

**Barbados Civil Aviation** 

**Department** 

**BCAD Document PLAC-068** 

PERSONNEL LICENSING ADVISORY CIRCULAR

# PRIVATE PILOT- GLIDER LICENCE SKILL TEST STANDARDS

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**Subject: PRIVATE PILOT – GLIDER LICENCE SKILL TEST STANDARDS** 

**BCAD Advisory Circular PLAC-068** 

Date: 07/10/30

#### **FOREWORD**

- 1. (1) The BCAD has developed skill test standards for airmen licences and ratings and these are published as BCAD PL Advisory Circulars (PLACs). This PLAC establishes the standards for the private pilot licence skill tests for the glider category BCAD inspectors and designated pilot flight test examiners shall conduct skill tests in compliance with these standards. Flight instructors and applicants should find these standards helpful in skill test preparation. Other PLACs have been developed for other airmen licences and can be obtained from the BCAD website: www.bcad.gov.bb.
- (2) Terms, such as "shall" and "must" are directive in nature and when used in this document indicate that an action is mandatory. Guidance information is described in terms of "should" and "may" indicating the actions are desirable or permissive, but not mandatory.
- (3) The BCAD gratefully acknowledges the valuable assistance provided by the FAA in the development of these skill test standards (STS).
- (4) The Barbados Civil Aviation Regulations (BCARs) can be obtained from the Barbados Government printery, Bay Street, St. Michael Barbados. BCARS General Application& Personnel Licensing, cover the requirements for personnel licensing.
- (5) This PLAC may be downloaded from the BCAD website at www.bcad.gov.bb. Subsequent changes to this PLAC will also be available on BCAD web site.
  - (6) Comments regarding this publication should be sent to:

The Barbados Civil Aviation Department, Grantley Adams International Airport, Christ Church Barbados

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#### **PURPOSE**

1. The purpose of this BCAD Advisory Circular (PLAC) is to prescribe the standards that shall be used by BCAD inspectors and designated flight test examiners when conducting private pilot—glider (PPL-G) skill tests. Flight instructors are expected to use this document when preparing applicants for skill tests. Applicants should be familiar with this document and refer to these standards during their training.

#### **GENERAL**

2. (1) An applicant for a Barbados Private Pilot licence is required under BCARS No.1 to demonstrate to the Authority through a skill test, his ability to perform as a pilot in command of an aircraft, the relevant procedures and manoeuvres prescribed by the BCARs, with a degree of competence appropriate to the privileges granted to the holder of a Private Pilot Licence. This PLAC has been published by the BCAD to establish the standards for the Private Pilot Licence skill test for the glider category. BCAD inspectors and designated flight test examiners shall conduct skill tests in compliance with these standards. Flight instructors and applicants should find these standards helpful in preparing students for the required skill test for a Barbados Private Pilot Licence.

## SKILL TEST STANDARDS CONCEPT

3. BCARS General Application& Personnel Licensing specifies the areas of operation in which knowledge and skill must be demonstrated by the applicant before the issue of a private pilot licence or rating. The BCARs provide the flexibility to permit the BCAD to publish STSs containing the areas of operation and specific tasks in which pilot competency shall be demonstrated. The BCAD shall revise this STS whenever it is determined that changes are needed in the interest of safety. Adherence to the provisions of the BCARs and the STS is mandatory for the evaluation of private pilot applicants.

## SKILL TEST DESCRIPTION

- **4.** (1) This BAC contains the STS for private pilot glider. This includes the AREAS OF OPERATION and TASKS required for the issuance of an initial private pilot—glider licence and for the addition of other aircraft category ratings.
- (2) AREAS OF OPERATION are phases of the skill test arranged in a logical sequence within each standard. They begin with preflight preparation and end with postflight procedures. The examiner may conduct the skill test in any sequence that results in a complete and efficient test; however, the ground portion of the skill test shall be accomplished before the flight portion.
- (3) TASKS are titles of knowledge areas, flight procedures, or maneuvers appropriate to an AREA OF OPERATION.
- (4) The TASKS required for each additional aircraft category rating are shown in the Rating Task Table on page 16.
- (5) NOTE is used to emphasize special considerations required in the AREA OF OPERATION or TASK.

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(6) 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 references. Publications other than those listed may be used for references if their content conveys substantially the same meaning as the referenced publications. Many of the publications listed are publications published by the Federal Aviation Administration of the United States (FAA), and adopted by BCAD in cooperation with the FAA. The most recent version of these references should be used. The STSs are based on the following references:

BCAR	General Application and Personnel Licensing
BCAR	Airworthiness
BCAR	Aircraft Instruments and Equipment
BCAR	Operations
FAA-H-8083-25	Pilot's Handbook of Aeronautical Knowledge
FAA AC 00-6	Aviation Weather
FAAAC 00-45	Aviation Weather Services
FAA AC 60-22	Aeronautical Decision Making
FAA AC 61-84	Role of Preflight Preparation
FAA AC 90-48	Pilot's Role in Collision Avoidance
FAA AC 120-51	Crew Resource Management Training
AIP	Aeronautical Information Publication – Eastern Caribbean
AFD	Airport Facility Directory
AFM	BCAD Approved Aeroplane Flight Manual
РОН	Pertinent Pilot's Operation Handbooks
NOTAMS	Notices to Airmen
Other	Soaring Flight Manual (Jeppeson Sanderson)

- (7) The Objective lists the important elements that must be satisfactorily performed to demonstrate competency in a TASK. The Objective includes:
  - (a) Specifically what the applicant should be able to do;
  - (b) The conditions under which the TASK is to be performed; and
  - (c) The acceptable standards of performance.
  - (8) The following abbreviations have the meanings shown:

ADM	Aeronautical Decision Making
AIRMETS	Airman's Meteorological Information
APV	Approach with Vertical Guidance
AFD	Airport Facility Directory
ATC	Air Traffic Control
AIP	Aeronautical Information Publication of the Eastern Caribbean
ATS	Air Traffic Service
BCARS	Barbados Civil Aviation Regulations
CRM	Crew Resource Management

