#### Don't Pop Your Plugs!

# VFR / IFR Flight Planning and Preflight Preparation:

Things You Need to Know as a Pilot During Planning and Preflight For a VFR / IFR Flight

Presented to: FAA Safety Seminar Attendees

By: FAAST Rep Bill Doyle

Date: 2014 – 2015



#### How to Download this Presentation

- You can download this presentation at the link below.
  - The link is case-sensitive.
  - It is available in both PPT and PDF formats.
  - The PPT format is password-protected. Click the readonly button on the right.
- <a href="http://williamjdoylejr.net/FAAST/FlightPlanning/Pre-">http://williamjdoylejr.net/FAAST/FlightPlanning/Pre-</a> e-Flight\_Planning\_Cessna182T.ppt

#### Presentation Agenda

- A Pre-Flight Mishap
- FARs 91.3 and 91.103
- NTSB Pre-Flight Planning Accident Trends
- Planning a Proficiency Flight
- How to Query the NTSB Database
- Credits and Reference Information

# A Pre-Flight Mishap

#### The Mishap

- A pilot holding an FAA Commercial certificate with an instrument rating is conducting a pre-flight inspection in a Cessna 182T
  - The pilot gets distracted and forgets to remove the cowl plugs
  - The pilot starts the engine with the cowl plugs in place
  - What are the risks?
- Could this happen to you?
  - If yes, why?
  - If no, why not?
- How do you prevent it from happening to you?
  - See the rest of this presentation for prevention techniques

#### This Could Happen to You

- A pilot holding an FAA Commercial certificate with Instrument rating as well as a CFI A&I flies a Cessna 172 from Trenton to the Flying W for a multi-engine lesson in a Beech Duchess.
  - The lesson is one of those lessons where everything that could possibly go wrong, does.
  - The pilot is dejected and distracted due to what he feels is really poor performance on his part.
  - When doing the pre-flight on the Cessna 172 for the return flight to Trenton, the pilot forgets to remove the cowl plugs
  - The pilot starts the engine with the cowl plugs in place, taxis out, and departs the Flying W
  - A week later the mechanic at TTN shows the pilot the "chewed up" cowl plugs.
- Any lessons learned here?

# Two FARs You Really Need to Understand

#### 14 CFR 91.3

- Responsibility and authority of the pilot in command.
  - a) The pilot in command of an aircraft is directly responsible for, and is the **final** authority as to, the operation of that aircraft.
  - b) In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule of this part to the extent required to meet that emergency.
  - c) Each pilot in command who deviates from a rule under paragraph (b) of this section shall, **upon the request of the Administrator**, send a written report of that deviation to the Administrator.
- What Do You Do If You Start Engine with chocks, pitot tube cover, or cowl plugs in place?
  - Shut down immediately!
  - Report to your flying organization, flying club, FBO, or mechanic.

## 14 CFR 91.103 – Preflight Action

- Each pilot in command shall, before beginning a flight, become familiar with all available information concerning that flight. This information must include
  - a) For a flight under IFR or a flight not in the vicinity of an airport, weather reports and forecasts, fuel requirements, alternatives available if the planned flight cannot be completed, and any known traffic delays of which the pilot in command has been advised by ATC;
  - b) For any flight, **runway lengths at airports of intended use**, and the following takeoff and landing distance information:
    - 1) For civil aircraft for which an approved Airplane or Rotorcraft Flight Manual containing takeoff and landing distance data is required, the takeoff and landing distance data contained therein; and
    - 2) For civil aircraft other than those specified in paragraph (b)(1) of this section, other reliable information appropriate to the aircraft, relating to aircraft performance under expected values of airport elevation and runway slope, aircraft gross weight, and wind and temperature.

on
Pre-Flight Planning
General Aviation Accidents
in the
United States
from 1/1/2000 to 07/31/2013



## NTSB Pre-Flight Planning Accident Trends U.S. – 1/1/2000 – 7/31/2013

#### Pre-Flight Planning Accidents from 01/01/2000 to 07/31/2013

| U.S. | Fatal | Non-Fatal | <b>Fatalities</b> | Serious | Minor | Uninjured | Total |
|------|-------|-----------|-------------------|---------|-------|-----------|-------|
| 388  | 91    | 297       | 172               | 92      | 167   | 368       | 799   |

| Year  | Fatal | Non-Fatal | Total |
|-------|-------|-----------|-------|
| 2000  | 13    | 40        | 53    |
| 2001  | 5     | 27        | 32    |
| 2002  | 13    | 22        | 35    |
| 2003  | 5     | 32        | 37    |
| 2004  | 10    | 33        | 43    |
| 2005  | 6     | 33        | 39    |
| 2006  | 9     | 26        | 35    |
| 2007  | 13    | 18        | 31    |
| 2008  | 1     | 22        | 23    |
| 2009  | 7     | 12        | 19    |
| 2010  | 4     | 12        | 16    |
| 2011  | 5     | 13        | 18    |
| 2012  | 0     | 6         | 6     |
| 2013  | 0     | 1         | 1     |
| Total | 91    | 297       | 388   |

| PIC Certificate  | Fatal | Non-Fatal | Total |
|------------------|-------|-----------|-------|
| ATP              | 10    | 30        | 40    |
| Commercial       | 15    | 94        | 109   |
| Private          | 64    | 163       | 227   |
| Sport            | 0     | 1         | 1     |
| Student          | 2     | 7         | 9     |
| Non-certificated | 0     | 2         | 2     |
| Total            | 91    | 297       | 388   |

| PIC Age |    |  |  |  |  |  |
|---------|----|--|--|--|--|--|
| Average | 49 |  |  |  |  |  |
| Median  | 51 |  |  |  |  |  |
| Mode    | 56 |  |  |  |  |  |
| High    | 84 |  |  |  |  |  |
| Low     | 17 |  |  |  |  |  |



## NTSB Pre-Flight Planning Accident Trends U.S. – 1/1/2000 – 7/31/2013

#### **Purpose of Flight**

| U. S.     | Instructional | Personal | Business | Executive/<br>Corporate |   | Banner<br>Tow | Ferry | Flight<br>Test | Glider<br>Tow | Positioning | Public<br>Use | Skydi<br>ving | Other<br>Work<br>Use |
|-----------|---------------|----------|----------|-------------------------|---|---------------|-------|----------------|---------------|-------------|---------------|---------------|----------------------|
| Fatal     | 6             | 70       | 10       | 0                       | 0 | 0             | 1     | 0              | 0             | 3           | 0             | 0             | 0                    |
| Non-Fatal | 26            | 231      | 13       | 5                       | 2 | 1             | 1     | 1              | 1             | 5           | 1             | 2             | 7                    |
| Total     | 32            | 301      | 23       | 5                       | 2 | 1             | 2     | 1              | 1             | 8           | 1             | 2             | 7                    |

#### **Weather Conditions of Flight**

| U.S.      | VMC | IMC |
|-----------|-----|-----|
| Fatal     | 54  | 34  |
| Non-Fatal | 285 | 12  |
| Total     | 339 | 46  |

#### **Broad Phase of Flight**

| U. S.     | Taxi | Takeoff | Climb | Cruise | Descent | Approach | Maneuvering | Landing | Go-<br>Around | Standing |
|-----------|------|---------|-------|--------|---------|----------|-------------|---------|---------------|----------|
| Fatal     | 2    | 18      | 6     | 24     | 3       | 14       | 12          | 2       | 2             | 0        |
| Non-Fatal | 6    | 85      | 6     | 81     | 18      | 43       | 12          | 26      | 3             | 2        |
| Total     | 8    | 103     | 12    | 105    | 21      | 57       | 24          | 28      | 5             | 2        |



