

Ex. 2 – Aeroplane Familiarization and Preparation for Flight



What you will learn:

- ✓ Main parts and control surfaces of an airplane

- ✓ How to ensure the plane is ready for flight:
 - Dispatch: Documents, Weight and Balance
 - Walk around airplane inspection
 - survival equipment, flight plan, nav log.

Why learn this:

- ✓ A good flight starts on the ground.
- ✓ Poor pre-flight preparation continues to rank high among the causes of accidents in general aviation
- ✓ Stay safe: get ready for your flight **before** you get airborne!

Theories and Definitions:

- ✓ Pilot's Operating Handbook
- ✓ Aircraft Components
- ✓ Documents Required on Board
- ✓ Survival Equipment, Clothing, Footwear.

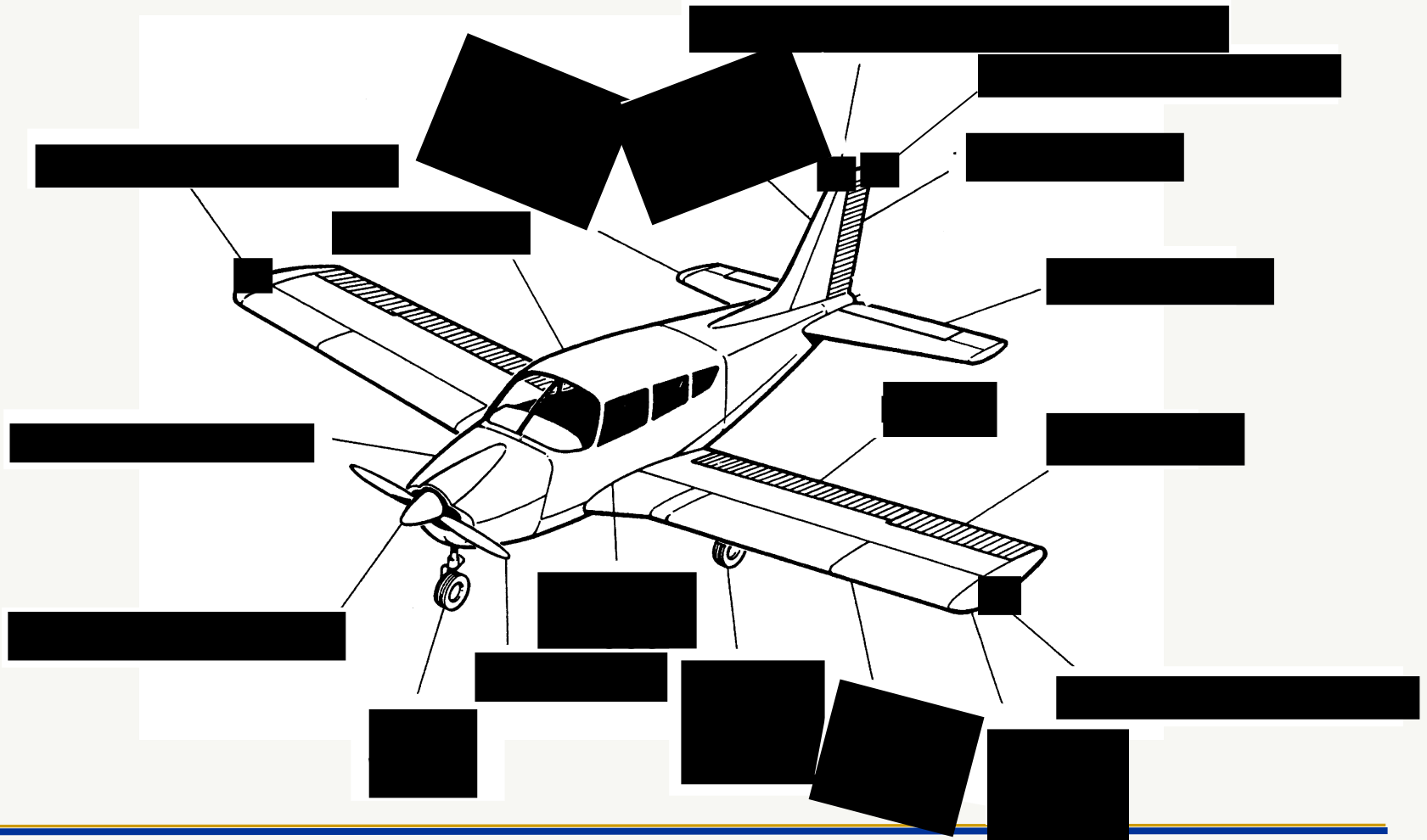
Pilot Operating Handbook (POH)



