

CFI Bootcamp

Flight Instructor Training

Preflight Procedures

Understanding the Preflight Inspection

Good – Marginal – Rejected

Today's Bootcamp+ Network Programming

What's on for Today?



Live Show – 1st Hour – Wings Credit
Open Mic – 2nd Hour – End
Monitor the Chat – Links/Info
Wings Credit - End of the Live Show

Today's Bootcamp+ Network Programming

What's New?



PH Rebroadcasts Wed - 8pm EDT
Powerhour Podcasts – Full shows
CFI Knowledge Gaps Course

When is an airplane airworthy?

- When it has an airworthiness certificate
- When it continuously conforms to its type certificate

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION

STANDARD AIRWORTHINESS CERTIFICATE

1. NATIONALITY AND REGISTRATION MARKS	2. MANUFACTURER AND MODEL	3. AIRCRAFT SERIAL NUMBER	4. CATEGORY
5. AUTHORITY AND BASIS FOR ISSUANCE This Standard Airworthiness Certificate is issued pursuant to the Federal Aviation Act of 1958 and the rules thereunder, as of the date of issuance, the aircraft in which issued has been inspected and found to conform to the type certificate requirements, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided to Annex 8 to the Convention on International Civil Aviation, signed at Rome, 1944. Exemptions:			
6. TERMS AND CONDITIONS Unless sooner terminated, suspended, revoked, or a certificate of title is otherwise accompanied by the registration, this airworthiness certificate is valid as long as the maintenance, inspection, and alterations are performed in accordance with §§ 43 and 43A of the Federal Aviation Regulations, as applicable, and the aircraft is registered in the United States.			
DATE OF ISSUANCE	FAA WORKSHEET NO.	DESIGNATION NUMBER	

Any alteration, reproduction, or reuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 2 years, or both. THIS CERTIFICATE MUST BE DISPLAYED ON THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

FAA Form 8100-2 (9-82) U.S. GPO:2001-888-455

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

1417 Revision 18 Standard Airworthiness Certificate	
131	1311
131A	1311A
131B	1311B
131C	1311C
131D	1311D
131E	1311E
131F (USAF T-46A)	1311F
131G	1311G
131H (USAF T-46A)	1311H
July 28, 2011	

WARNING: Use of aircraft listed here may cause serious performance degradation and fuel system component damage, and is therefore prohibited on certain airplanes.

TYPE CERTIFICATE DATA SHEET NO. 1417

This data sheet which is part of Type Certificate No. 1417 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Trimble Aviation Inc.
One Coast Boulevard
P.O. Box 7164
Wichita, Kansas 67277

Type Certificate Holder Revised: Cessna Aircraft Company (transferred to Trimble Aviation Inc. on July 28, 2011)

1. Model 172, 172B, 172C (Normal Category), approved November 6, 1983, 2 P.L.M. 172B (Category), Approved December 11, 1986

