FAA-S-ACS-2

U.S. Department
of Transportation

**Federal Aviation
Administration**

Commercial Pilot for Powered-Lift Category Airman Certification Standards

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Flight Standards Service
Washington, DC 20591

Foreword

The U.S. Department of Transportation, Federal Aviation Administration (FAA), Office of Safety Standards, Regulatory Support Division, Airman Testing Standards Branch, has published the Commercial Pilot for Powered-Lift Category Airman Certification Standards (ACS) to communicate the aeronautical knowledge, risk management, and flight proficiency standards for commercial pilot certification in the powered-lift category.

This ACS is available for download, in PDF format, from www.faa.gov.

Comments regarding this ACS may be emailed to acsptsinquiries@faa.gov.

The FAA created FAA-G-ACS-2, Airman Certification Standards Companion Guide for Pilots, to provide guidance considered relevant and useful to the community. The number of appendices in the ACS was reduced and much of the non-regulatory material was moved to the Airman Certification Standards Companion Guide for Pilots. Applicants, instructors, and evaluators should consult this companion guide to familiarize themselves with ACS procedures. FAA-G-ACS-2 is available for download, in PDF format, from www.faa.gov.

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Introduction

Airman Certification Standards Concept

The goal of the airman certification process is to ensure the applicant possesses the knowledge, ability to manage risks, and skill consistent with the privileges of the certificate or rating being exercised, in order to act as pilot-in-command (PIC).

Safe operations in today's National Airspace System (NAS) require the integration of aeronautical knowledge, risk management, and flight proficiency standards. To accomplish these goals, the FAA drew upon the expertise of organizations and individuals across the aviation and training community to develop the ACS. The ACS integrates the elements of knowledge, risk management, and skill required for each airman certificate or rating. It thus forms a more comprehensive standard for what an applicant must know, consider, and do to demonstrate proficiency to pass the tests required for issuance of the applicable airman certificate or rating.

Use of the Term "Flight Manual"

Throughout this document, the term "flight manual" refers to the approved powered-lift aircraft flight manual.

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Area of Operation I. Preflight Preparation

Task A. Pilot Qualifications

References: 14 CFR parts 61, 68, 91, 119.1(e); AC 68-1; FAA-H-8083-2, FAA-H-8083-25

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with airman and medical certificates including privileges, limitations, currency, and operating as pilot-in-command as a commercial pilot.

Knowledge:	The applicant demonstrates understanding of:
CP.I.A.K1	Certification requirements, recent flight experience, and recordkeeping.
CP.I.A.K2	Privileges and limitations.
CP.I.A.K3	Medical certificates: class, expiration, privileges, temporary disqualifications.
CP.I.A.K4	Documents required to exercise commercial pilot privileges.
CP.I.A.K5	Part 68 BasicMed privileges and limitations.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.I.A.R1	Proficiency versus currency.
CP.I.A.R2	Flying unfamiliar aircraft or operating with unfamiliar flight display systems and avionics.
Skills:	The applicant exhibits the skill to:
CP.I.A.S1	Apply requirements to act as pilot-in-command (PIC) under Visual Flight Rules (VFR) in a scenario given by the evaluator.

Task B. Airworthiness Requirements

References: 14 CFR parts 21, 39, 43, 91; FAA-H-8083-2, FAA-H-8083-25

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with airworthiness requirements, including aircraft certificates.

Knowledge:	The applicant demonstrates understanding of:
CP.I.B.K1	General airworthiness requirements and compliance for aircraft, including:
CP.I.B.K1a	a. Location and expiration dates of required aircraft certificates
CP.I.B.K1b	b. Required inspections and aircraft logbook documentation
CP.I.B.K1c	c. Airworthiness Directives and Special Airworthiness Information Bulletins
CP.I.B.K1d	d. Purpose and procedure for obtaining a special flight permit
CP.I.B.K2	Pilot-performed preventive maintenance.
CP.I.B.K3	Equipment requirements for day and night VFR flight, including:
CP.I.B.K3a	a. Flying with inoperative equipment
CP.I.B.K3b	b. Using an approved Minimum Equipment List (MEL)

CP.I.B.K3c	c. Kinds of Operation Equipment List (KOEL)
CP.I.B.K3d	d. Required discrepancy records or placards
CP.I.B.K4	Standard and special airworthiness certificates and their associated operational limitations.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.I.B.R1	Inoperative equipment discovered prior to flight.

Skills:	The applicant exhibits the skill to:
CP.I.B.S1	Locate and describe aircraft airworthiness and registration information.
CP.I.B.S2	Determine the aircraft is airworthy in the scenario given by the evaluator.
CP.I.B.S3	Apply appropriate procedures for operating with inoperative equipment in the scenario given by the evaluator.

Task C. Weather Information

References: 14 CFR part 91; AC 91-92; AIM; FAA-H-8083-2, FAA-H-8083-25, FAA-H-8083-28

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with weather information for a flight under VFR.

Note: *If K2 is selected, the evaluator must assess the applicant's knowledge of at least three sub-elements.*

Note: *If K3 is selected, the evaluator must assess the applicant's knowledge of at least three sub-elements.*

Knowledge:	The applicant demonstrates understanding of:
CP.I.C.K1	Sources of weather data (e.g., National Weather Service, Flight Service) for flight planning purposes.
CP.I.C.K2	Acceptable weather products and resources required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight such as:
CP.I.C.K2a	a. Airport Observations (METAR and SPECI) and Pilot Observations (PIREP)
CP.I.C.K2b	b. Surface Analysis Chart, Ceiling and Visibility Chart (CVA)
CP.I.C.K2c	c. Terminal Aerodrome Forecasts (TAF)
CP.I.C.K2d	d. Graphical Forecasts for Aviation (GFA)
CP.I.C.K2e	e. Wind and Temperature Aloft Forecast (FB)
CP.I.C.K2f	f. Convective Outlook (AC)
CP.I.C.K2g	g. Inflight Aviation Weather Advisories including Airmen's Meteorological Information (AIRMET), Significant Meteorological Information (SIGMET), and Convective SIGMET
CP.I.C.K3	Meteorology applicable to the departure, en route, alternate, and destination under visual flight rules (VFR) in Visual Meteorological Conditions (VMC), including expected climate and hazardous conditions such as:
CP.I.C.K3a	a. Atmospheric composition and stability
CP.I.C.K3b	b. Wind (e.g., windshear, mountain wave, factors affecting wind, etc.)
CP.I.C.K3c	c. Temperature and heat exchange

CP.I.C.K3d	d. Moisture/precipitation
CP.I.C.K3e	e. Weather system formation, including air masses and fronts
CP.I.C.K3f	f. Clouds
CP.I.C.K3g	g. Turbulence
CP.I.C.K3h	h. Thunderstorms and microbursts
CP.I.C.K3i	i. Icing and freezing level information
CP.I.C.K3j	j. Fog/mist
CP.I.C.K3k	k. Frost
CP.I.C.K3l	l. Obstructions to visibility (e.g., smoke, haze, volcanic ash, etc.)
CP.I.C.K4	Flight deck instrument displays of digital weather and aeronautical information.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.I.C.R1	Making the go/no-go and continue/divert decisions, including:
CP.I.C.R1a	a. Circumstances that would make diversion prudent
CP.I.C.R1b	b. Personal weather minimums
CP.I.C.R1c	c. Hazardous weather conditions, including known or forecast icing or turbulence aloft
CP.I.C.R2	Use and limitations of:
CP.I.C.R2a	a. Installed onboard weather equipment
CP.I.C.R2b	b. Aviation weather reports and forecasts
CP.I.C.R2c	c. Inflight weather resources

Skills:	The applicant exhibits the skill to:
CP.I.C.S1	Use available aviation weather resources to obtain an adequate weather briefing.
CP.I.C.S2	Analyze the implications of at least three of the conditions listed in K3a through K3l, using actual weather or weather conditions provided by the evaluator.
CP.I.C.S3	Correlate weather information to make a go/no-go decision.

Task D. Cross-Country Flight Planning

References: 14 CFR part 91; AIM; Chart Supplements; FAA-H-8083-2, FAA-H-8083-25; NOTAMs; VFR Navigation Charts

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with cross-country flights and VFR flight planning.

Note: *Preparation, presentation, and explanation of a computer-generated flight plan is an acceptable option.*

Knowledge:	The applicant demonstrates understanding of:
CP.I.D.K1	Route planning, including consideration of different classes and special use airspace (SUA) and selection of appropriate and available navigation/communication systems and facilities.

CP.I.D.K1a	a. Use of an electronic flight bag (EFB), if used
CP.I.D.K2	Altitude selection accounting for terrain and obstacles, glide or autorotative distance of the aircraft, VFR cruising altitudes, and the effect of wind.
CP.I.D.K3	Calculating:
CP.I.D.K3a	a. Time, climb and descent rates, course, distance, heading, true airspeed, and groundspeed
CP.I.D.K3b	b. Estimated time of arrival, including conversion to universal coordinated time (UTC)
CP.I.D.K3c	c. Fuel requirements, including reserve
CP.I.D.K4	Elements of a VFR flight plan.
CP.I.D.K5	Procedures for filing, activating, and closing a VFR flight plan.
CP.I.D.K6	Inflight intercept procedures.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.I.D.R1	Pilot.
CP.I.D.R2	Aircraft.
CP.I.D.R3	Environment (e.g., weather, airports, airspace, terrain, obstacles, including wire strike hazards).
CP.I.D.R4	External pressures.
CP.I.D.R5	Limitations of air traffic control (ATC) services.
CP.I.D.R6	Fuel planning.
CP.I.D.R7	Use of an electronic flight bag (EFB), if used.

Skills:	The applicant exhibits the skill to:
CP.I.D.S1	Prepare, present, and explain a cross-country flight plan assigned by the evaluator, including a risk analysis based on real-time weather, to the first fuel stop.
CP.I.D.S2	Apply pertinent information from appropriate and current aeronautical charts, Chart Supplements; Notices to Air Missions (NOTAMs) relative to airport/heliport/helipad/landing area, runway and taxiway closures; and other flight publications.
CP.I.D.S3	Create a navigation log and prepare a VFR flight plan.
CP.I.D.S4	Recalculate fuel reserves based on a scenario provided by the evaluator.
CP.I.D.S5	Use an electronic flight bag (EFB), if applicable.

Task E. National Airspace System

References: 14 CFR parts 71, 91, 93; AIM; FAA-H-8083-2, FAA-H-8083-25; VFR Navigation Charts

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with National Airspace System (NAS) operations under VFR as a commercial pilot.

Knowledge:	The applicant demonstrates understanding of:
CP.I.E.K1	Airspace classes and associated requirements and limitations.

CP.I.E.K2	Chart symbols.
CP.I.E.K3	Special use airspace (SUA), special flight rules areas (SFRA), temporary flight restrictions (TFR), and other airspace areas.
CP.I.E.K4	Special visual flight rules (VFR) requirements.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.I.E.R1	Various classes and types of airspace.

Skills:	The applicant exhibits the skill to:
CP.I.E.S1	Identify and comply with the requirements for basic VFR weather minimums and flying in particular classes of airspace.
CP.I.E.S2	Correctly identify airspace and operate in accordance with associated communication and equipment requirements.
CP.I.E.S3	Identify the requirements for operating in SUA or within a TFR. Identify and comply with special air traffic rules (SATR) and SFRA operations, if applicable.

Task F. Performance and Limitations

References: FAA-H-8083-1, FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with operating an aircraft within the parameters of its performance capabilities and limitations.

Knowledge:	The applicant demonstrates understanding of:
CP.I.F.K1	Elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance.
CP.I.F.K2	Factors affecting performance, including:
CP.I.F.K2a	a. Atmospheric conditions
CP.I.F.K2b	b. Pilot technique
CP.I.F.K2c	c. Aircraft configuration
CP.I.F.K2d	d. Airport, heliport, helipad, or unprepared surface environment
CP.I.F.K2e	e. Loading [e.g., center of gravity (CG)]
CP.I.F.K2f	f. Weight and balance
CP.I.F.K3	Aerodynamics.
CP.I.F.K4	Height/Velocity (H/V) diagram according to the flight manual.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.I.F.R1	Use of performance charts, tables, and data.
CP.I.F.R2	Aircraft limitations.

CP.I.F.R3	Possible differences between calculated performance and actual performance.
CP.I.F.R4	Operations within “avoid areas” of the H/V diagram.
CP.I.F.R5	Other hazards specific to the powered-lift make and model.

Skills: The applicant exhibits the skill to:

CP.I.F.S1	Compute the weight and balance, correct out-of-center of gravity loading errors and determine if the weight and balance remains within limits during all phases of flight and aircraft configurations.
CP.I.F.S2	Use of the appropriate manufacturer’s approved performance charts, tables, and data.

Task G. Operation of Systems

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with safe operation of systems on the aircraft provided for the flight test.

Note: *If K1 is selected, the evaluator must assess the applicant's knowledge of at least three sub-elements.*

Knowledge: The applicant demonstrates understanding of:

CP.I.G.K1	Aircraft systems, including:
CP.I.G.K1a	a. Primary flight controls
CP.I.G.K1b	b. Secondary flight controls
CP.I.G.K1c	c. Powerplant(s) and means of producing thrust
CP.I.G.K1d	d. Landing gear
CP.I.G.K1e	e. Fuel, oil, and hydraulic
CP.I.G.K1f	f. Electrical
CP.I.G.K1g	g. Avionics
CP.I.G.K1h	h. Pitot-static, vacuum/pressure, and associated flight instruments
CP.I.G.K1i	i. Environmental
CP.I.G.K1j	j. Deicing and anti-icing
CP.I.G.K1k	k. Oxygen system
CP.I.G.K1l	l. Gearboxes, drive shafts, transmission systems, as applicable
CP.I.G.K1m	m. Battery(s) used for propulsion–charging, discharging, and condition, as applicable
CP.I.G.K2	Indications of and procedures for managing system abnormalities or failures.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.I.G.R1	Detection of system malfunctions or failures.
CP.I.G.R2	Management of a system failure.
CP.I.G.R3	Monitoring and management of automated systems.

Skills:	The applicant exhibits the skill to:
CP.I.G.S1	Operate at least three of the systems listed in K1a through K1m appropriately.
CP.I.G.S2	Complete the appropriate checklist(s).

Task H. Human Factors

References: AIM; FAA-H-8083-2, FAA-H-8083-25

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with personal health, flight physiology, and aeromedical and human factors related to safety of flight.

Knowledge:	The applicant demonstrates understanding of:
CP.I.H.K1	Symptoms, recognition, causes, effects, and corrective actions associated with aeromedical and physiological issues, including:
CP.I.H.K1a	a. Hypoxia
CP.I.H.K1b	b. Hyperventilation
CP.I.H.K1c	c. Middle ear and sinus problems
CP.I.H.K1d	d. Spatial disorientation
CP.I.H.K1e	e. Motion sickness
CP.I.H.K1f	f. Carbon monoxide poisoning
CP.I.H.K1g	g. Stress
CP.I.H.K1h	h. Fatigue
CP.I.H.K1i	i. Dehydration and nutrition
CP.I.H.K1j	j. Hypothermia
CP.I.H.K1k	k. Optical illusions
CP.I.H.K1l	l. Dissolved nitrogen in the bloodstream after scuba dives
CP.I.H.K2	Regulations regarding use of alcohol and drugs.
CP.I.H.K3	Effects of alcohol, drugs, and over-the-counter medications.
CP.I.H.K4	Aeronautical Decision-Making (ADM) to include using Crew Resource Management (CRM) or Single-Pilot Resource Management (SRM), as appropriate.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.I.H.R1	Aeromedical and physiological issues.
CP.I.H.R2	Hazardous attitudes.
CP.I.H.R3	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.I.H.R4	Confirmation and expectation bias.

