



U.S. Department
of Transportation
**Federal Aviation
Administration**

FAA-S-8081-3B

RECREATIONAL PILOT

Practical Test Standards

for

Airplane Category and

Rotorcraft Category

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Flight Standards Service
Washington, DC 20591

Foreword

FAA-S-8081-3B, Recreational Pilot Practical Test Standards for Airplane Category and Rotorcraft Category is published by the FAA to establish the standards for recreational pilot practical tests for airplane, rotorcraft/helicopter, and rotorcraft/gyroplane. FAA inspectors and designated examiners shall conduct practical tests in compliance with these standards. Instructors and applicants should find these standards helpful in practical test preparation.

FAA-S-8081-3B supersedes FAA-S-8081-3A, Recreational Pilot Practical Test Standards for Airplane, Rotorcraft/Helicopter, and Rotorcraft/Gyroplane, dated August 2006.

Major Enhancements to Version FAA-S-8081-3B

- Updated References throughout
- Changed “student” to “learner” throughout
- Changed “cockpit” to “flight deck” throughout
- Introduction:
 - Updated “General Information” section
 - Revised “Practical Test Standards Concept” section
 - Revised “Practical Test Standards Description” section
 - Updated “Abbreviations” section
 - Updated “Practical Test Prerequisites” section
 - Updated “Aircraft and Equipment Required for the Practical Test” section
 - Updated “Examiner Responsibility” section
- Revised Task A: Certificates and Documents in Area of Operation I: Preflight Preparation in Section 1
- Revised Task F: Before Takeoff Check in Area of Operation II: Preflight Procedures in Section 1
- Revised Task M: Forward Slip to a Landing in Area of Operation IV: Takeoffs, Landings, and Go-Arounds in Section 1
- Revised Task A: Certificates and Documents in Area of Operation I: Preflight Preparation in Section 2
- Revised Task D: Before Takeoff Check in Area of Operation II: Preflight Procedures in Section 2
- Revised Task A: Certificates and Documents in Area of Operation I: Preflight Preparation in Section 3
- Revised Task E: Before Takeoff Check in Area of Operation II: Preflight Procedures in Section 3

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Introduction

General Information

The FAA has developed the PTS for use by FAA inspectors and evaluators when conducting the practical test. Instructors should use this PTS when preparing applicants for practical tests. Applicants should be familiar with this PTS and refer to these standards during their training.

Throughout this PTS the following titles will be referred to as an evaluator: ASI, pilot examiner (other than administrative pilot examiners), TCE, or chief instructor, assistant chief instructor, or check instructor of pilot school holding examining authority, or authorized instruction.

Information considered directive in nature is described in this PTS in terms such as “shall” and “must,” indicating the actions are mandatory. Guidance information is described in terms such as “should” and “may,” indicating the actions are desirable or permissive, but not mandatory.

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

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

PTS Concept

14 CFR part 61 specifies the subject areas in which knowledge and skill must be demonstrated by the applicant before the issuance of a certificate. The practical test standards contain the Areas of Operation and specific Tasks in which competency shall be demonstrated. The FAA will revise this PTS whenever it is determined that changes are needed in the interest of safety. Per 14 CFR part 61, section 61.43, adherence to the practical test standards is mandatory.

PTS Description

The Recreational Pilot—Practical Test Standards for Airplane Rotorcraft/Helicopter Rotorcraft/Gyroplane include the Areas of Operation and Tasks for the issuance of an initial Recreational Pilot Certificate and for the addition of category and/or class ratings to that certificate.

Areas of Operation are phases of the practical test arranged in a logical sequence within this standard. They begin with Preflight Preparation and end with Postflight Procedures. The evaluator may conduct the practical test in any sequence that will result in a complete and efficient test; **however, the ground portion of the practical test must be accomplished before the flight portion.**

Tasks are specific knowledge areas, flight procedures, or maneuvers appropriate to an Area of Operation.

Note is used to emphasize special considerations required in the Area of Operation or Task.

Reference identifies the publication(s) that describe(s) the Task. Descriptions of Tasks are not included in the standards because this information can be found in the current issue of the listed reference. Publications other than those listed may be used, for references if their content conveys substantially the same meaning as the referenced publications.

This PTS is based on the following references:

14 CFR part 1	Definitions and Abbreviations
14 CFR part 43	Maintenance, Preventive Maintenance, Rebuilding, and Alteration
14 CFR part 61	Certification: Pilots, Flight Instructors, and Ground Instructors
14 CFR part 67	Medical Standards and Certification
14 CFR part 68	Requirements for Operating Certain Small Aircraft without a Medical Certificate
14 CFR part 71	Designation of Class A, B, C, D, and E Airspace Areas; Air Traffic Service Routes; and Reporting Points
14 CFR part 91	General Operating and Flight Rules
AC 60-22	Aeronautical Decision-Making
AC 60-28	FAA English Language Standard for an FAA Certificate Issued Under 14 CFR Parts 61, 63, 65, and 107
AC 61-65	Certification: Pilots and Flight and Ground Instructors
AC 61-67	Stall and Spin Awareness Training
AC 61-98	Currency Requirements and Guidance for the Flight Review and Instrument Proficiency Check
AC 61-134	General Aviation Controlled Flight into Terrain Awareness
AC 90-23	Aircraft Wake Turbulence
AC 90-48	Pilots' Role in Collision Avoidance
AC 90-66	Non-Towered Airport Flight Operations
AC 90-95	Unanticipated Right Yaw in Helicopters
AC 91-32	Safety In and Around Helicopters
AC 91-55	Reduction of Electrical System Failures Following Aircraft Engine Starting
AC 91-73	Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations
AC 120-51	Crew Resource Management Training
AFH	Airplane Flying Handbook
AIM	Aeronautical Information Manual
FAA-H-8083-1	Weight and Balance Handbook
FAA-H-8083-2	Risk Management Handbook
FAA-H-8083-3	Airplane Flying Handbook
FAA-H-8083-21	Helicopter Flying Handbook
FAA-H-8083-23	Seaplane, Skiplane and Float/Skid Equipped Helicopter Operations Handbook
FAA-H-8083-28	Aviation Weather Handbook
FAA-H-8083-25	Pilot's Handbook of Aeronautical Knowledge
HFM	Helicopter Flight Manual
NOTAM	Notice to Air Missions
49 CFR part 830	NTSB: Notification and Reporting of Aircraft Accidents or Incidents and Overdue Aircraft, and Preservation of Aircraft Wreckage, Mail, Cargo, and Records
POH/AFM	Pilot's Operating Handbook/FAA-Approved Flight Manual
RFM	Rotorcraft Flight Manual
GFM	Gyroplane Flight Manual
Other	Aeronautical Navigation Charts International-Inland Seaplane Supplement Chart Supplements

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

The Objective lists the important elements that must be satisfactorily performed to demonstrate competency in a Task. The Objective includes:

1. specifically what the applicant must be able to do;
2. the conditions under which the Task is to be performed;
3. the acceptable standards of performance; and
4. safety considerations, when applicable.

Abbreviations/Acronyms

14 CFR	Title 14 of the Code of Federal Regulations
AC	Advisory Circular
AD	Airworthiness Directive
ADM	Aeronautical Decision-Making
AELS	Aviation English Language Standard
AFM	Airplane Flight Manual
AGL	Above Ground Level
AIM	Aeronautical Information Manual
AKTR	Airman Knowledge Test Report
AMEL	Airplane Multiengine Land
AMES	Airplane Multiengine Sea
ASEL	Airplane Single Engine Land
ASES	Airplane Single Engine Sea
ASI	Aviation Safety Inspector
ASOS	Automated Surface Observing System
ATC	Air Traffic Control
AWOS	Automated Weather Observing System
CFIT	Controlled Flight Into Terrain
CG	Center of Gravity
CRM	Crew Resource Management
FAA	Federal Aviation Administration
FSO	Flight Standards Office
G	Gravity
GFA	Graphical Forecasts for Aviation
GFM	Gyroplane Flight Manual
ID	Identification
IMC	Instrument Meteorological Conditions
LAHSO	Land and Hold Short Operations
MEL	Minimum Equipment List
METAR	Aviation Routine Weather Report
NAS	National Airspace System
NOTAM	Notice to Air Missions
NTSB	National Transportation Safety Board
PDF	Portable Document Format
POH	Pilot Operating Handbook
PPCL	Powered Parachute Land
PPCS	Powered Parachute Sea
PTS	Practical Test Standards
RG	Rotorcraft—Gyroplane
RH	Rotorcraft—Helicopter
RFM	Rotorcraft Flight Manual
RPM	Revolutions Per Minute
SOP	Standard Operating Procedure

SRM	Single Pilot Resource Management
SUA	Special Use Airspace
TAF	Terminal Area Forecast
TCE	Training Center Evaluators
TFR	Temporary Flight Restrictions
U.S.	United States
USCG	United States Coast Guard
V _A	Velocity of Acceleration (Maneuvering Speed)
VFR	Visual Flight Rules
V _{so}	Velocity Stall Zero (Stalling Speed)
V _x	Best Angle of Climb Speed
V _y	Best Rate of Climb Speed
WSCL	Weight Shift Control Land
WSCS	Weight Shift Control Sea

Use of the PTS

The PTS has been designed to evaluate competency in both knowledge and skill.

The FAA requires that all practical tests be conducted in accordance with the appropriate PTS. Applicants must be evaluated in all Tasks included in the Areas of Operation of the appropriate practical test standard unless otherwise noted.

An applicant, who holds at least a Recreational Pilot Certificate seeking an additional category rating and/or class rating at the recreational pilot level will be evaluated in the Areas of Operation and Tasks listed in the Additional Rating Task Table. At the discretion of the evaluator, an evaluation of the applicant's competence in the remaining Areas of Operation and Tasks may be conducted.

If the applicant holds two or more category or class ratings at least at the recreational level, and the rating table indicates differing required Tasks, the “least restrictive” entry applies. For example, if “All” or “None” is indicated for one Area of Operation, the “None” entry applies. If “B” and “B, C” are indicated, the “B” entry applies.

In preparation for each practical test, the evaluator must develop a written “plan of action” for each practical test. The “plan of action” is a tool, for the sole use of the evaluator, to be used in evaluating the applicant. The plan of action need not be grammatically correct or in any formal format. The plan of action must contain all of the required Areas of Operations and Tasks and any optional Tasks selected by the evaluator. The “plan of action” must incorporate one or more scenarios that will be used during the practical test.

The evaluator should try to include as many of the Tasks into the scenario portion of the test as possible, but maintain the flexibility to change due to unexpected situations as they arise and still result in an efficient and valid test. **Any Task selected for evaluation during a practical test is to be evaluated in its entirety.**

The evaluator is not required to follow the precise order in which the Areas of Operations and Tasks appear in this PTS. The evaluator may change the sequence or combine Tasks with similar objectives to have an orderly and efficient flow of the practical test. For example, lost procedures may be combined with radio navigation. The evaluator's “plan of action” should include the order and combination of Tasks to be demonstrated by the applicant in a manner that will result in an efficient and valid test.

The evaluator is expected to use good judgment in the performance of simulated emergency procedures. The use of the safest means for simulation is expected. Consideration must be given to local conditions

(both meteorological and topographical) at the time of the test, as well as the applicant's workload and the condition of the aircraft used. **If the procedure being evaluated would jeopardize safety, it is expected that the applicant will simulate that portion of the maneuver.**

Special Emphasis Areas

Evaluators must place special emphasis upon areas of aircraft operation considered critical to flight safety. Among these are:

1. positive aircraft control;
2. procedures for positive exchange of flight controls (who is flying the aircraft);
3. stall/spin awareness (airplane);
4. collision avoidance;
5. wake turbulence avoidance and low-level wind shear avoidance;
6. LAHSO;
7. runway incursion avoidance;
8. CFIT;
9. wire strike avoidance (rotorcraft);
10. ADM and risk management;
11. checklist usage;
12. TFRs;
13. SUA;
14. aviation security;
15. SRM; and
16. other areas deemed appropriate to any phase of the practical test.

Although these areas may not be specifically addressed under each Task, they are essential to flight safety and will be evaluated during the practical test. In all instances, the applicant's actions will be relate to the complete situation.

PTS Test Prerequisites

14 CFR part 61, section 61.39 and subpart D, provide practical test and certification prerequisites.

Aircraft and Equipment Requirements

14 CFR part 61, section 61.45 provides requirements for aircraft and equipment for the practical test.

Evaluator Responsibility

An evaluator is:

- ASI;
- Pilot examiner (other than administrative pilot examiners);
- TCE; or
- Chief instructor, assistant chief instructor or check instructor of a pilot school holding examining authority.

The evaluator must determine that the applicant meets AELS. An applicant for an FAA certificate or rating must be able to communicate in English in a discernible and understandable manner with 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 issued in accordance with 14 CFR part 61 who cannot hear or speak due to a medical deficiency may be eligible for an FAA certificate with specific operational limitations. 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.

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 who is not an ASI¹ 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, Application for an Airman Certificate and/or Rating. The evaluator will refer the applicant to the appropriate FSO.

If the applicant's ability to meet the FAA AELS comes into question after the practical test begins, an evaluator who is not 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 an FAA Form 8060-5, Notice of Disapproval Application, with the comment "Does Not Demonstrate FAA AELS" in addition to any unsatisfactory Task(s).

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

The evaluator conducting the practical test is responsible for determining that the applicant meets the acceptable standards of knowledge and skill of each Task within the appropriate practical test standard. Since there is no formal division between the "oral" and "skill" portions of the practical test, this becomes an ongoing process throughout the test. Oral questioning, to determine the applicant's knowledge of Tasks and related safety factors, should be used judiciously at all times, especially during the flight portion of the practical test.

Evaluators must test to the greatest extent practicable the applicant's correlative abilities rather than mere rote enumeration of facts throughout the practical test.

If the evaluator determines that a Task is incomplete, or the outcome uncertain, the evaluator may require the applicant to repeat that Task, or portions of that Task. This provision has been made in the interest of fairness and does not mean that instruction, practice, or the repeating of an unsatisfactory task is permitted during the certification process.

