TRAINING MATERIALS

The following list of materials is to be made available to each crewmember for the purpose of instruction only.

Each crewmember will be responsible for the cost of replacement of missing items!

1. Copy of Operations Manual
2. Copy of applicable Aircraft Flight Manual
3. Copy of FAR's/AIM
4. Copy of Advisory Circular - Aviation Weather
5. Copy of or excerpts of appropriate Advisory Circulars
6. Copy of Advisory Circular - Aviation Weather Services
7. Copy of Rotorcraft Flying Handbook
8. Copy of Instrument Flying Handbook

Each crewmember will be expected to furnish a flight computer (E6B, etc.) and any other flight equipment compatible with the type operation expected to be conducted.

Subject: Unusual Attitude Recovery

References: AC 60-4

1. Objective:

Practice of this maneuver will enable the trainee to safely establish aircraft control when encountering an unusual aircraft attitude whether as a result of spatial disorientation, loss of visual reference outside the aircraft, or encountering an upset from an unknown cause, without exceeding helicopter or engine limitations.

2. Description:

This maneuver is used to provide a safe means by which a pilot, who has encountered a situation where the aircraft is in an attitude outside of a planned profile and recovery from such, is difficult or not possible utilizing outside visual reference, can establish a safe flight profile utilizing aircraft instruments.

Immediately upon losing visual reference or determining that the aircraft is in an unusual or unplanned attitude. the aircrafts flight path should be stabilized by use of available flight instruments, with the attitude deviation indicator (ADI), altimeter, vertical speed indicator (VSI), and directional gyro (DG) being the primary flight instruments.

The aircraft should first be placed into a neutral bank attitude. The aircraft should then be brought into level flight about the pitch axis. Once the flight path is stabilized the aircraft should be flown in a safe manner which will safely avoid terrain. If unable to immediately establish visual flight reference, the pilot should initiate an Inadvertent IMC Recovery.

Note: When stabilizing the flight path of the aircraft by sole means of aircraft instruments, the pilot should be extremely careful to not overlook the fact that one or more of the aircraft instruments may be inoperative or unreliable. This can be done by cross-referencing primary and secondary flight instruments.

3. Acceptable Performance Guidelines:

Performance will be evaluated on the basis of aircraft control by sole means of aircraft instrument reference. Once initiated the aircraft should be safely stabilized into level flight with a minimal loss of altitude and without exceeding any aircraft limitation. There should never be any doubt as to the trainee having full control of the aircraft.

Subject: Inadvertent IMC Recovery

References: AC 60-4

1. Objective:

Practice of this maneuver will enable the trainee to transition from visual flight reference to instrument flight reference, in forward flight and in turns at variable flight speeds, to be able to climb, descend and maintain a specified altitude without exceeding helicopter or engine limitations.

2. Description:

This maneuver is used to provide a safe means by which a pilot who has inadvertently entered into Instrument Meteorological Conditions (IMC), can operate an aircraft remaining clear of terrain for as much time as is needed to transition back to visual flight conditions.

Note: Recovery from inadvertent entry into IMC poses many inherent dangers and should never be taken casually or utilized in a routine fashion. All reasonable steps should be taken to avoid ever entering IMC, unless operating on an IFR flight plan with an appropriate certified aircraft being operated by an appropriate certified pilot. Situational awareness and recognition of deteriorating meteorological conditions are key to a pilot avoiding the necessity for this maneuver.

Immediately upon losing visual reference, the aircrafts flight path should be stabilized by use of available flight instruments, with the attitude deviation indicator (ADI), altimeter, vertical speed indicator (VSI), and directional gyro (DG) being the primary flight instruments.

The aircraft should be placed into a climb to a minimum safe altitude, which will be determined prior to departure. A minimum safe altitude (MSA) will generally be an altitude that is at least 1000’ above the highest terrain within a 5 miles of your intended routing. If the routing is such as to not allow for an MSA to be established or safely maintained, pre-departure planning should include alternate routing which will allow the flight to safely continue.

Note: Exercise extreme caution keeping in mind oxygen requirements and limitations for any planned flight routes.

Once established at an MSA, the aircraft should be flown toward the nearest airport with an operational instrument approach which the aircraft is capable of flying. Contact should be made with ATC to establish radar contact if possible.

Note: Pre-departure planning should include being aware of the Minimum Enroute Altitude for the planned routing to determine in advance whether ATC will be able to provide radar coverage.

Upon making contact with ATC, it is recommended that the pilot request radar vectoring to execute the nearest instrument approach, if appropriate, or for vectoring to known VFR areas. If VFR conditions are encountered, the pilot should remain VFR and immediately return to base or nearest company facility, whichever appropriate. IF IFR conditions prevail, the pilot should complete the instrument approach deemed to be the safest and most prudent for the prevailing conditions.

3. Acceptable Performance Guidelines:

Performance will be evaluated on the basis of aircraft control by sole means of aircraft instrument reference. Once initiated the aircraft should be safely stabilized into a climbing attitude and turned to a predetermined heading + or – 10 degrees. Upon reaching a predetermined altitude the aircraft should be flown in level flight + or – 100 feet of altitude and on assigned headings + or – 10 degrees. The aircraft should be flown on simulated vectors, to include 180 and 360 degree turns, as well as climbs and descents to different altitudes, as appropriate, to establish the aircraft on an instrument approach. At all times, airspeed should be consistent with the flight profile of the aircraft. There should never be any doubt as to the trainee having full control of the aircraft.

CURRICULUM SEGMENT: **Operational Control – Management Delegates**

OBJECTIVE: To develop the necessary knowledge and understanding of **Operational Control** for the assignment of flight crewmember(s) and aircraft for revenue service under the operating certificate.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs.
TESTING/CHECKING:	Management supervision*

GENERAL OPERATIONAL SUBJECTS

A: To ensure that operations are conducted as authorized in the Papillon Airways, Inc. OpSpecs.

B: To ensure that only crewmembers that are trained and qualified in accordance with the applicable regulations and the certificate holder's approved training program are assigned to conduct a flight.

C: To determine that the crewmember is qualified to function as a required crewmember on the flight.

D: To ensure that all crewmembers are in compliance with all applicable flight, duty, and rest requirements before assigning the crewmember to a flight

E: To designate a Pilot in Command (PIC) for each flight before the flight commences.

F: To specify the conditions under which a flight may be operated, such as determining weather minimums, proper aircraft loading, center of gravity limitations, icing conditions, and fuel requirements.

G: To put procedures in place to ensure that when safety conditions specified for a flight cannot be met, the flight is canceled, delayed, rerouted, or diverted.

H: To ensure that an aircraft is airworthy and is in compliance with the conditions and limitations specified by the FAA-approved inspection/maintenance program for Papillon Airways, Inc. before it is allowed to depart on a part 135 flight.

I: To have a system for locating each flight if a flight plan has not been filed

* Management supervision means that the certificate holder tracks the actions of the management delegate or employee, samples the work of that employee and has the ability to enforce the standards of Papillon Airways, Inc. through corrective actions such as re-training, re-qualification, or disciplinary actions. Since Papillon Airways, Inc. is responsibly for the conduct of its Management Delegates, it must have the ability to monitor and control their performance.

TRAINING PROGRAM

FOR

PAPILLON AIRWAYS Inc.

(FAR 135)

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SECTION D - CURRICULUM SEGMENTS

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SECTION E - MANEUVERS/PROCEDURES

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REVISIONS

In accordance with FAR 135.21(a), revisions will be prepared by the Chief Pilot and approved by the Director of Operations. Each revision will have a revision number, date, and page numbers being revised.

It will be the responsibility of each manual holder to keep his/her manual current and record any revisions on this page. In order to facilitate record keeping and ensure that all manuals are current, each revision will have a receipt which must be completed and returned to the Chief Pilot where it will be filed in the Manual Revision folder.

All manual revisions will be submitted to the FAA for review prior to being implemented.

LOG OF REVISIONS

Rev. No.	Date	Page Numbers	Initials
1	04-12-96	Complete Revision	
2	07-16-97		
3	10-31-97		
4	06-30-98		
5	01-01-00		
6	05-01-04		
7	08-11-08	Complete Revision	
8	10-06-08	AP-D1&D2 Added	
9	01-07-09	Page E-35 Added	
10	01-12-12	Added AS-350 B3e Ground/Flight Training to Page iii and Section D. Added Differences Training to C-5. Renumbered pages in Section D. Pages affected by this revision: iii C-5 D-4/300 to C-4/700 C-6/300 to C-6/700 D-7/100 D-8/100 D-9 to D-12	

REVISIONS

Rev. No.	Date	Page Numbers	Initials
11	07-08-13	Removed Revision 10 Complete Revision of the Preface Complete Revision of Section C Revised D-1 Renumbered D-2.1 through D-3.1 Revised D-4.300 to include separate modules for the AS-350B2 Transition, the AS-350B3e Transition, and the AS-350B3e Differences Training Added D-5.2 Revised D-6.300 to include separate modules for the AS-350B2 Transition, the AS-350B3e Transition, and the AS-350B3e Differences Training Added D-6.7 Revised D-8.5 and Removed D-8.6	
12	04-15-14	Revised Preface Pages vii, viii, and ix Revised Appendix F Pages F-6 and F-11	
13	07-06-15	Revised i Updated revision number Revised ii Updated page numbers. Revised iii Updated page numbers Revised iv Removed BHT 407 FADEC. Revised v Removed Reference Library. Revised vii Updated Revised viii Added Revised ix Updated Revised x Updated Revised A-2 Removed hazardous materials FAR reference. Revised A-6 Added pilot training room to Boulder City Facilities. Revised A-11 Removed (ref. FAA Order 8400.10 Para. 471). Revised A-13 Added current 135.337(b)(1-7) check airman requirements. Revised C-6 Fixed format error for SFAR 50-2 requalification training time. Revised D-1 Removed BHT 407 and updated page number from index. Revised D-2.101 Added CFR 135.293(a)(9) requirements. Revised D-2.102 Updated Crew Resource Management and Added Safety Management System Revised D-4.104/204/224/304/404 Changed Cockpit to Crew Revised D-4.200 through D-4.404 Updated page numbers. Revised D-4.300 Added Initial-B4/T2 differences.	

REVISIONS

Rev. No.	Date	Page Numbers	Initials
13	07-06-15	Revised D-6.200 through D-6.600 Updated page numbers. Revised E-ii Removed BHT 407 FADEC Maneuvers. Revised E-iii Fixed spelling. Revised E-1 Changed References. Revised E-4 Updated Power Pedal. Revised E-5 Changed Right Pedal to Appropriate Pedal. Revised E-7 Corrected Grammar. Revised E-9 Corrected Grammar. Revised E-12 Added Exception for AS350B2 and removed touchdown autos. Revised E-13 Removed Aim Airspeed. Revised E-14 Power Recovery. Revised E-19 Updated Pedal Requirements. Revised E-24 Updated Pedal Requirements. Revised E-25 Removed Reciprocating Engine. Revised E-28 Added Note to include Airbus Aircraft. Removed E-35 BHT 407 FADEC Manual Mode. Revised F-5 Added CFR 135.293(a)(9) Revised F-16 Added CFR 135.293(a)(9) Removed AP Reference Library. Revised AP-B1, B2, B3, C1, and C2 Updated page numbers.	
14	04-25-16	Revised Preface Page viii Revised C-6 Changed SFRA Ground Requirements. Updated page ix Effect Pages	

Formatted Table

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C2	Rev 13	07/06/15

USE OF THIS MANUAL

This document is only one aspect of the total training program. This volume incorporates curriculum for the various categories and duty positions; specific curriculum segments and various subject modules supporting those segments. The definitions for curriculum segments and subject modules, as used in this manual, may be found under the title definitions in this Section. While the curriculum gives guidance as to the general areas of study required by the crewmember, the subject modules provide detailed information on the subjects to be presented. Modular Training is the concept of program development in which logical subdivisions of training programs are developed, reviewed, approved, and modified as individual units. Curriculum segments and modules may be used in multiple curriculums. The modular approach allows great flexibility in program development and reduces the administrative workload in the development and approval of these programs.

This specific manual provides a ***framework*** for the standardization of the training program, it is the standard and is directive in nature. Instructors will make and follow their lesson plans based on the approved subject module. Improvements to the lesson plans are encouraged.

To determine the training required one need only define the category of training and duty position of the crewmember, and find the appropriate curriculum table in Section C. The page numbers for the appropriate curriculum segments appear in the corresponding blocks along with the suggested times to be applied to the curriculum segments. From there follow the curriculum to the curriculum segments in section D, where they are located, for the objectives, instruction required, and prerequisites.

Each training curriculum lists the Curriculum Segments that must be completed prior to pilot qualification. Within the Curriculum Segments are Subject Modules containing the descriptive information to be covered.

Revision control is accomplished in the upper right hand corner of each page. The following is an explanation of the terms found:

A-1/REVISION 7/08-11-08

A-1	Represents Section A, Page 1.
REVISION 7	Represents Revision 7.
08-11-08	Represents the date the revision became effective.

Record keeping is an integral part of training. Without adequately documented records, training never took place. This manual has one chapter (Section F) devoted to the records needed to properly document all phases of the company training program. If there is a more expedient method of recording training activities bring it to the attention of the Chief Pilot, changes are encouraged.

GENERAL INFORMATION
REGULATIONS

Under the provisions of CFR 135, Subpart H, it is the responsibility of the operator to develop a training program in order to enhance safety and standardization. This manual, when implemented, fulfills the provision of a training program as required under CFR 135.341: Pilot and Flight Attendant Crewmember Training Programs; recurrent training as required under CFR 135.351: Recurrent Training; and of course, CFR 135.323: Training Program:

General. Under the provisions of CFR 135.343: Crewmember Initial and Recurrent Training, there is a requirement that, "No certificate holder may use a person, nor may any person serve, as a crewmember in operations under this part unless that crewmember has completed the appropriate initial or recurrent training phase of the training program appropriate to the type of operation in which the crewmember is to serve since the beginning of the 12th calendar month before that service."

Note, however, the provisions of CFR 135.323(b), "Whenever a crewmember who is required to take recurrent training under this subpart completes the training in the calendar month before, or the calendar month after, the month in which that training is required, the crewmember is considered to have completed it in the calendar in which it was required."

There is a similar provision where no person may be assigned any duties or responsibilities pertaining to Hazardous Materials unless “within the preceding 12 calendar months that person has satisfactorily completed initial or recurrent training in an appropriate training program established by the certificate holder,”

Under the provisions of FAR 135.351(c) requires recurrent pilot flight training may be substituted by a flight check providing if it is documented on the Company 8410. The Check Airman will note: “Check given in lieu of recurrent training” in the remarks section.

Additionally, whenever an instructor or check airman signs any training record, certifying accomplishment of any training event, by placing their signature on the training form, they are certifying as to the trainee’s proficiency and knowledge in accordance with 135.323(c).

One purpose of this training program is to provide information and impart skills to pilots leading to the checks required under CFR 135.293, .297 or .299. Testing and checking determines whether learning has occurred. In that light, tests will be administered throughout the training program.

Initial approval of this manual and program will be indicated by letter and signed by the FAA Principal Operations Inspector.

Final approval of this manual and program must be obtained within 24 months from the date of initial approval.

APPLICABILITY

This document sets forth the standards and requirements for the establishment and maintenance of an approved training program for crew members, check airmen, flight instructors and other applicable operations personnel employed by or under contract to PAPILLON AIRWAYS INC.

TRAINING OBJECTIVE

At the conclusion of any category training curriculum, the individual involved will be able to successfully demonstrate his knowledge of the regulations, polices, and procedures applicable to the specific block of instruction by correctly answering 70 percent of the questions on written tests which shall be corrected to 100 percent. In relation to flight checks, the pilot will be able to fly the aircraft with the successful outcome of each maneuver never in doubt.

CATEGORIES OF TRAINING

There are six basic categories of training applicable to CFR Part 135 operators. The primary factors which determine the appropriate category of training are the crewmember's previous experience with the operator and previous duty position. Each category of training consists of one or more curriculums each one of which is specific to an aircraft type and a duty position. Training should be identified with and organized according to specific categories of training. When discussing training requirements, instructors and check airmen should be specific regarding the category of training being discussed and use the nomenclature described in this Training Program. Use of this common nomenclature improves standardization and mutual understanding. The six categories of training are briefly discussed in the following subparagraphs.

A. ***Initial New-Hire Training.*** This training category is for personnel who **have not had previous experience** with the operator (newly-hired personnel). It also applies, however, to personnel employed by the operator who have not previously held a crewmember duty position with that operator. Initial new-hire training includes basic indoctrination training and training for a specific duty position and aircraft type. Except for the basic indoctrination curriculum segment, the regulatory requirements for "initial new hire "and" initial equipment training" are the same. Since initial new-hire training is usually the employee's first exposure to specific company methods, systems, and procedures, it must be the most comprehensive of the six categories of training. For this reason, initial new-hire training is a distinct separate category of training and should not be confused with initial equipment training.

