December 19, 2018

Ms. Lirio Liu
Director, Office of Rulemaking
Aviation Rulemaking Advisory Committee Designated Federal Official
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

RE: Airman Certification Working Group (ACSWG) Interim Recommendation Report

Dear Ms. Liu,

On December 13, 2018, the Aviation Rulemaking Advisory Committee (ARAC) voted to accept the Interim Recommendation Report filed by the Airman Certification System Working Group (ACSWG). This report covers the following areas: Instructor Airman Certification Standards and Aviation Maintenance Inspection Authorization.

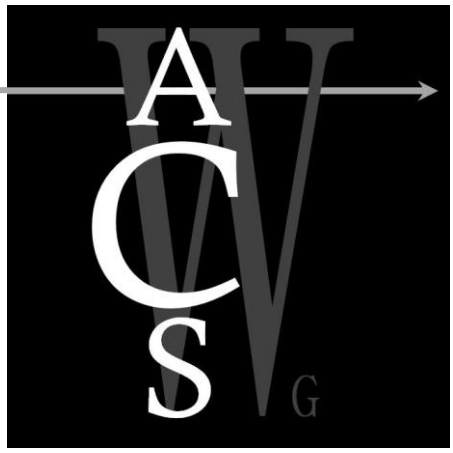
On behalf of the ARAC members, please accept the ACSWG Interim Recommendation Report. Please also forward it to the relevant program offices to be implemented as soon as possible.

Please do not hesitate to contact me with any questions. Thank you very much.

Sincerely yours,

Yvette A. Rose
ARAC Chair

cc: David Oord, ACSWG Chair and ARAC Vice Chair



Aviation Rulemaking Advisory Committee

Airman Certification System Working Group

Interim Recommendation Report

November 20, 2018

November 20, 2018

Yvette A. Rose
Chair, Aviation Rulemaking Advisory Committee
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Dear Ms. Rose,

On behalf of the Airman Certification System Working Group (ACSWG), we submit the following interim recommendation report to the Aviation Rulemaking Advisory Committee (ARAC) for consideration and implementation.

The FAA and the aviation industry have continued its collaborative effort to improve airman training and testing by establishing an integrated, holistic airman certification system that clearly aligns testing with the certification standards, guidance, and reference materials, and maintains that alignment.

As part of its ongoing effort, the ACSWG is submitting, for the committee's review, a revised Area of Operation on slow flight, stalls and spins for the Instructor Airman Certification Standard and a draft Inspection Authorization Testing Standard with consolidated feedback.

Collectively, we recommend and endorse the committee's transmittal of the working group recommendations to the FAA for further review, incorporation, and execution. We are confident that, by doing so, the safety of aviation will continue to markedly improve.

Sincerely,

David Oord
ARAC Vice-Chair & ACSWG Chair
Senior Director, Regulatory Affairs
Aircraft Owners and Pilots Association

Susan Parson
FAA Representative
Flight Standards Service
Federal Aviation Administration

Eric Crump
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Aviation Supplies & Academics, Inc.

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Instructor Airman Certification Standards

Revised Aero of Operation XI

Slow flight, Stalls, and Spins

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

The following Task refers to the description contained in the CAX ACS document as indicated:

*Referenced Task Knowledge, Risk Management, and Skill elements when noted will be preceded by an AIA for Instructor Airplane, **i.e. AIA.CA.VII.A.K2 = Use of slow flight in normal operations.**

Task	***Task A. Maneuvering During Slow Flight***
Foundational ACS	Refer to the Commercial Pilot ACS, Task VII, A., Maneuvering During Slow Flight
Reference	FAA-H-8083-3; FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant understands the elements associated with maneuvering during slow flight, and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
*	Maneuvering During Slow Flight as noted in the referenced Task.
AIA.XI.A.K2	Common errors related to maneuvering during slow flight encompassing:
AIA.XI.A.K2a	a. Failure to establish specified gear and flap configuration prior to entry
AIA.XI.A.K2b	b. Improper entry
AIA.XI.A.K2c	c. Improper pitch, heading, yaw, and bank control during straight-ahead flight
AIA.XI.A.K2d	d. Improper pitch, heading, yaw, and bank control during turning flight
AIA.XI.A.K2e	e. Rough and/or uncoordinated use of flight controls
AIA.XI.A.K2f	f. Failure to maintain coordinated flight
AIA.XI.A.K2g	g. Failure to establish and maintain the specified airspeed and altitude
AIA.XI.A.K2h	h. Unintentional stall
AIA.XI.A.K2i	i. Improper correction for left-turning tendencies
AIA.XI.A.K2j	j. Improper trim technique
AIA.XI.A.K2k	k. Inappropriate removal of hand from throttle(s)
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
*	Elements of maneuvering during slow flight as noted in the referenced *Task*.
AIA.XI.A.R2	Instructional risks associated with maneuvering during slow flight.
Skills	The applicant demonstrates the ability to:
*	Demonstrate and simultaneously explain maneuvering during slow flight as noted in the referenced *Task*.
AIA.XI.A.S2	Analyze and correct simulated common errors related to maneuvering during slow flight, to include those stipulated in K2a through K2k above.

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

Task	***Task B. Demonstration of Flight Characteristics at Various Configurations and Airspeeds***
Reference	FAA-H-8083-3; FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant understands the elements associated with flight characteristics and power required at different airspeeds and gear/flap configurations appropriate to the make and model of airplane flown, and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
AIA.XI.B.K1	Power required at various airspeeds between cruise airspeed and critically slow airspeeds near the critical angle of attack.
AIA.XI.B.K2	The minimum power required speed and its role in differentiating the region of normal command and the region of reversed command on the power required curve.
AIA.XI.B.K3	The relationships between lift, drag, angle of attack, airspeed, load factor, power required, weight, center of gravity, attitude, yaw effects, controllability, and stall and spins.
AIA.XI.B.K4	Pitch, power, and trim control inputs that are required to operate the airplane in level flight, turns, climbs, and descents and how the control inputs change at various airspeeds between cruise airspeed and critically slow airspeeds.
AIA.XI.B.K5	Flight characteristics and aerodynamics associated with configuration changes (flaps, gear, etc.) specific to the make and model of airplane flown.
AIA.XI.B.K6	Airspeeds specific to the airplane for various operations, how to identify them on the airspeed indicator (if applicable), and their significance in airplane performance, to include:
AIA.XI.B.K6a	a. Design/operating maneuvering speed
AIA.XI.B.K6b	b. Landing gear extended/operating speed
AIA.XI.B.K6c	c. Flaps extended/operating speed
AIA.XI.B.K6d	d. Best glide speed
AIA.XI.B.K6e	e. Reference landing speed
AIA.XI.B.K6f	f. Stalling speeds
AIA.XI.B.K7	Common errors related to flight at various configurations and airspeeds:
AIA.XI.B.K7a	a. Exceeding airplane operating limitations
AIA.XI.B.K7b	b. Improper pitch, heading, yaw, and bank control
AIA.XI.B.K7c	c. Rough and/or uncoordinated use of flight controls
AIA.XI.B.K7d	d. Failure to maintain coordinated flight
AIA.XI.B.K7e	e. Unintentional stall
AIA.XI.B.K7f	f. Improper correction for left-turning tendencies
AIA.XI.B.K7g	g. Improper trim technique

Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
AIA.XI.B.R1	Lack of familiarity with airplane airspeed limitations and interpretation of the airspeed indicator.
AIA.XI.B.R2	Exceeding airspeed limitations.
AIA.XI.B.R3	Failure to understand flight characteristics in the region of reversed command which could lead to loss of control.
AIA.XI.B.R4	Failure to understand the importance of the critical angle of attack.
AIA.XI.B.R5	Range, limitations, and operational characteristics of airspeed indicators and stall warning indicators (e.g., airplane buffet, stall horn, etc.).
AIA.XI.B.R6	Failure to verbally acknowledge stall warning indications.
AIA.XI.B.R7	Effect of environmental elements on airplane performance and controllability. (e.g., turbulence, microbursts, and high density altitude).
AIA.XI.B.R8	Collision hazards to include aircraft, terrain, obstacles, and wires.
AIA.XI.B.R9	Failure to present simulated instruction that demonstrates and emphasizes the hazards of improper airspeed indicator interpretation, ignoring stall warning indications, and maneuvering at critically slow airspeeds.
AIA.XI.B.R10	Instructional risks associated with flight at critically slow airspeed to include disorientation, loss of situational awareness, and/or improper task management.
Skills	The applicant demonstrates the ability to:
AIA.XI.B.S1	Throughout the maneuver the applicant must demonstrate the ability to fly the airplane and, when appropriate, maintain altitude ±100 feet, airspeed +5/-0 knots, heading ±10º, and specified bank angle ±5º, while simultaneously explaining the knowledge elements and risk management elements associated with the maneuver. ***Note:*** *The evaluator may select either or both the CLEAN or LANDING configuration(s) for the applicant to demonstrate.*
AIA.XI.B.S2	CLEAN configuration demonstration:
AIA.XI.B.S2a	a. Establish and maintain design/operating maneuvering speed appropriate to the airplane's weight while describing pitch, power, and trim inputs to maintain altitude and airspeed, then;
AIA.XI.B.S2b	b. With gear and flaps retracted (as applicable), slow the airplane to, and maintain, best glide speed (or as specified by evaluator), noting the power setting required, then;
AIA.XI.B.S2c	c. With gear and flaps retracted, continue to slow the airplane to, and maintain, an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power would result in an immediate stall, and maintain that airspeed in level flight, noting the airspeed and power setting required, while;
AIA.XI.B.S2d	d. Verbally acknowledging stall warning indications, then;
AIA.XI.B.S2e	e. Without changing power setting, lower the pitch attitude and accelerate to a faster airspeed until reestablishing the airplane in level flight, noting the new airspeed and amount of altitude lost, then;
AIA.XI.B.S2f	f. Return to normal cruise flight at the altitude and heading specified by the evaluator.
AIA.XI.B.S3	LANDING configuration demonstration
AIA.XI.B.S3a	a. Establish and maintain design/operating maneuvering speed appropriate to the airplane's weight while describing pitch, power, and trim inputs to maintain altitude and airspeed, then;
AIA.XI.B.S3b	b. Slow the airplane to, and maintain, the appropriate limiting airspeeds and

	fully extend the landing gear and flaps (as appropriate), then;
AIA.XI.B.S3c	c. With gear and flaps fully extended (as applicable), slow the airplane to, and maintain, reference landing speed (or as specified by the evaluator), noting the power setting required, then;
AIA.XI.B.S3d	d. With gear and flaps fully extended, continue to slow the airplane to, and maintain, an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power would result in an immediate stall, and maintain that airspeed in level flight, noting the airspeed and power setting required, while;
AIA.XI.B.S3e	e. Verbally acknowledging stall warning indications, then;
AIA.XI.B.S3f	f. Without changing power setting, lower the pitch attitude and accelerate to a faster airspeed until reestablishing the airplane in in level flight, noting the new airspeed and amount of altitude lost, then;
AIA.XI.B.S3g	g. Return to normal cruise flight at the altitude and heading specified by the evaluator.
AIA.XI.B.S4	Analyze and correct simulated common errors related to flight characteristics at various configurations and airspeeds, to include those stipulated in K7a through K7g above.

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

Task	***Task C. Power-Off Stalls***
Foundational ACS	Refer to the Private Pilot ACS, Task VII, B., and Commercial Pilot ACS, Task VII, B., Power-Off Stalls
Reference	FAA-H-8083-3; FAA-H-8083-9; FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant understands the elements of power-off stalls, and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
*	Power-Off Stalls as noted in the referenced Tasks
AIA.XI.C.K2	Common errors related to power-off stalls, encompassing:
AIA.XI.C.K2a	a. Failure to establish the specified landing gear and flap configuration prior to entry
AIA.XI.C.K2b	b. Improper entry
AIA.XI.C.K2c	c. Improper pitch, heading, yaw, and bank control during straight-ahead stalls
AIA.XI.C.K2d	d. Improper pitch, yaw, and bank control during turning stalls
AIA.XI.C.K2e	e. Rough and/or uncoordinated use of flight controls
AIA.XI.C.K2f	f. Failure to maintain coordinated flight
AIA.XI.C.K2g	g. Failure to recognize the first indications of a stall
AIA.XI.C.K2h	h. Failure to achieve a stall
AIA.XI.C.K2i	i. Poor stall recognition and delayed recovery
AIA.XI.C.K2j	j. Excessive altitude loss or excessive airspeed during recovery
AIA.XI.C.K2k	k. Secondary stall during recovery
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
*	Elements of Power-Off Stalls as noted in the referenced Tasks.
AIA.XI.C.R2	Instructional risks associated with power-off stalls.
Skills	The applicant demonstrates the ability to:
*	Demonstrate and simultaneously explain impending and full power-off stalls as noted in the referenced Tasks.
AIA.XI.C.S2	Analyze and correct simulated common errors related to power-off stalls, in descending flight (straight or turning), with selected landing gear and flap configurations, to include those stipulated in K2a through K2k above.

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

Task	***Task D. Power-On Stalls***
Foundational ACS	Refer to the Private Pilot ACS, Task VII, C., and Commercial Pilot ACS, Task VII, C., Power-On Stalls
Reference	FAA-H-8083-3; FAA-H-8083-9; FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant understands the elements of power-on stalls, and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
*	Power-On Stalls as noted in the referenced Tasks.
AIA.XI.D.K2	Common errors related to power-on stalls, encompassing:
AIA.XI.D.K2a	a. Failure to establish the specified landing gear and flap configuration prior to entry
AIA.XI.D.K2b	b. Improper entry
AIA.XI.D.K2c	c. Improper pitch, heading, yaw, and bank control during straight-ahead stalls
AIA.XI.D.K2d	d. Improper pitch, yaw, and bank control during turning stalls
AIA.XI.D.K2e	e. Rough and/or uncoordinated use of flight controls
AIA.XI.D.K2f	f. Failure to maintain coordinated flight
AIA.XI.D.K2g	g. Failure to recognize the first indications of a stall
AIA.XI.D.K2h	h. Failure to achieve a stall
AIA.XI.D.K2i	i. Poor stall recognition and delayed recovery
AIA.XI.D.K2k	j. Excessive altitude loss or excessive airspeed during recovery
AIA.XI.D.K2k	k. Secondary stall during recovery
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
*	Elements of Power-On Stalls as noted in the referenced Tasks.
AIA.XI.D.R2	Instructional risks associated with power-on stalls.
Skills	The applicant demonstrates the ability to:
*	Demonstrate and simultaneously explain impending and full power-on stalls as noted in the referenced Tasks.
AIA.XI.D.S2	Analyze and correct simulated common errors related to power-on stalls, in climbing flight (straight or turning), with selected landing gear and flap configurations, to include those stipulated in K2a through K2k above.