Throughout the flight portion of the practical test, the evaluator must evaluate the applicant's use of visual scanning and collision avoidance procedures.

Flight Instructor Responsibility

An appropriately rated flight instructor is responsible for training the recreational pilot applicant to acceptable standards in all subject matter areas, procedures, and maneuvers included in the Tasks within the appropriate PTS.

¹ ASIs may assess an applicant's English language proficiency in accordance with FAA Order 8900.1.

Because of the impact of their teaching activities in developing safe, proficient pilots, flight instructors should exhibit a high level of knowledge, skill, and the ability to impart that knowledge and skill to learners. Additionally, the flight instructor must certify that the applicant is able to perform safely as a recreational pilot and is competent to pass the required practical test.

Throughout the applicant's training, the flight instructor is responsible for emphasizing the performance of effective visual scanning, collision avoidance, and runway incursion avoidance procedures. These areas are covered, in part, in AC 90-48, Pilots' Role in Collision Avoidance; FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge; and the Aeronautical Information Manual.

Satisfactory Performance

14 CFR part 61, section 61.43(a) describes satisfactory completion of the practical test for a certificate or rating.

Unsatisfactory Performance

If, in the judgment of the evaluator, the applicant does not meet the standards of performance of any Task performed, the associated Area of Operation is failed and, therefore, the practical test is failed. 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 are:

1. Any action or lack of action by the applicant that requires corrective intervention by the evaluator to maintain safe flight.
2. Failure to use proper and effective visual scanning techniques to clear the area before and while performing maneuvers.
3. Consistently exceeding tolerances stated in the Objectives.
4. Failure to take prompt corrective action when tolerances are exceeded.

When a disapproval notice is issued, the evaluator will record the applicant's unsatisfactory performance in terms of Area of Operations and specific Task(s) not meeting the standard appropriate to the practical test conducted. The Area(s) of Operation/Task(s) not tested and the number of practical test failures must also be recorded. If the applicant fails the practical test because of a special emphasis area, the Notice of Disapproval must indicate the associated Task.

Letter of Discontinuance

When a practical test is discontinued for reasons other than unsatisfactory performance (e.g., equipment failure, weather, or illness) FAA Form 8710-1, Airman Certificate and/or Rating Application, and, if applicable, the AKTR, are to be returned to the applicant. The evaluator at that time prepares, signs, and issues a Letter of Discontinuance to the applicant. The Letter of Discontinuance should identify the Areas of Operation and their associated Tasks of the practical test that were successfully completed. The applicant should be advised that the Letter of Discontinuance must be presented to the evaluator when the practical test is resumed and made part of the certification file.

ADM, Risk Management, CRM, and SRM

Throughout the practical test, the evaluator must assess the applicant's ability to use sound ADM procedures in order to identify hazards and mitigate risk. The evaluator must accomplish this requirement 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 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 ADM, including CRM/SRM, as applicable in any Task, the evaluator will note that Task as failed.

Applicant's Use of Checklists

Throughout the practical test, the applicant is evaluated on the use of an appropriate checklist. Proper use is dependent on the specific Task being evaluated. The situation may be such that the use of the checklist while accomplishing the elements of the Objective would be either unsafe or impractical, especially in a single pilot operation. In this case, a review of the checklist after the elements have been accomplished would be appropriate. Division of attention and proper visual scanning would be considered when using a checklist.

Use of Distractions During Practical Tests

Numerous studies indicate that many accidents have occurred when the pilot has been distracted during critical phases of flight. To evaluate the applicant's ability to utilize proper control technique while dividing attention both inside and/or outside the flight deck, the evaluator should simulate a realistic distraction during the flight portion of the practical test to evaluate the applicant's ability to divide attention while maintaining safe flight.

Positive Exchange of Flight Controls

During flight, there must always be a clear understanding between pilots of who has control of the aircraft. Prior to flight, a briefing should be conducted that includes the procedure for the exchange of flight controls. A positive three-step process, subsequently described, in the exchange of flight controls between pilots is a proven procedure and one that is strongly recommended.

When one pilot wishes to give the other pilot control of the aircraft, they will say, "You have the flight controls." The other pilot acknowledges immediately by saying, "I have the flight controls." The first pilot again says, "You have the flight controls." When control is returned to the first pilot, follow the same procedure. A visual check is recommended to verify that the exchange has occurred. There should never be any doubt as to who is flying the aircraft.

SECTION 1

RECREATIONAL PILOT—AIRPLANE

Single-Engine Land and

Single-Engine Sea

APPLICANT'S PRACTICAL TEST CHECKLIST

APPOINTMENT WITH EVALUATOR

EVALUATOR'S NAME _____

LOCATION _____

DATE/TIME _____

ACCEPTABLE AIRCRAFT

- ☐ Aircraft Documents:
 - ☐ Airworthiness Certificate
 - ☐ Registration Certificate
 - ☐ Operating Limitations
- ☐ Aircraft Maintenance Records:
 - ☐ Logbook Record of Airworthiness Inspections and AD Compliance
- ☐ POH and AFM

PERSONAL EQUIPMENT

- ☐ Current Aeronautical Charts
- ☐ Current AIM, Chart Supplements, and Appropriate Publications

PERSONAL RECORDS

- ☐ Identification – Photo/Signature ID
- ☐ Pilot Certificate
- ☐ Current and Appropriate Medical Certificate or show compliance with 14 CFR part 68
- ☐ Completed FAA Form 8710-1, Airman Certificate and/or Rating Application with Instructor's Signature (if applicable)
- ☐ AKTR
- ☐ Pilot Logbook with Appropriate Instructor Endorsements
- ☐ FAA Form 8060-5, Notice of Disapproval of Application (if applicable)
- ☐ Approved School Graduation Certificate (if applicable)
- ☐ Evaluator's Fee (if applicable)

EVALUATOR'S PRACTICAL TEST CHECKLIST

Airplane Single-Engine Land and Single-Engine Sea

APPLICANT'S NAME _____

LOCATION _____

DATE/TIME _____

I. PREFLIGHT PREPARATION

- A. CERTIFICATES AND DOCUMENTS (ASEL & ASES)
- B. AIRWORTHINESS REQUIREMENTS (ASEL & ASES)
- C. WEATHER INFORMATION (ASEL & ASES)
- D. NAS (ASEL & ASES)
- E. PERFORMANCE AND LIMITATIONS (ASEL & ASES)
- F. OPERATION OF SYSTEMS (ASEL & ASES)
- G. WATER AND SEAPLANE CHARACTERISTICS (ASES)
- H. SEAPLANE BASES, MARITIME RULES, AND AIDS TO MARINE NAVIGATION (ASES)
- I. AEROMEDICAL FACTORS (ASEL & ASES)

II. PREFLIGHT PROCEDURES

- A. PREFLIGHT INSPECTION (ASEL & ASES)
- B. FLIGHT DECK MANAGEMENT (ASEL & ASES)
- C. ENGINE STARTING (ASEL & ASES)
- D. TAXIING (ASEL)
- E. TAXIING AND SAILING (ASES)
- F. BEFORE TAKEOFF CHECK (ASEL & ASES)

III. AIRPORT AND SEAPLANE BASE OPERATIONS

- A. RADIO COMMUNICATIONS (ASEL & ASES)
- B. TRAFFIC PATTERNS (ASEL & ASES)
- C. AIRPORT/SEAPLANE BASE, RUNWAY, AND TAXIWAY SIGNS, MARKINGS, AND LIGHTING (ASEL & ASES)

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS

- A. NORMAL AND CROSSWIND TAKEOFF AND CLIMB (ASEL & ASES)
- B. NORMAL AND CROSSWIND APPROACH AND LANDING (ASEL & ASES)
- C. SOFT-FIELD TAKEOFF AND CLIMB (ASEL)
- D. SOFT-FIELD APPROACH AND LANDING (ASEL)
- E. SHORT-FIELD TAKEOFF AND MAXIMUM PERFORMANCE CLIMB (ASEL)
- F. SHORT-FIELD APPROACH AND LANDING (ASEL)
- G. CONFINED AREA TAKEOFF AND MAXIMUM PERFORMANCE CLIMB (ASES)
- H. CONFINED AREA APPROACH AND LANDING (ASES)
- I. GLASSY WATER TAKEOFF AND CLIMB (ASES)
- J. GLASSY WATER APPROACH AND LANDING (ASES)
- K. ROUGH WATER TAKEOFF AND CLIMB (ASES)
- L. ROUGH WATER APPROACH AND LANDING (ASES)

- M. FORWARD SLIP TO A LANDING (ASEL & ASES)
- N. GO-AROUND/REJECTED LANDING (ASEL & ASES)

V. PERFORMANCE MANEUVERS

- A. STEEP TURNS (ASEL & ASES)

VI. GROUND REFERENCE MANEUVERS

- A. RECTANGULAR COURSE (ASEL & ASES)
- B. S-TURNS (ASEL & ASES)
- C. TURNS AROUND A POINT (ASEL & ASES)

VII. NAVIGATION

- A. PILOTAGE (ASEL & ASES)
- B. DIVERSION (ASEL & ASES)
- C. LOST PROCEDURES (ASEL & ASES)

VIII. SLOW FLIGHT AND STALLS

- A. MANEUVERING DURING SLOW FLIGHT (ASEL & ASES)
- B. POWER-OFF STALLS (ASEL & ASES)
- C. POWER-ON STALLS (ASEL & ASES)
- D. SPIN AWARENESS (ASEL & ASES)

IX. EMERGENCY OPERATIONS

- A. EMERGENCY APPROACH AND LANDING (ASEL & ASES)
- B. SYSTEMS AND EQUIPMENT MALFUNCTIONS (ASEL & ASES)
- C. EMERGENCY EQUIPMENT AND SURVIVAL GEAR (ASEL & ASES)

X. POST-FLIGHT PROCEDURES

- A. AFTER LANDING, PARKING, AND SECURING (ASEL & ASES)
- B. ANCHORING (ASES)
- C. DOCKING AND MOORING (ASES)
- D. RAMPING/BEACHING (ASES)

ADDITIONAL RATINGS TASK TABLE

Addition of an ASEL Rating to an existing Recreational Pilot (or higher) Certificate												
Required TASKs are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKs must be tested based on the notes in each AREA OF OPERATION.												
PILOT RATING(S) HELD												
AREAS OF OPERATION	ASES	AMEL	AMES	RH	RG	Glider	Balloon	Airship	PPCL	PPCS	WSCL	WSCS
I	E, F	E, F	E, F	E, F	E, F	E, F	E, F	E, F	E, F	E, F	E, F	E, F
II	D	NONE	D	A, C, D, F	A, C, D, F	A, B, C, D, F	A, B, C, D, F	A, B, C, D, F	A, B, C, D, F	A, B, C, D, F	A, B, C, D, F	A, B, C, D, F
III	C	NONE	C	B, C	B, C	B, C	B, C	B, C	B, C	B, C	B, C	B, C
IV	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N	A, B, C, D, E, F, M, N
V	NONE	NONE	NONE	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VI	NONE	NONE	NONE	ALL	NONE	ALL	ALL	ALL	NONE	NONE	NONE	NONE
VII	NONE	NONE	NONE	NONE	NONE	ALL	ALL	NONE	NONE	NONE	NONE	NONE
VIII	NONE	NONE	NONE	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
IX	A, B	A, B	A, B	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
X	A	NONE	A	A	A	A	A	A	A	A	A	A

NOTE 1: This table is used by the evaluator in developing their plan of action for a practical test. The evaluator may test additional TASKs not listed in the table that they deem necessary to ensure the pilot can operate the aircraft safely in the NAS.

ADDITIONAL RATINGS TASK TABLE

Addition of an ASES Rating to an existing Recreational Pilot (or higher) Certificate												
Required TASKs are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKs must be tested based on the notes in each AREA OF OPERATION.												
PILOT RATING(S) HELD												
AREAS OF OPERATION	ASEL	AMEL	AMES	RH	RG	Glider	Balloon	Airship	PPCL	PPCS	WSCL	WSCS
I	E, F, G, H	E, F, G, H	E, F	E, F, G, H	E, F, G, H	E, F, G, H	E, F, G, H	E, F, G, H	E, F, G, H	E, F, G	E, F, G, H	E, F, G
II	A, C, E, F	A, C, E, F	E	A, B, C, E, F	A, B, E, F	A, B, C, E, F	A, B, C, E, F	A, B, C, E, F	A, B, C, E, F	A, B, C, E, F	A, B, C, E, F	A, B, C, E, F
III	C	C	NONE	B, C	B, C	B, C	B, C	B, C	B, C	B	B, C	B
IV	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N	A, B, G, H, I, J, K, L, M, N
V	NONE	NONE	NONE	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VI	NONE	NONE	NONE	ALL	NONE	ALL	ALL	ALL	NONE	NONE	NONE	NONE
VII	NONE	NONE	NONE	NONE	NONE	ALL	ALL	NONE	NONE	NONE	NONE	NONE
VIII	NONE	NONE	NONE	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
IX	ALL	ALL	A, B	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
X	B, C, D	B, C, D	NONE	B, C, D	B, C, D	B, C, D	B, C, D	B, C, D	B, C, D	B, C, D	B, C, D	B, C, D

NOTE 1: This table is used by the evaluator in developing their plan of action for a practical test. The evaluator may test additional TASKs not listed in the table that they deem necessary to ensure the pilot can operate the aircraft safely in the NAS.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

A. TASK: CERTIFICATES AND DOCUMENTS (ASEL AND ASES)

REFERENCES: 14 CFR parts 43, 61, 91; FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to certificates and documents by:

1. Explaining—
 - a. recreational pilot certificate privileges, limitations, and recent flight experience requirements.
 - b. medical requirements/medical certificate class and duration.
 - c. pilot logbook or flight records.
2. Locating and explaining—
 - a. airworthiness and registration certificates.
 - b. operating limitations, placards, instrument markings, and POH/AFM.
 - c. weight and balance data and equipment list.