## NTSB Pre-Flight Planning Accident Trends U.S. – 1/1/2000 – 7/31/2013

| Probable Cause      | Fatal | Non-Fatal | Total | Percent |
|---------------------|-------|-----------|-------|---------|
| Airspeed            | 1     | 3         | 4     | 1.0%    |
| Airworthiness       | 3     | 2         | 5     | 1.3%    |
| Approach to Landing | 0     | 4         | 4     | 1.0%    |
| Carburetor Ice      | 0     | 5         | 5     | 1.3%    |
| CFIT                | 7     | 15        | 22    | 5.7%    |
| Closed Airport      | 0     | 2         | 2     | 0.5%    |
| CRM                 | 1     | 0         | 1     | 0.3%    |
| Crosswind           | 0     | 8         | 8     | 2.1%    |
| Fatigue             | 1     | 0         | 1     | 0.3%    |
| Forecast Weather    | 1     | 0         | 1     | 0.3%    |
| Fuel Contamination  | 0     | 4         | 4     | 1.0%    |
| Fuel Management     | 18    | 155       | 173   | 44.6%   |
| Hand Propping       | 1     | 1         | 2     | 0.5%    |
| HAZMAT              | 0     | 1         | 1     | 0.3%    |
| Icing               | 5     | 1         | 6     | 1.5%    |
| Landing Flare       | 0     | 5         | 5     | 1.3%    |
| Loss of Control     | 1     | 7         | 8     | 2.1%    |
| Mechanical Failure  | 0     | 1         | 1     | 0.3%    |
| Mixture Leaning     | 1     | 3         | 4     | 1.0%    |
| Night               | 1     | 1         | 2     | 0.5%    |
| Obstacle Clearance  | 0     | 2         | 2     | 0.5%    |
| Runway Excursion    | 2     | 19        | 21    | 5.4%    |
| Takeoff Performance | 7     | 34        | 41    | 10.6%   |
| Thunderstorm        | 1     | 1         | 2     | 0.5%    |
| VFR into IMC        | 24    | 5         | 29    | 7.5%    |
| Visual Separation   | 5     | 4         | 9     | 2.3%    |
| Weight & Balance    | 11    | 13        | 24    | 6.2%    |
| Windshear           | 0     | 1         | 1     | 0.3%    |
| Total               | 91    | 297       | 388   |         |



# Planning Proficiency Flight

This will take you through the steps of pre-flight preparation

## Planning The Proficiency Flight

- You and another pilot intend to fly from Doylestown Airport (KDYL), PA to Cape May County Airport (KWWD), NJ for proficiency
- What are you flying?
  - 2005 Cessna 182T Skylane
- How will you plan the flight?
  - Your currency
  - Airplane's currency
  - Weight & Balance
  - Route
  - Airspace
  - Weather
  - TFRs
  - IMSAFE

#### Pilot and Passenger - Are They Good to Go?

- The Pilot Are You Current?
  - Do you have a current medical certificate?
    - 14 CFR 61.23 Medical Certificates: Requirement and Duration
  - Do you have a current flight review?
    - 14 CFR 61.56 Flight Review
  - Are you current with flight experience?
    - 14 CFR 61.57 Recent flight Experience: Pilot in Command
    - General Experience 90 days, 3 take-offs and landings
    - Night Experience 90 days, 3 take-offs and landings to a full stop
    - Instrument Experience 6 months, 6 approaches, airway tracking, holds

#### The Passenger

- What can your passenger do to help with Crew Resource Management (CRM)?
- Is your passenger a pilot? If so, don't waste his/her skills/knowledge!

## Hypothetical Pilot - Are You Current?

#### The Pilot

- Private Pilot Certificate
  - ASEL
  - Instrument Airplane
  - 1,000 hours total time
- Currency
  - Medical current
  - Flight Review current
  - General Experience current
  - Night Experience current
  - Instrument Experience current

#### Your Passenger - Can S/He Help with CRM?

#### The Passenger

- Commercial Pilot Certificate & Flight Instructor Certificate
  - ASEL and AMEL
  - Instrument Airplane
  - 3,000 hours total time
- Currency
  - Medical not current
  - Flight Review not current
  - General Experience not current
  - Night Experience not current
  - Instrument Experience not current
  - CFI A&I current

#### IMSAFE - Well Are You?

| I            | Illness        | Do I have an illness or any symptoms of an illness?   |
|--------------|----------------|---|
| M            | Medication     | Have I been taking prescription or over-the-counter drugs?  |
| S            | Stress         | Am I under psychological pressure from the job? Worried about financial matters, health problems or family discord? |
| A            | Alcohol        | Have I been drinking within eight hours? Within 24 hours?   |
| F            | <b>Fatigue</b> | Am I tired and not adequately rested?   |
| $\mathbf{E}$ | <b>Eating</b>  | Am I adequately nourished?  |

## About The Hypothetical Airplane

- Cessna 182T Skylane
  - 2005 model with G1000 and KAP 140 Autopilot
  - 6 cylinder, 235 HP Lycoming engine, 140 knot cruise speed



#### The Hypothetical Airplane – Is It Good to Go?

- The Airplane's Navigation Systems Are They Current?
  - If your airplane has a GPS
    - Is the database(s) current?
  - Are your charts (paper or electronic) current?
    - Are your Sectional charts current?
      - New York? Washington? Detroit?
    - Are your TAC charts current?
      - Philadelphia? New York? Baltimore?
    - Are your approach plates current?
  - Do you use an Electronic Flight Bag (EFB)?
    - Is your OS/IOS current?
    - Are your Apps current?
    - Have you downloaded the most current charts and approach plates?
    - Is your battery at full charge?
    - Did you pre-flight your EFB the night before your flight?



## The Hypothetical Airplane — Is It Good to Go? The Airplane — Is It Current? — How Do You Know?

- Current annual inspection?
  - Every 12 months 14 CFR 91.409(a)(1)
- Current ELT inspection?
  - Every 12 calendar months 14 CFR 91.207
- Current Mode C Transponder inspection?
  - Every 24 months 14 CFR 91.413
- Current Pitot-Static System inspection?
  - Every 24 months 14 CFR 91.411
- Current VOR check?
  - Every 30 days 14 CFR 91.171
- Current 100 hour inspection?
  - 14 CFR 91.409(b)
- Compliance with Airworthiness Directives and Service Bulletins
- Use the Kinds of Operational Equipment List (KOEL) see POH
- Did you check log for squawks from recent flights?

## Know Your Airplane – KOEL

Cirrus Design SR20 Section 2 Limitations

| System,<br>Instrument, | К          | inds of (  | Operatio   | Remarks,<br>Notes, |                      |
|------------------------|------------|------------|------------|--------------------|----------------------|
| and/or<br>Equipment    | VFR<br>Day | VFR<br>Nt. | IFR<br>Day | IFR<br>Nt.         | and/or<br>Exceptions |
| Lights                 |            |            |            |                    |                      |
| Anticollision Lights   | 2          | 2          | 2          | 2                  |                      |
| Flight Controls        |            |            |            |                    |                      |
| Stall Warning System   | 1          | 1          | 1          | 1                  |                      |

Cirrus Design SR22 Section 2 Limitations

| System,<br>Instrument,               | Ki         | nds of     | Remarks,<br>Notes, |            |                      |
|--------------------------------------|------------|------------|--------------------|------------|----------------------|
| and/or<br>Equipment                  | VFR<br>Day | VFR<br>Nt. | IFR<br>Day         | IFR<br>Nt. | and/or<br>Exceptions |
| Lights                               |            |            |                    |            |                      |
| Anticollision Lights Flight Controls | 2          | 2          | 2                  | 2          |                      |
| Stall Warning System                 | 1          | 1          | 1                  | 1          |                      |

## Cessna 182T - G1000 and KAP 140 Autopilot



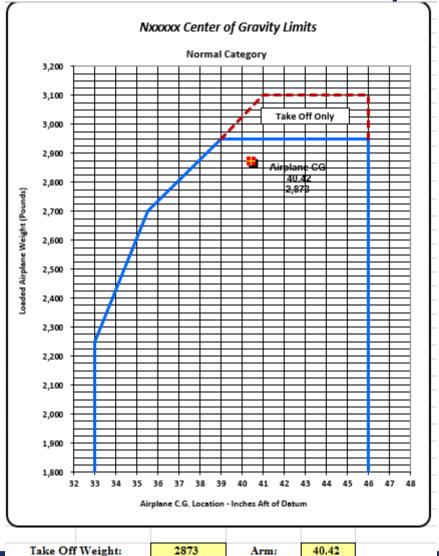
### Planning the Flight - Weight & Balance

- 2005 Cessna 182T Weight Limitations Is the crew good to go?
  - Gross Takeoff Weight = 3,100 pounds
  - Basic Empty Weight = 2,060 pounds
  - Maximum Useful Load = 1,040 pounds
  - Crew, Fuel, and Flight Kits
    - Pilot (left front) 200 pounds
    - Passenger (right front) 260 pounds
    - Pilot Flight Kit (left rear) 10 pounds
    - Passenger Flight Kit (right rear) 10 pounds
    - Baggage 30 pounds
    - Fuel (55 gallons) 330 pounds
- See weight & balance spreadsheet on next two slides