B. ***Initial Equipment Training.*** **Not Utilized**

C. ***Transition Training.*** This category of training is for an employee who has been previously trained and qualified for a specific duty position by the operator and who is being assigned to the same duty position on a different aircraft type.

D. ***Upgrade Training.*** **Not Utilized**

E. ***Recurrent Training.*** This category of training is for an employee who has been trained and qualified by the operator, who will continue to serve in the same duty position and aircraft type, and who must receive recurring training and/or checking within an appropriate eligibility period to maintain currency.

F. ***Re-qualification Training.*** This category of training is for an employee who has been trained and qualified by the operator, but has become unqualified to serve in a particular duty position and/or aircraft due to not having received recurrent training and/or a required flight or competency check within the appropriate eligibility period.

g. ***Differences Training.*** This category of training is for an employee who has been previously trained and qualified for a specific duty position by the operator and who is being assigned to the same duty position on a similar aircraft type.

FACILITIES

South Rim
Training will be conducted in the training room or conference room located in the administrative offices of Papillon Airways. The training room can comfortably seat six and the conference room can comfortably seat eight students, both rooms can be equipped with all necessary audio & video equipment.

Boulder City
Training will be conducted in the conference room at the Papillon Airways terminal building or the pilot training room in the flight department building. These rooms can comfortably seat six students and is equipped with all necessary audio & video equipment.

For smaller groups, or when these rooms are not available, instructors shall insure that the facility utilized is conducive to the educational process and that the facilities contain the necessary audio & video equipment need to professionally conduct training.

Other training aids include: a dry erase chalkboard, an opaque projector, training computer(s) and when needed a video tape playback unit.

COURSEWARE

A. A listing of training materials made available to each student can be found in the appendix under, Training Materials.

B. Specific lesson plans are not contained in this manual. All company instructors will utilize the lesson plans provided by Papillon Airways prior to instruction.

C. A reference library is maintained by the Chief Pilot or persons designated by the Chief Pilot. A list of material used in the training program and contained in the library, are listed in the appendix under, Reference Library.

D. Computer based training aids, such as Computer Training Systems, (CTS), Avstar Training Systems, (ATS), or computer based training programs can be used when approved by the FSDO. These aids can be used to complement initial ground training but in no case will be used as the sole method of initial ground training. In the case of Recurrent or Requalification training these programs can be used as a substitute for the required ground training provided the minimum require subject times are met.

QUALIFICATION REQUIREMENTS

No person will be assigned duties as a crewmember until the following requirements as appropriate have been completed:

PART 135 REQUIRED CERTIFICATES
All pilots must hold specific certificates and ratings before performing duties in Part 135 revenue service. If a pilot does not hold the required certificates and/or ratings, they must be obtained when completing the qualification curriculum segment.

A. ***Pilot Certification Requirements - Helicopters.*** The pilot certification requirements for pilots conducting Part 135 helicopter operations are as follows:

(1) All PIC's must hold at least the following:

- Commercial pilot certificate (or ATP certificate)
- Rotorcraft category rating
- Helicopter class rating
- At least a second class medical certificate

PART 135 MINIMUM PIC FLIGHT EXPERIENCE REQUIREMENTS
CFR 135.243(b) and (c) require that a PIC who does not hold an ATP certificate and who conducts operations that do not require an ATP certificate, must have acquired a minimum number of flight hours before serving as a PIC.

1. Before serving as a PIC in a VFR operation, the pilot must have accumulated at least the following flight hour experience:

- 500 total pilot flight hours
- 100 cross-country flight hours
- 25 night, cross-country flight hours

BASIC CHECKING QUALIFICATION

The basic checking modules for Part 135 are composed of two parts. One part consists of the written or oral test elements and the other part consists of the flight check events. Although they are distinct and separate parts, when combined, they make up a single checking module.

The subject areas which must be addressed in the written or oral test for the Part 135 basic checking module are described in CFR 135.293(a) These regulations require a written or oral test element as a distinct part of the basic checking module. The determination to use a written or oral test will depend on the checking module being performed.

Basic checks must be conducted to Commercial Rotorcraft Practical Test Standards.

PART 135 BASIC CHECKING MODULE

The flight check required to qualify a pilot for revenue service is termed a basic checking module when listed in a curriculum outline. The basic checking module of a Part 135 curriculum must be designed to satisfy the requirements of CFR 135.293.

CFR 135.293 Requirements.

All pilots who are qualifying in an aircraft type for Part 135 service, are required by CFR 135.293 to complete a check in that type of aircraft before entering revenue service and annually thereafter. The rule refers to this check as a “competency check”. The requirements of CFR 135.293 are aircraft specific; that is, each pilot must satisfactorily complete a competency check in each type of aircraft prior to operating that aircraft in revenue service. CFR 135.293 does not specify the maneuvers (events) which must be accomplished on a competency check, though it does state that the competency check may include any of the maneuvers and procedures required for the original issuance of the particular type of pilot certificate required for the operations involved.

The rule authorizes the administrator or check airman to make this determination. To ensure standardization and an adequate level of safety, the minimum acceptable content of competency checks for a Part 135 curricula are established in this curriculum segment.

As a matter on national safety policy, however, some demonstration of competency in the ability to maneuver the aircraft solely by reference to instruments will be included on each competency check. For VFR competency checks, this demonstration will be appropriate to the aircraft's installed equipment and the operating environment.

LINE CHECK QUALIFICATION

Part 135 specifies that before a pilot can serve as an unsupervised PIC in revenue operations, that pilot must have satisfactorily completed a line check. Re-qualification training curriculums that are used to re-qualify PIC's who have been unqualified for 12 months or more should include a required PIC line check module. Part 135 specifies that all PIC's must satisfactorily complete a line check once every 12 calendar months in at least one of the aircraft types in which the PIC is to serve. Therefore, the qualification curriculum segment for recurrent training should include a line check module for the PIC.

A. Part 135 Line Checks

For Part 135 operations, the line check must be conducted over at least one route segment which includes takeoffs and landings at one or more airports that are representative of the type of operation. In certain Part 135 operations, it may not be practical to conduct a line check during revenue operations. In these cases the check airman may authorize that the line check be conducted during the same flight period that the competency check is conducted. If the line check is conducted in this manner, the line check portion of this flight period must include the requirements previously discussed.

OPERATING EXPERIENCE QUALIFICATION

Part 135 specifies that before a pilot may be assigned as a PIC in a commuter passenger- carrying operation, that pilot must acquire operating experience in each make and basic model of aircraft in which the pilot is to serve as a PIC. Part 135 specifies the minimum flight hour requirements for these duty positions. When a pilot is actually acquiring operating experience, FAR 135.244(b)(4) provides for a reduction in the minimum flight hours. These regulations specify that the minimum hours may be reduced to 50% of the total required flight hours by the substitution on one takeoff and landing for one hour of flight.

A. *Part 135 Minimum Flight Hours.* The Part 135 flight hour requirement applies only to pilots who will be assigned to serve as PIC in a commuter passenger-carrying operation. In addition, the minimum IOE must be acquired for each make and basic model of aircraft in which the pilot is to serve as PIC. FAR 135.244 specifies that the type of engine powering aircraft determines the minimum flight hours for commuter PIC’s, which are as follows:

- Single-engine helicopters 10 Hours

  Multiengine helicopters 15 Hours

  Multiengine, turbine-powered helicopters 20 Hours

B. *Acquiring Operating Experience.* All flight crewmembers must have successfully completed a flight check before starting operating experience and are therefore considered to be qualified to serve in revenue operations, under the appropriate supervision. Operating experience must be acquired while conducting revenue operations, except when the aircraft has not been previously used by the operator. In this case, the flight hours acquired while conducting proving flights or ferry flights may be credited towards the operating experience requirement.

1. A pilot in the process of acquiring operating experience as a PIC under the provisions of Part 135 must occupy the appropriate pilot position and perform PIC duties under the supervision of a check airman / company IOE instructor that is qualified and current for commuter operations. The check airman / company IOE instructor must also occupy a pilot position. During the time that a qualifying PIC is acquiring operating experience, the supervising check airman / company IOE instructor should give instruction as needed and help to refine the pilot’s proficiency as a PIC. The check airman / company IOE instructor must determine when the PIC is fully proficient and ready to be administered an initial line check. If the qualifying PIC is not ready for an initial line check after the minimum flight hours have been completed, the supervision must be continued until the PIC is proficient. The check airman / company IOE instructor should not recommend an initial line check until the check airman / company IOE instructor is satisfied that the qualifying PIC is proficient. If the check airman / company IOE instructor recommends the PIC for an initial line check before the minimum flight hours are acquired, the time spent conducting the line check may be credited toward the required flight. In all cases, however, the qualifying PIC must acquire the minimum flight hours under the supervision of a check airman / company IOE instructor before the PIC can be released to operate.

PROGRAMMED FLIGHT TRAINING HOURS – REDUCTION

A flight crewmember will complete a flight training curriculum segment by successfully accomplishing each training event and the specified number of training hours, except as provided below. Flight crewmembers are then required to successfully meet the requirements specified in the Qualification Segment. If a crewmember fails to meet any of the qualification requirements because of a lack in flight proficiency, the crewmember must be returned to training status. After additional or re-training, an instructor recommendation is required for re-accomplishing the unsatisfactory qualification requirement. When this check is given by a company check airman and an event or events are found to be unsatisfactory, the check airman will notify the pilot of his unsatisfactory performance. He will then have the option to: a. terminate the check and recommend the pilot for further instruction or b. stop the check at that point, give further instruction in the deficient area(s), as a company instructor, if so qualified, then resume the check. In either case the chosen course of action will be noted in the appropriate event block and “REMARKS” section of the Papillon Form 8410.

A flight crewmember may successfully complete a training curriculum segment without completing the specified number of training hours, provided all of the following are met:

1. The crewmember demonstrates proficiency in all training events required by the curriculum segment.

2. An instructor recommends that testing/checking be conducted before completion of the specified number of training hours. **THE RECOMMENDATION MUST BE DOCUMENTED.**

3. The crewmember satisfactorily completes the qualification curriculum segment requirements.

NOTE: If a flight crewmember fails to meet the qualification curriculum segment requirements because of lack of flight proficiency, the crewmember must complete all training hours specified. The crewmember must then be recommended by an instructor before re-accomplishing the failed qualification requirements.

CREDIT FOR PREVIOUS GROUND TRAINING

It is recognized that in some cases a "new-hire" flight crewmember may have recently completed subject areas which apply to an aircraft which the crewmember will be qualified to operate. This previous training will be a result of having been qualified (within the last twelve months) with another certificated operator of that particular aircraft.

In a situation such as this, certain ground training subject modules may be granted credit for previous training. In order to take advantage of this "credit", certain documentation **MUST** be on file in the crewmember's record file.

Acceptable training "credit" will be within the same make and model. Variations within a series and/or installed equipment (navigation systems, etc.) must be evaluated and knowledge determined to be satisfactory.

Supporting documentation will consist of the following:

a. Copies of training received from a certificated Air Carrier's approved CFR 135 training program, including an FAA form 8410-3, Proficiency Check record (within the previous twelve calendar months).

b. Copies of training received from a training center such as Flight Safety or Simuflite (within the previous twelve calendar months).

Training credit will be granted only with supporting documentation in the crewmember's record file. Training in each subject area for which credit is granted will consist of a quiz or review to determine the extent of the crewmember's knowledge and instruction as necessary in any area of knowledge determined to be deficient.

Credit for previous training may be granted as follows:

a. Basic Indoctrination - Airman Specific Modules only.
b. General Emergency - Situation Modules only.
c. Aircraft Ground - Systems Modules only.
d. Instructor/Check Airman - Ground Training only

INSTRUCTORS AND CHECK AIRMEN

A. No person may serve as a flight instructor or check airman in the training program for a particular type aircraft unless that person:

1. Holds the airman certificate and ratings that must be held to serve as a pilot in command for that type of operation.
2. Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training, that are required to serve as a pilot in command.
3. Has satisfactorily completed the proficiency or competency checks that are required to serve as a pilot in command.
4. Has satisfactorily completed the applicable training requirements of CFR 135.339 for Check Airmen, or CFR 135.340 for Instructors.
5. Holds a current Class I or Class II medical certificate.
6. Has satisfied the recency of experience requirements of CFR 135.247.
7. In the case of a Check Airman, has been approved by the Administrator for the airman duties involved.

B. Ground training will be conducted at the direction of the Chief Pilot or his designated representative. The Administrator, the Chief Pilot, or a Company Check Airman may administer all tests for Check Airmen or Instructors, whether they are written or oral.

C. Flight training will be conducted by the Chief Pilot or a Company Check Airman. Check Airman Flight Qualification can only be conducted by the Administrator.

DEFINITIONS. The following terms are used throughout this training manual and are defined as follows:

Training Program: A system of instruction which includes curriculums, facilities, instructors, check airmen, courseware, instructional delivery methods, and testing and checking procedures. This system must satisfy the training program requirements of Part 121 or Part 135 and ensure that each crewmember and dispatcher remains adequately trained for each aircraft, duty position, and kind of operation in which the person serves.

Curriculum: A complete training agenda specific to an aircraft type and a crewmember or dispatcher duty position. Each curriculum consists of several curriculum segments.

Curriculum Segment: The largest subdivision of a curriculum containing broadly related training subjects and activities based on regulatory requirements. Curriculum segments are logical subdivisions of a curriculum which can be separately evaluated and individually approved, for example: the ground training segment and the flight training segment. Each curriculum segment consists of one or more training modules.

Modular Training: The concept of program development in which logical subdivisions of training programs are developed, reviewed, approved, and modified as individual units. Curriculum segments and modules may be used in multiple curriculums. The modular approach allows great flexibility in program development and reduces the administrative workload on both operators and in the development and approval of these programs.

Training Module: A subpart of a curriculum segment which constitutes a logical, self contained unit. A module contains elements or events which relate to a specific subject. For example, a ground training curriculum segment could logically be divided into modules pertaining to aircraft systems (hydraulic, pneumatic, electrical, etc.). As another example, a flight training curriculum segment is normally divided into flight periods each of which is a separate module. A training module includes the outline, appropriate courseware, and the instructional delivery methods. It is usually but not necessarily completed in a single training session.

Courseware: Instructional material developed for each curriculum. This is information in lesson plans, instructor guides, computer software programs, audiovisual programs, workbooks, aircraft operating manuals, and handouts. Courseware must accurately reflect curriculum requirements, be effectively organized, and properly integrate with instructional delivery methods.

Instructional Delivery Methods: Methodology for conveying information to a student. For example, this may include lectures, demonstrations, audiovisual presentations, home study assignments, workshops, and drills. Training devices, simulators, aircraft, and computer work stations are also considered instructional delivery methods.

Eligibility Period: Three calendar months (the calendar month before the "training/checking month," the "training/checking month," and the calendar month after the "training/checking" month). During this period a crewmember must receive recurrent training, a flight check, or a competency check, to remain in a qualified status. Training or checking completed during the eligibility period, is considered to be completed during the "training/checking month."

CONTRACT GROUND TRAINING

No contract training will be conducted by any outside agency at this time. However, formal aircraft ground and flight training courses that are conducted by the Aircraft Manufacturer may be utilized providing they are conducted in accordance with the specifications set forth in this training program and approved by the FAA Principal Operations Inspector.

CATEGORIES OF TRAINING
INDEX

CATEGORIES OF TRAINING

This section contains the curricula appropriate to the crewmember duty position and aircraft assigned. Each curriculum lists the curriculum segments to be completed for the appropriate categories of training. These categories of training are summarized in general terms as follows:

A. All personnel not previously employed by the operator must complete *initial new-hire training.*

B. All personnel must complete *recurrent training* for the duty position and aircraft type for which they are currently assigned within the appropriate eligibility period.

C. All personnel who have become unqualified for a duty position on an aircraft type with the operator must complete *re-qualification training* to reestablish qualification for that duty position and aircraft type. Any personnel out of currency more than 36 months must undergo *initial new-hire training.*

D. All personnel who are being assigned by the operator to a different duty position and/or aircraft type must complete either *initial equipment, transition, upgrade, differences* or *re-qualification training,* depending on the aircraft type and duty position for which they were previously qualified.

DEFINITIONS

Categories of Training: Courses of training which provide the necessary training and checking or testing for various types of crewmembers who have not previously qualified (or have or will become unqualified) to serve unsupervised in specific duty positions. Each category of training consists of one or more curriculums.

Initial New-Hire Training. This training category is for personnel who have not had previous experience with the operator (newly-hired personnel). It also applies, however, to personnel employed by the operator who have not previously held a crewmember duty position with that operator. Initial new-hire training includes basic indoctrination training and training for a specific duty position and aircraft type. Except for the basic indoctrination curriculum segment, the regulatory requirements for "initial new hire "and" initial equipment training" are the same. Since initial new-hire training is usually the employee's first exposure to specific company methods, systems, and procedures, it must be the most comprehensive of the six categories of training. For this reason, initial new-hire training is a distinct separate category of training and should not be confused with initial equipment training.