Skills:	The applicant exhibits the skill to:

CP.I.H.S1	Associate the symptoms and effects for at least three of the conditions listed in K1a through K1l with the cause(s) and corrective action(s).
CP.I.H.S2	Perform self-assessment, including fitness for flight and personal minimums, for actual flight or a scenario given by the evaluator.

Task I. Night Operations

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with night preparation and flight.

Knowledge:	The applicant demonstrates understanding of:
CP.I.I.K1	Physiological aspects of vision related to night flying.
CP.I.I.K2	Required aircraft equipment and lighting for night operations.
CP.I.I.K3	Personal equipment essential for night flight.
CP.I.I.K4	Night orientation, navigation, chart reading techniques and methods for maintaining night vision effectiveness.
CP.I.I.K5	Visual illusions at night.
CP.I.I.K6	Lighting systems identifying airports/heliports/helipads/landing areas, runways, taxiways and obstructions, as well as pilot controlled lighting.
CP.I.I.K7	Interpretation of traffic position and direction based solely on position lights.
CP.I.I.K8	Night taxi operations.
CP.I.I.K9	Appropriate use of automation, if applicable.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.I.I.R1	Collision hazards.
CP.I.I.R2	Runway incursion.
CP.I.I.R3	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.I.I.R4	Effect of visual illusions and night adaptation during all phases of night flying.
CP.I.I.R5	Night currency versus proficiency.
CP.I.I.R6	Weather considerations specific to night operations.
CP.I.I.R7	Inoperative equipment.

Skills:	The applicant exhibits the skill to:
CP.I.I.S1	[Intentionally left blank].

Area of Operation II. Preflight Procedures

Task A. Preflight Assessment

References: FAA-H-8083-2, FAA-H-8083-25, FAA-H-8083-28; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with preparation for safe flight.

Knowledge:	The applicant demonstrates understanding of:
CP.II.A.K1	Pilot self-assessment.
CP.II.A.K2	Determining that the aircraft to be used is airworthy.
CP.II.A.K3	Aircraft preflight inspection, including:
CP.II.A.K3a	a. Which items should be inspected
CP.II.A.K3b	b. The reasons for checking each item
CP.II.A.K3c	c. How to detect possible defects
CP.II.A.K3d	d. The associated regulations
CP.II.A.K4	Environmental factors, including weather, terrain, route selection, and obstructions.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.II.A.R1	Pilot.
CP.II.A.R2	Aircraft.
CP.II.A.R3	Environment (e.g., weather, icing, airports/heliports/helipads/landing areas, airspace, terrain, obstacles).
CP.II.A.R4	External pressures.
CP.II.A.R5	Aviation security concerns.

Skills:	The applicant exhibits the skill to:
CP.II.A.S1	Inspect the aircraft with reference to an appropriate checklist.
CP.II.A.S2	Verify the aircraft is in condition for safe flight and conforms to its type design.
CP.II.A.S3	Perform self-assessment.
CP.II.A.S4	Continue to assess the environment for safe flight.

Task B. Flight Deck Management

References: 14 CFR part 91; AC 120-71; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with flight deck management practices.

Note: *See Appendix 2: Safety of Flight.*

Knowledge:	The applicant demonstrates understanding of:

CP.II.B.K1	Passenger briefing requirements, including operation and required use of safety restraint systems.
CP.II.B.K2	Use of appropriate checklists.
CP.II.B.K3	Requirements for current and appropriate navigation data.
CP.II.B.K4	Securing items and cargo.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.II.B.R1	Use of systems or equipment, including automation and portable electronic devices.
CP.II.B.R2	Inoperative equipment.
CP.II.B.R3	Passenger distractions.

Skills: The applicant exhibits the skill to:

CP.II.B.S1	Secure all items in the aircraft.
CP.II.B.S2	Conduct an appropriate passenger briefing, including identifying the pilot-in-command (PIC), use of safety belts, shoulder harnesses, doors, sterile aircraft, passenger conduct and avoidance of rotor or air induction systems, powerplants, and other heat sources, and emergency procedures.
CP.II.B.S3	Properly program and manage the aircraft's automation, as applicable.
CP.II.B.S4	Appropriately manage risks by utilizing ADM, including SRM/CRM.

Task C. Powerplant Starting

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with recommended powerplant starting procedures.

Knowledge: The applicant demonstrates understanding of:

CP.II.C.K1	Starting under various conditions.
CP.II.C.K2	Starting procedures, including the use of external power if applicable.
CP.II.C.K3	Limitations associated with starting.
CP.II.C.K4	Conditions leading to and procedures for an aborted start.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.II.C.R1	Use of external power unit.
CP.II.C.R2	Limitations during starting.
CP.II.C.R3	Other hazards specific to the powered-lift make and model.

Skills: The applicant exhibits the skill to:

CP.II.C.S1	Position the aircraft properly considering structures, other aircraft, wind, and the safety of nearby persons and property.

CP.II.C.S2	Complete the appropriate checklist(s).
CP.II.C.S3	Position the primary flight controls, including the thrust vector, for the prevailing environmental conditions.
CP.II.C.S4	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task D. Ground Taxiing

References: AC 91-73; AIM; Chart Supplements; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with ground taxi operations, in a wheel-type aircraft, including runway incursion avoidance.

Knowledge: The applicant demonstrates understanding of:

CP.II.D.K1	Current airport aeronautical references and information resources such as the Chart Supplement, airport diagram, and Notices to Air Missions (NOTAMs).
CP.II.D.K2	Taxi instructions/clearances.
CP.II.D.K3	Airport, heliport, helipad, or unprepared surface environment.
CP.II.D.K4	Visual indicators for wind.
CP.II.D.K5	Aircraft lighting, as appropriate.
CP.II.D.K6	Procedures for:
CP.II.D.K6a	a. Appropriate flight deck activities prior to taxi, including route planning and identifying the location of Hot Spots
CP.II.D.K6b	b. Aircraft configuration
CP.II.D.K6c	c. Radio communications at towered and non-towered airports/heliports/helipads/landing areas
CP.II.D.K6d	d. Entering or crossing runways
CP.II.D.K6e	e. Night taxi operations
CP.II.D.K6f	f. Taxi limitations

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.II.D.R1	Activities and distractions.
CP.II.D.R2	Confirmation or expectation bias as related to taxi instructions.
CP.II.D.R3	A taxi route or departure runway change.
CP.II.D.R4	Speed during taxi and turns.
CP.II.D.R5	Appropriate thrust vector and brake use.
CP.II.D.R6	Airframe and rotor clearances during taxi.
CP.II.D.R7	Runway incursion.
CP.II.D.R8	Other hazards specific to the powered-lift make and model.

Skills: The applicant exhibits the skill to:

CP.II.D.S1	Receive and correctly read back clearances/instructions, if applicable.
CP.II.D.S2	Use an appropriate airport/heliport diagram or taxi chart, if published.
CP.II.D.S3	Position the flight controls and configure the aircraft for the existing wind conditions.
CP.II.D.S4	Complete the appropriate checklist(s).
CP.II.D.S5	Maintain positive control of the aircraft during ground operations by controlling direction and speed without excessive use of brakes.
CP.II.D.S6	Comply with airport/heliport/helipad/landing area taxiway markings, signals, and air traffic control (ATC) clearances and instructions.
CP.II.D.S7	Position the aircraft relative to hold lines or a specified point.
CP.II.D.S8	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task E. Before Takeoff Check

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with before takeoff check.

Knowledge:	The applicant demonstrates understanding of:
CP.II.E.K1	Purpose of before takeoff checklist items, including:
CP.II.E.K1a	a. Reasons for checking each item
CP.II.E.K1b	b. Detecting malfunctions
CP.II.E.K1c	c. Configuring the aircraft as recommended by the manufacturer

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.II.E.R1	Division of attention while conducting before takeoff checks.
CP.II.E.R2	Unexpected runway changes.
CP.II.E.R3	Unexpected or unclear clearances from ATC.
CP.II.E.R4	Wake turbulence.
CP.II.E.R5	Downwash.
CP.II.E.R6	Potential powerplant failure during takeoff or other malfunction considering operational factors such as aircraft characteristics, runway/takeoff path length, surface conditions, environmental conditions, and obstructions.

Skills:	The applicant exhibits the skill to:
CP.II.E.S1	Review takeoff performance.
CP.II.E.S2	Select the appropriate takeoff profile for aircraft and environmental conditions.
CP.II.E.S3	Complete the appropriate checklist(s).
CP.II.E.S4	Properly position the aircraft considering other aircraft, vessels, and wind.

CP.II.E.S5 Divide attention inside and outside the aircraft.

CP.II.E.S6 Verify that powerplant parameters and aircraft configuration are suitable for the takeoff profile.

CP.II.E.S7 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Area of Operation III. Airport and Heliport Operations

Task A. Communications, Light Signals, and Runway Lighting Systems

References: 14 CFR part 91; AIM; FAA-H-8083-2, FAA-H-8083-25

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with normal and emergency radio communications, air traffic control (ATC) light signals, and runway lighting systems.

Knowledge:	The applicant demonstrates understanding of:
CP.III.A.K1	How to obtain appropriate radio frequencies.
CP.III.A.K2	Proper radio communication procedures and air traffic control (ATC) phraseology.
CP.III.A.K3	ATC light signal recognition.
CP.III.A.K4	Appropriate use of transponder(s).
CP.III.A.K5	Lost communication procedures.
CP.III.A.K6	Equipment issues that could cause loss of communication.
CP.III.A.K7	Radar assistance.
CP.III.A.K8	National Transportation Safety Board (NTSB) accident/incident reporting.
CP.III.A.K9	Runway Status Lighting Systems.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.III.A.R1	Communication.
CP.III.A.R2	Deciding if and when to declare an emergency.
CP.III.A.R3	Use of non-standard phraseology.

Skills:	The applicant exhibits the skill to:
CP.III.A.S1	Select and activate appropriate frequencies.
CP.III.A.S2	Transmit using standard phraseology and procedures as specified in the Aeronautical Information Manual (AIM) and Pilot/Controller Glossary.
CP.III.A.S3	Acknowledge radio communications and comply with ATC instructions or as directed by the evaluator.

Task B. Runway/Taxiway/Heliport/Helipad Signs, Markings, and Lighting

References: 14 CFR part 91; AIM; FAA-H-8083-2, FAA-H-8083-25

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with runway/taxiway/heliport/helipad signs, markings and lighting.

Knowledge:	The applicant demonstrates understanding of:
CP.III.B.K1	Airport runway, heliport, helipad, taxiway signs, markings, and lighting.
CP.III.B.K2	Airport movement area.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.III.B.R1	Interpretation of signs, markings, or lighting.
CP.III.B.R2	Landing site dimensions and limitations.
CP.III.B.R3	Conflict with aircraft, vehicles, and persons.
CP.III.B.R4	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.III.B.R5	Powered-lift configuration, including the effect of thrust on other aircraft.
Skills:	The applicant exhibits the skill to:
CP.III.B.S1	Comply with airport/heliport/helipad signs, markings, and lighting encountered, as applicable to the aircraft provided for the practical test.

Task C. Traffic Patterns

References: 14 CFR part 91; AIM; FAA-H-8083-2, FAA-H-8083-25

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with traffic patterns.

Knowledge:	The applicant demonstrates understanding of:
CP.III.C.K1	Towered and nontowered airport/heliport/helipad/landing area operations and restrictions.
CP.III.C.K2	Runway selection and traffic pattern parameters for the current conditions.
CP.III.C.K3	Right-of-way rules.
CP.III.C.K4	Use of automated weather and airport/heliport information.
CP.III.C.K5	Aircraft configuration and selection for the traffic pattern in use.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.III.C.R1	Collision hazards.
CP.III.C.R2	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.III.C.R3	Windshear and wake turbulence.
Skills:	The applicant exhibits the skill to:
CP.III.C.S1	Identify and interpret airport/heliport/helipad/landing area runways, taxiways, markings, signs, and lighting.
CP.III.C.S2	Comply with recommended traffic pattern procedures.
CP.III.C.S3	Correct for wind drift to maintain the proper ground track.
CP.III.C.S4	Maintain orientation with the runway/landing area in use.
CP.III.C.S5	Maintain traffic pattern altitude, ±100 feet, and the appropriate airspeed, ±10 knots.
CP.III.C.S6	Maintain situational awareness and proper spacing from other aircraft in the traffic pattern.

CP.III.C.S7	Position the primary flight controls, including the thrust vector, for the prevailing environmental conditions.
CP.III.C.S8	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Area of Operation IV. Hovering Maneuvers

Task A. Vertical Takeoff and Landing

References: 14 CFR part 91; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with vertical takeoff and landing from a hover.

Knowledge:	The applicant demonstrates understanding of:
CP.IV.A.K1	Elements related to a vertical takeoff to a hover and landing from a hover.
CP.IV.A.K2	Appropriate aircraft configuration for a stationary hover.
CP.IV.A.K3	Effect of wind on flight control inputs.
CP.IV.A.K4	Ground effect.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.IV.A.R1	Obstacle and hazard avoidance.
CP.IV.A.R2	Dynamic rollover.
CP.IV.A.R3	Powerplant failure during hover.
CP.IV.A.R4	Downwash.
CP.IV.A.R5	Ground resonance.
Skills:	The applicant exhibits the skill to:
CP.IV.A.S1	Complete the appropriate checklist(s).
CP.IV.A.S2	Comply with air traffic control (ATC) or evaluator instructions and make radio calls as appropriate.
CP.IV.A.S3	Position the primary flight controls, including the thrust vector, for the prevailing environmental conditions.
CP.IV.A.S4	Ascend to and maintain recommended hovering altitude, and descend from recommended hovering altitude in headwind, crosswind, and tailwind conditions, without drift.
CP.IV.A.S5	Maintain recommended hovering altitude, ±1/2 of that altitude within 10 feet of the surface, if above 10 feet, ±5 feet.
CP.IV.A.S6	Maintain position within ±2 feet of a designated point.
CP.IV.A.S7	Descend vertically to within 2 feet of the designated touchdown point.
CP.IV.A.S8	Maintain headings ±10°, as specified by the evaluator.
CP.IV.A.S9	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task B. Hover Taxi

References: AC 91-73; AIM; Chart Supplements; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with hover taxi operations, including runway incursion avoidance.

Knowledge:	The applicant demonstrates understanding of:
CP.IV.B.K1	Current airport aeronautical references and information resources such as the Chart Supplement, airport diagram, and Notices to Air Missions (NOTAMs).
CP.IV.B.K2	Hover taxi instructions, clearances, and limitations.
CP.IV.B.K3	Airport/heliport/helipad/landing area, signs, markings, and lighting.
CP.IV.B.K4	Visual indicators for wind.
CP.IV.B.K5	Aircraft lighting, as appropriate.
CP.IV.B.K6	Procedures for:
CP.IV.B.K6a	a. Pilot activities during taxiing
CP.IV.B.K6b	b. Safe hover taxi at towered and non-towered airports/heliports/helipads/landing areas
CP.IV.B.K6c	c. Entering or crossing runways
CP.IV.B.K7	Aircraft configuration.
CP.IV.B.K8	Aircraft operating limitations.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.IV.B.R1	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.IV.B.R2	Reduced visibility or night taxi operations.
CP.IV.B.R3	Powerplant(s) failure during hover taxi.
CP.IV.B.R4	Other aircraft and hazards.
CP.IV.B.R5	Hazardous effects of downwash.
CP.IV.B.R6	Aircraft configuration.
CP.IV.B.R7	Height/Velocity (H/V) considerations.
CP.IV.B.R8	Crosswind limitations.
CP.IV.B.R9	Other hazards specific to the powered-lift make and model.
CP.IV.B.R10	Runway incursion.

