

Lesson 6: Another Short Cross-Country Flight

This is another short flight, but it gives you the opportunity to practice essential procedures and skills that you should apply whenever you fly.

Scenario

As in the generic FITS syllabus, this lesson involves a flight to a nearby airport so that you can deliver an essential part to a shop that is restoring a classic car that you own. You are under pressure to get the part to the shop quickly. If you don't arrive today, the project will sit idle for at least a week.

As you cruise toward your destination, you should frequently consider how you would deal with various situations, such as unexpected changes in the weather, problems with the airplane, or other distractions.

Objectives

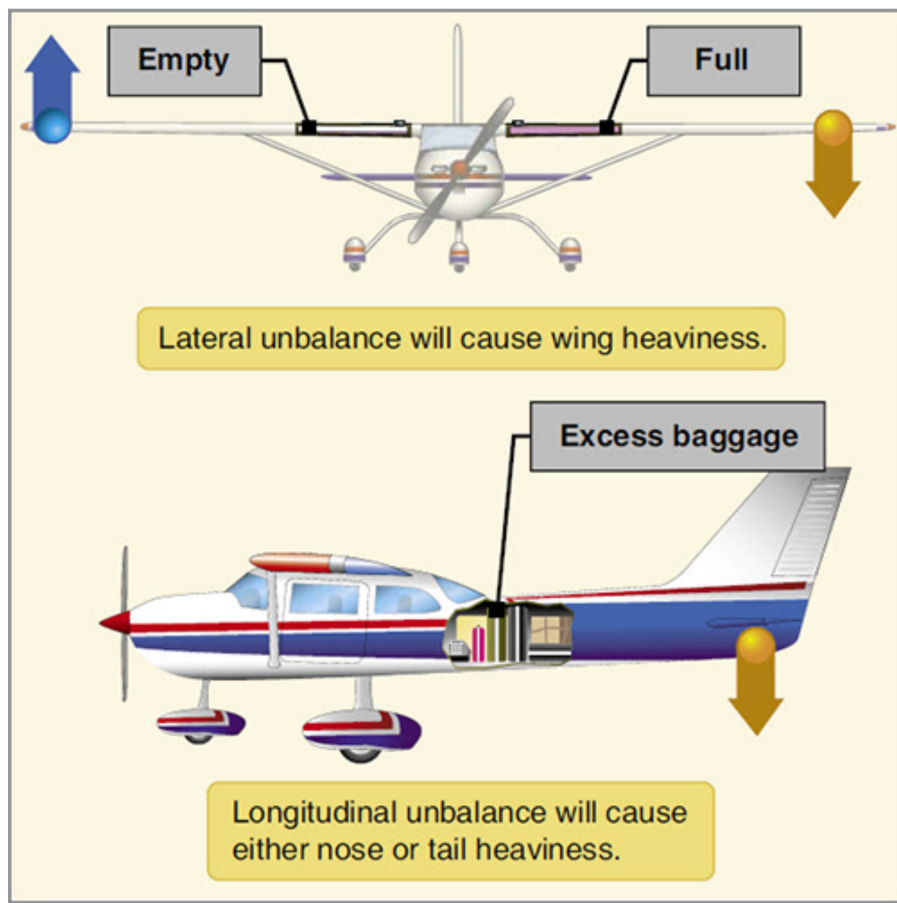
The primary goals of this flight are:

- Making a normal takeoff and climbing to cruise altitude
- Completing a short cross-country flight to practice aircraft control and basic navigation (piloting) skills

Secondary goals include:

- Reviewing the basics of aircraft performance and weight-and-balance calculations (see Figure 18-1)
- Practicing the process for obtaining a preflight briefing
- Learning about NOTAMs, which provide current information about the status of airports, navigation aids, and other critical information
- Introducing the procedures for contacting a control tower

Figure 18-1: Some effects of improper aircraft loading, as shown in Figure 9-1 of the Pilot's Handbook of Aeronautical Knowledge



As in all lessons at this stage of your training, you should also use this short flight to practice the basics of risk assessment and aeronautical decision making (ADM).

Completion Standards

The detailed goals for this lesson are outlined in the table at the end of this chapter. In general, before moving on to the next lesson, you should understand:

- The procedures for a normal takeoff and climb
- The fundamental concepts of aircraft performance and weight-and-balance
- The basic procedures for obtaining a preflight briefing
- How to find information about airports in the A/FD

You can also evaluate your performance by reviewing the information about common errors associated with normal takeoffs on p. 5-4 of the Airplane Flying Handbook.