Initial Equipment Training: This category of training is for personnel who have been previously trained and qualified for a duty position by the operator (not a new-hire) and are being reassigned.
As an example:
The crewmember is being reassigned to a duty position on a different aircraft type when the crewmember has not been previously trained and qualified by the operator for that duty position and aircraft type.

Transition Training: This category of training is for personnel who have been previously trained and qualified for a specific duty position by the operator and are being re-assigned to the same duty position on a different aircraft type.

Upgrade Training: Not Utilized by Papillon Airways.

Recurrent Training: This category of training is for personnel who have been trained and qualified by the operator and will continue to serve in the same duty position and aircraft type and must receive recurring training or checking within an appropriate eligibility period to maintain currency.

Requalification Training: This category of training is for personnel who have been trained and qualified by the operator, but have become unqualified to serve in a particular duty position and/or aircraft due to not receiving recurrent training and/or a required flight or competency check within the appropriate eligibility period.

DEFINITIONS CONT.

Differences Training: This category of training is for crewmembers who have qualified and served on a particular type aircraft, when the Administrator finds differences training is necessary before a crewmember serves in the same capacity on a particular variation of that aircraft.
As an example:
The crewmember was previously trained and qualified as a PIC for the AS350B2. In order for the crewmember to be assigned as a PIC for the AS-350B3e variation, he or she must complete Differences Training.

AIRCRAFT FAMILIES

There are five basic families of aircraft used in Part 135 operations. Aircraft are assigned to a particular family according to their performance and flight characteristics. The ground and flight training requirements for crewmembers are significantly different for each family of aircraft. Within each aircraft family, however, the ground and flight training requirements are similar, even though individual aircraft may be quite different in construction and appearance. The five families of aircraft are as follows:

1. ***Transport/Commuter Category Airplane*** - Not Applicable.

2. ***Turboprop and SFAR Airplane*** - Not Applicable.

3. ***Multiengine General Purpose Airplane*** - Not Applicable.

4. ***Single-Engine General Purpose Airplane*** - Not Applicable

5. ***Helicopter -*** This family includes all helicopters. Helicopter operations under Part 135 require similar knowledge, skills, and abilities. General training requirements for this family of aircraft include such events as autorotation and anti-torque failure. The type of operation may require specific training in events such as high altitude.

PIC HELICOPTER CURRICULUM

OBJECTIVE: To develop the necessary knowledge and skill for the crewmember to perform the duties and responsibilities of the assigned duty position and aircraft to the desired standards.

	REQUIRED CURRICULUM SEGMENTS							
TRAINING CATEGORY	BASIC INDOC	GEN EMERG	A/C GROUND	A/C FLIGHT	HAZ MAT	QUAL	SFAR 50-2	
							GROUND	FLIGHT
INITIAL NEW-HIRE TRAINING	D-2 8	D-3 2	D-4 16	D-6 4	D-7 2	D-8 --	D-5 2	D-6 --
INITIAL EQUIPMENT TRAINING	D-2 --	D-3 --	D-4 --	D-6 --	D-7 --	D-8 --	D-5 --	D-6 --
TRANSITION TRAINING	D-2 --	D-3 --	D-4 8	D-6 3	D-7 --	D-8 --	D-5 --	D-6 --
RECURRENT TRAINING	D-2 3	D-3 --	D-4 4	D-6 2	D-7 1	D-8 --	D-5 1	D-6 --
UPGRADE TRAINING	D-2 --	D-3 --	D-4 --	D-6 --	D-7 --	D-8 --	D-5 --	D-6 --
DIFFERENCE TRAINING	D-2 --	D-3 --	D-4 1	D-6 1	D-7 --	D-8 --	D-5 --	D-6 --
REQUALIFICATION TRAINING 12 – 24 MONTHS	D-2 4	D-3 --	D-4 4	D-6 2	D-7 1	D-8 --	D-5 1	D-6 --
REQUALIFICATION TRAINING 24 – 36 MONTHS	D-2 6	D-3 1	D-4 6	D-6 2	D-7 1	D-8 --	D-5 2	D-6 --

DIFFERENCES TRAINING: For any category must either be developed as a separate curriculum segment or may be contained in the individual curriculum segment as appropriate.

RECURRENT FLIGHT TRAINING: In accordance with 135.351(c) Recurrent flight training for pilots must include, at least, flight training in the maneuvers or procedures in this subpart, except that satisfactory completion of the check required by 135.293 within the preceding 12 calendar months may be substituted for recurrent flight training. If this is the case it will be so noted in the remarks section of the Papillon Form.

INITIAL AND TRANSITION

INSTRUCTOR

CURRICULUM

OBJECTIVE: To develop the necessary knowledge and skill for the crewmember to perform the duties and responsibilities of their assigned duty position to the desired standard and to deal with any possible emergencies which may arise during flight instruction.

INSTRUCTOR REQUIRED CURRICULUM SEGMENTS		
TRAINING CATEGORY	GROUND TRAINING	FLIGHT TRAINING
INITIAL/TRANSITION TRAINING (NO CFI)	D-9.2 8	D-10.2 1
INITIAL/TRANSITION TRAINING (CURRENT CFI)	D-9.2 2	D-10.2 1

CHECK AIRMAN

OBJECTIVE: To develop the necessary knowledge and skill for the crewmember to perform the duties and responsibilities of their assigned duty position to the desired standard and to deal with any possible emergencies which may arise during Flight Checks.

CHECK AIRMAN REQUIRED CURRICULUM SEGMENTS		
TRAINING CATEGORY	GROUND TRAINING	FLIGHT TRAINING
CHECK AIRMAN	D-9.1 4	D-10.1 2

CURRICULUM SEGMENTS INDEX

CURRICULUM SEGMENT: **BASIC INDOCTRINATION**

OBJECTIVE: To introduce the new-hire pilot to the company and its manner of conducting operations in air transportation, to acquaint the pilot with the company's policies, procedures, forms, organizational and administrative practices, and to ensure the pilot has acquired basic airman knowledge.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs/Computer Training Aids
TESTING/CHECKING:	Written/Oral Exam

OPERATOR SPECIFIC

A. DUTIES AND RESPONSIBILITIES

1. Company History, Organization, and Management Structure
2. Operational Concepts, Policies, and Kind of Operation
3. Company Forms, Records, and Administrative Procedures
4. Employee Standards and Rules of Conduct
5. Employee Compensation, Benefits, and Contracts
6. Authority and Responsibilities of Duty Position
7. Company Required Equipment
8. Appropriate Portions of Company Operating Manual, Organization, Revisions, and Employee Responsibilities Concerning Manuals
9. Operational Control

B. APPROPRIATE PROVISIONS OF THE FEDERAL AVIATION REGULATIONS

1. Pilot Certification, Training, and Qualification Requirements
2. Medical Certificates, Physical Examination, and Fitness for Duty Requirements
3. Flight Control Requirements (Flight-Locating)
4. Flight Duty and Rest Requirements
5. Record Keeping Requirements
6. Operational Rules in Parts 61, 91, 135 and Any Other Applicable Regulations
7. Regulatory Requirements for Company Manuals
8. Other Appropriate Regulations Such as Flight crew Emergency Authority, Interference with Crewmembers, and Reporting Requirements

C. CONTENTS OF CERTIFICATE AND OPERATIONS SPECIFICATIONS

1. Regulatory Basis in Part 135 and The FA Act of 1958
2. Definitions, Descriptions, and Organization of Operations Specifications
3. Limitations and Authorizations of Operations Specifications
4. Description of Certificate
5. Description of FAA Certificate Holding District Office and Responsibilities of FAA Principal Inspectors

D. EMPLOYEE ASSISTANCE PROGRAM

AIRMAN SPECIFIC

A. COMPANY FLIGHT CONTROL

1. Flight Locating System and Procedures
2. Organization, Duties, and Responsibilities
3. Weather and NOTAM Information
4. Company Communications

B. WEIGHT AND BALANCE

1. Definitions (such as empty weight, moments, and inches of datum)
2. General Loading Procedures and Center of Gravity Computations
3. Effects of Fuel Burn and Load Shifts in Flight
4. Weight and Balance Forms, Load Manifests, Fuel Slips, and Other Applicable Documents

C. AIRCRAFT PERFORMANCE

1. Definitions (such as height/velocity curve and maximum endurance)
2. Effects of Temperature and Pressure Altitude
3. Power Check Procedures
4. Rate of Climb
5. Operations and Allowable Relative Wind
6. IGE and OGE Hover Ceilings and Charts.

D. METEOROLOGY

1. Basic Weather Definitions (such as forecasts, reports, and symbols)
2. Temperature, Pressure, and Winds
3. Atmosphere, Moisture, and Clouds
4. Air Masses and Fronts
5. Thunderstorms, Icing, Wind shear and Micro-Burst
6. Reduced Visibility including Fog
7. Knowledge & procedures for:
   a. Recognizing, avoiding, and escaping severe weather situations (including inadvertent IMC encounter)
   b. Recognizing Cold weather conditions.
   C. Recognizing flat-light, whiteout, and brownout conditions.

E. NAVIGATION

1. Definitions (such as wind correction angle or magnetic north)
2. Basic Navigation Instruments
3. Dead Reckoning and Pilotage Concepts and Procedures
4. Navigational Aides
5. GPS systems when required.

F. AIRSPACE AND ATC PROCEDURES

1. Definitions (such as SFRA, Airways, and ATIS)
2. Description of Airspace
3. Navigational Performance and Separation Standards
4. Controller and Pilots Responsibilities
5. ATC Communications Procedures (Normal and Emergency)
6. Air traffic flow control
7. Monitoring of ATC for Traffic Avoidance

G. ENROUTE AND TERMINAL AREA CHARTING AND FLIGHT PLANNING

1. Terminology of Charting Services (Such as Jeppesen, NOAA)
2. Minimum Cloud Clearances and Visibility Requirements
3. General Company Flight Planning Procedures
4. Flight Service Procedures
5. Airport Diagrams

H. CREW RESOURCE MANAGEMENT

1. Situational Awareness
2. Workload and Time Management
3. Communication
4. Aeronautical Decision Making
5. Authority of the PIC
6. Building the Team
7. Fatigue
8. Stress

I. Safety Management System

CURRICULUM SEGMENT: **GENERAL EMERGENCY**

OBJECTIVE: To develop the necessary knowledge and skills in the actual use of certain items of emergency equipment, as well as the procedures to be followed, when emergency situations occur.

INSTRUCTIONAL DELIVERY METHOD: Lecture, Demonstration, Drill
TRAINING AIDS/COURSEWARE: Emergency Equip./Ref. Docs
TESTING/CHECKING: Written Exam

EMERGENCY SITUATION TRAINING

A: PILOT DUTIES AND RESPONSIBILITIES
1. Emergency Assignments
2. Captain's Emergency Authority
3. Reporting Incidents and Accidents

B: CREW COORDINATION AND COMPANY COMMUNICATIONS
1. Passenger notification procedures
2. Ground Agency Notification Procedures
3. Company Communications Procedures
4. Emergency Response Accident Manual

C: AIRCRAFT FIRES
1. Principles of Combustion and Classes of Fires
2. Fire in Flight or on the Surface
3. Emphasis on Electrical Equipment and Related Circuit Breakers Found in Cockpit Area
4. Toxic Fumes and Chemical Irritants
5. Smoke Control Procedures
6. Location and Use of Appropriate Hand-Held Extinguishers

D: FIRST AID EQUIPMENT
1. Location, Contents and Proper Use of First Aid Kit
2. Requirements for First Aid Kit Integrity
3. Use of Individual Items

E: ILLNESS, INJURY, OR OTHER ABNORMAL SITUATIONS
1. Principles of CPR
2. Ear and Sinus Blocks
3. Seeking Medical Assistance
4. Treatment of Shock
5. Heart Attack and Pregnancy Situations

F: GROUND EVACUATION
1. Aircraft Configuration
2. Passenger Briefing
3. Directing Passenger Flow
4. Blocked or Jammed Exit Procedures
5. Fuel Spills and Other Ground Hazards
6. Handicapped Persons

G: DITCHING
1. Cockpit and Cabin Preparation
2. Passenger Briefing
3. Ditching and Water Landings

H: REVIEW OF COMPANY PREVIOUS AIRCRAFT ACCIDENTS/INCIDENTS

1. NTSB Accident Report Reviews
2. Human Factors/Considerations
3. NASA Reporting System

I: CREWMEMBER INCAPACITATION

1. Company Procedures
2. Reporting Requirements (NTSB)
3. Interference with Crewmembers

J: HIJACKING AND OTHER UNUSUAL SITUATIONS

1. Hijack Procedures
2. Bomb Threat Procedures
3. Security Coordinator Responsibilities
4. In-flight Intercept Signals and Procedures

EMERGENCY DRILL TRAINING

A. HANDHELD FIRE EXTINGUISHERS

1. Inspection Tags, Dates, and Proper Charge Levels
2. Removal and Storage of Extinguishers
3. Proper Usage of Each Type of Extinguisher
4. Maintenance Procedures and MEL

B: EMERGENCY EXITS

1. Actual Operation (Open and Close) of Exit Doors in Normal and Emergency Modes

C: DITCHING EQUIPMENT (IF APPLICABLE)

1. Actual Donning, Use, and Inflation of Individual Flotation Means (Life Preservers)
2. Instruction on Survival Equipment

Note 1: *The emergency drill training modules, which require the pilot to actually operate the items of emergency equipment (hands-on), must be conducted at least every 24 months. During the alternate 12-month periods, the emergency drill training may be accomplished by pictorial presentation or demonstration.*

CURRICULUM SEGMENT: **AIRCRAFT GROUND BHT-206**

OBJECTIVE: To develop the necessary pilot knowledge for understanding the basic functions of aircraft systems, the use of the individual systems components, the integration of aircraft systems, and operational procedures.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs.
TESTING/CHECKING:	Written Exam

GENERAL OPERATIONAL SUBJECTS

A: FLIGHT LOCATING PROCEDURES (REFERENCE OPS MANUAL, FLIGHT PLANS)

1. Company Flight Following Procedures

B: WEIGHT AND BALANCE

1. Company Procedures
2. Company Forms

C: ADVERSE WEATHER PRACTICES

1. Icing
2. Turbulence
3. Thunderstorms with Associated Wind shear and Microburst Phenomena
4. Low Visibility
5. Contaminated Landing Areas

D: COMMUNICATION AND NAVIGATION EQUIPMENT

1. Company Communication Requirements
2. ATC Clearance and Monitoring Requirements
3. Area Departure and Arrival Requirements
4. En-Route Requirements
5. Approach and Landing Requirements
6. Normal and Emergency communication procedures
7. GPS System when appropriate

E: PERFORMANCE CHARACTERISTICS DURING ALL FLIGHT REGIMES

1. The Use of Charts, Tables, and Other Related Manual Information Including the Aircraft Flight Manual
2. Normal, Abnormal, and Emergency Performance Problems Including Fuel Consumption and Cruise Power Settings
3. Meteorological and Weight-Limiting Performance Factors (Such As Temperature, Pressure, or Precipitation
4. Inoperative Equipment Performance Limiting Factors (Such As MEL)
5. Special Operational Conditions (High Altitude Airports and Confined Areas)

AIRCRAFT SYSTEMS

A: AIRCRAFT GENERAL
1. Dimensions
2. Turning Radius
3. Panel Layout
4. Cockpit and Cabin Configurations
5. Other Major Systems and Components or Appliances

B: POWERPLANT
1. Basic Engine Description
2. Engine Horsepower Rating
3. Accessory Drives
4. Ignition
5. Oil System
6. Fuel System
7. Bleed Air

C: ELECTRICAL
1. Generator
2. External Power
3. Electrical System Schematic
   a. Buses
   b. Circuit breakers
   c. Fuses
4. Battery
5. Emergencies

D: HYDRAULIC
1. Reservoir
2. Pump
3. Hydraulic System Schematic
4. Filters
5. Check Valves
6. Actuators
7. Hydraulically Operated Components

E: FUEL
1. Fuel Tank
2. Pumps (Engine-Driven and Boost Pumps)
3. Valves
4. Fuel System Schematic
5. Quantity Indicator

F: PNEUMATICS
1. Bleed Air Source
2. Bleed Air System Schematic
3. Valves
4. Ducts

G: AIR CONDITIONING
1. Heaters
2. Air Conditioning System Schematic
3. Fans

H: FLIGHT CONTROLS

1. Primary Controls (Cyclic, Collective, and Anti-Torque)
2. Secondary controls (sync elevator)
3. Means of Actuation (Direct/Indirect)

I: LANDING GEAR

1. Skid gear system construction & limitations

J: ICE AND RAIN PROTECTION (IF APPLICABLE)

1. Anti-icing and deicing systems
    a. Engines
    b. Pitot-static probes
2. Systems schematics
3. Pneumatic/electrical valves

