



Fundamentals of Instructing

Are you an Accident Waiting to Happen?

The Walking Dead

Are you an Accident Waiting to Happen? - The Walking Dead

Are you the Walking Dead?



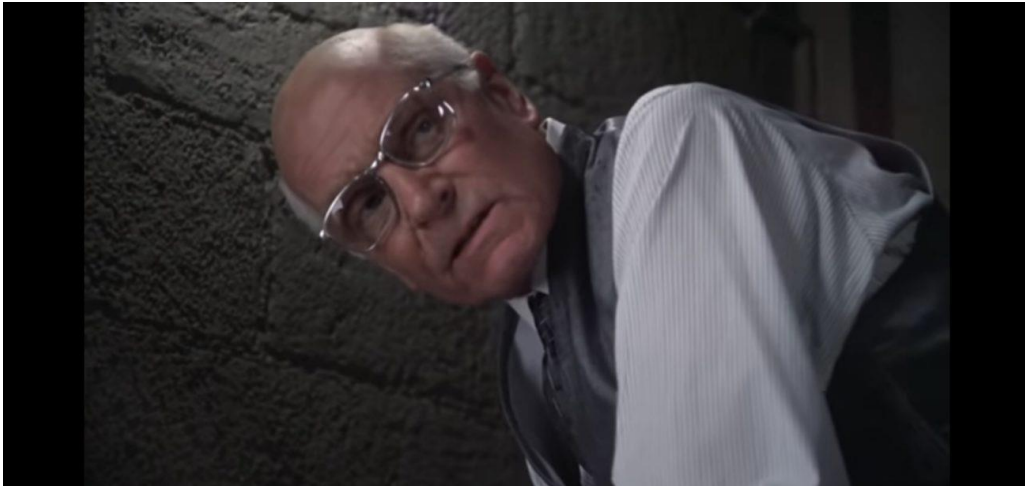
CFI Bootcamp
Flight Instructor Training

Are you an Accident Waiting to Happen? - The Walking Dead

Flying a small GA airplane – You wonder

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Is it SAFE?



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Just how dangerous is it to fly a small GA airplane?



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How dangerous is it to fly a small GA airplane?

Without good Risk Management, about the same as riding a motorcycle

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A very cool place to fly to...



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A very cool place to fly to...



Dock
BBQ
Solar Electricity
Satellite Internet

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A very cool place to fly to...



On demand hot water
Bathroom with Shower/Toilet
Full kitchen with Fridge, stove

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About the landing strip

About 2000 ft/dirt

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About the landing strip

1980 MSL

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About the landing strip

Trees at the approach end approx. 60 ft.

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About the landing strip

Must go around prior to 200 ft. due to rising terrain

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About the landing strip

Well maintained runway with tiedown for v4 airplanes

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You really wanted to go to the cabin, didn't you - Why?



Requires skill

Challenging

Reward at the end

All plays directly into risk/fun

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Almost all Pilots are Risk Takers – WHAT?

Pilots also ski, snowboard, Kayak, Kite Surf, Skydive,
Scuba Dive – You name it

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Almost all Pilots are Risk Takers – WHY?

It's a new skill to master

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Almost all Pilots are Risk Takers – WHY?

It lets you overcome challenges and fears

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Almost all Pilots are Risk Takers – WHY?

It lets you use your survival instinct

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What can be done to improve the safety?

Let's be honest about things...

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The most dangerous part of today was your drive to the airport – Not True!

This is only true when flying on an Air Carrier (Part 121)

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Why isn't it true?

Equipment

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Why isn't it true?

Pilot Training and Proficiency Checks

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Why isn't it true?

Experience

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Why isn't it true?

Layers of Protection: Dispatch, Maintenance, Cpt, FO

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What doesn't work

Only going over NTSB reports

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What doesn't work

Upping your personal minimums by trying

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What doesn't work

Asking for the test before the lesson

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What doesn't work

Risk assessments that take too long for training flights

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FAA answers to Risk Management

Handbooks too big and have too much detail

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The Problem with the Hazardous Attitudes

People sometimes don't identify with them

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The Problem with the Hazardous Attitudes

It's too simplistic – people don't really see things that way

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What can we do?