References and Resources

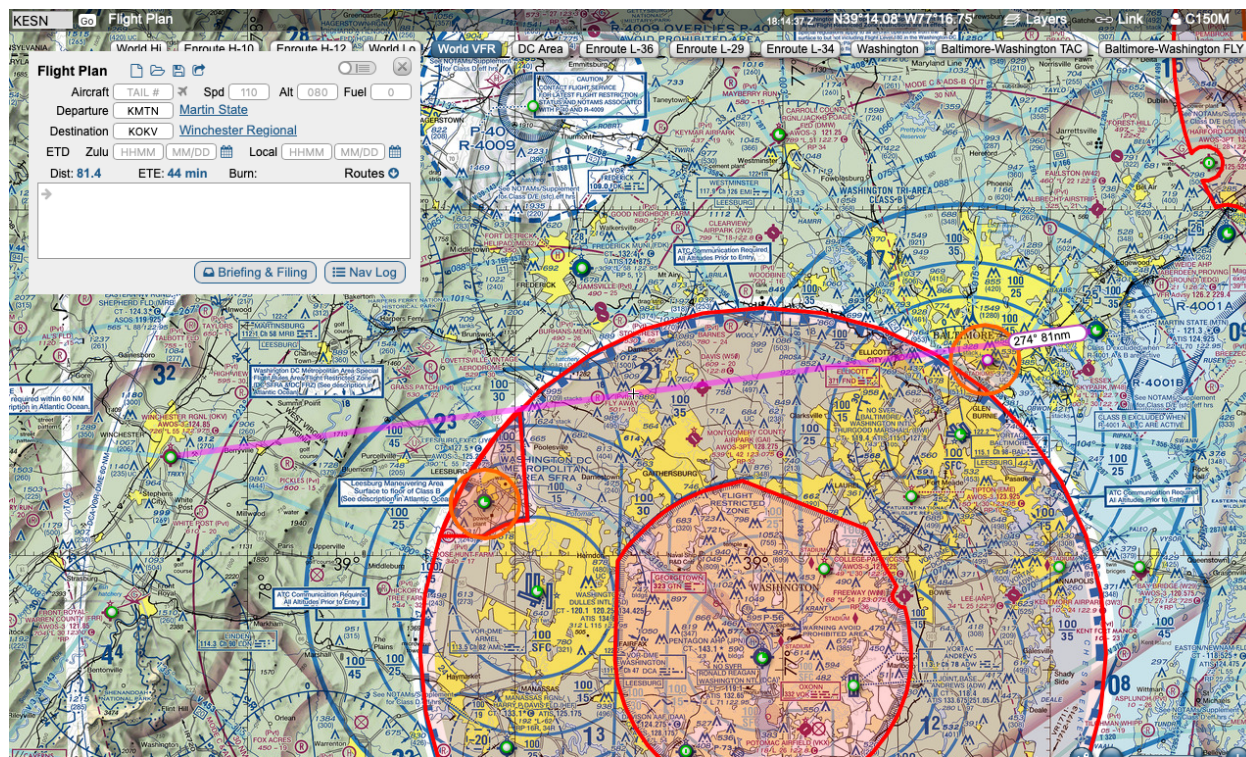
To prepare for this lesson, review the following references and resources. The AOPA Air Safety Institute publications are valuable supplements to the official information in the FAA references. The AOPA ASI Safety Advisors about airspace and operations at towered airports are especially helpful in preparing for this lesson.

Title	Chapter/Section	Topic/Notes
<i>Pilot's Handbook of Aeronautical Knowledge</i>	Chapter 15, "Navigation"	Review
	Chapter 9, "Weight and Balance"	Review all sections
	Chapter 10, "Aircraft Performance"	Review all sections in pages 10-1–10-13
	Chapter 12, "Aviation Weather Services"	Weather Briefings (p. 12-5)
	Chapter 13, "Airport Operations"	Sources for Airport Data (p. 13-2) and Radio Communications (p. 13-11)
	Chapter 14, "Airspace"	Discussions of Class D on p. 13-13 and p. 14-9
<i>Aeronautical Information Manual (AIM)</i>	Chapter 4, Section 2	Radio Communications Phraseology and Techniques
<i>Airplane Flying Handbook</i>	Chapter 5, "Takeoff and Departure Climbs"	Review pages 5-1–5-4
<i>Aeronautical Chart Users Guide</i>	Explanation of VFR Terms And Symbols	Review pages 1–3
	VFR Aeronautical Chart Symbols	Aeronautical Information: Airports (p. 11)
<i>Risk Management Handbook</i>	Chapter 6, "Single-Pilot Resource Management"	Review all sections
<i>Private Pilot Practical Test Standards</i>	Task 1 C: Weather Information	Page 1-2
	Task 1 D: Cross-Country Flight Planning	Page 1-2
	Task IV A: Normal and Crosswind Takeoff and Climb	Page 1-10
	Task IV B: Normal and Crosswind Approach and Landing	Page 1-11
	Task VII: Navigation	Page 1-24
AOPA ASI Safety Advisor <i>Mastering Takeoffs and Landings</i>	–	–
AOPA ASI Safety Advisor <i>Operations at Nontowered Airports</i>	–	–
AOPA ASI Safety Advisor <i>Operations at Towered Airports</i>	–	–
AOPA ASI Safety Advisor <i>Airspace for Everyone</i>	–	–
Using the Communications Radios	X-Plane Operations Manual	Controlling Instruments and Avionics with the Mouse (p. 65)
	FSX Learning Center	Using the Radios