Skills:	The applicant exhibits the skill to:
CP.IV.B.S1	Complete the appropriate checklist(s).
CP.IV.B.S2	Receive and correctly read back clearances/instructions, if applicable.
CP.IV.B.S3	Use an airport diagram or taxi chart during taxi, if published, and maintain situational awareness.
CP.IV.B.S4	Comply with airport/heliport taxiway markings, signals, and signs.
CP.IV.B.S5	Position the primary flight controls, including the thrust vector, for the prevailing environmental conditions.
CP.IV.B.S6	Hover taxi over specified ground references, demonstrating forward, sideward, and rearward hovering and hovering turns.

CP.IV.B.S7	Maintain recommended hovering altitude, ±1/2 of that altitude within 10 feet of the surface, if above 10 feet, ±5 feet.
CP.IV.B.S8	Make 90°, 180°, and 360° pivoting turns, stopping within 10° of specified headings.
CP.IV.B.S9	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task C. Air Taxi

References: AC 91-73; AIM; Chart Supplements; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with air taxi operations.

Knowledge: The applicant demonstrates understanding of:

CP.IV.C.K1	Current airport aeronautical references and information resources such as the Chart Supplement, airport diagram, and Notices to Air Missions (NOTAMs).
CP.IV.C.K2	Air taxi instructions, clearances, and limitations.
CP.IV.C.K3	Aircraft configuration.
CP.IV.C.K4	Airport/heliport/helipad/landing area, signs, markings, and lighting.
CP.IV.C.K5	Visual indicators for wind.
CP.IV.C.K6	Aircraft lighting, as appropriate.
CP.IV.C.K7	Procedures for:
CP.IV.C.K7a	a. Pilot activities during taxiing
CP.IV.C.K7b	b. Safe air taxi at towered and non-towered airports/heliports/helipads/landing areas
CP.IV.C.K7c	c. Overflying of runways
CP.IV.C.K8	Aircraft operating limitations.
CP.IV.C.K9	Appropriate height and speed for air taxi.
CP.IV.C.K10	Height/Velocity (H/V) considerations.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.IV.C.R1	Activities and distractions.
CP.IV.C.R2	Reduced visibility or night taxi operations.
CP.IV.C.R3	H/V diagram performance in case of powerplant failure.
CP.IV.C.R4	Other aircraft and hazards.
CP.IV.C.R5	Runway incursion.

Skills: The applicant exhibits the skill to:

CP.IV.C.S1	Complete the appropriate checklist(s).
CP.IV.C.S2	Use an airport diagram or taxi chart during taxi, if published, and maintain situational awareness.

CP.IV.C.S3	Select a safe airspeed and altitude.
CP.IV.C.S4	Maintain an appropriate aircraft configuration throughout the maneuver.
CP.IV.C.S5	Maintain specified altitude, ±10 feet.
CP.IV.C.S6	Air taxi from one point to another under various wind conditions.
CP.IV.C.S7	Maintain the aircraft within operating limits throughout the maneuver.
CP.IV.C.S8	Comply with airport/heliport/helipad/landing area markings, lights, signs, and ATC instructions.
CP.IV.C.S9	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Area of Operation V. Takeoffs, Landings, and Go-Arounds

Note: *Select all applicable tasks in accordance with the aircraft's operating characteristics as specified in the flight manual.*

Task A. Normal Takeoff and Climb from a Hover

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with normal takeoff and climb from a hover.

Note: *If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.*

Knowledge:	The applicant demonstrates understanding of:
CP.V.A.K1	Effects of atmospheric conditions, including wind, on takeoff and climb performance.
CP.V.A.K2	Recommended takeoff and climb profiles.
CP.V.A.K3	Aircraft configuration.
CP.V.A.K4	Factors affecting the profile of the height/velocity (H/V) diagram.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.V.A.R1	Selection of helipad/deck, runway, or departure point based on aircraft performance and limitations, available distance, and wind.
CP.V.A.R2	Effects of:
CP.V.A.R2a	a. Crosswind
CP.V.A.R2b	b. Windshear
CP.V.A.R2c	c. Tailwind
CP.V.A.R2d	d. Wake turbulence
CP.V.A.R2e	e. Runway/departure point surface/condition
CP.V.A.R2f	f. Aircraft weight
CP.V.A.R3	Abnormal operations including:
CP.V.A.R3a	a. Rejected takeoff
CP.V.A.R3b	b. Powerplant failure in hover/takeoff/climb phase of flight
CP.V.A.R4	Collision hazards.
CP.V.A.R5	Low altitude maneuvering, including stall, spin, or controlled flight into terrain (CFIT).
CP.V.A.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.V.A.R7	Runway incursion.
Skills:	The applicant exhibits the skill to:

CP.V.A.S1	Complete the appropriate checklist(s).
CP.V.A.S2	Make radio calls as appropriate.
CP.V.A.S3	Verify assigned/correct runway, if at an airport.
CP.V.A.S4	Determine wind direction with or without visible wind direction indicators.
CP.V.A.S5	Position the flight controls and configure the aircraft for the existing wind conditions.
CP.V.A.S6	Clear the area, ground or hover taxi into takeoff position, and hover the aircraft above the departure point, aligned with the departure path.
CP.V.A.S7	Confirm takeoff power and instrument indications prior to forward movement.
CP.V.A.S8	Takeoff and accelerate to the manufacturer's recommended speed.
CP.V.A.S9	After takeoff, establish and maintain a positive rate of climb and configure aircraft, as appropriate.
CP.V.A.S10	Maintain the aircraft within operating limits throughout the maneuver.
CP.V.A.S11	Maintain V_Y ±5 knots to a safe maneuvering altitude.
CP.V.A.S12	Maintain directional control and proper wind-drift correction throughout takeoff and climb.
CP.V.A.S13	Comply with noise abatement procedures, as applicable.
CP.V.A.S14	Use runway incursion avoidance procedures, if applicable.

Task B. Rolling Takeoff and Climb

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with rolling takeoff with wheel-type landing gear.

Note: *If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.*

Knowledge:	The applicant demonstrates understanding of:
CP.V.B.K1	Elements related to a rolling takeoff and the purpose of the maneuver.
CP.V.B.K2	Aircraft configurations.
CP.V.B.K3	Effects of wind, weight, temperature, and density altitude.
CP.V.B.K4	Translational lift.
CP.V.B.K5	Takeoff and climb performance and the height velocity (H/V) diagram.
CP.V.B.K6	Aircraft performance and limitations.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.V.B.R1	Collision hazards.
CP.V.B.R2	Powerplant failure during rolling takeoff and climb out.
CP.V.B.R3	Aircraft configuration.

CP.V.B.R4	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.V.B.R5	Effects of:
CP.V.B.R5a	a. Crosswind
CP.V.B.R5b	b. Windshear
CP.V.B.R5c	c. Tailwind
CP.V.B.R5d	d. Wake turbulence
CP.V.B.R5e	e. Runway/departure point surface/condition
CP.V.B.R5f	f. Aircraft weight
CP.V.B.R6	Low altitude maneuvering, including stall, spin, or controlled flight into terrain (CFIT).

Skills:	The applicant exhibits the skill to:
CP.V.B.S1	Comply with air traffic control (ATC) or evaluator instructions and make radio calls as appropriate.
CP.V.B.S2	Complete the appropriate checklist(s).
CP.V.B.S3	Configure the aircraft correctly regarding environmental conditions and aircraft loading.
CP.V.B.S4	Maintain the aircraft within operating limits throughout the maneuver.
CP.V.B.S5	Maintain proper ground track with crosswind correction, if necessary.
CP.V.B.S6	Maintain a positive rate of climb.
CP.V.B.S7	Transition to recommended climb airspeed ±5 knots.
CP.V.B.S8	Use runway incursion avoidance procedures, if applicable.
CP.V.B.S9	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task C. Maximum Performance Takeoff and Climb

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with maximum performance takeoff and climb.

Knowledge:	The applicant demonstrates understanding of:
CP.V.C.K1	Situations where this maneuver is appropriate.
CP.V.C.K2	Effects of atmospheric conditions, including wind and temperature, on takeoff and climb performance.
CP.V.C.K3	Appropriate aircraft configuration, takeoff, and climb profiles.
CP.V.C.K4	Factors affecting the profile of the height/velocity (H/V) diagram.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.V.C.R1	Selection of takeoff path based on aircraft performance and limitations, available distance, and wind.
CP.V.C.R2	Effects of:

CP.V.C.R2a	a. Crosswind
CP.V.C.R2b	b. Windshear
CP.V.C.R2c	c. Tailwind
CP.V.C.R2d	d. Low level turbulence
CP.V.C.R2e	e. Surface conditions
CP.V.C.R3	Abnormal operations including:
CP.V.C.R3a	a. Rejected takeoff
CP.V.C.R3b	b. Powerplant failure in takeoff/climb phase of flight
CP.V.C.R4	Collision hazards.
CP.V.C.R5	Low altitude maneuvering, including controlled flight into terrain (CFIT).
CP.V.C.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.V.C.S1	Complete the appropriate checklist(s).
CP.V.C.S2	Make radio calls as appropriate.
CP.V.C.S3	Determine wind direction with or without visible wind direction indicators.
CP.V.C.S4	Position the flight controls and configure the aircraft for the existing wind conditions.
CP.V.C.S5	Clear the area, taxi into takeoff position, utilizing maximum available takeoff area and align the aircraft on the takeoff path.
CP.V.C.S6	Confirm takeoff power and proper powerplant and flight instrument indications prior to takeoff.
CP.V.C.S7	Establish and maintain the most efficient lift-off attitude/configuration for obstacle clearance.
CP.V.C.S8	Maintain the recommended airspeed and aircraft configuration until the obstacle is cleared.
CP.V.C.S9	After clearing the obstacle, establish pitch attitude and aircraft configuration for V_Y and accelerate to and maintain V_Y ±5 knots during the climb.
CP.V.C.S10	Reconfigure the aircraft after a positive rate of climb has been verified or in accordance with the aircraft manufacturer's guidance.
CP.V.C.S11	Maintain directional control and proper wind-drift correction throughout takeoff and climb.
CP.V.C.S12	Comply with noise abatement procedures.
CP.V.C.S13	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
CP.V.C.S14	Use runway incursion avoidance procedures, if applicable.

Task D. Normal Approach to a Hover

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with approach profile to a hover.

Knowledge: The applicant demonstrates understanding of:

CP.V.D.K1	Types of approaches and applicability.
CP.V.D.K2	Performance data and the height velocity (H/V) diagram.
CP.V.D.K3	Effects of atmospheric conditions, including wind and density altitude, on approach and hover performance.
CP.V.D.K4	Wind correction techniques on approach and hover.
CP.V.D.K5	Aircraft configurations for the approach and hover.
CP.V.D.K6	Aircraft performance and limitations.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.V.D.R1	Selection of runway/helipad/touchdown point based on aircraft performance and limitations, available distance, and wind.
CP.V.D.R2	Effects of:
CP.V.D.R2a	a. Crosswind
CP.V.D.R2b	b. Windshear
CP.V.D.R2c	c. Tailwind
CP.V.D.R2d	d. Wake turbulence
CP.V.D.R2e	e. Vortex ring state (VRS)
CP.V.D.R2f	f. Runway/arrival point surface/condition
CP.V.D.R3	Situations including:
CP.V.D.R3a	a. Rejected landing and go-around
CP.V.D.R3b	b. Powerplant failure during the approach
CP.V.D.R4	Collision hazards.
CP.V.D.R5	Flat light conditions.
CP.V.D.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills: The applicant exhibits the skill to:

CP.V.D.S1	Complete the appropriate checklist(s).
CP.V.D.S2	Comply with air traffic control (ATC) or evaluator instructions and make radio calls as appropriate.
CP.V.D.S3	Use the appropriate techniques and aircraft configurations through all stages of the approach.
CP.V.D.S4	Consider the wind conditions, landing surface, and obstructions and select a suitable hover point.
CP.V.D.S5	Maintain appropriate ground track with crosswind correction throughout the approach.
CP.V.D.S6	Fly a stabilized approach.
CP.V.D.S7	Arrive over the arrival point at a stabilized hover ±2 feet.
CP.V.D.S8	Execute a timely go-around for any condition that may result in an unsafe approach or landing.

CP.V.D.S9 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

CP.V.D.S10 Use runway incursion avoidance procedures, if applicable.

Task E. Normal Approach and Landing

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with a normal approach and landing.

Note: *If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.*

Knowledge: The applicant demonstrates understanding of:

CP.V.E.K1 Effects of atmospheric conditions, including wind, on approach speed and angle.

CP.V.E.K2 Atmospheric factors affecting performance.

CP.V.E.K3 Use of proper thrust vector angle for transition to landing.

CP.V.E.K4 Factors affecting the profile of the height/velocity (H/V) diagram.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.V.E.R1 Selection of runway or takeoff path based on aircraft performance and limitations, available distance, and wind.

CP.V.E.R2 Effects of:

CP.V.E.R2a a. Crosswind

CP.V.E.R2b b. Windshear

CP.V.E.R2c c. Tailwind

CP.V.E.R2d d. Wake turbulence

CP.V.E.R2e e. Runway/heliport/helipad surface, condition, and length

CP.V.E.R3 Situations including:

CP.V.E.R3a a. Rejected landing and go-around

CP.V.E.R3b b. Powerplant failure during the approach

CP.V.E.R4 Collision hazards.

CP.V.E.R5 Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills: The applicant exhibits the skill to:

CP.V.E.S1 Complete the appropriate checklist(s).

CP.V.E.S2 Comply with noise abatement procedures.

CP.V.E.S3 Make radio calls as appropriate.

CP.V.E.S4 Verify assigned/correct runway/landing point if at an airport.

CP.V.E.S5	Determine wind direction with or without visible wind direction indicators.
CP.V.E.S6	Maintain proper ground track with crosswind correction, if necessary.
CP.V.E.S7	Maintain a stabilized approach profile.
CP.V.E.S8	Use manufacturer's recommended technique and remain within airspeed range allowed for each configuration change.
CP.V.E.S9	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
CP.V.E.S10	Use runway incursion avoidance procedures, if applicable.

Task F. Steep Approach and Landing

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with a steep approach to the surface.