A plane's POH contains description of the airplane's systems, checklists for pre-flight inspection, performance figures, normal and emergency procedure, weight and balance information.

Aircraft Components

Can you name these components?



Documents Required on Board

Certificate of **A**irworthiness

- Establishes the plane is legally airworthy (ok to fly)
- Valid as long as the plane is properly maintained, not overloaded or otherwise out of POH limits

Certificate of **R**egistration

- States the plane's owner, purpose (private, commercial) and address. Valid as long as this info doesn't change.

- The copy on board must be for that **specific** airplane (e.g. C-GMCX)

Owner's Manual (POH)

- States the **specific** airplane's Basic Empty Weight and Centre of Gravity location.

Weight and Balance Report

- Better not be out of date!
Also, know your coverage and your deductible!

Insurance Certificate

- Contains info on plane's maintenance. Check to ensure inspections are up to date and there are no "snags". Only required on board if you plan to land and shut down at another field.

Crew **L**icenses

- Student Pilot Permit or Private/Commercial Pilot License. PPL/CPL is valid as long as your medical is valid and legal currency requirements are fulfilled. SPP, in addition to these requirements, expires in 5 years.

Journey **L**ogbook

- Radio Operator Certificate (valid forever).

- Medical Certificate – validity period varies with certificate category and pilot age.

Survival Equipment

- ✓ Can you survive an emergency landing in the middle of nowhere? Specific equipment will vary based on conditions, but, if you're flying over an area where survival can be jeopardized, you **MUST** have the means to:

- build a shelter



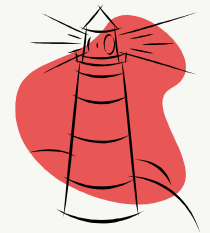
- start a fire



- provide/purify water

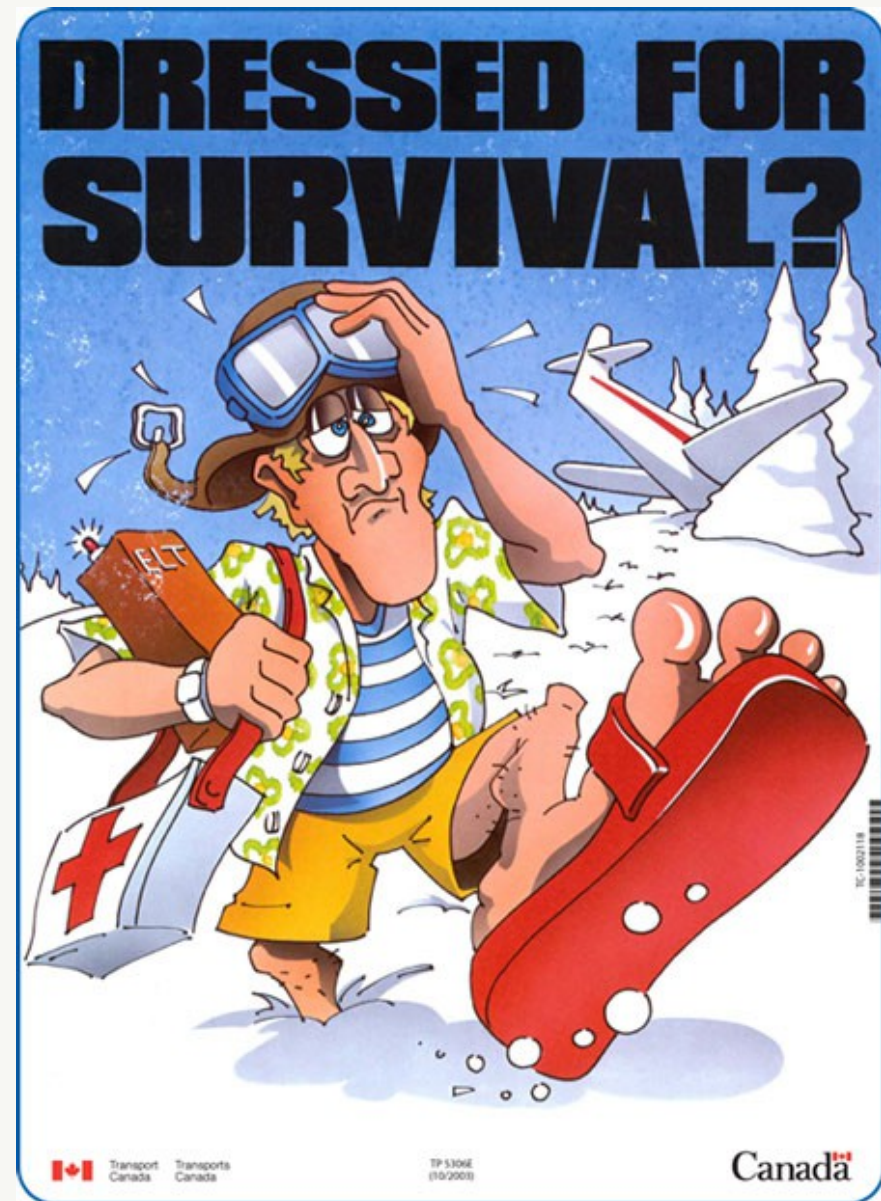


- signal distress



Clothing

- ✓ In Canada, our biggest survival concern is usually cold weather...



Procedures

- ✓ Before You Leave the House
 - Check your own health
 - weather conditions

- ✓ At the Flight School
 - weather and NOTAMs
 - Journey Log
 - Weight and Balance calculations
 - sign-out procedures

- ✓ On the Apron / In the Hangar

- ✓ In the Airplane.

Before You Leave the House

✓ We have a checklist for the pilot, not just the plane!

Illness – are you feeling well?

Medication – have you taken any medication that could affect your performance?

Sleep – have you had an adequate rest or are you sleep-deprived?

Alcohol – have you had any in the last 8 hours? Do you have a hangover?

Fatigue – are you exhausted? Had a long and stressful workday?

Eating – are you well nourished? A starving pilot is not a safe pilot!

Flying with your instructor when sick, tired, impaired or hungry will waste your time and money....

And doing so as a pilot in command can lead to an accident!

Oh, and how's the weather today? Check with your instructor if you're not sure... the trip to the airport might not be worth it!

At the Flight School

✓ Check weather and NOTAMs

- your instructor will show you the Nav Canada Aviation Weather Web Site AWWWS and/or introduce you to phone weather briefing service from your local Flight Information Centre (FIC)
- make sure you check NOTAMs as well as weather! NOTAMs (NOTices to AirMen) contain information that reflects recent or temporary changes not published elsewhere. You want to know if a runway at your airport is closed or that there is an airshow nearby!

✓ Check the plane's Journey Log

- Scheduled maintenance performed on time? Out-of-phase tasks up-to-date?
- Any snags/defects, deferred defects.

✓ Complete Weight & Balance Calculations

- It is important to ensure the plane is loaded properly. You will learn how to complete these calculations from your instructor and/or in the ground school

✓ Sign out the plane – Daily Flight Sheet

On the Apron/In the Hangar

- ✓ Perform the walk-around, to check that the plane is good to go. Follow the POH, the school's checklist and your instructor's tips to do it properly for your type of plane.

