



Shaun Williams
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Office of Aviation Safety - Central Region

Date: 10 May 2023

Subject: CEN23LA172, N28HE

Contact: Robert Tano, Airframe and Powerplant Mechanic
Zane Brown, Aviation Accident Investigator, NTSB

On May 3, 2023, about 1329 central daylight time, a Piper PA-34-200 airplane, N28HE, sustained substantial damage when it was involved in an accident near Coldspring, Texas. A postaccident examination revealed that the bolt which connects the stabilator trim rod assembly to the stabilator link assembly was missing and not located. Mr. Tano was the mechanic to last perform maintenance on the trim system.

Mr. Tano stated that after the initial write up for the trim cable unspooling (dated March 23, 2023), he respoiled the cable. He was unable to duplicate the unwinding unless he forced the trim wheel past the down-stop. At that point, it would put slack in the cable and de-spool. He tensioned the cables, rigged the entire system, placed the aircraft on jacks and attempted to duplicate the de-spool, but it would not. He then signed it off.

When he did the work re-spooling, he could recall disconnecting the trim rod from the linkage. He stated that he counted the wraps on the trim actuator to ensure there were enough wraps, checked the free play, but did not disconnect. When he took the cables loose, he put a cable block in place. After re-spooling, he recounted the wraps. He said there was no reason to disconnect the trim control. When asked if he knew the last time the trim control rod would have been removed, he did not know. He said he did not know of any time when that would have been removed. He said there was no reason to check the trim control rod. After the work, they leveled the airplane to ensure neutral trim and then ran the trim both ways to make sure it was set correctly.

When asked about the securement, he could not recall if it was a castellated nut and cotter pin or a safety wire. When asked if that was something that would be checked on an annual or 100-hour inspection, he stated that it would not be a specific item on the checklist for a castellated nut, but it would just be checked for general condition and see if it was loose. Just a general inspection of the flight controls would be to check for free-play, but no specific line item for the securement hardware.

He stated that he did not recall taking the trim assembly apart. It was not needed to respool the cable. He again stated that there was no excessive play, so there was no need to take any of it apart. He stated that had he adjusted the stabilator control rod, he would have signed it off and it would have been in the logbook entry.
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