B. TASK: AIRWORTHINESS REQUIREMENTS (ASEL AND ASES)

REFERENCES: 14 CFR part 91; FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25.

Objective. To determine that the applicant exhibits knowledge of the elements related to airworthiness requirements by:

1. Explaining—
 - a. required instruments and equipment for day VFR.
 - b. procedures and limitations for determining airworthiness of the airplane with inoperative instruments and equipment with and without an MEL.
 - c. requirements and procedures for obtaining a special flight permit.
2. Locating and explaining—
 - a. airworthiness directives.
 - b. compliance records.
 - c. maintenance/inspection requirements.
 - d. appropriate record keeping.

C. TASK: WEATHER INFORMATION (ASEL AND ASES)

NOTE: The evaluator will use a variety of weather conditions to evaluate this TASK.

REFERENCES: 14 CFR part 91; FAA-H-8083-25, FAA-S-8083-28; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to weather information by analyzing weather reports, surface analysis charts, and forecasts from aeronautical weather reporting sources.
 - a. METAR, TAF, and GFA.
 - b. surface analysis charts.
 - c. radar summary chart.
 - d. significant weather prognostic charts.
 - e. AWOS and ASOS reports.
2. Makes a competent "go/no-go" decision for the flight evaluation based on actual weather conditions.
3. Describes the importance of avoiding adverse weather and an inadvertent IMC encounter.
4. Explains courses of action to safety exit from an inadvertent IMC encounter.

D. TASK: NAS (ASEL AND ASES)

REFERENCES: 14 CFR parts 71, 91; FAA-H-8083-25; Aeronautical Navigation Charts; AIM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the NAS by explaining:

1. Recreational pilot privileges and limitations applicable to the following classes of airspace:
 - a. Class B.
 - b. Class C.
 - c. Class D.
 - d. Class E.
 - e. Class G.
2. Special use and other airspace areas.
3. TFRs.

E. TASK: PERFORMANCE AND LIMITATIONS (ASEL AND ASES)

REFERENCES: FAA-H-8083-1, FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
2. Computes weight and balance. Determines the computed weight and center of gravity is within the airplane's operating limitations and if the weight and center of gravity will remain within limits during all phases of flight.
3. Demonstrates use of the appropriate performance charts, tables, and data.
4. Describes the effects of atmospheric conditions on the airplane's performance.

F. TASK: OPERATION OF SYSTEMS (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the operation of systems on the airplane provided for the flight test by explaining at least three (3) of the following systems:

1. Primary flight controls and trim.
2. Flaps, leading edge devices, and spoilers.
3. Water rudders (ASES).
4. Powerplant and propeller.
5. Landing gear and brakes.
6. Fuel, oil, and hydraulic.
7. Electrical.
8. Avionics.
9. Pitot-static, vacuum/pressure, and associated flight instruments.
10. Environmental.
11. Deicing and anti-icing.

G. TASK: WATER AND SEAPLANE CHARACTERISTICS (ASES)

REFERENCE: FAA-H-8083-23.

Objective. To determine that the applicant exhibits knowledge of the elements related to water and seaplane characteristics by explaining:

1. The characteristics of a water surface as affected by features, such as:
 - a. size and location.
 - b. protected and unprotected areas.
 - c. surface wind.
 - d. direction and strength of water current.
 - e. floating and partially submerged debris.
 - f. sandbars, islands, and shoals.
 - g. vessel traffic and wakes.
 - h. other features peculiar to the area.
2. Float and hull construction, and their effect on seaplane performance.
3. Causes of porpoising and pilot action required to prevent or correct these occurrences.

H. TASK: SEAPLANE BASES, MARITIME RULES, AND AIDS TO MARINE NAVIGATION (ASES)

REFERENCES: FAA-H-8083-23; AIM.

Objective. To determine that the applicant exhibits knowledge of the elements related to seaplane bases, maritime rules, and aids to marine navigation by explaining:

1. How to locate and identify seaplane bases on charts or in directories.
2. Operating restrictions at various bases.
3. Right-of-way, steering, and sailing rules pertinent to seaplane operation.
4. Marine navigation aids such as buoys, beacons, lights, and sound signals.

I. TASK: AEROMEDICAL FACTORS (ASEL AND ASES)

REFERENCES: FAA-H-8083-25; AIM.

Objective. To determine that the applicant exhibits knowledge of the elements related to aeromedical factors by explaining:

1. The symptoms, causes, effects, and corrective actions of at least three (3) of the following:
 - a. hypoxia.
 - b. hyperventilation.
 - c. middle ear and sinus problems.
 - d. spatial disorientation.
 - e. motion sickness.
 - f. carbon monoxide poisoning.
 - g. stress and fatigue.
 - h. dehydration.
2. The effects of alcohol, drugs, and over-the-counter medication.
3. The effects of excess nitrogen during scuba dives upon a pilot or passenger in flight.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

A. TASK: PREFLIGHT INSPECTION (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to preflight inspection including which items must be inspected, the reasons for checking each item, and how to detect possible defects.
2. Inspects the airplane with reference to an appropriate checklist.
3. Verifies the airplane is in condition for safe flight.

B. TASK: FLIGHT DECK MANAGEMENT (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to flight deck management procedures.
2. Ensures all loose items in the flight deck and cabin are secured.
3. Organizes material and equipment in an efficient manner so they are readily available.
4. Briefs the occupant on the use of safety belts, shoulder harnesses, doors, and emergency procedures.

C. TASK: ENGINE STARTING (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; AC 91-55; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to recommended engine starting procedures including the use of an external power source, hand propping safety, and starting under various atmospheric conditions.
2. Positions the airplane properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
3. Utilizes the appropriate checklist for starting procedure.

D. TASK: TAXIING (ASEL)

REFERENCES: FAA-H-8083-3, FAA-H-8083-25; AC 91-73; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to safe taxi procedures.
2. Performs a brake check immediately after the airplane begins moving.
3. Positions the flight controls properly for the existing wind conditions.
4. Controls direction and speed without excessive use of brakes.
5. Complies with airport/taxiway markings and signs.
6. Taxes so as to avoid other aircraft and hazards.

E. TASK: TAXIING AND SAILING (ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; AC 91-73; USCG Navigation Rules; International-Inland; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to water taxi and sailing procedures.
2. Positions the flight controls properly for the existing wind conditions.
3. Plans and follows the most favorable course while taxiing or sailing considering wind, water current, water conditions, and maritime regulations.
4. Uses the appropriate idle, plow, or step taxi technique.
5. Uses flight controls, flaps, doors, water rudder, and power correctly so as to follow the desired course while sailing.
6. Prevents and corrects for porpoising and skipping.
7. Avoids other aircraft, vessels, and hazards.
8. Complies with seaplane base signs.

F. TASK: BEFORE TAKEOFF CHECK (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to the before takeoff check including the reasons for checking each item and how to detect malfunctions.
2. Positions the airplane properly considering other aircraft/vessels, wind, and surface conditions.
3. Divides attention inside and outside the flight deck.
4. Ensures that engine temperature and pressure are suitable for runup and takeoff.
5. Accomplishes the before takeoff checklist and ensures the airplane is in safe operating condition.
6. Reviews takeoff performance airspeeds, takeoff distances, departure, and emergency procedures.
7. Avoids runway incursions and/or insures no conflict with traffic prior to taxiing into takeoff position.
8. Completes the appropriate checklist.

III. AREA OF OPERATION: AIRPORT AND SEAPLANE BASE OPERATIONS

A. TASK: RADIO COMMUNICATIONS

NOTE: If the aircraft is not radio equipped this TASK will be evaluated orally.

REFERENCES: 14 CFR part 91; FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to radio communications at non-towered airports.
2. Selects appropriate frequencies.
3. Transmits using phraseology recommended in the AIM.
4. Acknowledges radio communications.

B. TASK: TRAFFIC PATTERNS (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; AC 90-66; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to traffic patterns including procedures at non-towered airports, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.
2. Complies with proper traffic pattern procedures.
3. Maintains proper spacing from other aircraft.
4. Corrects for wind drift to maintain the proper ground track.
5. Maintains orientation with the runway/landing area in use.
6. Maintains traffic pattern altitude, ± 100 feet and the appropriate airspeed, ± 10 knots.

C. TASK: AIRPORT/SEAPLANE BASE, RUNWAY, AND TAXIWAY SIGNS, MARKINGS, AND LIGHTING (ASEL AND ASES)

REFERENCES: FAA-H-8083-23, FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to airport/seaplane base, runway, and taxiway operations with emphasis on runway incursion avoidance.
2. Properly identifies and interprets airport/seaplane base, runway, and taxiway signs, markings, and lighting.

IV. AREA OF OPERATION: TAKEOFFS, LANDINGS, AND GO-AROUNDS

A. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB (ASEL AND ASES)

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

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a normal and crosswind takeoff, climb operations, and rejected takeoff procedures.
2. Positions the flight controls for the existing wind conditions.
3. Clears the area; taxis into the takeoff position and aligns the airplane on the runway center/takeoff path.
4. Retracts the wing flaps, as appropriate, (ASES) and advances the throttle smoothly to takeoff power.
5. Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping (ASES).
6. Lifts off at the recommended airspeed and accelerates to V_Y .
7. Establishes a pitch attitude that will maintain $V_Y + 10/-5$ knots to a safe maneuvering altitude.
8. Retracts the flaps, if appropriate, after a positive rate of climb is established.
9. Maintains takeoff power and $V_Y + 10/-5$ knots to a safe maneuvering altitude.
10. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
11. Complies with noise abatement procedures.
12. Completes the appropriate checklist.

B. TASK: NORMAL AND CROSSWIND APPROACH AND LANDING (ASEL AND ASES)

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

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a normal and crosswind approach and landing.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and recommended airspeed, or in its absence, not more than $1.3 V_{SO} + 10/-5$ knots, with wind gust factor applied.
6. Makes smooth, timely, and correct control application during the roundout and touchdown.
7. Contacts the water at the proper pitch attitude (ASES).
8. Touches down smoothly at approximately stalling speed (ASEL).
9. Touches down at or within 400 feet beyond a specified point, with no drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. Completes the appropriate checklist.

C. TASK: SOFT-FIELD TAKEOFF AND CLIMB (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field takeoff and climb.
2. Positions the flight controls for existing wind conditions and to maximize lift as quickly as possible.
3. Clears the area; taxis onto the takeoff surface at a speed consistent with safety without stopping while advancing the throttle smoothly to takeoff power.
4. Establishes and maintains a pitch attitude that will transfer the weight of the airplane from the wheels to the wings as rapidly as possible.
5. Lifts off at the lowest possible airspeed and remains in ground effect while accelerating to V_X or V_Y as appropriate.
6. Establishes a pitch attitude for V_X or V_Y as appropriate, and maintains selected airspeed $+10/-5$ knots, during the climb.
7. Retracts the flaps, if appropriate, after clear of any obstacles or as recommended by the manufacturer.
8. Maintains takeoff power and V_X or $V_Y +10/-5$ knots, to a safe maneuvering altitude.
9. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
10. Completes the appropriate checklist.

D. TASK: SOFT-FIELD APPROACH AND LANDING (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field approach and landing.
2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown area.
3. Establishes the recommended approach and landing configuration, and airspeed.
4. Maintains a stabilized approach and recommended airspeed, or in its absence not more than $1.3 V_{SO}$, $+10/-5$ knots, with wind gust factor applied.
5. Makes smooth, timely, and correct control application during the roundout and touchdown.
6. Touches down softly with no drift, and with the airplane's longitudinal axis aligned with the runway/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.
8. Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.
9. Completes the appropriate checklist.

E. TASK: SHORT FIELD TAKEOFF AND MAXIMUM PERFORMANCE CLIMB (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a short-field takeoff and maximum performance climb.
2. Positions the flight controls for the existing wind conditions; sets the flaps as recommended.
3. Clears the area; taxies into takeoff position utilizing maximum available takeoff area and aligns the airplane on the runway center/takeoff path.
4. Applies brakes while advancing the throttle smoothly to takeoff power.
5. Lifts off at the recommended airspeed, and accelerates to the recommended obstacle clearance airspeed or V_X .
6. Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or V_X , +10/-5 knots, until the obstacle is cleared, or until the airplane is 50 feet above the surface.
7. After clearing the obstacle, establishes the pitch attitude for V_Y , accelerates to V_Y , and maintains V_Y , +10/-5 knots, during the climb.
8. Retracts the flaps, if appropriate.
9. Maintains takeoff power and V_Y +10/-5 knots to a safe maneuvering altitude.
10. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
11. Completes the appropriate checklist.

F. TASK: SHORT FIELD APPROACH AND LANDING (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a short-field approach and landing.
2. Considers the wind conditions, landing surface, obstructions, and selects the most suitable touchdown point.
3. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and recommended approach airspeed, or in its absence, not more than $1.3 V_{SO}$, +10/-5 knots, with wind gust factor applied.
5. Makes smooth, timely, and correct control applications during the roundout and touchdown.
6. Touches down smoothly at minimum controllable airspeed.
7. Touches down at or within 200 feet beyond a specified point, with no side drift, minimum float and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
8. Maintains crosswind correction and directional control throughout the approach and landing sequence.
9. Applies brakes and or elevator control, as necessary, to stop in the shortest distance consistent with safety.
10. Completes the appropriate checklist.

G. TASK: CONFINED AREA TAKEOFF AND MAXIMUM PERFORMANCE CLIMB (ASES)

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a confined area takeoff and maximum performance climb.
2. Positions the flight controls for the existing wind conditions; sets the flaps as recommended.
3. Selects an appropriate takeoff path for the existing conditions.
4. Clears the area; taxis into takeoff position utilizing maximum available takeoff area and aligns the airplane on the takeoff path.
5. Smoothly advances the throttle to takeoff power.
6. Clears the area, taxis into takeoff position utilizing the maximum available takeoff area, and aligns the airplane on the takeoff path.
7. Smoothly advances the throttle to takeoff power.
8. Establishes and maintains the most efficient planing/lift-off attitude and corrects for porpoising and skipping.
9. Lifts off at the recommended airspeed, and accelerates to the recommended obstacle clearance airspeed or V_X .
10. Establishes a pitch attitude that will maintain the recommended obstacle clearance airspeed, or V_X , +10/-5 knots, until the obstacle is cleared, or until the airplane is 50 feet above the surface.
11. After clearing the obstacle, establishes the pitch attitude for V_Y , accelerates to V_Y , +10/-5 knots, during the climb.
12. Retracts the flaps, if appropriate, after clear of any obstacles.
13. Maintains takeoff power and V_Y +10/-5 knots to a safe maneuvering altitude.
14. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
15. Completes the appropriate checklist.