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FAA AC	Federal Aviation Administration Advisory Circular
FSTD	Flight Simulation Training Device
NOTAM	Notice to Airmen
NPA	Nonprecision Approach
PIREP(s)	Pilot Weather Reports
SIGMETS	Significant Meteorological Advisory
SRM	Single Pilot Resource Management
STS	Skill Test Standards
SUA	Single Use Airspace
TFR	Temporary Flight Restriction

#### **USE OF SKILL TEST STANDARDS**

- **5.**(1) The BCAD requires that all private pilot skill tests be conducted in accordance with the appropriate private pilot STS and the policies set forth herein. Applicants shall be evaluated in all tasks included in the areas of operation of the appropriate STS (unless otherwise noted).
- (2) An applicant who holds at least a private pilot licence seeking an additional aircraft category rating and/or class rating at the private pilot level, shall be evaluated in the areas of operation and tasks listed in the *Additional Rating Task Table*. At the discretion of the flight test examiner, an evaluation of the applicant's competence in the remaining areas of operation and tasks may be conducted.
- (3) If the applicant holds two or more category or class ratings at the private level, and the ratings table indicates differing required tasks, the "least restrictive" entry applies. For example, if "All" and "None" are indicated for one area of operation, the "None" entry applies. If "B" and "B, C" are indicated, the "B" entry applies.
- (4) In preparation for each skill test, the flight test examiner shall develop a written "plan of action." The "plan of action" shall include all tasks in each area of operation, unless noted otherwise. If the elements in one task have already been evaluated in another task, they need not be repeated. For example, the "plan of action" need not include evaluating the applicant on complying with markings, signals, and clearances at the end of the flight, if that element was sufficiently observed at the beginning of the flight. Any task selected for evaluation during a skill test shall be evaluated in its entirety.
- (5) The flight test examiner is not required to follow the precise order in which the areas of operation and tasks appear in this document. The flight test examiner may change the sequence or combine tasks with similar Objectives to have an orderly and efficient flow of the skill test..
- (6) The flight test examiner 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 manoeuvre.

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#### SPECIAL EMPHASIS AREAS

**6.** Reserved.

## SKILL TEST PREREQUISITES: PRIVATE PILOT - GLIDER LICENCE

- 7. An applicant for an private pilot glider skill test is required by BCARs (General Applications and Personnel Licensing) NO:30(2) to:
  - (a) Age: Be less than 16 years of age.
  - (b) Medical fitness: hold Class 2 medical certificate issued under BCARs (General Applications and Personnel Licensing) Part IX; and.
  - (c) Training: Obtain the applicable training and aeronautical experience prescribed for the instrument rating sought;
  - (d) Language: Be able to read, speak, write, and understand the English language; and
  - (e) Instructor Authorization: Obtain a written statement from an authorized flight instructor certifying that the applicant has been given flight training in preparation for the skill test within 60 days preceding the date of application. The statement shall also state that the instructor finds the applicant competent to pass the skill test and that the applicant has satisfactory knowledge of the subject area(s) in which a deficiency was indicated by the Airman Knowledge Test Report.

## AIRCRAFT AND EQUIPMENT REQUIRED FOR THE SKILL TEST

**8**. (1) The private pilot - glider applicant is required to provide an airworthy, certificated aircraft for use during the skill test. Its operating limitations must not prohibit the TASKS required on the skill test. Flight instruments are those required for controlling the aircraft without outside references.

## FLIGHT INSTRUCTOR RESPONSIBILITY

- **9.** (1) An appropriately rated flight instructor is responsible for training the private pilot glider applicant to acceptable standards in all subject matter areas, procedures, and maneuvers included in the TASKS within the appropriate skill test standard.
- (2) 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 students. Additionally, the flight instructor must certify that the applicant is able to perform safely as a private pilot glider and is competent to pass the required skill test.
- (3) 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 AP 90-48, Pilot's Role in Collision Avoidance; FAA-H8083-3, Aeroplane Flying Handbook; FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge; and the Aeronautical Information Manual.

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#### FLIGHT TEST EXAMINER RESPONSIBILITY

- 10. (1) The flight test examiner conducting the skill test is responsible for determining that the applicant meets the acceptable standards of knowledge and skill of each task within the appropriate STS. This is 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 skill test. Examiners shall test to the greatest extent practicable the applicant's correlative abilities rather than mere rote enumeration of facts throughout the skill test.
- (2) If the flight test examiner determines that a task is incomplete, or the outcome uncertain, he 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. In this case, the remaining tasks of the skill test phase should be completed before repeating the questionable task.
- (3) Throughout the flight portion of the skill test, the flight test examiner shall evaluate the applicant's use of visual scanning and collision avoidance procedures.

#### SATISFACTORY PERFORMANCE

- **11.** Satisfactory performance to meet the requirements for licence issue is based on the applicant's ability to safely -
  - (a) Perform the tasks specified in the areas of operation for the licence or rating sought within the approved standards;
  - (b) Demonstrate mastery of the aircraft with the successful outcome of each task performed never seriously in doubt;
  - (c) Demonstrate satisfactory proficiency and competency within the approved standards;
  - (d) Demonstrate sound judgment; and
  - (e) Demonstrate single-pilot competence if the aircraft is type licenced for single-pilot operations.

## UNSATISFACTORY PERFORMANCE

- 12. (1) The tolerances represent the performance expected in good flying conditions. If, in the judgment of the flight test examiner, the applicant does not meet the standards of performance of any task performed, the associated area of operation is failed and therefore, the skill test is failed.
- (2) The flight test examiner or applicant may discontinue the test at any time when the failure of an area of operation makes the applicant ineligible for the licence or rating sought. **The test may be continued** *ONLY* **with the consent of the applicant.** If the test is discontinued, the

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applicant is entitled credit for only those areas of operation and their associated tasks that were satisfactorily performed. However, during the retest, and at the discretion of the flight test examiner, any task may be re-evaluated, including those previously passed.