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

Task	***Task E. Accelerated Maneuver Stalls***
Reference	FAA-H-8083-3; FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant understands the elements of accelerated maneuver stalls and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
*	Accelerated Maneuver Stalls as noted in the referenced Tasks.
AIA.XI.E.K1	Aerodynamics of accelerated maneuver stalls.
AIA.XI.E.K2	Flight situations where accelerated maneuver stalls may occur.
AIA.XI.E.K3	Recognition of an accelerated maneuver stall.
AIA.XI.E.K4	Entry procedure and minimum entry altitude.
AIA.XI.E.K5	Recovery procedure.
AIA.XI.E.K6	Common errors related to accelerated maneuver stalls, encompassing:
AIA.XI.E.K6a	a. Failure to establish proper configuration prior to entry
AIA.XI.E.K6b	b. Improper or inadequate demonstration of the recognition and recovery from a accelerated maneuver stall
AIA.XI.E.K6c	c. Failure to present simulated student instruction that adequately emphasizes the hazards of poor procedures in recovering from an accelerated stall
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
*****	Elements of Accelerated Maneuver Stalls as noted in the referenced Tasks.
AIA.XI.E.R1	Failure to present simulated instruction that adequately demonstrates and emphasizes the hazards of an accelerated maneuver stall.
AIA.XI.E.R2	Instructional risks associated with an accelerated maneuver stall to include:
AIA.XI.E.R2a	a. Disorientation, loss of situational awareness, and/or improper task management
Skills	The applicant demonstrates the ability to:
*****	Demonstrate and simultaneously explain accelerated maneuver stalls as noted in the referenced Tasks.
AIA.XI.E.S1	Demonstrate and simultaneously explain accelerated maneuver stall.
AIA.XI.E.S2	Demonstrate and simultaneously explain proper stall recovery techniques promptly after an accelerated stall has occurred.
AIA.IX.E.S3	Analyze and correct simulated common errors related to accelerated maneuver stalls, to include those stipulated in K6a through K6c above.

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

Task	***Task F. Cross-Controlled Stalls***
Reference	FAA-H-8083-3; FAA-H-8083-9; FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant understands the elements of cross-controlled stalls, and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
AIA.XI.F.K1	Aerodynamics of cross-controlled stalls.
AIA.XI.F.K2	Flight situations where unintentional cross-controlled stalls may occur.
AIA.XI.F.K3	Recognition of cross-controlled stalls.
AIA.XI.F.K4	Entry procedure and minimum entry altitude.
AIA.XI.F.K5	Recovery procedure.
AIA.XI.F.K6	Common errors related to cross-controlled stalls, encompassing:
AIA.XI.F.K6a	a. Failure to establish selected configuration prior to entry
AIA.XI.F.K6b	b. Failure to establish a cross-controlled turn and stall condition that will adequately demonstrate the hazards of a cross-controlled stall
AIA.XI.F.K6c	c. Improper or inadequate demonstration of the recognition and recovery from a cross-controlled stall
AIA.XI.F.K6d	d. Failure to present simulated student instruction that emphasizes the hazards of a cross-controlled condition in a gliding or reduced airspeed condition
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
AIA.XI.F.R1	Failure to present simulated instruction that demonstrates and emphasizes the hazards of a cross-controlled stall.
AIA.XI.F.R2	Instructional risks associated with cross-controlled stalls to include.
AIA.XI.F.R2a	a. Disorientation, loss of situational awareness, and/or improper task management
Skills	The applicant demonstrates the ability to:
AIA.XI.F.S1	Demonstrate and simultaneously explain a cross-controlled stall in a specified configuration.
AIA.XI.F.S2	Demonstrate and simultaneously explain proper stall recovery techniques promptly after a cross-controlled stall has occurred.
AIA.XI.F.S3	Analyze and correct simulated common errors related to cross-controlled stalls, to include those stipulated in K6a through K6d above.

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

Task	***Task G. Elevator Trim Stalls***
Foundational ACS	FAA-H-8083-3; FAA-H-8083-9; POH/AFM
Objective	To determine that the applicant understand the elements of elevator trim stalls and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
AIA.XI.G.K1	Aerodynamics of elevator trim stalls.
AIA.XI.G.K2	Flight situations where elevator trim stalls could occur.
AIA.XI.G.K3	Recognition of elevator trim stalls.
AIA.XI.G.K4	Entry procedure and minimum entry altitude.
AIA.XI.G.K5	Recovery procedure.
AIA.XI.G.K6	Common errors related to elevator trim stalls, encompassing:
AIA.XI.G.K6a	a. Failure to present simulated student instruction that adequately emphasizes the hazards of poor correction for propeller and torque effects and up-elevator trim during go-around and other maneuvers
AIA.XI.G.K6b	b. Failure to establish selected configuration prior entry
AIA.XI.G.K6c	c. Improper or inadequate demonstration of the recognition of, and the recovery from an elevator trim stall
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
AIA.XI.G.R1	Failure to present simulated instruction that adequately emphasizes the hazards of an elevator trim stall.
AIA.XI.G.R2	Instructional risks associated with elevator trim stalls to include:
AIA.XI.G.R2a	a. Disorientation, loss of situational awareness, and /or improper task management
Skills	The applicant demonstrates the ability to:
AIA.XI.G.S1	Demonstrate and simultaneously explain elevator trim stalls in a specified configuration.
AIA.XI.G.S2	Demonstrate and simultaneously explain proper stall recovery techniques promptly after an elevator trim stall has occurred.
AIA.XI.G.S3	Analyze and correct simulated common errors related to elevator trim stalls, to include those stipulated in K6a through K6c above.

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

Task	***Task H. Secondary Stalls***
Reference	FAA-H-8083-3; FAA-H-8083-9; FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant understands the elements of secondary stalls, and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
AIA.XI.H.K1	Aerodynamics of secondary stalls.
AIA.XI.H.K2	Flight situations where secondary stalls may occur.
AIA.XI.H.K3	Recognition of a secondary stall.
AIA.XI.H.K4	Entry procedure and minimum entry altitude.
AIA.XI.H.K5	Recovery procedure.
AIA.XI.H.K6	Common errors related to secondary stalls, encompassing:
AIA.XI.H.K6a	a. Failure to establish selected configuration prior to entry
AIA.XI.H.K6b	b. Improper or inadequate demonstration of the recognition of and recovery from a secondary stall
AIA.XI.H.K6c	c. Failure to present simulated student instruction that adequately emphasizes the hazards of poor procedure in recovering from a primary stall
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
AIA.XI.H.R1	Failure to present simulated instruction that adequately demonstrates and emphasizes the hazards of a secondary stall.
AIA.XI.H.R2	Instructional risks associated with a secondary stall to include:
AIA.XI.H.R2a	a. Disorientation, loss of situational awareness, and/or improper task management
Skills	The applicant demonstrates the ability to:
AIA.XI.H.S1	Demonstrate and simultaneously explain secondary stalls in a specified configuration.
AIA.XI.H.S2	Demonstrate and simultaneously explain proper stall recovery techniques after a secondary stall has occurred.
AIA.XI.H.S3	Analyze and correct simulated common errors related to secondary stalls, to include those stipulated in K6a through K6c above.

Note: The evaluator must select Task A or B, and Task C, D, or E, and Task F, G or H, and Task I from Area of Operation XI, Slow Flight, Stalls, and Spins.