Preflight Briefing

This lesson begins with your Cessna 172 ready for takeoff at the end of runway 33 at the Martin State airport (KMTN). You plan to fly to Winchester, VA (KOKV), a distance of about 81 nm, as shown in Figure 18-2. You will need to fly around the restricted airspace around Baltimore/Washington. The estimated time en route is one hour, and you plan to cruise at 4,500 ft.

Figure 18-2: The course from KMTN to KOKV as shown on the Washington sectional chart on SkyVector



Perform a normal takeoff and climb to 2,500 ft. You should climb straight ahead for 14 miles then turn left to a heading of 265° toward KOKV.

As you approach the Frederick airport (KFDK), you may need to contact the control tower for permission to fly through its Class D airspace. The air traffic control features in X-Plane and FSX aren't especially useful for training, but you can still tune the communication radios and, using the procedures described in the references for this lesson, practice communication techniques. You can assume that the tower at Frederick will clear you to fly through (transition) its airspace on your way to KOKV.

Location and Weather

The lesson begins with your Skyhawk ready for takeoff from runway 34 at Martin State (KMTN). The skies are mostly clear with light winds from the southwest along your route.

NOTAMs

Notices to Airmen (NOTAMs) provide current information about the status of airports, navigation aids, and other critical information that isn't published on charts and airport guides. The NOTAM system was developed in the teletype age; and like many aspects of aviation, information about closed runways, temporary obstructions, air shows, and other potential hazards is presented in a standard format replete with arcane abbreviations.

Here are a couple of NOTAMs relevant to your flight to Ephrata:

- EPH 06/017 MTN AIRSPACE UNMANNED ROCKETS 2 NMR MTN319029 17000 AGL/BLW 1500-0500 DLY WEE 1106251500-1106270500
- EPH 06/010 MTN AIRSPACE AEROBATIC ACT 6500/BLW 2 MR 1500-0300 DLY TIL 1106270300

As you can probably tell from even a cursory reading, model rockets are being launched northeast of Martins, and acrobatic aircraft are practicing within a 2-nm radius of the airport.

To learn more about NOTAMs, see the references associated with this lesson.

Tips for This Lesson

Here are a few suggestions to help you get the most from this lesson:

- As in previous lessons, practice getting weather information using online sources such as the Aviation Digital Data Service (ADDs) and Aviation Weather Center (AWC), and from unofficial resources for pilots such as NavMonster <http://www.NavMonster.com/>.
- You can get information about airports via links to the A/FD provided at this book's website or online at [http://Sky Vector.com](http://SkyVector.com), [http://AirNav. com](http://AirNav.com), and similar sites.
- Use the interactive map in X-Plane or FSX occasionally to help you track your position. The interactive map is especially helpful as you approach KOKV.
- Review the sectional chart and try to identify useful checkpoints along your route. When flying an airplane like the Cessna 172, it's a good idea to establish checkpoints about every 20 nm, which translates to 10-15 minutes of flying time.
- Plan to fly about two miles south of KOKV so that you can enter the traffic pattern for runway 32. Follow the procedures for operating at a non-towered airport, and keep an eye out for aerobatic aircraft.

What-Ifs

Keep the following considerations in mind as you fly toward KFDK:

- What available resources (including the autopilot) can you use to help you manage all of the tasks involved in flying the airplane?
- Frequently consider how you should respond to a passenger who needs assistance, a change in the weather, or other unexpected circumstances.
- For an additional challenge, assume that about halfway to KOKV, clouds begin to obscure your path. You decide to return to KMTN. Can you reverse course and navigate back to Martins?

Objectives and Desired Outcome Grading Sheet

Scenario Activities	Scenario Sub-Activities	Desired Outcome
Make a normal takeoff and climb.	—	Practice
Review the concepts and procedures for calculating weight and balance.	—	Describe/Practice
Practice gathering information for a preflight briefing.	Check current and forecast weather, NOTAMs, and review airport information.	Describe/Practice
Review the basics of Class D airspace.	Practice tuning the communication radios in your simulation.	Describe/Explain