# About Your Airplane's Weight & Balance – Is it within the Weight Envelope?

| 2005 C182T Skylane Weight & Balance |            |        |        |        |  |  |  |  |  |
|-------------------------------------|------------|--------|--------|--------|--|--|--|--|--|
| Nxxxxx                              | Input Data | Weight | Arm    | Moment |  |  |  |  |  |
| Basic Empty Weight                  | 2,060      | 2,060  | 39.49  | 81.34  |  |  |  |  |  |
| Crew: Pilot                         | 200        | 200    | 37.00  | 7.40   |  |  |  |  |  |
| Co-pilot                            | 260        | 260    | 37.00  | 9.62   |  |  |  |  |  |
| Passengers: Left Rear               | 0          | 0      | 74.00  | 0.00   |  |  |  |  |  |
| Right Rear                          | 0          | 0      | 74.00  | 0.00   |  |  |  |  |  |
| Baggage                             | 30         | 30     | 97.00  | 2.91   |  |  |  |  |  |
| Rear Baggage Area                   | 0          | 0      | 116.00 | 0.00   |  |  |  |  |  |
| Fuel in gallons (Max 87 gallons)    | 55         | 330    | 46.00  | 15.18  |  |  |  |  |  |
| Total Ramp Weight                   |            | 2,880  | 40.44  | 116.45 |  |  |  |  |  |
| Minus Runup Fuel                    |            | -7     | 46.00  | -0.32  |  |  |  |  |  |
| Total Take Off Weight               |            | 2,873  | 40.42  | 116.13 |  |  |  |  |  |
| Maximum Gross Weight                | 3,100      | Ok     |        |        |  |  |  |  |  |
| Maximum Useful Load                 | 1040.2     |        |        |        |  |  |  |  |  |
| Useful Load on this Flight          | 813.2      |        |        |        |  |  |  |  |  |
| Available Useful Load               | 227        |        |        |        |  |  |  |  |  |

## About Your Airplane's Weight & Balance – Is it within the CG Envelope?





## Planning the Route of Flight

- Route of Flight (VFR)
  - KDYL  $\rightarrow$  KPNE  $\rightarrow$  KVAY  $\rightarrow$  VCN  $\rightarrow$  KWWD
- Planned Altitude = 2,500 feet MSL
  - The crew has been flying this route for years
  - Any issues?
    - Weather?
    - TFRs?
    - Airspace?
- Is the flight good to go?

#### Weather Forecast

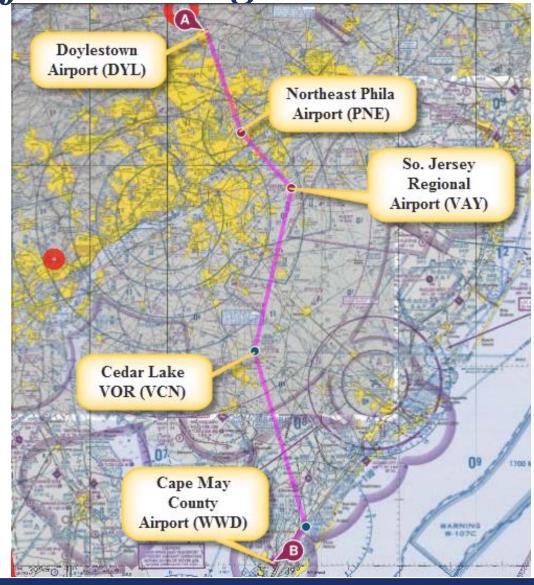
- Weather
  - For flight down FA, TAF, and METAR showed
    - Cloud ceilings in Pennsylvania: forecast for 10,000 feet broken
    - Cloud ceilings in New Jersey: forecast for 15,000 feet broken.
    - Is this a factor?
  - For flight back FA, TAF, and METAR showed
    - Cloud ceilings in PA and NJ: forecast for 5,000 feet overcast.
    - Is this a factor?
- Is the flight good to go?

#### **TFRs**

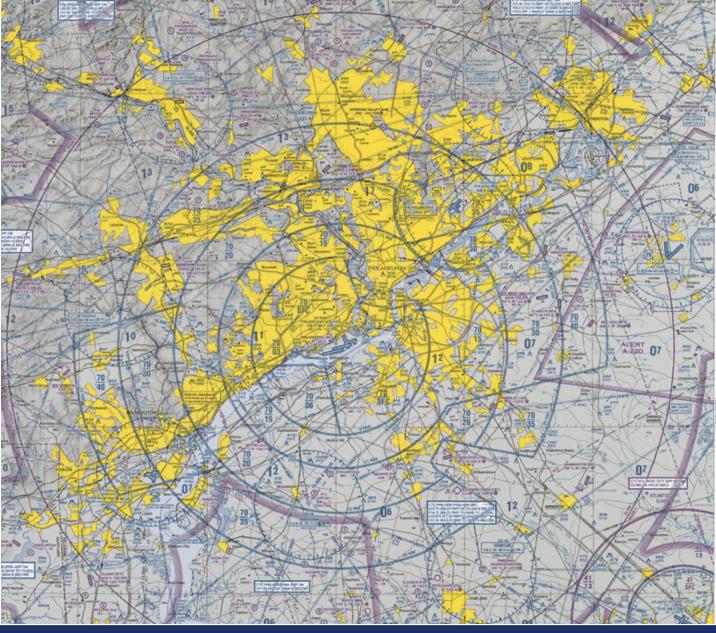
- TFRs
  - Vice-Presidential TFR near DQO VORTAC
  - None reported or expected for the route of flight
- Is the flight good to go?

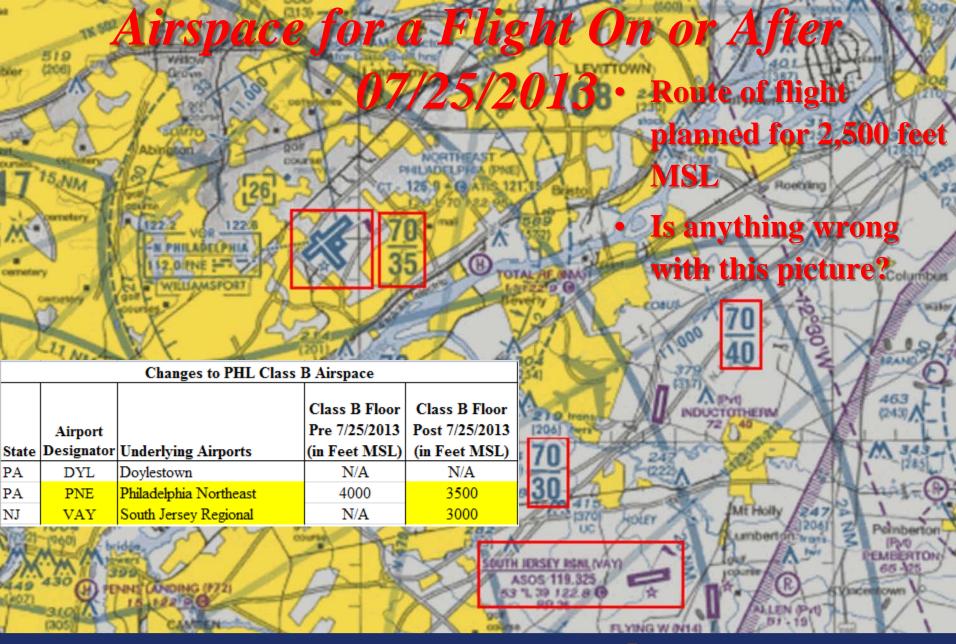
Airspace for the Flight

- Note changes to PHL Class
   B Airspace effective
   07/25/2013
  - If flying VFR, pilot needs to fly at 2,500 feet MSL to remain beneath the floor of the PHL Class B Airspace



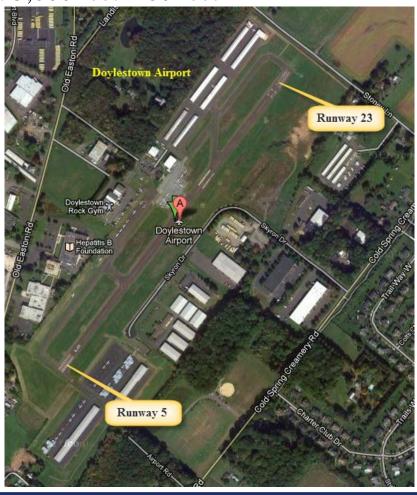
PHL Class
B Airspace
effective
07/25/2013