Task	***Task I. Spin Awareness and Spins***
Foundational ACS	Refer to the Commercial Pilot ACS, Task VII E., Spin Awareness
Reference	FAA-H-8083-3; FAA-H-8083-25; POH/AFM
Objective	To determine that the applicant understands the elements of spins, and demonstrates the ability to apply that knowledge in delivering ground and/or flight instruction. **NOTE**: At the discretion of the evaluator, a logbook record attesting applicant instructional competency in spin entries, spins, and spin recoveries may be accepted in lieu of this Task. The flight instructor who conducted the spin instruction must certify the logbook record.
Knowledge	The applicant demonstrates instructional knowledge by describing and explaining:
*	Spin awareness as noted in the referenced Task.
AIA.XI.I.K2	Anxiety factors associated with spin instruction.
AIA.XI.I.K4	Airplanes approved for the spin maneuver based on airworthiness category and type certificate.
AIA.XI.I.K5	Flight situations where unintentional spins may occur.
AIA.XI.I.K6	Entry procedure and minimum entry altitude for intentional spins.
AIA.XI.I.K7	Control procedure to maintain a stabilized spin.
AIA.XI.I.K8	Orientation during a spin, to include which instrument(s) are reliable for determining the direction of spin
AIA.XI.I.K9	Recovery procedure and minimum recovery altitude for intentional spins.
AIA.XI.I.K10	Common errors related to performing spins, encompassing:
AIA.XI.I.K10a	a. Failure to establish proper configuration prior to spin entry
AIA.XI.I.K10b	b. Failure to achieve and maintain a full stall during spin entry
AIA.XI.I.K10c	c. Failure to close throttle when a spin entry is achieved
AIA.XI.I.K10d	d. Failure to recognize the indications of an imminent, unintentional spin
AIA.XI.I.K10e	e. Improper use of flight controls during spin entry, rotation, or recovery
AIA.XI.I.K10f	f. Disorientation during a spin
AIA.XI.I.K10g	g. Failure to distinguish between a spiral dive and a spin
AIA.XI.I.K10h	h. Excessive speed or accelerated stall during recovery
Risk Management	The applicant demonstrates the ability to teach and manage the risks arising from:
AIA.XI.I.R1	Failure to provide adequate instruction on spin awareness as noted in the referenced Task.
AIA.XI.I.R2	Instructional risks associated with performing spins.
Skills	The applicant demonstrates the ability to:
AIA.XI.I.S1	Explain spin awareness as noted in the referenced task.
AIA.XI.I.S2	Demonstrate and simultaneously explain proper intentional spin entry and recovery procedures, if requested by the evaluator.
AIA.XI.I.S3	Analyze and correct simulated common errors related to spins, to include those stipulated in K10a through K10h above.

Aviation Maintenance Inspection Authorization

Testing Standards

FAA-S-TS-1

FAA-S-TS-1
DRAFT: 10/26/18

U.S. Department
of Transportation

**Federal Aviation
Administration**

Aviation Maintenance
Inspection Authorization
Testing Standards

Effective Date: TBD

**Flight Standards Service
Washington, DC 20591**

Acknowledgments

The U.S. Department of Transportation, Federal Aviation Administration (FAA), Office of Safety Standards, Regulatory Support Division, Airman Testing Branch, P.O. Box 25082, Oklahoma City, OK 73125 developed this Inspection Authorization (IA) Testing Standards (TS) document with the assistance of the aviation community. The FAA gratefully acknowledges the valuable support from the many individuals and organizations who contributed their time and expertise to assist in this endeavor.

Availability

This TS document is available for download from www.faa.gov. Please email to afs630comments@faa.gov.

Foreword

The FAA has published the Aviation Maintenance Technician Inspection Authorization (IA) Testing Standard (TS) document to communicate the aeronautical knowledge and risk management standards for the IA knowledge test for obtaining the authority to exercise the privileges of Title 14 of the Code of Federal Regulations (14 CFR) part 65, section 65.95. This TS incorporates and supersedes the Inspection Authorization Knowledge Test Guide, FAA-G-8082-11C.

The FAA views the TS as the foundation of its transition to a more integrated and systematic approach to testing for an IA. The TS is part of the safety management system (SMS) framework that the FAA uses to mitigate risks associated with training and testing. Specifically, the TS, associated guidance, and test item bank question components are constructed around the four functional components of an SMS:

- Safety Policy that defines and describes aeronautical knowledge, maintenance proficiency, and risk management as integrated components of the IA testing system;
- Safety Risk Management processes through which internal and external stakeholders identify and evaluate regulatory changes, safety recommendations, or other factors that require modification of testing and training materials;
- Safety Assurance processes to ensure the prompt and appropriate incorporation of changes arising from new regulations and safety recommendations; and
- Safety Promotion in the form of ongoing engagement with both external stakeholders (e.g., the aviation training industry) and FAA policy divisions.

In this connection, the FAA gratefully acknowledges and deeply appreciates the many hours that aviation-training experts throughout the industry have contributed to the development of this TS, along with the associated guidance and a more systematic approach to knowledge test question development. This kind of collaboration, a hallmark of a robust safety culture, strengthens and enhances aviation safety at every level of the IA testing system.

Rick Domingo
Executive Director, Flight Standards Service

Revision History

Document #	Description	Revision Date
FAA-G-8082-11C	Inspection Authorization Knowledge Test Guide	July 2010
FAA-S-TS-1	Aviation Maintenance Inspection Authorization Testing Standards	October 2018

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Introduction

Inspection Authorization Testing Standard Concept

The goal of the testing process is to ensure the applicant possesses the knowledge and skill, as well as the ability to manage the risks associated with aircraft maintenance in order to act as an Aviation Maintenance Technician, with Airframe and Powerplant Ratings, with an Inspection Authorization (IA), consistent with the privileges of the rating and/or authorization being exercised. In fulfilling its responsibilities for the IA process, the Federal Aviation Administration (FAA) Flight Standards Service (AFS) plans, develops, and maintains materials related to aircraft maintenance and IA training and testing.

Historically, these materials have included several components. The FAA knowledge test measures a fundamental understanding of the aeronautical knowledge areas listed in Title 14 of the Code of Federal Regulations (14 CFR) part 65. The IA Testing Standard (TS) defines the acceptable parameters of maintenance proficiency in the Areas of Maintenance listed in 14 CFR part 65. FAA handbooks (FAA-H-8083 series), computer testing supplements (FAA-CT-8080 series), and other materials provide guidance to applicants on aeronautical knowledge, maintenance proficiency, and risk management.

The FAA recognizes that safe operations in today's complex National Airspace System (NAS) require a more systematic integration of aeronautical knowledge, maintenance proficiency standards, and risk management. The FAA further recognizes the need to more clearly calibrate knowledge and risk management according to the level of the authorization. To that end, the FAA drew upon the expertise of organizations and individuals across the aviation and training community to develop this IA TS.

Based on aeronautical knowledge and maintenance proficiency standards specified in 14 CFR part 65, the TS integrates the knowledge and risk management abilities necessary for the safe conduct of each Subject. In keeping with this integrated and systematic approach, the knowledge and risk management sections of each Subject stipulate that the applicant must demonstrate understanding of each specific item. The applicant demonstrates this understanding by passing the knowledge exam.

Throughout this process, the FAA expects the knowledge exam to assess the applicant's mastery of the topic in accordance with the level of learning (i.e., rote, understanding, application, or correlation) most appropriate for the specified Subject and authorization being sought.

This TS is a variety of knowledge and risk elements or subjects contained in each subject area which is prescribed in 14 CFR part 65, section 65.95.

Compliance with these procedures makes certain that applicants meet a satisfactory level of competency required for authorization. Every applicant is required to demonstrate a minimum satisfactorily competency level, regardless of their education background.

The Inspection Authorization Knowledge Test is comprehensive, as it must test your knowledge in many subject areas. When applying for an IA you should review 14 CFR part 65, section 65.91(c)(5), for the knowledge areas on the test. Applicants must pass a written test on the ability to inspect according to safety standards for returning aircraft to service after major repairs and major alterations and annual and progressive inspection performed under 14 CFR part 43 of this chapter.