- (3) Typical areas of unsatisfactory performance and grounds for disqualification are -
  - (a) Any action or lack of action by the applicant that requires corrective intervention by the flight test examiner to maintain safe flight;
  - (b) Failure to use proper and effective visual scanning techniques to clear the area before and while performing manoeuvres;
  - (c) Consistently exceeding tolerances stated in the Objectives;
  - (d) Failure to take prompt corrective action when tolerances are exceeded.
- (4) When a notice of disapproval is issued, the flight test examiner shall record the applicant's unsatisfactory performance in terms of the area of operation and specific task(s) not meeting the standard appropriate to the skill test conducted. The area(s) of operation/tasks not tested and the number of skill test failures shall also be recorded. If the applicant fails the skill test because of a special emphasis area, the Notice of Disapproval shall indicate the associated task. For example, AREA OF OPERATION VIII, MANOEUVERING DURING SLOW FLIGHT, failure to use proper collision avoidance procedures.

#### AERONAUTICAL DECISION MAKING AND RISK MANAGEMENT

- 13. (1) The examiner shall evaluate the applicant's ability throughout the skill test to use good aeronautical decision making procedures in order to evaluate risks. The examiner shall accomplish this requirement by developing scenarios that incorporate as many TASKS as possible to evaluate the applicants risk management in making safe aeronautical decisions. For example, the examiner may develop a scenario that incorporates weather decisions and performance planning.
- (2) The applicant's ability to utilize all the assets available in making a risk analysis to determine the safest course of action is essential for satisfactory performance. The scenarios should be realistic and within the capabilities of the aircraft used for the skill test.

## **CREW RESOURCE MANAGEMENT (CRM)**

**14.** (1) CRM refers to the effective use of all available resources: human resources, hardware, and information. Human resources include all groups routinely working with the cockpit crew or pilot who are involved with decisions that are required to operate a flight safely. These groups include, but are not limited to flight operations officers/dispatchers, cabin crewmembers, maintenance personnel, air traffic controllers, and weather services. CRM is not a single task, but a set of competencies that must be evident in all tasks in this STS as applied to either single pilot operations or crew. CRM competencies, grouped into three clusters of observable behavior, are:

## (a) COMMUNICATIONS PROCESSES AND DECISIONS

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- 1. Briefing
- 2. Inquiry/Advocacy/Assertiveness
- 3. Self-Critique
- 4. Communication with Available Personnel Resources
- 5. Decision Making

## (b) BUILDING AND MAINTENANCE OF A FLIGHT TEAM

- 1. Leadership/Followership
- 2. Interpersonal Relationships

## (c) WORKLOAD MANAGEMENT AND SITUATIONAL AWARENESS

- 1. Preparation/Planning
- 2. Vigilance
- 3. Workload Distribution
- 4. Distraction Avoidance
- 5. Wake Turbulence Avoidance
- (2) CRM deficiencies almost always contribute to the unsatisfactory performance of a TASK. Therefore, the competencies provide an extremely valuable vocabulary for debriefing. For debriefing purposes, an amplified list of these competencies, expressed as behavioral markers, may be found in FAA AC 120-51, Crew Resource Management Training, as amended. These markers consider the use of various levels of automation in flight management systems.
- (3) The standards for each CRM competency as generally stated and applied are subjective. Conversely, some of the competencies may be found objectively stated as required operational procedures for one or more TASKS. Examples of the latter include briefings, radio calls, and instrument approach callouts. Whether subjective or objective, application of CRM competencies are dependent upon the composition of the crew.

## HOW THE EXAMINER APPLIES CREW RESOURCE MANAGEMENT

- 15 (1) Examiners are required to exercise proper CRM competencies in conducting tests as well as expecting the same from applicants.
- (2) Pass/Fail judgments based solely on CRM issues must be carefully chosen since they may be entirely subjective. Those Pass/Fail judgments which are not subjective apply to CRM-related procedures in FAA-approved operations manuals that must be accomplished, such as briefings to other crewmembers. In such cases, the operator (or the aircraft manufacturer) specifies what should be briefed and when the briefings should occur. The examiner may judge objectively whether the briefing requirement was or was not met. In those cases where the operator (or aircraft manufacturer) has not specified a briefing, the examiner shall require the applicant to brief the appropriate items from the following note. The examiner may then judge objectively whether the briefing requirement was or was not met.
- (3) The majority of aviation accidents and incidents are due to resource management failures by the pilot/crew; fewer are due to technical failures. Each applicant shall give a crew briefing before each

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takeoff/departure and approach/landing. If the operator or aircraft manufacturer has not specified a briefing, the briefing shall cover the appropriate items, such as runway, SID/STAR/IAP, power settings, speeds, abnormals or emergency prior to or after takeoff, emergency return intentions, missed approach procedures, FAF, altitude at FAF, initial rate of descent, DH/MDA, time to missed approach, and what is expected of the other crewmembers during the takeoff/SID and approach/landing. If the first takeoff/departure and approach/landing briefings are satisfactory, the examiner may allow the applicant to brief only the changes, during the remainder of the flight.

## SINGLE-PILOT RESOURCE MANAGEMENT

16. Single-Pilot Resource Management refers to the effective use of ALL available resources: human resources, hardware, and information. It is similar to Crew Resource Management (CRM) procedures that are being emphasized in multi-crewmember operations except that only one crewmember (the pilot) is involved. Human resources "...include all other groups routinely working with the pilot who are involved in decisions that are required to operate a flight safely. These groups include, but are not limited to: dispatchers, weather briefers, maintenance personnel, and air traffic controllers." Pilot Resource Management is not a single TASK; it is a set of skill competencies that must be evident in all TASKS in this skill test standard as applied to single-pilot operation.

## APPLICANT'S USE OF CHECKLISTS

17. Throughout the skill 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 elements of an 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 should be considered when using a checklist.