Accept the label and behave as if it were true about us!

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A method that you will use and it won't take forever

Let's have just one way to perform a risk assessment

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A method that you will use and it won't take forever

Let's have just one way to manage risk inflight

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The goal for every training flight

Perform a risk assessment before EVERY flight

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The goal for every training flight

Have that assessment completed in 10 minutes or less

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The goal for every training flight

Longer, non training flights can and should take longer

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What's the difference between a hazard and a risk?

A hazard is something that could adversely affect the flight

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What's the difference between a hazard and a risk?

A risk is the effect it will have on this flight/situation

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What's the difference between a hazard and a risk?

Example: Alternator failure Day VFR on Final

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What's the difference between a hazard and a risk?

Risk – Very low

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What's the difference between a hazard and a risk?

Alternator failure – IFR/night 100nm to destination in a single engine airplane with one alternator

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What's the difference between a hazard and a risk?

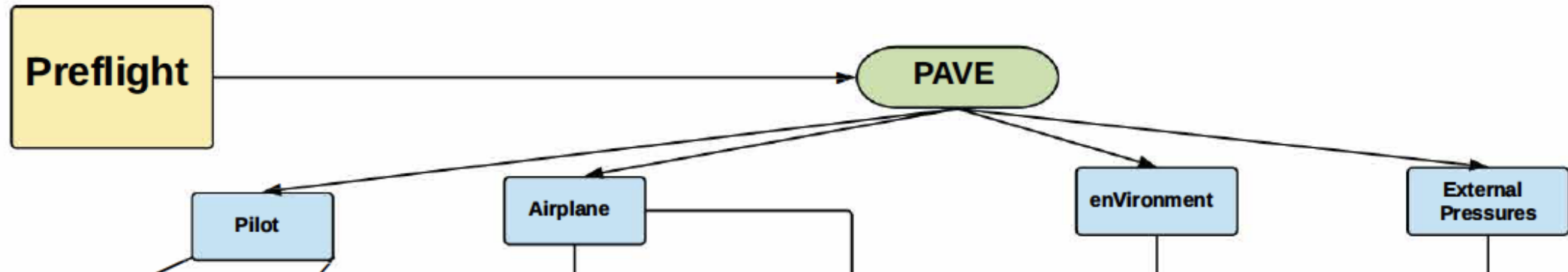
Risk – Very high – limited to no navigation capability before arrival at destination

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Let's Preflight the Flight!

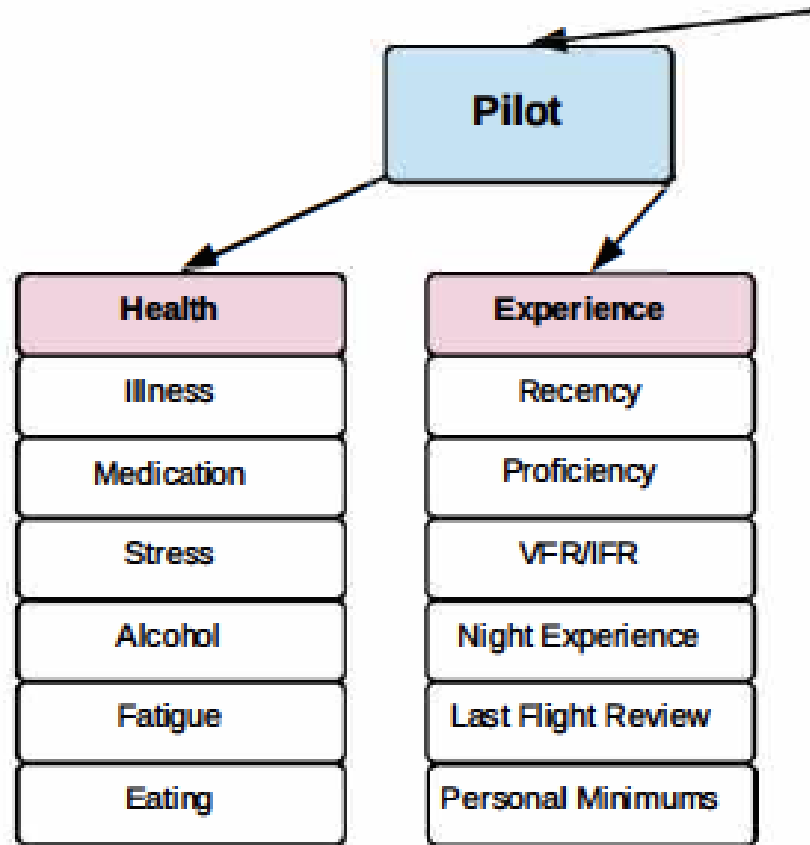
PAVE before a flight – Preflight the flight

