

# The National FAA Safety Team Presents

## Topic of the Month – May Owner/Mechanic Relations

Presented to: FSFC and Friends

By: Drew Myers, FAASTeam Wings Rep

Date: May 13th, 2021

**Produced by AFS-850  
The FAA Safety Team (FAASTeam)**



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# Welcome

- **Drew Myers, AGI, and Flying Clubs Initiative Manager at AOPA**
  - Safety Officer, Plane Captain, Free State Flying Club
  - FAASTeam representative, Baltimore FSDO
- **Sponsor Acknowledgment – FSFC, AOPA, FAASTeam, Baltimore FSDO**
- **Please - MUTE your microphone.**
- **WINGS Credit: Yes...but give me a day or two...**
- **In-and-out...no time for questions, but send email:**
  - **drew.myers@aopa.org**



# Important!

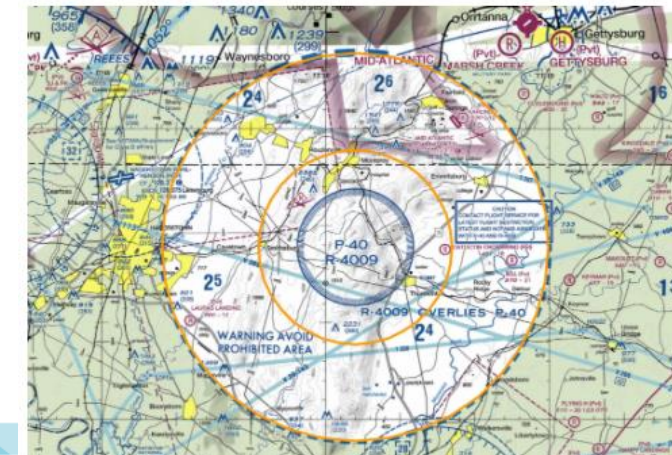
- **Wilmington Delaware TFRs**
- **Extended P-40 TFRs**
- **Will be popping up like daisies...**
- **Check NOTAMs**
- **Subscribe to NOTAM notifications**
- **Call flight service when in flight**



VIP TFR OVER WILIMINGTON, DE BEGINNING TODAY SATURDAY, MARCH 6, 2021



VIP TFR OVER HAGERSTOWN/THURMONT, MD BEGINNING FRIDAY, APRIL 2, 2021  
(((CHANGE IN DEPARTURE TIME)))



# Objectives

**To give owner/operators/mechanics information on:**

- Who's responsible for the airworthiness of the aircraft
- What the owner should expect to see
- What mechanics should do to the aircraft during annual/condition inspection

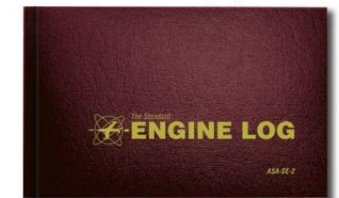
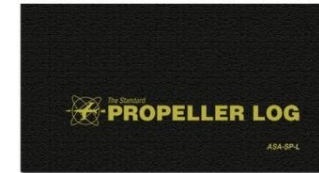




# Objectives

To give owner/operators/mechanics information on:

- What the logbook entry **MUST** contain
- What the logbook **SHOULD** contain
- How the mechanic should document compliance with AD's