Applicants should find these standards helpful during training and preparing for the IA knowledge test, which is required under 14 CFR part 65, section 65.91.

Using the IA TS

The Inspection Authorization Knowledge Test is comprehensive, as it must test your knowledge in many subject areas. When applying for an IA you should review 14 CFR part 65, section 65.91(c)(5), for the knowledge areas on the test.

Definitions within:

- **Knowledge** – elements are indicated by use of the words *"Exhibits knowledge in...."*
- **Risk** – elements are indicated by the use of the words “Determine, Identify, Creates…”

This TS consists of ***Knowledge and Risk subject elements,*** arranged in a logical sequence, that are significant as they measure the applicant's ability to logically think and objectively apply the knowledge that enables them to carry out aircraft maintenance inspections in a professional and safe manner. Each Area of Knowledge includes ***Subjects*** appropriate to that Area of Inspections. Each Subject begins with an ***Objective*** listing the important knowledge elements for what the applicant should know that will be utilized when administering aviation mechanic inspection authorization tests. The TS then lists the aeronautical knowledge and risk management elements relevant to the specific Subject, along with the conditions and standards for acceptable performance. The TS uses ***Notes*** to emphasize special considerations. The TS uses the terms "will" and "must" to convey directive (mandatory) information. The terms "should" and "may" denote items that are recommended, but not required.

TS Coding

Each Subject in the TS is coded according to a scheme that includes four elements. For example:

IAR.I.A.K1:

IAR = IA TS
I = Area of Inspection (Inspection Authorization)
A = Subject (Inspections – 14 CFR part 91 C, part 125 D, part 135, and part 43)
K2 = Knowledge Subject element 1 Aircraft inspection programs (e.g., progressive, annual, and other FAA-approved inspections.)

Knowledge test questions are mapped to the IA TS codes, which replace the previous system of "Learning Statement Codes." Because the Airman Knowledge Test Report (AKTR) will list an IA TS code that correlates to a specific Subject Element for a given Area of Inspection, remedial instruction and re-testing will be specific, targeted, and based on specified learning criteria.

The applicant must pass the knowledge test before being approved for IA.

The FAA encourages applicants and instructors to use the IA TS to measure progress during training, and as a reference to ensure the applicant is adequately prepared for the knowledge test. The FAA will revise the IA TS as circumstances require.

I. Inspection Authorization

Subject	***A. Inspections***
References	FAA-H-8083-31; AC 43.13-1B; Type Certificate Data Sheets and Specifications
Objective	To determine the applicant exhibits satisfactory knowledge and risk management associated with obtaining, understanding, and performing aircraft inspections.
Knowledge	The applicant demonstrates understanding of:
IAR.I.A.K1	Nondestructive Testing (NDT) procedures and methods.
IAR.I.A.K2	Aircraft inspection programs (e.g., progressive, annual, and other FAA-approved inspections).
IAR.I.A.K3	Applicability of an Airworthiness Directive (AD).
IAR.I.A.K4	Substituting fasteners with other than what was originally used.
IAR.I.A.K5	Principles of sheet metal bending.
IAR.I.A.K6	Aircraft with discrepancies or unairworthy conditions.
IAR.I.A.K7	Content, form, and disposition of alteration records.
IAR.I.A.K8	Maintenance record entry for approval for return to service after inspection.
IAR.I.A.K9	Function and installation requirements for equipment installed on aircraft.
IAR.I.A.K10	Operation limitations, such as aircraft speeds, powerplant, and instrument markings.
IAR.I.A.K11	Aircraft operating with an Minimum Equipment List (MEL).
IAR.I.A.K12	Malfunction or Defect Reports.
IAR.I.A.K13	Incomplete inspection.
IAR.I.A.K14	Special flight permits.
IAR.I.A.K15	Scope and detail.
IAR.I.A.K16	Discrepancy list.
Risk Management	The applicant exhibits the necessary knowledge to identify, assess, and mitigate risks encompassing:
IAR.I.A.R1	Understanding the safety hazards associated with human fatigue and strive to eliminate fatigue contributors in all maintenance activities.
IAR.I.A.R2	Carefully following manufacturers' instructions to ensure that the work is completed as specified.
IAR.I.A.R3	Carefully inspecting the safety and security of critical items that have received maintenance.
IAR.I.A.R4	Hazards resulting from incomplete or inaccurate documentation.

I. Inspection Authorization

Subject	***B. Major Repairs and Major Alterations***
References	14 CFR parts 23 and 27; FAA-H-8083-30, FAA-H-8083-31, FAA-H-8083-32; AC 43-13.1B
Objective	To determine the applicant exhibits satisfactory knowledge and risk management associated with obtaining, understanding, and performing the inspection requirements for major repairs and alterations performed by the Airframe and Powerplant (A&P) Mechanics.
Knowledge	The applicant demonstrates understanding of:
IAR.I.B.K1	Whether a given repair or alteration is major or minor.
IAR.I.B.K2	Ensuring adherence to manufacturer's structural repair manual during inspections of fasteners.
IAR.I.B.K3	Ensuring adherence to Advisory Circulars (AC) during inspection of fasteners.
IAR.I.B.K4	Recording.
IAR.I.B.K5	Airframe major repairs using approved data.
IAR.I.B.K5a	a. Type Certificate Data Sheets (TCDS).
IAR.I.B.K5b	b. Organization Designation Authorization (ODA).
IAR.I.B.K5c	c. Technical Standard Order (TSO).
IAR.I.B.K5d	d. Parts Manufacturer Approval (PMA).
IAR.I.B.K5e	e. FAA-approved Supplemental Type Certificate (STC).
IAR.I.B.K5f	f. Manufactures manuals or instructions.
IAR.I.B.K5g	g. Airworthiness Directive (AD).
IAR.I.B.K5h	h. FAA Form 337 Major Repair and Alteration.
IAR.I.B.K5i	i. FAA-approved Structural Repair Manual (SRM).
IAR.I.B.K5j	j. Designated Engineering Representative (DER).
IAR.I.B.K6	The purpose and use of FAA Forms (e.g., FAA Forms 337, 8010-4, 8100-2, 8130-3).
IAR.I.B.K7	Calculating sheet metal repairs.
IAR.I.B.K8	Operation and inspection after major alterations.
Risk Management	The applicant exhibits the necessary knowledge to identify, assess, and mitigate risks encompassing:
IAR.I.B.R1	Hazards from using unapproved data for repair.
IAR.I.B.R2	Hazards of failure to correctly identify AD applicability.

I. Inspection Authorization

Subject	***C. Regulations and Publications***
References	14 CFR parts 23, 27, 39, 43, 45, 65, and 91; FAA-H-8083-30
Objective	To determine the applicant exhibits satisfactory knowledge, risk management associated with obtaining, understanding, and performing the inspection requirements for the use of maintenance forms, records, and publications in accordance with applicable FAA regulations.
Knowledge	The applicant demonstrates understanding of:
IAR.I.C.K1	General definitions.
IAR.I.C.K2	Special retroactive safety requirements for seating and harnesses.
IAR.I.C.K3	Airplane categories; e.g. normal, utility, acrobatic and commuter.
IAR.I.C.K4	Type Certificate Data Sheets (TCDS) and specifications to include the type of information found on them.
IAR.I.C.K4a	a. Major groups
IAR.I.C.K4b	b. Code entries
IAR.I.C.K4c	c. Airworthiness standards for TCDS on normal category rotorcraft
IAR.I.C.K5	Rotorcraft flight manual and approved manual material.
IAR.I.C.K6	Airworthiness Directives (AD) to include the type of information found in them.
IAR.I.C.K7	The requirements for identification and registration markings on aircraft, engines and accessories including antique aircraft location of marks on fixed-wing and non-fixed-wing aircraft.
IAR.I.C.K8	Eligibility and application requirements for Inspection Authorization.
IAR.I.C.K9	Duration and renewal of Inspection Authorization.
IAR.I.C.K10	Privileges and limitation of Inspection Authorization.
Risk Management	The applicant exhibits the necessary knowledge to identify, assess, and mitigate risks encompassing:
IAR.I.C.R1	Hazards resulting from incomplete or inaccurate documentation.