H. TASK: CONFINED AREA APPROACH AND LANDING (ASES)

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a confined area approach and landing.
2. Adequately surveys the intended landing area.
3. Considers the wind conditions, water depth, hazards, surrounding terrain, other watercraft, and selects the most suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and the recommended approach airspeed, or in its absence, not more than $1.3 V_{SO}$, +10/-5, with wind gust factor applied.
6. Makes smooth, timely, and correct control applications during the roundout and touchdown.
7. Selects the proper landing path, contacts the water at the minimum safe airspeed with the proper pitch attitude for the surface conditions.
8. Touches down at or within 200 feet beyond a specified point, with no side drift, minimum float and with the airplane's longitudinal axis aligned with and over the landing path.
9. Maintains crosswind correction and directional control throughout the approach and landing sequence.
10. Applies the elevator control as necessary, to stop in the shortest distance consistent with safety.
11. Completes the appropriate checklist.

I. TASK: GLASSY WATER TAKEOFF AND CLIMB (ASES)

NOTE: If a glassy water condition does not exist, the applicant will be evaluated by simulating the TASK.

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to glassy water takeoff and climb.
2. Positions the flight controls and flaps for the existing conditions.
3. Clears the area; selects an appropriate takeoff path considering surface hazards and/or vessels and surface conditions.
4. Retracts the water rudders as appropriate; advances the throttle smoothly to takeoff power.
5. Establishes and maintains an appropriate planing attitude, directional control, and corrects for porpoising, skipping, and increases in water drag.
6. Utilizes appropriate techniques to lift seaplane from the water considering surface conditions.
7. Establishes proper attitude/airspeed, and accelerates to V_Y , +10/-5 knots during the climb.
8. Retracts the flaps, if appropriate.
9. Maintains takeoff power and V_Y +10/-5 knots to a safe maneuvering altitude.
10. Maintains directional control and proper wind-drift correction through takeoff and climb.
11. Completes the appropriate checklist.

J. TASK: GLASSY WATER APPROACH AND LANDING (ASES)

NOTE: If a glassy water condition does not exist, the applicant will be evaluated by simulating the TASK.

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to glassy water approach and landing.
2. Adequately surveys the intended landing area.
3. Considers the wind conditions, water depth, hazards, surrounding terrain, and other watercraft.
4. Selects the most suitable approach path, and touchdown area.
5. Establishes the recommended approach and landing configuration and airspeed, adjusts pitch attitude and power as required.
6. Maintains a stabilized approach and the recommended approach airspeed, +10/-5 knots and maintains a touchdown pitch attitude and descent rate from the last altitude reference until touchdown.
7. Makes smooth, timely, and correct power and control adjustments to maintain proper pitch attitude and rate of descent to touchdown.
8. Contacts the water in the proper pitch attitude, and slows to idle taxi speed.
9. Maintains crosswind correction and directional control throughout the approach and landing sequence.
10. Completes the appropriate checklist.

K. TASK: ROUGH WATER TAKEOFF AND CLIMB (ASES)

NOTE: If a rough water condition does not exist, the applicant will be evaluated by simulating the TASK.

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to rough water takeoff and climb.
2. Positions the flight controls and flaps for the existing conditions.
3. Clears the area; selects an appropriate takeoff path considering wind, swells, surface hazards, and/or vessels.
4. Retracts the water rudders as appropriate; advances the throttle smoothly to takeoff power.
5. Establishes and maintains an appropriate planing attitude, directional control, and corrects for porpoising, skipping, or excessive bouncing.
6. Lifts off at minimum airspeed and accelerates to V_Y , +10/-5 knots before leaving ground effect.
7. Retracts the flaps, if appropriate.
8. Maintains takeoff power and V_Y , +10/-5 to a safe maneuvering altitude.
9. Maintains directional control and proper wind-drift corrections throughout takeoff and climb.
10. Completes the appropriate checklist.

L. TASK: ROUGH WATER APPROACH AND LANDING (ASES)

NOTE: If a rough water condition does not exist, the applicant will be evaluated by simulating the TASK.

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to rough water approach and landing.
2. Adequately surveys the intended landing area.
3. Considers the wind conditions, water depth, hazards, surrounding terrain, and other watercraft.
4. Selects the most suitable approach path and touchdown area.
5. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
6. Maintains a stabilized approach and the recommended approach airspeed, or in its absence not more than $1.3 V_{SO}$ +10/-5 knots with wind gust factor applied.
7. Makes smooth, timely, and correct power and control application during the roundout and touch down.
8. Contacts the water in the proper pitch attitude and at the proper airspeed, considering the type of rough water.
9. Maintains crosswind correction and directional control throughout the approach and landing sequence.
10. Completes the appropriate checklist.

M. TASK: FORWARD SLIP TO A LANDING (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to forward slip to a landing.
2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown point.
3. Establishes the slipping attitude at the point from which a landing can be made using the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
4. Maintains a ground track aligned with the runway center/landing path and an airspeed, which results in minimum float during the roundout.
5. Makes smooth, timely, and correct control application during the recovery from the slip, the roundout, and the touchdown.
6. Touches down smoothly at the approximate stalling speed, at or within 400 feet beyond a specified point, with no side drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.

N. TASK: GO-AROUND/REJECTED LANDING (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a go-around/rejected landing.
2. Makes a timely decision to discontinue the approach to landing.
3. Applies takeoff power immediately and transitions to climb pitch attitude for V_Y , and maintains V_Y , +10/-5 knots.
4. Retracts the flaps as appropriate.
5. Maneuvers to the side of the runway/landing area to clear and avoid conflicting traffic.
6. Maintains takeoff power and V_Y , +10/-5 to a safe maneuvering altitude.
7. Maintains directional control and proper wind-drift correction throughout the climb.
8. Completes the appropriate checklist.

V. AREA OF OPERATION: PERFORMANCE MANEUVER

A. TASK: STEEP TURNS (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to steep turns.
2. Establishes the manufacturer's recommended airspeed or if one is not stated, a safe airspeed not to exceed V_A .
3. Rolls into a coordinated 360° turn; maintains a 45° bank.
4. Performs the task in the opposite direction, as specified by the evaluator.
5. Divides attention between airplane control and orientation.
6. Maintains the entry altitude, ± 100 feet, airspeed, ± 10 knots, bank, $\pm 5^\circ$; and rolls out on the entry heading, $\pm 10^\circ$.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

NOTE: The evaluator shall select at least one TASK.

A. TASK: RECTANGULAR COURSE (ASEL AND ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a rectangular course.
2. Selects a suitable reference area.
3. Plans the maneuver so as to enter a left or right pattern, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area, 45° to the downwind leg.
4. Applies adequate wind-drift correction during straight-and- turning flight to maintain a constant ground track around the rectangular reference area.
5. Divides attention between airplane control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ± 100 feet; maintains airspeed, ± 10 knots.

B. TASK: S-TURNS (ASEL AND ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to S-Turns.
2. Selects a suitable ground reference line.
3. Plans the maneuver so as to enter at 600 to 1,000 feet AGL, perpendicular to the selected reference line.
4. Applies adequate wind-drift correction to track a constant radius turn on each side of the selected reference line.
5. Reverses the direction of turn directly over the selected reference line.
6. Divides attention between airplane control and the ground track while maintaining coordinated flight.
7. Maintains altitude ± 100 feet; maintains airspeed, ± 10 knots.

C. TASK: TURNS AROUND A POINT (ASEL AND ASES)

REFERENCE: FAA-H-8083-3.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to turns around a point.
2. Selects a suitable ground reference point.
3. Plans the maneuver so as to enter at 600 to 1000 feet AGL, at an appropriate distance from the reference point.
4. Applies adequate wind-drift correction to track a constant radius turn around the selected reference point.
5. Divides attention between airplane control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ± 100 feet; maintains airspeed, ± 10 knots.

VII. AREA OF OPERATION: NAVIGATION

A. TASK: PILOTAGE

REFERENCE: FAA-8083-25.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to pilotage.
2. Follows the preplanned course by visual reference to landmarks, with the aid of a magnetic compass.
3. Identifies landmarks by relating surface features to chart symbols.
4. Verifies the airplane's position within three (3) nautical miles of the flight-planned route.
5. Maintains the appropriate altitude, ± 200 feet and headings, $\pm 15^\circ$.

B. TASK: DIVERSION (ASEL AND ASES)

REFERENCES: FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to diversion.
2. Selects an appropriate alternate airport and route.
3. Makes a reasonable estimate of heading and fuel consumption to the alternate airport.
4. Maintains the appropriate altitude, ± 200 feet and heading, $\pm 15^\circ$.

C. TASK: LOST PROCEDURES (ASEL AND ASES)

REFERENCES: FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to lost procedures.
2. Selects an appropriate course of action.
3. Maintains an appropriate heading and climbs, if necessary.
4. Identifies prominent landmarks.
5. Plans a precautionary landing if deteriorating weather and/or fuel exhaustion is impending.

VIII. AREA OF OPERATION: SLOW FLIGHT AND STALLS

A. TASK: MANEUVERING DURING SLOW FLIGHT (ASEL AND ASES)

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to maneuvering during slow flight.
2. Selects an entry altitude that will allow the task to be completed no lower than 1,500 feet AGL.
3. Establishes and maintains an airspeed at which any further increase in angle of attack, increase in load factor, or reduction in power would result in an immediate stall.
4. Accomplishes coordinated straight-and-level flight, turns, climbs, and descents with flap configurations specified by the evaluator.
5. Divides attention between airplane control and orientation.
6. Maintains the specified altitude, ± 100 feet; airspeed, $+10/-0$ knots; and specified angle of bank or heading, $\pm 10^\circ$.

B. TASK: POWER-OFF STALLS (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; AC 61-67; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power-off stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.
3. Establishes a stabilized descent in the approach or landing configuration, as specified by the evaluator.
4. Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
5. Maintains a specified heading, $\pm 10^\circ$, in straight flight; maintains a specified angle of bank not to exceed 20° , $\pm 10^\circ$; in turning flight, while inducing the stall.
6. Recognizes and recovers promptly after the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
7. Retracts the flaps to the recommended setting, if appropriate.
8. Accelerates to V_X or V_Y speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the evaluator.

C. TASK: POWER-ON STALLS (ASEL AND ASES)

NOTE: In some airplanes, the power setting may have to be reduced below the practical test standards power setting to prevent excessively high pitch attitudes (greater than 30 degrees nose up).

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; AC 61-67; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power-on stalls.
2. Selects an entry altitude that allows the task to be completed no lower than 1,500 feet AGL.
3. Establishes the takeoff or departure configuration. Sets power to no less than 65 percent available power.
4. Transitions smoothly from the takeoff or departure attitude to the pitch attitude that will induce a stall.
5. Maintains a specified heading, $\pm 10^\circ$, in straight flight; maintains a specified angle of bank not to exceed 20° , $\pm 10^\circ$, in turning flight, while inducing the stall.
6. Recognizes and recovers promptly after the stall occurs by simultaneously reducing the angle of attack, increasing power as appropriate, and leveling the wings to return to a straight- and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
7. Retracts the flaps to the recommended setting, if appropriate.
8. Accelerates to V_X or V_Y speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the evaluator.

D. TASK: SPIN AWARENESS (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; AC 61-67; POH/AFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to spin awareness by explaining:

1. Aerodynamic factors related to spins.
2. Flight situations where unintentional spins may occur.
3. Procedures for recovery from spins.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

A. TASK: EMERGENCY APPROACH AND LANDING (SIMULATED) (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-80803-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency approach and landing procedures.
2. Analyzes the situation and select an appropriate course of action.
3. Establishes and maintains the recommended best-glide airspeed, ± 10 knots.
4. Selects a suitable landing area.
5. Plans and follows a flight pattern to the selected landing area considering altitude, wind, terrain, and obstructions.
6. Prepares for landing, or go-around (if not at an airport, the go-around will be initiated no lower than 500 feet AGL), as specified by the evaluator.
7. Follows the appropriate checklist.

B. TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS (ASEL AND ASES)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to system and equipment malfunctions appropriate to the airplane provided for the practical test.
2. Analyzes the situation and take appropriate action for simulated emergencies appropriate to the airplane provided for the practical test for at least three (3) of the following—
 - a. partial or complete power loss.
 - b. engine roughness or overheat.
 - c. carburetor or induction icing.
 - d. loss of oil pressure.
 - e. fuel starvation.
 - f. electrical malfunction.
 - g. vacuum/pressure, and associated flight instruments malfunction.
 - h. pitot/static.
 - i. landing gear or flap malfunction.
 - j. inoperative trim.
 - k. inadvertent door or window opening.
 - l. structural icing.
 - m. smoke/fire/engine compartment fire.
 - n. any other emergency appropriate to the airplane.
3. Follows the appropriate checklist or procedure.

C. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency equipment and survival gear appropriate to the airplane and environment encountered during flight. Identifies appropriate equipment that should be aboard the airplane.

X. AREA OF OPERATION: POSTFLIGHT PROCEDURES

NOTE: The evaluator must select TASK A and for ASES applicants at least one other TASK.

A. TASK: AFTER LANDING, PARKING, AND SECURING (ASEL AND ASES)

REFERENCES: FAA-H-8083-3, FAA-H-8083-25; POH/AFH.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to after landing, parking and securing procedures.
2. Maintains directional control after touchdown while decelerating to an appropriate speed.
3. Observes runway hold lines and other surface control markings and lighting.
4. Parks in an appropriate area, considering the safety of nearby persons and property.
5. Follows the appropriate procedure for engine shutdown.
6. Completes the appropriate checklist.
7. Conducts an appropriate postflight inspection and secures the aircraft.