# Objectives

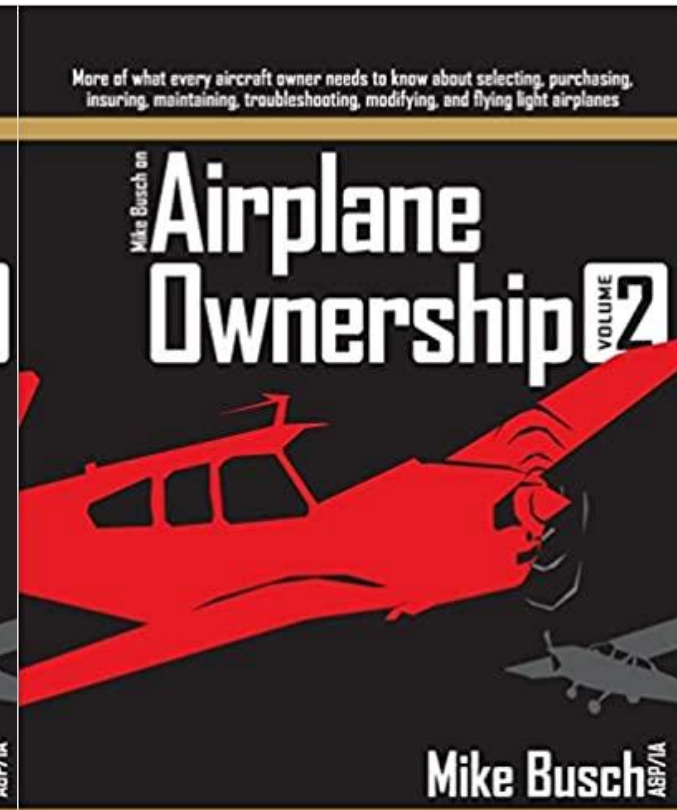
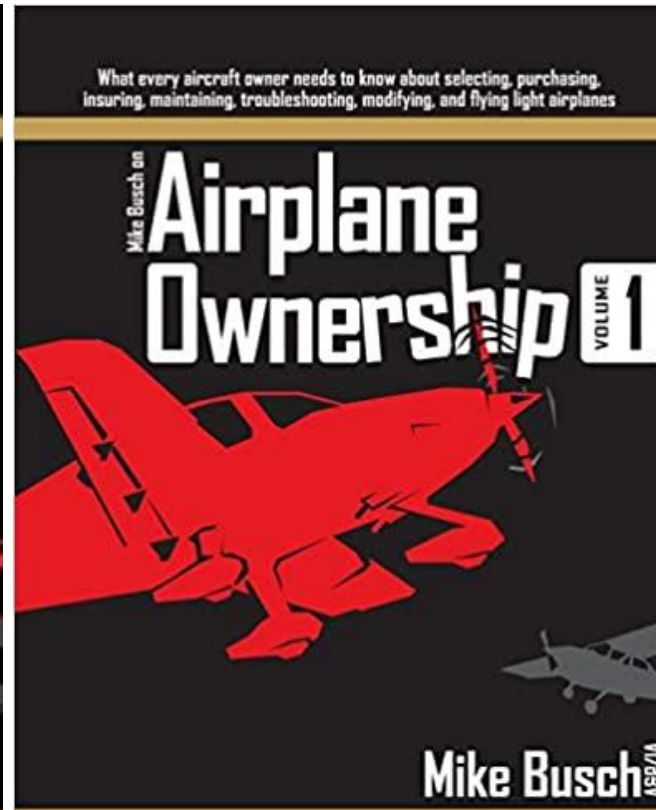
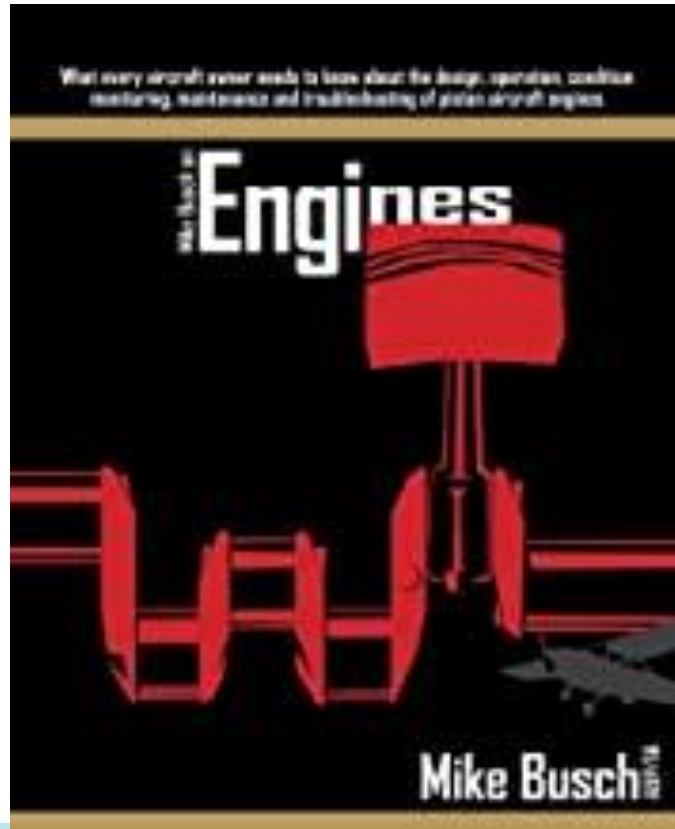
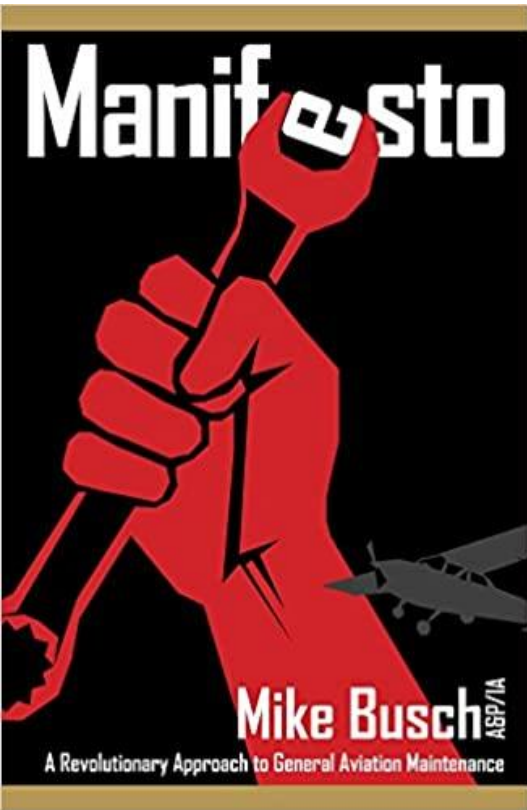
## **Become educated on maintenance**

- Who can/must do what?
- What can you do?
- Read around the subject!



