GARMIN FIRST TURBOFAN CERTIFICATION FOR GFC 600 DIGITAL AUTOPILOT

News / Manufacturer

Garmin has received FAA Supplemental Type Certificate approval for the GFC™ 600 digital autopilot in select Cessna CitationJet 525 models1, the first jet certification for this popular autopilot solution. The GFC 600 digital autopilot delivers superior in-flight characteristics and new operational capabilities such as autopilot-coupled Vertical Navigation (VNAV) descent, auto Course Deviation Indicator (CDI) switching, fully coupled go-around capability and much more.

“We are thrilled to announce the first jet aircraft approval for the GFC 600 digital autopilot, providing these turbofan aircraft with a modern and advanced autopilot upgrade and further simplifying single-pilot operations,” said Carl Wolf, Garmin vice president of aviation sales and marketing. “The GFC 600 combines our state-of-the-art flight control capabilities with hardened smart servos specifically tailored to the demands of turbofan aircraft. With this upgrade, it is easier than ever for CJ owners and operators to get the most out of their aircraft.”

For Cessna CitationJet owners and operators, the GFC 600 digital autopilot will be installed as part of a complete package that requires single or dual G600 TXi 10.6” flight display(s), dual GTN

or GTN Xi Series navigators, and a GI 275 electronic flight instrumentconfigured as a standby flight instrument. With this installation, the system offers new operational capabilities and features including autopilot-coupled VNAV descents, automatic GPS-to-LOC switching during ILS/LOC approaches, fully coupled missed approaches and supports Reduced Vertical Separation Minima (RVSM) operations, among other features. Further, the installation of the GFC 600 digital autopilot also removes the requirement to retain the power inverter driving the legacy autopilot, aiding in weight savings. Optional upgrades include a dedicated PFD controller, audio panel, ADS-B transponder, Iridium datalink, weather radar, datalink SiriusXM weather, and Garmin Connext connectivity via the Flight Stream 510 wireless gateway.

To optimize selection and control of GFC 600 modes, a compact self-contained autopilot controller incorporates backlit keys and a bright, sunlight readable display that depicts autopilot status and mode selection. An intuitive built-in control wheel also provides convenient adjustment of aircraft pitch, airspeed and vertical speed modes. The GFC 600 also features a dedicated level mode (LVL) button, an active safety-enhancing feature that gives the pilot a single touch autopilot-engage button to command the aircraft to roll wings level and pitch to a level attitude, if momentarily distracted or disoriented.

The GFC 600 offers environmentally hardened autopilot servos designed for harsh operating conditions. Its brushless DC motors offer improved performance and reduce maintenance requirements when compared to decades-old servo designs on the market today. In addition, these smart servos are optimized specifically for turbine operations by offering broader speed scheduling in addition to more torque to help better command and respond to control demands required of turbine aircraft.

As a standard feature, pilots receive Garmin Electronic Stability and Protection (ESP™) with the GFC 600 digital autopilot, which works to assist the pilot in maintaining the aircraft in a stable flight condition. ESP functions independently of the autopilot and works in the background when the pilot is hand-flying the aircraft to help avoid inadvertent flight attitudes or bank angles and provides airspeed protection.

Additional capabilities of the GFC 600 include:

- Traditional autopilot functions with modern capability such as altitude pre-select2 and indicated airspeed hold mode
- Select, couple to, and fly various instrument approaches, including GPS, ILS, VOR, LOC and back course approaches3
- Built-in GPS roll steering capability eliminates the need for external roll steering converters, allowing for smoother navigation tracking
- Underspeed protection helps prevent the aircraft from entering a stall condition
- Overspeed protection helps prevent the aircraft from exceeding aircraft maximum speed (VNE)
- Yaw Damping (YD) mode minimizes yawing oscillations while also helping to maintain coordinated flight by keeping the slip/skid indicator centered
- Flight Director command bars are displayed on the G600 TXi flight display
- Fly coupled ‘go-arounds’ during missed approach sequencing with a remotely installed go-around button that commands the Flight Director to display the appropriate pitch attitude required for the missed approach procedure and activates a loaded missed approach when paired with a GTN 650/750 or GTN 650/750 Xi navigator
- Pitch-trim servo provides automatic trim and manual electric trim with improved speed scheduling

- Control wheel steering allows the pilot to adjust pitch, roll, altitude hold, vertical speed or airspeed references using the control yoke while the autopilot is engaged

14 MAY 2021

ARTICLE LINK:
https://to.50skyshades.com/news/manufacturer/garmin-first-turbofan-certification-for-gfc-600-digital-autopilot