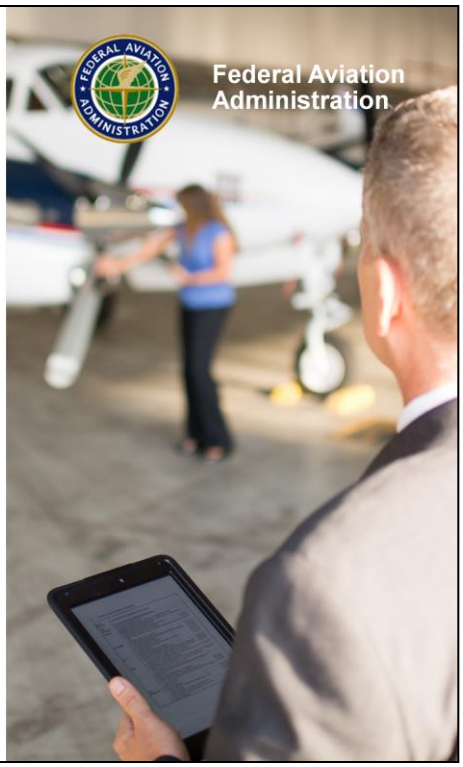
Update on the ACS

***A**irman*
***C**ertification*
***S**tandards*

Summer 2016



Welcome to this introduction to the Airman Certification Standards, or ACS, concept. This presentation has two goals.

- First is to provide basic information on a new, industry-developed Airman Certification Standards framework that will replace the Practical Test Standards.

- Second is to offer an opportunity to provide comments and ask questions as we approach initial implementation. At the end of this presentation is a slide listing FAA Headquarters contact information and additional sources of information on this project.

Overview

- What is the ACS?
- Why change?
- How is it better?
- When does it take effect?
- What do I need to know?
- How do I use the ACS?
- What do I need to do now?
- Where can I get more information?

Here are the topics we'll cover.

What is the ACS?

- **A**irman **C**ertification **S**tandards
  - "Enhanced" version of the Practical Test Standards (PTS) – ACS replaces the PTS
  - Adds task-specific knowledge and risk management elements to each PTS Area of Operation/Task
  - Result = integrated presentation of specific knowledge, risk management, and skill elements for each Task
  - Combines standards for both knowledge exam and the practical (certification) test

FAA-S-ACS-6

U.S. Department of Transportation
Federal Aviation Administration

Private Pilot – Airplane
Airman Certification Standards

June 2016

Flight Standards Service
Washington, DC 20591

- The ACS is an enhanced version of the PTS, and it will start to replace the PTS on June 15, 2016.

- The ACS adds task-specific knowledge and risk management elements to each PTS Area of Operation/Task. The result is an integrated presentation of specific knowledge, risk management, and skill elements for each Task.

- The ACS thus provides a single-source set of the standards for both knowledge exam and the practical test.

Why make this change?

- The ACS started in 2011 as a way to fix knowledge testing.
- The FAA and industry partners determined the need for a systematic approach that would:
  - Provide clear standards for aeronautical knowledge
  - List specific behaviors for risk management and ADM
  - Consolidate overlapping tasks in the PTS
  - Tie the many "special emphasis" items to knowledge and skill
  - Connect the standards for knowledge, risk management, and skill to guidance (H-series handbooks), to knowledge test questions, and the practical test

Airman Certification Standards
Summer 2016
Federal Aviation Administration
4

- The ACS started in 2011 as a way to fix knowledge testing, which was criticized for being out of step with today's operating environment. We asked for help from the aviation training industry experts whose names you will see later in this course. They started with the idea of a "Knowledge Test Standard," or KTS, but found that we really needed a systematic approach to the overall airman certification system. We needed to:
- Provide clear standards for the aeronautical knowledge elements listed in the regulations, and make sure that knowledge reflects things airmen really need to know for safe operation in the NAS.
- List specific, observable behaviors for risk management and aeronautical decision-making rather than just words in the introduction of the PTS.
- Consolidate overlapping Tasks in the PTS.
- Tie the many "special emphasis" items listed in the PTS to knowledge and skill.
- And last but not least, we needed to connect the standards for knowledge, risk management, and skill to FAA handbooks, to knowledge test questions, and to the practical test, which is the "final exam" for someone seeking an airman certificate or rating.

How is it better?