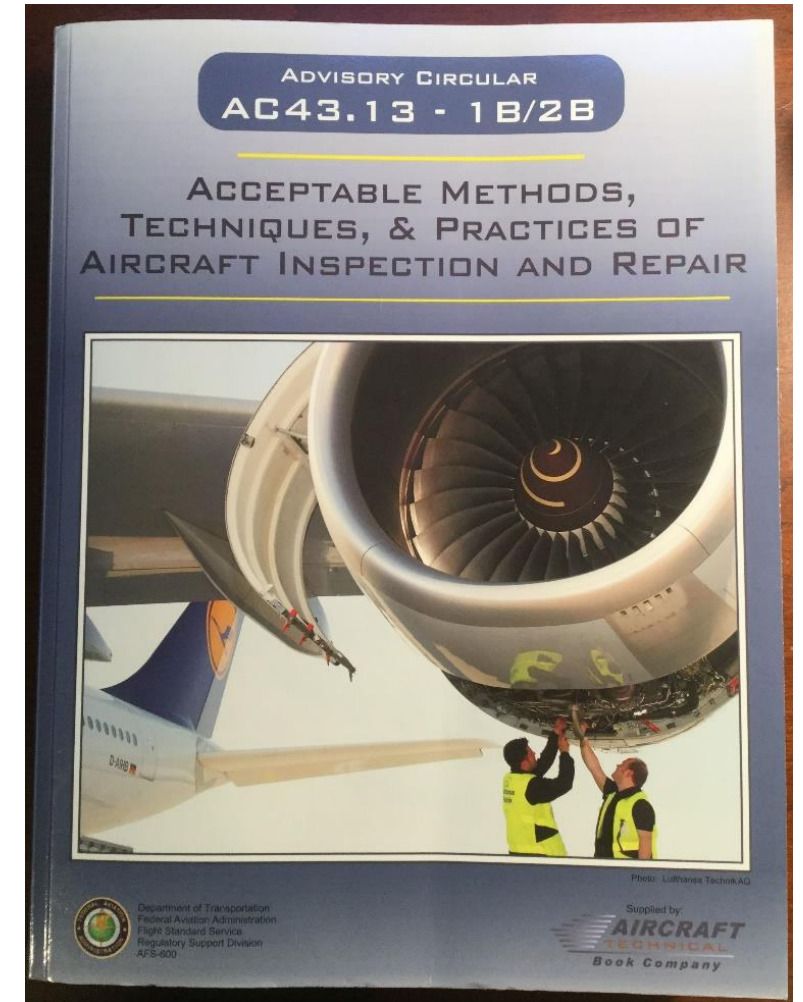
# Become Educated:

- Mike Bush's books (and articles):



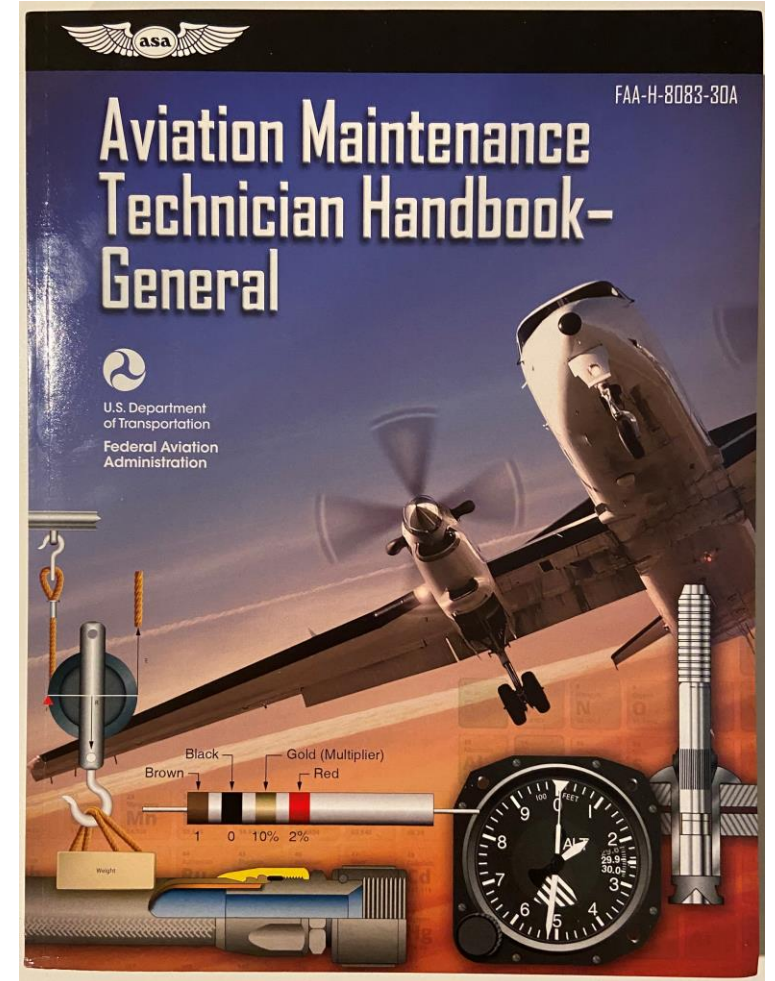
# Become Educated:

- AC 43.13 1B/2B
- A “must” for your aviation library
- Curl up on the sofa and give it a solid read
- You WILL learn a lot!
- When is a washer not a washer?
  - When it is not an aviation washer





# Become Educated: Want More...?



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# Become Educated: Part 43

- **The rule permits maintenance to be done by ordinary noncertificated folks, provided it's done under the supervision of and approved by a certificated mechanic**
- **Beyond that, FAR 43.3 permits a pilot to perform preventive maintenance on an aircraft provided the aircraft is used strictly for noncommercial operations under Part 91**
- **Pilots > PPL may do this all by themselves without any A&P involvement!**
  - Just because you can, doesn't mean you should
  - Be careful what you wish for...