#### USE OF DISTRACTIONS DURING SKILL 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 cockpit, the flight test examiner shall cause realistic distractions during the flight portion of the skill test to evaluate the applicant's ability to divide attention while maintaining safe flight.

## POSITIVE EXCHANGE OF FLIGHT CONTROLS

- 19 (1) During flight training, there must always be a clear understanding between students and flight instructors 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 in the exchange of flight controls between pilots is a proven procedure and one that is strongly recommended.
- (2) When the instructor wishes the student to take control of the aircraft, he or she will say, "You have the flight controls." The student acknowledges immediately by saying, "I have the

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flight controls." The flight instructor again says, "You have the flight controls." When control is returned to the instructor, follow the same procedure. A visual check is recommended to verify that the exchange has occurred. There should never by any doubt as to who is flying the aircraft.

## **METRIC CONVERSION INITIATIVE**

20. To assist pilots in understanding and using the metric measurement system, the STSs refer to the metric equivalent of various altitudes throughout. The inclusion of meters is intended to familiarize pilots with its use. The metric altimeter is arranged in 10 meter increments; therefore, when converting from feet to meters, the exact conversion, being too exact for skill purposes, is rounded to the nearest 10 meter increment or even altitude as necessary.

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## ADDITIONAL RATING TASK TABLES

21. The following table indicates the areas of operations required during a skill test for the addition of a glider rating to a private pilot licence with another aircraft category rating.

ADDITION OF A GLIDER RATING TO AN EXISTING PRIVATE PILOT LICENCE								
AREAS OF OPER- ATION	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.							
	ASEL	ASES	AMEL	AMES	RH	RG	Balloon	Airship
I	B,C,D	B,C,D	B,C,D	B,C,D	B,C,D	B,C,D	C,D	C,D
II	A,B,C,E	A,B,C,E	A,B,C,E	A,B,C,E	A,B,C,E	A,B,C,E	ALL	A,B,C,E
III	В	В	В	В	В	В	В	В
IV	ALL*	ALL*	ALL*	ALL*	ALL*	ALL*	ALL*	ALL*
V	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VI	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VII	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
VIII	NONE	NONE	NONE	NONE	NONE	NONE	A	NONE
IX	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
X	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
XI	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL

<sup>\*</sup>EXAMINER SHALL SELECT KIND OF LAUNCH BASED ON THE APPLICANT'S QUALIFICATIONS.

## **LEGEND**

ASEL	Aeroplane Single-Engine Land
ASES	Aeroplane Single-Engine Sea
AMEL	Aeroplane Multiengine Land
AMES	Aeroplane Multiengine Sea
RH	Rotorcraft Helicopter
RG	Rotorcraft Gyroplane

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# **SECTION TWO**

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## APPLICANT'S SKILL TEST CHECKLIST:

# APPOINTMENT WITH THE FLIGHT TEST EXAMINER:

EST EXAMINER'S NAME:
N:
<b>E</b> :
TABLE AIRCRAFT
Airworthiness Licence Registration Licence Operating Limitations ircraft Maintenance Records: Logbook Record of Airworthiness Inspections and AD Compliance Applicable Airworthiness Directives ilot's Operating Handbook, CAD Approved Glider Flight Manual
NAL EQUIPMENT
kill Test Standards furrent Aeronautical Charts computer and Plotter light Plan Form light Logs current and Appropriate Flight Information Publications
ONAL RECORDS
dentification-Photo/Signature ID ilot Licence Currently Held current and Appropriate Medical Certificate completed BCAD Form PL001, Application For Flight Crew Licence, Rating, Authorization or Validation Certificate with authorized instructor's Signature (If applicable) original Aviation Knowledge Test Report ilot Logbook or Approved Training Organization (ATO) document containing in authorized instructor's endorsement certifying the applicant is prepared for the required skill test. CAD Form PL005, Notice of Denial (if applicable)

# EXAMINER'S PRACTICAL TEST CHECKLIST PRIVATE PILOT—GLIDER

APPLICANT'S NAME_	
LOCATION	
DATE/TIME	

## I. PREFLIGHT PREPARATION

- **A.** Certificates and Documents
- **B.** Weather Information
- **C.** Operation of Systems
- **D.** Performance and Limitations
- **E.** Aeromedical Factors

## II. PREFLIGHT PROCEDURES

- **A.** Assembly
- **B.** Ground Handling
- **C.** Preflight Inspection
- **D.** Cockpit Management
- E. Visual Signals

## III. AIRPORT AND GLIDERPORT OPERATIONS

- **A.** Radio Communications
- **B.** Traffic Patterns
- C. Airport, Runway, and Taxiway Signs, Markings, and Lighting

## IV. LAUNCHES AND LANDINGS

#### **AERO TOW**

- **A.** Before Takeoff Check
- **B.** Normal and Crosswind Takeoff
- **C.** Maintaining Tow Positions
- **D.** Slack Line
- **E.** Boxing The Wake
- **F.** Tow Release
- **G.** Abnormal Occurrences

## **GROUND TOW (AUTO OR WINCH)**

- **H.** Before Takeoff Check
- I. Normal and Crosswind Takeoff
- **J.** Abnormal Occurences

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## **SELF-LAUNCH**

- **K.** Engine Starting
- L. Taxiing
- M. Before Takeoff Check
- N. Normal and Crosswind Takeoff and Climb
- O. Engine Shutdown In Flight
- P. Abnormal Occurrences

## **LANDINGS**

- Q. Normal and Crosswind Landing
- **R.** Slips to Landing
- S. Downwind Landing

## V. PERFORMANCE AIRSPEEDS

- A. Minimum Sink Airspeed
- **B.** Speed-To-Fly

## VI. SOARING TECHNIQUES

- **A.** Thermal Soaring
- **B.** Ridge and Slope Soaring
- **C.** Wave Soaring

## VII. PERFORMANCE MANEUVERS

- A. Straight Glides
- **B.** Turns to Headings
- C. Steep Turns

## VIII. NAVIGATION

- **A.** Flight Preparation and Planning
- **B.** National Airspace System

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#### **AREAS OF OPERATION**

## I. AREA OF OPERATION: PREFLIGHT PREPARATION

## A. TASK: CERTIFICATES AND DOCUMENTS

REFERENCES: 14 CFR parts 43, 61, and 91; AC 61-23; Glider Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to certificates and documents by explaining
  - a. pilot certificate privileges and limitations.
  - b. medical fitness.
  - c. pilot logbook or flight records.
- 2. Exhibits knowledge of the elements related to certificates and documents by locating and explaining
  - a. airworthiness and registration certificates.
  - b. operating limitations, placards, and instrument markings.
  - c. weight and balance data and equipment list.
  - d. maintenance requirements, appropriate records, airworthiness directives, and compliance records.