B. TASK: ANCHORING (ASES)

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to anchoring.
2. Selects a suitable area for anchoring, considering seaplane movement, water depth, tide, wind, and weather changes.
3. Uses an adequate number of anchors and lines of sufficient strength and length to ensure the seaplane's security.

C. TASK: DOCKING AND MOORING (ASES)

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to docking and mooring.
2. Approaches the dock or mooring buoy in the proper direction considering speed, hazards, wind, and water current.
3. Ensures seaplane security.

D. TASK: RAMPING/BEACHING (ASES)

REFERENCES: FAA-H-8083-23; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to ramping/beaching.
2. Approaches the ramp/beach considering persons and property, in the proper attitude and direction, at a safe speed, considering water depth, tide, current, and wind.
3. Ramps/beaches and secures the seaplane in a manner that will protect it from the harmful effect of wind, waves, and changes in water level.

SECTION 2

RECREATIONAL PILOT—

ROTORCRAFT/HELICOPTER

APPLICANT'S PRACTICAL TEST CHECKLIST

APPOINTMENT WITH EVALUATOR:

EVALUATOR'S NAME _____

LOCATION _____

DATE/TIME _____

ACCEPTABLE AIRCRAFT

- ☐ Aircraft Documents:
 - ☐ Airworthiness Certificate
 - ☐ Registration Certificate
 - ☐ Operating Limitations
- ☐ Aircraft Maintenance Records:
 - ☐ Logbook Record of Airworthiness Inspections and AD Compliance
- ☐ POH and HFM

PERSONAL EQUIPMENT

- ☐ Current Aeronautical Charts
- ☐ Current AIM, Chart Supplements, and Appropriate Publications

PERSONAL RECORDS

- ☐ Identification – Photo/Signature ID
- ☐ Pilot Certificate
- ☐ Current and Appropriate Medical Certificate or show compliance with 14 CFR part 68
- ☐ Completed FAA Form 8710-1, Airman Certificate and/or Rating Application with Instructor's Signature (if applicable)
- ☐ AKTR (if applicable)
- ☐ Pilot Logbook with Appropriate Instructor Endorsements
- ☐ FAA Form 8060-5, Notice of Disapproval of Application (if applicable)
- ☐ Approved School Graduation Certificate (if applicable)
- ☐ Evaluator's Fee (if applicable)

EVALUATOR'S PRACTICAL TEST CHECKLIST

(HELICOPTER)

APPLICANT'S NAME _____

LOCATION _____

DATE/TIME _____

I. PREFLIGHT PREPARATION

- A. CERTIFICATES AND DOCUMENTS
- B. AIRWORTHINESS REQUIREMENTS
- C. WEATHER INFORMATION
- D. NAS
- E. PERFORMANCE AND LIMITATIONS
- F. OPERATION OF SYSTEMS
- G. AEROMEDICAL FACTORS

II. PREFLIGHT PROCEDURES

- A. PREFLIGHT INSPECTION
- B. FLIGHT DECK MANAGEMENT
- C. ENGINE STARTING AND ROTOR ENGAGEMENT
- D. BEFORE TAKEOFF CHECK

III. AIRPORT AND HELIPORT OPERATIONS

- A. RADIO COMMUNICATIONS
- B. TRAFFIC PATTERNS
- C. AIRPORT AND HELIPORT MARKINGS AND LIGHTING

IV. HOVERING MANEUVERS

- A. VERTICAL TAKEOFF AND LANDING
- B. SLOPE OPERATIONS
- C. SURFACE TAXI
- D. HOVER TAXI
- E. AIR TAXI

V. TAKEOFFS, LANDINGS, AND GO-AROUNDS

- A. NORMAL AND CROSSWIND TAKEOFF AND CLIMB
- B. NORMAL AND CROSSWIND APPROACH
- C. MAXIMUM PERFORMANCE TAKEOFF AND CLIMB
- D. STEEP APPROACH
- E. ROLLING TAKEOFF
- F. CONFINED AREA OPERATIONS
- G. PINNACLE/PLATFORM OPERATIONS
- H. SHALLOW APPROACH AND RUNNING/ROLL-ON LANDING
- I. GO-AROUNDS

VI. PERFORMANCE MANEUVERS

- A. RAPID DECELERATION**
- B. STRAIGHT IN AUTOROTATION**
- C. 180° AUTOROTATION**

VII. GROUND REFERENCE MANEUVERS

- A. RECTANGULAR COURSE**
- B. S-TURNS**
- C. TURNS ROUND A POINT**

VIII. NAVIGATION

- A. PILOTAGE**
- B. DIVERSION**
- C. LOST PROCEDURES**

IX. EMERGENCY OPERATIONS

- A. POWER FAILURE AT A HOVER**
- B. POWER FAILURE AT ALTITUDE**
- C. SYSTEMS AND EQUIPMENT MALFUNCTIONS**
- D. SETTLING-WITH-POWER**
- E. LOW ROTOR RPM RECOVERY**
- F. ANTITORQUE SYSTEM FAILURE**
- G. DYNAMIC ROLLOVER**
- H. GROUND RESONANCE**
- I. LOW G CONDITIONS**
- J. EMERGENCY EQUIPMENT AND SURVIVAL GEAR**

X. POST-FLIGHT PROCEDURES

- A. AFTER LANDING AND SECURING**

ADDITIONAL RATINGS TASK TABLE

Addition of a Rotorcraft/Helicopter Rating to an existing Recreational Pilot or Higher Certificate												
Required TASKs are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKs must be tested based on the notes in each AREA OF OPERATION.												
PILOT RATING(S) HELD												
AREAS OF OPERATION	ASEL	ASES	AMEL	AMES	RG	Glider	Balloon	Airship	PPCL	PPCS	WSCL	WSCS
I	F, G	F, G	F, G	F, G	F, G	F, G	F, G	F, G	F, G	F, G	F, G	F, G
II	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
III	B, C	B, C	B, C	B, C	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
IV	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
V	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VI	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VII	NONE	NONE	NONE	NONE	NONE	ALL	ALL	ALL	NONE	NONE	NONE	NONE
VIII	NONE	NONE	NONE	NONE	NONE	ALL	ALL	ALL	NONE	NONE	NONE	NONE
IX	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
X	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL

NOTE 1: This table is used by the evaluator in developing their plan of action for a practical test. The evaluator may test additional TASKs not listed in the table that they deem necessary to ensure the pilot can operate the aircraft safely in the NAS.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

A. TASK: CERTIFICATES AND DOCUMENTS

REFERENCES: 14 CFR parts 43, 61, 91; FAA-H-8083-21, FAA-H-8083-25; POH/RFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to certificates and documents by:

1. Explaining—
 - a. recreational pilot certificate privileges, limitations, and recent flight experience requirements.
 - b. medical requirements/medical certificate class and duration.
 - c. pilot logbook or flight records.
2. Locating and explaining—
 - a. airworthiness and registration certificates.
 - b. operating limitations, placards, instrument markings, and POH/RFM.
 - c. weight and balance data and equipment list.

B. TASK: AIRWORTHINESS REQUIREMENTS

REFERENCES: 14 CFR part 91; FAA-H-8083-21, FAA-H-8083-25; POH/RFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to airworthiness requirements by:

1. Explaining—
 - a. required instruments and equipment for day VFR.
 - b. procedures and limitations for determining airworthiness of the helicopter with inoperative instruments and equipment with and without an MEL.
 - c. requirements and procedures for obtaining a special flight permit.
2. Locating and explaining—
 - a. airworthiness directives.
 - b. compliance records.
 - c. maintenance/inspection requirements.
 - d. appropriate record keeping.

C. TASK: WEATHER INFORMATION

NOTE: The evaluator will use a variety of weather conditions to evaluate this TASK.

REFERENCES: 14 CFR part 91; FAA-H-8083-25, FAA-S-8083-28; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to real time weather information by analyzing weather reports, surface analysis charts, and forecasts from aeronautical weather reporting sources.
 - a. METAR, TAF, and GFA.
 - b. surface analysis charts.
 - c. radar summary chart.
 - d. significant weather prognostic chart.
 - e. AWOS and ASOS reports.
2. Makes a competent "go/no-go" decision for the flight evaluation based on actual weather conditions.
3. Describes the importance of avoiding adverse weather and an inadvertent IMC encounter.
4. Explains courses of action to safety exit from an inadvertent IMC encounter.

D. TASK: NAS

REFERENCES: 14 CFR parts 71, 91; FAA-H-8083-25; Navigational Charts; AIM

Objective. To determine that the applicant exhibits knowledge of the NAS by explaining:

1. Recreational pilot privileges and limitations applicable to the following classes of airspace:
 - a. Class B.
 - b. Class C.
 - c. Class D.
 - d. Class E.
 - e. Class G.
2. Special use airspace and other airspace areas.
3. TFRs.

E. TASK: PERFORMANCE AND LIMITATIONS

REFERENCES: FAA-H-8083-1, FAA-H-8083-21, FAA-H-8083-25; AC 90-95; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
2. Computes weight and balance. Determines the computed weight and center of gravity is within the helicopter's operating limitations and if the weight and center of gravity will remain within limits during all phases of flight.
3. Demonstrates the use of appropriate performance charts, tables, and data.

4. Describes the effect of atmospheric conditions on the helicopter's performance.
5. Understands the cause and effects of retreating blade stall.
6. Considers circumstances when operating within "avoid areas" of the height/velocity diagram.
7. Is aware of situations that lead to loss of tail rotor/antitorque effectiveness (unanticipated yaw).

F. TASK: OPERATION OF SYSTEMS

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; POH/RFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the operation of systems on the helicopter provided for the flight test by explaining at least three (3) of the following systems selected by the evaluator:

1. Primary flight controls and trim.
2. Powerplant.
3. Main rotor and antitorque.
4. Landing gear, brakes, steering, skids or floats as applicable.
5. Fuel, oil, and hydraulic.
6. Electrical.
7. Pitot-static, vacuum/pressure, and associated flight instruments, if applicable.
8. Environmental, if applicable.
9. Anti-icing, including carburetor heat, if applicable.
10. Avionics equipment.

G. TASK: AEROMEDICAL FACTORS

REFERENCES: FAA-H-8083-25; AIM.

Objective. To determine that the applicant exhibits knowledge of the elements related to aeromedical factors by explaining:

1. The symptoms, causes, effects, and corrective actions of at least three of the following—
 - a. hypoxia.
 - b. hyperventilation.
 - c. middle ear and sinus problems.
 - d. spatial disorientation.
 - e. stress and fatigue.
 - f. carbon monoxide poisoning.
 - g. stress and fatigue.
 - h. dehydration.
2. The effects of alcohol and drugs, including over-the-counter drugs.
3. The effects of nitrogen excesses during scuba dives upon a pilot and/or passenger in flight.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

A. TASK: PREFLIGHT INSPECTION

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; POH/ RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a preflight inspection including which items must be inspected, the reasons for checking each item, and how to detect possible defects.
2. Inspects the helicopter with reference to an appropriate checklist.
3. Verifies that the helicopter is in condition for safe flight.

B. TASK: FLIGHT DECK MANAGEMENT

REFERENCES: 14 CFR part 91; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related flight deck management procedures.
2. Ensures all loose items in the flight deck and cabin are secured.
3. Organizes material and equipment in an efficient manner so they are readily available.
4. Briefs the occupant on the use of safety belts, shoulder harnesses, doors, rotor blade avoidance, and emergency procedures.

C. TASK: ENGINE STARTING AND ROTOR ENGAGEMENT

REFERENCES: FAA-H-8083-21; AC 91-55; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to correct engine starting procedures including the use of an external power source, starting under various atmospheric conditions, awareness of other persons and property during start, and the effects of using incorrect starting procedures.
2. Positions the helicopter properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
3. Utilizes the appropriate checklist for starting procedure.

D. TASK: BEFORE TAKEOFF CHECK

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to the before takeoff check including the reasons for checking each item and how to detect malfunctions.
2. Positions the helicopter properly considering other aircraft, wind and surface conditions.
3. Divides attention inside and outside the flight deck.
4. Ensures that the engine temperature and pressure are suitable for run-up and takeoff.
5. Accomplishes the before takeoff check and ensures that the helicopter is in a safe operating condition.
6. Reviews takeoff performance airspeeds, takeoff distances, and departure and emergency procedures.
7. Avoids runway incursions and/or ensures no conflict with traffic prior to takeoff.
8. Completes the appropriate checklist.

III. AREA OF OPERATION: AIRPORT AND HELIPORT OPERATIONS

A. TASK: RADIO COMMUNICATIONS

NOTE: The evaluator will evaluate this TASK orally if the aircraft is not radio equipped.

REFERENCES: 14 CFR part 91; FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to radio communications at non-towered airports.
2. Selects appropriate frequencies.
3. Transmits using phraseology recommended in the AIM.
4. Acknowledges radio communications.

B. TASK: TRAFFIC PATTERNS

REFERENCES: 14 CFR part 91; FAA-H-8083-21, FAA- H-8083-25; AIM; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to traffic patterns including procedures at non-towered airports, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.
2. Complies with proper traffic pattern procedures.
3. Maintains proper spacing from other traffic.
4. Corrects for wind drift to maintain the proper ground track.
5. Maintains orientation with the runway/landing area in use.
6. Maintains traffic pattern altitude, ± 100 feet, and the appropriate airspeed, ± 10 knots.

C. TASK: AIRPORT AND HELIPORT MARKINGS AND LIGHTING

REFERENCES: 14 CFR part 91; FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to airport/heliport runway and taxiway operations with emphasis on runway incursion avoidance.
2. Properly identifies and interprets airport/heliport runway and taxiway signs, markings, and lighting.