Definition & integration of elements = comprehensive standard

Aeronautical knowledge

Task	*Task A. Steep Turns*
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with steep turns.
Knowledge	The applicant demonstrates understanding of:
PA.V.A.K1	1. Coordinated flight.
PA.V.A.K2	2. Attitude control at various airspeeds.
PA.V.A.K3	3. Maneuvering speed, including changes in weight.
PA.V.A.K4	4. Controlling rate and radius of turn.
PA.V.A.K5	5. Accelerated stalls.
PA.V.A.K6	6. Overbanking tendencies.
PA.V.A.K7	7. Use of trim in a turn.
PA.V.A.K8	8. Aerodynamics associated with steep turns.
PA.V.A.K9	9. Aerobatic requirements and limitations.

Know

Aeronautical decision-making and special emphasis

Risk Management	The applicant demonstrates the ability to identify, assess and mitigate risks, encompassing:
PA.V.A.R1	1. Failure to divide the attention between airplane control and orientation.
PA.V.A.R2	2. Task management.
PA.V.A.R3	3. Energy management.
PA.V.A.R4	4. Accelerated stalls.
PA.V.A.R5	5. Spins.
PA.V.A.R6	6. Failure to maintain situational awareness.
PA.V.A.R7	7. Collision avoidance, scanning, obstacle and wire strike avoidance.
PA.V.A.R8	8. Failure to maintain coordinated flight.

Consider

PTS-based flight proficiency

Skills	The applicant demonstrates the ability to:
PA.V.A.S1	1. Establish the manufacturer's recommended airspeed or if one is not stated, a safe airspeed not to exceed V_A.
PA.V.A.S2	2. Roll into a coordinated 360° steep turn with a 45° bank.
PA.V.A.S3	3. Perform the task in the opposite direction, as specified by the evaluator.
PA.V.A.S4	4. Maintain the entry altitude ±100 feet, airspeed ±10 knots, bank ±5°; and roll out on the entry heading, ±10° or as recommended by aircraft manufacturer to a safe maneuvering altitude.

Do

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Summer 2016

Federal Aviation Administration

5

- The integrated format of the ACS has a number of benefits.
    - It clearly tells applicants, instructors, and evaluators what an airman must KNOW, CONSIDER, and DO to pass the knowledge test and the practical test for an airman certificate or rating.
    - It shows how the required knowledge, risk management, and skill elements for each Area of Operation/Task are connected.
    - It defines expectations and behaviors for risk management and connects them to specific Tasks.
    - It puts the “special emphasis” items from the PTS in the right context.
- In summary – the ACS approach enhances safety and contributes to standardization in teaching and testing these concepts.

How is it better?

Clear & logical presentation

- Often-overlooked introductory material in PTS has been relocated to specifically focused appendices.
- Roles, responsibilities, and expectations are clearly defined.
- Lengthy notes in individual PTS Tasks have been integrated into the appropriate Appendix.

APPENDIX 1: The Knowledge Test - Eligibility, Prerequisites and Testing Centers

Knowledge Test Description
English Language Proficiency
Knowledge Test Requirements
Knowledge Test Centers
Knowledge Test Registration

APPENDIX 2: Knowledge Test Procedures and Tips

Acceptable Materials
Test Tips
Cheating or Other Unauthorized Conduct
Testing Procedures for Applicants Requesting Special Accommodation

APPENDIX 3: Airman Knowledge Test Report

General Information
FAA Knowledge Test Question Coding

APPENDIX 4: The Practical Test – Eligibility and Prerequisites

APPENDIX 5 – Practical Test Roles, Responsibilities, and Outcomes

Applicant Responsibilities
Instructor Responsibilities
Evaluator Responsibilities
Possible Outcomes of the Test
Practical Test Checklist (Applicant)
Additional Rating Task Table

APPENDIX 6: Safety of Flight

General
Stall and Spin Awareness
Use of Checklists
Use of Distractions
Positive Exchange of Flight Controls
Aeronautical Decision Making, Risk Management, CRM and SRM
Multiengine Considerations
Single Engine Considerations

APPENDIX 7: Aircraft, Equipment, and Operational Requirements & Limitations

Aircraft Requirements & Limitations
Equipment Requirements & Limitations
Operational Requirements & Limitations

APPENDIX 8: Use of FSTDs and ATDs

Use of FSTDs
Use of ATDs
Credit for Time in an FSTD
Credit for Time in an ATD
Use of an FSTD on a Practical Test

APPENDIX 9 - References

APPENDIX 10 - Abbreviations and Acronyms

The ACS improves the presentation of important information.

- As you see on the slide:
    - Often-overlooked introductory material in the PTS has been relocated to specifically focused appendices.
    - Roles, responsibilities, and expectations are clearly defined.
    - Lengthy notes in individual PTS Tasks have been integrated into the appropriate appendix.