## B. TASK: WEATHER INFORMATION

REFERENCES: FAA AC 00-6, FAA AC 00-45, FAA AC 61-23, and FAA AC 61-84; Soaring Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to weather information from various sources with emphasis on
  - a. use of weather reports, charts, and forecasts.
  - b. significant weather prognostics.
- 2. Exhibits knowledge of the relationship of the following factors to the lifting process
  - a. pressure and temperature lapse rates.
  - b. atmospheric instability.
  - c. thermal index and thermal production.
  - d. cloud formation and identification.
  - e. frontal weather.
  - f. other lifting sources.

- 3. Explains hazards associated with flight in the vicinity of thunderstorms.
- 4. Makes a competent "go/no-go" decision based on available weather information.

## C. TASK: OPERATION OF SYSTEMS

REFERENCES: FAA AC 61-23; Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to the operation of instruments and systems, including as appropriate
  - a. magnetic compass.
  - b. yaw string or inclinometer.
  - c. airspeed indicator and altimeter.
  - d. variometer and total energy compensators.
  - e. gyroscopic instruments.
  - f. electrical.
  - g. landing gear and brakes.
  - h. avionics.
  - i. high-lift and drag devices.
  - j. oxygen equipment.
- 2. Correctly interprets information displayed on the instruments.

#### D. TASK: PERFORMANCE AND LIMITATIONS

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

#### **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to performance and limitations, including the use of charts, tables, data to determine performance, and the adverse effects of exceeding limitations.
- 2. Uses appropriate performance charts, tables, and data.
- 3. Computes weight and balance, and determines if the weight and center of gravity are within limits.
- 4. Explains the management of ballast and its effect on performance.
- 5. Describes the effect of various atmospheric conditions on the glider's performance.
- 6. Explains the applicable performance speeds and their uses.
- 7. Describes the relationship between airspeeds and load factors.

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#### E. TASK: AEROMEDICAL FACTORS

REFERENCES: AIP, Soaring Flight Manual.

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

- 1. Symptoms, causes, effects, and corrective action 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 (self-launch).
  - g. stress and fatigue.
  - h. dehydration and heatstroke.
- 2. Effects of alcohol and drugs, including over-the-counter drugs.
- 3. Effects of evolved gas from scuba diving on a pilot during flight.

## II. AREA OF OPERATION: PREFLIGHT PROCEDURES

#### A. TASK: ASSEMBLY

**NOTE:** If, in the judgment of the examiner, the demonstration of the glider assembly is impractical, competency may be determined by oral testing.

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to assembly procedures.
- 2. Selects a suitable assembly area and provides sufficient crewmembers for assembly.
- 3. Follows an appropriate checklist.
- 4. Uses proper tools.
- 5. Handles components properly.
- 6. Cleans and lubricates parts, as appropriate.
- 7. Accounts for all tools and parts at the completion of assembly.
- 8. Performs post-assembly inspection, including a positive control check.

## B. TASK: GROUND HANDLING

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

**Objective.** To determine that the applicant:

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- 1. Exhibits knowledge of the elements related to ground handling procedures.
- 2. Selects the appropriate ground handling procedures and equipment for existing conditions.
- 3. Determines the number of crewmembers needed.
- 4. Handles the glider in a manner that will not result in damage during movement.
- 5. Secures the glider and controls, as necessary, in proper position.

## C. TASK: PREFLIGHT INSPECTION

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to preflight inspection, including which items must be inspected, for what reasons, and how to detect possible defects.
- 2. Inspects the glider using the appropriate checklist.
- 3. Verifies the glider is in condition for safe flight, notes any discrepancies, and determines if maintenance is required.
- 4. Inspects the launch equipment, including towline, tow hitches, weak links, and release mechanism.

## D. TASK: COCKPIT MANAGEMENT

REFERENCES: 14 CFR part 91; Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to cockpit management procedures.
- 2. Organizes and arranges material and equipment in a manner making items readily available.
- 3. Briefs passengers on the use of safety belts, shoulder harnesses, and emergency procedures.
- 4. Utilizes all appropriate checklists.

## E. TASK: VISUAL SIGNALS

REFERENCE: Soaring Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to aero tow or ground tow visual signals, as appropriate.
- 2. Uses, interprets, and responds to prelaunch, launch, airborne, and emergency signals, as appropriate.

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# III. AREA OF OPERATION: AIRPORT AND GLIDERPORT OPERATIONS

#### A. TASK: RADIO COMMUNICATIONS

**NOTE:** If radio communications are impractical, competency may be determined by oral testing.

REFERENCE: AIP.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to radio communications, radio failure, and ATC light signals.
- 2. Selects appropriate frequencies for facilities to be used.
- 3. Transmits using recommended phraseology.
- 4. Acknowledges radio communications and complies with instructions.
- 5. Uses appropriate procedures for simulated radio communications failure.
- 6. Interprets and complies with ATC light signals.

