

SUBJECT: TRIM SYSTEM

To all Customers, Operators and Service Centers:

Date: February 23/17

Effectivity: All PC-12, PC-12/45, PC-12/47 and PC-12/47E aircraft.

This Safety Information Letter is issued to draw attention to the following information:

Important reminder of procedures and operations of PC-12 (all models) when encountering a trim runaway condition.

From time to time, Pilatus addresses important operational issues by means of PC-12 Safety Information Letters. This time, we want to remind the PC-12 community about the trim runaway procedures set out in the Pilot's Operating Handbook (POH) and their application.

Furthermore, we highlight several items for safe flight continuation and landing for pilots to consider and to support them in the decision-making process after the trim runaway condition is stopped.

Correct and timely application of the trim runaway procedures set out in the POH is vital to avoid or reduce the adverse effects of a trim runaway in the following respects and circumstances:

- **Departure from initiated flight path**
- **AFCS capability**
- **Aircraft performance**
- **Increased workload and subsequent pilot fatigue.**

In addition to following the POH procedures, flight crews should be aware of the following:

1. Identification - Recognition

Components within an electrical trim system can malfunction causing a non-commanded out of trim force operation called "Trim Runaway".

Depending on the affected axis, an associated alert may support recognition. Non-commanded AFCS disconnects followed by departure from actual aircraft pitch and/or roll attitude or excessive slip indications are additional evidence of a trim runaway condition.

2. Refresh and visualize procedures

In case of a trim runaway condition, as an immediate action, activate the guarded "Trim Interrupt" switch (refer to POH Section 3).

Hands-on training reduces the activation time and minimizes the risk of erroneously activating the "Flaps Interrupt" system switch (which cannot be reset in-flight).

Once the "Trim Interrupt" switch is activated, all four (4) trim motors and the AFCS are disconnected and the runaway is stopped (refer to POH Sections 3 and 7-3).

By pulling its associated Circuit Breaker (CB), the affected trim motor will be isolated before the pilot can attempt to regain control of the unaffected systems (refer to POH Section 3).

Familiarization with the positions of the four (4) trim CBs shortens the (re)action time.

To regain control of the unaffected systems, simply reposition the “Trim Interrupt” switch to NORM (refer to POH Section 3).

A reduction in airspeed will significantly reduce the existing out-of-trim forces and will help the pilot regain full control of the aircraft (refer to POH Section 3).

3. Awareness of effects and their consequences

Depending on the affected trim axis and the extent of the trim system departure from its previous position before it was interrupted and isolated, the pilot may expect the following consequences:

- Increase in flight control forces disproportionate to airspeed, causing the aircraft to depart from its initial flight path
- Immediate loss of AFCS functionality when the alternate pitch or rudder trim system has malfunctioned
- Possible delayed loss of the AFCS functionality following an aileron trim runaway
- Substantial impact on aircraft performance from increased drag in relation to airspeed
- Substantial increase of physical fatigue from extended counteracting of continuous flight control forces.

The PC-12 trim system is designed to assure that the pilot does not have to counteract continuous or excessive control forces after encountering a trim runaway. In case of a runaway on one of the pitch trim motors, the remaining one can be used to regain normal control forces.

To manage the worst-case scenario (non-commanded nose down trim runaway during high speed descent), a considerable reduction of engine power and pitch-up control input to reduce the airspeed is required.

To avoid pilot fatigue by regaining normal control forces after a departed rudder or aileron trim tab, the remaining trim systems can be used to establish a steady heading side-slip condition within the lower speed range.

Refer to the PC-12 POH (Sections 3 and 7-3) for a detailed description of the applicable procedures and additional system information.

Pilatus appreciates your participation in distributing safety critical information.

Sharing this Safety Information Letter and associated information with pilots will enhance the safe operation of the PC-12 aircraft.

Best regards

Your Pilatus Team