Note: *See Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates understanding of:
CP.V.F.K1	A stabilized steep approach.
CP.V.F.K2	Approach techniques and applicability.
CP.V.F.K3	Performance data and the height velocity (H/V) diagram.
CP.V.F.K4	Effects of atmospheric conditions on approach and landing performance.
CP.V.F.K5	Wind correction techniques.
CP.V.F.K6	Aircraft configuration.
CP.V.F.K7	Aircraft performance and limitations.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.V.F.R1	Selection of the approach path and landing area.
CP.V.F.R2	Effects of:
CP.V.F.R2a	a. Crosswind
CP.V.F.R2b	b. Windshear
CP.V.F.R2c	c. Tailwind
CP.V.F.R2d	d. Wake turbulence
CP.V.F.R2e	e. Vortex ring state (VRS)
CP.V.F.R2f	f. Landing point condition
CP.V.F.R3	Planning for:
CP.V.F.R3a	a. Rejected landing and go-around

CP.V.F.R3b	b. Powerplant failure during the approach
CP.V.F.R4	Landing in an area or in conditions where a takeoff/climb may not be possible.
CP.V.F.R5	Degraded Visual Environment (DVE) and flat light conditions.
CP.V.F.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.V.F.S1	Complete the appropriate checklist(s).
CP.V.F.S2	Position the flight controls, including the thrust vector, for the prevailing environmental conditions.
CP.V.F.S3	Maintain awareness of aircraft performance, limitations, and relative position throughout the maneuver.
CP.V.F.S4	Arrive over the touchdown point on the surface ±5 feet from intended landing point or, at the discretion of the evaluator, at a stabilized hover ±5 feet height.
CP.V.F.S5	Maintain proper ground track with crosswind correction, if necessary.
CP.V.F.S6	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
CP.V.F.S7	Use runway incursion avoidance procedures, if applicable.

Task G. Running/Roll-On Landing

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with running/roll-on landing operation.

Knowledge:	The applicant demonstrates understanding of:
CP.V.G.K1	H/V diagram, if applicable.
CP.V.G.K2	Aircraft performance and limitations.
CP.V.G.K3	Aircraft configuration.
CP.V.G.K4	Effects of atmospheric conditions, including wind, on approach and landing performance.
CP.V.G.K5	Wind correction techniques on approach and landing.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.V.G.R1	Situations including:
CP.V.G.R1a	a. Powerplant failure during approach
CP.V.G.R1b	b. Rejected landing
CP.V.G.R2	Effects of:
CP.V.G.R2a	a. Crosswind
CP.V.G.R2b	b. Windshear
CP.V.G.R2c	c. Tailwind

CP.V.G.R2d	d. Wake turbulence
CP.V.G.R2e	e. Runway surface/condition
CP.V.G.R3	Collision hazards.
CP.V.G.R4	Low altitude maneuvering, including stall, spin, or controlled flight into terrain (CFIT).
CP.V.G.R5	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.V.G.S1	Coordinate with crew, if applicable, and complete the approach and landing checklists.
CP.V.G.S2	Ensure the aircraft is correctly configured for the landing.
CP.V.G.S3	Comply with air traffic control (ATC) or evaluator instructions and make radio calls as appropriate.
CP.V.G.S4	Maintain a ground track that ensures the desired traffic pattern flown takes into consideration obstructions and air traffic control (ATC) or evaluator instructions.
CP.V.G.S5	Ensure the aircraft is aligned with the correct/assigned runway or landing surface.
CP.V.G.S6	Consider the wind conditions, aircraft performance, landing surface, obstructions, and select a suitable touchdown point.
CP.V.G.S7	Maintain crosswind correction and directional control throughout the approach and landing.
CP.V.G.S8	Make smooth, timely, and correct control application during round out and touchdown.
CP.V.G.S9	Touch down at the appropriate speed, aircraft configuration and pitch attitude.
CP.V.G.S10	On touchdown, maintain proper ground track.
CP.V.G.S11	After touchdown, reconfigure the aircraft for surface/hover taxi.
CP.V.G.S12	Execute a timely go-around for any condition that may result in an unsafe approach or landing.
CP.V.G.S13	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
CP.V.G.S14	Use runway incursion avoidance procedures, if applicable.

Task H. Go-Around/Rejected Landing

References: AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with go-around/rejected landing with emphasis on factors that contribute to landing conditions that may require a go-around.

Knowledge:	The applicant demonstrates understanding of:
CP.V.H.K1	Situations and considerations on approach that could require a go-around/rejected landing.
CP.V.H.K2	Effects of atmospheric conditions on a go-around or rejected landing.
CP.V.H.K3	Aircraft configuration changes and techniques for the go-around.
CP.V.H.K4	Go-around/rejected landing procedures, the importance of a timely decision, and appropriate airspeeds for the maneuver.

CP.V.H.K5	Wind correction techniques.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.V.H.R1	Recognition of the need for a go-around/rejected landing.
CP.V.H.R2	Aircraft performance.
CP.V.H.R3	Application of power.
CP.V.H.R4	Aircraft configuration.
CP.V.H.R5	Collision hazards.
CP.V.H.R6	Low altitude maneuvering, including stall or controlled flight into terrain (CFIT).
CP.V.H.R7	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.V.H.S1	Make a timely decision to go-around/reject the landing.
CP.V.H.S2	Apply the appropriate power setting for the flight condition and establish an aircraft configuration necessary to obtain the desired performance.
CP.V.H.S3	Establish a positive rate of climb and the appropriate airspeed ±10 knots.
CP.V.H.S4	Configure the aircraft, as appropriate.
CP.V.H.S5	Maintain the ground track, heading, or course appropriate for the conditions, or as specified by air traffic control (ATC) or the evaluator.
CP.V.H.S6	Notify/coordinate with air traffic control (ATC) or evaluator instructions as required.
CP.V.H.S7	Complete the appropriate checklist(s).
CP.V.H.S8	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.
CP.V.H.S9	Use runway incursion avoidance procedures, if applicable.

Area of Operation VI. Performance Maneuvers

Task A. Rapid Deceleration/Quick Stop

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with rapid deceleration/quick stop and conditions that may require a rapid deceleration/quick stop.

Knowledge:	The applicant demonstrates understanding of:
CP.VI.A.K1	Purpose of the maneuver.
CP.VI.A.K2	Aircraft transmission and powerplant limitations.
CP.VI.A.K3	Airspeed limitations.
CP.VI.A.K4	Aircraft maximum rate deceleration rate and technique.
CP.VI.A.K5	Height velocity (H/V) awareness.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.VI.A.R1	Gaining or losing altitude.
CP.VI.A.R2	Excessive pitch attitudes.
CP.VI.A.R3	Effects of wind.
CP.VI.A.R4	Airframe and airspeed limitations.
CP.VI.A.R5	Collision hazards.
CP.VI.A.R6	Dividing attention between aircraft control and orientation.
CP.VI.A.R7	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.VI.A.R8	Uncoordinated flight.
CP.VI.A.R9	Vortex ring state (VRS).
Skills:	The applicant exhibits the skill to:
CP.VI.A.S1	Complete the appropriate checklist(s).
CP.VI.A.S2	Clear the area.
CP.VI.A.S3	Maintain heading throughout the maneuver, ±5°.
CP.VI.A.S4	Perform a maximum performance deceleration as directed by the evaluator.
CP.VI.A.S5	Select an appropriate power setting and thrust vector to allow deceleration at maximum rate.
CP.VI.A.S6	Maintain coordinated flight throughout the maneuver.

Task B. Inflight Conversion During Straight-and-Level Flight

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with

converting from thrust-borne configuration to wing-borne configuration, and returning to thrust-borne configuration.

Knowledge: The applicant demonstrates understanding of:

CP.VI.B.K1 Procedures for changing aircraft configuration.

CP.VI.B.K2 Aerodynamic effects of changing aircraft configuration.

CP.VI.B.K3 Flight control operation when converting from thrust-borne to wing-borne configuration, and when converting from wing-borne to thrust-borne configuration, while in straight-and-level flight.

CP.VI.B.K4 Aircraft performance and limitation charts.

CP.VI.B.K5 Factors related to weight and balance and center of gravity (CG) envelopes.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.VI.B.R1 Aircraft performance limitations.

CP.VI.B.R2 Powerplant failure during conversion.

CP.VI.B.R3 Aerodynamic stall.

CP.VI.B.R4 Effects of gross weight and CG.

CP.VI.B.R5 Rapid configuration or thrust vector changes.

CP.VI.B.R6 Other hazards specific to the powered-lift make and model.

CP.VI.B.R7 Altitude variation/vertical speed.

CP.VI.B.R8 Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills: The applicant exhibits the skill to:

CP.VI.B.S1 Convert from thrust-borne configuration to wing-borne configuration during straight-and-level flight.

CP.VI.B.S2 Convert the aircraft from wing-borne configuration to thrust-borne configuration during straight-and-level flight.

CP.VI.B.S3 Utilize proper control technique throughout the maneuver.

CP.VI.B.S4 Maintain awareness of aircraft performance, limitations, and relative position throughout the maneuver.

CP.VI.B.S5 Maintain altitude ±100 feet and specified heading ±10° throughout the operation. Achieve and maintain targeted airspeed ±10 knots.

CP.VI.B.S6 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

CP.VI.B.S7 Use the appropriate checklist, if applicable.

Task C. Steep Turns

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with steep turns.

Knowledge: The applicant demonstrates understanding of:

CP.VI.C.K1	Aerodynamics associated with steep turns, including:
CP.VI.C.K1a	a. Maintaining coordinated flight
CP.VI.C.K1b	b. Overbanking tendencies
CP.VI.C.K1c	c. Maneuvering speed, including the impact of weight changes
CP.VI.C.K1d	d. Load factor and accelerated stalls
CP.VI.C.K1e	e. Rate and radius of turn

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.VI.C.R1	Dividing attention between aircraft control and orientation.
CP.VI.C.R2	Collision hazards.
CP.VI.C.R3	Low altitude maneuvering, including stall, spin, or controlled flight into terrain (CFIT).
CP.VI.C.R4	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.VI.C.R5	Uncoordinated flight.

Skills:	The applicant exhibits the skill to:
CP.VI.C.S1	Clear the area.
CP.VI.C.S2	Establish the manufacturer's recommended airspeed; or if one is not available, an airspeed not to exceed maneuvering speed (V_A).
CP.VI.C.S3	Roll into a coordinated 360° steep turn as selected by the evaluator and according to the aircraft's operating limitations.
CP.VI.C.S4	Perform the maneuver in the opposite direction.
CP.VI.C.S5	Maintain the entry altitude ±100 feet, airspeed ±10 knots, bank ±5°, and roll out on the entry heading ±10°.

Area of Operation VII. Navigation

Task A. Pilotage and Dead Reckoning

References: AIM; FAA-H-8083-2, FAA-H-8083-25; VFR Navigation Charts

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with pilotage and dead reckoning.

Knowledge:	The applicant demonstrates understanding of:
CP.VII.A.K1	Pilotage and dead reckoning.
CP.VII.A.K2	Magnetic compass errors.
CP.VII.A.K3	Topography.
CP.VII.A.K4	Selection of appropriate:
CP.VII.A.K4a	a. Route
CP.VII.A.K4b	b. Altitude(s)
CP.VII.A.K4c	c. Checkpoints
CP.VII.A.K5	Plotting a course, including:
CP.VII.A.K5a	a. Determining heading, speed, and course
CP.VII.A.K5b	b. Wind correction angle
CP.VII.A.K5c	c. Estimating time, speed, and distance
CP.VII.A.K5d	d. True airspeed and density altitude
CP.VII.A.K6	Aircraft configuration.
CP.VII.A.K7	Planned calculations versus actual results and required corrections.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.VII.A.R1	Collision hazards.
CP.VII.A.R2	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.VII.A.R3	Unplanned fuel/power consumption, if applicable.

Skills:	The applicant exhibits the skill to:
CP.VII.A.S1	Prepare and use a flight log.
CP.VII.A.S2	Navigate by pilotage.
CP.VII.A.S3	Navigate by means of pre-computed headings, groundspeeds, elapsed time, and reference to landmarks or checkpoints.
CP.VII.A.S4	Use the magnetic direction indicator in navigation, including turns to headings.
CP.VII.A.S5	Correct for and record the differences between preflight fuel, groundspeed, and heading calculations and those determined en route.

CP.VII.A.S6	Verify position within two nautical miles of the flight-planned route.
CP.VII.A.S7	Arrive at the en route checkpoints within three minutes of the initial or revised estimated time of arrival (ETA) and provide a destination estimate.
CP.VII.A.S8	Maintain the selected altitude, ±100 feet and heading, ±10°.

Task B. Navigation Systems and Radar Services

References: AC 91-78; AIM; FAA-H-8083-2, FAA-H-8083-25

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with navigation systems and radar services.

Note: *The evaluator should reference the manufacturer's equipment supplement(s) as necessary for appropriate limitations, procedures, etc.*

Knowledge: The applicant demonstrates understanding of:

CP.VII.B.K1	Ground-based navigation (identification, orientation, course determination, equipment, tests, regulations, interference, appropriate use of navigation data, and signal integrity).
CP.VII.B.K2	Satellite-based navigation (e.g., equipment, regulations, authorized use of databases, and Receiver Autonomous Integrity Monitoring (RAIM)).
CP.VII.B.K3	Radar assistance to visual flight rules (VFR) aircraft (e.g., operations, equipment, available services, traffic advisories).
CP.VII.B.K4	Transponder (Mode(s) A, C, and S) and Automatic Dependent Surveillance-Broadcast (ADS-B).

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.VII.B.R1	Management of automated navigation and autoflight systems.
CP.VII.B.R2	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.VII.B.R3	Limitations of the navigation system in use.
CP.VII.B.R4	Loss of a navigation signal.
CP.VII.B.R5	Use of an electronic flight bag (EFB), if used.

Skills: The applicant exhibits the skill to:

CP.VII.B.S1	Use an airborne electronic navigation system.
CP.VII.B.S2	Determine the aircraft's position using the navigation system.
CP.VII.B.S3	Intercept and track a given course, radial, or bearing.
CP.VII.B.S4	Recognize and describe the indication of station or waypoint passage.
CP.VIII.B.S5	Recognize signal loss or interference and take appropriate action, if applicable.
CP.VII.B.S6	Use proper communication procedures when utilizing radar services.
CP.VII.B.S7	Maintain the appropriate altitude, ±100 feet and heading, ±10°.

Task C. Diversion

References: AIM; FAA-H-8083-2, FAA-H-8083-25; VFR Navigation Charts

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with diversion.

Knowledge:	The applicant demonstrates understanding of:
CP.VII.C.K1	Selecting an alternate destination.
CP.VII.C.K2	Situations that require deviations from flight plan or air traffic control (ATC) instructions.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.VII.C.R1	Collision hazards.
CP.VII.C.R2	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.VII.C.R3	Circumstances that would make diversion prudent.
CP.VII.C.R4	Selecting an airport/heliport/helipad, as applicable.
CP.VII.C.R5	Using available resources (e.g., automation, ATC, and flight deck planning aids).
Skills:	The applicant exhibits the skill to:
CP.VII.C.S1	Select a suitable airport/heliport/helipad, as applicable, and route for diversion.
CP.VII.C.S2	Make a reasonable estimate of heading, groundspeed, arrival time, and fuel required to the “divert to” destination.
CP.VII.C.S3	Promptly divert toward the airport/heliport/helipad.
CP.VII.C.S4	Maintain the selected altitude, ±100 feet and heading, ±10°.
CP.VII.C.S5	Update/interpret weather in flight.
CP.VII.C.S6	Use displays of digital weather and aeronautical information, as applicable to maintain situational awareness.

Task D. Lost Procedures

References: AIM; FAA-H-8083-2, FAA-H-8083-25; VFR Navigation Charts

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with lost procedures and can take appropriate steps to achieve a satisfactory outcome if lost.

Knowledge:	The applicant demonstrates understanding of:
CP.VII.D.K1	Methods to determine position.
CP.VII.D.K2	Assistance available if lost (e.g., radar services, communication procedures).
CP.VII.D.K3	Rapidly deteriorating weather or impending fuel exhaustion.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:

CP.VII.D.R1	Collision hazards.
CP.VII.D.R2	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.VII.D.R3	Recording times over waypoints.
CP.VII.D.R4	When to seek assistance or declare an emergency in a deteriorating situation.