K: EQUIPMENT AND FURNISHINGS

1. Exits
2. Cargo Areas
3. Pilot and Passenger Seats
4. Seating and/or Cargo Configurations
5. Non Emergency Equipment and Furnishings

L: NAVIGATION EQUIPMENT

1. Navigation receivers
    a. VOR
    b. GPS
2. Functional displays
3. Transponder
4. Fault indications

M: FLIGHT INSTRUMENTS

1. Overview of Panel Arrangement
2. Sources of Power (Electrical, Pneumatic and Pitot-Static)
3. Attitude Indicator
4. Heading Indicator
5. Airspeed Indicator
6. Vertical Speed Indicator
7. Altimeter

N: COMMUNICATIONS EQUIPMENT

1. VHF/FM/HF Radio
2. Audio Panels
3. Intercom and Audio Entertainment System

O: WARNING SYSTEMS

1. Aural and Visual Warning Systems
    a. Character and degree of urgency related to signal
2. Warning and Caution Annunciator Systems

P: FIRE DETECTION

1. Visual and/or Aural Indications of Fire or Overheat
    a. Overheat sensors
    b. Fire detection system schematic

Q: LIGHTING

1. Cockpit
2. Cabin
3. External
4. Power Sources
5. Switches
6. Spare Bulbs

R: EMERGENCY EQUIPMENT

1. Type (first aid kits, life preservers, and survival kits)
2. Location of Each
3. Purpose of Each

AIRCRAFT SYSTEMS INTEGRATION

A: USE OF CHECKLIST

1. Safety Checks
2. Cockpit Preparation
3. Checklist Utilization
4. Checklist Sequence

B: FLIGHT PLANNING

1. Performance Limitations
    A. Meteorological
    B. Weight
    C. MEL Items
2. Required Fuel Loads
3. Weather Planning

C: NAVIGATIONAL SYSTEMS

1. Preflight preparation
2. Operation
3. Flight planning requirements

D: COCKPIT FAMILIARIZATION

1. Activation of Aircraft Systems Controls and Switches
    a. Normal
    b. Abnormal
    c. Emergency
2. Annunciators
    a. Lights
    b. Other caution and warning systems

E: CREW RESOURCE MANAGEMENT / HUMAN FACTORS

1. Additional Resources in Single Pilot Operations
2. Situation Awareness
   a. Reality versus perceptions of reality
   b. Fixation
   c. Monitoring
   d. Incapacitation
3. Problem Solving/Decision Making/Judgment
   a. Conflict resolution
   b. Review
4. Team Management
   a. Team building
   b. Managerial skills
   c. Authority
   d. Barriers
   e. Workload management
5. Stress Management
   a. Fitness to fly
   b. Fatigue
   c. Incapacitation
6. Team Review
   a. Pre-mission analysis and planning
   b. Critique
   c. Ongoing review
   d. Post-mission
7. Interpersonal Skills
   a. Listening
   b. Conflict resolution

CURRICULUM SEGMENT: **AIRCRAFT GROUND AS-350B2 Transition**

OBJECTIVE: To develop the necessary pilot knowledge for understanding the basic functions of aircraft systems, the use of the individual systems components, the integration of aircraft systems, and operational procedures.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs.
TESTING/CHECKING:	Written Exam

GENERAL OPERATIONAL SUBJECTS

A: FLIGHT LOCATING PROCEDURES (REFERENCE OPS MANUAL, FLIGHT PLANS)

1. Company Flight Following Procedures

B: WEIGHT AND BALANCE

1. Company Procedures
2. Company Forms

C: ADVERSE WEATHER PRACTICES

1. Icing
2. Turbulence
3. Thunderstorms with Associated Wind shear and Microburst Phenomena
4. Low Visibility
5. Contaminated Landing Areas

D: COMMUNICATION AND NAVIGATION EQUIPMENT

1. Company Communication Requirements
2. ATC Clearance and Monitoring Requirements
3. Area Departure and Arrival Requirements
4. En-Route Requirements
5. Approach and Landing Requirements

E: PERFORMANCE CHARACTERISTICS DURING ALL FLIGHT REGIMES

1. The Use of Charts, Tables, and Other Related Manual Information Including The Aircraft Flight Manual
2. Normal, Abnormal, and Emergency Performance Problems Including Fuel Consumption and Cruise Power Settings
3. Meteorological and Weight-Limiting Performance Factors (Such As Temperature, Pressure, or Precipitation
4. Inoperative Equipment Performance Limiting Factors (Such As MEL)
5. Special Operational Conditions (High Altitude Airports and Confined Areas)

AIRCRAFT SYSTEMS

A: AIRCRAFT GENERAL

1. Dimensions
2. Turning Radius
3. Panel Layout
4. Cockpit And Cabin Configurations
5. Other Major Systems And Components Or Appliances

B: POWERPLANT

1. Basic Engine Description
2. Engine Horsepower Rating
3. Accessory Drives
4. Ignition
5. Oil System
6. Fuel System
7. Bleed Air

C: ELECTRICAL

1. Generator
2. External Power
3. Electrical System Schematic
   a. Buses
   b. Circuit breakers
   c. Fuses
4. Battery

D: HYDRAULIC

1. Reservoir
2. Pump
3. Accumulators
4. Hydraulic System Schematic
5. Filters
6. Check Valves
7. Actuators
8. Hydraulically Operated Components

E: FUEL

1. Fuel Tank
2. Pumps (Engine-Driven and Boost Pumps)
3. Valves
4. Fuel System Schematic
5. Quantity Indicator

F: PNEUMATICS

1. Bleed Air Source
2. Bleed Air System Schematic
3. Valves
4. Ducts

G: AIR CONDITIONING

1. Heaters
2. Air Conditioning System Schematic
3. Fans

H: FLIGHT CONTROLS

1. Primary Controls (Cyclic, Collective, and Anti-Torque)
2. Means of Actuation (Direct/Indirect)

I: LANDING GEAR

1. Landing Skids and Vibration Dampening System Schematic

J: ICE AND RAIN PROTECTION (IF APPLICABLE)

1. Anti-icing and deicing systems
    a. Engines
    b. Pitot-static probes
2. Systems schematics
3. Pneumatic/electrical valves

K: EQUIPMENT AND FURNISHINGS

1. Exits
2. Cargo Areas
3. Pilot and Passenger Seats
4. Seating and/or Cargo Configurations
5. Non Emergency Equipment and Furnishings

L: NAVIGATION EQUIPMENT

1. Navigation receivers
    a. VOR
    b. GPS
2. Functional displays
3. Transponder
4. Fault indications

M: FLIGHT INSTRUMENTS

1. Overview of Panel Arrangement
2. Sources of Power (Electrical, Pneumatic and Pitot-Static)
3. Attitude Indicator
4. Heading Indicator
5. Airspeed Indicator
6. Vertical Speed Indicator
7. Altimeter

N: COMMUNICATIONS EQUIPMENT

1. VHF Radio
2. Audio Panels
3. Intercom and Audio Entertainment System

O: WARNING SYSTEMS

1. Aural and Visual Warning Systems
    a. Character and degree of urgency related to signal
2. Warning and Caution Annunciator Systems

P: FIRE DETECTION

1. Visual and/or Aural Indications of Fire or Overheat
    a. Overheat sensors
    b. Fire detection system schematic

Q: LIGHTING

1. Cockpit
2. External
3. Power Sources
4. Switches
5. Spare Bulbs

R: EMERGENCY EQUIPMENT

1. Type (first aid kits, life preservers, and survival kits)
2. Location of Each
3. Purpose of Each

AIRCRAFT SYSTEMS INTEGRATION

A: USE OF CHECKLIST

1. Safety Checks
2. Cockpit Preparation
3. Checklist Utilization
4. Checklist Sequence

B: FLIGHT PLANNING

1. Performance Limitations
   - A. Meteorological
   - B. Weight
   - C. MEL Items
2. Required Fuel Loads
3. Weather Planning

C: NAVIGATIONAL SYSTEMS

1. Preflight preparation
2. Operation
2. Flight planning requirements

D: COCKPIT FAMILIARIZATION

1. Activation of Aircraft Systems Controls and Switches
   - a. Normal
   - b. Abnormal
   - c. Emergency
2. Annunciators
   - a. Lights
   - b. Other caution and warning systems

E: CREW RESOURCE MANAGEMENT / HUMAN FACTORS

1. Additional Resources in Single Pilot Operations
2. Situation Awareness
   - a. Reality versus perceptions of reality
   - b. Fixation
   - c. Monitoring
   - d. Incapacitation
3. Problem Solving/Decision Making/Judgment
   - a. Conflict resolution
   - b. Review
4. Team Management
   - a. Team building
   - b. Managerial skills
   - c. Authority
   - d. Barriers
   - e. Workload management
5. Stress Management
   - a. Fitness to fly
   - b. Fatigue
   - c. Incapacitation
6. Team Review
   - a. Pre-mission analysis and planning
   - b. Critique
   - c. Ongoing review
   - d. Post-mission
7. Interpersonal Skills
   - a. Listening
   - b. Conflict resolution

CURRICULUM SEGMENT: **AIRCRAFT GROUND AS-350B3e Transition**

OBJECTIVE: To develop the necessary pilot knowledge for understanding the basic functions of aircraft systems, the use of the individual systems components, the integration of aircraft systems, and operational procedures.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs.
TESTING/CHECKING:	Written Exam

GENERAL OPERATIONAL SUBJECTS

A: FLIGHT LOCATING PROCEDURES (REFERENCE OPS MANUAL, FLIGHT PLANS)

1. Company Flight Following Procedures

B: WEIGHT AND BALANCE

1. Company Procedures
2. Company Forms

C: ADVERSE WEATHER PRACTICES

1. Icing
2. Turbulence
3. Thunderstorms with Associated Wind shear and Microburst Phenomena
4. Low Visibility
5. Contaminated Landing Areas

D: COMMUNICATION AND NAVIGATION EQUIPMENT

1. Company Communication Requirements
2. ATC Clearance and Monitoring Requirements
3. Area Departure and Arrival Requirements
4. En-Route Requirements
5. Approach and Landing Requirements

E: PERFORMANCE CHARACTERISTICS DURING ALL FLIGHT REGIMES

1. The Use of Charts, Tables, and Other Related Manual Information Including The Aircraft Flight Manual
2. Normal, Abnormal, and Emergency Performance Problems Including Fuel Consumption and Cruise Power Settings
3. Meteorological and Weight-Limiting Performance Factors (Such As Temperature, Pressure, or Precipitation
4. Inoperative Equipment Performance Limiting Factors (Such As MEL)
5. Special Operational Conditions (High Altitude Airports and Confined Areas)

AIRCRAFT SYSTEMS

A: AIRCRAFT GENERAL

1. Dimensions
2. Turning Radius
3. Panel Layout
4. Cockpit And Cabin Configurations
5. Other Major Systems And Components Or Appliances

B: POWERPLANT

1. Basic Engine Description
2. Engine Horsepower Rating
3. Accessory Drives
4. Ignition
5. Oil System
6. Fuel System
7. Bleed Air

C: ELECTRICAL

1. Generator
2. External Power
3. Electrical System Schematic
   a. Buses
   b. Circuit breakers
   c. Fuses
4. Battery

D: HYDRAULIC

1. Reservoir
2. Pump
3. Accumulators
4. Hydraulic System Schematic
5. Filters
6. Check Valves
7. Actuators
8. Hydraulically Operated Components

E: FUEL

1. Fuel Tank
2. Pumps (Engine-Driven and Boost Pumps)
3. Valves
4. Fuel System Schematic
5. Quantity Indicator

F: PNEUMATICS

1. Bleed Air Source
2. Bleed Air System Schematic
3. Valves
4. Ducts

G: AIR CONDITIONING

1. Heaters
2. Air Conditioning System Schematic
3. Fans

H: FLIGHT CONTROLS

1. Primary Controls (Cyclic, Collective, and Anti-Torque)
2. Means of Actuation (Direct/Indirect)

I: LANDING GEAR

1. Landing Skids and Vibration Dampening System Schematic

J: ICE AND RAIN PROTECTION (IF APPLICABLE)

1. Anti-icing and deicing systems
   a. Engines
   b. Pitot-static probes
2. Systems schematics
3. Pneumatic/electrical valves

K: EQUIPMENT AND FURNISHINGS

1. Exits
2. Cargo Areas
3. Pilot and Passenger Seats
4. Seating and/or Cargo Configurations
5. Non Emergency Equipment and Furnishings

L: NAVIGATION EQUIPMENT

1. Navigation receivers
   a. VOR
   b. GPS
2. Functional displays
3. Transponder
4. Fault indications

M: FLIGHT INSTRUMENTS

1. Overview of Panel Arrangement
2. Sources of Power (Electrical, Pneumatic and Pitot-Static)
3. Attitude Indicator
4. Heading Indicator
5. Airspeed Indicator
6. Vertical Speed Indicator
7. Altimeter

N: COMMUNICATIONS EQUIPMENT

1. VHF Radio
2. Audio Panels
3. Intercom and Audio Entertainment System

O: WARNING SYSTEMS

1. Aural and Visual Warning Systems
   a. Character and degree of urgency related to signal
2. Warning and Caution Annunciator Systems

P: FIRE DETECTION

1. Visual and/or Aural Indications of Fire or Overheat
    a. Overheat sensors
    b. Fire detection system schematic

Q: LIGHTING

1. Cockpit
2. External
3. Power Sources
4. Switches
5. Spare Bulbs

R: EMERGENCY EQUIPMENT

1. Type (first aid kits, life preservers, and survival kits)
2. Location of Each
3. Purpose of Each

AIRCRAFT SYSTEMS INTEGRATION

A: USE OF CHECKLIST

1. Safety Checks
2. Cockpit Preparation
3. Checklist Utilization
4. Checklist Sequence

B: FLIGHT PLANNING

1. Performance Limitations
   - A. Meteorological
   - B. Weight
   - C. MEL Items
2. Required Fuel Loads
3. Weather Planning

C: NAVIGATIONAL SYSTEMS

2. Preflight preparation
2. Operation
2. Flight planning requirements

D: COCKPIT FAMILIARIZATION

1. Activation of Aircraft Systems Controls and Switches
   - a. Normal
   - b. Abnormal
   - c. Emergency
2. Annunciators
   - a. Lights
   - b. Other caution and warning systems

E: CREW RESOURCE MANAGEMENT / HUMAN FACTORS

1. Additional Resources in Single Pilot Operations
2. Situation Awareness
   - a. Reality versus perceptions of reality
   - b. Fixation
   - c. Monitoring
   - d. Incapacitation
3. Problem Solving/Decision Making/Judgment
   - a. Conflict resolution
   - b. Review
4. Team Management
   - a. Team building
   - b. Managerial skills
   - c. Authority
   - d. Barriers
   - e. Workload management
5. Stress Management
   - a. Fitness to fly
   - b. Fatigue
   - c. Incapacitation
6. Team Review
   - a. Pre-mission analysis and planning
   - b. Critique
   - c. Ongoing review
   - d. Post-mission
7. Interpersonal Skills
   - a. Listening
   - b. Conflict resolution

CURRICULUM SEGMENT: **AIRCRAFT GROUND AS-350B3e Differences**

OBJECTIVE: To develop the necessary pilot knowledge for understanding the basic differences in aircraft systems, the use of the individual systems components, the integration of aircraft systems, and operational procedures.