## B. TASK: TRAFFIC PATTERNS

REFERENCES: 14 CFR part 91; FAA AC 90-66; Soaring Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to traffic pattern procedures for gliders.
- 2. Follows established traffic pattern procedures.
- 3. Maintains awareness of other traffic in pattern.
- 4. Maintains proper ground track with crosswind correction, if necessary.
- 5. Crosses designated points at appropriate altitudes, unless conditions make such action impractical.
- 6. Selects touchdown and stop points.
- 7. Adjusts glidepath and track promptly to compensate for unexpected lift, sink, or changes in wind velocity.
- 8. Makes smooth, coordinated turns with a bank angle not to exceed 45° when turning final approach.
- 9. Adjusts flaps, spoilers, or dive brakes, as appropriate.
- 10. Recognizes and makes appropriate corrections for the effect of wind.
- 11. Completes the prescribed checklist, if applicable.

# C. TASK: AIRPORT, RUNWAY, AND TAXIWAY SIGNS, MARKINGS, AND LIGHTING

REFERENCES: FAA AC 61-23; AIP.

**Objective.** To determine that the applicant:

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- 1. Exhibits knowledge of the elements related to airport, runway, and taxiway signs, markings, and lighting.
- 2. Identifies, interprets, and complies with appropriate airport, runway, and taxiway signs, markings, and lighting.

## IV. AREA OF OPERATION: LAUNCHES AND LANDINGS

**NOTE:** Examiner shall select kind of launch based on the applicant's qualifications.

#### **AERO TOW**

## A. TASK: BEFORE TAKEOFF CHECK

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **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. Establishes a course of action with crewmembers, including signals, speeds, wind, and emergency procedures.
- 3. Ensures that the glider is in safe operating condition.
- 4. Checks towline hookup and release mechanism, using the appropriate hook for the type of launch conducted.
- 5. Ensures no conflict with traffic prior to takeoff.
- 6. Completes the prescribed checklist, if applicable.

#### B. TASK: NORMAL AND CROSSWIND TAKEOFF

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

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to normal and crosswind takeoff, including configurations and tow positions.
- 2. Uses proper signals for takeoff.
- 3. Lifts off at an appropriate airspeed.
- 4. Maintains proper position until towplane lifts off.
- 5. Maintains directional control and proper wind-drift correction thoughout the takeoff.
- 6. Maintains proper alignment with the towplane.

## C. TASK: MAINTAINING TOW POSITIONS

REFERENCE: Soaring Flight Manual.

**Objective.** To determine that the applicant:

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- 1. Exhibits knowledge of the elements related to high-tow (slightly above the wake) and low-tow (slightly below the wake) positions during various phases of aero tow.
- 2. Makes smooth and correct control applications to maintain vertical and lateral positions during high and low tow.
- 3. Transitions from high- to low-tow position through the wake while maintaining positive control.
- 4. Maintains proper tow position during turns.

## D. TASK: SLACK LINE

REFERENCE: Soaring Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to the causes, hazards, and corrections related to slack line.
- 2. Recognizes slack line and applies immediate, positive, and smooth corrective action to eliminate slack line in various situations.

## E. TASK: BOXING THE WAKE

REFERENCE: Soaring Flight Manual.

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**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to boxing the wake (maneuvering around the wake).
- 2. Maneuvers the glider, while on tow, slightly outside the towplane's wake in a rectangular, box-like pattern.
- 3. Maintains proper control and coordination.

## F. TASK: TOW RELEASE

REFERENCE: Soaring Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to tow release, including related safety factors.
- 2. Maintains high-tow position with normal towline tension.
- 3. Clears the area before releasing the towline.
- 4. Releases the towline and confirms release by observing the towline.
- 5. Makes level or climbing turn.

## G. TASK: ABNORMAL OCCURRENCES

REFERENCE: Soaring Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to aero tow abnormal occurrences, for various situations, such as
  - a. towplane power loss during takeoff.
  - b. towline break.
  - c. towplane power failure at altitude.
  - d. glider release failure.
  - e. glider and towplane release failure.
    - 2. Demonstrates simulated aero tow abnormal occurrences as required by the examiner.

#### **GROUND TOW (AUTO OR WINCH)**

## H. TASK: BEFORE TAKEOFF CHECK

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **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. Establishes a course of action with crewmembers, including signals, speeds, wind direction, and emergency procedures.
- 3. Ensures glider is in safe operating condition.
- 4. Checks towline hookup and release mechanism, using the appropriate hook for the type of launch conducted.
- 5. Ensures no conflict with traffic prior to takeoff.
- 6. Completes the prescribed checklist, if applicable.

## I. TASK: NORMAL AND CROSSWIND TAKEOFF

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

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to normal and crosswind takeoff, including related safety factors.
- 2. Uses proper signals for takeoff.

- 3. Maintains directional control during launch.
- 4. Lifts off at the proper airspeed.
- 5. Establishes proper initial climb pitch attitude.
- 6. Takes prompt action to correct high speed, low speed, or porpoising.
- 7. Maintains proper ground track during climb.
- 8. Releases in proper manner and confirms release.

## J. TASK: ABNORMAL OCCURRENCES

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to ground tow abnormal occurrences for various situations, such as
  - a. overrunning the towline.
  - b. towline break.
  - c. inability to release towline.
  - d. over- and under-speeding.
  - e. porpoising.
- 2. Demonstrates simulated ground tow abnormal occurrences, as required by the examiner.

#### **SELF-LAUNCH**

## K. TASK: ENGINE STARTING

REFERENCE: Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to engine starting, including various atmospheric conditions, and awareness of other persons and property during start.
- 2. Accomplishes recommended starting procedures.
- 3. Completes appropriate checklists.

## L. TASK: TAXIING

REFERENCE: Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to taxiing, including the effect of wind during taxiing and appropriate control positions.
- 2. Performs a brake check immediately after the glider begins moving.
- 3. Positions flight controls properly, considering the wind.

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- 4. Controls direction and speed without excessive use of brakes.
- 5. Avoids other aircraft and hazards.
- 6. Complies with signals.