How is it better? ACS coding system

V. Performance Maneuvers	
Task	***Task A. Steep Turns***
References	FAA-H-8083-2, FAA-H-8083-3; POH/AFM
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with steep turns.
Knowledge	The applicant demonstrates understanding of:
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PA.V.A.R2	2. Task management.
PA.V.A.R3	3. Energy management.
PA.V.A.R4	4. Accelerated stalls.
PA.V.A.R5	5. Spins.
PA.V.A.R6	6. Failure to maintain situational awareness.
PA.V.A.R7	7. Collision avoidance, scanning, obstacle and wire strike avoidance.
PA.V.A.R8	8. Failure to maintain coordinated flight.
Skills	The applicant demonstrates the ability to:
PA.V.A.S1	1. Establish the manufacturer's recommended airspeed or if one is not stated, a safe airspeed not to exceed V_A.
PA.V.A.S2	2. Roll into a coordinated 360° steep turn with a 45° bank.
PA.V.A.S3	3. Perform the task in the opposite direction, as specified by the evaluator.
PA.V.A.S4	4. Maintain the entry altitude ±100 feet, airspeed ±10 knots, bank ±5°; and roll out on the entry heading, ±10° or as recommended by aircraft manufacturer to a safe maneuvering altitude.

The ACS assigns a unique code to each element of knowledge, risk management, & skill

PA = Private Pilot Airplane (*defines applicable ACS*)

V = Performance Maneuvers (*defines Area of Operation*)

A = Steep Turns (*defines Task*)

K5 = Accelerated Stalls (*defines element*)

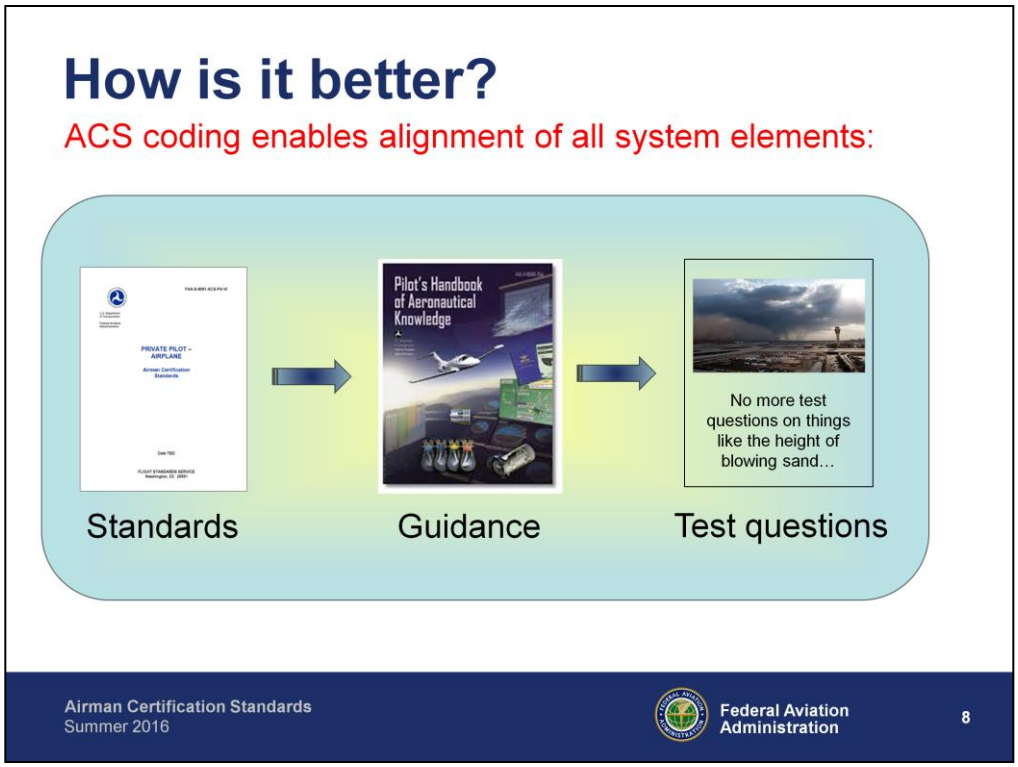
Airman Certification Standards
Summer 2016

Federal Aviation Administration

7

- One of the strongest tools that the industry team developed for the Airman Certification Standards framework is a coding system.
- The ACS assigns a unique code to each element of knowledge, risk management and skill.
- Let's take a look at what PA.V.A.K5 means:

  - **PA** = Private Pilot Airplane (*defines applicable ACS*)
  - **V** = Performance Maneuvers (*defines Area of Operation*)
  - **A** = Steep Turns (*defines Task*)
  - **K5** = Accelerated Stalls (*defines element*)



- The ACS coding system provides the “thread” to link standards to guidance and test questions, and to keep them aligned in the future.
- Later on, this ACS code will replace the LSC, or PLT, code now shown on the Airman Knowledge Test Report.
- Already, though, the industry team has used the ACS coding to help ensure that handbooks are aligned with the standards as defined with the ACS. The FAA is incorporating industry recommendations for a number of these documents.
- Also, the FAA has already used the ACS coding system to revise and align all private pilot airplane and instrument-airplane rating knowledge test questions to the knowledge, skill, and risk management elements in the corresponding ACS.