## Airports for the Flight

- Doylestown Airport (DYL) Runways
  - Runways 5 23: 3,000 feet x 60 feet



## Airports for the Flight

- Cape May County Airport (WWD) Runways
  - Runways 1 19: 5,003 feet x150 feet
  - Runways 10 28: 4,998 feet x150 feet



# The Flight Down

### The Pre-Flight Inspection – 1 of 2

- The tasks listed below are for the Cessna 182T and include checking fuel and oil, tie-downs, cowl plugs, pitot cover, and yoke gust lock.
- See the Pre-Flight Check List for details later in this presentation
  - Preflight Cabin 31 inspection tasks
  - Preflight Empennage 6 inspection tasks
  - Preflight Right Wing 8 inspection tasks
  - Preflight Nose 8 inspection tasks
    - See step # 3 Engine Cooling Outlets...... Clear
  - Preflight Left Wing 4 inspection tasks
  - Preflight Left Wing Leading Edge 4 inspection tasks
  - Preflight Left Wing Trailing Edge 2 inspection tasks
  - Before Starting Engine 9 inspection tasks
  - Starting Engine using Battery 24 inspection tasks



### The Pre-Flight Inspection – 2 of 2

- See the Pre-Flight Check List for details later in this presentation
  - Taxi– 6 inspection tasks
  - Before Takeoff Run-Up- 32 inspection tasks
  - Takeoff 6 inspection tasks
  - Normal Climb 6 inspection tasks
  - Cruise 5 inspection tasks
  - Descent 10 inspection tasks
  - Before Landing 7 inspection tasks
  - Normal Landing 7 inspection tasks
  - Balked Landing 5 inspection tasks
  - After Landing (Clear of Runway) 6 inspection tasks
  - Securing Aircraft 15 inspection tasks

### The Flight Down

- The Pilot did the following
  - o Pre-takeoff run-up
  - Departed Doylestown Runway 5
  - o Right turn-out on course and climbed to 2,500 feet MSL
- The Passenger did the following
  - o Set the flight plan in the Garmin G1000
    - $KDYL \rightarrow KPNE \rightarrow KVAY \rightarrow VCN \rightarrow KWWD$
- The Pilot flew the GPS route at 2,500 feet MSL with the Flight Director (FD) engaged
  - o FD allowed hand-flying but gave prompts for deviations
  - o Descended to 1,500 feet about 10 nautical miles north of Cape May
  - Flew a visual approach into Cape May
  - Landed on Runway 19

## G1000 MFD View of Flight Down



# The Pre-Flight Check List

# Pre-Flight

#### Civil Air Patrol

Cessna-182T Nav III – N355CP

#### Preflight Cabin

1. Pitot Tube Cover .. Remove. Check for blockage. Hobbs Time ...... Check.

POH ..... Accessible to Pilot. Garmin G1000™ Cockpit Reference Guide ...... Accessible to Pilot.

Weight & Balance ...... Checked. Parking Brake ...... Set. Control Wheel Lock ......... Remove.

#### WARNING

When the master switch is on, using an external power source. or manually rotating the propeller, treat the propeller as if the magnetos switch were on. Do not stand, nor allow anyone else to stand, within the arc of the propeller since a loose or broken wire, or a component malfunction could cause the engine to start.

| 8. MAGNETOS SwitchOff.                   |
|--|
| 9. AVN Switch (BUS 1&2)Off.              |
| 10. MASTER Switch (BUS 1&2)On.           |
| 11. Primary Flt Display Verify On.       |
| 12. FUEL QTY (L&R)Check/Reset Used.      |
| 13. Tach Time Check.                     |
| 14. LOW FUEL L & R Annunciators Verify   |
| Off.                                     |
| 15. OIL PRESS Annunciator Verify On.     |
| 16. LOW VOLTS Annunciator Verify On.     |
| 17. LOW VACUUM Annunciator               |
| Verify On.                               |
| 18. AVIONICS Switch (BUS 1)On.           |
| 19. Forward Avionics Fan.Check Audibly   |
| for Operation.                           |
| 20. AVIONICS Switch (BUS 1)Off.          |
| 21. AVIONICS Switch (BUS 2)On.           |
| 22. Aft Avionics Fan., Check Audibly for |
| Operation.                               |
| 23. AVIONICS Switch (BUS 2)Off.          |
| 24. PITOT HEAT SwitchOn/Check.           |
| 25. Stall Warning System Check.          |

PITOT HEAT Switch.

| 27. | MASTER Switch (ALT & BAT). Off. |
|-----|---------------------------------|
| 28. | Trim Controls Takeoff position. |
| 29. | FUEL SELECTOR Valve Both.       |
| 30. | ALT STATIC AIR Valve Off.       |
| 31. | Fire ExtinguisherVerify green.  |

#### Preflight Empennage

 Baggage Compartment Door CHECK latched, lock with key. Rudder Gust Lock ......Remove.

Tail Tie-Down ...... Disconnect. Control Surfaces......Check. Trim Tab...... Check for security.

Antennas ...... Check.

#### Preflight Right Wing

 Aileron ......Check. Flap......Check. Wing Tie Down ..... Disconnect. Wing Tank Vent Opening ..... Check.

Main Wheel Tire .... Check Condition

See Fuel Contamination Warning in the POH.

Fuel Tank Drain Valves.... Drain (5). Fuel Quantity .......Check Visually.

8. Fuel Filler Cap ..... Secure and Vent Unobstructed.

 Static Source Opening...... Check. Fuel Drains Underside...... Drain(3).

#### See Fuel Contamination Warning in the POH.

| 3. | Engine Cooling Outlets       | Clear.        |
|----|------------------------------|---------------|
| 4. | Propeller & Spinner          | Check.        |
| 5. | Air Filter                   | Check.        |
| 6. | Nosewheel Strut and Tire     | Check.        |
| 7. | Engine Oil DipstickCheck     | oil level and |
|    | secure. (4 qt min., 8 qt for | extended      |
|    | flights)                     |               |
| 8. | Static Source Opening        | Check.        |
|    |                              |               |

#### Preflight Left Wing

Main Wheel Tire ... Check Condition.

#### See Fuel Contamination Warning in the POH.

#### Fuel Tank Drain Valves.... Drain (5).

Fuel Quantity......Visually Check. 4. Fuel Filler Cap...... Secure & Vent unobstructed.

#### Preflight Left Wing Leading Edge

- Fuel Tank Vent Opening .. Check for blockage.
- Stall Warning Opening ..... Check for blockage.
- Wing Tie Down......Disconnect.
- Landing/Taxi light(s)...... Check.

#### Preflight Left Wing Trailing Edge

 Left Aileron ...... Check. Left Flap ...... Check.

#### PASSENGER BRIEF

- Seat Belts / Shoulder Harness Personal Electronic Devices off
- 3. Air Vents / Comfort
- 4. Fire Extinguisher Location / Operation
- 5. Emergency Procedures & Exits

#### MISSION BRIEF

#### Mission Objective

- Destination, WX, Route, Alt, ETE
- 3. NOTAMS
- 4. Crew Coordination & CRM
- 5. Sterlie Cockpit Procedures
- 6. Cockplt Layout
- Intercom & Radio Usage
- 8. Seats, Seatbelts, Doors
- Emergency Action & Equipment

#### Before Starting Engine

| ١. | Frenight inspection Complete.          |  |
|----|--|--|
| 2. | Passenger Brief Complete.              |  |
| 3. | Seats / Belts / Shoulder HarnessAdjust |  |
|    | and lock, check initial reel (front &  |  |
|    | rear)                                  |  |

|    | rear).                     |
|----|----------------------------|
| 4. | BrakesTest & Set.          |
| 5. | Circuit Breakers Check In. |

Electrical Equipment .....Off.

Caution (See Complete Caution in POH)

#### The avionics switch (Bus 1 and 2) must be off during engine start ....

Avionics Switch (Bus 1&2)...... Off. Cowl Flaps ...... Open. Fuel Selector.....Both.