IV. AREA OF OPERATION: HOVERING MANEUVERS

A. TASK: VERTICAL TAKEOFF AND LANDING

REFERENCES: FAA-H-8083-21; AC 90-95; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a vertical takeoff to a hover and landing from a hover.
2. Ascends to and maintains recommended hovering altitude, and descends from recommended hovering altitude in headwind, crosswind, and tailwind conditions.
3. Maintains RPM within normal limits.
4. Establishes recommended hovering altitude, $\pm 1/2$ of that altitude within 10 feet of the surface; if above 10 feet, ± 5 feet.
5. Avoids conditions that might lead to loss of tail rotor/antitorque effectiveness.
6. Maintains position within 4 feet of a designated point, with no aft movement.
7. Descends vertically to within 4 feet of the designated touchdown point.
8. Maintains specified heading, $\pm 10^\circ$.

B. TASK: SLOPE OPERATIONS

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to slope operations.
2. Selects a suitable slope, approach, and direction considering wind effect, obstacles, dynamic rollover avoidance, and discharging passengers.
3. Properly moves toward the slope.
4. Maintains RPM within normal limits.
5. Makes a smooth positive descent to touch the upslope skid on the sloping surface.
6. Maintains positive control while lowering the down slope skid or landing gear to touchdown.
7. Recognizes if slope is too steep and abandons the operation prior to reaching cyclic control stops.
8. Makes a smooth transition from the slope to a stabilized hover parallel to the slope.
9. Properly moves away from the slope.
10. Maintains the specified heading throughout the operation, $\pm 10^\circ$.

C. TASK: SURFACE TAXI

NOTE: This TASK applies to only helicopters equipped with wheel-type landing gear.

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; AIM; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to surface taxiing.
2. Surface taxis the helicopter from one point to another under headwind, crosswind, and tailwind conditions, with the landing gear in contact with the surface, avoiding conditions that might lead to loss of tail rotor/antitorque effectiveness.
3. Properly uses cyclic, collective, and brakes to control speed while taxiing.
4. Properly positions nosewheel/tailwheel, if applicable, locked or unlocked.

5. Maintains RPM within normal limits.
6. Maintains appropriate speed for existing conditions.
7. Stops helicopter within 4 feet of a specified point.
8. Maintains specified track within ± 4 feet.

D. TASK: HOVER TAXI

REFERENCES: FAA-H-8083-21; AIM; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to hover taxiing.
2. Hover taxis over specified ground references, demonstrating forward, sideward, and rearward hovering and hovering turns.
3. Maintains RPM within normal limits.
4. Maintains specified ground track within ± 4 feet of a designated reference on straight legs.
5. Maintains constant rate of turn at pivot points.
6. Maintains position within 4 feet of each pivot point during turns.
7. Makes a 360° pivoting turn, left and right, stopping within 10° of a specified heading.
8. Maintains recommended hovering altitude, $\pm 1/2$ of that altitude within 10 feet of the surface, if above 10 feet, ± 5 feet.

E. TASK: AIR TAXI

REFERENCES: FAA-H-8083-21; AC 90-95; AIM; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to air taxiing.
2. Air taxis the helicopter from one point to another under headwind and crosswind conditions.
3. Maintains RPM within normal limits.
4. Selects a safe airspeed and altitude.
5. Maintains desired track and groundspeed in headwind and crosswind conditions, avoiding conditions that might lead to loss of tail rotor/antitorque effectiveness.
6. Maintains a specified altitude, ± 10 feet.

V. AREA OF OPERATION: TAKEOFFS, LANDINGS, AND GO- AROUNDS

NOTE: The evaluator shall select TASKs A, B, C, D, I and at least one other TASK.

A. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB

NOTE: If a calm wind weather condition exists, the applicant's knowledge of the crosswind elements shall be evaluated through oral testing; otherwise a crosswind takeoff and climb shall be demonstrated.

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to normal and crosswind takeoff and climb, including factors affecting performance, to include height/velocity information.
2. Establishes a stationary position on the surface or a stabilized hover, prior to takeoff in headwind and crosswind conditions.
3. Maintains RPM within normal limits.
4. Accelerates to manufacturer's recommended climb airspeed, ± 10 knots.
5. Maintains proper ground track with crosswind correction, if necessary.
6. Remains aware of the possibility of wind shear and/or wake turbulence.

B. TASK: NORMAL AND CROSSWIND APPROACH

NOTE: If a calm wind weather condition exists, the applicant's knowledge of the crosswind elements shall be evaluated through oral testing; otherwise a crosswind approach and landing shall be demonstrated.

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to normal and crosswind approach.
2. Considers performance data, to include height/velocity information.
3. Considers the wind conditions, landing surface, and obstacles.
4. Selects a suitable touchdown point.
5. Establishes and maintains the normal approach angle, and proper rate of closure.
6. Remains aware of the possibility of wind shear and/or wake turbulence.
7. Avoids situations that may result in settling-with-power.
8. Maintains proper ground track with crosswind correction, if necessary.
9. Arrives over the touchdown point, on the surface or at a stabilized hover, ± 4 feet.
10. Completes the prescribed checklist, if applicable.

C. TASK: MAXIMUM PERFORMANCE TAKEOFF AND CLIMB

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a maximum performance takeoff and climb.
2. Considers situations where this maneuver is recommended and factors related to takeoff and climb performance, to include height/velocity information.
3. Maintains RPM within normal limits.

4. Utilizes proper control technique to initiate takeoff and forward climb airspeed attitude.
5. Utilizes the maximum available takeoff power.
6. After clearing all obstacles, transitions to normal climb attitude, airspeed, ± 10 knots, and power setting.
7. Remains aware of the possibility of wind shear and/or wake turbulence.
8. Maintains proper ground track with crosswind correction, if necessary.

D. TASK: STEEP APPROACH

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a steep approach.
2. Considers situations where this maneuver is recommended and factors related to a steep approach, to include height/velocity information.
3. Considers the wind conditions, landing surface, and obstacles.
4. Selects a suitable termination point.
5. Establishes and maintains a steep approach angle (15° maximum), and proper rate of closure.
6. Avoids situations that can result in settling-with-power.
7. Remains aware of the possibility of wind shear and/or wake turbulence.
8. Maintains proper ground track with crosswind correction, if necessary.
9. Arrives at the termination point, on the surface or at a stabilized hover, ± 4 feet.

E. TASK: ROLLING TAKEOFF

NOTE: This TASK applies only to helicopters equipped with wheel- type landing gear.

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a rolling takeoff.
2. Considers situations where this maneuver is recommended and factors related to takeoff and climb performance, to include height/velocity information.
3. Maintains RPM within normal limits.
4. Utilizes proper preparatory technique prior to initiating takeoff.
5. Initiates forward accelerating movement on the surface.
6. Transitions to a normal climb airspeed, ± 10 knots, and power setting.
7. Remains aware of the possibility of wind shear and/or wake turbulence.
8. Maintains proper ground track with crosswind correction, if necessary.
9. Completes the prescribed checklist, if applicable.

F. TASK: CONFINED AREA OPERATIONS

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to confined area operations.
2. Accomplishes a proper high and low reconnaissance.
3. Selects a suitable approach path, termination point, and departure path.
4. Tracks the selected approach path at an acceptable approach angle and rate of closure to the

termination point.

5. Maintains RPM within normal limits.
6. Avoids situations that can result in settling-with-power.
7. Terminates at a hover or on the surface, as conditions allow.
8. Accomplishes a proper ground reconnaissance.
9. Selects a suitable takeoff point, considers factors affecting takeoff and climb performance under various conditions.

G. TASK: PINNACLE/PLATFORM OPERATIONS

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements pinnacle/platform operations.
2. Accomplishes a proper high and low reconnaissance.
3. Selects a suitable approach path, termination point, and departure path.
4. Tracks the selected approach path at an acceptable approach angle and rate closure to the termination point.
5. Maintains RPM within normal limits.
6. Terminates at a hover or on the surface, as conditions allow.
7. Accomplishes a proper ground reconnaissance.
8. Selects a suitable takeoff point, considers factors affecting takeoff and climb performance under various conditions.

H. TASK: SHALLOW APPROACH AND RUNNING/ROLL-ON LANDING

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to shallow approach and running/roll-on landing, including the purpose of the maneuver, factors affecting performance data, to include height/velocity information, and effect of landing surface texture.
2. Maintains RPM within normal limits.
3. Considers obstacles and other hazards.
4. Establishes and maintains the recommended approach angle and proper rate of closure.
5. Remains aware of the possibility of wind shear and/or the possibility of wake turbulence.
6. Maintains proper ground track with crosswind correction, if necessary.
7. Maintains a speed that will take advantage of the effective translational lift during surface contact with landing parallel with the ground track.
8. Utilizes proper flight control technique after surface contact.
9. Completes the prescribed checklist, if applicable.

I. TASK: GO-AROUNDS

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a go-around and when it is necessary.
2. Makes a timely decision to discontinue the approach to landing.
3. Maintains RPM within normal limits.
4. Establishes proper control input to stop descent and initiate climb.
5. Retracts the landing gear, if applicable, after a positive rate-of- climb.
6. Maintains proper ground track with crosswind correction, if necessary.
7. Transitions to a normal climb airspeed ± 10 knots.
8. Completes the prescribed checklist, if applicable.

VI. AREA OF OPERATION: PERFORMANCE MANEUVERS

NOTE: The evaluator will select TASK A and at least one other TASK.

A. TASK: RAPID DECELERATION

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to rapid deceleration.
2. Maintains RPM within normal limits.
3. Properly coordinates all controls throughout the execution of the maneuver.
4. Maintains an altitude that will permit safe clearance between the tail boom and the surface.
5. Decelerates and terminates in a stationary hover at the recommended hovering altitude.
6. Maintains heading throughout the maneuver, $\pm 10^\circ$.

B. TASK: STRAIGHT IN AUTOROTATION

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a straight in autorotation terminating with a power recovery to a hover.
2. Selects a suitable touchdown area.
3. Initiates the maneuver at the proper point.
4. Establishes proper aircraft trim and autorotation airspeed, ± 10 knots.
5. Maintains rotor RPM within normal limits.
6. Compensates for wind speed and direction as necessary to avoid undershooting or overshooting the selected landing area.
7. Utilizes proper deceleration, collective pitch application to a hover.
8. Comes to a hover within 400 feet of a designated point.

C. TASK: 180° AUTOROTATION

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a 180° autorotation terminating with a power recovery to a hover.
2. Selects a suitable touchdown area.
3. Initiates the maneuver at the proper point.
4. Establishes proper aircraft trim and autorotation airspeed, ± 10 knots.
5. Maintains rotor RPM within normal limits.
6. Compensates for wind speed and direction as necessary to avoid undershooting or overshooting the selected landing area.
7. Utilizes proper deceleration, collective pitch application to a hover.
8. Comes to a hover within 400 feet of a designated point.

VII. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

NOTE: The evaluator will select at least one TASK.

A. TASK: RECTANGULAR COURSE

REFERENCE: FAA-H-8083-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a rectangular course.
2. Selects an appropriate ground reference based on wind direction and emergency landing areas.
3. Plans the maneuver so as to enter a left or right pattern, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area, 45° to the downwind leg.
4. Applies adequate wind-drift correction during straight-and-turning flight to maintain a constant ground track around the rectangular reference area.
5. Divides attention between helicopter control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ± 100 feet; maintains airspeed, ± 10 knots.

B. TASK: S-TURNS

REFERENCE: FAA-H-8083-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to S-turns.
2. Selects an appropriate reference line based on wind direction and emergency landing areas.
3. Plans the maneuver so as to enter at 600 to 1,000 feet AGL, perpendicular to the selected reference line.
4. Applies adequate wind-drift correction to track a constant radius turn on each side of the selected reference line.
5. Reverses the direction of turn directly over the selected reference line.
6. Divides attention between helicopter control and the ground track while maintaining coordinated flight.
7. Maintains the entry altitude throughout the maneuver, ± 100 feet; maintains airspeed, ± 10 knots.

C. TASK: TURNS AROUND A POINT

REFERENCE: FAA-H-8083-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to turns around a point.
2. Selects an appropriate reference point based on wind direction and emergency landing areas.
3. Plans the maneuver so as to enter left or right at 600 to 1,000 feet AGL, at an appropriate distance from the reference point.
4. Applies adequate wind-drift correction to track a constant radius circle around the selected reference point with a bank of approximately 40° at the steepest point in the turn.
5. Divides attention between helicopter control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ± 100 feet; maintains airspeed, ± 10 knots.

VIII. AREA OF OPERATION: NAVIGATION

A. TASK: PILOTAGE

REFERENCE: FAA-H-8083-25.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to pilotage.
2. Follows the preplanned course by visual reference to landmarks, with the aid of a magnetic compass.
3. Identifies landmarks by relating the surface features to chart symbols.
4. Verifies the helicopter's position within three (3) nautical miles of the flight planned route.
5. Maintains the appropriate altitude, ± 200 feet and established heading, $\pm 15^\circ$.

B. TASK: DIVERSION

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to diversion.
2. Selects an appropriate alternate airport or heliport and route.
3. Promptly diverts toward the alternate airport or heliport.
4. Makes a reasonable estimate of heading and fuel consumption to the alternate airport or heliport.
5. Maintains the appropriate altitude, ± 200 feet and established heading, $\pm 15^\circ$.

C. TASK: LOST PROCEDURES

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to lost procedures.
2. Selects an appropriate course of action.
3. Maintains an appropriate heading and climbs, if necessary.
4. Identifies prominent landmark(s).
5. Plans a precautionary landing if deteriorating weather and/or fuel exhaustion is impending.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

NOTE: TASKs F through I are knowledge only TASKs.

A. TASK: POWER FAILURE AT A HOVER

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power failure at a hover.
2. Determines that the terrain below the aircraft is suitable for a safe touchdown.
3. Performs autorotation from a stationary or forward hover into the wind at recommended altitude, and RPM, while maintaining established heading, $\pm 10^\circ$.
4. Touches down with minimum sideward movement and no rearward movement.
5. Exhibits orientation, division of attention, and proper planning.