Risk Management Definition: Decision making process to identify and eliminate, mitigate and accept hazards.



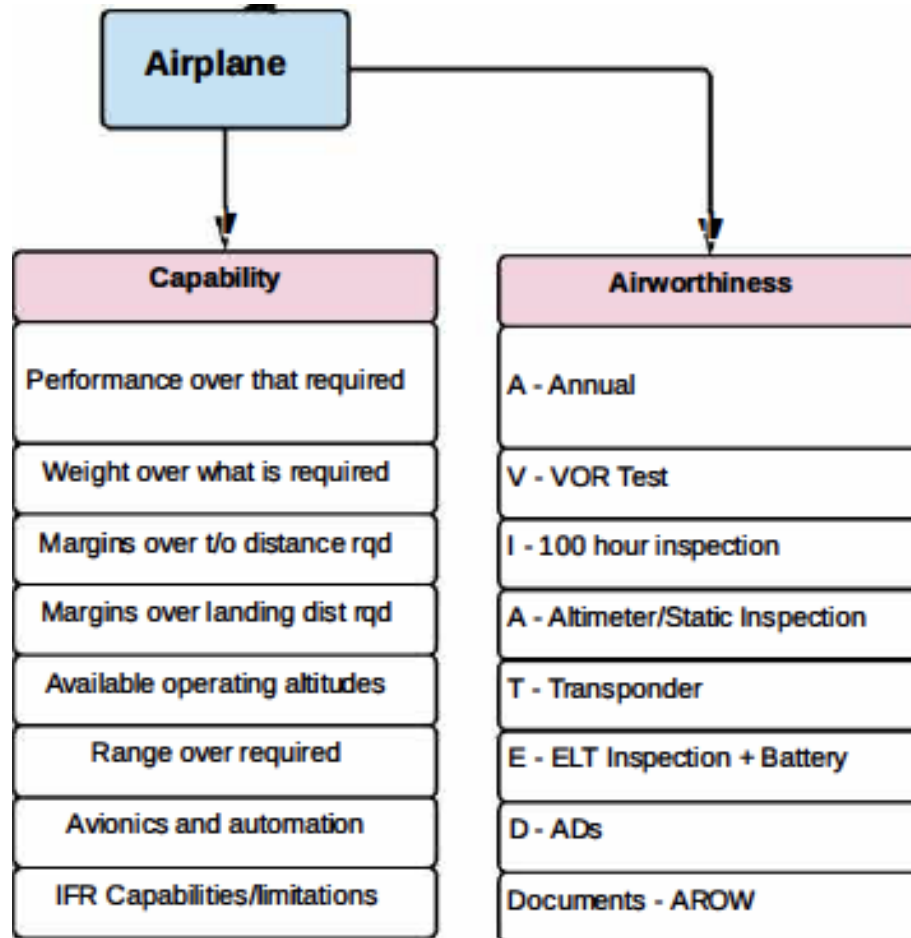
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Let's Preflight the Flight!