# Let's go on a little trip to the maintenance hangar...



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# Know before you go: Who's responsible?

- **14 CFR Part 91.403(a)** says the **owner/operator is primarily responsible** for maintaining the aircraft in an airworthy condition to include compliance with all applicable ADs
- **14 CFR Part 91.7** says: No person may operate a civil aircraft unless it is in an airworthy condition.

AND

**The pilot in command of a civil aircraft is responsible** for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when un-airworthy mechanical, electrical, or structural conditions occur.





# Airworthiness Certificate

UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION  
**STANDARD AIRWORTHINESS CERTIFICATE**

## 6. TERMS AND CONDITIONS

Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventive maintenance, and alterations are performed in accordance with Parts 21, 43, and 91, of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.

DATE OF ISSUANCE

FAA REPRESENTATIVE

DESIGNATION NUMBER

Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.  
THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

FAA Form 8100-2



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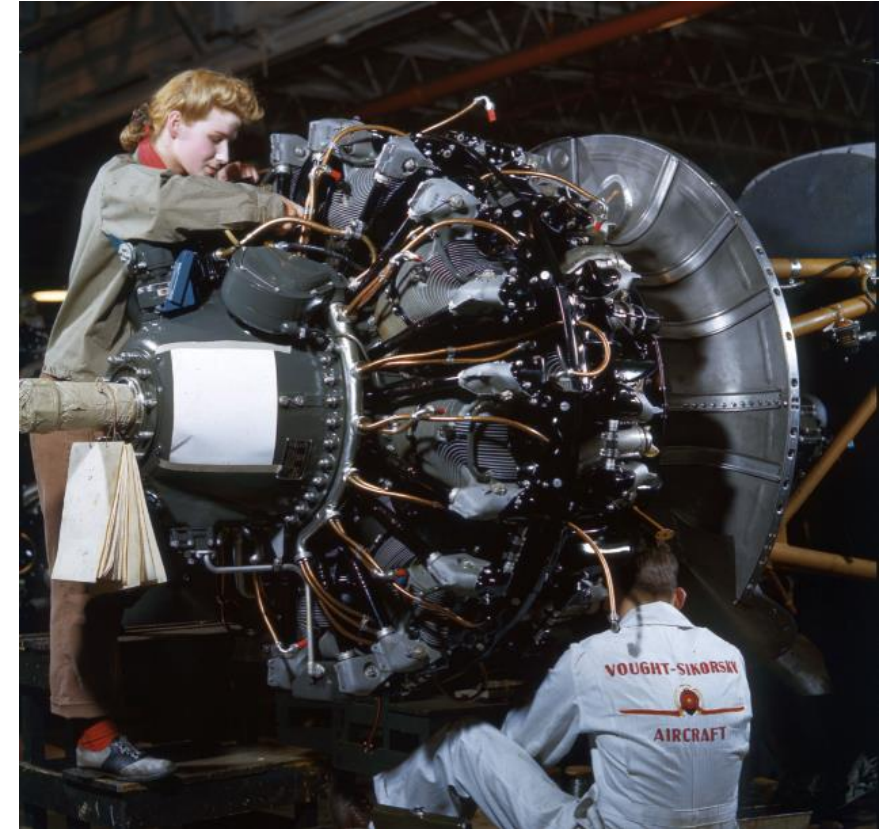
# Arrival at the Maintenance Hangar



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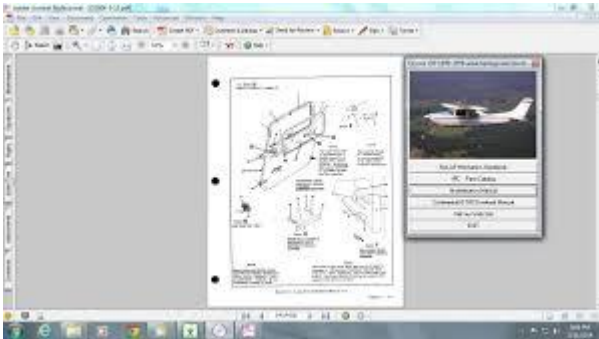
# What You Should Expect To See

- A clean, neat and organized shop area
- Proper storage of materials and parts
- Adequate lighting
- Adequate tooling and equipment



# What to ask your mechanic

- **Do they have current, relevant and approved data?**
  - Current
  - Relevant
  - Approved





# What your mechanic must do

In accordance with 14 CFR Section 43.15 during annual/100-hour mechanics must:

- Use a Checklist that meets Appendix D of Part 43 at a minimum

In accordance with 14 CFR Section 43.13 they must:

- Use approved parts and materials

In accordance with 14 CFR Section 43.15 during annual/100-hour they must:

- Run-up the aircraft



# What your logbook entry **must** contain

14 CFR Section 43.9(a) says for maintenance other than inspections:

- (1) Description
- (2) Date
- (3) Name Signature, Certificate, and Type

AIRCRAFT MAINTENANCE RECORD		SIGNATURE
DATE	DESCRIPTION OF WORK PERFORMED	
01/21/99	Total Time 1743.8 Hours	
	I certify that this aircraft has been	
	inspected in accordance with (insert type)	
	inspection and was determined to be in	
	airworthy condition.	
		<i>Ima B. Good</i>
		Ima B. Good
		A&P 123456789

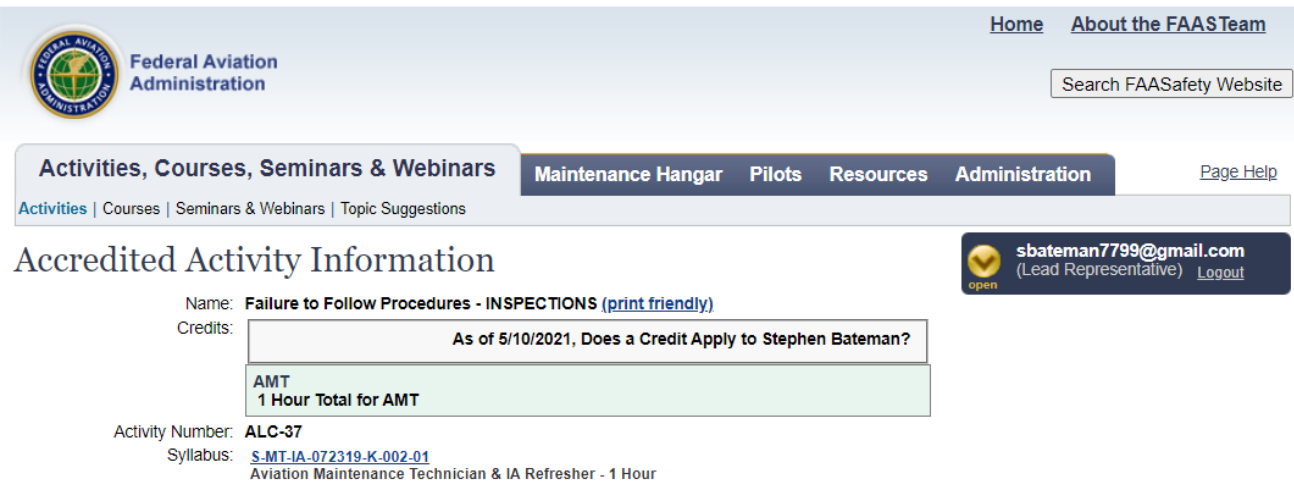
14 CFR Section 43.11(a) says for inspections:

- (1) The type of Inspection
- (2) The date of the inspection and aircraft total time in service (not necessarily tach time)
- (3) The signature, certificate number, kind of certificate held by the person approving or **disapproving** for return to service



# For more on inspections:

- **Have a crack at the FAASTeam AMT course:**
  - *ALC-37: Failure to Follow Procedures—Inspections*



The screenshot shows the FAA Safety Team website interface. At the top left is the Federal Aviation Administration logo. Navigation links include Home, About the FAASTeam, and a search bar for the FAASafety Website. A menu bar contains: Activities, Courses, Seminars & Webinars, Maintenance Hangar, Pilots, Resources, Administration, and Page Help. Below this is the 'Accredited Activity Information' section for course ALC-37. It lists the name 'Failure to Follow Procedures - INSPECTIONS (print friendly)', activity number 'ALC-37', and syllabus 'S-MT-IA-072319-K-002-01 Aviation Maintenance Technician & IA Refresher - 1 Hour'. A table shows 'AMT 1 Hour Total for AMT'. A user profile for 'sbateman7799@gmail.com (Lead Representative)' is visible in the top right.

This course highlights the consequences of failing to follow procedures with specific emphasis and best practices presented in the areas of installation, inspection, and maintenance.



The certificate is framed in a dark blue border. It features the FAA logo at the bottom left. The text reads: 'Certificate of Achievement This is to certify that Stephen Bateman has successfully completed the FAA Safety Team Aviation Learning Center Online Course Failure To Follow Procedures - Inspections Course Number ALC-37 (Qualifies for 1 Hour IA Refresher Training) Presented by FAA Safety Team May 9, 2021'. The signature of Valerie G. Palazzolo, National Manager, FAA Safety Team, is on the right. The certificate number '0351922-20210509-00037' is at the bottom.



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# For inspections, your logbook entry **must** contain

- (4) If approved for return to service...similarly worded statement- “I certify that this aircraft has been inspected in accordance with a (insert type) inspection and was determined to be in airworthy condition”
- (5) If not approved for return to service...similarly worded statement- “I certify that this aircraft has been inspected in accordance with (insert type) inspection **and a list of discrepancies and unairworthy items** dated (date) has been provided to the aircraft owner or operator”
- (6) NOTE: Inspections are different than fixing. There is no requirement for the IA to fix the discrepancies.
- (7) In fact, the IA **MUST** provide a list of discrepancies AND **sign** the logbook. The inspection is then complete.
- (8) When the fixes are made, an IA signs off the work. A second Inspection is **NOT** required.