Skills:	The applicant exhibits the skill to:
CP.VII.D.S1	Select an appropriate course of action.
CP.VII.D.S2	Use an appropriate method to determine position.
CP.VII.D.S3	Maintain an appropriate heading and climb as necessary.
CP.VII.D.S4	Identify prominent landmarks.
CP.VII.D.S5	Use navigation systems/facilities or contact an ATC facility for assistance.

Area of Operation VIII. Slow Flight and Stalls

Task A. Maneuvering During Slow Flight (Wing-Borne Configuration)

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with maneuvering during slow flight in wing-borne configuration.

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates understanding of:
CP.VIII.A.K1	Aerodynamics associated with slow flight in various aircraft configurations, including the relationship between angle of attack, airspeed, load factor, power setting, aircraft weight and center of gravity, aircraft attitude, and yaw effects.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.VIII.A.R1	Inadvertent slow flight and flight with a stall warning, which could lead to loss of control.
CP.VIII.A.R2	Range and limitations of stall warning indicators (e.g., aircraft buffet, stall horn, etc.).
CP.VIII.A.R3	Uncoordinated flight.
CP.VIII.A.R4	Effect of environmental elements on aircraft performance (e.g., turbulence, microbursts, and high density altitude).
CP.VIII.A.R5	Collision hazards.
CP.VIII.A.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.VIII.A.S1	Clear the area.
CP.VIII.A.S2	Select an entry altitude that allows the Task to be completed no lower than 3,000 feet above ground level (AGL).
CP.VIII.A.S3	Establish and maintain an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power, would result in a stall warning (e.g., aircraft buffet, stall horn, etc.).
CP.VIII.A.S4	Accomplish coordinated straight-and-level flight, turns, climbs, and descents with the aircraft configured as specified by the evaluator without a stall warning (e.g., aircraft buffet, stall horn, etc.).
CP.VIII.A.S5	Maintain the specified altitude, ±50 feet; specified heading, ±10°; airspeed, +5/-0 knots; and specified angle of bank, ±5°.

Task B. Power-Off Stalls

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with power-off stalls.

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates understanding of:
CP.VIII.B.K1	Aerodynamics associated with stalls in various aircraft configurations, including the relationship between angle of attack, airspeed, load factor, power setting, aircraft weight and center of gravity, aircraft attitude, and yaw effects.
CP.VIII.B.K2	Stall characteristics as they relate to aircraft design, and recognition impending stall and full stall indications using sight, sound, or feel.
CP.VIII.B.K3	Factors and situations that can lead to a power-off stall and actions that can be taken to prevent it.
CP.VIII.B.K4	Fundamentals of stall recovery.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.VIII.B.R1	Factors and situations that could lead to an inadvertent power-off stall, spin, and loss of control.
CP.VIII.B.R2	Range and limitations of stall warning indicators (e.g., aircraft buffet, stall horn, etc.).
CP.VIII.B.R3	Stall warning(s) during normal operations.
CP.VIII.B.R4	Stall recovery procedure.
CP.VIII.B.R5	Secondary and accelerated stalls.
CP.VIII.B.R6	Effect of environmental elements on aircraft performance related to power-off stalls (e.g., turbulence, microbursts, and high-density altitude).
CP.VIII.B.R7	Collision hazards.
CP.VIII.B.R8	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.VIII.B.S1	Clear the area.
CP.VIII.B.S2	Select an entry altitude that allows the Task to be completed no lower than 3,000 feet AGL or as recommended by the manufacturer, whichever is higher.
CP.VIII.B.S3	Configure the aircraft in the approach or landing configuration, as specified by the evaluator, and maintain coordinated flight throughout the maneuver.
CP.VIII.B.S4	Establish a stabilized descent.
CP.VIII.B.S5	Transition smoothly from the approach or landing attitude to a pitch attitude that induces a stall.
CP.VIII.B.S6	Maintain a specified heading, ±10° if in straight flight; maintain a specified angle of bank not to exceed 20°, ±5°, if in turning flight, until an impending or full stall occurs, as specified by the evaluator.
CP.VIII.B.S7	Acknowledge the cues at the first indication of a stall (e.g., aircraft buffet, stall horn, etc.).
CP.VIII.B.S8	Recover at the first indication of a stall or after a full stall has occurred, as specified by the evaluator.
CP.VIII.B.S9	Configure the aircraft as recommended by the manufacturer and accelerate to V_X or V_Y.
CP.VIII.B.S10	Return to the altitude, heading, and airspeed specified by the evaluator.
CP.VIII.B.S11	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task C. Power-On Stalls

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with power-on stalls.

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates understanding of:
CP.VIII.C.K1	Aerodynamics associated with stalls in various aircraft configurations, including the relationship between angle of attack, airspeed, load factor, power setting, aircraft weight and center of gravity, aircraft attitude, and yaw effects.
CP.VIII.C.K2	Stall characteristics as they relate to aircraft design, and recognition impending stall and full stall indications using sight, sound, or feel.
CP.VIII.C.K3	Factors and situations that can lead to a power-on stall and actions that can be taken to prevent it.
CP.VIII.C.K4	Fundamentals of stall recovery.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.VIII.C.R1	Factors and situations that could lead to an inadvertent power-on stall, spin, and loss of control.
CP.VIII.C.R2	Range and limitations of stall warning indicators (e.g., aircraft buffet, stall horn, etc.).
CP.VIII.C.R3	Pitch attitude limitations.
CP.VIII.C.R4	Stall warning(s) during normal operations.
CP.VIII.C.R5	Stall recovery procedure.
CP.VIII.C.R6	Secondary stalls and accelerated stalls.
CP.VIII.C.R7	Effect of environmental elements on aircraft performance related to power-on stalls (e.g., turbulence, microbursts, and high-density altitude).
CP.VIII.C.R8	Collision hazards.
CP.VIII.C.R9	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.VIII.C.S1	Clear the area.
CP.VIII.C.S2	Select an entry altitude that allows the Task to be completed no lower than 3,000 feet AGL or as recommended by the manufacturer, whichever is higher.
CP.VIII.C.S3	Establish the takeoff, departure, or wing-borne configuration, as specified by the evaluator, and maintain coordinated flight throughout the maneuver.
CP.VIII.C.S4	Transition smoothly from the takeoff or departure attitude to the pitch attitude that would induce a stall.
CP.VIII.C.S5	Maintain a specified heading ±10° if in straight flight; maintain a specified angle of bank not to exceed 20°, ±10° if in turning flight, until an impending or full stall is reached, as specified by the evaluator.
CP.VIII.C.S6	Acknowledge the cues at the first indication of a stall (e.g., aircraft buffet, stall horn, etc.).

CP.VIII.C.S7 Recover at the first indication of a stall or after a full stall has occurred, as specified by the evaluator.

CP.VIII.C.S8 Configure the aircraft as recommended by the manufacturer and accelerate to V_X or V_Y.

CP.VIII.C.S9 Return to the altitude, heading, and airspeed specified by the evaluator.

CP.VIII.C.S10 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task D. Accelerated Stalls

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with accelerated stalls (power-on or power-off).

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge: The applicant demonstrates understanding of:

CP.VIII.D.K1 Aerodynamics associated with stalls in various aircraft configurations, including the relationship between angle of attack, airspeed, load factor, power setting, aircraft weight and center of gravity, aircraft attitude, and yaw effects.

CP.VIII.D.K2 Stall characteristics as they relate to aircraft design, and recognition impending stall and full stall indications using sight, sound, or feel.

CP.VIII.D.K3 Factors leading to an accelerated stall and preventive actions.

CP.VIII.D.K4 Fundamentals of stall recovery.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.VIII.D.R1 Factors and situations that could lead to an inadvertent accelerated stall, spin, and loss of control.

CP.VIII.D.R2 Range and limitations of stall warning indicators (e.g., aircraft buffet, stall horn, etc.).

CP.VIII.D.R3 Stall warning(s) during normal operations.

CP.VIII.D.R4 Stall recovery procedure.

CP.VIII.D.R5 Secondary stalls and accelerated stalls.

CP.VIII.D.R6 Effect of environmental elements on aircraft performance related to power-on stalls (e.g., turbulence, microbursts, and high-density altitude).

CP.VIII.D.R7 Collision hazards.

CP.VIII.D.R8 Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills: The applicant exhibits the skill to:

CP.VIII.D.S1 Clear the area.

CP.VIII.D.S2 Select an entry altitude that allows the Task to be completed no lower than 3,000 feet AGL or as recommended by the manufacturer, whichever is higher.

CP.VIII.D.S3 Establish the takeoff, departure, or wing-borne configuration, as specified by the evaluator, and maintain coordinated flight throughout the maneuver.

CP.VIII.D.S4 Set power as assigned by the evaluator.

CP.VIII.D.S5 Establish and maintain a coordinated turn in a 45° bank (or as limited by the manufacturer), increasing elevator back pressure smoothly and firmly until an impending stall is reached.

CP.VIII.D.S6 Acknowledge the cues at the first indication of a stall (e.g., aircraft buffet, stall horn, etc.).

CP.VIII.D.S7 Recover at the first indication of a stall.

CP.VIII.D.S8 Configure the aircraft as recommended by the manufacturer and accelerate to V_X or V_Y.

CP.VIII.D.S9 Return to the altitude, heading, and airspeed specified by the evaluator.

CP.VIII.D.S10 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Area of Operation IX. Emergency Operations

Task A. Powerplant(s) Failure (Simulated) during Takeoff in Thrust-Borne Flight

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with indications and pilot actions after powerplant(s) failure during takeoff while the aircraft is predominantly in thrust-borne flight in a multi-powerplant aircraft.

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Note: *The task outcome can be vertical or rolling depending on aircraft capabilities, configuration, and flight manual procedures.*

Knowledge:	The applicant demonstrates understanding of:
CP.IX.A.K1	Aircraft performance and limitations, (e.g., height velocity (H/V) diagram information).
CP.IX.A.K2	Factors involved in determining a valid go/no-go decision.
CP.IX.A.K3	Recognition of powerplant(s) failure.
CP.IX.A.K4	Pilot actions required on recognition of powerplant(s) failure, including checklist memory items.
CP.IX.A.K5	Aircraft configuration for landing with powerplant(s) failure.
CP.IX.A.K6	Causes of asymmetric thrust conditions and appropriate responses.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.IX.A.R1	Powerplant(s) failure.
CP.IX.A.R2	Identification of powerplant(s) failure conditions.
CP.IX.A.R3	Pilot reaction to powerplant(s) failure conditions.
CP.IX.A.R4	Aircraft configuration.
Skills:	The applicant exhibits the skill to:
CP.IX.A.S1	Recognize that a powerplant(s) failure has occurred.
CP.IX.A.S2	Use flight controls in the proper combination and aircraft configuration as recommended by the manufacturer, or as required to maintain best performance, and trim as required.
CP.IX.A.S3	Maintain the operating powerplant(s) within acceptable operating limits.
CP.IX.A.S4	Land the aircraft, as appropriate to the scenario presented by the evaluator.
CP.IX.A.S5	Complete the appropriate checklist(s).
CP.IX.A.S6	Make radio calls as appropriate.
CP.IX.A.S7	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task B. Powerplant(s) Failure (Simulated) during Takeoff While in Semi-Wing-Borne Flight

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with indications and pilot actions after powerplant(s) failure during takeoff while in semi-wing-borne flight in a multi-powerplant aircraft.

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Note: *This can be initiated during the takeoff roll in wheeled aircraft or during the transition to wing-borne flight following a vertical takeoff.*

Knowledge:	The applicant demonstrates understanding of:
CP.IX.B.K1	The procedures used during a powerplant(s) failure on takeoff, the appropriate reference airspeeds, and the specific pilot actions required.
CP.IX.B.K2	Operational considerations to include: aircraft performance (e.g., sideslip, bank angle, etc.), takeoff warning systems, runway length, surface conditions, density altitude, wake turbulence, environmental conditions, obstructions, and other related factors that could adversely affect safety.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.IX.B.R1	Powerplant(s) failure.
CP.IX.B.R2	Reaction to the loss of power from one or more powerplants.
CP.IX.B.R3	Deceleration in a space-limited environment.
CP.IX.B.R4	Windshear.
CP.IX.B.R5	Dividing attention inside and outside the aircraft.
CP.IX.B.R6	Runway incursion.
CP.IX.B.R7	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.IX.B.R8	Abnormal operations, including planning for.
CP.IX.B.R8a	a. Rejected takeoff
CP.IX.B.R8b	b. Powerplant failure in takeoff/climb phase of flight
CP.IX.B.R9	Energy management.
Skills:	The applicant exhibits the skill to:
CP.IX.B.S1	Recognize that a powerplant failure has occurred while performing a rolling takeoff.
CP.IX.B.S2	Input the appropriate flight control(s) and configure the aircraft for maximum deceleration.
CP.IX.B.S3	Maintain the operating powerplant(s) within acceptable operating limits.
CP.IX.B.S4	Apply braking as appropriate.
CP.IX.B.S5	Refer to the checklist to ensure that the emergency procedure was followed correctly.
CP.IX.B.S6	Make radio calls as appropriate.

CP.IX.B.S7	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task C. Inflight Powerplant(s) Failure and Restart in Multi-Powerplant Aircraft

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with an inflight powerplant(s) failure and restart, if applicable, in a multi-powerplant powered-lift aircraft.

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates understanding of:
CP.IX.C.K1	Flight characteristics and controllability associated with maneuvering the aircraft with powerplant(s) inoperative, including the importance of drag reduction and appropriate aircraft configuration.
CP.IX.C.K2	Aircraft/powerplant limitations.
CP.IX.C.K3	Powerplant restart procedures and conditions where a restart attempt is appropriate.
CP.IX.C.K4	Causes of asymmetric thrust conditions and appropriate responses.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.IX.C.R1	Potential powerplant(s) failure during flight.
CP.IX.C.R2	Following checklist procedures for a powerplant(s) failure or a powerplant(s) restart.
CP.IX.C.R3	Identifying the powerplant(s) that failed.
CP.IX.C.R4	Collision hazards.
CP.IX.C.R5	Aircraft configuration.
CP.IX.C.R6	Factors and situations that could lead to loss of control with an inflight powerplant(s) failure.
CP.IX.C.R7	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.IX.C.S1	Recognize and correctly identify powerplant(s) failure, complete memory items (if applicable), and maintain positive aircraft control.
CP.IX.C.S2	Coordinate with crew, if applicable, and complete the appropriate emergency procedures and checklist(s) for powerplant shutdown.
CP.IX.C.S3	Use flight controls and configure the aircraft in the proper combination as recommended by the manufacturer, or as required, to maintain best performance, and trim as required.
CP.IX.C.S4	Determine the cause for the powerplant(s) failure and if a restart is a viable option.
CP.IX.C.S5	Maintain the operating powerplant(s) within acceptable operating limits.
CP.IX.C.S6	Maintain the airspeed ±10 knots, the specified heading ±10°, and altitude ±100 feet as specified by the evaluator and within the aircraft's capability.
CP.IX.C.S7	Consider a powerplant restart and, if appropriate, demonstrate the powerplant restart procedures in accordance with the manufacturer or operator specified procedures and checklists.

CP.IX.C.S8 Select the nearest suitable airport or landing area.