How is it better?

ACS benefits from extensive FAA/industry collaboration

- Industry-led development – the ACS has been developed, refined, and tested through three consecutive aviation training industry groups with diverse representation.
- Public comment - the FAA established several dockets for the industry groups to receive public comments on the ACS.
- Prototyping - the FAA and its industry partners conducted ACS prototype activities to test and refine the ACS for private pilot (airplane) and instrument rating (airplane).
  - Private Pilot-Airplane prototyped twice in Orlando
  - Instrument-Airplane prototypes still underway in Seattle and Orlando
  - Feedback has been very positive.

Airman Certification Standards
Summer 2016

Federal Aviation Administration

9

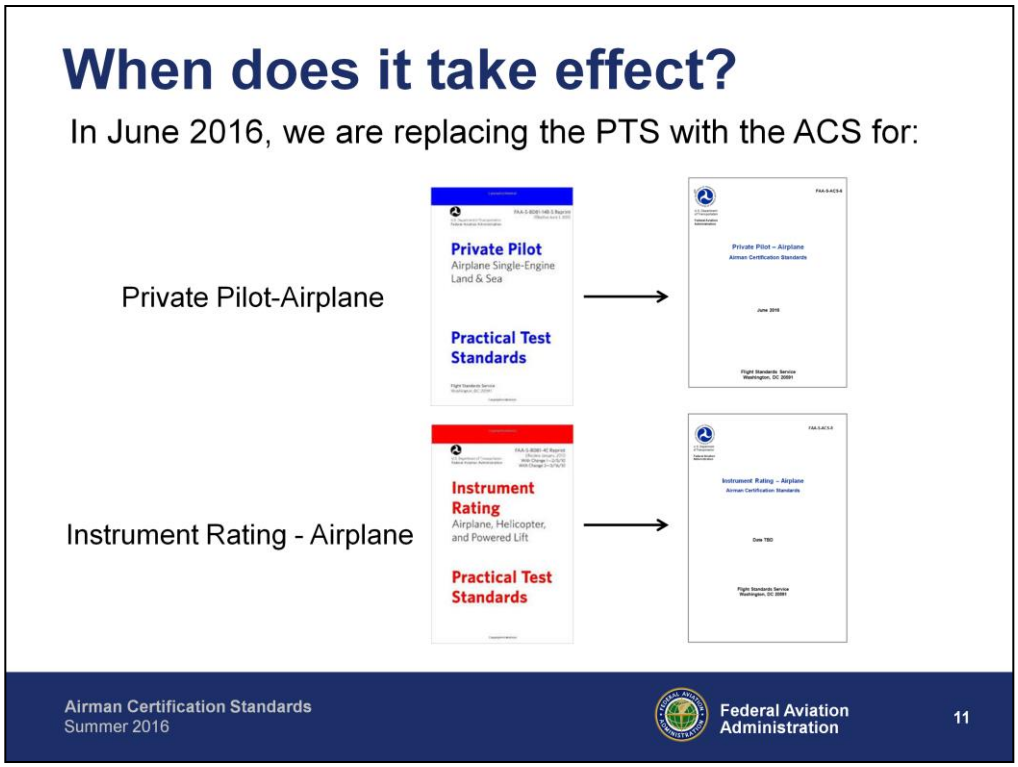
- The ACS reflects a great deal of input from industry experts, and from the public.
- The FAA has now used three groups of industry experts to develop, refine, and test the ACS.
- On behalf of industry working groups, the FAA twice established dockets to receive public feedback on the draft Private, Instrument, and Instructor ACS.
- The working groups used those comments to refine the ACS, and also to develop a set of Frequently Asked Questions for the FAA website.
- Prototype efforts started in the summer of 2014 in Orlando.
- In the fall of 2015, we launched ACS Instrument-Airplane Rating prototype activities in Orlando and in Seattle.
- Feedback from applicants, instructors, evaluators and FSDO inspectors in both locations has been very positive.

How is it better?