# What your logbook entry **should** contain

- Part and serial numbers for parts removed
- Part and serial numbers for parts installed
- Specific reference to approved data used to perform a task
- Reference to approval documents for parts installed (FAA Form 8130-3 or RTS Tags)
- Aircraft Make/model AD's, whether they apply or not
- Any other comments deemed important by the mechanic (never too much information)



# How AD's **must** be signed off

## ONE TIME AD's

- AD number including revision date
- Method of compliance

## RECURRING AD's

- Everything above, plus
- Time and/or date when the next action is required

~~AD's C/W through 09/2019~~

AIRWORTHINESS DIRECTIVE COMPLIANCE RECORD							
Make Piper		Model PA28-161		S/N 28-7410669			
AD Number	Subject	Date and Hours of Compliance	Method of Compliance	One time	Recurring	Next Comp. Due.	Authorized Signature
62-19-03 08-28-62	Prop Bolt failure	1044.8 12-01-77	N/A by S/N	X			George B. Jones AP 272182 IA
64-06-06 04-06-64	Control Wheel failure	1044.8 12-01-77	N/A by S/N	X			George B. Jones AP 272182 IA
67-20-04 09-27-67	Main landing gear torque link failure	1044.8 12-01-77	N/A by Torque links not drilled for lube fittings	X			George B. Jones AP 272182 IA
67-26-02 05-22-68	Various Modifications	1044.8 12-01-77	N/A by S/N	X			George B. Jones AP 272182 IA
77-23-03 11-14-77	Control Rod Binding	1044.8 12-01-77	C/W by installing new style rod end	X			George B. Jones AP 272182 IA
79-02-05 01-29-79	Fuel Flow Interruption	1308.7 12-30-79	N/A by S/N	X			George B. Jones AP 272182 IA
79-13-03 06-08-79	Prevent Potential Fire Hazard	1352.2 01-05-80	N/A by S/N	X			George B. Jones AP 272182 IA
79-22-02 10-26-79	Prevent Possible Fuel Leakage and Fire Haz	1352.6 01-05-80	N/A by S/N	X			George B. Jones AP 272182 IA
80-14-03 07-01-80	Disruption of Radio Communication	1422.3 01-05-81	N/A by S/N	X			George B. Jones AP 272182 IA
81-23-05 03-08-82	Prevent In-Flight Fire	1615.4 05-25-82	C/W by inspection and by installing Piper kit P/N 764-303V	X			George B. Jones AP 272182 IA
95-26-13 02-05-96	Oil Cooler Hose Failure	2589.2 03-28-96	C/W by installing new hoses	X	3589.2 03-28-04		George B. Jones AP 272182 IA
96-10-03 06-14-96	To Prevent Flap Handle Bolt Failure	2596.9 07-15-96	C/W By Inspection and by installing new bolt & bushing	X			George B. Jones AP 272182 IA



# You have a positive safety culture—does your mechanic?

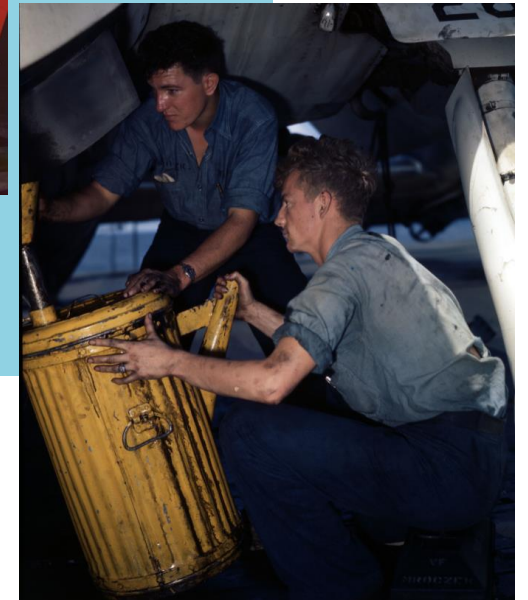
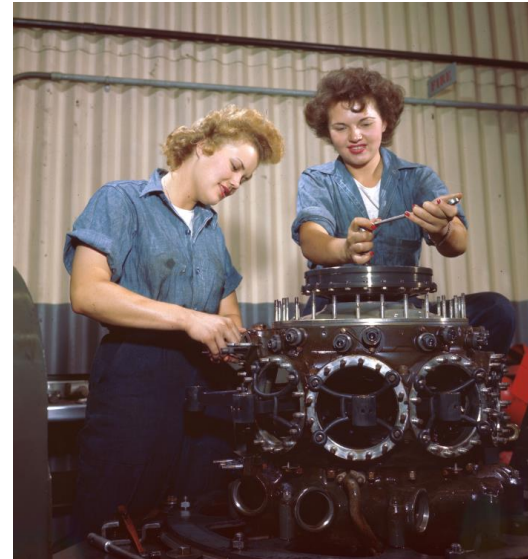
**A Clean, Neat, Well-Lit Shop**