#### Starting Engine (Using Battery)

- Throttle Control...... Open ¼ Inch. Propeller Control......High RPM.
- Mixture Control ......Idle Cut Off. Stby Batt Switch......Test/ (Hold for 20) seconds, verify that green test lamp does not go out), then ARM
- Engine Indicating System ..... Check parameters, (verify no red X's through ENGINE page Indicators).
- Bus E Volts ......Verify 24 volts min.
- M Bus Volts...... Verify 0 volts.
- Batt S Amps Verify Discharge (neg).
- Stby Batt Annunciator ...... Verify On.
- Propeller Area ...... Clear. Master Switch (Alt and Bat)..... On.
- Note

If engine is warm, omit priming procedure of steps 12, 13 and 14 below.

- Fuel Pump Switch ...... On.
- Mixture Control..Advance to Full Rich. wait until fuel flow indication is stable. then return to idle cut off position.
- Fuel Pump Switch ...... Off.
- Magnetos Switch...... Start.
- 16. Mixture Control..Advance to full rich when engine starts.

If the engine floods, place the mixture control in the Idle Cut Off position, open the throttle control 1/2 to full, and engage the starter motor (Start). When the engine starts, advance the mixture control to the Full Rich position and retard the throttle control promptly.

- 17. Oil Pressure ......Check.
- Amps (M Batt & Batt S)Check charge (positive).
- Low Volts Annunciator ... Verify Off.
- Beacon Light Switch..... On as reg.
- Nav Lights Switch..... On as req.
- Avionics Switch (Bus1&2) ...... On.
- 23. Check MFD for correct A/C type and Jeppesen expiration dates, then press ENT.
- ATIS / AWOS ......Copy.



# Pre-Flight

| 1. Mixture ControlLean as required. 2. BrakesTest. 3. Heat / Vents / Defrost As Required. 4. Attitude Indicator Verify Proper Ops. 5. Turn CoordinatorVerify Ops. 6. H.I. & Compass Verify Proper Ops.  Before Takeoff - Run-Up 1. Parking BrakeSet. 2. Passenger Seat BacksMost upright position. 3. Seats and Seat BeltsCheck Secure. 4. Cabin DoorsClosed and Looked. 5. Elicht Controls.   | 18. Throttle Control   | PowerAs Desired.     MixtureEnrich as required. | 7. Braking     |
|--|--|---|----------------|
| 5. Flight ControlsFree & Correct. 6. Flight InstrumentsCheck no red Xs. 7. Altimeter:  PDF (Baro)Set. Set. Standby AltimeterSet. KAP 140 Autopilot (Baro) Set. 8. G1000 Alt SelSet. Note There is no connection between the G1000 Alt Sel feature and the KAP 140 autopilot altitude pre-select or altitude hold functions. G1000 and KAP 140 altitudes are set independently.  10. Standby Flight Instruments. Check. 11. Fuel QuantityCheck. | WARNING (See Full Warning in POH) Interruption of NAV signal to the autopilot will cause autopilot to revert to ROL mode with NO warning chime or PFD annunciation.  26. Autopilot | 3. Cowl Flaps                                   | 6. Pitot Heat  |
| Note Flight is not recommended when both fuel quantity indicators are in the yellow arc range.  12. Mixture control  | Interesti  I. Flaps0°20° (10° preferred).  I. Throttle Control   | 9. Fuel Selector valve                          | 12. Cowl Flaps |

.85-95 KIAS.

... 2400 RPM.

4. Mixture.....15 GPH or Full Rich (If less 5. Touchdown....... Main Wheel First.

2. Throttle..23 Inches or Full (If less than

| After Landing (Clear of Runway)  |
|--|
| Wing FlapsUp.     Cowl FlapsOpen.  |
| 2. Cowl FlapsOpen.   |
| LightsAs Required.     Transponder GND/STBY & 1200.  |
|  |
| 5. MixtureLean. 6. Pitot HeatOff.  |
| 0. Filot HeatOil.  |
| Securing Aircraft  |
| Parking Brake Set.   |
| 2. Throttle ControlIdle.   |
| 3. Electrical EquipmentOff.  |
| <ol><li>Avionics Switch (Bus 1&amp;2) Off.</li></ol>   |
| <ol><li>Magnetos Check for Ground.</li></ol>   |
| 6. MixtureIdle Cut Off.  |
| <ol><li>Magneto &amp; Master Switch Off.</li></ol>   |
| Tach TimeCheck/Record.   |
| 9. Stby Batt SwitchOff.  |
| <ol><li>Control/Avionics Lock Install.</li></ol>   |
| 11. Parking Brake Off.   |
| 12. Cowl Flaps Closed.   |
| 13. Fuel SelectorRight.  |
| 14. Aircraft Secured & Locked.   |
| 15. Flight Plan Closed.  |
| This checklist is a guide to coordinate Pliot<br>Operating Handbook and STC data applicable to |
| this particular aircraft only. The applicable Pilo   |
| Operating Handbook and STC Installations   |
| remain the official documentation for this   |
| aircraft. The pilot in command is responsible<br>for complying with all items in the Pilot     |
| Operating Handbook and applicable STCs.  |
|  |
| Reviewed by:   |
|  |



Normal Landing

Airspeed ... 70-80 KIAS (Flaps Up).

Wing Flaps ......As Desired.

3. Airspeed .. 60-70 KIAS (Full Flaps).

Landing Roll .....Lower Nosewheel.

Prop Control..Cycle from high to

Engine Indicators ...... Check.

Ammeters & Voltmeters.Check.

AnnunciatorsCheck none illuminated.

VAC Indicators....

low RPM, return to high RPM (full 1. Airspeed ...

..... Check.

Normal Climb

23 in. Hg.).

Propeller Control....

than 15 GPH).

# Pre-Flight

#### EMERGENCY PROCEDURES

#### C-182T N355CP

| C-1021 N333C1   |         |
|---|---------|
| Engine Failure During Takeoff                         | 6. Fue  |
| Roll  |         |
| 1. Throttle ControlIdle.                              | If the  |
| 2. Brakes Apply.                                      | imr     |
| 3. Wing Flaps Retract.                                | failu   |
| <ol> <li>Mixture Control Idle Cut-Off.</li> </ol>     | retu    |
| <ol><li>Magnetos SwitchOff.</li></ol>                 |         |
| 6. Stby Batt SwitchOff.                               | Emer    |
| <ol><li>Master Switch (Alt &amp; Bat). Off.</li></ol> | Engir   |
|   | 1. Pas  |
| Engine Failure Immediately After                      | Uprigl  |
| Takeoff   | 2. Sea  |
| 1. Airspeed   | 3. Airs |
| 75 KIAS (Flaps Up).                                   |         |
| 70 KIAS (Flaps Down).                                 |         |
| Mixture Control Idle Cut-Off.                         | 4. Mix  |
| 3. Fuel shutoff valveOff.                             | 5. Fue  |
| 4. Magnetos SwitchOff.                                | 6. Ma   |
| <ol><li>Wing FlapsAs req. (Full</li></ol>             | 7. Wir  |
| Recommended)  | Recor   |
| 6. Stby Batt SwitchOff.                               | 8. Stb  |
| <ol><li>Master Switch (Alt &amp; Bat). Off.</li></ol> | 9. Ma   |
| 8. Cabin DoorUnlatch.                                 | (when   |

| Engine Failure Durin | g Flight |
|----------------------|----------|
| (Restart Procedures) |          |
| 1. Airspeed          | 75 KIAS  |

Land...... Straight Ahead.

| ٠  |
|----|
| ı. |
| n  |
| h  |
| h  |
| х  |
|    |
|    |

If propeller is windmilling, engine will restart automatically within a few seconds. If propeller has

stopped (possible at low

speeds), turn Magnetos switch to Start, advance throttle slowly from idle, and lean the mixture from full rich, as required to obtain smooth operation.

el Pump Switch.....Off

e indicated fuel flow (FFLOW GPH) mediately drops to zero, a sign of are of the engine-driven fuel pump. m the Fuel Pump switch to the On Position.

#### gency Landing Without ne Power

- ssenger Seat Back ..... Most ht Position.
- ats and Seat Belts .. Secure speed .....

75 KIAS (Flaps Up). Ditching

- xture Control ... Idle Cut-Off. el Selector Valve.....Off.
- agnetos Switch.....Off. ing Flaps.....As reg. (Full mmended)
- by Batt Switch.....Off. aster Switch (Alt & Bat) ... Off
- (when landing is assured). 10. Doors ..... Unlatched Prior To Touchdown.
- Touchdown Slightly Tail Low.
- Brakes ..... Apply Heavily.

