



Piper Archer Magneto Safety Guard

Simple aircraft safety cover preventing accidental startup and battery drain in training fleets.



Employees at Purdue University have developed a magneto safety guard to ensure Piper Archer aircraft are secure when no longer in use. Purdue University's school of Aviation and Transportation Technology uses Piper Aircraft's Archer model (PA-28-181 Archer) for student flight training. Currently, there is no way to tell externally if the Piper Archers' magneto switches have been left 'on.' With the magneto 'on,' a plane's batteries may drain, the ignition system may overheat, or the plane may accidentally start up. Purdue employees designed a protective covering over the magneto switches to ensure they are not 'on,' while also using a red hanging tag to visually alert approaching flight crews.

Technology Validation:

The device is currently deployed and being used on all applicable Purdue aircraft.

Advantages:

- Prevents accidental start-up
- Prevents injury/death

Technology ID

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Category

Aviation/Engines

Aviation/Engines/Design

Aerospace &

Defense/Aviation/Components

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Applications:

-Safety

-Aeronautics

Publication:

<https://www.purdue.edu/newsroom/2024/Q4/purdue-aviation-experts-create-safety-guard-for-piper-archer-aircraft-in-the-purdue-fleet/>

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Intellectual Property:

Design Patent, 2021-04-20, United States

DIV-Patent, 2023-04-05, United States

DIV-Patent, 2023-04-13, United States

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