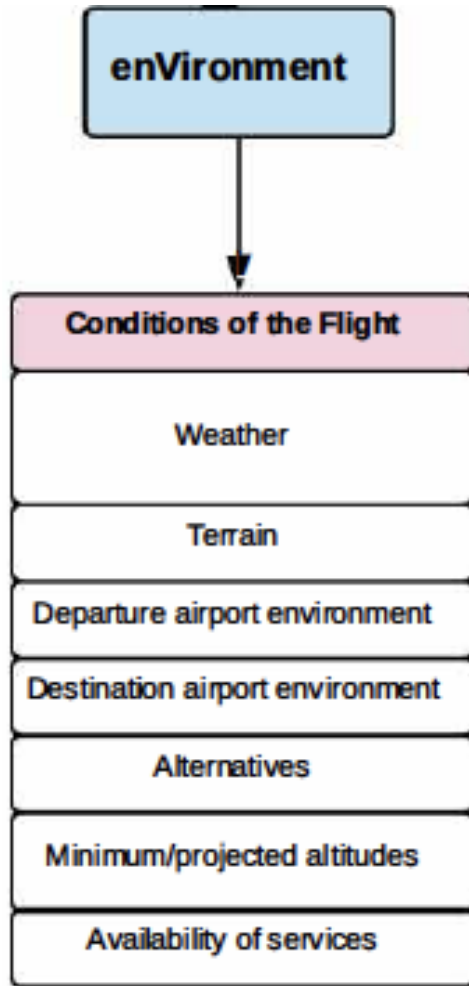
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Let's Preflight the Flight!



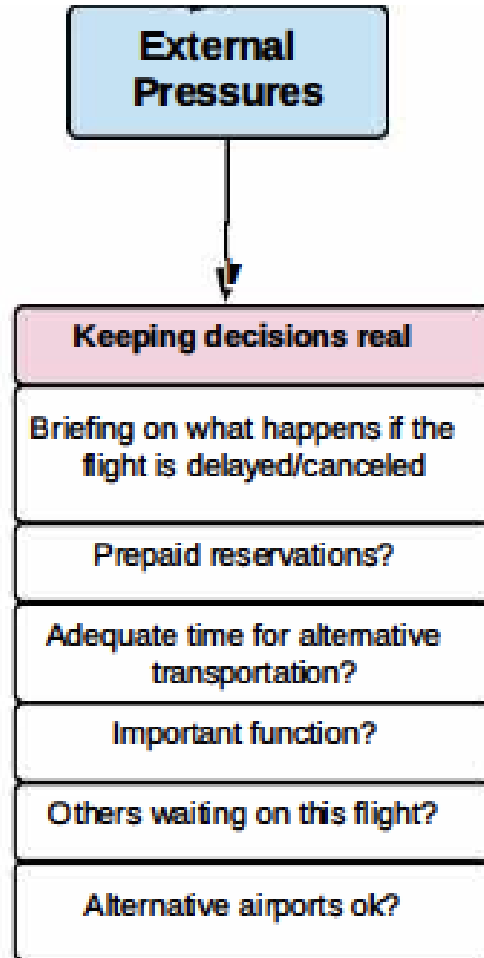
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Let's Preflight the Flight!



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Let's Preflight the Flight!



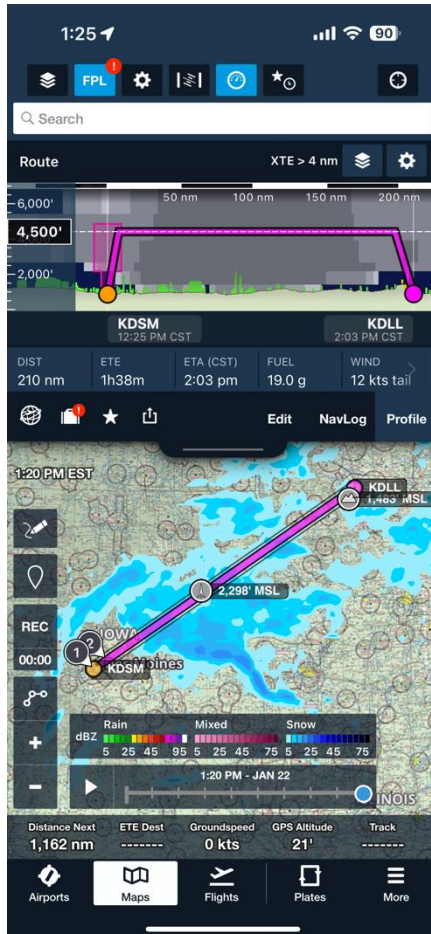
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Let's use some tools you will look forward to using!