Current and Past Aviation Community Participants

Aircraft Owners & Pilots Association (AOPA)
Airlines for America
Air Line Pilots Association
AnywhereEducation Inc.
Aviation Accreditation Board International
Aviation Research Training & Services
Aviation Supplies & Academics
CAE
Cessna Pilot Centers
Coalition of Airline Pilots Associations
Embry-Riddle Aeronautical University
Federal Aviation Administration (AFS-200,400,600,800)
Flight Safety International
General Aviation Manufacturers Association
Gleim
Florida Institute of Technology
Jeppesen
King Schools
Liberty University
Mary Schu Aviation
National Air Transportation Association
National Association of Flight Instructors
National Business Aviation Association
Oxford Flying Club
Paul Alp, CFI
Polk State College
Redbird Simulations
Regional Air Cargo Carriers Association
Robert Stewart, CFI
Satcom Direct
Society of Aviation and Flight Educators
Sportys Academy
University Aviation Association
University of North Dakota

- This list includes all past and present working group participants. Essentially, these are the organizations and individuals who created the ACS in close collaboration with the FAA.



- After five years in development, which includes the prototype testing in Orlando and Seattle, the time has come to begin the real-world transition from the PTS to the ACS.

- We still have work to do on the ACS for commercial, ATP, and Instructor, but the FAA and our industry partners are ready to move forward on private and instrument.

- So on June 15, 2016, we are replacing the PTS for Private Pilot-Airplane and the Instrument-Airplane rating with the corresponding ACS.

When does it take effect?

Key components will be in place:

Standards

- June 2016: Final versions of the ACS for Private Pilot-Airplane and the Instrument-Airplane Rating published on the Airman Testing web page.

Guidance

- June 2016: First of revised FAA H-series handbooks will be published.

Test Questions

- Now: All active knowledge test questions on the Private Pilot-Airplane and the Instrument-Airplane Rating knowledge tests have already been aligned with the corresponding ACS.

Airman Certification Standards
Summer 2016

Federal Aviation Administration

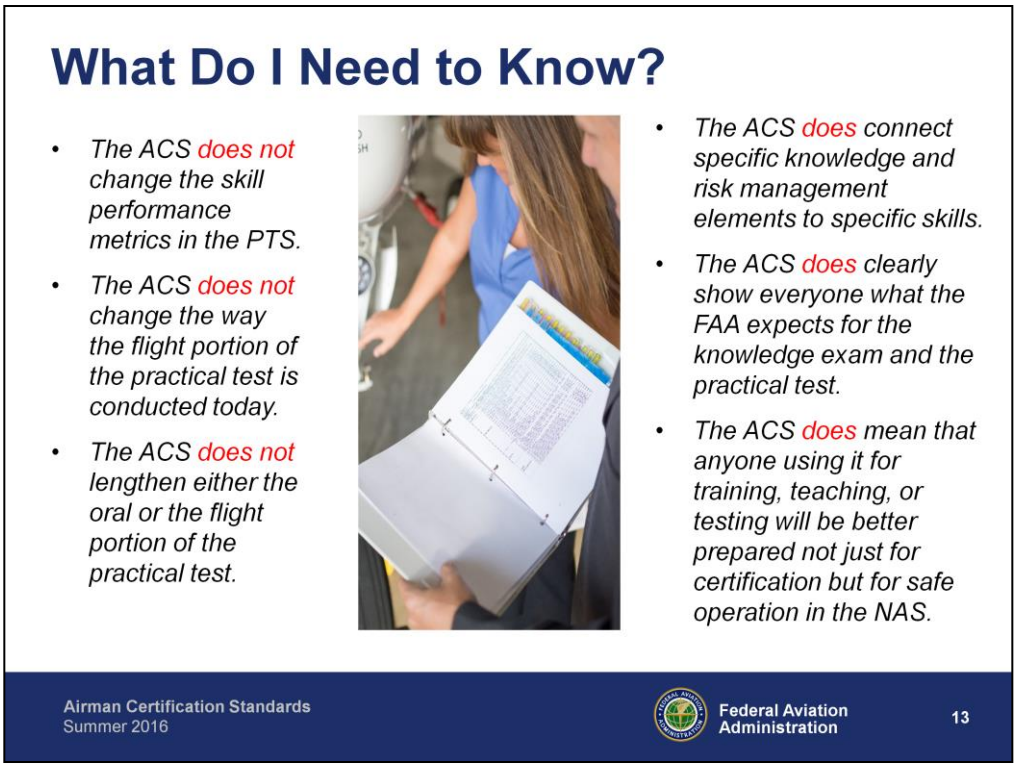
12

The key components will be in place:

May 2016: Final versions of the ACS for Private Pilot-Airplane and the Instrument-Airplane Rating will be published on the FAA's Airman Testing web page. These will not be significantly different from the draft versions you see today.

June 2016: The first of the revised FAA H-series handbooks will be published.