## M. TASK: BEFORE TAKEOFF CHECK

REFERENCE: Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to the before takeoff check, including the reason for checking each item and to detect malfunctions.
- 2. Positions the glider properly considering other aircraft, wind, and surface conditions.
- 3. Ensures engine temperatures and pressures are suitable for run-up and takeoff.
- 4. Accomplishes before takeoff checks and ensures the glider is in safe operating condition.
- 5. Reviews airspeeds, takeoff distance, and emergency procedures.
- 6. Completes appropriate checklists.

#### N. TASK: NORMAL AND CROSSWIND TAKEOFF AND CLIMB

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

REFERENCE: Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to normal and crosswind takeoff and climb.
- 2. Positions flight controls for existing wind conditions.
- 3. Clears the area, taxies into takeoff position, and aligns the glider for departure.
- 4. Advances throttle smoothly to takeoff power.
- 5. Rotates at recommended airspeed, and accelerates to appropriate climb speed, +10/-5 knots
- 6. Maintains takeoff power to a safe maneuvering altitude, then sets climb power.
- 7. Completes appropriate checklists.

## O. TASK: ENGINE SHUTDOWN IN FLIGHT

REFERENCE: Glider Flight Manual.

#### **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to engine shutdown procedures in flight.
- 2. Sets power for proper engine cooling.
- 3. Establishes appropriate airspeed.
- 4. Sets electrical equipment.
- 5. Shuts down engine.
- 6. Feathers or positions propeller and stows, as applicable.

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- 7. Selects proper static source, if applicable.
- 8. Completes appropriate checklists.

#### P. TASK: ABNORMAL OCCURRENCES

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to self-launch abnormal occurrences, for various situations, such as
  - a. partial, complete power failure, and failure to gain restart.
  - b. fire or smoke.
  - c. electrical system malfunction.
  - d. low fuel pressure.
  - e. low oil pressure.
  - f. engine overheat.
  - g. canopy opening in flight.
  - h. engine restart in flight.
- 2. Demonstrates simulated self-launch abnormal occurrences, as required by the examiner.

#### **LANDINGS**

## O. TASK: NORMAL AND CROSSWIND LANDING

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

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to normal and crosswind approach and landing procedures.
- 2. Adjusts flaps, spoilers, or dive brakes, as appropriate.
- 3. Maintains recommended approach airspeed, +10/-5 knots.
- 4. Maintains crosswind correction and directional control throughout the approach and landing.
- 5. Makes smooth, timely, and positive control application during the roundout and touchdown.
- 6. Touches down smoothly within the designated landing area, with no appreciable drift, and with the longitudinal axis aligned with the desired landing path, stopping short of and within 200 feet (120 meters) of a designated point.
- 7. Maintains control during the after-landing roll.
- 8. Completes appropriate checklists.

## R. TASK: SLIPS TO LANDING

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to forward, side, and turning slips to landing, with and without the use of drag devices.
- 2. Recognizes the situation where a slip should be used to land in a desired area.
- 3. Establishes a slip without the use of drag devices.
- 4. Maintains the desired ground track.
- 5. Maintains proper approach attitude.
- 6. Makes smooth, proper, and positive control applications during recovery from the slip.
- 7. Touches down smoothly within the designated landing area.

#### S. TASK: DOWNWIND LANDING

**NOTE:** This TASK may be evaluated orally at the discretion of the examiner.

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to downwind landings, including safety related factors.
- 2. Adjusts flaps, spoilers, or dive brakes, as appropriate.
- 3. Maintains recommended approach airspeed, ±5 knots.
- 4. Uses proper downwind landing procedures.
- 5. Maintains proper directional control during touchdown and roll-out.
- 6. Applies brake smoothly to bring glider to a stop.

## V. AREA OF OPERATION: PERFORMANCE AIRSPEEDS

## A. TASK: MINIMUM SINK AIRSPEED

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to aerodynamic factors and use of minimum sink airspeed.
- 2. Determines the minimum sink airspeed for a given situation and maintains the selected speed,  $\pm 5$  knots.

## B. TASK: SPEED-TO-FLY

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to speed-to-fly, and its uses.
- 2. Determines the speed-to-fly for a given situation and maintains the speed,  $\pm 5$  knots.

## VI. AREA OF OPERATION: SOARING TECHNIQUES

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**NOTE:** Due to varying geographical locations and atmospheric conditions, the applicant may be asked to demonstrate at least one of the following soaring TASKS most appropriate for the particular location and existing conditions.

If conditions do not permit a demonstration of soaring skills, applicants will be expected to demonstrate knowledge of the various types of soaring through oral testing.

#### A. TASK: THERMAL SOARING

REFERENCE: Soaring Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to thermal soaring.
- 2. Recognizes the indications of, and the presence of, a thermal.
- 3. Analyzes the thermal structure and determines the direction to turn to remain within the thermal.
- 4. Exhibits coordinated control and planning when entering and maneuvering to remain within the thermal.
- 5. Applies correct techniques to re-enter the thermal, if lift is lost.
- 6. Remains oriented to ground references, wind, and other aircraft.
- 7. Maintains proper airspeeds in and between thermals.

## B. TASK: RIDGE AND SLOPE SOARING

REFERENCE: Soaring Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to ridge and slope soaring.
- 2. Recognizes terrain features and wind conditions which create orographic lift.
- 3. Enters the area of lift properly.
- 4. Estimates height and maintains a safe distance from the terrain.
- 5. Exhibits smooth, coordinated control, and planning to remain within the area of lift.
- 6. Uses correct technique to re-enter the area of lift, if lift is lost.
- 7. Remains oriented to ground references, wind, and other aircraft.
- 8. Uses proper procedures and techniques when crossing ridges.
- 9. Maintains proper airspeeds.

## C. TASK: WAVE SOARING

REFERENCE: Soaring Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to wave soaring.
- 2. Locates and enters the area of lift.
- 3. Exhibits smooth, coordinated control, and planning to remain within the area of lift.
- 4. Uses correct technique to re-enter the area of lift, if lift is lost.
- 5. Remains oriented to ground references, wind, and other aircraft.
- 6. Recognizes and avoids areas of possible extreme turbulence.
- 7. Maintains proper airspeeds.
- 8. Coordinates with ATC, as appropriate.