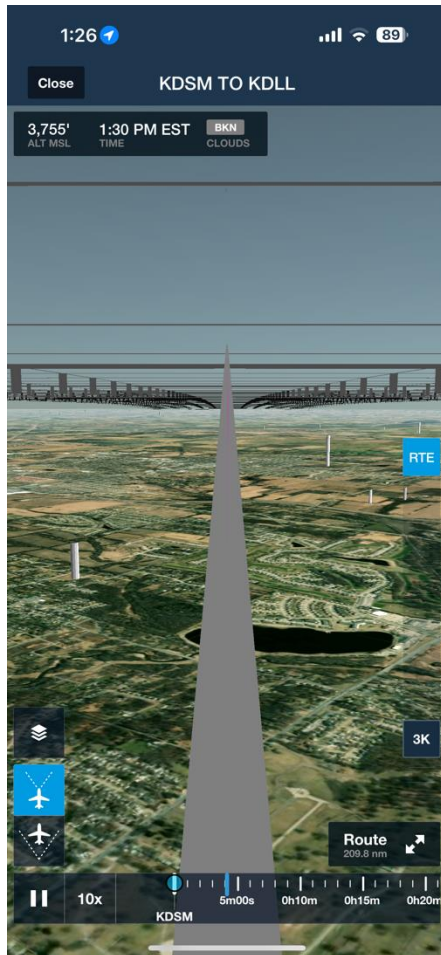
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ForeFlight – Profile View – Performance+ - Clouds and Icing



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ForeFlight – 3D View/Route – Performance+ - Airports/Terrain



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ForeFlight – Traffic – Pattern/Practice Area



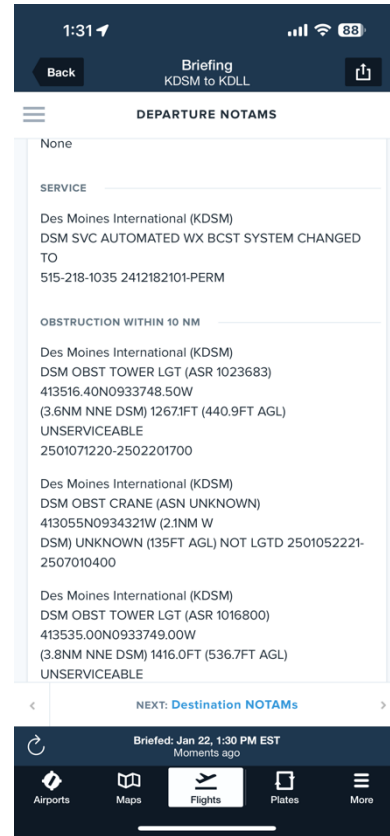
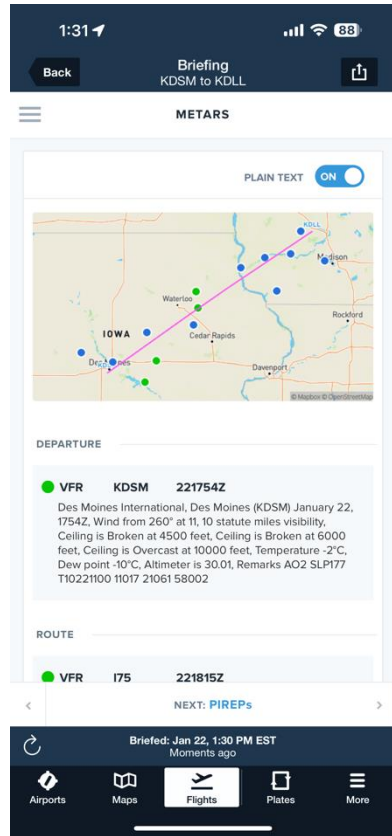
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ForeFlight – Traffic – Pattern/Practice Area