Now: As mentioned earlier, all active knowledge test questions on the Private Pilot-Airplane and the Instrument-Airplane Rating knowledge tests have already been aligned with the corresponding ACS.



Here are some important points to know.

The ACS does not change the skill performance metrics in the PTS.

The ACS does not change the way the flight portion of the practical test is conducted today.

The ACS does not lengthen either the oral or the flight portions of the practical test.

The ACS does connect specific, appropriate knowledge and risk management elements to specific skills.

The ACS does help everyone understand what the FAA expects for the knowledge exam and the practical test.

The ACS does mean that anyone using it for training, teaching, or testing will be better prepared not just for certification but for operating safely.

How do I use the ACS?

- **Read Introduction & Appendices.**

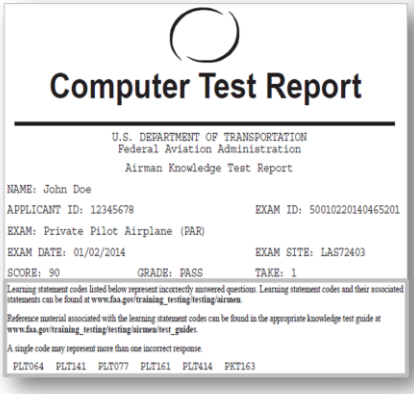
- 1 – KT Eligibility, Prerequisites and Testing Centers
- 2 – KT Procedures and Tips
- 3 – KT Report
- 4 – PT Eligibility and Prerequisites
- 5 – PT Roles, Responsibilities, and Outcomes
- 6 – Safety of Flight
- 7 – Aircraft, Equipment, and Operational Requirements
- 8 – Use of Flight Simulation Training Devices and Aviation Training Devices
- 9 – References
- 10 – Abbreviations and Acronyms

- The introduction contains important information, both general concepts and instructions on how to use the ACS as an applicant, an instructor, or an evaluator.
- You also need to carefully review the ACS appendices, which are listed on the screen. Many of the notes and comments that were scattered throughout the PTS have been consolidated into a specific appendix. These notes remain critical to the practical test.
- Pay special attention to several of the appendices.
    - Appendix 5 covers roles, responsibilities, and outcomes.
    - Appendix 6 consolidates safety of flight information, such as stall/spin awareness, use of checklists, and important multiengine considerations.
    - Appendix 7 outlines aircraft requirements such as multiengine and equipment requirements. It also requires the applicant to demonstrate automation management skills.
    - Appendix 8 provides significantly updated and enhanced information on use of flight simulation training devices and aviation training devices.

How do I use the ACS?

- **Using PLT codes with the ACS**

Current State



Computer Test Report

U.S. DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
Airman Knowledge Test Report

NAME: John Doe
APPLICANT ID: 12345678 EXAM ID: 50010220140465201
EXAM: Private Pilot Airplane (PAR)
EXAM DATE: 01/02/2014 EXAM SITE: LAS72403
SCORE: 90 GRADE: PASS TAKE: 1

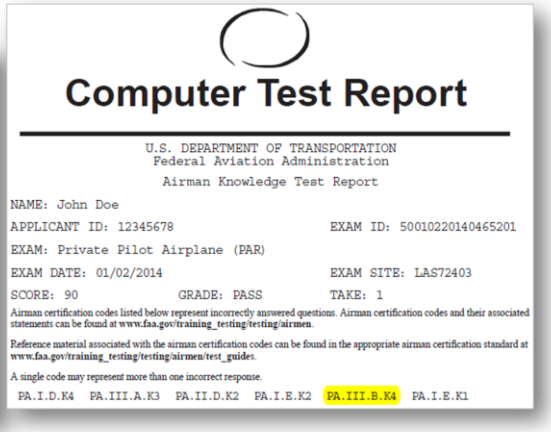
Learning statement codes listed below represent incorrectly answered questions. Learning statement codes and their associated statements can be found at www.faa.gov/training_testing/testing/airmen.

Reference material associated with the learning statement codes can be found in the appropriate knowledge test guide at www.faa.gov/training_testing/testing/airmen/test_guides.

A single code may represent more than one incorrect response.

PLT064 PLT141 PLT077 PLT161 PLT414 PKT163

Future State



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Airman certification codes listed below represent incorrectly answered questions. Airman certification codes and their associated statements can be found at www.faa.gov/training_testing/testing/airmen.

Reference material associated with the airman certification codes can be found in the appropriate airman certification standard at www.faa.gov/training_testing/testing/airmen/test_guides.

A single code may represent more than one incorrect response.