CP.IX.C.S9 Communicate with air traffic control (ATC) and the evaluator, as appropriate for the situation.

CP.IX.C.S10 Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task D. Vortex Ring State (VRS) Avoidance

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge and risk management associated with preventing the aircraft from entering and the procedure for recovering from Vortex Ring State (VRS).

Note: *Evaluator assesses this Task orally only.*

Knowledge: The applicant demonstrates understanding of:

CP.IX.D.K1 Elements of vortex ring state.

CP.IX.D.K2 Effects of wind, weight, temperature, and density altitude.

CP.IX.D.K3 Requirements for the formation of VRS.

CP.IX.D.K4 Aircraft systems that aid the pilot in avoiding VRS, if applicable.

CP.IX.D.K5 Aerodynamics and indications of VRS.

CP.IX.D.K6 Flight scenarios under which VRS can occur.

CP.IX.D.K7 Asymmetric VRS, if applicable.

CP.IX.D.K8 Effective recovery techniques.

CP.IX.D.K9 Control inputs and configuration changes to recover from VRS.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.IX.D.R1 Conditions for entering VRS.

CP.IX.D.R2 Pilot recognition and response to VRS.

CP.IX.D.R3 Loss of control.

CP.IX.D.R4 Collision hazards.

CP.IX.D.R5 Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills: The applicant exhibits the skill to:

CP.IX.D.S1 [Intentionally left blank].

Task E. Approach and Landing with Powerplant(s) Failure (Simulated)

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with approach and landing with simulated powerplant(s) failure.

Note: *See Appendix 2: Safety of Flight and Appendix 3: Aircraft, Equipment, and Operational Requirements &*

Limitations for information related to this Task.

Knowledge:	The applicant demonstrates understanding of:
CP.IX.E.K1	Elements of approach and landing with powerplant(s) failure.
CP.IX.E.K2	Effects of atmospheric conditions on emergency approach and landing.
CP.IX.E.K3	A stabilized approach, including energy management concepts.
CP.IX.E.K4	Air traffic control (ATC) services to aircraft in distress.
CP.IX.E.K5	Appropriate approach and landing profiles and aircraft configurations.
CP.IX.E.K6	Causes of asymmetric thrust conditions and appropriate responses.
CP.IX.E.K7	Go-around/rejected landing procedures with a powerplant failure.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.IX.E.R1	Consideration of altitude, wind, terrain, obstructions, and available landing area.
CP.IX.E.R2	Planning and following a flightpath to the selected landing area.
CP.IX.E.R3	Collision hazards.
CP.IX.E.R4	Flight control input(s).
CP.IX.E.R5	Low altitude maneuvering, including stall, spin, or controlled flight into terrain (CFIT).
CP.IX.E.R6	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.IX.E.R7	Go-around/rejected landing.
Skills:	The applicant exhibits the skill to:
CP.IX.E.S1	Maintain the operating powerplant(s) within limits.
CP.IX.E.S2	Maintain, prior to beginning the final approach segment, the recommended flight profile with altitude ±100 feet, airspeed, ±10 knots, heading ±5°, and maintains track.
CP.IX.E.S3	Use flight controls in the proper combination and aircraft configuration as recommended by the manufacturer, or as required to maintain best performance, and trim as required.
CP.IX.E.S4	Select a suitable landing area considering altitude, wind, terrain and obstructions.
CP.IX.E.S5	Plan and follow a flightpath to the selected landing area considering altitude, wind, terrain, and obstructions.
CP.IX.E.S6	Maintain directional control and appropriate crosswind correction throughout the approach and landing.
CP.IX.E.S7	Complete the appropriate checklist(s).
CP.IX.E.S8	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task F. Emergency Descent

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with

emergency descent.

Note: *See Appendix 2: Safety of Flight.*

Knowledge:	The applicant demonstrates understanding of:
CP.IX.F.K1	Situations that would require an emergency descent (e.g., depressurization, smoke, or fire).
CP.IX.F.K2	Immediate action items and emergency procedures.
CP.IX.F.K3	Airspeed, including airspeed limitations.
CP.IX.F.K4	Aircraft performance and limitations.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.IX.F.R1	Altitude, wind, terrain, obstructions, gliding distance, and available landing distance considerations.
CP.IX.F.R2	Collision hazards.
CP.IX.F.R3	Flight control input(s) and aircraft configuration.
CP.IX.F.R4	Distractions, task prioritization, loss of situational awareness, or disorientation.

Skills:	The applicant exhibits the skill to:
CP.IX.F.S1	Clear the area.
CP.IX.F.S2	Establish and maintain the appropriate airspeed and configuration appropriate to the scenario specified by the evaluator and as covered in the manufacturer's flight manual for the emergency descent.
CP.IX.F.S3	Maintain orientation, divide attention appropriately, and plan and execute a smooth recovery.
CP.IX.F.S4	Use bank angles between 30° and 45° to maintain positive load factors during the descent.
CP.IX.F.S5	Maintain appropriate airspeed, +0/-10 knots, and level off at specified altitude, ±100 feet.
CP.IX.F.S6	Make radio calls as appropriate.
CP.IX.F.S7	Complete the appropriate checklist(s).
CP.IX.F.S8	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task G. Emergency Equipment and Survival Gear

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with emergency equipment, and survival gear appropriate to the aircraft and environment encountered during flight.

Knowledge:	The applicant demonstrates understanding of:
CP.IX.G.K1	Emergency Locator Transmitter (ELT) operations, limitations, and testing requirements.
CP.IX.G.K2	Fire extinguisher operations and limitations.
CP.IX.G.K3	Emergency equipment and survival gear needed for:

CP.IX.G.K3a a. Climate extremes (hot/cold)

CP.IX.G.K3b b. Mountainous terrain

CP.IX.G.K3c c. Overwater operations

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.IX.G.R1 Survival gear (water, clothing, shelter) for 48 to 72 hours.

Skills: The applicant exhibits the skill to:

CP.IX.G.S1 Identify appropriate equipment and personal gear.

CP.IX.G.S2 Brief passengers on proper use of on-board emergency equipment and survival gear.

Task H. Systems and Equipment Malfunctions

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with system and equipment malfunctions appropriate to the aircraft provided for the practical test.

Knowledge: The applicant demonstrates understanding of:

CP.IX.H.K1 Causes of partial or complete power loss related to the specific type of powerplant(s).

CP.IX.H.K2 System and equipment malfunctions specific to the aircraft, including:

CP.IX.H.K2a a. Electrical malfunction

CP.IX.H.K2b b. Vacuum/pressure and associated flight instrument malfunctions

CP.IX.H.K2c c. Pitot-static system malfunction

CP.IX.H.K2d d. Electronic flight deck display malfunction

CP.IX.H.K2e e. Landing gear or flap malfunction

CP.IX.H.K2f f. Inoperative trim

CP.IX.H.K3 Smoke/fire/powerplant compartment fire.

CP.IX.H.K4 Any other system specific to the aircraft (e.g., supplemental oxygen, deicing).

CP.IX.H.K5 Inadvertent door or window opening.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.IX.H.R1 Startle response.

CP.IX.H.R2 Checklist usage for a system or equipment malfunction.

CP.IX.H.R3 Distractions, task prioritization, loss of situational awareness, or disorientation.

CP.IX.H.R4 Undesired aircraft state.

Skills: The applicant exhibits the skill to:

CP.IX.H.S1 Determine appropriate action for simulated emergencies specified by the evaluator, from at least three of the elements or sub-elements listed in K1 through K5.

CP.IX.H.S2 Complete the appropriate checklist(s).

Task I. Dynamic Rollover

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with dynamic rollover.

Note: *Evaluator assesses this Task orally only.*

Knowledge: The applicant demonstrates understanding of:

CP.IX.I.K1 Elements related to dynamic rollover.

CP.IX.I.K2 Interactions between thrust, crosswind, slope, lateral CG, aircraft weight, and flight controls that contribute to dynamic rollover.

CP.IX.I.K3 Preventive flight technique and recovery during flight operations, including slope operations.

CP.IX.I.K4 Aircraft slope limitations.

Risk Management: The applicant is able to identify, assess, and mitigate risk associated with:

CP.IX.I.R1 Surface conditions conducive to dynamic rollover.

CP.IX.I.R2 Landing gear proximity to the surface.

CP.IX.I.R3 Flight control inputs during takeoff or landing.

CP.IX.I.R4 Sideward hover.

CP.IX.I.R5 Critical rollover angle and rolling moment.

CP.IX.I.R6 Translating tendency.

Skills: The applicant exhibits the skill to:

CP.IX.I.S1 [Intentionally left blank].

Task J. Recovery from Unusual Flight Attitudes

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with attitude instrument flying while recovering from unusual attitudes solely by reference to instruments.

Note: *See Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge: The applicant demonstrates understanding of:

CP.IX.J.K1 Prevention of unusual attitudes, including flight causal, physiological, and environmental factors, and system and equipment failures.

CP.IX.J.K2	Procedures for recovery from unusual attitudes in flight.
CP.IX.J.K3	Procedures available to safely regain visual meteorological conditions (VMC) after flight into inadvertent instrument meteorological conditions or unintended instrument meteorological conditions (IIMC)/(UIMC).
CP.IX.J.K4	Appropriate use of automation, if applicable.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.IX.J.R1	Situations that could lead to loss of control in-flight (LOC-I) or unusual attitudes in-flight (e.g., stress, task saturation, inadequate instrument scan distractions, and spatial disorientation).
CP.IX.J.R2	Assessment of the unusual attitude.
CP.IX.J.R3	Control input errors, inducing undesired aircraft attitudes.
CP.IX.J.R4	Collision hazards.
CP.IX.J.R5	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.IX.J.R6	Interpreting flight instruments.
CP.IX.J.R7	Operating envelope considerations.

Skills:	The applicant exhibits the skill to:
CP.IX.J.S1	Use proper instrument cross-check and interpretation to identify an unusual attitude (including both nose-high and nose-low) in flight, and apply the appropriate flight control, power input, and aircraft configuration in the correct sequence, to return to a stabilized level flight attitude.
CP.IX.J.S2	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Area of Operation X. High-Altitude Operations

Task A. Supplemental Oxygen

References: 14 CFR part 91; AC 61-107; AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with flight at higher altitudes where supplemental oxygen is required or recommended.

Knowledge:	The applicant demonstrates understanding of:
CP.X.A.K1	Regulatory requirements for supplemental oxygen use by flight crew and passengers.
CP.X.A.K2	Physiological factors, including:
CP.X.A.K2a	a. Impairment
CP.X.A.K2b	b. Symptoms of hypoxia
CP.X.A.K2c	c. Time of useful consciousness (TUC)
CP.X.A.K3	Operational factors, including:
CP.X.A.K3a	a. Characteristics, limitations, and applicability of continuous flow, demand, and pressure-demand oxygen systems
CP.X.A.K3b	b. Differences between and identification of “aviator’s breathing oxygen” and other types of oxygen
CP.X.A.K3c	c. Precautions when using supplemental oxygen systems

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.X.A.R1	High altitude flight.
CP.X.A.R2	Use of supplemental oxygen.
CP.X.A.R3	Management of compressed gas containers.
CP.X.A.R4	Combustion hazards in an oxygen-rich environment.

Skills:	The applicant exhibits the skill to:
CP.X.A.S1	Operate or simulate operation of the installed or portable oxygen equipment in the aircraft, if installed or available.
CP.X.A.S2	Determine the quantity of supplemental oxygen required in a scenario given by the evaluator.
CP.X.A.S3	Brief passengers on use of supplemental oxygen in a scenario given by the evaluator, if equipment is installed.
CP.X.A.S4	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task B. Pressurization

References: AC 61-107; AIM; FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with flight in pressurized aircraft at high altitudes.

Knowledge:	The applicant demonstrates understanding of:
CP.X.B.K1	Fundamental concepts of aircraft pressurization systems, including failure modes.
CP.X.B.K2	Physiological factors, including:
CP.X.B.K2a	a. Impairment
CP.X.B.K2b	b. Symptoms of hypoxia
CP.X.B.K2c	c. Time of useful consciousness (TUC)
CP.X.B.K2d	d. Effects of rapid decompression on crew and passengers
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.X.B.R1	High altitude flight.
CP.X.B.R2	Malfunction of pressurization system, if equipment is installed.
Skills:	The applicant exhibits the skill to:
CP.X.B.S1	Operate the pressurization system, if equipment is installed.
CP.X.B.S2	Respond appropriately to simulated pressurization malfunctions, if equipment is installed.
CP.X.B.S3	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Area of Operation XI. Special Operations

Task A. Confined Area Operations

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with confined area operations.

Knowledge:	The applicant demonstrates understanding of:
CP.XI.A.K1	Effects of wind, weight, temperature, and density altitude.
CP.XI.A.K2	Situations when a confined area approach and landing is recommended and factors related to landing performance including H/V diagram information.
CP.XI.A.K3	High and low reconnaissance, including takeoff and departure planning.
CP.XI.A.K4	Power requirements versus power available for the departure or arrival profile(s).
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.XI.A.R1	Selection of approach path, termination point and departure path based on aircraft performance and limitations, wind, and availability of alternate sites.
CP.XI.A.R2	Effects of:
CP.XI.A.R2a	a. Wind Direction
CP.XI.A.R2b	b. Windshear
CP.XI.A.R2c	c. Turbulence
CP.XI.A.R3	H/V diagram information.
CP.XI.A.R4	Go-around.
CP.XI.A.R5	Forced landing during the maneuver.
CP.XI.A.R6	Landing surface.
CP.XI.A.R7	Dynamic rollover.
CP.XI.A.R8	Ground resonance.
CP.XI.A.R9	Collision hazards.
CP.XI.A.R10	Vortex ring state (VRS).
CP.XI.A.R11	Aircraft limitations.
CP.XI.A.R12	Low altitude maneuvering.
CP.XI.A.R13	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.XI.A.R14	Power requirements versus power available for the departure or arrival profile(s).
Skills:	The applicant exhibits the skill to:
CP.XI.A.S1	Complete the appropriate checklist(s).

CP.XI.A.S2	Make radio calls as appropriate.
CP.XI.A.S3	Confirm power available meets or exceeds the power required for the selected departure or arrival profile(s).
CP.XI.A.S4	Determine wind direction with or without visible wind direction indicators.
CP.XI.A.S5	Accomplish a proper high and low reconnaissance of the confined landing area.
CP.XI.A.S6	Select a suitable approach path, termination point, and departure path.
CP.XI.A.S7	Track the selected approach path at an acceptable approach angle and rate of closure to the termination point.
CP.XI.A.S8	Continually evaluate the suitability of the confined landing area and termination point.
CP.XI.A.S9	Maintain powerplant and thrust output within normal limits.
CP.XI.A.S10	Execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing.
CP.XI.A.S11	Accomplish a proper ground reconnaissance.
CP.XI.A.S12	Terminate in a hover or on the surface, as appropriate.
CP.XI.A.S13	Use runway incursion avoidance procedures, if applicable.
CP.XI.A.S14	Conduct a takeoff and departure using the appropriate technique and aircraft configuration.
CP.XI.A.S15	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task B. Slope Operations

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with slope operations.

Note: *See Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations for information related to this Task.*

Knowledge:	The applicant demonstrates understanding of:
CP.XI.B.K1	Elements related to slope operations.
CP.XI.B.K2	Factors used for selecting an appropriate slope.
CP.XI.B.K3	Effect of wind on slope operations.
CP.XI.B.K4	Dynamic rollover considerations during slope operations and preventive/recovery techniques.
CP.XI.B.K5	Aircraft configuration and slope limitations.