I. Inspection Authorization

Subject	***D. Weight and Balance***
References	14 CFR parts 21 and 23; FAA-H-8083-1
Objective	To determine the applicant exhibits satisfactory knowledge, risk management associated with obtaining, understanding, and performing the inspection requirements associated with the weight and balance of aircraft in accordance with applicable FAA regulations.
Knowledge	The applicant demonstrates understanding of:
IAR.I.D.K1	Proof of compliance.
IAR.I.D.K2	Load distribution limits, such as ranges of weights and center of gravity (CG), for safe operation.
IAR.I.D.K3	Weight limits, both maximum and minimum.
IAR.I.D.K4	Empty weight and corresponding CG.
IAR.I.D.K5	Adverse loading considerations and how to calculate if adverse loading will cause an out of limit condition.
IAR.I.D.K6	Revise an aircraft equipment list after equipment change.
IAR.I.D.K7	Determine an aircraft's CG range using aircraft specifications, Type Certificate Data Sheets (TCDSs), and aircraft listings.
Risk Management	The applicant exhibits the necessary knowledge to identify, assess, and mitigate risks encompassing:
IAR.I.D.R1	Adverse aerodynamic effect of CG that is forward or aft of CG limits.
IAR.I.D.R2	Adverse aerodynamic and performance effects of weight in excess of limits.
IAR.I.D.R3	Weighing an aircraft without following recommended procedures.

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Appendix 1: Knowledge Test Eligibility, Prerequisites, and Testing Centers

Knowledge Test Description

Federal Aviation Administration (FAA) airman knowledge tests are effective instruments for aviation safety and regulation measurement. However, these tests can only sample the vast amount of knowledge every aviation maintenance technician needs.

The knowledge test consists of objective, multiple-choice questions. There is a single correct response for each test question. Each test question is independent of other questions. A correct response to one question does not depend upon, or influence, the correct response to another.

Knowledge Test Table

Test Code	Test Name	Number of Questions	Minimum Age	Allotted Time	Passing Score
IAR	Inspection Authorization	50	21*	3.0	70

*Refer to 14 CFR part 65, section 65.91.

The IA Knowledge Test is comprehensive, as it must test your knowledge in many subject areas. When applying for an IA you should review 14 CFR part 65, section 65.91(c)(5).

IAR Topic Weighting		Percentage of Test Questions
A.	Inspection	35 - 50%
B.	Major Repairs and Major Alterations	15 - 35%
C.	Regulations and Publications	5 - 15%
D.	Weight and Balance	5 - 15%

English Language Proficiency

In accordance with the requirements of 14 CFR part 65, section 65.71 and the FAA Aviation English Language Proficiency standard, throughout the application and testing process the applicant must demonstrate the ability to read, write, speak, and understand the English language. English language proficiency is required to ensure clear and effective aircraft maintenance communication and coordination. Normal restatement of questions as would be done for a native English speaker is permitted, and does not constitute grounds for disqualification.

Knowledge Test Requirements

Eligibility is established at the local FAA Flight Standards District Office (FSDO) or International Field Office (IFO) prior to taking the Inspection Authorization Knowledge Test.

You are eligible for the Inspection Authorization Knowledge Test if you meet the requirements of 14 CFR part 65, section 65.91(c).

Interview and Test Registration Process

The first step in taking the Inspection Authorization Knowledge Test is to contact your local Flight Standards District Office (FSDO) or International Flight Office (IFO) to make an appointment to interview with an Aviation Safety Inspector (ASI) (airworthiness) to determine eligibility before registering for the knowledge test. At the interview, the ASI will ask you to complete two copies of FAA Form 8610-1, Mechanic's Application for Inspection Authorization and provide proof of identity. An acceptable identification document includes a recent photograph, signature, and actual residential address, if different from the mailing address. This information may be presented in more than one form of identification.

Acceptable forms of identification include, but are not limited to, driver license, government identification card, passport, alien residency (green) card, and military identification card. Some applicants may not possess the

identification documentation described. In any case, you should always check with your local FSDO or IFO if you are unsure of the kind of identification to bring to the interview.

During the interview, you will be asked to demonstrate to the ASI's satisfaction that you meet the requirements for the authorization as specified in 14 CFR part 65, section 65.91(c)(1) through (4).

The ASI will interview to the extent necessary to determine that you clearly understand the inspection authorization privileges, limitations, and responsibilities. Once your qualifications have been demonstrated, the inspector will sign both of the Form 8610-1 you completed. You must present one copy of the form at the test site in order to take the test; the other copy will remain on file at the FSDO or IFO.

Retesting After Failure

If you receive a score lower than 70 percent, you may not apply for retesting until 90 days after the date that you failed the test. Any attempt to retest prior to the 90-day waiting period is contrary to 14 CFR part 65, and could result in revocation of any airman certificates, ratings, or authorization that you hold. Whether retesting after a failed examination or simply retesting for a better score, you will need to present your test report in order to retest.

Note: *If the applicant no longer possesses the original test report, he or she may request a duplicate replacement issued by the Airmen Testing Standards Branch.*

Knowledge Test Centers

The FAA authorizes hundreds of knowledge testing center locations that offer a full range of airman knowledge tests. For information on authorized testing centers and to register for the knowledge test, contact one of the providers listed at www.faa.gov.

Knowledge Test Registration

When you contact a knowledge testing center to register for a test, please be prepared to select a test date, choose a testing center, and make financial arrangements for test payment when you call.[1] You may register for test(s) several weeks in advance, and you may cancel in accordance with the testing center's cancellation policy.

[1] If you are in the military, or a Department of Defense civilian employee, check with the local military testing center to see if they are an authorized FAA testing center. It may be that there is no charge for FAA exams if taken at one of those authorized sites. You may also find a complete list of authorized military test sites at www.faa.gov.

Appendix 2: Knowledge Test Procedures and Tips

Before starting the actual test, the testing center will provide an opportunity to practice navigating through the test. This practice or tutorial session may include sample questions to familiarize the applicant with the look and feel of the software. (e.g., selecting an answer, marking a question for later review, monitoring time remaining for the test, and other features of the testing software.)