INSTRUCTIONAL DELIVERY METHODS: Lecture
TRAINING AIDS/COURSEWARE: Classroom Equip./Ref. Docs.
TESTING/CHECKING: Written Exam

AIRCRAFT SYSTEMS

A: AIRCRAFT GENERAL
1. Panel Layout
2. Cockpit And Cabin Configurations
3. Other Major Systems And Components Or Appliances

B: POWERPLANT
1. Basic Engine Description
2. Engine Horsepower Rating
3. Accessory Drives
4. Ignition
5. Oil System
6. Fuel System
7. Bleed Air

C: HYDRAULIC
1. Reservoir
2. Pump
3. Accumulators
4. Hydraulic System Schematic
5. Filters
6. Check Valves
7. Actuators
8. Hydraulically Operated Components

D: FLIGHT CONTROLS
1. Primary Controls (Cyclic, Collective, and Anti-Torque)
2. Means of Actuation (Direct/Indirect)

E: WARNING SYSTEMS
1. Aural and Visual Warning Systems
    a. Character and degree of urgency related to signal
2. Warning and Caution Annunciator Systems

AIRCRAFT SYSTEMS INTEGRATION

A: USE OF CHECKLIST

1. Safety Checks
2. Cockpit Preparation
3. Checklist Utilization
4. Checklist Sequence

B: FLIGHT PLANNING

1. Performance Limitations
   - A. Meteorological
   - B. Weight
   - C. MEL Items
2. Required Fuel Loads

C: COCKPIT FAMILIARIZATION

1. Activation of Aircraft Systems Controls and Switches
   - a. Normal
   - b. Abnormal
   - c. Emergency
2. Annunciators
   - a. Lights
   - b. Other caution and warning systems

CURRICULUM SEGMENT: **AIRCRAFT GROUND EC-130 INITIAL-B4/T2 DIFFERENCES**

OBJECTIVE: To develop the necessary pilot knowledge for understanding the basic functions of aircraft systems, the use of the individual systems components, the integration of aircraft systems, and operational procedures.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs.
TESTING/CHECKING:	Written Exam

GENERAL OPERATIONAL SUBJECTS

A: FLIGHT LOCATING PROCEDURES (REFERENCE OPS MANUAL, FLIGHT PLANS)

1. Company Flight Following Procedures

B: WEIGHT AND BALANCE

1. Company Procedures
2. Company Forms

C: ADVERSE WEATHER PRACTICES

1. Icing
2. Turbulence
3. Thunderstorms with Associated Wind shear and Microburst Phenomena
4. Low Visibility
5. Contaminated Landing Areas

D: COMMUNICATION AND NAVIGATION EQUIPMENT

1. Company Communication Requirements
2. ATC Clearance and Monitoring Requirements
3. Area Departure and Arrival Requirements
4. En-Route Requirements
5. Approach and Landing Requirements

E: PERFORMANCE CHARACTERISTICS DURING ALL FLIGHT REGIMES

1. The Use of Charts, Tables, and Other Related Manual Information Including The Aircraft Flight Manual
2. Normal, Abnormal, and Emergency Performance Problems Including Fuel Consumption and Cruise Power Settings
3. Meteorological and Weight-Limiting Performance Factors (Such As Temperature, Pressure, or Precipitation
4. Inoperative Equipment Performance Limiting Factors (Such As MEL)
5. Special Operational Conditions (High Altitude Airports and Confined Areas)

AIRCRAFT SYSTEMS

A: AIRCRAFT GENERAL

1. Dimensions
2. Turning Radius
3. Panel Layout
4. Cockpit And Cabin Configurations
5. Other Major Systems And Components Or Appliances

B: POWERPLANT

1. Basic Engine Description
2. Engine Horsepower Rating
3. Accessory Drives
4. Ignition
5. Oil System
6. Fuel System
7. Bleed Air
8. FADEC Systems

C: ELECTRICAL

1. Generator
2. External Power
3. Electrical System Schematic
   a. Buses
   b. Circuit breakers
   c. Fuses
4. Battery

D: HYDRAULIC

1. Reservoir
2. Pump
3. Hydraulic System Schematic
4. Filters
5. Check Valves
6. Actuators
7. Hydraulically Operated Components

E: FUEL

1. Fuel Tank
2. Pumps (Engine-Driven and Boost Pumps)
3. Valves
4. Fuel System Schematic
5. Quantity Indicator

F: PNEUMATICS

1. Bleed Air Source
2. Bleed Air System Schematic
3. Valves
4. Ducts

G: AIR CONDITIONING

1. Heaters
2. Air Conditioning System Schematic
3. Fans

H: FLIGHT CONTROLS

1. Primary Controls (Cyclic, Collective, and Anti-Torque)
2. Means of Actuation (Direct/Indirect)

I: LANDING GEAR

1. Landing Skids and Vibration Dampening System Schematic

J: ICE AND RAIN PROTECTION (IF APPLICABLE)

1. Anti-icing and deicing systems
    a. Engines
    b. Pitot-static probes
2. Systems schematics
3. Pneumatic/electrical valves

K: EQUIPMENT AND FURNISHINGS

1. Exits
2. Cargo Areas
3. Pilot and Passenger Seats
4. Seating and/or Cargo Configurations
5. Non Emergency Equipment and Furnishings

L: NAVIGATION EQUIPMENT

1. Navigation receivers
    a. VOR
    b. GPS
2. Functional displays
3. Transponder
4. Fault indications

M: FLIGHT INSTRUMENTS

1. Overview of Panel Arrangement
2. Sources of Power (Electrical, Pneumatic and Pitot-Static)
3. Attitude Indicator
4. Heading Indicator
5. Airspeed Indicator
6. Vertical Speed Indicator
7. Altimeter

N: COMMUNICATIONS EQUIPMENT

1. VHF/FM Radio
2. Audio Panels
3. Intercom and Audio Entertainment System

O: WARNING SYSTEMS

1. Aural and Visual Warning Systems
    a. Character and degree of urgency related to signal
2. Warning and Caution Annunciator Systems

P: FIRE DETECTION

1. Visual and/or Aural Indications of Fire or Overheat
    a. Overheat sensors
    b. Fire detection system schematic

Q: LIGHTING

1. Cockpit
2. External
3. Power Sources
4. Switches
5. Spare Bulbs

R: EMERGENCY EQUIPMENT

1. Type (first aid kits, life preservers, and survival kits)
2. Location of Each
3. Purpose of Each

AIRCRAFT SYSTEMS INTEGRATION

A: USE OF CHECKLIST

1. Safety Checks
2. Cockpit Preparation
3. Checklist Utilization
4. Checklist Sequence

B: FLIGHT PLANNING

1. Performance Limitations
   - A. Meteorological
   - B. Weight
   - C. MEL Items
2. Required Fuel Loads
3. Weather Planning

C: NAVIGATIONAL SYSTEMS

1. Preflight preparation
2. Operation
3. Flight planning requirements

D: COCKPIT FAMILIARIZATION

1. Activation of Aircraft Systems Controls and Switches
   - a. Normal
   - b. Abnormal
   - c. Emergency
2. Annunciators
   - a. Lights
   - b. Other caution and warning systems

E: CREW RESOURCE MANAGEMENT / HUMAN FACTORS

1. Additional Resources in Single Pilot Operations
2. Situation Awareness
   - a. Reality versus perceptions of reality
   - b. Fixation
   - c. Monitoring
   - d. Incapacitation
3. Problem Solving/Decision Making/Judgment
   - a. Conflict resolution
   - b. Review
4. Team Management
   - a. Team building
   - b. Managerial skills
   - c. Authority
   - d. Barriers
   - e. Workload management
5. Stress Management
   - a. Fitness to fly
   - b. Fatigue
   - c. Incapacitation
6. Team Review
   - a. Pre-mission analysis and planning
   - b. Critique
   - c. Ongoing review
   - d. Post-mission
7. Interpersonal Skills
   - a. Listening
   - b. Conflict resolution

CURRICULUM SEGMENT: **AIRCRAFT GROUND MD900**

OBJECTIVE: To develop the necessary pilot knowledge for understanding the basic functions of aircraft systems, the use of the individual systems components, the integration of aircraft systems, and operational procedures.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs.
TESTING/CHECKING:	Written Exam

GENERAL OPERATIONAL SUBJECTS

A: FLIGHT LOCATING PROCEDURES (REFERENCE OPS MANUAL, FLIGHT PLANS)

1. Company Flight Following Procedures

B: WEIGHT AND BALANCE

1. Company Procedures
2. Company Forms

C: ADVERSE WEATHER PRACTICES

1. Icing
2. Turbulence
3. Thunderstorms with Associated Wind shear and Microburst Phenomena
4. Low Visibility
5. Contaminated Landing Areas

D: COMMUNICATION AND NAVIGATION EQUIPMENT

1. Company Communication Requirements
2. ATC Clearance and Monitoring Requirements
3. Area Departure and Arrival Requirements
4. En-Route Requirements
5. Approach and Landing Requirements

E: PERFORMANCE CHARACTERISTICS DURING ALL FLIGHT REGIMES

1. The Use of Charts, Tables, and Other Related Manual Information Including The Aircraft Flight Manual
2. Normal, Abnormal, and Emergency Performance Problems Including Fuel Consumption and Cruise Power Settings
3. Meteorological and Weight-Limiting Performance Factors (Such As Temperature, Pressure, or Precipitation
4. Inoperative Equipment Performance Limiting Factors (Such As MEL)
5. Special Operational Conditions (High Altitude Airports and Confined Areas)

AIRCRAFT SYSTEMS

A. AIRCRAFT GENERAL
1. Dimensions
2. Turning Radius
3. Panel Layout
4. Cockpit and Cabin Configurations
5. Other Major Systems and Components

B. POWERPLANT
1. Basic Engine(s) Description
2. Engine Horsepower Rating
3. Accessory Drives
4. Ignition
5. Oil System
6. Fuel System
7. Bleed Air
8. Combiner Gearbox
9. FADEC System(s)

C. ROTOR SYSTEM
1. Main Rotor System
2. NOTAR System

D. ELECTRICAL
1. Generator(s)
2. External Power
3. Electrical System Schematic
    a. Busses
    b. Circuit breakers
    c. Fuses
4. Battery

E. HYDRAULICS
1. Reservoirs
2. Pumps
3. Hydraulic System Schematic
4. Filters
5. Check Valves
6. Actuators
7. Hydraulically Operated Components

F. FUEL
1. Fuel Tank
2. Pumps (Engine-Driven and Boost Pumps)
3. Valves
4. Fuel System Schematic
5. Quantity Indicators

G. PNEUMATICS
1. Bleed Air Source
2. Bleed Air System Schematic
3. Valves
4. Ducts

H. AIR CONDITIONING

1. Heat/Demist System
2. Air Conditioning System Schematic
3. Fans

I. FLIGHT CONTROLS

1. Primary Controls (Cyclic, Collective, and Anti-Torque)
2. Means of Actuation (Direct/Indirect)
3. Flight Stabilization System (VSCS)

J. LANDING GEAR

1. Landing Skids and Vibration Dampening System Schematic

K: ICE AND RAIN PROTECTION (IF APPLICABLE)

1. Anti-icing, deicing, and inlet protection systems (NACA)
    a. Engines
    b. Pitot-static probes
2. Systems schematics
3. Pneumatic/electrical valves

L: NAVIGATION EQUIPMENT

1. Navigation receivers
    a. VOR
    b. GPS
2. Functional displays
3. Transponder
4. Fault indications

M. EQUIPMENT AND FURNISHINGS

1. Exits
2. Cargo Areas
3. Pilot and Passenger Seats
4. Seating and/or Cargo Configurations
5. Non Emergency Equipment and Furnishings

N. FLIGHT INSTRUMENTS

1. Overview of Panel Arrangement
2. Sources of Power (Electrical, Pneumatic and Pitot-Static)
3. Attitude Indicator
4. Heading Indicator
5. Airspeed Indicator
6. Vertical Speed Indicator
7. Altimeter

O. COMMUNICATIONS EQUIPMENT

1. VHF/FM Radio
2. Audio Panels
3. Intercom and Audio Entertainment System

P. WARNING SYSTEMS

1. Aural and Visual Warning Systems
    a. Character and degree of urgency related to signal
2. Warning and Caution Annunciator Systems

Q. FIRE PROTECTION

1. Fire Detection System
2. Fire Extinguishing System

R. LIGHTING

1. Cockpit
2. External
3. Power Sources
4. Switches
5. Spare Bulbs

Q. EMERGENCY EQUIPMENT

1. Type (first aid kits, life preservers, and survival kits)
2. Location of Each
3. Purpose of Each

AIRCRAFT SYSTEMS INTEGRATION

A: USE OF CHECKLIST

1. Safety Checks
2. Cockpit Preparation
3. Checklist Utilization
4. Checklist Sequence

B: FLIGHT PLANNING

1. Performance Limitations
   - A. Meteorological
   - B. Weight
   - C. MEL Items
2. Required Fuel Loads
3. Weather Planning

C: NAVIGATIONAL SYSTEMS

1. Preflight preparation
2. Operation
3. Flight planning requirements

D: COCKPIT FAMILIARIZATION

1. Activation of Aircraft Systems Controls and Switches
   - a. Normal
   - b. Abnormal
   - c. Emergency
2. Annunciators
   - a. Lights
   - b. Other caution and warning systems

E: CREW RESOURCE MANAGEMENT / HUMAN FACTORS

1. Additional Resources in Single Pilot Operations
2. Situation Awareness
   - a. Reality versus perceptions of reality
   - b. Fixation
   - c. Monitoring
   - d. Incapacitation
3. Problem Solving/Decision Making/Judgment
   - a. Conflict resolution
   - b. Review
4. Team Management
   - a. Team building
   - b. Managerial skills
   - c. Authority
   - d. Barriers
   - e. Workload management
5. Stress Management
   - a. Fitness to fly
   - b. Fatigue
   - c. Incapacitation
6. Team Review
   - a. Pre-mission analysis and planning
   - b. Critique
   - c. Ongoing review
   - d. Post-mission
7. Interpersonal Skills
   - a. Listening
   - b. Conflict resolution

CURRICULUM SEGMENT: **SFAR 50-2 GROUND**

OBJECTIVE: To develop the necessary knowledge and understanding for a CFR Part 135 current and qualified pilot, to meet and clearly demonstrate the requirements and procedures set forth in SFAR 50-2.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs.
TESTING/CHECKING:	Oral or Written Exam

A. SFAR 50-2 GENERAL

1. History
2. Manual
3. Pilot Responsibilities

B. APPLICABILITY

C. PILOT QUALIFICATION

D. AIRCRAFT OPERATIONS - GENERAL

1. Weather Minimums
2. Altitudes
3. Routing and Reporting Points
4. Entry/Exit Points
5. Communications
6. Other Company Operations
7. Aircraft Equipment

E. FLIGHT-FREE ZONES

F. CONDUCT OF TOURS

1. Safety
2. Maneuvers
   a. Cruise Flight
   b. Climbs & Descents
   c. Turns and Banks
   d. Pitch.
3. Sterile Cockpit
4. Communications
5. Narration
6. Music

G. PASSENGER BRIEFINGS

H. INADVERTENT IMC PROCEDURES

1. Procedure
2. IFR Publications
3. IMC Review

CURRICULUM SEGMENT: **GARMIN G500h GROUND**

OBJECTIVE: To develop the necessary knowledge and understanding for a CFR Part 135 current and qualified pilot, to meet and clearly demonstrate proficiency with the Garmin G500h system.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS/COURSEWARE:	Classroom Equip./Ref. Docs.
TESTING/CHECKING:	Oral or Written Exam

A. SYSTEMS OVERVIEW

1. Terminology
2. Line Replaceable Units (LRU)
3. SD Data Cards
4. System Powerup
5. System Operation
6. System Failures

B. PRIMARY FLIGHT DISPLAY

1. Instrument Depiction and Interpretation
2. PFD Knob/Bezel Keys/Soft Keys
3. Synthetic Vision Technology
4. System Settings

C. MULTI-FUNCTION DISPLAY

1. MFD Knobs and Soft Keys
2. Page/Menu Navigation
3. Editing Information
4. Decluttering
5. Selecting Page Options
6. Selecting Items on a Map
7. Measuring Distances
8. Map Setup
9. Datalink Weather
10. Flight Plan Page
11. Selecting and Viewing Charts
12. Safe Taxi (If Applicable)
13. System Settings

D. HAZARD AVOIDANCE

1. Terrain Avoidance
2. Traffic Avoidance
3. Hazardous Weather Avoidance

CURRICULUM SEGMENT: **FLIGHT TRAINING - PIC HELICOPTER BHT-206**

OBJECTIVE: To develop the necessary pilot skills and knowledge to perform the duties and responsibilities of PIC and operate the aircraft to the desired standards.

INSTRUCTIONAL DELIVERY METHOD: Instruction/Demonstration/Practice

TRAINING AIDS: Stationary Aircraft

COURSEWARE: Lesson Plan, A.F.M., Maneuvers/Procedures Doc.

TESTING/CHECKING: Evaluation, Progress Check

A. PREPARATION
1. Visual Inspection
2. Pre-taxi procedure
3. Performance Limitations

B. SURFACE OPERATION
1. Starting/Rotor Engagement
2. Lift-To-Hover IGE/OGE
3. Hover Turns IGE/OGE
4. Sideward/Rearward Hovering
5. Slope Operations
   A. Liftoff
   B. Landing

C. TAKEOFF
1. Normal
2. Obstacle Clearance
3. High altitude
4. Rejected Takeoff

D. CLIMB
1. Normal
2. Best Rate
3. Best Angle

E. EN ROUTE
1. Medium-Banked Turns
2. Low Speed Characteristics
3. High Speed Characteristics

F. DESCENT
1. Normal
2. Maximum Rate
3. Autorotative Glide

G. APPROACHES

1. VFR Procedures
   - A. Normal
   - B. Obstacle Clearance
   - C. High Altitude
   - D. Elevated Landing Site
   - E. Rejected Landing (Go around)

H. LANDINGS

1. Normal
2. Crosswind

I. AFTER LANDING

1. Taxiing
2. Parking
3. Stopping the Rotors
4. Emergency Evacuation

J. UNPREPARED SITE OPERATIONS

1. Confined Areas
2. Pinnacles
3. Ridgelines

K. OTHER FLIGHT PROCEDURES DURING ANY AIRBORNE PHASE

1. Holding
2. Ice Accumulation on Airframe
3. Air Hazard Avoidance
4. Wind shear/Microburst

L. SYSTEMS PROCEDURES DURING ANY AIRBORNE PHASE (Normal or abnormal)

1. Air Conditioning
2. Fuel and Oil
3. Electrical
4. Hydraulic
5. Flight Controls
6. Loss of Anti-Torque Effectiveness
7. Flight Instrument System Malfunction
8. Communications Equipment
9. Navigation equipment

M. SYSTEMS PROCEDURES TRAINING DURING ANY AIRBORNE PHASE (Emergency)

1. Aircraft Fires
2. Smoke Control
3. Powerplant Malfunctions
4. Electrical and Hydraulic Systems
5. Flight Control Systems Malfunction
6. Anti-Torque Failure
7. Settling-With-Power
8. Autorotations

CURRICULUM SEGMENT: **FLIGHT TRAINING - PIC HELICOPTER AS-350B2**

OBJECTIVE: To develop the necessary pilot skills and knowledge to perform the duties and responsibilities of PIC and operate the aircraft to the desired standards.

