GARMIN ANNOUNCED AVAILABILITY OF TXI EIS FOR SELECT PILATUS PC-12 AIRCRAFT

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Garmin expanded engine monitoring capability is now available for select Pilatus PC-12/45 and PC-12/47 aircraft with the addition of the TXi Engine Indication System (EIS) display. This upgrade offers PC-12 owners and operators a fully modernized, complete Garmin cockpit retrofit solution that includes the GFC 600 autopilot, G600 TXi primary flight display, GTN Xi navigators, GTX ADS-B transponders and GWX weather radar and more. Additionally, Garmin has also received Federal Aviation Administration Supplemental Type Certification for the GFC 600 autopilot in Pilatus PC-12/47 aircraft.

For Pilatus PC-12 owners and operators, the TXi EIS can be installed as part of a complete package that includes G600 TXi 10.6” flight display(s), GTN Xi Series navigators, GFC 600 autopilot and a GI 275 electronic flight instrument configured as a standby flight instrument. With this installation, the system offers new operational capabilities and features including autopilot-coupled VNAV descents, fully coupled missed approaches, and Smart Glide™ safety technology, which can automatically engage the autopilot and pitch for the aircraft’s best glide speed while simultaneously navigating the aircraft within the vicinity of the selected airport so the pilot can execute an approach and landing in the event of an engine failure. Further, the installation of this package also removes legacy avionics and wiring, aiding in weight savings. Other optional upgrades include an audio panel, ADS-B transponder, Iridium datalink, weather radar, datalink

SiriusXM weather, and Garmin Connext® connectivity via the Flight Stream 510 wireless gateway.

Enhancements and capabilities with TXi EIS

PC-12 owners and operators can now replace aging and costly to replace EIS gauges with a modernized display and view EIS information on a 10.6-inch TXi flight display which can accommodate primary flight display (PFD) information; a multifunction display (MFD) with a vertical EIS strip; or on a 7-inch TXi flight display in portrait mode, which serves as a dedicated EIS display. With this upgrade, pilots will be able to more clearly read and analyze critical engine, fuel and electrical parameters while simplifying the cockpit. PC-12 owners and operators can continue to benefit from the auto-start, automatic ignition and fuel balancing functionality previously supported by the original EIS system, among other existing functions like dynamic gauge limits and more. When using multiple TXi displays, pilots can also benefit from display backup capability to help prevent the loss of PFD or EIS information during a single-display failure.

Dynamic gauge limits and indications

All TXi EIS gauge indications display real-time turbine engine information using distinct colors, bands and radials to clearly depict normal operating ranges as well as limitations so pilots can more easily interpret engine data at-a-glance. Select turboprop gauges such as engine torque, prop RPM (NP), gas generator RPM (NG), and engine temperature (ITT) can be configured to change their markings based on pressure altitude, outside air temperature, smart sequence and more. These dynamic indications are configured during installation so pilots can more easily operate the engine within its limitations during changing flight conditions. Additional standard gauges include oil pressure and temperature, as well as fuel flow, fuel quantity and electrical system status.

Limit timers and exceedance recordings

Utilizing gauge limit timers, TXi EIS helps pilots maintain the engine within its allowed limits to avoid engine exceedances and as a result, costly maintenance procedures. For example, once a preconfigured limit is reached, a countdown timer is displayed alongside the engine gauge. This timer is an indication to the pilot that they need to mitigate the exceedance. If the time-based limit is exceeded, the timer and gauge begin to flash and the pilot receives a notification that an exceedance has been recorded. Simultaneously, the TXi EIS system automatically logs a variety of information, including the parameter that was exceeded, duration, highest value that was recorded, time, date and more. The pilot can then review the exceedance and share it with maintenance professionals for post-flight analysis.

Wireless flight data logging

To assist with tracking maintenance activities, controlling operating costs and analyzing overall engine health, built-in engine data logging is included with TXi EIS. Aircraft performance, engine data and any exceedances that are recorded during a flight are automatically stored on an SD card (sold separately) in the display. When the TXi EIS display is paired with the Flight Stream 510 wireless gateway, information is wirelessly transferred and stored within the Garmin Pilot™ app and automatically uploaded to the flyGarmin® website. Engine and flight cycles are also recorded to help identify aircraft systems that depend on those limits, such as pressurization systems and other life-limited parts.

Add precision to fuel planning

Pilots can more precisely monitor fuel calculations with TXi EIS, which includes an integrated fuel computer. After making a fuel stop, pilots can enter the fuel data within TXi EIS by selecting “full fuel” or by adding a specified amount in pounds, gallons, liters or kilograms. When airborne, the system monitors fuel flow and GPS information to estimate fuel range, endurance and how much fuel is expected to be available at the destination airport.

Full-featured autopilot

In addition to select PC-12/45 aircraft, the GFC 600 digital autopilot is also now certified for select PC-12/47 aircraft. The GFC 600 is intended for piston single/twin-engine and turbine aircraft that have a wide range of speed and performance characteristics, and provides a long list of existing general aviation aircraft with a simple, lightweight, cost-effective autopilot upgrade path. Incorporating solid state attitude with robust self-monitoring capabilities, the GFC 600 provides superior autopilot performance, greater reliability, and tremendous safety tools. In addition to traditional autopilot capabilities such as altitude hold, vertical speed and heading modes, the GFC 600 also includes:

- Premium functions and advanced capabilities such as altitude pre-select3 and indicated airspeed hold mode
- VNAV capability when paired with a GTN™ or GTN Xi series navigator
- Dedicated LVL button automatically engages the autopilot to restore the aircraft to straight and level flight with one press
- Support for Smart Glide™ that can automate tasks and reduce pilot workload in engine power loss emergencies when paired with a GTN Xi series navigator and Garmin attitude indicator
- Overspeed protection
- Select, couple and fly various instrument approaches, including GPS, ILS, VOR, LOC and back course approaches when paired with a compatible Garmin GPS navigator
- Yaw Damping (YD) mode minimizes yawing oscillations while also helping to maintain coordinated flight
- ESP functions independently of the autopilot and works in the background while the pilot is hand-flying the aircraft to help avoid inadvertent flight attitudes or bank angles by nudging the pilot to return the aircraft back to a safe flight attitude

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