

# The National FAA Safety Team Presents Frankenplane!

## Beware the Hidden Dangers of Layering STCs

AW Topic of the quarter Qtr. 2FY2019

Presented to: AMTs in CO and WY

By: FAA Safety Team

Date: March 2019

Produced by:  
The FAA Safety Promotion Program Office



Federal Aviation  
Administration



# People always seem to have a better idea



# Special Mission...or not





# Beech Baron N28MR 2 Fatalities





# Beech Baron N28MR 2 Fatalities



# Cessna 337 N12NA 5 Fatalities





# Cessna 337 N12NA 5 Fatalities



# Cessna 337 N12NA 5 Fatalities



**Outboard Section of the Left Wing Separated and found on the Runway**

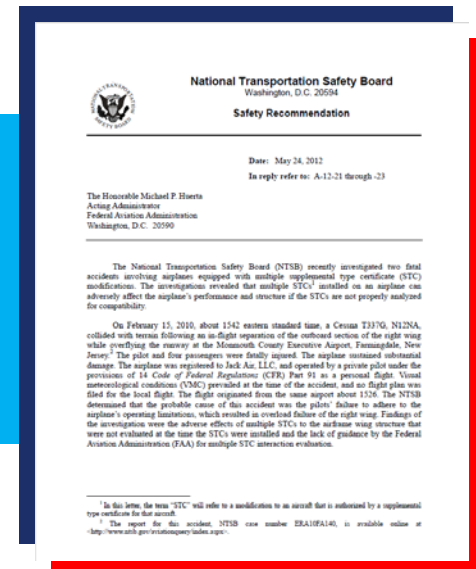




# 3 NTSB Safety Recommendations

## Three NTSB Safety Recommendations Issued by the Board on May 24, 2012

Educate  
Evaluate  
Document

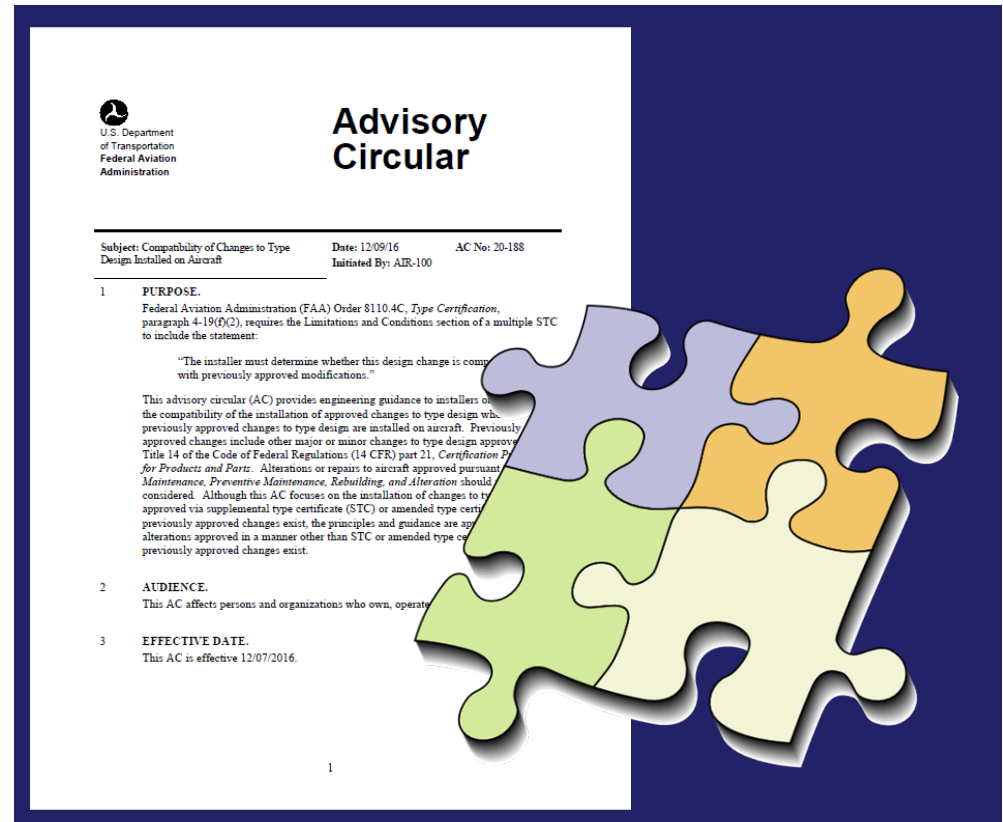


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# AC 20-188

## Compatibility of Changes to Type Design Installed on Aircraft

1. List of Installations that Might be Incompatible
2. Guidance for the Owner/Operator
3. Installer Responsibilities
4. How to Resolve Non-compatible Modifications





# Transport Canada

- Transport Canada **Airworthiness Notices - B045**, Edition 1 - 15 May 1998,



The screenshot shows the Transport Canada website interface. At the top, there is a black header with the Canadian flag, "Government of Canada / Gouvernement du Canada", and "Canada.ca | Services | Departments | Français". Below this is a blue banner with "Transport Canada" and a large red maple leaf. A search bar is on the right. A navigation menu includes "Aviation", "Marine", "Rail", "Road", "Dangerous goods", "Security", "Resources", and "Regions". Below the menu, a breadcrumb trail reads: "Home > Air Transportation > Aircraft > Aircraft Maintenance and Manufacturing > Regulatory Requirements and References > Airworthiness Notices". The main heading is "Airworthiness Notices - B045, Edition 1 - 15 May 1998". A left sidebar lists "Air Transportation" (selected), "Airports and Aerodromes", "Aircraft", and "National Aircraft Certification". The main content area has the heading "Airworthiness Notices - B045, Edition 1 - 15 May 1998" and the subheading "Compatibility of Multiple Modifications". Under "Purpose", it states: "The purpose of this notice is to remind aircraft owners, operators and". On the right, a blue box labeled "Operational Airworthiness" contains a link to "Standards Branch".



# Other Documents

- **Anchorage ACO flyer**, *How Do I Determine Supplemental Type Certificate (STC) Compatibility?*
- **Aircraft Owners and Pilots Association (AOPA)** article “Layering STCs: Understanding and Managing the Risks. November 21, 2013
- **FAA Safety Briefing** - May/June 2014 article *Beware the Frankenplane! The Hidden Dangers of Layering STCs.*






# FAA Order 8110.4

For multiple STCs, include the following note:

“The installer must determine whether this design change is compatible with previously approved modifications.”

ORDER 8110.4C

TYPE CERTIFICATION



March 28, 2007

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

Distribution: A-W(RFS/EE)-3; A-X (CDFS)-3; A-FFS-5.7(LTD);  
A-FAC-2; AMA-220 (20 copies); AMA-250 (20 copies);  
AFS-600 (10 copies); AEU-100 (1 copy) Initiated by: AIR-110



# FAA Form 337

## NOTICE

*Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. **An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.***



### NOTICE

*Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.*

#### 8. Description of Work Accomplished

*(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)*

\_\_\_\_\_

\_\_\_\_\_

Nationality and Registration Mark

Date





# What Can You Do?

- **The AC is meant to be a starting point to create awareness**
  - Expected to evolve over time.
  - Add cases/information as available
- **Submit feedback form in AC if you have a recommendation.**



# Who you gonna call?

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## FAA Consultant DER Directory



# Questions?

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## Alteration Questions:

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