**Adequate, Calibrated and Organized Tools**

**Current, Relevant and Approved Data**

**Use of Approved and Traceable Parts**

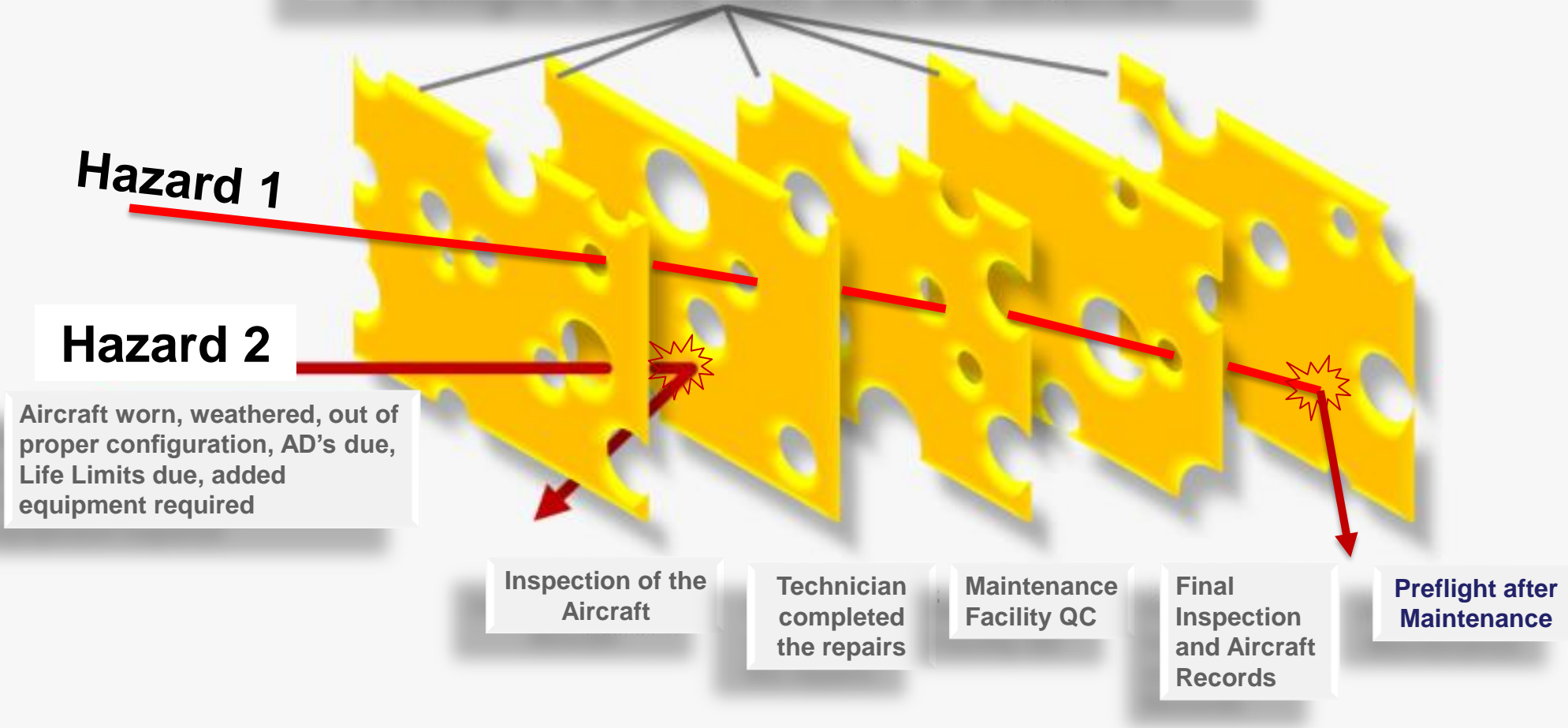
**Proper Logbook Entries, including AD's**