#### ed). Precautionary Landing With Engine Power

- Passenger Seats ... Most Upright Position.
- Seats and Seat Belts ..... Secure. ed) 3. Airspeed .......75 KIAS.
  - Wing Flaps......20°.

- 5. Selected Field .... Fly Over, noting terrain and obstructions, then retract flaps upon reaching a safe altitude and airspeed.
- Avionics Switch (Bus1 & 2)...Off. Electrical Equip. Switches.....Off. 8. Wing Flaps ...... Full (on final
- approach). 9. Airspeed ......70 KIAS. 9. Stby Batt Switch .....Off.
- Master Switch (Alt and Bat) Off. 11. Doors......Unlatch Prior To Touchdown.
- Touchdown.... Slightly Tail Low. Mixture Control ..... Idle Cut Off. Magnetos Switch ......Off.
- 15. Brakes ..... Apply Heavily.

- 70 KIAS (Flaps Down). 1. Radio...... Transmit Mayday on 121.5, giving location and intentions and Squawk 7700.
  - Heavy Objects (in baggage area) Secure Or Jettison (if possible).
  - Passenger Seat Backs ...... Most Upright Position.
  - Seats and Seat Belts..... Secure. 5. Wing Flaps ......20° to Full.
  - 6. Power.....Establish 300 Ft/Min descent at 65 KIAS.

#### Note

If no power is available, approach at 70 KIAS with flaps up or at 65 KIAS with 10° of Flaps.

#### Approach

- High winds, Heavy Seas ...... Into the Wind
  - Light winds, Heavy Swells..... Parallel to Swells.
- 8.Cabin Doors ......Unlatch.
- Touchdown......Level Attitude At Established Rate-Of-Descent.

- Face..... Cushion at touchdown with folded coat. 11. ELT ..... Activate.
- 12. Airplane...... Evacuate through cabin doors. If necessary, open window and flood cabin to equalize pressure so doors can be opened. 13. Life Vests and Raft...... Inflate When Clear Of Airplane.

#### Fire During Start On Ground

- 1. Magnetos Switch..... Start (continue cranking to start engine). If Engine Starts:
- 2. Power......1700 RPM for a few
- Engine....Shut Down and inspect for damage.
- If Engine Fails To Start:
- 2. Throttle Control......Full Open.
- 3. Mixture Control ....Idle Cut-Off. 4. Magnetos Switch..... Start (continue cranking).
- 5. Fuel Selector Valve ...... Push Down and Rotate Off.
- 6. Fuel Pump Switch .....Off. 7. Magnetos Switch.....Off.
- 8. Stby Batt Switch.....Off. 9. Master Switch (Alt & Bat) .. Off.
- 10. Engine.....Secure. Parking Brake ...... Release.
- Fire Extinguisher ..... Obtain. 13. Airplane..... Evacuate.
- 14. Fire ...... Extinguish using fire extinguisher, wool blanket, or dirt.
- 15. Fire Damage ......Inspect...

# PreFlight 4 of 4

#### Engine Fire in Flight 1. Mixture Control....Idle Cut-Off. 2. Fuel Selector Valve ...... Push Down and Rotate to Off. 3. Fuel Pump Switch ..... Off. 4. Stby Batt Switch.....Off. Master Switch (Alt & Bat).. Off. 6. Cabin Heat and Air..... Off (except overhead vents). Airspeed ...... 100 KIAS. (If fire is not extinguished, increase glide speed to find an airspeed, within airspeed limitations, which will provide an incombustible mixture). Forced Landing ..... Execute. Refer to Emergency Landing Without Power.

#### Electrical Fire in Flight

| 1. Stby Batt SwitchOff.              |
|--------------------------------------|
| 2. Master Switch (Alt & Bat) Off.    |
| 3. Vents/Cabin Air/Heat Closed.      |
| 4. Fire Extinguisher Activate.       |
| 5. Avionics Switch (Bus 1 & 2). Off. |
| 6. All Other Switches (except        |
| magnetos switch) Off.                |

#### Warning

After The Fire Extinguisher Has Been Used, Make Sure That The Fire Is Extinguished Before Exterior Air Is Used To Remove Smoke From Cabin.

 Vents/Cabin Air/Heat...... Open when it is ascertained that fire is completely extinguished.
 If fire has been extinguished and electrical power is necessary for continued flight to nearest

| 8. Circuit Breaker Check for C | )pen    |
|--------------------------------|---------|
| circuit(s), do not reset.      |         |
| O. Manton Curitals (Alt 9 Dat) | $O_{n}$ |

| <ol><li>Master Switch (Alt &amp; Dat)</li></ol> | On. |
|---|-----|
| 10. Avionics Switch (Bus 1)                     | On. |
| 11 Avionics Switch (Bus 2)                      | On  |

#### Cabin Fire

- Stby Batt Switch ..... Off.
   Master Switch (Alt & Bat) . Off.
- 3. Vents/Cabin Air/Heat ... Closed (to avoid drafts).
- 4. Fire Extinguisher ..... Activate.

See Warning Under Electrical Fire in Flight.

- Vents/Cabin Air/Heat ...... Open when it is sure that fire is completely extinguished.
- Land the airplane as soon as possible to inspect for damage.

#### Wing Fire

- Land &Taxi Light Switches...Off.
   Nav Light Switch .....Off.
   Anticollision Strobe Light Switch
- 4. Pitot Heat Switch ......Off.

Perform a sideslip to keep the flames away from the fuel tank and cabin. Land as soon as possible using flaps only as required for final approach and touchdown.

#### High Main Battery Charge Current (M Bat Amps More Than 40)

- Master Switch (ALT) .....Off.
   Nonessential Elect. Equip....Off.
- 3. Avionics Switch (Bus 1&2) ... Off.
- Flight...... Terminate as soon as practical.

#### Air Language Airspeed Indicator

- ADC/AHRS Circuit Breakers
   Check In (ESS Bus and AVN Bus 1).
   If open, reset (close) circuit breaker.
   If circuit breaker opens again, do not reset.
- Standby Airspeed Indicator.. Use for airspeed information.

#### Red X - PFD Altitude Indicator

- Standby Altimeter ........... Check current barometric pressure Set.
  Use for Altitude Information.

#### Attitude And Heading Reference System (AHRS) Failure Red X – PFD Attitude Indicator

- ADC/AHRS Circuit Breakers...
  Check In (ESS BUS and AVN Bus 1).
   If open, reset (close) circuit breaker. If circuit breaker opens
- again, do not reset.

  2. Standby Attitude Indicator ... Use for attitude information

#### Red X – Horizontal Situation Indicator (HSI)

- ADC/AHRS Circuit Breakers...
  Check In (ESS BUS and AVN Bus 1).
  If open, reset (close) circuit breaker.
  If circuit breaker opens again, do not reset.
- Non-Stabilized Magnetic Compass
   Use for heading information.

#### PFD1 Cooling or MFD1 Cooling Annunciator(s)

 Cabin Heat.......Reduce to min.
 Forward Avionics Fan ..... Check (feel for airflow from screen on glareshield).

If Forward Avionics Fan Has Failed
3. Stby Batt Switch...... Off (unless needed for emergency power).
If PFD1 Cooling or MFD1 Cooling Annunciator Does Not Go Off Within 3 Minutes Or If Both PFD1 Cooling And MFD1 Cooling Annunciators Come On
3. Stby Batt Switch..... Off (Land as

#### Vacuum System Failure

soon as practical).

Low Vacuum Annunciator Comes

#### Caution

If Vacuum Pointer Is Out Of The Green ARC During Flight Or The Gyro Flag Is Shown On The Standby Attitude Indicator, The Standby Attitude Indicator Must Not Be Used For Attitude Information.

Vacuum Indicator (VAC)...

Check EIS System page to make sure vacuum pointer is in the green arc limits.

For all other
Emergency/Abnormal
Procedures. See the
POH – Section 3.

Reviewed by:

Wing Director of Maintenance





# How to Query the MTSB Database

# Accessing the NTSB Database

- Use your web browser to access the NTSB Database
  - http://www.ntsb.gov/aviationquery/index.aspx



Aviation

Accident Database & Synopses

The NTSB aviation accident database contains information from 1962 and later about civil aviation accidents and selected incidents within the United States, its territories and possessions, and in international waters. Generally, a **preliminary** report is available online within a few days of an accident. **Factual** information is added when available, and when the investigation is completed, the preliminary report is replaced with a **final** description of the accident and its probable cause. Full narrative descriptions may not be available for dates before 1993, cases under revision, or where NTSB did not have primary investigative responsibility.

