

The Roo Project Live Ground Instruction

PAR Checkride Prep: Emergency Procedures



Session ID	ACC-PEM
Type	Live
Location	Remote
Estimated Timing	1–3h
Timing Breakdown	1–3h Theory / Discussion

Lesson Overview

This lesson is designed to prepare you for the Private Pilot Airplane Oral Exam, focusing on emergency procedures. Depending on time constraints, this lesson may be split into multiple sessions.

Learning Objectives

By the end of this lesson, the student will be able to:

- Identify appropriate action during loss of communication scenarios while operating within controlled and uncontrolled fields.
- Explain emergency procedures associated with vacuum, pitot-static, electrical, and navigational failures.
- Be able to recognize spatial disorientation during inadvertent flight into IMC.
- Understand and identify compass errors.
- Show the ability to apply sound aeronautical decision-making during emergencies.
- Demonstrate knowledge of emergency communication procedures and resources available to pilots.
- Show an understanding of aircraft emergencies requiring immediate pilot action.
- Explain the situation that may require an emergency descent and describe the associated procedures.
- Identify appropriate immediate actions and emergency procedures for common aircraft emergencies.

Session Preparation

The student should familiarize themselves with the following prior to the session:

TRP Private Pilot Ground School

N/A

PHAK

Chapter 9- Flight Manuals and Other Documents

CFR Part 91

[91.185](#)- Two-way radio communications failure

[91.213](#)- Inoperative instrument and equipment

[91.3](#)- Responsibility and authority of the PIC

91.125- ATC light gun signals

Supporting References

[AIM Section 2](#)- Emergency Services Available to Pilots

Session Tasks

Theory Tasks	ACS Ref
Emergency Communication - ATC light gun signals..... - Lost communication procedures..... - Emergency transponder codes.....	PA.III.A.K3 PA.III.A.K4 PA.III.A.K5 PA.III.A.K6 PA.III.A.K7
Aircraft Systems Failures - Vacuum systems failures..... - Pitot-static system failures..... - Electrical system failures..... - Navigational equipment failures.....	PA.IX.C.K2a PA.IX.C.K2b PA.IX.C.K2c PA.IX.C.K2d PA.IX.C.K2f
Spatial Disorientation - Causes of spatial disorientation..... - Common visual and vestibular illusions..... - Hazardous associated with inadvertent flight into IMC..... - Recovery and risk mitigation techniques.....	PA.I.H.K1c
Magnetic Compass Errors - Magnetic dip..... - Variation and deviation..... - Acceleration and deceleration errors..... - Turning errors.....	PA.VI.A.K2
Common Emergency Procedures - Engine failure (takeoff, cruise, descent)..... - Emergency descents..... - Engine (in flight and during start)..... - Electrical fire..... - Cabin smoke.....	PA.IX.C.K3 PA.IX.C.K4 PA.IX.C.K5 PA.IX.B.K2 PA.IX.B.K3 PA.IX.BK4
Aeronautical Decision-Making and Emergency Risk Management - Loss of situational awareness..... - Workload management..... - Emergency decision-making strategies..... - Post-emergency considerations.....	PA.IX.D.K2 PA.IX.D.K3 PA.IX.D.K5 PA.IX.B.K1

Completion Standards

- Demonstrate knowledge of emergency communication procedures.**
 - Be able to identify and interpret ATC light gun signals.
 - Show the ability to apply lost communication procedures in both controlled and uncontrolled environments.
 - Understand the purpose of and proper use of emergency transponder codes.
- Possess and understand of aircraft system failures and associated procedures.**
 - Identify indications of vacuum, pitot-static, electrical, and navigational failures and the proper action to be taken as prescribed by the POH.
- Recognize the hazards associated with spatial disorientation.**
 - Identify common visual and vestibular illusions.
 - Understand the dangers of inadvertent flight into IMC.

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- Demonstrate knowledge of recovery and risk mitigation strategies.
 - Recognize factors that contribute to loss of situational awareness.
 - **Show knowledge of magnetic compass errors and limitations.**
 - Explain the effects of magnetic dip, variation, and deviation.
 - Identify acceleration, deceleration, and turning errors.
 - **Apply an understanding of common aircraft emergencies.**
 - Identify appropriate procedures for engine failures during takeoff, descent, and in cruise flight.
 - Demonstrate knowledge of procedures for engine fires, electrical fires, and cabin smoke emergencies.
 - Show the ability to effectively manage workload during high-stress situations.