Just a tiny sample of things to check for

CONTROL SURFACE MOVEMENT

FIRE EXTINGUISHER...

PROPELLER CRACKS...

LIGHTS AND SWITCHES...

BIRD NESTS...

PITOT TUBE BLOCKAGE]]]]

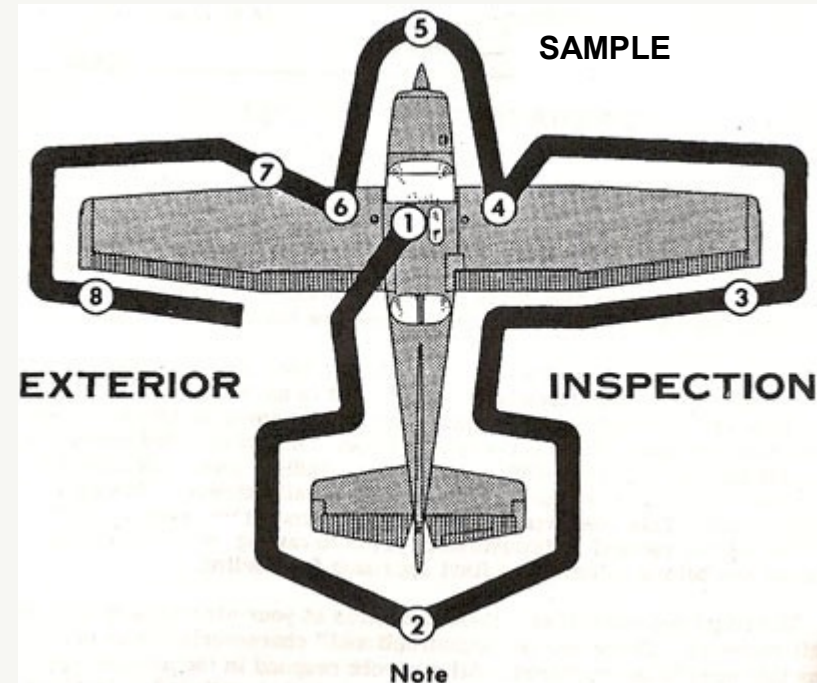
TIRE INFLATION...

FRAYING CABLES...

FUEL... Missing ...R...I...V...E...T...S...

BRAKE FLUID LEAKS...

OIL LEVELS...



In The Airplane

- ✓ Follow checklists for engine start, taxi, run-up, and pre-take-off
- ✓ Do not rely on memory alone!

Considerations

- ✓ Ensure the plane is in a position that allows you to safely taxi out before jumping in and starting the engine
- ✓ Always consider which way the tail is pointing – you'll be sending a major blast of prop wash that way after start. Do not blast people, open hangars.
- ✓ Develop/learn a preflight routine and follow it every time – this improves consistency and ensures no items are skipped
- ✓ Checklist tip: hold it up as you read off the items, so you can still see what's going on outside.

SAFETY

- ! ALWAYS check weather, NOTAMs, documents and do a thorough walk around before going flying!**
- ! ALWAYS take steps to ensure area near the propeller is clear before starting the engine**
- ! ALWAYS make sure there is necessary safety/survival equipment on board and that you and your passengers are dressed for surviving the weather.**

Review

- Q Where can you find the information on the plane's performance characteristics, limitations, normal and emergency checklists?
- Q Where can you find the information about the plane's maintenance and defects history?
- Q What documents are required on board of the aircraft?
- Q Where can you find aviation weather forecasts?
- Q How to make sure YOU the pilot are ready for flying?

Conclusion

- ✓ Now you know the steps to take on the ground before you can take the plane up in the air!
- ✓ Most aviation incidents and accidents are preventable by good pre-flight procedures. But once in the air, you can't just "pull over" if you realize something is amiss! You can't call if you run out of fuel mid-flight! Take your time to prepare on the ground to have a fun and safe airborne experience.