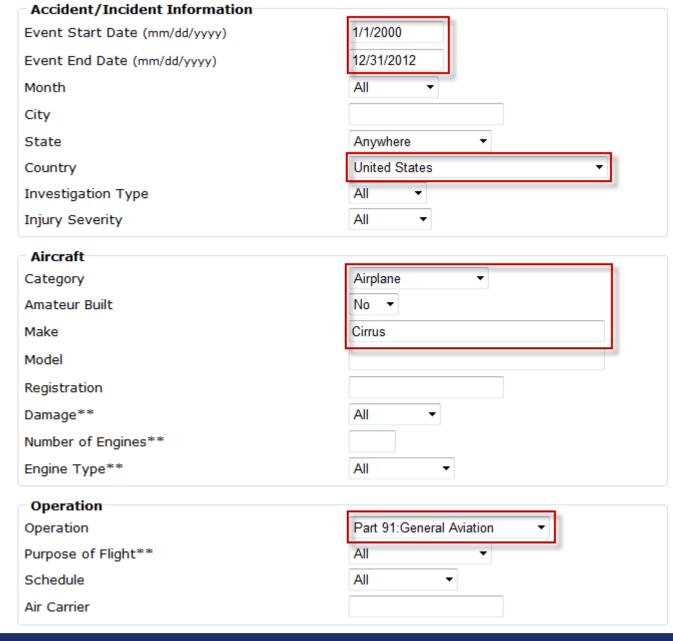
- . Monthly lists accidents sorted by date, updated daily.
- Investigations Nearing Completion List of investigations with estimated dates of publishing probable cause.
- <u>Downloadable datasets</u> one complete dataset for each year beginning from 1982, updated monthly in Microsoft Access 2000 MDB format; this site also provides weekly "change" updates and complete documentation.
- GILS record complete description of the accident database, including definition of "accident" and "incident".
- FAA incident database complete information about incidents, including those not investigated by NTSB, is provided by the Federal Aviation Administration.
- . Data & Information Products lists other sources of information about aviation accidents, including publications, dockets, and press releases

This interactive search capability for the NTSB database, updated daily; see the and data dictionary before using the form for the first time.



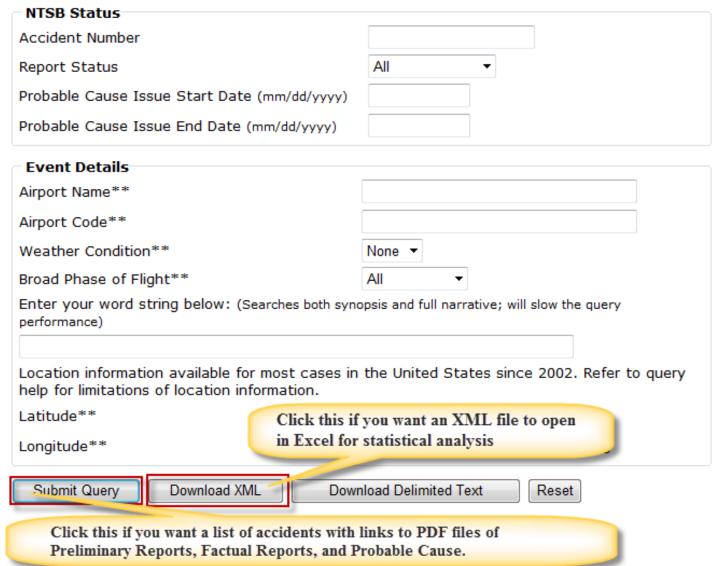


# Accessing the NTSB Database





## Creating an NTSB Database Query



## Database Query Results (Partial)

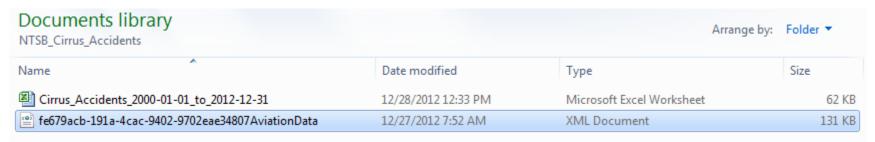
#### 179 records meet your search criteria.

A docket of supporting materials may exist for factual and probable cause reports. Please contact Records Management Division. Dockets are not available for preliminary reports.

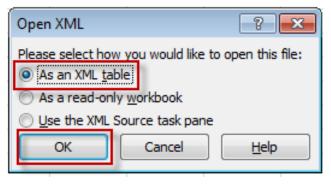
| Accident Database & Synopses Download XML Download Delimited Text |   |            |                      |                  |                         |                   |            |                |  |
|---|---|------------|----------------------|------------------|-------------------------|-------------------|------------|----------------|--|
| Current<br>Synopsis   | PDF Report(s)<br>(Published)                              | Event Date | Estimated<br>Release | Location         | Make/Model              | Regist.<br>Number | NTSB No.   | Event Severity |  |
| Preliminary   | Preliminary<br>(11/20/2012)                               | 11/16/2012 |                      | Show Low, AZ     | CIRRUS SR22             | N800RW            | WPR13LA043 | Nonfatal       |  |
| Preliminary   | Preliminary<br>(11/13/2012)                               | 10/21/2012 |                      | Pahokee, FL      | CIRRUS DESIGN CORP SR22 | N6839R            | ERA13LA048 | Nonfatal       |  |
| Preliminary   | Preliminary<br>(10/31/2012)                               | 10/15/2012 |                      | Parker, AZ       | CIRRUS DESIGN CORP SR20 | N499SF            | WPR13LA011 | Nonfatal       |  |
| Preliminary   | Preliminary<br>(10/16/2012)                               | 10/6/2012  |                      | Birmingham, AL   | CIRRUS DESIGN CORP SR22 | N80KW             | ERA13LA012 | Nonfatal       |  |
| Preliminary   | Preliminary<br>(10/11/2012)                               | 10/3/2012  |                      | Gary, IN         | CIRRUS DESIGN CORP SR22 | N308PJ            | CEN13FA002 | Fatal(2)       |  |
| Probable<br>Cause   | Factual<br>(11/01/2012)<br>Probable Cause<br>(12/19/2012) | 10/2/2012  | 12/19/2012           | Eden Prairie, MN | CIRRUS DESIGN CORP SR20 | N750SR            | CEN13CA007 | Nonfatal       |  |
| Preliminary   | Preliminary<br>(09/20/2012)                               | 9/15/2012  |                      | Willard, MO      | CIRRUS DESIGN CORP SR22 | N436KS            | CEN12FA633 | Fatal(5)       |  |
| Preliminary   | Preliminary<br>(09/12/2012)                               | 9/1/2012   |                      | Falmouth, MA     | CIRRUS DESIGN CORP SR22 | N221DV            | ERA12FA540 | Fatal(1)       |  |

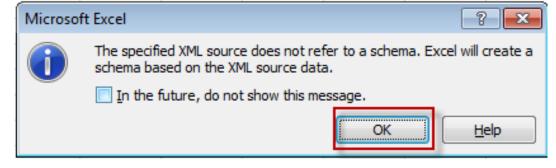
# Download of Cirrus Accidents in XML Format (1 of 2)

Download the XML file



After you download the XML file, launch Excel and open the XML file





# Download of Cirrus Accidents in XML Format (2 of 2)

- Your XML file will look similar to the screen shown below.
- You can save your XML file as an Excel workbook.