Engine: Continental IO-300-A or IO-300-B

Three Classifications

- Good
- Marginal
- Rejected



The Basics

- Use a checklist
- Establish a routine
- Know how to report a discrepancy

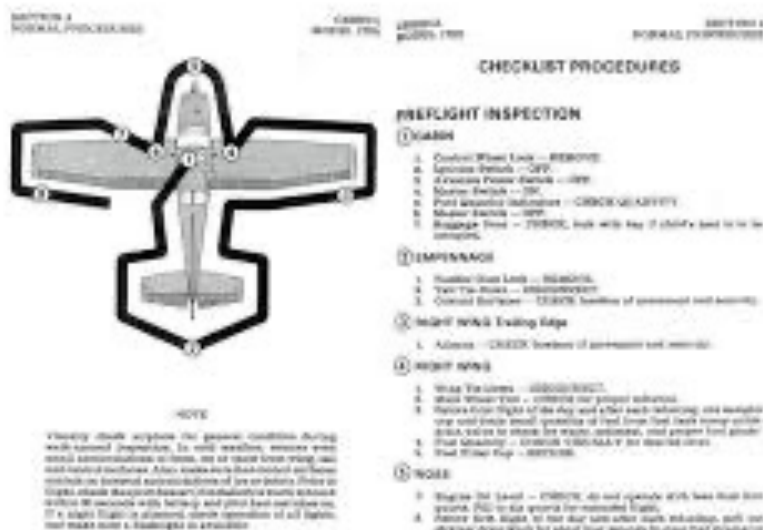


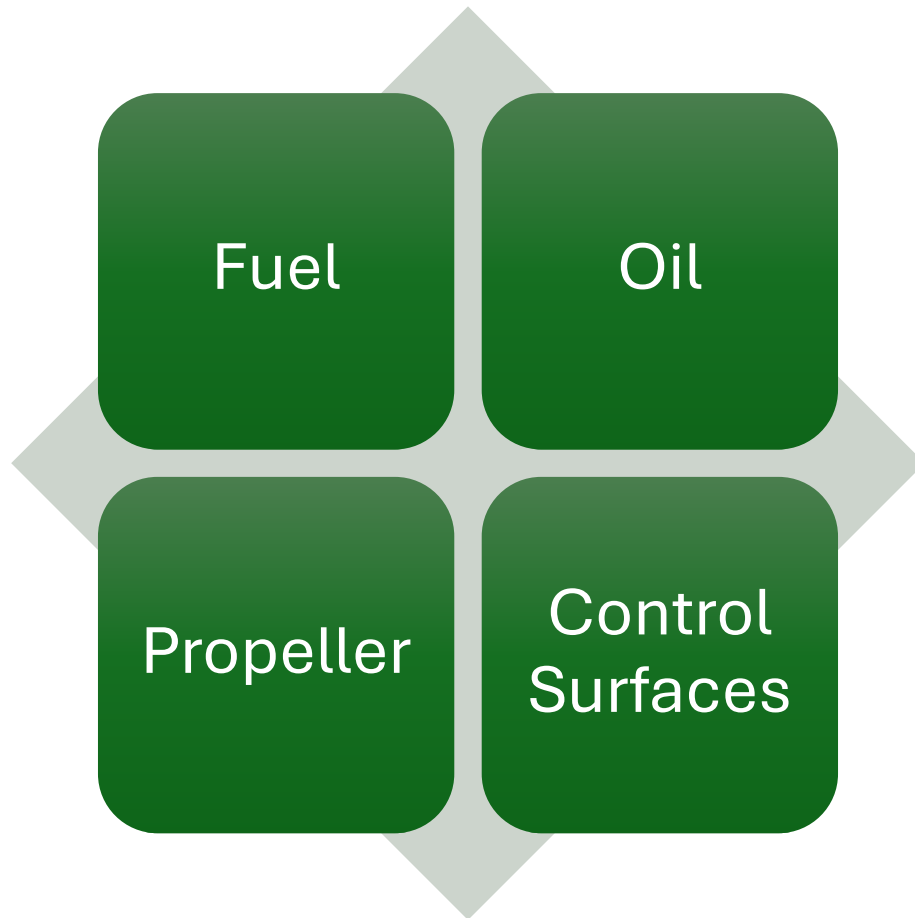
Figure 4-1: Preflight inspection

The Absolute Golden Rule for CFIs – Always...

- Check the Fuel
- Check the Oil
- Do a Walk Around
- Every time, no matter what – No exceptions



Airplane Key Components



Airplane Key Components

Fuselage

Nosewheel

Tires/Brakes

Fuel



Grade

Contamination/Water

Quantity

Fuel Caps

Fuel Vent(s)

Oil



Color

Quantity

Dipstick Security

Leaks

Propeller



Nicks

Damage

Security

Control Surfaces



Movement

Skin Condition

Tears

Paint

Popped Rivets

Fuselage



Skin Condition

Dents

Paint

Corrosion

Popped Rivets

Fuselage



Skin Condition

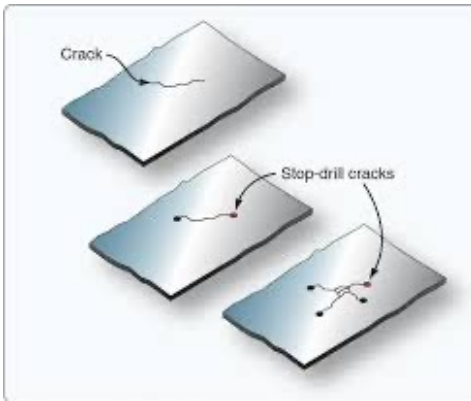
Dents

Paint

Corrosion

Popped Rivets

Fuselage



Tears in Trim Pieces

Stop Drilling

Windows

Antennas

Fuselage



Air Intake

Engine Air Intake

Doors

Static Ports and Pilot Tubes

Nosewheel



Proper Inflation

Shimmy Dampener

Tire

Leaks

Tires



Wear Condition

Flat Spots – Cord Showing?

No or Light Tread

Under and Over Inflation

Projected Use for a Given Flight

Cessna 172 preflight condition guide

Know when to fly, when to monitor, and when to ground the aircraft

☐ Good

☐ Marginal

☐ Rejected

FUEL

Good

Blue color, no water
odor normal, caps secure

Marginal

Low but legal
Min per POH for route,
recheck quantity

Rejected

Water/contamination
Wrong color/grade, cap
missing, quantity unsafe

OIL

Good

6-8 qts
Clean amber color,
no metal particles

Marginal

4-5 qts
Dark but not black,
add oil before long flight

Rejected

Below 4 qts / milky
Milky = water intrusion,
black = overdue change

TIRES & GEAR

Good

Proper inflation
No cuts/bulges, tread
visible, wheel pants secure

Marginal

Slightly low / worn
Minor surface cracks,
monitor — plan to service

Rejected

Flat / cord showing
Cuts, bulges, flat spot,
or brake fluid leak

CONTROL SURFACES

Good

Full, free & correct
No play, hinges tight,
fabric/skin intact

Marginal

Minor skin dent
Small non-structural dent,
log & get mech. opinion

Rejected

Binding / missing rivet
Restricted movement,
cracks, loose hinge

PITOT / STATIC PORTS

Good

Clear & unobstructed
No cover installed,
no insects/debris

Marginal

Minor residue
Wipe carefully, recheck
for full clearance

Rejected

Cover on / blocked
Insect nest, cover left on,
or moisture inside

WINDSHIELD / VISIBILITY

Good

Clean & clear
No cracks, good
clarity, no delamination

Marginal

Light scratching
Does not impair vision,
log and plan repair

Rejected

Cracked / delaminated
Cracks in pilot view,
severe haze or peeling

SUMP DRAIN / FUEL SAMPLES

Good

Clear blue, no water
All drains sampled,
no globules or separation

Marginal

Slight cloudiness
Drain again, re-sample
until clear before flight

Rejected

Water globules / wrong color
Visible water, purple/
green tint — do not fly

When in doubt, don't go. Always defer to the POH, a CFI, or an A&P mechanic.

Special Announcement!

Reminders!



CFI Study Group on FaceBook



National Association of
Flight Instructors

Join SAFE, NAFI and the CFI Study Group by Clicking on the Images Above

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Flight Instructor Training