B. TASK: POWER FAILURE AT ALTITUDE

NOTE: Simulated power failure at altitude shall be given over areas where actual touchdowns can safely be completed in the event of an actual powerplant failure.

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to power failure at altitude.
2. Establishes an autorotation and selects a suitable landing area.
3. Establishes proper aircraft trim and autorotation airspeed, ± 5 knots.
4. Maintains rotor RPM within normal limits.
5. Compensates for wind speed and direction as necessary to avoid undershooting or overshooting the selected landing area.
6. Terminates approach with a power recovery at a safe altitude when directed by the evaluator.

C. TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to causes, indications, and pilot actions for various systems and equipment malfunctions.
2. Analyzes the situation and takes action, appropriate to the helicopter used for the practical test, in at least three of the following areas—
 - a. engine/oil and fuel.
 - b. hydraulic, if applicable.
 - c. electrical.
 - d. carburetor or induction icing.
 - e. smoke and/or fire.
 - f. flight control/trim.
 - g. pitot static/vacuum and associated flight instruments, if applicable.
 - h. rotor and/or antitorque.
 - i. various frequency vibrations and the possible components that may be affected.
 - j. any other emergency unique to the helicopter flown.

D. TASK: SETTLING-WITH-POWER

NOTE: May be evaluated orally at the discretion of the evaluator.

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to settling-with- power.
2. Selects an altitude that will allow recovery to be completed no less than 1,000 feet AGL or, if applicable, the manufacturer's recommended altitude, whichever is higher.
3. Promptly recognizes and recovers at the onset of settling-with- power.
4. Utilizes the appropriate recovery procedure.

E. TASK: LOW ROTOR RPM RECOVERY

NOTE: The evaluator may test the applicant orally on this TASK if helicopter used for the practical test has a governor that cannot be disabled.

REFERENCES: FAA-H-8083-21; Appropriate Manufacturer's Safety Notices; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to low rotor RPM recovery, including the combination of conditions that are likely to lead to this situation.
2. Detects the development of low rotor RPM and initiates prompt corrective action.
3. Utilizes the appropriate recovery procedure.

F. TASK: ANTITORQUE SYSTEM FAILURE

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to antitorque system failure by describing—
 - a. The aerodynamic indications of the types of possible system failure(s) associated with the helicopter.
 - b. Manufacturers recommended procedures for dealing with the different types of system(s) failure.

G. TASK: DYNAMIC ROLLOVER

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to the aerodynamics of dynamic rollover.
2. Understands the interaction between the antitorque thrust, crosswind, slope, CG, cyclic, and collective pitch control in contributing to dynamic rollover.
3. Explains preventive flight technique during takeoffs, landings, and slope operations.

H. TASK: GROUND RESONANCE

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a fully articulated rotor system and the aerodynamics of ground resonance.
2. Understands the conditions that contribute to ground resonance.
3. Explains preventive flight technique during takeoffs and landings.

I. TASK: LOW G CONDITIONS

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to low G conditions.
2. Understands and recognizes the situations that contribute to low G conditions.
3. Explains proper recovery procedures.

J. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR

REFERENCES: FAA-H-8083-21; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency equipment and survival gear appropriate to the helicopter environment encountered during flight.
2. Identifies appropriate equipment that should be aboard the helicopter.

X. AREA OF OPERATION: POST-FLIGHT PROCEDURES

A. TASK: AFTER LANDING AND SECURING

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; POH/RFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to after-landing, parking, and securing procedures.
2. Minimizes the hazardous effects of rotor downwash during hovering.
3. Parks in an appropriate area, considering the safety of nearby persons and property.
4. Follows the appropriate procedure for engine shutdown.
5. Completes the appropriate checklist.
6. Conducts an appropriate postflight inspection and secures the aircraft.

SECTION 3

RECREATIONAL PILOT—

ROTORCRAFT/GYROPLANE

APPLICANT'S PRACTICAL TEST CHECKLIST

APPOINTMENT WITH EVALUATOR:

EVALUATOR'S NAME _____

LOCATION _____

DATE/TIME _____

ACCEPTABLE AIRCRAFT

- ☐ Aircraft Documents:
 - ☐ Airworthiness Certificate
 - ☐ Registration Certificate
 - ☐ Operating Limitations
- ☐ Aircraft Maintenance Records:
 - ☐ Logbook Record of Airworthiness Inspections and AD Compliance
- ☐ Pilot's Operating Handbook and Gyroplane Flight Manual

PERSONAL EQUIPMENT

- ☐ Current Aeronautical Charts
- ☐ Current AIM, Chart Supplements, and Appropriate Publications

PERSONAL RECORDS

- ☐ Identification – Photo/Signature ID
- ☐ Pilot Certificate
- ☐ Current and Appropriate Medical Certificate or show compliance with 14 CFR part 68
- ☐ Completed FAA Form 8710-1, Airman Certificate and/or Rating Application with Instructor's Signature (if applicable)
- ☐ AKTR (if applicable)
- ☐ Pilot Logbook with Appropriate Instructor Endorsements
- ☐ FAA Form 8060-5, Notice of Disapproval of Application (if applicable)
- ☐ Approved School Graduation Certificate (if applicable)
- ☐ Evaluator's Fee (if applicable)

EVALUATOR'S PRACTICAL TEST CHECKLIST

(GYROPLANE)

APPLICANT'S NAME _____

LOCATION _____

DATE/TIME _____

I. PREFLIGHT PREPARATION

- A. CERTIFICATES AND DOCUMENTS
- B. AIRWORTHINESS REQUIREMENTS
- C. WEATHER INFORMATION
- D. NAS
- E. PERFORMANCE AND LIMITATIONS
- F. OPERATION OF SYSTEMS
- G. AEROMEDICAL FACTORS

II. PREFLIGHT PROCEDURES

- A. PREFLIGHT INSPECTION
- B. FLIGHT DECK MANAGEMENT
- C. ENGINE STARTING
- D. TAXIING
- E. BEFORE TAKEOFF CHECK

III. AIRPORT OPERATIONS

- A. RADIO COMMUNICATIONS
- B. TRAFFIC PATTERNS
- C. AIRPORT MARKINGS AND LIGHTING

IV. TAKEOFFS, LANDINGS, AND GO-AROUNDS

- A. NORMAL AND CROSSWIND TAKEOFF AND CLIMB
- B. NORMAL AND CROSSWIND APPROACH AND LANDING
- C. SOFT-FIELD TAKEOFF AND CLIMB
- D. SOFT-FIELD APPROACH AND LANDING
- E. GO-AROUND

V. PERFORMANCE MANEUVER

- A. STEEP TURNS

VI. GROUND REFERENCE MANEUVERS

- A. RECTANGULAR COURSE
- B. S-TURNS
- C. TURNS AROUND A POINT

VII. NAVIGATION

- A. PILOTAGE
- B. DIVERSION
- C. LOST PROCEDURES

VIII. FLIGHT AT SLOW AIRSPEEDS

- A. MANEUVERING AT SLOW AIRSPEEDS
- B. HIGH RATE OF DESCENT AND RECOVERY

IX. EMERGENCY OPERATIONS

- A. EMERGENCY APPROACH AND LANDING
- B. LIFT-OFF AT LOW AIRSPEED AND HIGH ANGLE OF ATTACK
- C. GROUND RESONANCE
- D. SYSTEMS AND EQUIPMENT MALFUNCTIONS
- E. EMERGENCY EQUIPMENT AND SURVIVAL GEAR

X. POST-FLIGHT PROCEDURES

- A. AFTER LANDING, PARKING, AND SECURING

ADDITIONAL RATINGS TASK TABLE

Addition of a Rotorcraft/Gyroplane rating to an existing Recreational Pilot or Higher Certificate												
Required TASKs are indicated by either the TASK letter(s) that apply(s) or an indication that all or none of the TASKs must be tested based on the notes in each AREA OF OPERATION.												
PILOT RATING (S) HELD												
AREAS OF OPERATION	ASEL	ASES	AMEL	AMES	RH	Glider	Balloon	Airship	PPCL	PPCS	WSCL	WSCS
I	F, E	F, E	F, E	F, E	F, E	F, E	F, E	F, E	F, E	F, E	F, E	F, E
II	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
III	B	B, C	B	B, C	B	ALL	ALL	ALL	B	B, C	B	B, C
IV	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
V	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VI	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VII	NONE	NONE	NONE	NONE	NONE	ALL	ALL	NONE	NONE	NONE	NONE	NONE
VIII	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
IX	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
X	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL

NOTE 1: This table is used by the evaluator in developing their plan of action for a practical test. The evaluator may test additional TASKs not listed in the table that they deem necessary to ensure the pilot can operate the aircraft safely in the NAS.

I. AREA OF OPERATION: PREFLIGHT PREPARATION

A. TASK: CERTIFICATES AND DOCUMENTS

REFERENCES: 14 CFR parts 43, 61, 91; FAA-H-8083-21, FAA-H-8083-25; GFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to certificates and documents by:

1. Explaining—
 - a. recreational pilot certificate privileges, and limitations and recent flight experience.
 - b. medical requirements/medical certificate class and duration.
 - c. pilot logbook or flight records.
2. Locating and explaining—
 - a. airworthiness and registration certificates.
 - b. operating limitations, placards, and instrument markings and GFM.
 - c. weight and balance data and equipment.

B. TASK: AIRWORTHINESS REQUIREMENTS

REFERENCES: 14 CFR part 91; FAA-H-8083-21, FAA-H-8083-25; POH/RFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to airworthiness requirements by:

1. Explaining—
 - a. required instruments and equipment for day VFR.
 - b. procedures and limitations for determining airworthiness of the gyroplane with inoperative instruments and equipment with and without an MEL.
 - c. requirements and procedures for obtaining a special flight permit.
2. Locating and explaining—
 - a. airworthiness directives.
 - b. compliance records.
 - c. maintenance/inspection requirements.
 - d. appropriate record keeping.

C. TASK: WEATHER INFORMATION

NOTE: The evaluator will use a variety of weather scenarios to evaluate this TASK.

REFERENCES: 14 CFR part 91; FAA-H-8083-25, FAA-H-8083-28; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to real time weather information by analyzing weather reports, charts, and forecasts from aeronautical weather reporting sources—
 - a. METAR, TAF and GFA.
 - b. surface analysis charts.
 - c. radar summary chart.
 - d. significant weather prognostic chart.
 - e. AWOS and ASOS reports.
2. Makes a competent "go/no-go" decision for the flight evaluation based on actual weather conditions.
3. Describes the importance of avoiding adverse weather and an inadvertent IMC encounter.
4. Explains courses of action to safety exit from an inadvertent IMC encounter.

D. TASK: NAS

REFERENCES: 14 CFR parts 71, 91; FAA-H-8083-25; Aeronautical Navigation Charts; AIM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the NAS by explaining:

1. Recreational pilot privileges and limitations applicable to the following classes of airspace—
 - b. Class B.
 - c. Class C.
 - d. Class D.
 - e. Class E.
 - f. Class G.
2. Special use airspace and other airspace areas.
3. TFRs.

E. TASK: PERFORMANCE AND LIMITATIONS

REFERENCES: FAA-H-8083-1, FAA-H-8083-21, FAA-H-8083-25; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to performance and limitations by explaining the use of charts, tables, and data to determine performance and the adverse effects of exceeding limitations.
2. Computes weight and balance. Determines the computed weight and center of gravity is within the gyroplanes operating limitations and if the weight and center of gravity will remain within limits during all phases of flight.
3. Demonstrates the use of appropriate performance charts, tables, and data.
4. Describes the effects of atmospheric conditions on the gyroplane's performance.
5. Understands the cause, effect, and avoidance procedure of "power pushover" and "pilot induced oscillation."

F. TASK: OPERATION OF SYSTEMS

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; GFM.

Objective. To determine that the applicant exhibits knowledge of the elements related to the operation of systems in the gyroplane provided for the flight test by explaining at least three (3) of the following systems selected by the evaluator.

1. Primary flight controls and trim.
2. Powerplant.
3. Rotor, including prerotator/spin-up control, if applicable.
4. Landing gear, brakes, and steering.
5. Fuel, oil, and hydraulic.
6. Electrical.
7. Pitot-static, vacuum/pressure, and associated flight instruments, if applicable.
8. Environmental, if applicable.
9. Anti-icing, including carburetor heat, if applicable.
10. Avionics equipment.

G. TASK: AEROMEDICAL FACTORS

REFERENCES: FAA-H-8083-25, AIM.

Objective. To determine that the applicant exhibits knowledge of the elements related to aeromedical factors by explaining:

1. The symptoms, causes effects, and corrective actions of at least three of the following—
 - a. hypoxia.
 - b. hyperventilation.
 - c. middle ear and sinus problems.
 - d. spatial disorientation.
 - e. motion sickness.
 - f. carbon monoxide poisoning.
 - g. stress and fatigue.
 - h. dehydration.
2. The effects of alcohol and drugs, including over-the-counter drugs.
3. The effects of nitrogen excesses during scuba dives upon a pilot and/or passenger in flight.

II. AREA OF OPERATION: PREFLIGHT PROCEDURES

A. TASK: PREFLIGHT INSPECTION

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a preflight inspection including which items must be inspected, the reasons for checking each item, and how to detect possible defects.
2. Inspects the gyroplane with reference to an appropriate checklist.
3. Verifies that the gyroplane is in condition for safe flight.

B. TASK: FLIGHT DECK MANAGEMENT

REFERENCES: 14 CFR part 91; FAA-H-8083-21; AC 91-32; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to flight deck management procedures.
2. Ensures all loose items in the aircraft are secured.
3. Organizes and arranges material and equipment in an efficient manner so they are readily available.
4. Briefs the occupants on the use of safety belts, shoulder harnesses, doors, propeller and rotor blade avoidance, and emergency procedures.

C. TASK: ENGINE STARTING

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; AC 91-55; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to recommended engine starting procedures including the use of an external power source, hand propping safety, starting under various atmospheric conditions, awareness of other persons and property during start, and the effects of using incorrect starting procedures.
2. Positions the gyroplane properly considering structures, surface conditions, other aircraft, and the safety of nearby persons and property.
3. Utilizes the appropriate checklist for starting procedure.