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.XI.B.R1	Aircraft configuration.
CP.XI.B.R2	Operations on a slope.
CP.XI.B.R3	Conditions leading to dynamic rollover.

CP.XI.B.R4	Flight control limits.
CP.XI.B.R5	Surface conditions.
CP.XI.B.R6	Embarking or disembarking passengers.
CP.XI.B.R7	Exceeding the manufacturer's slope limitations.

Skills:	The applicant exhibits the skill to:
CP.XI.B.S1	Select a suitable slope.
CP.XI.B.S2	Complete the appropriate checklist(s).
CP.XI.B.S3	Position the primary flight controls, including the thrust vector, for the prevailing environmental conditions.
CP.XI.B.S4	Maintain heading and ground position and prevent movement of aircraft on slope.
CP.XI.B.S5	Recognize if slope is too steep and abandon the operation prior to reaching flight control limits.
CP.XI.B.S6	Make a smooth positive descent to touch the upslope landing gear on the sloping surface.
CP.XI.B.S7	Neutralize controls after landing.
CP.XI.B.S8	Make a smooth transition from the slope to a stabilized hover parallel to the slope.
CP.XI.B.S9	Properly move away from the slope.
CP.XI.B.S10	Maintain positive control of aircraft throughout the maneuver.
CP.XI.B.S11	Use controls while lowering the downslope landing gear to touchdown.
CP.XI.B.S12	Maintain specified headings throughout the operation, ±5°.
CP.XI.B.S13	Use single-pilot resource management (SRM) or crew resource management (CRM), as appropriate.

Task C. Pinnacle Operations

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with pinnacle operations.

Knowledge:	The applicant demonstrates understanding of:
CP.XI.C.K1	Elements of pinnacle/platform operations.
CP.XI.C.K2	Effects of wind, weight, temperature, and density altitude.
CP.XI.C.K3	Suitable takeoff point and departure flight path during climb.
CP.XI.C.K4	Situations when a pinnacle/platform approach, landing and takeoff is recommended and factors related to aircraft performance.
CP.XI.C.K5	Elements of a high and low reconnaissance.
CP.XI.C.K6	Power requirements versus power available for the departure or arrival profile(s).

Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:

CP.XI.C.R1	Selection of approach path, termination point and departure path based on aircraft performance and limitations, and wind.
CP.XI.C.R2	Effects of:
CP.XI.C.R2a	a. Wind Direction
CP.XI.C.R2b	b. Windshear
CP.XI.C.R2c	c. Turbulence
CP.XI.C.R3	H/V diagram information.
CP.XI.C.R4	Go-around.
CP.XI.C.R5	Powerplant failure during approach/landing phase of flight.
CP.XI.C.R6	Collision hazards.
CP.XI.C.R7	Vortex ring state (VRS).
CP.XI.C.R8	Landing surface.
CP.XI.C.R9	Dynamic rollover.
CP.XI.C.R10	Ground resonance.
CP.XI.C.R11	Aircraft limitations.
CP.XI.C.R12	Low altitude maneuvering.
CP.XI.C.R13	Distractions, task prioritization, loss of situational awareness, or disorientation.
CP.XI.C.R14	Passenger exposure to thrust or exhaust.
CP.XI.C.R15	Forced landing.
CP.XI.C.R16	Power requirements versus power available for the departure or arrival profile(s).

Skills:	The applicant exhibits the skill to:
CP.XI.C.S1	Complete the appropriate checklist(s).
CP.XI.C.S2	Confirm power available meets or exceeds the power required for the selected departure or arrival profile(s).
CP.XI.C.S3	Make radio calls as appropriate.
CP.XI.C.S4	Accomplish high and low reconnaissance.
CP.XI.C.S5	Determine wind direction with or without visible wind direction indicators.
CP.XI.C.S6	Select a suitable approach path, termination point, and departure path.
CP.XI.C.S7	Select an approach path considering wind direction.
CP.XI.C.S8	Track the selected approach path at an acceptable approach angle and rate of closure to the termination point.
CP.XI.C.S9	Maintain powerplant and thrust output within normal limits.
CP.XI.C.S10	Execute a timely go-around if the approach cannot be made within the tolerances specified above or for any other condition that may result in an unsafe approach or landing.

CP.XI.C.S11 Accomplish a proper ground reconnaissance.

CP.XI.C.S12 Terminate in a hover or on the surface, as appropriate.

CP.XI.C.S13 Select a suitable takeoff point and consider factors affecting takeoff and climb performance under various conditions.

Area of Operation XII. Postflight Procedures

Task A. After Landing, Parking, and Securing

References: FAA-H-8083-2, FAA-H-8083-25; Flight Manual

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with after landing, parking, and securing procedures.

Knowledge:	The applicant demonstrates understanding of:
CP.XII.A.K1	Parking, shutdown, securing, and postflight inspection.
CP.XII.A.K2	Documenting in-flight/postflight discrepancies.
Risk Management:	The applicant is able to identify, assess, and mitigate risk associated with:
CP.XII.A.R1	Activities and distractions.
CP.XII.A.R2	Airport/heliport specific security procedures.
CP.XII.A.R3	Disembarking passengers safely on the ramp and monitoring passenger movement while on the ramp.
Skills:	The applicant exhibits the skill to:
CP.XII.A.S1	Minimize any hazardous effects of thrust/downwash during hover, if applicable.
CP.XII.A.S2	Park in an appropriate area, considering the safety of nearby persons and property.
CP.XII.A.S3	Complete the appropriate checklist(s).
CP.XII.A.S4	Conduct a postflight inspection and document discrepancies and servicing requirements, if any.
CP.XII.A.S5	Secure the aircraft.

Appendix 1: Practical Test Roles, Responsibilities, and Outcomes

Eligibility Requirements for a Commercial Pilot Certificate

The prerequisite requirements and general eligibility for a practical test and the specific requirements for the issuance of a Commercial Pilot Certificate in the powered-lift category can be found in 14 CFR part 61, sections 61.39(a) and 61.123.

In accordance with 14 CFR part 61, section 61.39, the applicant must pass the airman knowledge test before taking the practical test, if applicable to the certificate or rating sought.

An applicant seeking to add an additional category or class to an existing certificate must comply with 14 CFR section 61.63, as applicable.

For an initial commercial certificate, applicants must pass the knowledge test listed in the table below as a prerequisite for the practical test.

Test Code	Test Name	Number of Questions	Age	Allotted Time	Passing Score
CPL	Commercial Pilot - Powered-Lift	100	16	3.0	70

Use of the ACS During a Practical Test

The practical test is conducted in accordance with the ACS and FAA regulations that are current as of the date of the test.

The Areas of Operation in this ACS align with the Areas of Operation found in 14 CFR part 61, section 61.127(b). Each Area of Operation includes Tasks appropriate to that Area of Operation. Each Task contains an Objective stating what the applicant must know, consider, and/or do. The ACS then lists the aeronautical knowledge, risk management, and skill elements relevant to the specific Task, along with the conditions and standards for acceptable performance. The ACS uses Notes to emphasize special considerations.

During the ground and flight portion of the practical test, the FAA expects evaluators to assess the applicant's mastery of the topic in accordance with the level of learning most appropriate for the specified Task. The oral questioning will continue throughout the entire practical test. For some topics, the evaluator will ask the applicant to describe or explain. For other items, the evaluator will assess the applicant's understanding by providing a scenario that requires the applicant to appropriately apply and/or correlate knowledge, experience, and information to the circumstances of the given scenario. The flight portion of the practical test requires the applicant to demonstrate knowledge, risk management, flight proficiency, and operational skill in accordance with the ACS.

The elements within each Task in this ACS are coded according to a scheme that includes four components. For example, CP.I.C.K2:

CP = Applicable ACS

I = Area of Operation

C = Task

K2 = Task element (in this example, Knowledge 2)

There is no requirement for an evaluator to test every knowledge and risk management element in a Task; rather the evaluator has discretion to sample as needed to ensure the applicant’s mastery of that Task. The required minimum elements to be tested from each applicable Task include:

- any elements in which the applicant was shown to be deficient on the knowledge test, as applicable;
- at least one knowledge element;
- at least one risk management element; and
- all skill elements unless otherwise noted.

The Airman Knowledge Test Report (AKTR) lists ACS codes that correlate to a specific Task element for a given Area of Operation for any incorrect responses on the knowledge test.

Knowledge and risk management elements are primarily evaluated during the knowledge testing phase of the airman certification process. The evaluator administering the practical test has the discretion to combine Tasks/elements as appropriate to testing scenarios.

Unless otherwise noted in the Task, the evaluator must test each item in the skills section by observing the applicant perform each one. As safety of flight conditions permit, the evaluator should use questions during flight to test knowledge and risk management elements not evident in the demonstrated skills. To the greatest extent practicable, evaluators should test the applicant's ability to apply and correlate information and use rote questions only when they are appropriate for the material being tested.

If the Task includes a knowledge or risk element with sub-elements, the evaluator may choose the primary element and select at least one sub-element to satisfy the requirement. Selection of the sub-element satisfies the requirement for one element unless otherwise noted.

For example, an evaluator who chooses CP.I.F.K2 may select a sub-element such as CP.I.F.K2e to satisfy the requirement to select one knowledge element.

The References for each Task indicate the source material for Task elements. For example, in the Task element "Acceptable weather products and resources required for preflight planning, current and forecast weather for departure, en route, and arrival phases of flight such as:" (CP.I.C.K2), the applicant should be prepared for questions on any weather product presented in the references for that Task.

The FAA encourages applicants and instructors to use the ACS when preparing for the airman knowledge tests and practical tests. Evaluators must conduct the practical test in accordance with the current ACS and FAA regulations pursuant to 14 CFR part 61, section 61.43. If an applicant is entitled to credit for Areas of Operation previously passed as indicated on a Notice of Disapproval of Application or Letter of Discontinuance, evaluators shall use the ACS currently in effect on the date of the test.

The ground portion of the practical test allows the evaluator to determine whether the applicant is sufficiently prepared to advance to the flight portion of the practical test. The applicant must pass the ground portion of the practical test before beginning the flight portion. The oral questioning will continue throughout the entire practical test.

Instructor Responsibilities

The instructor trains and qualifies the applicant to meet the established standards for knowledge, risk management, and skill elements in all Tasks appropriate to the certificate and rating sought. The instructor should use this ACS and its references when preparing the applicant to take the practical test and when retraining the applicant to proficiency in any subject(s) missed on the knowledge test.

Evaluator Responsibilities

An evaluator includes the following:

- Aviation Safety Inspector (ASI);
- Pilot examiner (other than administrative pilot examiners);
- Training center evaluator (TCE);
- Chief instructor, assistant chief instructor, or check instructor of pilot school holding examining authority; or
- Instrument Flight Instructor (CFII) conducting an instrument proficiency check (IPC).

The evaluator who conducts the practical test verifies the applicant has met the aeronautical experience requirements specified for a certificate or rating before administering the test. During the practical test, the evaluator determines whether the applicant meets the established standards of aeronautical knowledge, risk management, and skills for the Tasks in the appropriate ACS.

The evaluator must develop a plan of action (POA) that includes all required Areas of Operation and Tasks and administer each practical test in English. The POA must include scenario(s) that evaluate as many of the required Areas of Operation and Tasks as possible. As a scenario unfolds during the test, the evaluator will introduce problems and simulate emergencies that test the applicant's ability. The evaluator has the discretion to modify the POA to accommodate unexpected situations as they arise or suspend and later resume a scenario to assess certain Tasks.

Prior to and throughout the evaluation, the evaluator ensures the applicant meets the FAA Aviation English Language Standard (AELS). An applicant must be able to communicate in English in a discernible and understandable manner with

air traffic control (ATC), pilots, and others involved in preparing an aircraft for flight and operating an aircraft in flight. This communication may or may not involve radio communications. An applicant for an FAA certificate or rating issued in accordance with 14 CFR parts 61, 63, 65, or 107 who cannot hear or speak due to a medical deficiency may be eligible for an FAA certificate with specific operational limitations.

If the applicant's ability to meet the FAA AELS comes into question before starting the practical test, the evaluator will not begin the practical test. An evaluator other than an ASI will check the box, "Referred to FSO for Aviation English Language Standard Determination," located on the bottom of page 2 of the applicant's FAA Form 8710-1, Airman Certificate and/or Rating Application, or FAA Form 8710-11, Airman Certificate and/or Rating Application - Sport Pilot, as applicable. The evaluator will refer the applicant to the appropriate Flight Standards Office (FSO).

If the applicant's ability to meet the FAA AELS comes into question after the practical test begins, an evaluator who other than an ASI will discontinue the practical test and check the box, "Referred to FSO for Aviation English Language Standard Determination," on the application. The evaluator will also issue FAA Form 8060-5, Notice of Disapproval of Application, with the comment "Does Not Demonstrate FAA AELS" in addition to any unsatisfactory Task(s). The evaluator will refer the applicant to the appropriate FSO. ASIs conducting the practical test may assess an applicant's English language proficiency in accordance with FAA Order 8900.1.

In either case, the evaluator must complete and submit the application file through normal application procedures and evaluators other than an ASI notify the appropriate FSO of the referral.

If the ability of an FAA certificated airman comes into question prior to or during a required regulatory check (e.g., proficiency check) the evaluator other than an ASI will not continue the check or provide an endorsement indicating completion. The evaluator will refer the airman to the jurisdictional FAA field office for further determination of ability to meet the FAA AELS.

For additional information, reference AC 60-28, FAA English Language Standard for an FAA Certificate issued under 14 CFR parts 61, 63, 65, and 107, as amended.

Possible Outcomes of the Test

A practical test has three possible outcomes: (1) Temporary Airman Certificate (satisfactory), (2) Notice of Disapproval of Application (unsatisfactory), or (3) Letter of Discontinuance.

If the evaluator determines that a Task is incomplete, or the outcome is uncertain, the evaluator must require the applicant to repeat that Task, or portions of that Task. This provision does not mean that instruction, practice, or the repetition of an unsatisfactory Task is permitted during the practical test.

Satisfactory Performance

Refer to 14 CFR part 61, section 61.43, for satisfactory performance requirements.

Satisfactory performance will result in the issuance of a temporary certificate.

Unsatisfactory Performance

If, in the judgment of the evaluator, the applicant does not meet the standards for any Task, the applicant fails the Task and associated Area of Operation and the evaluator issues a Notice of Disapproval of Application. The evaluator lists the Area(s) of Operation in which the applicant did not meet the standard, any Area(s) of Operation not tested, and the number of practical test failures. The evaluator should also list the Tasks failed or Tasks not tested within any unsatisfactory or partially completed Area(s) of Operation. 14 CFR part 61, section 61.43(c)-(f) provides additional unsatisfactory performance requirements and parameters.

Typical areas of unsatisfactory performance and grounds for disqualification include:

- Any action or lack of action by the applicant that requires corrective intervention by the evaluator to maintain safe flight.
- Failure to use proper and effective visual scanning techniques to clear the area before and while performing maneuvers.
- Consistently exceeding tolerances stated in the skill elements of the Task.
- Failure to take prompt corrective action when tolerances are exceeded.
- Failure to exercise risk management.

The evaluator or the applicant may end the test if the applicant fails a Task. The evaluator may continue the test only with the consent of the applicant. The applicant receives credit only for those Areas of Operation and the associated Tasks performed satisfactorily.

Letter of Discontinuance

Refer to 14 CFR part 61, section 61.43(e)(2) for conditions to issue a letter of discontinuance.