| $\square$ | А              | В                   | С                | D           | Е                      | F             | G          | Н           | I             | J                              | K              | L            |
|-----------|----------------|---------------------|------------------|-------------|------------------------|---------------|------------|-------------|---------------|--------------------------------|----------------|--------------|
| 1         | EventId 🔻      | InvestigationType 💌 | AccidentNumber 💌 | EventDate 💌 | Location               | Country 🔽     | Latitude 💌 | Longitude 💌 | AirportCode 💌 | AirportName                    | InjurySeverity | AircraftDama |
| 2         | 20121116X62231 | Accident            | WPR13LA043       | 11/16/2012  | Show Low, AZ           | United States | 34.218889  | -109.873889 |               |                                | Non-Fatal      | Substantial  |
| 3         | 20121106X04117 | Accident            | ERA13LA048       | 10/21/2012  | Pahokee, FL            | United States | 26.784444  | -80.689444  | PHK           | Palm Beach County Glades Airpo | Non-Fatal      | Substantial  |
| 4         | 20121015X75934 | Accident            | WPR13LA011       | 10/15/2012  | Parker, AZ             | United States | 34.110556  | -114.627500 | P20           | Parker                         | Non-Fatal      | Substantial  |
| 5         | 20121007X94725 | Accident            | ERA13LA012       | 10/06/2012  | Birmingham, AL         | United States | 33.563889  | -86.752222  | BHM           | Birmingham International       | Non-Fatal      | Substantial  |
| 6         | 20121003X24635 | Accident            | CEN13FA002       | 10/03/2012  | Gary, IN               | United States | 41.616111  | -87.412778  | KGYY          | Gary/Chicago Int'l Arp         | Fatal(2)       | Substantial  |
| 7         | 20121007X75550 | Accident            | CEN13CA007       | 10/02/2012  | Eden Prairie, MN       | United States | 44.823056  | -93.455278  | KFCM          | Flying Cloud                   | Non-Fatal      | Substantial  |
| 8         | 20120915X35028 | Accident            | CEN12FA633       | 09/15/2012  | Willard, MO            | United States | 37.305278  | -93.428334  | SGF           | Springfield-Branson National   | Fatal(5)       | Substantial  |
| 9         | 20120901X42234 | Accident            | ERA12FA540       | 09/01/2012  | Falmouth, MA           | United States | 41.584722  | -70.542777  | 5B6           | Falmouth Airpark               | Fatal(1)       | Substantial  |
| 10        | 20120828X83828 | Accident            | CEN12CA576       | 08/25/2012  | Watkins, CO            | United States | 39.766667  | -104.525000 | KFTG          | Front Range Airport            | Non-Fatal      | Substantial  |
| 11        | 20120731X35733 | Accident            | CEN12LA495       | 07/29/2012  | Lakeview, AR           | United States |            |             | 3MO           | Gastons Airport                | Non-Fatal      | Substantial  |
| 12        | 20120723X43615 | Accident            | ERA12LA473       | 07/22/2012  | Pickens, SC            | United States | 34.810000  | -82.702778  |               |                                | Non-Fatal      | Substantial  |
| 13        | 20120715X25131 | Accident            | WPR12FA305       | 07/14/2012  | Salina, UT             | United States | 38.819723  | -111.432223 |               |                                | Fatal(2)       | Substantial  |
| 14        | 20120711X12055 | Accident            | ERA12FA438       | 07/11/2012  | Moscow, TN             | United States | 35.056389  | -89.386389  |               |                                | Fatal(1)       | Substantial  |
| 15        | 20120706X65711 | Incident            | WPR12IA296       | 06/17/2012  | Deer Valley, AZ        | United States | 33.686111  | -112.076111 | DVT           | Deer Valley                    | Incident       | Minor        |
| 16        | 20120530X50747 | Accident            | WPR12FA235       | 05/29/2012  | Duck Creek Village, UT | United States | 37.435000  | -112.765000 |               |                                | Fatal(4)       | Substantial  |
| 17        | 20120427X35846 | Accident            | ERA12FA303       | 04/27/2012  | Anderson, SC           | United States | 34.493889  | -82.707778  | KAND          | Anderson Regional Airport      | Fatal(1)       | Substantial  |
|           |                |                     |                  |             |                        |               |            |             |               |                                |                |              |



# **Parting Thoughts**



## The Three Most Useless Things to a Pilot

- The runway behind you
  - Moral: know your aircraft's take-off minimums and calculate the weight and balance for your flight, your airport's runway length, density altitude, any obstacles to be cleared
- The altitude above you
  - Moral: know your aircraft's power settings for climb, cruise, and descent
- The fuel on the ground below you
  - Moral: know your aircraft's fuel capacity, fuel system, GPH burn rate, and winds aloft for the route of flight.
- Utilize superior judgment to avoid needing to use superior skill
  - Moral: know your aircraft's systems and how to use them

# **Credits and Information**



### CAP References and Information

- Some CAP Cessna 182T-specific references
  - http://williamjdoylejr.net/G1000\_2013/N355CP/N355CP\_Check\_List.pdf
     Checklist for N355CP
  - http://williamjdoylejr.net/G1000\_2013/N355CP/POH\_182T.pdf Cessna 182T
     Airplane Information Manual (G1000 and KAP 140 Autopilot)
  - http://williamjdoylejr.net/G1000\_2013/N355CP/n355cp\_w&b.xls N355CP weight and balance
- CAP Ground Handling Video
  - https://www.capnhq.gov/CAP.eServices.Web/default.aspx?ReturnUrl=https://www.capnhq.gov/CAP.MultiMedia.Web/Video.aspx
- CAPR 60-1 CAP Flight Management
  - http://www.capmembers.com/media/cms/R060\_001\_E70E3BAE1C0D4.pdf
- CAPR 62-1 CAP Safety Responsibilities and Procedures
  - http://www.capmembers.com/media/cms/R062\_002\_211E97E99C6A4.pdf
- CAPR 62-2 Mishap Reporting and Review
  - http://www.capmembers.com/media/cms/R062\_002\_211E97E99C6A4.pdf





### References and Information

#### Author of Presentation

- William J. Doyle, Jr., CFI A&I, AGI, IGI, Cessna CFAI
  - FAA FAAST Team Representative, PHL FSDO

#### Downloading This Presentation

- Uses PowerPoint 2003 and later
- Password-protected, so click on the "Read Only" button
- <u>http://williamjdoylejr.net/FAAST</u> all of my FAAST Team presentations
- http://williamjdoylejr.net/FAAST/FlightPlanning/Pre-Flight\_Planning\_Cessna182T.ppt
- http://williamjdoylejr.net/FAAST/What\_IF/Airplane\_Performance/What\_If\_Airplane\_Performance\_ADM.ppt
- <a href="http://williamjdoylejr.net/FAAST/What\_IF/What\_If\_VFR\_into\_IMC.ppt">http://williamjdoylejr.net/FAAST/What\_IF/What\_If\_VFR\_into\_IMC.ppt</a>
- http://williamjdoylejr.net/FAAST/Cirrus/Cirrus\_SR20\_and\_SR22.ppt
- http://williamjdoylejr.net/FAAST/W&B/Weight\_&\_Balance\_Cirrus\_SR20.xls
- http://williamjdoylejr.net/FAAST/Cessna/Cessna\_172\_182\_and\_206.ppt
- http://williamjdoylejr.net/FAAST/W&B/Weight\_and\_Balance.ppt





# References and Information

- NTSB Accident Database
  - http://www.ntsb.gov/aviationquery/index.aspx
- Electronic Code of Federal Regulations Title 14 Aeronautics and Space
  - http://www.ecfr.gov/cgi-bin/textidx?sid=fd0d4ed9821626f95caf8cad8372ce03&c=ecfr&tpl=/ecfrbrowse/Title14 /14tab\_02.tpl
- Electronic Code of Federal Regulations Title 14 Chapter I--Federal Aviation Administration, Department of Transportation, Subchapter D – Airmen
  - http://ecfr.gpoaccess.gov/cgi/t/text/textidx?sid=fd0d4ed9821626f95caf8cad8372ce03&c=ecfr&tpl=/ecfrbrowse/Title14 /14cfrv2\_02.tpl





# Just a Real Nice Picture of a Cessna 182T





## FAASTeam on

# Don't Pop Your Plugs! VFR / IFR Flight Planning and Preflight Preparation:

Things You Need to Know as a Pilot During Planning and Preflight For a VFR / IFR Flight

Questions?
Comments?
Ideas?





# This Completes Don't Pop Your Plugs!

VFR / IFR Flight Planning and Preflight Preparation:
Things You Need to Know as a Pilot During Planning and Preflight
For a VFR / IFR Flight

Be sure to sign in so your attendance is record validated!

FAA Customer Feedback Website
<a href="http://www.faa.gov/about/office\_org/headquarters\_offices/avs/offices/als/qms/">http://www.faa.gov/about/office\_org/headquarters\_offices/avs/offices/als/qms/</a>

PHL FSDO FAAST Program Manager – Eileen Iandola Eileen.J.Iandola@FAA.gov