D. TASK: TAXIING

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; AIM; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to recommended taxi procedures, including rotor blade management and the effect of wind during taxiing.
2. Performs a brake check immediately after the gyroplane begins moving.
3. Properly positions rotor blades while taxiing.
4. Controls direction and speed without excessive use of brakes.
5. Complies with airport runway/taxiway markings and signs.
6. Avoids other aircraft and hazards.
7. Properly positions the gyroplane for runup considering other aircraft, surface conditions, and if applicable, existing wind conditions.

E. TASK: BEFORE TAKEOFF CHECK

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to the before takeoff check including the reasons for checking the items and how to detect malfunctions.
2. Positions the gyroplane properly considering other aircraft, surface conditions, and wind conditions.
3. Divides attention inside and outside the flight deck.
4. Accomplishes the before takeoff check and ensures that the gyroplane is in safe operating condition.
5. Reviews takeoff performance airspeeds and expected takeoff distance.
6. Describes takeoff emergency procedures, to include low speed/ high speed blade flap situations.
7. Avoids runway incursions and/or ensures no conflict with traffic prior to taxiing into takeoff position.
8. Utilizes proper rotor spin-up procedures.
9. Completes the appropriate checklist.

III. AREA OF OPERATION: AIRPORT OPERATIONS

A. TASK: RADIO COMMUNICATIONS

NOTE: The evaluator will evaluate this TASK orally if the aircraft is not radio equipped.

REFERENCES: 14 CFR part 91; FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to radio communications at non-towered airports.
2. Selects appropriate frequencies.
3. Transmits using phraseology recommended in the AIM.
4. Acknowledges radio communications.

B. TASK: TRAFFIC PATTERNS

REFERENCES: 14 CFR part 91; FAA-H-8083-25; AIM; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to traffic patterns including procedures at airports without operating control towers, prevention of runway incursions, collision avoidance, wake turbulence avoidance, and wind shear.
2. Complies with proper traffic pattern procedures.
3. Maintains proper spacing from other traffic.
4. Corrects for wind drift to maintain the proper ground track.
5. Maintains orientation with the runway/landing area in use.
6. Maintains traffic pattern altitude, ± 100 feet, and the appropriate airspeed, ± 5 knots.

C. TASK: AIRPORT MARKINGS AND LIGHTING

REFERENCES: FAA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to airport runway and taxiway operations with emphasis on runway incursion avoidance.
2. Properly identifies and interprets airport runway and taxiway signs, markings, and lighting.

IV. AREA OF OPERATION: TAKEOFFS, LANDINGS, AND GO- AROUNDS

NOTE: If the gyroplane provided for the test is not capable of safely performing soft field or short field maneuvers the applicant may be tested orally on their knowledge of the basic procedures.

A. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB

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

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a normal and crosswind takeoff, climb operations, and rejected takeoff procedures. Positions the flight controls for the existing wind conditions.
2. Prerotates rotor blades to appropriate RPM.
3. Clears the area, taxies into the takeoff position, and aligns the gyroplane with takeoff path.
4. Advances the throttle as required.
5. Maintains proper directional control during acceleration on the surface.
6. Attains the proper lift-off attitude and airspeed.
7. Accelerates to appropriate climb airspeed, ± 5 knots.
8. Maintains takeoff power to a safe maneuvering altitude, then sets climb power.
9. Maintains directional control and proper wind-drift correction throughout the takeoff and climb.
10. Remains aware of the possibility of wind shear and/or wake turbulence.
11. Completes the prescribed checklist, if applicable.

B. TASK: NORMAL AND CROSSWIND APPROACH AND LANDING

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

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to normal and crosswind approach and landing.
2. Adequately surveys the intended landing area.
3. Considers the wind conditions, landing surface, obstructions, and selects a suitable touchdown point.
4. Establishes and maintains a stabilized approach at the recommended airspeed, with gust correction factor applied, ± 5 knots.
5. Maintains proper ground track with crosswind correction, if necessary.
6. Remains aware of the possibility of wind shear and/or wake turbulence.
7. Makes smooth, timely, and correct control application during the flare and touchdown.
8. Touches down smoothly, beyond and within 200 feet of a specified point with no appreciable drift, and with the longitudinal axis aligned with the intended landing path.
9. Completes the appropriate checklist.

C. TASK: SOFT-FIELD TAKEOFF AND CLIMB

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field takeoff and climb.
2. Determines and utilizes best takeoff procedure based on the capabilities of this gyroplane and current conditions.
3. Positions the flight controls for existing wind conditions and to maximize lift as quickly as possible.
4. Prerotates rotor blades to appropriate RPM.
5. Clears the area; taxis onto the takeoff surface at a speed consistent with safety, without stopping, while advancing the throttle smoothly to takeoff power.
6. Maintains proper directional control.
7. Lifts off and remains in ground effect while accelerating to recommended climb airspeed.
8. Maintains recommended climb airspeed, ± 5 knots.
9. Maintains takeoff power to a safe maneuvering altitude, then sets climb power.
10. Maintains proper ground track with crosswind correction, if necessary.
11. Remains aware of the possibility of wind shear and/or wake turbulence.
12. Completes the appropriate checklist.

D. TASK: SOFT-FIELD APPROACH AND LANDING

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field approach and landing.
2. Considers the wind conditions, landing surface, and obstacles, and selects the most suitable touchdown area.
3. Establishes and maintains a stabilized approach at the recommended airspeed, with gust correction factor applied, ± 5 knots.
4. Maintains proper ground track with crosswind correction, if necessary.
5. Remains aware of the possibility of wind shear and/or wake turbulence.
6. Makes smooth, timely, and correct control application during the flare and touchdown.
7. Touches down smoothly, at a minimum descent rate and airspeed with no appreciable drift, and with the longitudinal axis aligned with the intended landing path.
8. Completes the appropriate checklist.

E. TASK: GO-AROUND

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a go-around and when it is necessary.
2. Makes a timely decision to discontinue the approach to landing.
3. Applies appropriate power and establishes a climb at the appropriate airspeed, ± 5 knots.
4. Maintains takeoff power to a safe maneuvering altitude, then sets climb power.
5. Maintains proper ground track with crosswind correction, if necessary.
6. Completes the prescribed checklist, if applicable.

V. AREA OF OPERATION: PERFORMANCE MANEUVER

A. TASK: STEEP TURNS

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to steep turns.
2. Selects a safe altitude.
3. Establishes the manufacturer's recommended airspeed.
4. Smoothly enters a coordinated steep 360° turn with a 40° bank.
5. Performs the task in the opposite direction, as specified by the evaluator.
6. Divides attention between gyroplane control and orientation.
7. Maintains the entry altitude, ± 100 feet, airspeed, ± 10 knots, rolls out on the entry heading, $\pm 10^\circ$, bank $\pm 5^\circ$.

VI. AREA OF OPERATION: GROUND REFERENCE MANEUVERS

NOTE: The evaluator shall select at least one TASK.

A. TASK: RECTANGULAR COURSE

REFERENCE: FAA-H-8083-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a rectangular course.
2. Selects an appropriate ground reference based on wind direction and emergency landing areas.
3. Plans the maneuver so as to enter a left or right pattern, 600 to 1,000 feet AGL at an appropriate distance from the selected reference area, 45° to the downwind leg.
4. Applies adequate wind-drift correction during straight-and- turning flight to maintain a constant ground track around the rectangular reference area.
5. Divides attention between gyroplane control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ± 100 feet; maintains airspeed, ± 10 knots.

B. TASK: S-TURNS

REFERENCE: FAA-H-8083-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to S-turns.
2. Selects an appropriate reference line based on wind direction and emergency landing areas.
3. Plans the maneuver so as to enter at 600 to 1,000 feet AGL, perpendicular to the selected reference line.
4. Applies adequate wind-drift correction to track a constant radius turn on each side of the selected reference line.
5. Reverses the direction of turn directly over the selected reference line.
6. Divides attention between gyroplane control and the ground track while maintaining coordinated flight.
7. Maintains the entry altitude throughout the maneuver, ± 100 feet; maintains airspeed, ± 10 knots.

C. TASK: TURNS AROUND A POINT

REFERENCE: FAA-H-8083-21.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to turns around a point.
2. Selects an appropriate reference point based on wind direction and emergency landing areas.
3. Plans the maneuver so as to enter left or right at 600 to 1,000 feet AGL, at an appropriate distance from the reference point.
4. Applies adequate wind-drift correction to track a constant radius circle around the selected reference point with a bank of approximately 40° at the steepest point in the turn.
5. Divides attention between gyroplane control and the ground track while maintaining coordinated flight.
6. Maintains altitude, ± 100 feet; maintains airspeed, ± 10 knots.

VII. AREA OF OPERATION: NAVIGATION

A. TASK: PILOTAGE

REFERENCE: FAA-H-8083-25.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to pilotage.
2. Follows the preplanned course by visual reference to landmarks, with the aid of a magnetic compass.
3. Identifies landmarks by relating surface features to chart symbols.
4. Verifies the gyroplane's position within 3 nautical miles of the flight planned route at all times.
5. Maintains the appropriate altitude, ± 200 feet and established heading, $\pm 15^\circ$.

B. TASK: DIVERSION

REFERENCE: FAA-H-8083-25.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to diversion.
2. Selects an appropriate alternate airport and route.
3. Makes a reasonable estimate of heading and fuel consumption to the alternate airport.
4. Maintains the appropriate altitude, ± 200 feet and established heading, $\pm 15^\circ$.

C. TASK: LOST PROCEDURES

REFERENCES: FA-H-8083-25; AIM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to lost procedures.
2. Selects an appropriate course of action.
3. Maintains an appropriate heading, and climbs if necessary.
4. Identifies prominent landmarks.
5. Plans a precautionary landing if deteriorating weather and/or fuel exhaustion is impending.

VIII. AREA OF OPERATION: FLIGHT AT SLOW AIRSPEEDS

A. TASK: MANEUVERING AT SLOW AIRSPEEDS

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to flight characteristics and controllability associated with maneuvering during slow flight.
2. Selects a safe altitude.
3. Establishes and maintains a specified airspeed ± 5 , -0 , in straight-and-level flight, turns, climbs, and descents as directed.
4. Maintains the specified altitude, ± 100 feet.
5. Maintains the specified heading during straight flight, $\pm 10^\circ$.
6. Maintains specified bank angle, $\pm 10^\circ$, during turning flight.
7. Rolls out on specified headings, $\pm 10^\circ$.
8. Divides attention between gyroplane control and orientation.

B. TASK: HIGH RATE OF DESCENT AND RECOVERY

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to aerodynamic factors associated with a high rate of descent and recovery and how this relates to actual approach and landing situations.
2. Selects an entry altitude that allows the task to be completed no lower than 500 feet AGL.
3. Establishes an airspeed that will induce a high rate of descent in high or low power settings.
4. Recognizes the onset of a high rate of descent.
5. Promptly recovers with or without power as directed.
6. Maintains the specified heading, $\pm 10^\circ$.
7. Resumes normal cruising flight.

IX. AREA OF OPERATION: EMERGENCY OPERATIONS

A. TASK: EMERGENCY APPROACH AND LANDING

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency approach and landing with a power failure.
2. Establishes and maintains the appropriate airspeed, ± 5 knots.
3. Selects a suitable landing area, considering the possibility of an actual forced landing.
4. Plans and follows a flight pattern to the selected landing area, considering altitude, wind, terrain, obstacles, and other factors.
5. Attempts to determine the reason for the simulated malfunction, if time permits.
6. Completes the prescribed checklist, if applicable.

B. TASK: LIFT-OFF AT LOW AIRSPEED AND HIGH ANGLE OF ATTACK

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to lift-off at low airspeed and high angle of attack, including combination of conditions, which are likely to lead to this situation.
2. Properly positions the controls.
3. Prerotates rotor blades to appropriate RPM, if applicable.
4. Clears the area; taxis into the takeoff position and aligns the gyroplane with the takeoff path.
5. Maintains proper directional control during acceleration on the surface.
6. Rotates for takeoff prior to normal lift-off airspeed with high angle of attack.
7. Detects the development of a low airspeed and high angle of attack, and initiates prompt corrective action.
8. Accelerates to recommended climb airspeed, ± 5 knots.

C. TASK: GROUND RESONANCE

NOTE: The evaluator will evaluate this TASK orally.

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a fully articulated rotor system and the aerodynamics of ground resonance.
2. Understands the conditions that contribute to ground resonance.
3. Explains preventive flight techniques used during takeoffs and landings.

C. TASK: SYSTEMS AND EQUIPMENT MALFUNCTIONS

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to causes, indications, and pilot actions for various systems and equipment malfunctions.
2. Analyzes the situation and takes action, appropriate to the gyroplane used for the practical test, in at least three of the following areas—
 - a. engine/oil and fuel.
 - b. hydraulic, if applicable.
 - c. electrical.
 - d. carburetor or induction icing.
 - e. smoke and/or fire.
 - f. flight control/trim.
 - g. pitot static/vacuum and associated flight instruments, if applicable.
 - h. rotor and/or propeller.
 - i. any other emergency unique to the gyroplane flown.

E. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR

REFERENCES: FAA-H-8083-21; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to emergency equipment and survival gear appropriate to the gyroplane and environment encountered during flight. Identifies appropriate equipment that should be aboard the gyroplane.

X. AREA OF OPERATION: POST-FLIGHT PROCEDURES

A. TASK: AFTER LANDING, PARKING, AND SECURING

REFERENCES: FAA-H-8083-21, FAA-H-8083-25; AIM; GFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to after landing, parking, and securing procedures.
2. Maintains directional control after touchdown while decelerating to an appropriate speed.
3. Observes runway hold lines and other surface control markings and lighting.
4. Parks in an appropriate area, considering the safety of nearby persons and property.
5. Follows the appropriate procedure for engine shutdown.
6. Completes the appropriate checklist.
7. Conducts an appropriate post flight inspection and secures the aircraft.