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ForeFlight – Weather Briefing



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C172 Performance App - iOS



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C172 Performance App - iOS

1:35

Flight Performance

Fuel: 36 gal. 216 lbs. 170 lbs.

Departure

Airport: KD SM
Conditions: VFR
METAR age: 0:41
TORA: 9,004 ft.
Width: 150 ft.
Slope: -0.2%
Surface: Hard, dry
Weight: 2,041 lbs.
V_r: 44 kias.

Enroute

Route distance: 221 nm.
Reserves: 0:30
Cruise altitude: 5500ft.
Power: 2,600RPM (76%MCP)

Fuel: 0 20 36
Time: 0 1:46 3:25

Avg. wind: 10 kt. tailwind

Destination

Airport: KD LL
Conditions: VFR
METAR age: 0:20
LDA: 5,010 ft.
Width: 100 ft.
Slope: 0.2%
Surface: Hard, dry
Weight: 1,935 lbs.
V_{ref}: 61 kias.

1:36

Risk

8 Moderate

Consider alternatives that mitigate some risk items.

No visual or instrument glideslope: ☐

Runway condition: Dry ☐

Runway < 2,000 ft.: ☐

Weather conditions: VFR (≥ 3000 ft., 5 sm.) ☐

Wind/gust ≥ 20 kt.: ☐

Crosswind ≥ 12 kt., runway < 50 ft. wide: ☒ +5

Low-level windshear: ☐

Temperature < 0°C: ☒ +1

Temperature/dewpoint spread < 3°C: ☐

Night: ☐

Precipitation: ☐

Steep terrain/obstacle nearby: ☐

Unfamiliar with airport: ☒ +1

No operating tower: ☐

No radar coverage for approach: ☐

Less than 1:30 h:m fuel at dest.: ☒ +1

1:36

Risk

11 High

Have a serious alternative plan. Consider consulting with a CFI or another pilot.

General flight

Flight rules: VFR ☐

Convective SIGMET (red) penetration: ☐

Thunderstorm penetration possible: ☐

Possible freezing rain/fog: ☐

Autopilot inoperable: ☐

First flight after maintenance: ☐

Human factors

Previous flights today: 0 ☐

Not 15 day current: ☒ +3

Fatigue or inadequate rest: ☐

After workday: ☐

Illness, cold, or flu: ☐

Personal or relationship issues: ☐

Business issues: ☐

Departure area

Runway condition: Dry ☐

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Risk Management Inflight

Keep is simple – 3P

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Risk Management Inflight

Perceive – What just happened

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Risk Management Inflight

Process – Is it important now? – what can be done?

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Risk Management Inflight

Perform – Do the action – checklist/memory item

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SRM – Single Pilot Resource Management

5P Checklist

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SRM – Single Pilot Resource Management

Pilot – What can you do?

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SRM – Single Pilot Resource Management

Plane – What can the airplane do?

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SRM – Single Pilot Resource Management

Plan – What needs to be changed?

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SRM – Single Pilot Resource Management

Programming – What needs to be done ahead of time/now?

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SRM – Single Pilot Resource Management

Passengers – Who can help and to what extent?

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By the way...

Join SAFE – safepilots.org and get 1/3 off Foreflight!



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By the way...

Join the CFI Study Group on Facebook - Free



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Practice Risk Management on Every Flight and...

You Won't be the Walking Dead and...



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Practice Risk Management on Every Flight and...

It is SAFE!