PA.I.D.K4 PA.III.A.K3 PA.II.D.K2 PA.I.E.K2 PA.III.B.K4 PA.I.E.K1

- As discussed earlier, the FAA is already using the ACS codes to ensure that the standards for knowledge, risk management, and skill are aligned with guidance material and test questions.
- That means that all active knowledge test questions for the private pilot airplane and the instrument-airplane rating knowledge tests have already been aligned with the corresponding ACS.
- The current knowledge test management system does not have the capability to print ACS codes. Until the FAA completes the acquisition of a new test management services contract, you will continue to see today's Learning Statement, or PLT, Codes on the Airman Knowledge Test Report.
- However, the next slide will show you how the ACS can still improve the process of retesting subjects that the applicant missed on the knowledge test.

How do I use the ACS?

- **Using PLT codes with the ACS**
  - There is no one-to-one correlation between LSC (PLT) codes and ACS codes. Still, you can use the ACS to narrow the scope and retest deficient areas in the context of an Area of Operation and Task:

PLT 040
Airspace classes, charts, diagrams

PLT 161
Aircraft Systems / Avionics / Transponder / Airspace / Publications / AFD / Transponder Operations

PLT 162
Airspace requirements, operations

PLT 163
Airspace requirements, visibility / cloud clearance

PLT 376
Airspace, special use, TFRs

PLT 393
Airspace, regulations / restrictions

→

PA.I.D.K1
Ask about airspace in context of planning a XC flight

PA.I.E.K1-6
Ask about airspace as part of preflight preparation

PA.II.A.S4
Ask about airspace as part of preflight assessment

PA.V.B.S1
Ask about airspace as part of ground reference maneuvers evaluation

Airman Certification Standards
Summer 2016

Federal Aviation Administration

16

- Today's Learning Statement, or PLT, Codes are linked to references. So there is a large number of PLT codes.
- By contrast, each ACS code is tied to a unique Task Element in the standard itself.
- Because of this difference, there is no one-to-one correlation between the PLT codes and the ACS codes.
- All active knowledge test questions for the private pilot airplane and the instrument-airplane rating knowledge tests have been aligned with the corresponding ACS.
- As this slide shows, that means that you can look up the PLT code(s) on the Airman Knowledge Test Report, and use the subject area to do two things:
    - Narrow the scope of material for retraining and retesting.
    - Learn, train, and test that material in the context of the appropriate Areas of Operation and Tasks.

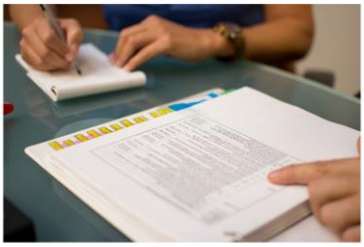
How do I use the ACS?

Applicants will use ACS to:

- Clearly understand what they must:
  - Know (knowledge)
  - Consider (risk management)
  - Do (skill)

  in order to qualify for any given airman certificate or rating.

- Develop an understanding of how knowledge, risk management, and skill elements work together for safe performance of each Task.



Airman Certification Standards
Summer 2016

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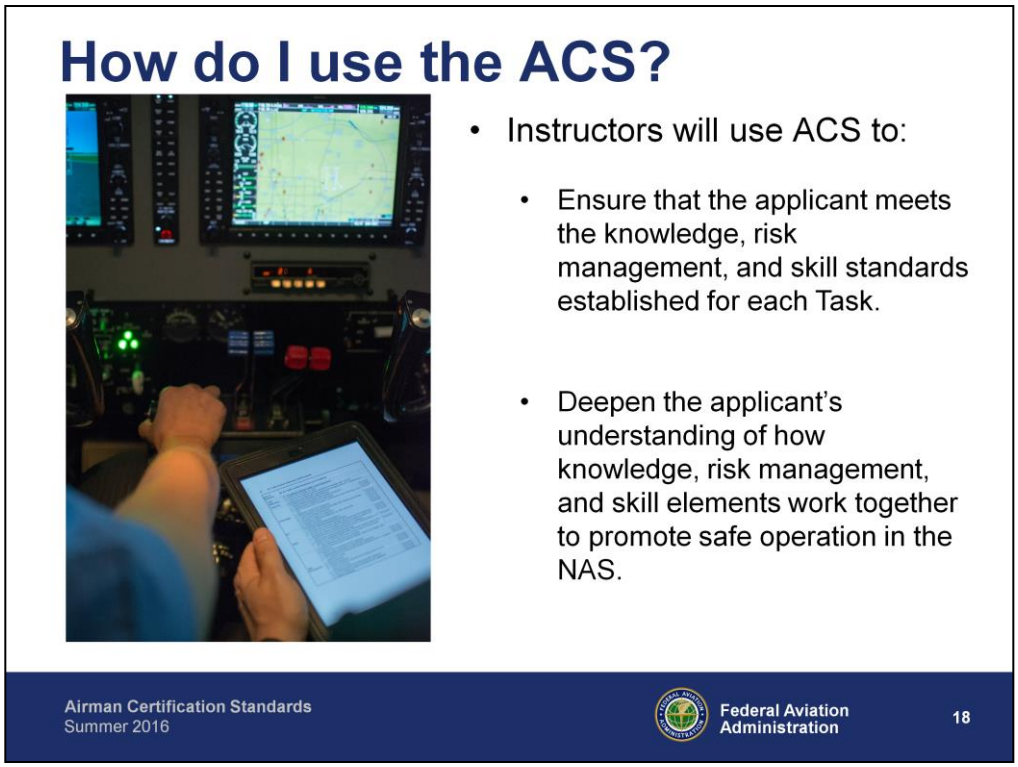
17