If discontinuing a practical test for reasons other than unsatisfactory performance (e.g., equipment failure, weather, illness), the evaluator must return all test paperwork to the applicant. The evaluator must prepare, sign, and issue a Letter of Discontinuance that lists those Areas of Operation the applicant successfully completed and the time period remaining to complete the test to receive credit for previously completed Areas of Operation. The evaluator should advise the applicant to present the Letter of Discontinuance to the evaluator when the practical test resumes in order to receive credit for the items successfully completed. The Letter of Discontinuance becomes part of the applicant's certification file.

Time Limit and Credit after a Discontinued Practical Test

Refer to 14 CFR part 61, sections 61.39(f) and 61.43(f) after issuance of a Letter of Discontinuance or Notice of Disapproval of Application.

Additional Rating Task Table

For an applicant who holds a Commercial Certificate and seeks an additional Powered-Lift category at the Commercial Pilot level, the evaluator must evaluate that applicant in the Areas of Operation and Tasks listed in the Additional Rating Task Table. The evaluator may evaluate the applicant’s competence in the remaining Areas of Operation and Tasks.

If the applicant holds two or more category or class ratings at the commercial level, and the ratings table indicates different Task requirements, the “least restrictive” entry applies. For example, if an asterisk (*) and “None” are indicated for one Area of Operation, the “None” entry applies. If the table indicates “B” and “B, C” the “B” entry applies.

Addition of a Powered-Lift Rating to an Existing Commercial Pilot Certificate

The table below indicates the required Tasks for each Area of Operation tested in accordance with this ACS.

Legend	
ASEL	Airplane – Single-Engine Land
AMEL	Airplane – Multiengine Land
ASES	Airplane – Single-Engine Sea
AMES	Airplane – Multiengine Sea
RH	Rotorcraft – Helicopter
RG	Rotorcraft – Gyroplane

	Commercial Pilot Rating(s) Held								
Area of Operation	**ASEL**	**AMEL**	**ASES**	**AMES**	**RH**	**RG**	**Glider**	**Balloon**	**Airship**
I	F,G,I	F,G,I	F,G,I	F,G,I	F,G	F,G	D,F,G,I	D,F,G,I	D,F,G,I
II	A,B,C,D	A,B,C,D	A,B,C,D	A,B,C,D	A,B,C,D	A,B,C,D	*	*	*
III	B,C	B,C	B,C	B,C	C	C	B,C	B,C	B,C
IV	*	*	*	*	*	*	*	*	*
V	*	*	*	*	*	*	*	*	*
VI	*	*	*	*	B	*	*	*	*
VII	None	None	None	None	None	None	*	*	*
VIII	A	A	A	A	*	*	*	*	*
IX	A,B,C,D,E,H,I	A,B,C,D,E,H,I	A,B,C,D,E,H,I	A,B,C,D,E,H,I	A,B,C,E,F,H,J	A,B,C,D,E,F,H,I,J	A,B,C,D,E,F,H,I,J	A,B,C,D,E,F,H,I,J	A,B,C,D,E,F,H,I,J
X	None	None	None	None	*	*	*	*	*
XI	*	*	*	*	B	*	*	*	*
XII	*	*	*	*	*	*	*	*	*

Note: *An asterisk directs the evaluator to follow the selection requirements for the AOO and Tasks in the body of this ACS.*

Appendix 2: Safety of Flight

General

Safety of flight must be the prime consideration at all times. The evaluator, applicant, and crew must be continually alert for other traffic. If performing aspects of a given maneuver, such as emergency procedures, would jeopardize safety, the evaluator will ask the applicant to simulate that portion of the maneuver. The evaluator will assess the applicant's use of visual scanning and collision avoidance procedures throughout the entire test.

Stall, Spin, Angle of Attack Awareness

An applicant, instructor, and evaluator must avoid operations that lead to inadvertent high angle of attack flight that may lead to loss of control, when thrust-borne-lift is insufficient for wing-borne flight.

Use of Checklists

Throughout the practical test, the applicant is evaluated on the use of an appropriate checklist.

Assessing proper checklist use depends upon the specific Task. In all cases, the evaluator should determine whether the applicant demonstrates CRM, appropriately divides attention, and uses proper visual scanning. In some situations, reading the actual checklist may be impractical or unsafe. In such cases, the evaluator should assess the applicant's performance of published or recommended immediate action “memory” items along with their review of the appropriate checklist once conditions permit.

In a single-pilot aircraft, the applicant should demonstrate the crew resource management (CRM) principles described as single-pilot resource management (SRM). Proper use depends on the specific Task being evaluated. If the use of the checklist while accomplishing elements of an Objective would be either unsafe or impractical in a single-pilot operation, the applicant should review the checklist after accomplishing the elements.

Positive Exchange of Flight Controls

A clear understanding of who has control of the aircraft must exist. Prior to flight, the pilots involved should conduct a briefing that includes reviewing the procedures for exchanging flight controls.

The FAA recommends a positive three-step process for exchanging flight controls between pilots:

- When one pilot seeks to have the other pilot take control of the aircraft, they will say, “You have the flight controls.”
- The second pilot acknowledges immediately by saying, “I have the flight controls.”
- The first pilot again says, “You have the flight controls,” and visually confirms the exchange.

Pilots should follow this procedure during any exchange of flight controls, including any occurrence during the practical test. The FAA also recommends that both pilots use a visual check to verify that the exchange has occurred. Doubt as to who is flying the aircraft should not occur.

Use of Distractions

Numerous studies indicate that many accidents have occurred when the pilot has been distracted during critical phases of flight. The evaluator should incorporate realistic distractions during the flight portion of the practical test to evaluate the pilot's situational awareness and ability to utilize proper control technique while dividing attention both inside and outside the flight deck.

Aeronautical Decision-Making, Risk Management, Crew Resource Management, and Single-Pilot Resource Management

Throughout the practical test, the evaluator must assess the applicant's ability to use sound aeronautical decision-making procedures in order to identify hazards and mitigate risk. The evaluator must accomplish this requirement by reference to the risk management elements of the given Task(s), and by developing scenarios that incorporate and combine Tasks appropriate to assessing the applicant's risk management in making safe aeronautical decisions. For example, the evaluator

may develop a scenario that incorporates weather decisions and performance planning.

In assessing the applicant's performance, the evaluator should take note of the applicant's use of CRM and, if appropriate, SRM. CRM/SRM is the set of competencies that includes situational awareness, communication skills, teamwork, task allocation, and decision-making within a comprehensive framework of standard operating procedures (SOP). SRM specifically refers to the management of all resources onboard the aircraft, as well as outside resources available to the single pilot.

If an applicant fails to use aeronautical decision-making (ADM), including SRM/CRM, as applicable in any Task, the evaluator will note that Task as failed. The evaluator will also include the ADM Skill element from the Flight Deck Management Task on the Notice of Disapproval of Application.

Multi-Powerplant Considerations

During the required preflight briefing for practical tests conducted in a multi-powerplant powered-lift aircraft, the evaluator and applicant must discuss the methods for simulating powerplant(s) failure including:

- Who will initiate the simulated powerplant(s) failure;
- The technique used to simulate the powerplant(s) failure; and
- Who will perform the power recovery procedure.

The evaluator must not simulate a powerplant(s) failure during takeoff while in semi-wing-borne flight until attaining an altitude of at least 400 feet AGL and a minimum safe speed in accordance with the approved flight manual.

The evaluator must select an entry altitude that will allow the powerplant(s) failure and restart demonstration Task to be completed no lower than 3,000 feet AGL, unless a higher altitude is required by the flight manual. At altitudes lower than 3,000 feet AGL, powerplant(s) failure should be simulated in accordance with the flight manual.

For safety reasons, when the practical test is conducted in an aircraft and a powerplant(s) shutdown is required, the applicant demonstrates these Tasks only under conditions and at a position and altitude where it is possible to make a safe landing on a suitable landing surface if there is difficulty restarting the powerplant(s). If it is not possible to restart the powerplant(s) while airborne, the applicant and the evaluator shall treat the situation as an emergency.

Appendix 3: Aircraft, Equipment, and Operational Requirements & Limitations

Aircraft Requirements & Limitations

If the aircraft has inoperative equipment and can be operated in accordance with 14 CFR part 91, section 91.213, it must be determined if any inoperative instruments or equipment are required to complete the practical test. The inoperative equipment must not interfere with practical test requirements.

Equipment Requirements & Limitations

The aircraft must meet the requirements as outlined in 14 CFR part 61, section 61.45.

To assist in management of the aircraft during the practical test, the applicant is expected to demonstrate automation management skills by utilizing installed, available, or airborne equipment such as autopilot, avionics and systems displays, and/or a flight management system (FMS). The evaluator is expected to test the applicant's knowledge of the systems that are available or installed and operative during both the ground and flight portions of the practical test. If the applicant has trained using a portable electronic flight bag (EFB) to display charts and data and wishes to use the EFB during the practical test, the applicant is expected to demonstrate appropriate knowledge, risk management, and skill appropriate to its use.

If the practical test involves maneuvering the aircraft solely by reference to instruments, the applicant is required by 14 CFR part 61, section 61.45(d)(2) to provide an appropriate view limiting device acceptable to the Administrator. The applicant and the evaluator should establish a procedure as to when and how this device should be donned and removed and brief this procedure before the flight. This device must prevent the applicant from having visual reference outside the aircraft, but it must not restrict the evaluator's ability to see and avoid other traffic. The use of the device does not apply to specific elements within a Task when there is a requirement for visual references.

Use of Flight Simulation Training Devices (FSTD)

Applicants for a pilot certificate or rating can accomplish all or part of a practical test or proficiency check in an FSTD qualified under 14 CFR part 60, which includes full flight simulators (FFS) or flight training devices (FTD), only when conducted within an FAA-approved training program. Each operational rule part identifies additional requirements for the approval and use of FSTDs in an FAA-approved training program.

Credit for Pilot Time in an FSTD

14 CFR part 61 and part 141 specify the minimum experience requirements for each certificate or rating sought. 14 CFR part 61 and the appendices to part 141 specify the maximum amount of FFS or FTD flight training time an applicant can apply toward those experience requirements.

Use of Aviation Training Devices (ATD)

Applicants for a pilot certificate or rating cannot use an ATD to accomplish a practical test, a 14 CFR part 61, section 61.58 proficiency check, or the flight portion of a 14 CFR part 61, section 61.57 flight review. An ATD is defined in 14 CFR part 61, section 61.1.

The FAA's General Aviation and Commercial Division evaluates and approves ATDs as permitted under 14 CFR part 61, section 61.4(c) and FAA Order 8900.1. Each ATD is then issued an FAA letter of authorization (LOA) that is valid for 60 calendar months. The LOA for each ATD lists the pilot time credit allowances and associated limitations.

The Pilot Training and Certification Group public website provides a list of the FAA-approved ATDs and the associated manufacturer.

Credit for Pilot Time in an ATD

14 CFR part 61 and part 141 specify the minimum experience requirements for each certificate or rating sought. 14 CFR part 61 and the appendices to part 141 specify the maximum amount of ATD flight training time an applicant can apply toward those experience requirements. The LOA for each FAA-approved ATD lists the pilot time credit allowances and the associated limitations.

Evaluators must request an applicant to provide a copy of the manufacturer's LOA when using ATD flight training time credit

to meet the minimum experience requirements for an airman pilot certificate, rating, or privilege.

Operational Requirements, Limitations, & Task Information

V. Takeoffs, Landings, and Go-Arounds

Task F. Steep Approach and Landing

Demonstration of a steep approach and landing may vary with each powered-lift make and model. The maximum angle to be used for any steep approach must be conducted in accordance with the approved flight manual.

VIII. Slow Flight and Stalls

Task A. Maneuvering During Slow Flight (Wing-Borne Configuration)

Evaluation criteria for this Task should recognize that environmental factors (e.g., turbulence) may result in a momentary activation of stall warning indicators, such as the stall horn. If the applicant recognizes the stall warning indication and promptly makes an appropriate correction, a momentary activation does not constitute unsatisfactory performance on this Task. As with other Tasks, unsatisfactory performance would arise from an applicant's continual deviation from the standard, lack of correction, and/or lack of recognition.

Task B. Power-Off Stalls

Power-Off Stalls shall be conducted in accordance with the manufacturer's flight manual. Evaluation criteria for a recovery from an approach to stall should not mandate a predetermined value for altitude loss and should not mandate maintaining altitude during recovery. Proper evaluation criteria should consider the multitude of external and internal variables that affect the recovery. The applicant shall select an entry altitude that will allow a recovery no lower than 3,000 feet AGL.

Task C. Power-On Stalls

Power-On Stalls shall be conducted in accordance with the manufacturer's flight manual. If allowed by the manufacturer, the power setting may be reduced below the ACS guidelines power setting to prevent excessively high pitch attitudes greater than 30° nose up, or the manufacturer's aircraft limitation in the flight manual. Evaluation criteria for a recovery from an approach to stall should not mandate a predetermined value for altitude loss and should not mandate maintaining altitude during recovery. Proper evaluation criteria should consider the multitude of external and internal variables that affect the recovery. The applicant shall recover at an altitude no lower than 3,000 feet AGL.

Task D. Accelerated Stalls

Pilots must set power for airspeed at or below the design maneuvering speed (V_A) for the powered-lift aircraft. A successful recovery occurs at the first indication of a stall. Delaying application of power until the powered-lift aircraft reaches a wings level altitude, attains a safe speed, and responds normally to control inputs is acceptable.

IX. Emergency Operations

Task A. Powerplant(s) Failure (Simulated) during Takeoff in Thrust-Borne Flight

Powerplant(s) Failure (Simulated) during Takeoff in Thrust-Borne Flight must be accomplished in-ground effect, approximately 15-20 knots and prior to reaching 50 percent of the available takeoff distance. The evaluator and applicant must ensure a safe landing area is available and free of obstructions.

Task B. Powerplant(s) Failure (Simulated) during Takeoff While in Semi-Wing-Borne Flight

The evaluator must not simulate a powerplant(s) failure during takeoff while in semi-wing-borne flight until attaining an altitude of at least 400 feet AGL and a minimum safe speed in accordance with the approved flight manual.

Task C. Inflight Powerplant(s) Failure and Restart in Multi-Powerplant Aircraft

Refer to Appendix 2: Safety of Flight, Multi-Powerplant Considerations, for additional information concerning required aircraft

capabilities as they relate to this Task.

When conducted in an FSTD, powerplant(s) failure or shutdown may be performed in conjunction with any Task and at locations and altitudes at the discretion of the evaluator.

Task E. Approach and Landing with Powerplant(s) Failure (Simulated)

The applicant must demonstrate at least one landing with a simulated powerplant(s) failure, in accordance with the approved flight manual.

Task J. Recovery from Unusual Flight Attitudes

The evaluator shall conduct a preflight briefing with the applicant regarding recovery. Intervention by the evaluator to prevent the applicant from exceeding any aircraft operating limitations or from entering an unsafe flight condition shall be disqualifying and the Task is unsatisfactory.

XI. Special Operations

Task B. Slope Operations

Demonstration of parallel slope operations must be conducted in accordance with the powered-lift manufacturer's flight manual.

If no slope limitations are published for the aircraft being used, parallel slope operations of approximately 5-10 degrees may be demonstrated. Landings with the aircraft facing downhill or uphill will not be tested during the practical test. A thorough review of the intended slope operations area must be conducted to ensure clearance from hazards.