

The pilot can override the autoland function at any time to resume normal flight conditions by simply disconnecting the autopilot.

HomeSafe™ operates with systems and their functionality already integrated on the TBM 940, such as the autopilot and autothrottle, as well as functions of Daher's TBM e-Copilot®: Enhanced Stability and Protection (ESP), the Emergency Descent Mode and automated de-icing detection. Inputs from the radar altimeter also are included.

Additional equipment incorporated on the TBM 940 for system functionality with HomeSafe™ includes electrical relays to enable automatic activation of the flaps, landing gear and landing lights. An emergency automatic braking system – activated by a Garmin servo control – complements the standard braking system, with an increased-capacity hydraulic fluid tank. A fuel shut-off valve also has been added to stop the engine by cutting off the fuel supply.



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