INSTRUCTIONAL DELIVERY METHOD:	Instruction/Demonstration/Practice
TRAINING AIDS:	Stationary Aircraft
COURSEWARE:	Lesson Plan, A.F.M., Maneuvers/Procedures Doc.
TESTING/CHECKING:	Evaluation, Progress Check

A. PREPARATION
1. Visual Inspection
2. Pre-taxi procedure
3. Performance Limitations

B. SURFACE OPERATION
1. Starting/Rotor Engagement
2. Lift-To-Hover IGE/OGE
3. Hover Turns IGE/OGE
4. Sideward/Rearward Hovering
5. Slope Operations
   A. Liftoff
   B. Landing

C. TAKEOFF
1. Normal
2. Obstacle Clearance
3. High altitude
4. Rejected Takeoff

D. CLIMB
1. Normal
2. Best Rate
3. Best Angle

E. EN ROUTE
1. Medium-Banked Turns
2. Low Speed Characteristics
3. High Speed Characteristics

F. DESCENT
1. Normal
2. Maximum Rate
3. Autorotative Glide

G. APPROACHES

1. VFR Procedures
   - A. Normal
   - B. Obstacle Clearance
   - C. High Altitude
   - D. Elevated Landing Site
   - E. Rejected Landing (Go around)

H. LANDINGS

1. Normal
2. Crosswind

I. AFTER LANDING

1. Taxiing
2. Parking
3. Stopping the Rotors
4. Emergency Evacuation

J. UNPREPARED SITE OPERATIONS

1. Confined Areas
2. Pinnacles
3. Ridgelines

K. OTHER FLIGHT PROCEDURES DURING ANY AIRBORNE PHASE

1. Holding
2. Ice Accumulation on Airframe
3. Air Hazard Avoidance
4. Wind shear/Microburst

L. SYSTEMS PROCEDURES DURING ANY AIRBORNE PHASE (Normal or abnormal)

1. Air Conditioning
2. Fuel and Oil
3. Electrical
4. Hydraulic
5. Flight Controls
6. Loss of Anti-Torque Effectiveness
7. Flight Instrument System Malfunction
8. Communications Equipment
9. Navigation equipment

M. SYSTEMS PROCEDURES TRAINING DURING ANY AIRBORNE PHASE (Emergency)

1. Aircraft Fires
2. Smoke Control
3. Powerplant Malfunctions
4. Electrical and Hydraulic Systems
5. Flight Control Systems Malfunction
6. Anti-Torque Failure
7. Settling-With-Power
8. Autorotations

CURRICULUM SEGMENT: **FLIGHT TRAINING - PIC HELICOPTER AS-350B3e**

OBJECTIVE: To develop the necessary pilot skills and knowledge to perform the duties and responsibilities of PIC and operate the aircraft to the desired standards.

INSTRUCTIONAL DELIVERY METHOD: Instruction/Demonstration/Practice
TRAINING AIDS: Stationary Aircraft
COURSEWARE: Lesson Plan, A.F.M., Maneuvers/Procedures Doc.
TESTING/CHECKING: Evaluation, Progress Check

A. PREPARATION
1. Visual Inspection
2. Pre-taxi procedure
3. Performance Limitations

B. SURFACE OPERATION
1. Starting/Rotor Engagement
2. Lift-To-Hover IGE/OGE
3. Hover Turns IGE/OGE
4. Sideward/Rearward Hovering
5. Slope Operations
   A. Liftoff
   B. Landing

C. TAKEOFF
1. Normal
2. Obstacle Clearance
3. High altitude
4. Rejected Takeoff

D. CLIMB
1. Normal
2. Best Rate
3. Best Angle

E. EN ROUTE
1. Medium-Banked Turns
2. Low Speed Characteristics
3. High Speed Characteristics

F. DESCENT
1. Normal
2. Maximum Rate
3. Autorotative Glide

G. APPROACHES

1. VFR Procedures
   - A. Normal
   - B. Obstacle Clearance
   - C. High Altitude
   - D. Elevated Landing Site
   - E. Rejected Landing (Go around)

H. LANDINGS

1. Normal
2. Crosswind

I. AFTER LANDING

1. Taxiing
2. Parking
3. Stopping the Rotors
4. Emergency Evacuation

J. UNPREPARED SITE OPERATIONS

1. Confined Areas
2. Pinnacles
3. Ridgelines

K. OTHER FLIGHT PROCEDURES DURING ANY AIRBORNE PHASE

1. Holding
2. Ice Accumulation on Airframe
3. Air Hazard Avoidance
4. Wind shear/Microburst

L. SYSTEMS PROCEDURES DURING ANY AIRBORNE PHASE (Normal or abnormal)

1. Air Conditioning
2. Fuel and Oil
3. Electrical
4. Hydraulic
5. Flight Controls
6. Loss of Anti-Torque Effectiveness
7. Flight Instrument System Malfunction
8. Communications Equipment
9. Navigation equipment

M. SYSTEMS PROCEDURES TRAINING DURING ANY AIRBORNE PHASE (Emergency)

1. Aircraft Fires
2. Smoke Control
3. Powerplant Malfunctions
4. Electrical and Hydraulic Systems
5. Flight Control Systems Malfunction
6. Anti-Torque Failure
7. Settling-With-Power
8. Autorotations

CURRICULUM SEGMENT: **FLIGHT TRAINING-PIC AS-350B3e DIFFERENCES**

OBJECTIVE: To develop the necessary pilot skills and knowledge to perform the duties and responsibilities of PIC and operate the aircraft to the desired standards.

INSTRUCTIONAL DELIVERY METHOD:	Instruction/Demonstration/Practice
TRAINING AIDS:	Stationary Aircraft
COURSEWARE:	Lesson Plan, A.F.M., Maneuvers/Procedures Doc.
TESTING/CHECKING:	Evaluation, Progress Check

A. PREPARATION
1. Visual Inspection
2. Pre-taxi procedure
3. Performance Limitations

B. SURFACE OPERATION
1. Starting/Rotor Engagement
2. Lift-To-Hover IGE/OGE
3. Hover Turns IGE/OGE

C. TAKEOFF
1. Normal
2. Rejected Takeoff

D. DESCENT
1. Normal
2. Maximum Rate
3. Autorotative Glide

E. APPROACHES
1. VFR Procedures
   - A. Normal
   - B. Elevated Landing Site
   - C. Rejected Landing (Go around)

H. LANDINGS
1. Normal
2. Crosswind

I. AFTER LANDING
1. Taxiing
2. Parking
3. Stopping the Rotors
4. Emergency Evacuation

L. SYSTEMS PROCEDURES DURING ANY AIRBORNE PHASE (Normal or abnormal)
1. Electrical
2. Hydraulic

M. SYSTEMS PROCEDURES TRAINING DURING ANY AIRBORNE PHASE (Emergency)
1. Powerplant Malfunctions
2. Electrical and Hydraulic Systems
3. Flight Control Systems Malfunction
4. Autorotations

CURRICULUM SEGMENT: **FLIGHT TRAINING - PIC HELICOPTER EC-130**

OBJECTIVE: To develop the necessary pilot skills and knowledge to perform the duties and responsibilities of PIC and operate the aircraft to the desired standards.

INSTRUCTIONAL DELIVERY METHOD:	Instruction/Demonstration/Practice
TRAINING AIDS:	Stationary Aircraft
COURSEWARE:	Lesson Plan, A.F.M., Maneuvers/Procedures Doc.
TESTING/CHECKING:	Evaluation, Progress Check

A. PREPARATION
1. Visual Inspection
2. Pre-taxi procedure
3. Performance Limitations

B. SURFACE OPERATION
1. Starting/Rotor Engagement
2. Lift-To-Hover IGE/OGE
3. Hover Turns IGE/OGE
4. Sideward/Rearward Hovering
5. Slope Operations
   A. Liftoff
   B. Landing

C. TAKEOFF
1. Normal
2. Obstacle Clearance
3. High altitude
4. Rejected Takeoff

D. CLIMB
1. Normal
2. Best Rate
3. Best Angle

E. EN ROUTE
1. Medium-Banked Turns
2. Low Speed Characteristics
3. High Speed Characteristics

F. DESCENT
1. Normal
2. Maximum Rate
3. Autorotative Glide

G. APPROACHES

1. VFR Procedures
   - A. Normal
   - B. Obstacle Clearance
   - C. High Altitude
   - D. Elevated Landing Site
   - E. Rejected Landing (Go around)

H. LANDINGS

1. Normal
2. Crosswind

I. AFTER LANDING

1. Taxiing
2. Parking
3. Stopping the Rotors
4. Emergency Evacuation

J. UNPREPARED SITE OPERATIONS

1. Confined Areas
2. Pinnacles
3. Ridgelines

K. OTHER FLIGHT PROCEDURES DURING ANY AIRBORNE PHASE

1. Holding
2. Ice Accumulation on Airframe
3. Air Hazard Avoidance
4. Wind shear/Microburst

L. SYSTEMS PROCEDURES DURING ANY AIRBORNE PHASE (Normal or abnormal)

1. Air Conditioning
2. Fuel and Oil
3. Electrical
4. Hydraulic
5. Flight Controls
6. Loss of Anti-Torque Effectiveness
7. Flight Instrument System Malfunction
8. Communications Equipment
9. Navigation equipment

M. SYSTEMS PROCEDURES TRAINING DURING ANY AIRBORNE PHASE (Emergency)

1. Aircraft Fires
2. Smoke Control
3. Powerplant Malfunctions
4. Electrical and Hydraulic Systems
5. Flight Control Systems Malfunction
6. Anti-Torque Failure
7. Settling-With-Power
8. Autorotations
9. FADEC Failure

CURRICULUM SEGMENT: **FLIGHT TRAINING - PIC HELICOPTER MD900**

OBJECTIVE: To develop the necessary pilot skills and knowledge to perform the duties and responsibilities of PIC and operate the aircraft to the desired standards.

INSTRUCTIONAL DELIVERY METHOD:	Instruction/Demonstration/Practice
TRAINING AIDS:	Stationary Aircraft
COURSEWARE:	Lesson Plan, A.F.M. Maneuvers /Procedures Doc.
TESTING/CHECKING:	Evaluation, Progress Check

A. PREPARATION
1. Visual Inspection
2. Performance Limitations

B. SURFACE OPERATION
1. Starting/Rotor Engagement
2. Lift-To-Hover IGE/OGE
3. Hover Turns IGE/OGE
4. Sideward/Rearward Hovering
5. Slope Operations
   A. Liftoff
   B. Landing

C. TAKEOFF
1. Normal
2. Obstacle Clearance
3. Rejected Takeoff

D. CLIMB
1. Normal
2. Best Rate
3. Best Angle

E. EN ROUTE
1. Medium-Banked Turns
2. Low Speed Characteristics
3. High Speed Characteristics

F. DESCENT
1. Normal
2. Maximum Rate

G. APPROACHES

1. VFR Procedures
   - A. Normal
   - B. Obstacle Clearance
   - C. High Altitude
   - D. Elevated Landing Site
   - E. Rejected Landing

H. LANDINGS

1. Normal
2. Crosswind

I. AFTER LANDING

1. Taxiing
2. Parking
3. Stopping the Rotors
4. Emergency Evacuation

J. UNPREPARED SITE OPERATIONS

1. Confined Areas
2. Pinnacles
3. Ridgelines

K. OTHER FLIGHT PROCEDURES DURING ANY AIRBORNE PHASE

1. Holding
2. Ice Accumulation on Airframe
3. Air Hazard Avoidance
4. Wind shear/Microburst

L. SYSTEMS PROCEDURES DURING ANY AIRBORNE PHASE (Normal or abnormal)

1. Air Conditioning
2. Fuel and Oil
3. Electrical
4. Hydraulic
5. Flight Controls
6. Loss of Anti-Torque Effectiveness (NOTAR)
7. Flight Instrument System Malfunction
8. Communications Equipment
9. Navigation equipment

M. SYSTEMS PROCEDURES TRAINING DURING ANY AIRBORNE PHASE (Emergency)

1. Aircraft Fires
2. Smoke Control
3. Powerplant Malfunctions
   - a. Simulated FADEC (EEC) Failures
     1. EEC Critical Fault
     2. EEC NON-Critical Fault
   - b. Single-engine Failure HIGE
   - c. Single-engine Failure HOGE
   - d. Single-engine failure on Takeoff
   - e. Single-engine failure During Cruise
   - f. Single-engine failure During Approach

4. Electrical and Hydraulic Systems
5. Flight Control Systems Malfunction (VSCS)
6. Anti-Torque Failure (NOTAR)
   a. Complete Loss of Thrust
   b. Fixed Thruster Setting
7. Settling-With-Power

CURRICULUM SEGMENT: **FLIGHT TRAINING – SFAR 50-2**

OBJECTIVE: To develop the necessary pilot skills and knowledge to perform the duties and responsibilities of PIC and operate the aircraft during SFAR 50-2 operations.

INSTRUCTIONAL DELIVERY METHOD:	Instruction/Demonstration/Practice
TRAINING AIDS:	GCNP Area Charts
COURSEWARE:	Lesson Plan, LAS FSDO 1380.2A,
TESTING/CHECKING:	Evaluation

ROUTE FAMILIARIZATION – Green One, Green One Alpha, Green Two, Green Four, Brown Six

Instruction will be given on a minimum of two flights along entire route. During theses flights, the Instructor or Check Airman shall point out the following applicable items.

1. Entry And Exit Points
2. Possible Emergency Landing Sites
3. Other Operator Routing And Landing Sites
4. Reporting Points
5. Reverse Course Operations
6. Location of Flight Free Zone(s)
7. Possible Landing Areas During Times of Inclement Weather
8. Unusual Attitude Recovery – Refer to AP-C1
9. Inadvertent IMC Recovery - Refer to AP-C2

Note: Pilot receiving a route familiarization flight must be sole manipulator of aircraft flight controls.

CURRICULUM SEGMENT: **GARMIN G500h FLIGHT**

OBJECTIVE: To develop the necessary knowledge and understanding for a CFR Part 135 current and qualified pilot, to meet and clearly demonstrate proficiency with the Garmin G500h system.

INSTRUCTIONAL DELIVERY METHODS: Instruction / Demonstration / Practice
TRAINING AIDS/COURSEWARE: Garmin G500h Pilot's Guide.
TESTING/CHECKING: Evaluation

A. SYSTEMS OVERVIEW

1. System Powerup
2. System Operation

E. PRIMARY FLIGHT DISPLAY

1. Instrument Interpretation
2. Synthetic Vision Technology
3. Altimeter Adjustment
4. Heading & Navigation Adjustments

F. MULTI-FUNCTION DISPLAY

1. MFD Knobs and Soft Keys
2. Page/Menu Navigation
3. Editing Information
4. Decluttering
5. Selecting Page Options
6. Selecting Items on a Map
7. Measuring Distances
8. Map Setup
9. Datalink XM Weather
10. Flight Plan Page
11. Selecting and Viewing Charts
12. Safe Taxi (If Applicable)

G. NAVIGATION

1. Direct to Navigation
2. Flight Plan Navigation
3. Garmin 430 Relationship / Interface

H. HAZARD AVOIDANCE

1. Terrain Avoidance
2. Traffic Avoidance
3. Hazardous Weather Avoidance

I. EMERGENCIES

1. System Failures
2. Unusual Attitude Recovery
3. Inadvertent IMC Procedures
4. Attitude Instrument Flight - Approach

CURRICULUM SEGMENT: **NON-CARRIAGE HAZARDOUS MATERIALS**

OBJECTIVE: The training program for Hazardous Materials (HM) Awareness Recognition shall apply to all personnel who are concerned with or have any duty or responsibility concerned with accepting, handling, or loading of air cargo and passenger baggage.

The scope of training should embrace at least a familiarization with the subjects listed under REFERENCE AND TEXT MATERIAL, with emphasis on job-related functions. The subjects listed under "SUBJECT FOR REQUIRED TRAINING" must be covered during all training.