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# •Maintenance Event

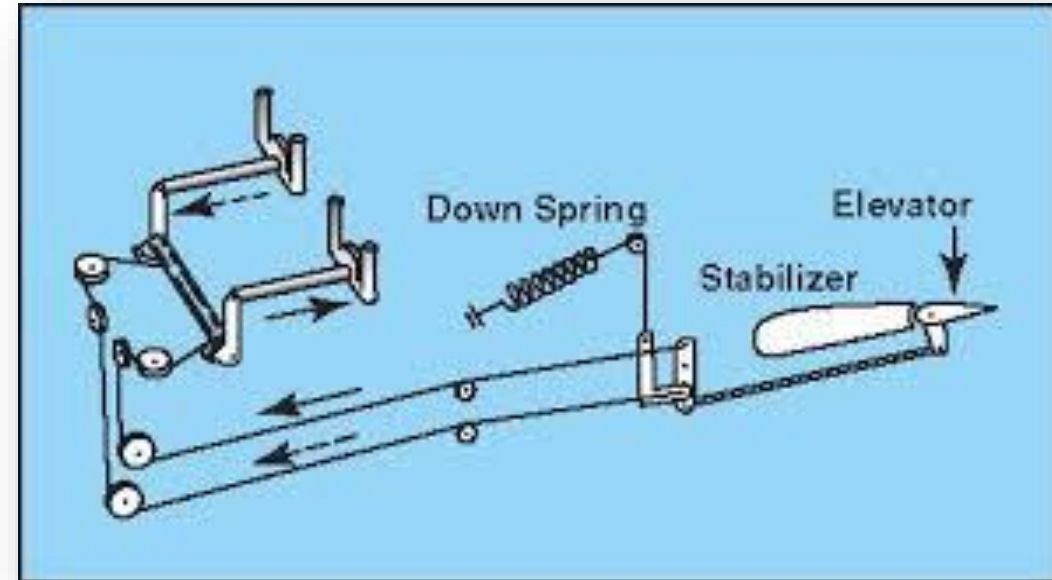
Preflight is the last line of defense





# Preflight after maintenance

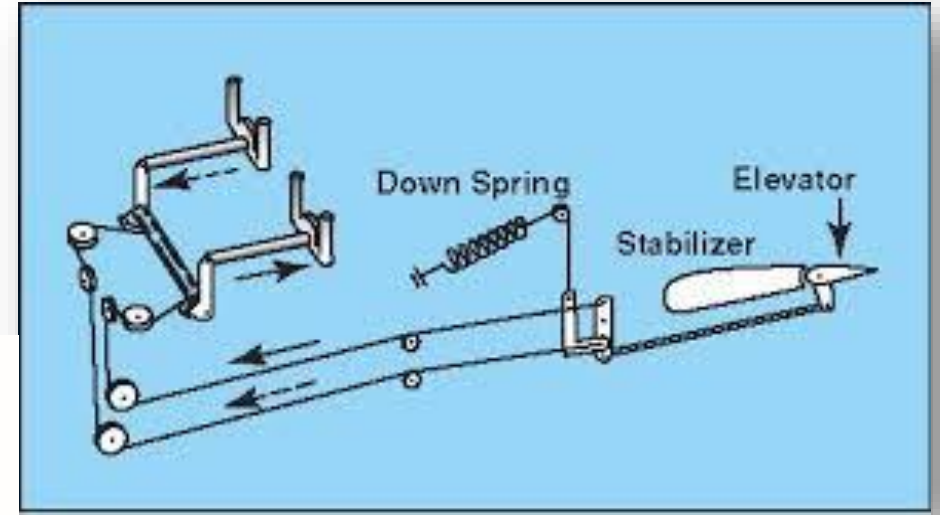
- Know what systems or structures were repaired or replaced during maintenance—they need special attention
- Discuss w/mechanic **ALL** work that was done
- Don't assume the part(s) replaced are the **ONLY** things that were taken apart or affected
- The trim tab likely checked “secure” but it wasn't the only part of the system affected...



# Preflight after maintenance

This preflight is unique and should be treated as such because:

- It's vital to your safety
- It's vital to the health of your aircraft
- It's the last line of defense against a mechanical error/failure
- Where do we look?
- What do we look for?
- How do we do it?



# Proficiency and Peace of Mind

- Fly regularly with your CFI
- Practice for Proficiency
- Document in WINGS



# Next Month's ToM

## The National FAA Safety Team Presents

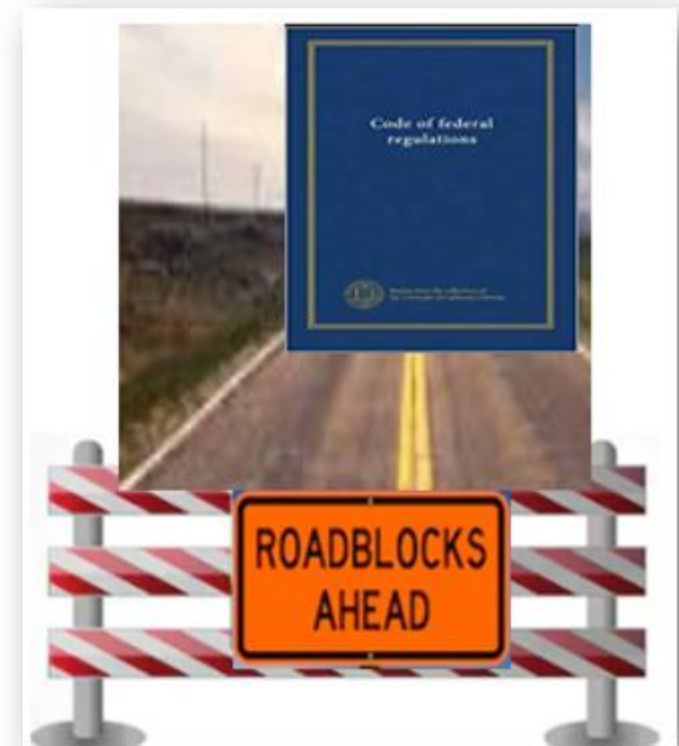
### Topic of the Month - June Regulatory Roadblock Reduction

Presented to: WAFC and Friends  
By: Stephen Bateman, CFI  
Date: June 14<sup>th</sup>, 2021

Produced by AFS-850  
The National FAA Safety Team (FAASTeam)



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# Thank you for attending!

**You are vital members of  
our GA safety community!**