Acceptable Materials

The applicant may use the following aids, reference materials, and test materials, as long as the material does not include actual test questions or answers:

Acceptable Materials	Unacceptable Materials	Notes
Supplement book provided by proctor	Written materials that are handwritten, printed, or electronic	Testing centers may provide calculators and/or deny the use of personal calculators.
All models of aviation-oriented calculators or small electronic calculators that perform only arithmetic functions	Electronic calculators incorporating permanent or continuous type memory circuits without erasure capability.	Unit Member (proctor) may prohibit the use of your calculator if he or she is unable to determine the calculator's erasure capability
Calculators with simple programmable memories, which allow addition to, subtraction from, or retrieval of one number from the memory; or simple functions, such as square root and percentages	Magnetic Cards, magnetic tapes, modules, computer chips, or any other device upon which pre-written programs or information related to the test can be stored and retrieved	Printouts of data must be surrendered at the completion of the test if the calculator incorporates this design feature.
Scales, straightedges, protractors, plotters, navigation computers, blank log sheets, holding pattern entry aids, and electronic or mechanical calculators that are directly related to the test	Dictionaries	Before, and upon completion of the test, while in the presence of the Unit Member, actuate the ON/OFF switch or RESET button, and perform any other function that ensures erasure of any data stored in memory circuits
Manufacturer's permanently inscribed instructions on the front and back of such aids, e.g., formulas, conversions, regulations, signals, weather data, holding pattern diagrams, frequencies, weight and balance formulas, and air traffic control procedures	Any booklet or manual containing instructions related to use of test aids	Unit Member makes the final determination regarding aids, reference materials, and test materials

Test Tips

When taking a knowledge test, please keep the following points in mind:

- Carefully read the instructions provided with the test.
- Answer each question in accordance with the latest regulations and guidance publications.
- Read each question carefully before looking at the answer options. You should clearly understand the problem before trying to solve it.
- After formulating a response, determine which answer option corresponds with your answer. The answer you choose should completely solve the problem.

- Remember that only one answer is complete and correct. The other possible answers are either incomplete or erroneous.
- If a certain question is difficult for you, mark it for review and return to it after you have answered the less difficult questions. This procedure will enable you to use the available time to maximum advantage.
- When solving a Calculation problem, be sure to read all the associated notes.
- For questions involving use of a graph, you may request a printed copy that you can mark in computing your answer. This copy and all other notes and paperwork must be given to the testing center upon completion of the test.

Cheating or Other Unauthorized Conduct

To avoid test compromise, computer testing centers must follow strict security procedures established by the FAA and described in FAA Order 8080.6 (as amended), Conduct of Airman Knowledge Tests. The FAA has directed testing centers to terminate a test at any time a test unit member suspects that a cheating incident has occurred.

The FAA will investigate and, if the agency determines that cheating or unauthorized conduct has occurred, any airman certificate, rating, or authorization you hold may be revoked. You will also be prohibited from applying for or taking any test for a certificate, rating, or authorization, under 14 CFR part 65, for a period of 1 year.

Testing Procedures for Applicants Requesting Special Accommodations

An applicant with learning or reading disability may request approval from the FAA as described in FAA Order 8080.6 (as amended).

Airman Knowledge Testing Supplements

The testing supplements contain the graphics, legends, and maps that are needed to successfully respond to certain knowledge test items. These supplements will be provided by Computer Testing Designees (CTD) test center personnel during the airman knowledge test.

Airman Knowledge Sample Test Questions

Sample questions may be found on the Airman Knowledge Sample Test Questions page of the FAA website www.faa.gov. These sample questions represent the types of questions included in the actual test banks. Practicing these questions will help you become familiar with the types of questions found on the airman knowledge tests. The knowledge test is not designed to intimidate any prospective airman; it is designed to measure understanding of the rules and regulations required to receive an FAA authorization. The list of reference materials contained in this testing standard is provided to ensure that instructors and students are able to determine the importance of the subject matter to be taught and learned.

Training and Testing Publications and General Information

Most of the current Flight Standards Service airman training and testing publications can be obtained in electronic format from the FAA website, www.faa.gov. The training and testing publications and general information can be found on the opening page of that website under the Training and Testing tab. If a publication is not available in electronic format, there are instructions for obtaining paper copies. Publications and information available on the website include the following:

- Advisory Circulars
- Knowledge testing sites
- Knowledge test statistics
- Knowledge Testing Supplements
- Other testing information
- Reference Handbooks
- Code of Federal Regulations
- Airworthiness Directives
- Type Certificate Data Sheets

Suggestions for Studying for the IA Test

- Be familiar with the parts of 14 CFR, as listed in the Publications and Technical Data section.
- Study 14 CFR parts 91 and 135 aircraft maintenance and inspection requirements.
- Be familiar with aircraft Type Certificate Data Sheets (TCDS) and specifications. This should include the differences and history of these documents. Applicant should know how revisions are noted.
- Study 14 CFR part 43, appendixes A, B, and D, for detailed information regarding major repairs, major alterations, and annual inspections.
- Learn to use the graphs and tables in AC 43.13-1B, (or most current revision) Acceptable Methods, Techniques and Practices—Aircraft Inspection and Repair; and AC 43.13-2A, (or most current revision) Acceptable Methods, Techniques, and Practices—Aircraft Alterations.
- Be familiar with airworthiness directives for small aircraft and rotorcraft. This should include knowledge of 14 CFR part 39.10.
- Be familiar with the completion of FAA Form 337, Major Repair and Alteration— Airframe, Powerplant, Propeller, or Appliance. Guidance in this area is provided in AC 43.9-1F, Instructions for Completion of FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance).
- Know the requirements for maintenance and inspection record entries for 14 CFR parts 43 and 91. Guidance in this area is provided in AC 43.9C, Maintenance Records, and AC 39-7C, Airworthiness Directives (AD).
- Be familiar with Minimum Equipment Lists (MEL) for general aviation aircraft. Guidance in this area is provided in AC 91-67, Minimum Equipment Requirements for General Aviation Operations under 14 CFR part 91.
- Be familiar with all aspects of weight and balance computations. Applicant must be able to:
    - calculate basic empty weight and center of gravity (CG) in both inches and percent of mean aerodynamic chord (MAC).
    - conduct adverse loading checks for extreme forward and rearward CG positions. Applicants should practice making changes to an aircraft weight and balance report by simulating installation or removal of equipment and then computing the forward, aft, and empty-weight (CG). Guidance in this area is provided in FAA-H-8083-30, Aviation Maintenance Technician Handbook – General and FAA-H-8083-1, Weight and Balance Handbook.

Note: *You should use the most current versions of the referenced documents.*

Airworthiness Directives

Airworthiness Directives (ADs) are legally enforceable regulations issued by the FAA in accordance with 14 CFR part 39 to correct an unsafe condition in a product. Part 39 defines a product as an aircraft, engine, propeller, or appliance. Current ADs can be found at http://www.faa.gov/regulations_policies/airworthiness_directives/.

Advisory Circulars

The FAA issues advisory circulars (AC) to provide guidance and information in a designated subject area or to show a method acceptable to the Administrator for complying with a related 14 CFR part. Electronic versions (as revised) are available at http://www.faa.gov/regulations_policies/advisory_circulars/.

Appendix 3: Airman Knowledge Test Report

Upon completion of the knowledge test, you will receive your Airman Knowledge Test Report (AKTR) (with the testing center's embossed seal), which reflects your score. The test site retains the FAA Form 8610-1, Mechanic's Application for Inspection Authorization.

The AKTR lists the Airman Certification Standards (ACS) codes for questions answered incorrectly. The total number of ACS codes shown on the AKTR is not necessarily an indication of the total number of questions answered incorrectly.

After passing the test, present your AKTR an Aviation Safety Inspector (ASI) at the Flight Standards District Office (FSDO) or International Field Office (IFO) where you interviewed. It is best to return to the original interviewer if possible; however, any available airworthiness ASI can complete the authorization process. At that time, the ASI will again review your application and discuss any questions you have. When the ASI finds that all requirements are met, the FAA Form 8310-5, Inspection Authorization will be issued.

An AKTR expires 24 calendar months from the month the applicant completes the knowledge test. If the AKTR expires before meeting with an ASI for issuance or your IA endorsement, the applicant must retake the knowledge test.

