

AIRCRAFT IN MAINTENANCE PLACARD

GAMA PUBLICATION NO. 18

Version 1.0

**General Aviation
Manufacturers Association**



AIRCRAFT IN MAINTENANCE PLACARD

This placard to be used to mitigate the risk of an aircraft undergoing maintenance being flown before returned to service or an aircraft which airworthiness has been determined to be in question.

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1.1 Problem

Aircraft being operated by a pilot before completion of maintenance has been identified as a surprisingly common issue in general aviation aircraft accidents. Analysis conducted by the General Aviation Joint Steering Committee (GAJSC) about System Component Failure – Power Plant (SCF-PP) accidents identified a number of fatal accidents where a common problem was a pilot electing to operate a general aviation aircraft that had not been returned to service. The operation of an aircraft that was undergoing maintenance was identified as causal to the fatal accident in 3 of 70 accidents¹ reviewed by the SCF-PP working group.

The SCF-PP working group developed Safety Enhancement (SE) 45, titled Maintenance Placard, which purpose is to mitigate the risk of these types of fatal accident occurring. According to SE-45:

“To help prevent fatal general aviation accidents due to failure of the powerplant system, the general aviation community should develop, distribute and promote a device to be displayed in the windscreen of aircraft undergoing maintenance.

During the SCF-PP evaluation of accident data, three accidents were identified that were caused by incomplete maintenance. Even more accidents were attributed to the aircraft not being maintained for a substantial amount of time. The group determined that there needed to be a more effective way to alert the pilot and mechanic that the airplane is not currently airworthy.”

1.2 Objective of the Placard

The purpose of GAMA Publication 18 is to: “...develop a highly visible device which will alert pilots when aircraft is undergoing maintenance and/or is not airworthy.”

Many organizations already use placards or notices to identify aircraft in maintenance. These organizations are encouraged to review the existing placard / notice to ensure it provides appropriate visibility of the maintenance activity being underway.

1.3 Design of Placard – Common Warning Sign Features

A general review of existing warning signs was conducted to support the development of “Aircraft in Maintenance” warning placard. It was determined that:

- The primary colors used in warning signs are a combination of red, yellow, and black.
 - Yellow, Example: RGB 255, 255, 0
 - Red, Example: RGB 255, 0, 0
 - Black, Example: RGB 0, 0, 0
- General warnings were announced using an exclamation point (“!”) symbol.
- The prevalent warning or caution sign shape is an upward pointing triangle.

¹ NTSB accident record SEA07FA195, ATL04LA103, and LAX02LA223

1.4 Aircraft In Maintenance Placard Design



The source file is available online for download and reproduction at:

GAJSC: <http://www.gajsc.org/system-component-failure-powerplant/>

GAMA: <https://gama.aero/facts-and-statistics/publications/>

1.5 Recommended Materials

The “Aircraft in Maintenance” placard should be made of a durable material (*i.e.*, not paper). The placard should be made of material such as:

- Hard Material Placard: Acrylic (often referred to as plexiglass)
- Soft Material Placard: Vinyl Cling Decal

1.6 Permission of Use

The “Aircraft in Maintenance” placard is provided free of use to the general aviation industry with the objective of mitigating the risk of aircraft accidents. The intended audience for and users of the placard includes, but is not limited to:

- Maintenance, Repair, and Overhaul Organizations
- Aircraft Mechanics
- Operators

1.7 Disclaimer of Liability

The General Aviation Manufacturers Association (GAMA) specifically **DISCLAIMS LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES** and assumes no responsibility or liability for any loss or damage suffered by any person as a result of the use or misuse of any of the “Aircraft in Maintenance” placard. GAMA assumes or undertakes **NO LIABILITY** for any loss or damage suffered as a result of the use, misuse or reliance on the “Aircraft in Maintenance” placard.