INSTRUCTIONAL DELIVERY METHOD:	Lecture, Demonstration, Drill, AVSTAR (ATS) Computerized Training
TRAINING AIDS:	AVSTAR (ATS) Computerized Training
COURSEWARE:	AVSTAR (ATS) Computerized Training, Reference Documents
TESTING/CHECKING:	AVSTAR (ATS) Computerized Training - Written Exam

SUBJECT FOR REQUIRED TRAINING

Refer to Company Operations Manual Appendix B Part 2 (Dangerous Goods Training), for the Non-Carriage Haz-Mat Training Curriculum. Additionally the instructor will utilize the Computer Based Haz-Mat Training Program (ATS).

CURRICULUM SEGMENT: **QUALIFICATION**

OBJECTIVE: To determine that a pilot has satisfactorily completed all required curriculum segments and to determine whether sufficient learning has occurred by the comparison or the pilot's performance, in practical situations, to established standards.

TESTING/CHECKING:

Each pilot required to train under a curriculum must complete the curriculum in its entirety.

All written examinations must be completed with a minimum score of 70% corrected to 100%. Subject areas found deficient will be reviewed and the pilot knowledge determined to be satisfactory. Such review will be documented by the instructor.

Satisfactory completion of flight training required events will be in accordance with the standards set forth in the Practical Test Standards FAA-S-8081-5(ATP), FAA-S-8081-2(COMM), and FAA-S-8081-4A(INST) as appropriate for the pilot certificate and rating required for the duty position assigned.

A pilot who fails to meet qualification objectives must continue training until those objectives are met, unless the pilot is removed from training status.

A pilot will become fully qualified to serve in a specific duty position in a specific aircraft upon satisfactory completion of the qualification segment requirements as follows:

BASIC CHECKING MODULE **PAGE**

ADDITIONAL CHECKING MODULES

BASIC CHECKING MODULE

A. BASIC CHECKING MODULES FOR CFR 135.293 VFR COMPETENCY CHECK

The minimum events for a CFR 135.293 VFR competency check are listed in the columns marked "VFR COMP" in the table below.

BASIC CHECKING MODULE OUTLINES

EVENTS	VFR COMP.	TWIN HELI	NOTES
WRITTEN OR ORAL TEST			
GROUND OPERATIONS Preflight Inspection	X	X	
Start Procedures	X	X	
Taxiing and Ground Hover	X	X	
Pre-Takeoff Checks	X	X	
TAKEOFFS AND DEPARTURES Normal	X	X	
Emergency Deceleration	X	X	1
INFLIGHT MANEUVERS Settling with power	X	X	Oral or Actual
Unusual Attitude Recovery	X	X	
Inadvertent IMC Procedure	X	X	2
LANDINGS AND APPROACHES TO LANDINGS Normal	X	X	3, 4
Steep	X	X	3, 4
Shallow	X	X	3, 4
Go-Around	X	X	
ABNORMAL AND EMERGENCY PROCEDURES System Malfunctions	X	X	Oral or Actual
Power failure & Autorotation to power recovery	X		
One Engine Inoperative Failures		X	
Hovering Autorotations	X		
Tail Rotor Failure	X	X	Oral Only
Dynamic Rollover	X	X	Oral Only
Low Rotor RPM	X	X	Oral Only
Anti-Torque System Failure	X	X	Oral or Actual
Confined Area/Pinnacle Operations	X	X	
Slope Operations	X	X	

BASIC CHECKING MODULE OUTLINE - Continued.

NOTES

1 The performance characteristics of some non-transport helicopters may make the introduction of a simulated engine failure on takeoff a potentially hazardous situation. When conducting a flight check in such helicopters check airmen should use their authority to waive or modify this event.

2 Check Airmen shall ensure pilots accomplish this event in an aircraft they operate in revenue operations. The event should reflect a realistic course of action the pilot might take to escape from an inadvertent encounter with IFR conditions. When the pilot is authorized to operate an appropriately equipped aircraft and the check is conducted at a location where an ILS is operational, an ILS approach should be demonstrated. Check Airmen may also approve a letdown on partial panel when this would be an appropriate course of action.

3 The landings listed are required but may be combined when appropriate.

4 To be credited also as a line check qualification module the check must include the following:

VFR A flight conducted over at least one route segment to include takeoffs and landings at one or more airports.

LINE CHECK MODULE OUTLINE

A. Terminal Security Procedures

B. Aircraft Security and Anti-Hijacking Procedures

C. Weather Forecasts and Information Sources

D. Flight Planning

E. Flight Following Procedures

F. Cockpit Set-Up

G. Weight & Balance Computation (including last minute changes)

H. ATC Flow Control Procedures

I. MEL & CDL Procedures

J. Procedures for Fueling and Confirming Fuel Loads

K. Familiarity with Major Terminal Areas

L. Terminal and En Route Communications

M. Flight Progress and Fuel Monitoring Procedures

N. Inflight Weather Watch

O. Diversion Procedures

SPECIAL CHECKING MODULE

A. SFAR 50-2 ROUTE CHECK – GENERAL

In accordance with LAS FSDO 1380.2A 1.7-D, route checks must be conducted by a qualified FAA Safety Inspector or designated Check Airman approved by the LAS FSDO to conduct such checks within the GCNP SFRA airspace.

1. During each route check the airman must be observed performing in the capacity of PIC while flying the route as sole manipulator of the aircraft flight controls.
2. With the exception of the line check requirements of 14 CFR Section 135.299, a pilot must be fully qualified as PIC for the operator under 14 CFR Part 135 before receiving a GCNP SFRA route check.

B. SFAR 50-2 ROUTE CHECK – INITIAL

An initial route check must consist of a flight along the entire published route unless the route portion tested is clearly annotated on the check ride form. In that case, the pilot is limited to flight assignments which cover the portion of the route flown during his/her route check.

C. SFAR 50-2 ROUTE CHECK – RECURRENT

A recurrent route check is required every 12 calendar months. Flying only a portion of the published route is acceptable for recurrent route checks as long as it represents the entire route normally used by the operator. During the flight, the airman must demonstrate knowledge of minimum altitudes, reporting points, site specific area location and boundaries, stand-off distances, and emergency and alternate landing spots. The grace period provisions of 14 CFR Section 135.301(a) are applicable to recurrent route checks.

D. SFAR 50-2 ROUTE CHECK – REQUALIFICATION

If a pilot’s currency in the GCNP SFRA lapses, the requalification requirements will depend on how long the pilot has been non-current.

1. Currency lapse of less than 12 calendar months:
   Pilot must receive at least 2.5 hours of GCNP SFRA ground training and satisfactorily complete a recurrent route check before resuming PIC duties within the GCNP SFRA

2. Currency lapse of 12 calendar months or more:
   Pilot must complete all requirements for initial qualification in the GCNP SFRA.

   A requalification route check must consist of a flight along the entire published route unless the route portion tested is clearly annotated on the check ride form. In that case, the pilot is limited to flight assignments which cover the portion of the route flown during his/her route check.

CURRICULUM SEGMENT: **CHECK AIRMAN GROUND TRAINING**

OBJECTIVE: To prepare the Check Airman candidate to be able to effectively perform the tasks necessary in checking pilots who are receiving various checks set forth within this program.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS:	Classroom Equip.
COURSEWARE:	Reference Docs.
TESTING/CHECKING:	Written or Oral Exam

A. Overview of Check Airman Duties and Responsibilities

B. Possible Emergencies which may arise during Flight Checks

C. Monitor a Check Ride

D. Conduct a mock Check Ride

CURRICULUM SEGMENT: **INSTRUCTOR GROUND TRAINING**

OBJECTIVE: To prepare an instructor candidate to be able to effectively perform the tasks necessary in teaching pilots who are receiving various training set forth within this program.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS:	Classroom Equip.
COURSEWARE:	Reference Docs.
TESTING/CHECKING:	Written or Oral Exam

TRAINING FOR THOSE PERSONS NOT HOLDING VALID GROUND OR FLIGHT INSTRUCTOR CERTIFICATES

A. THE LEARNING PROCESS

1. Definition of learning
2. Characteristics of learning
3. Laws of learning
4. How people learn
5. Levels of learning
6. Learning skills
7. Forgetting and retention
8. Transfer of learning
9. Habit formation

B. HUMAN BEHAVIOR

1. Control of human behavior
2. Human needs
3. Defense mechanisms
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CURRICULUM SEGMENT: **CHECK AIRMAN FLIGHT TRAINING**

OBJECTIVE: To familiarize and prepare the current and qualified PIC or Instructor with the necessary skills and proficiency to conduct flight qualification evaluations of pilots involved in the various training, comprised within this program.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS:	Classroom equip.
COURSEWARE:	Reference docs.
TESTING/CHECKING:	Written or Oral exam

GENERAL

Check Airmen will receive flight training in accordance with CFR 135.339(c). The training will consist of the following:

A. Practice conducting Flight Checks from both left and right pilot seats sufficient to ensure competence in handling normal, abnormal, and emergency maneuvers to be anticipated in the course of a Flight Check.

B. Safety measures to be taken from either seat in the event of an emergency likely to develop during a Flight Check.

A. The potential results of improper or untimely safety measures during a Flight Check.

CURRICULUM SEGMENT: **INSTRUCTOR FLIGHT TRAINING**

OBJECTIVE: To familiarize and prepare the current and qualified PIC with the necessary skills and proficiency to conduct flight instruction of pilots involved in the various training, comprised within this program.

INSTRUCTIONAL DELIVERY METHODS:	Lecture
TRAINING AIDS:	Classroom equip.
COURSEWARE:	Reference docs.
TESTING/CHECKING:	Written or Oral exam

GENERAL

Flight instructors will receive flight training in accordance with CFR 135.340(c). The training will consist of the following:

A. Practice conducting flight instruction from both left and right pilot seats sufficient to ensure competence in handling normal, abnormal, and emergency maneuvers to be anticipated in the course of a training session.

B. Safety measures to be taken from either seat in the event of an emergency likely to develop during training.

C. The potential results of improper or untimely safety measures during training.

FLIGHT TRAINING MANEUVERS

INDEX

The following pages comprise the flight training maneuvers section of the training program. The maneuvers outlined are for VFR operations

Part A – HELICOPTERS - Continued

Twin Engine (MD900) Specific Maneuvers

INTRODUCTION

The flight training maneuvers described herein will serve as the basis for standardized instruction and accomplishment of flight training. They will also serve as guidelines to achieve the highest level of proficiency and provide safe operations of the aircraft. At no time during flight training will the limitations of the aircraft be intentionally exceeded, nor maneuvers conducted that would jeopardize safety. ONLY APPROVED MANEUVERS WILL BE EXECUTED. Prior approval by the Director of Operations or the Chief Pilot will be required for deviations from or changes in the maneuvers contained herein.

FORMAT

The following flight training maneuvers are designed for flight training, pilot preparation and pilot evaluation. These maneuvers are presented in accordance with the following outline:

1. ***SUBJECT***. A specific name for the individual maneuver or maneuvers, consistent with a title identified in the applicable portion of the Federal Aviation Regulations and/or the applicable Practical Test Standards. Additional flight training maneuvers/procedures are included and identified according to standard titles.

2. ***OBJECTIVE***. The maneuver objective briefly states the purpose for which the maneuver is required.

3. ***REFERENCES***. The reference for the maneuver states the page and document in which the maneuver appears.

4. ***DESCRIPTION***. For each flight maneuver utilized, there is a prescribed word picture of a chronological order of events followed in the execution of the particular maneuver. The description may include CAUTIONS and brief NOTES to highlight aspects of the maneuver and/or procedure.

   In cases where more than one procedure is described, the alternate procedure(s) is included within the description portion of the maneuver by as a separate procedure. The alternate procedures will be identified as an ALTERNATE PROCEDURE.

5. ***ACCEPTABLE PERFORMANCE GUIDELINES***. The acceptable performance guidelines set forth in these maneuvers are utilized to evaluate the performance of a pilot and to determine if that pilot has attained the desired proficiency level. Consideration shall also be given to overall judgment, knowledge, precision and smoothness.

6. ***PROFILE***. For a flight training maneuver for which a pictorial depiction is appropriate, one is provided.

Subject: **Preflight Inspection**

References: **Approved Rotorcraft Flight Manual**

Preflight Inspections, a vital portion of preflight preparations, should be accomplished in accordance with the recommendation of the manufacturer. If there are no recommendations, the following are preflight inspections items:

1. Remove control tie downs and ground moorings.

2. Inspect rotor blades for damage.

3. Inspect security of blade attachment bolts.

4. Inspect rotor hub assembly, gear boxes and attachments for general condition and security.

5. Inspect swash plate and attachments for general condition and security.

6. Check fuel, oil, and hydraulic fluid levels.

7. Inspect transmission and engine compartment for security of bolts, mountings and possible oil leaks.

8. Check engine controls for freedom of movement, full travel and security.

9. Drain fuel sumps and strainers.

10. Inspect oil and fuel lines for general condition, security and evidence of leaks.

11. Inspect filters and cooling radiators for cleanliness.

12. Inspect control rods and cables for freedom of movement, security and full travel.

13. Check flight controls for correct response, freedom of movement, travel and security.

14. Inspect fuselage and attachments for general condition, damage and security.

15. Inspect skid gear and attachments for excessive wear, damage and security.

16. Inspect cowlings for condition and security.

17. Inspect drive belts for wear, tension and security.

Subject: **Taxiing - Ground**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Practice of this maneuver will enable the trainee to move the helicopter, under power, forward and in turns at variable ground speeds, while the landing gear is in contact with the ground, without exceeding helicopter or engine limitations.

2. **Description:** This maneuver is used to position the helicopter in relatively close quarters on the ground and is preparatory training for High Altitude Takeoffs. It should be accomplished on a firm level surface. Before initiating ground taxiing, the rpm is increased to normal operating rpm. Incline the cyclic slightly forward of neutral and apply UP collective smoothly until forward motion is started. Control the groundspeed at 3-5 mph with judicial use of collective; e.g.; UP collective to increase groundspeed and vice versa. Directional control is maintained with anti-torque pedals.

   Note: Rpm is governed on turbine powered helicopters.

   Turns while ground taxiing, are accomplished primarily with anti-torque pedal being applied in the desired direction of the turn. Some lateral cyclic "into the turn" will offset the effects of centrifugal force.

   Crosswind taxiing requires lateral cyclic into the wind prevent drifting while maintaining direction with pedals and ground speed with collective.

3. **Acceptable Performance Guidelines:** Performance will be evaluated on the basis of aircraft and rpm control. Ground speed should be stabilized at 3 to 5 mph in straight and turning movements. The rpm should never exceed maximum allowable and should be kept in the high green throughout the maneuver. There should never be any doubt as to the trainee having full control of the aircraft.

Subject: **Taxiing - Hover**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Practice of this maneuver will enable the trainee to hold the helicopter in a hover over a selected point on the ground or to move the helicopter from one point to another while maintaining altitude, desired heading, and ground speed control.

2. **Description:** The Hover is the foundation of many other maneuvers such as vertical landing, normal takeoff, terminating approach and others. In no wind conditions the rotor disc will be parallel to the ground in a hover. Any variation from this relationship will result in helicopter movement over the ground. Rotor disc attitude is difficult to ascertain with accuracy so you must rely upon aircraft attitude for reference. If the helicopter starts to move from a hover, the aircraft will appear to be leaning in that direction. Leveling the aircraft will NOT IMMEDIATELY stop the errors, however, provided the aircraft was perfectly leveled, the helicopter will coast to a stop. Preventing a change of attitude from hovering attitude will result in a stationary hover. Because of inherent delays in rotor system reaction, small errors in attitude can be corrected before the reaction to the error can begin. Over-controlling is generally the result of failing to neutralize the cyclic after a correction has been made. When a wind is present, the rotor disc must be tilted into the wind just enough to counteract the effects of the wind. Slight changes in the hovering attitude may be noted with each change of operating conditions (wind, CG, etc.).

   Altitude control in a Hover is the function of the collective. The collective is used to maintain altitude as well as to climb and descend in hovering flight.

Subject: **Taxiing – Hover - continued**

References: **FAA-H-8083-21 or Superseded**

Directional control in hovering flight is accomplished by neutralizing the effects of torque with the anti-torque pedals in the desired direction of the turn. Since application of the power pedal increases the pitch of the tail rotor blades, more power is required. When the rpm is governed (as on the turbine-powered helicopters) slight variations of torque will be noted. These variations are generally very slight and would only be noticeable when power requirements of heavy loads and high density altitude or both are close to maximum allowable.

To hover taxi in any direction - forward, sideward or rearward-the cyclic is inclined in the desired direction of flight. The ground speed should be no more than 10 mph for forward hover taxiing and no more than 5 mph in all other directions. Ground speed is controlled by the cyclic. Making cyclic control changes small and smoothly will minimize the effects of pendular action. Maintain heading with the pedals, altitude with the collective.

Crosswind taxiing is accomplished much in the same manner as no wind hover taxiing except the cyclic is also used to control ground TRACK as well as ground SPEED. The cyclic must be inclined into the wind enough to cancel out any tendency for the aircraft to drift.