To obtain a duplicate Airman Knowledge Test Report due to loss or destruction of the original, the applicant can send a signed request accompanied by a check or money order for $12.00, payable to the FAA to the following address:

Federal Aviation Administration
Airmen Certification Branch
P.O. Box 25082
Oklahoma City, OK 73125

To obtain a copy of the application form or a list of the information required, visit the FAA Airmen Certification Branch webpage at https://www.faa.gov/licenses_certificates/airmen_certification/test_results_replacement/.

Appendix 4: References

This Inspection Authorization (IA) Testing Standards (TS) document is based on the following Federal Regulations and FAA guidance documents:

Reference	Title
14 CFR part 21	Certification Procedures for Products and Parts
14 CFR part 23	Airworthiness Standards: Normal, Utility, Acrobatic, and Commuter Category Airplanes
14 CFR part 27	Airworthiness Standards: Normal Category Aircraft
14 CFR part 39	Airworthiness Directives
14 CFR part 43	Maintenance, Preventive Maintenance, Rebuilding, and Alteration
14 CFR part 65	Certification: Airmen Other Than Flight Crewmembers
14 CFR part 91	General Operating and Flight Rules
14 CFR part 125	Certification and Operations: Airplanes Having a Seating Capacity of 20 or More Passengers or a Maximum Payload Capacity of 6,000 Pounds or More
14 CFR part 135	Operating Requirements: Commute and On Demand Operations and Rules Governing Persons On Board such Aircraft
AC 43.13-1B	Acceptable Methods, Techniques and Practices A/C Inspection & Repair
FAA-H-8083-1	Aircraft Weight and Balance Handbook
FAA-H-8083-30	Aviation Maintenance Technician Handbook—General
FAA-H-8083-31	Aviation Maintenance Technician Handbook—Airframe
FAA-H-8083-32	Aviation Maintenance Technician Handbook-Powerplant
Other	Type Certificate Data Sheets and Specifications

Note: *Users should reference the current edition of the reference documents listed above. The current edition of all FAA publications can be found at www.faa.gov.*

Appendix 5: Abbreviations and Acronyms

The following abbreviations and acronyms are used in this Inspection Authorization (IA) Testing Standards(TS).

Abbreviation/ Acronym	Definition
14 CFR	Title 14 of the Code of Federal Regulations
A&P	Airframe and Powerplant
AC	Advisory Circular
AD	Airworthiness Directive
AFS	Flight Standards Service
IAR	Inspection Authorization
AMT	Aircraft Maintenance Technician
ASI	Aviation Safety Inspector
CFR	Code of Federal Regulations
CG	Center of gravity
FAA	Federal Aviation Administration
FSDO	Flight Standard District Office
IA	Inspection Authorization
ICAO	International Civil Aviation Organization
IFO	International Field Office
IFU	International Field Unit
MEL	Minimum Equipment List
NAS	National Airspace System
NDT	Nondestructive Testing
NTSB	National Transportation Safety Board
ODA	Organization Designation Authorization
PMA	Parts Manufacturer Approval
PTS	Practical Test Standards
RMP	Risk Management Process
SMS	Safety Management System
STC	Supplemental Type Certificate
TCDS	Type Certificate Date Sheet
TS	Testing Standards
TSO	Technical Standard Order

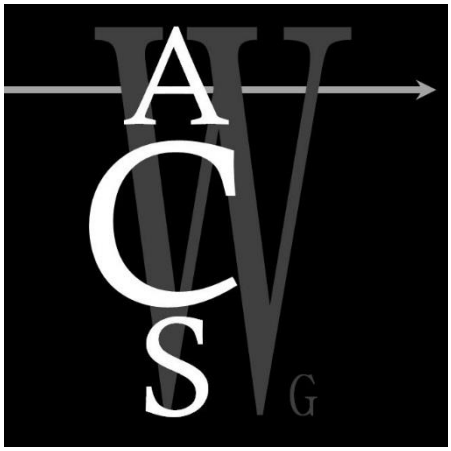
Aviation Maintenance Inspection Authorization Testing Standards

Consolidated Feedback

Comments to Draft Inspection Authorization (IA) Testing Standards (TS) FAA-S-TS-1

Page #	Location	Issue Type	Issue Description
1	Page v, Table of Contents Page 3, Subject A Page A-1, Appendix 1, IAR Topic Weighting Table		Suggest adding new Task (subject) to the effect of "IA Qualifications"; could include task elements covering Privileges and Limitations and Recurrent Training – both areas not currently covered on IA exam but probably should be. *(Alternately, these topics could be added to I.C. and add Part 65 to the list of References.)*
2	Pave v, Table of Contents	Typo	I.C. "Regulations" is spelled wrong.
3	Page 1, Introduction, 1st Paragraph, Last Sentence (and throughout document)	"Certification" and "Rating" vs. "Authorization"	Search and **replace "certification" and "rating" with "authorization"**.
4	Page 1, Introduction, 2nd Paragraph, Last Sentence	Language	Revise specific to IA environment.
5	Page 1, Introduction, 4th Paragraph, 1st Sentence (and throughout document)	Task vs. Subject	Inspection Authorization Testing Standard Concept: change "Task" to "Subject" (AMT ACS uses Section/Subject instead of Area of Operation/Task like the Ops side).
6	Page 1, Introduction Page 2 Page A-2	References	Search and replace/remove "8900.2" and "part 47" specific to IA – do not remove part 47, where applicable.
7	Page 3, "Inspections" Subject, Knowledge Elements	Misnumbering	Last four Inspections Knowledge Elements are misnumbered.
8	Page 4, "Major Repairs and Major Alterations" Subject, Risk Management Elements	Blank Elements	Remove blank IAR codes/rows pending the addition of more risk elements (was IAR.I.B.R2 and IAR.I.B.R3).

Page #	Location	Issue Type	Issue Description
9	Page A-1, Appendix 1, Knowledge Test Table	Age	Minimum age to take IAR knowledge exam is 21, per test matrix.
10	Page A-1, Appendix 1, IAR Topics Table	Math/Calculation Appears to be Incorrect	2nd table on page A-1, 'Percentage of Test Questions': with only 4 topics, the range will need to be 25-30% to result in 100% (unless the intent is for the 12-18 to be a quantity, rather than a percentage, in which case, the column heading would need to be renamed).
11	Page A-3, Appendix 2, "Knowledge Test Procedures and Tips"	Standardization of Appendix Content	Was the appendix information compared to current OPS ACs? It seems that the Appendices might have old information. (8/2/18 response from D.Byrne: Yes, this was drafted from other ACS documents and the IA test guide, and edited for content. Comments to exclude non-relevent information are welcome.)
12	Pages A-4 and A-5, Appendix 2, "Knowledge Test Procedures and Tips"	Irrelevant Subheadings/ Information	Starting with bold heading, "Advisory Circulars", through heading, "Airman Knowledge Testing Supplements": these appear to be definitions of terms and don't really fit here. Should they be removed or made a subheading of "Training and Testing Publications and General Information"?
13	Pages A-5 and A-6, Appendix 2, "Knowledge Test Procedures and Tips"	Irrelevant/ Replaced Information	Numbered suggestions: there are topics in this list which are not identified as task elements within the ACS itself. The list seems a little unnecessary, as the ACS "is" the suggested study list.
14	Page A-6, Appendix 2, "Knowledge Test Procedures and Tips"	Irrelevant/ Misplaced Information	"Summary of Airworthiness Directives": seems out of place or unnecessary for this document; could move this and earlier document definitions to 8082-19.
15	Page A-9, Appendix 4, "References"	Missing Reference	There is no reference to the AMP HB - is this intentional? Suggest adding 8083-32 to references list.
16	Page A-10, Appendix 5, "Abbreviations and Acronyms"	Non-applicable Information	Remove references to non-government books (ABS, JSGT, and JSPT).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