# VII. AREA OF OPERATION: PERFORMANCE MANEUVERS

## A. TASK: STRAIGHT GLIDES

REFERENCE: Soaring Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to straight glides, including the relationship of pitch attitude and airspeed.
- 2. Tracks toward a prominent landmark at a specified airspeed.
- 3. Demonstrates the effect of flaps, spoilers, or dive brakes, if equipped, in relation to pitch attitude and airspeed.
- 4. Exhibits smooth, coordinated control, and planning.
- 5. Maintains the specified heading,  $\pm 10^{\circ}$ , and the specified airspeed,  $\pm 10$  knots.

## B. TASK: TURNS TO HEADINGS

REFERENCE: Soaring Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to turns to headings, including the relationship of pitch attitude, bank angle, and airspeed.
- 2. Enters and maintains an appropriate rate of turn with smooth, proper, and coordinated control applications.
- 3. Maintains the desired airspeed,  $\pm 10$  knots, and rolls out on the specified heading,  $\pm 10^{\circ}$ .

## C. TASK: STEEP TURNS

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

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## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to steep turns, including load factor, effect on stall speed, and overbanking tendency.
- 2. Establishes the recommended entry airspeed.
- 3. Enters a turn maintaining a bank angle of 45°/±5°, with smooth and coordinated control applications.
- 4. Maintains desired airspeed, ±10 knots.
- 5. Recovers with smooth and coordinated control application within 10° of the desired heading.

## VIII. AREA OF OPERATION: NAVIGATION

**NOTE:** The applicant's knowledge of this AREA OF OPERATION will be evaluated through oral testing.

#### A. TASK: FLIGHT PREPARATION AND PLANNING

REFERENCES: FAA AC 61-23; AIP, Soaring Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to flight preparations and planning.
- 2. Selects and uses current and appropriate aeronautical charts.
- 3. Plots a course and selects prominent en route checkpoints.
- 4. Constructs a flight profile to determine minimum flight altitude at go-ahead points.
- 5. Explains method of using lift sources and speeds effectively within and between lift sources.
- 6. Selects available landing area.
- 7. Describes coordination procedures with air traffic control, as appropriate.

## B. TASK: NATIONAL AIRSPACE SYSTEM

REFERENCES: 14 CFR part 91; AIP.

**Objective.** To determine that the applicant exhibits knowledge of the elements related to the National Airspace System by explaining:

- 1. Basic VFR weather minimums for all classes of airspace.
- 2. Airspace classes and their dimensions, pilot certification, and glider equipment requirements for the following
  - a. Class A.
  - b. Class B.
  - c. Class C.
  - d. Class D.
  - e. Class E.
  - f. Class G.

3. Special use airspace and other airspace areas.

## IX. AREA OF OPERATION: SLOW FLIGHT AND STALLS

## A. TASK: MANEUVERING AT MINIMUM CONTROL AIRSPEED

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to maneuvering at minimum control airspeed, including flight characteristics and controllability.
- 2. Establishes and maintains the airspeed at which any further increase in angle of attack or change in configurations would result in a stall in straight or turning flight in various configurations and bank angles.
- 3. Adjusts the airspeed to avoid stalls in turbulent air or as bank is increased.
- 4. Applies control inputs in a smooth and coordinated manner.
- 5. Uses proper procedures to avoid stalls when raising a lowered wing.
- 6. Maintains heading,  $\pm 10^{\circ}$ , during straight flight, and the desired bank angle,  $\pm 10^{\circ}$ , during turns.

## B. TASK: STALL RECOGNITION AND RECOVERY

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

## **Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to stall recognition and recovery, including the aerodynamic factors and flight situations that may result in stalls, and the hazards of stalling during uncoordinated flight.
- 2. Selects an entry altitude that will allow the maneuver to be completed no lower than 1,500 feet AGL.
- 3. Establishes and maintains a pitch attitude that will result in a stall during both straight and turning flight with and without flaps, spoilers, or dive brakes, as appropriate.
- 4. Maintains a specified bank angle of up to  $15^{\circ}$  of bank,  $\pm 10^{\circ}$ , during turns.
- 5. Recovers at the stall.
- 6. Uses smooth and coordinated control applications throughout the maneuver.

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## X. AREA OF OPERATION: EMERGENCY OPERATIONS

## II. NOTE: These TASKS are knowledge only.

III.

#### A. TASK: SIMULATED OFF-AIRPORT LANDING

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

**Objective.** To determine that the applicant exhibits knowledge of the elements related to a simulated off-airport landing, including selection of a suitable landing area and the procedures used to accomplish an off-airport landing.

## B. TASK: EMERGENCY EQUIPMENT AND SURVIVAL GEAR

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

**Objective.** To determine that the applicant exhibits knowledge of the elements related to emergency equipment and survival gear, appropriate to the glider used for the practical test, by describing:

- 1. Location in the glider.
- 2. Method of operation or use.
- 3. Servicing and storage.
- 4. Inspection, fitting, and use of parachutes.
- 5. Equipment and gear appropriate for operation in various climates and over various types of terrain.

## XI. AREA OF OPERATION: POSTFLIGHT PROCEDURES

## IV. TASK: AFTER-LANDING AND SECURING

REFERENCES: Soaring Flight Manual, Glider Flight Manual.

**Objective.** To determine that the applicant:

- 1. Exhibits knowledge of the elements related to after-landing and securing procedures, including local and ATC operations, ramp safety, parking hand signals, shutdown (if appropriate), securing, and postflight inspection.
- 2. Selects a suitable parking area while considering wind and safety of nearby persons and property.
- 3. Taxies to parking area and performs engine shutdown, if applicable.
- 4. Services the glider, if applicable.
- 5. Secures the glider properly.
- 6. Performs a satisfactory postflight inspection.
- 7. Completes the prescribed checklist.

# **APPENDIX**

# TASK VS. FLIGHT SIMULATION TRAINING DEVICE CREDIT

Reserved