Applicants will use ACS to:

- Clearly understand what they are expected to:
  - Know (knowledge)
  - Consider (risk management)
  - Do (skill)

  to qualify for any given airman certificate or rating.

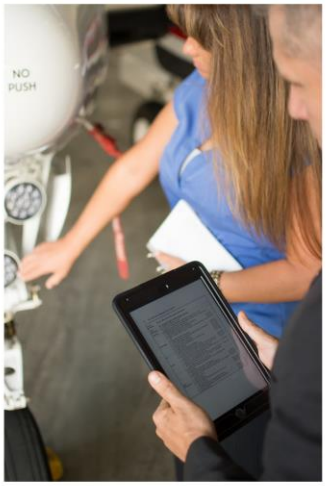
- Develop an understanding of how knowledge, risk management, and skill elements work together for safe performance of each Task.



Instructors will use ACS to:

- Ensure that the applicant meets the knowledge, risk management, and skill standards established for each Task.
- Deepen the applicant's understanding of how knowledge, risk management, and skill elements work together to promote safe operation in the NAS.

How do I use the ACS?

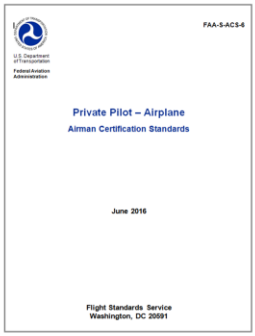


- Evaluators will use ACS to:
  - Improve the Plan of Action
  - Create better / more focused questions and scenarios for both phases of the practical test
  - Identify (via ACS codes) and focus more sharply on deficient knowledge and risk management areas during the oral assessment phase
  - Report (using ACS codes) any deficient areas on the practical test.

Evaluators will use ACS to:

- Develop the Plan of Action
- Create better / more focused questions and scenarios for both phases of the practical test
- Identify (via ACS codes) and focus more sharply on deficient knowledge and risk management areas during the oral assessment phase
- Report (using ACS codes) any deficient areas on the practical test.

What do I need to do now?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Washington, DC 20591

- Review the ACS carefully
- Read the FAQs
- Direct questions to ACS Focus Team
  - 9-AVS-ACS-Focus-Team@faa.gov

- To summarize: You will find a lot of familiar material in the ACS, but you will need to review it carefully from cover to cover to be sure you understand how to use it.
- To use it as it is intended to work, use the resources shown on the next slide to learn all you can right now. In addition:
  - Read the ACS from cover to cover, and read the online FAQs.
  - Become familiar with ACS coding.
  - Direct any questions to the ACS Focus Team, using the email address shown on the screen.

How can I get more information?

- **Airman Testing Web Page**
  - http://www.faa.gov/training_testing/testing/
  - http://www.faa.gov/training_testing/testing/acs/
- **FAASafety.gov – ALC-449**
  - www.faasafety.gov
- **ACS Focus Team**
  - 9-AVS-ACS-Focus-Team@FAA.gov

- The ACS team has developed a number of resources to help you get acquainted with the ACS. This slide shows links to the key areas.
- The Airman Testing web page includes:
  - The ACS for Private Pilot Airplane (PAR) certificate and Instrument-Airplane Rating (IRA)
  - ACS Frequently Asked Questions
  - An ACS Informational Brochure
  - An ACS PowerPoint presentation with notes
  - Sample PAR and IRA knowledge tests that show both PLT and ACS codes
  - A What's New in Airman Testing document that includes a list of subjects deleted from airman knowledge tests.
- The FAASafety.gov site now includes a WINGS credit course called "Understanding the ACS."
- As mentioned on the previous slide, the FAA has established the ACS Focus Team as the one-stop-shop for answering any questions not addressed on the Airman Testing web page. Please don't hesitate to contact the ACS Focus Team if you need help.
- Thanks for your attention, and we look forward to hearing your feedback on the Airman Certification Standards.