In all forward or rearward hover taxiing, the landing skids should be aligned with the flight path. This will provide for straight touchdowns in the event of power failure while taxiing.

3. **Acceptable Performance Guideline:** The trainee will be able to maintain the RPM within normal limits, maintains specified ground track within 2 feet on straight legs, maintains constant rate of turn at pivot points, maintains position within 2 feet of each pivot point during turns, make 90 / 180 / 360 degree pivoting turns, stopping within 10 degrees of specified headings, maintains recommended hovering altitude, ±1/2 that altitude within 10 feet of the surface.

Subject: **Vertical Takeoff to a Hover**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Practice of this maneuver will enable the trainee to transition the helicopter from the ground to a controlled hover.

2. **Description:** The vertical takeoff to a hover is normally the beginning of each flight. The maneuver is one in which the helicopter is lifted vertically to a normal hovering altitude of approximately 3 feet (skid height). This should be accomplished with a minimum fore or lateral, and no aft, movement over the ground.

   If possible, the helicopter should be headed into the wind; note, however, it can be accomplished safely by proficient pilots from any heading with winds up to 30Kts.

   To begin the maneuver, increase the rpm to full throttle with turbine powered helicopters. The collective should be completely DOWN and the cyclic control entered. A small amount of appropriate pedal may be applied in anticipation of additional torque that will be created when power is increased. Note the aircraft attitude before beginning the liftoff.

   Raise the collective smoothly and slowly until the helicopter tries to move (helicopter light on skids). Neutralize any attempt of the helicopter to move with the cyclic control and pedals before continuing with UP collective. After neutralizing any movement or attitude change, continue with UP collective. The Helicopter should rise vertically with little or no other movement. Maintain direction with pedals, and position over the ground with the cyclic control. Altitude should be controlled with the collective.

   Note: For each smooth and accurate control during liftoff, use pressures rather than abrupt control movements, and scan 50 to 75 feet from the helicopter rather than closer in.

3. **Acceptable Performance Guidelines:** The trainee shall demonstrate his ability to ascend to and maintain recommended hovering altitude in headwind, crosswind, and tailwind, maintains RPM within normal limits, maintains recommended hovering altitude, ±1/2 that altitude within 10 feet of the surface, avoids conditions that might lead to loss of tail rotor / Antitorque effectiveness, keeps forward and sideward movement within 2 feet of a designated point, with no aft movement, and maintains specific heading ±10 degrees.

Subject: **Vertical Landing from a Hover**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** With practice, the trainee will be able to accomplish a vertical descent from a hover to the ground with little or no movement over the ground.

2. **Description:** This maneuver is used to terminate nearly every flight.

   From a stabilized hover of approximately 3 feet skid height, lower the collective slightly to establish a slow rate of sink. Maintain direction with the anti-torque pedals and position over the ground with cyclic. As the helicopter gets close to the ground, ground effect may decrease or even stop the rate of sink. As this occurs, proper application of down collective will continue a controlled descent.

   At ground contact, continue to lower the collective smoothly until it is fully down. Maintain operating rpm until you are sure the helicopter will not move accidentally because of terrain. When aircraft is securely on the ground, reduce rpm as desired.

   Note: If you encounter difficulty, start over from a stabilized hover.

   Caution: Do not allow the helicopter to land with rearward or lateral movement.

3. **Acceptable Performance Guidelines:** The trainee shall demonstrate his ability to descend from recommended hovering altitude in headwind, crosswind, and tailwind, maintains RPM within normal limits, avoids conditions that might lead to loss of tail rotor / Antitorque effectiveness, keeps forward and sideward movement within 2 feet of a designated point, with no aft movement, descends vertically to within 2 feet of the designated touchdown point, maintains specific heading ±10 degrees.

Subject: **Normal Departure from Hover**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** When trainee is proficient in this maneuver, he/she will be able to transition the helicopter from hovering to climbing flight in a safe and efficient manner.

2. **Description:** While at a 3-foot hover, execute a 90 degree turn to clear the area for takeoff.

   Position the helicopter to the desired takeoff heading and check power required to maintain a 3-foot hover. Apply a small amount of forward cyclic to establish movement over the ground, while maintaining an altitude of 3 feet. As the helicopter starts to settle, because of a change in lift vector, apply sufficient collective pitch to stop settling. The helicopter begins its climb when effective translational lift if obtained, which is evident when the nose of the helicopter tends to pitch up. As the helicopter starts to climb, adjust collective pitch to obtain normal climb power and establish an attitude that will allow a smooth acceleration to climb airspeed. The maneuver is complete when a climb has been established at climb airspeed and climb power. (If hovering in effective translational lift, begin the climb (from a 3-foot stationary hover).

   Note: Torque reaction is a function of power and airspeed. As airspeed increases for a given power setting, less power pedal is required. Maintain airspeed/attitude (climb established) with cyclic. Maintain takeoff heading with anti-torque pedals. At approximately 100' AGL, place the aircraft in trim.

3. Acceptable Performance Guidelines: The trainee shall establish a stationary position on the surface or stabilized hover, prior to take off, maintains RPM within normal limits, accelerates to manufacture’s recommended airspeed ±5 kts, maintain proper ground track, remains aware of the possibility of wind shear and / or wake turbulence, and completes the prescribed checklist.

Subject: **Normal Approach to a Hover**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Proficiency in this maneuver will enable the trainee to transition a helicopter from cruising flight to approximately a 3 foot hover.

2. **Description:** A normal approach to a hover is the accepted way to transition from cruising flight to a hover.

   The Approach is a descent from an altitude of 300-500 feet AGL on a constant angle of descent and at a constant airspeed of no less than best rate of climb airspeed until the helicopter is approximately 75 feet above the ground. From that point a deceleration to zero ground speed is accomplished along the same angle of descent timed so as to reach zero ground speed as the helicopter reaches an altitude of approximately 3 feet AGL at the selected point of landing.

   During the approach the angle of descent is controlled with the collective pitch control. The ground track and heading is controlled with lateral cyclic. The pedals are used to counteract skidding caused by changes in torque.

   The normal approach has an approach angle of approximately 12 degrees. It is begun, in training, from straight and level, aligned into the wind and at the desired approach airspeed.

   The helicopter is flown straight and level until the sight picture for the 12 degree angle is reached. At this time lower the collective a small amount to initiate the descent. Adjust the cyclic as necessary to maintain the airspeed. Maintain the sight picture with the collective- for instance, if the intended landing spot appears to move up on the bubble, you are going low so raise the collective to return to the proper angle and vice versa. If the airspeed is allowed to vary, errors in sight picture will also be evident e.g. If the airspeed is excessive it will appear as if you're going below the desired angle of approach and vice versa. A timely correction with cyclic control will prevent large errors from occurring if airspeed is incorrect.

Subject: **Normal Approach to a Hover - continued**

References: **FAA-H-8083-21 or Superseded**

The final phase of the approach - deceleration is begun when the helicopter is approximately 75 feet AGL. At this point airspeed is no longer a consideration and all attention should be concentrated on the rate of closure of the helicopter to the intended point of landing. Move the cyclic gently aft to initiate the deceleration. A small amount of additional down collective will be necessary, momentarily to prevent ballooning or over arcing the approach. If the rate of closure with the spot is CONSTANT the helicopter will come to a stop at that point. If it is not, adjust cyclic as necessary. As the airspeed decreases the total lift decreases and power will have to be added up (collective) to maintain the angle of approach.

Note: In an AS-350 helicopter, adding power (collective) requires more right pedal to offset the effects of the additional torque.

3. **Acceptable Performance Guidelines:** The trainee shall consider performance data information, consider the wind conditions, landing surface, and obstacle, select a suitable termination point, establishes and maintains the recommended approach angle, and rate of closure, remains aware of the possibility of wind shear and/or wake turbulence, avoid situations that may result in settling-with-power, maintains proper ground track, arrives at the termination point, on the surface or at a stabilized hover, ±2 feet, and completes the prescribed checklist.

Subject: **Crosswind Operations**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Proficiency in these maneuvers will enable the trainee to take off and approach to a landing with a helicopter when operations into the wind are not feasible.

2. **Description:** Crosswind departure and approach in helicopters are similar to the operation in fixed wing.

   The primary difference in all crosswind vertical takeoffs and landings is that cyclic must be inclined into the wind in sufficient amounts to offset drifting tendencies. Sufficient downwind pedal to offset the tendency to turn must also be applied. During these operations, the upwind skid will leave the ground last on a vertical takeoff and it will touch the ground first on vertical landing.

   Normal takeoffs in crosswind utilize much the same technique as used by fixed wing aircraft; e.g., during the initial acceleration up to 50 feet AGL, the slip method is used (cyclic inclined into the wind to offset drift and opposite pedal applied as necessary to maintain heading). Above 50 feet, neutralize the controls and establish crab to maintain ground track.

3. **Acceptable Performance Guidelines**: In addition to guidelines established for no wind approaches, all crosswind work will be evaluated on the basis of maintaining proper ground track.

Subject: **High Altitude Takeoff**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** To enable the helicopter to become airborne when a hover cannot be sustained due to a heavy load or high density altitude. This maneuver provides practice in simulating the above conditions.

2. **Description:** A procedure used to enable a helicopter to become airborne by using ground effect and transitional lift when the helicopter cannot sustain a hover because of a heavy load or high density altitude.

   A running takeoff should be attempted only if the ground area is of sufficient length and smoothness, no barriers exist which would interfere with a shallow climb-out, and the helicopter can be hovered momentarily.

   To establish the amount of power to be used, the aircraft is brought to a hover the primary power instrument (temperature, torque, or NI) is checked and a reduction of approximately 5% torque is used to compute the simulated maximum power setting used during this maneuver.

   With the aircraft resting on the ground headed into the wind, the collective is raised slowly as the cyclic is moved forward of neutral and power is brought to the predetermined allowable setting,. The aircraft will begin to taxi forward and as translational speed is reached, a slight back pressure on the cyclic will lift the aircraft off the ground. An altitude not exceeding 10 feet must be maintained until climb speed is obtained. At this point the cyclic is adjusted to hold climb airspeed and climb attitude to an altitude of approximately 50 feet. When reaching this altitude, the maneuver is discontinued and normal climb-out is established.

3. **Acceptable Performance Guidelines:** The trainee shall consider situations where this maneuver is recommended and factors related to takeoff and climb performance information, maintains RPM within limits, utilizes proper preparatory technique to initiating takeoff, initiates forward accelerating movement on the surface, transitions to a normal airspeed, ±5 Kts, and power setting, remains aware of the possibility of wind shear and/or wake turbulence, maintains proper ground track, and completes the prescribed checklist.

Subject: **Autorotations**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Practice of this maneuver will result in the trainee becoming proficient enough to make satisfactory touchdown autorotation in a desired area and, if necessary, abort a practice autorotation with a power recovery without exceeding aircraft/engine limitations.

2. **Description:** An autorotation is the technique applied in the event of an engine failure, some tail rotor failures and, as desired, rapid descents.

   In practice, the maneuver will be entered in the same manner as if the engine had actually failed. During the autorotative glide, the collective will be fully down except when it is necessary to prevent rotor rpm over-speeds with some up collective and terminate to a 3-5 foot hover after the flare. All power recoveries are to be made with skids level and aligned with flight path. After instruction and practice to develop entry, glide, flare and recovery techniques has been accomplished to the satisfaction of the instructor, all autorotations will be practiced with accuracy in mind. At no time, however, should accuracy take precedence over the primary objective of the maneuver.

   Practice autorotations can be terminated at any time prior to touchdown by executing either a go-around or a power recovery. A power recovery differs from a go-around in that it is terminated in a 3-5 foot hover.

   a. **Entry**

   To enter an autorotation, the instructor or check airman shall decrease the throttle to the “ground idle” setting (except the AS350B2 which will remain in the governed range), the airman shall lower the collective sufficiently to maintain rotor speed. The resultant loss of power will cause the nose of the helicopter to skid right in French-built helicopters so left pedal must be applied to keep the helicopter in trim. The cyclic should be used as required to attain the proper attitude for desired gliding airspeed

Subject: **Autorotations - continued**

References: **FAA-H-8083-21 or Superseded**

NOTE: In a turbine helicopter with a medium to low inertia rotor system, such as the AS-350 helicopter, automatically or routinely lowering the collective can be dangerous. Depending on the aircrafts airspeed at the time this maneuver is initiated, it may actually be necessary to delay the lowering of the collective, or if operating at a high airspeed, actually raise the collective until the aircraft sufficiently slows, to prevent rotor over-speed. Airman must take a brief moment to assess the situation when entering an autorotation, to prevent, themselves from compounding an emergency situation.

b. **Glide**

Gliding air range is a function of airspeed. For each helicopter there is an optimum airspeed to set the longest distance for each foot of altitude lost. This airspeed should be used to reach the field; however, if there is no question of being able to reach a desired spot in the field, airspeed can be adjusted accordingly. In our training, we use the autorotative final approach airspeed recommended by the manufacturer, modifying it as necessary to achieve the desired results (range).

Autorotative gliding turns are accomplished in the same manner as powered flight turns, i.e., they are primarily accomplished using cyclic only. Gliding turns will place more G Loads on the aircraft which may result in the rpm over-speeding. This over-speeding tendency must be acknowledged and over-speeds prevented by using up collective as necessary. When the turn is completed, the collective must again be lowered to prevent under-speeding of the rotor. The decision to complete the maneuver to either a touchdown or power recovery should be made during the autorotative glide. If the decision is to touchdown, the throttle should be at flight idle in turbine powered helicopters.

Subject: **Autorotations - continued**

References: **FAA-H-8083-21 or Superseded**

c. **Flare**

Approach speeds of 50-60 mph and higher are excessive for touchdown, so this speed must be diminished to an acceptable value prior to touchdown. The degree of flare to be used is at the option of the pilot based upon the conditions he is faced with on any given autorotative approach. Flares are commonly classified as shallow, moderate or full.

The flare is used for two other important results besides reducing groundspeed. They are: Reduction of sink rate, and an increase of rotor rpm (increases inertia of rotor system).

In most light helicopters with average inertia in the rotor system, the flare is started at approximately 35-50 feet AGL. The flare is "built" until the desired results are realized and / or until the tail rotor is no less than 5 feet above the ground.

In no wind conditions a full flare should not normally be used unless it is necessary to avoid obstacles ahead of the aircraft. A moderate flare will result in the aircraft still moving at some groundspeed at touchdown (no wind).

D. **Termination Procedure-Power Recovery**

Besides being a useful tool of the pilot/instructor to abort a practice autorotative landing close to the ground, the power recovery termination is used by all instructor pilots to terminate practice autorotations at a point prior to actual touchdown.

The power recovery is generally initiated after the flare is fully developed and it is completed while in the helicopter leveling process.

Engine power, twist grip will be reset to “Flight” position by the **Instructor or Check Airman** prior to power recovery.

Subject: **Autorotations - continued**

References: **FAA-H-8083-21 or Superseded**

3. Acceptable Performance Guidelines: The trainee should select a suitable landing area, initiates the maneuver at the proper point, establishes proper aircraft trim and autorotation airspeed, ±5 Kts, maintains rotor RPM within normal limits, compensates for wind speed and direction as necessary to avoid undershooting or overshooting the selected landing area, terminates approach with a power recovery at a safe altitude, and comes to a hover within 50 feet of a designated point.

Subject: **Loss of Lift at Altitude (Settling with Power)**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** The demonstration of this maneuver will graphically show the dangerous results of operating at low airspeeds, moderate to high power settings and high rates of sink. It will also demonstrate the proper prevention and recovery from this phenomenon.

2. **Description:** The Phenomena - Loss of Lift at Altitude-also known as settling with power is most dangerous when it happens at relatively low altitudes. It should be demonstrated at an altitude of at least 1000 feet AGL or, if applicable, the manufactures recommended altitude, whichever is higher upon completion of the maneuver.

   To enter the maneuver, adjust the power to approximately 20% torque while maintaining altitude with aft cyclic, until the airspeed approaches 20 mph. Allow the sink rate to increase to 300 fpm or more as the attitude is adjusted, to obtain an airspeed of less than 10 mph. The aircraft will begin to shudder. Application of additional up collective will increase the vibration.

   Since a well developed loss of lift of altitude can result in rates of sink in excess of 2000 fpm, prompt recovery should be initiated at the first signs.

   There are two recovery techniques commonly used-the first is preferred because it results in the minimum loss of altitude during recovery. First apply forward cyclic to increase airspeed with simultaneous moderate reduction of power (collective). The recovery will be completed when the aircraft reaches effective translational lift airspeed (approximately 17 mph). Normal resumption of flight is recommended.

   The second recovery techniques is the simplest, however, it is also the most costly in terms of altitude loss during recovery. The technique simply is to enter autorotation. Settling with power cannot occur or continue if the helicopter is in autorotation. As previously mentioned, the high rate of sink incurred by the autorotation at slow airspeeds coupled with high rate of sink developed in the maneuver itself will cause a loss of altitude in excess of 1000 feet or more during the recovery.

3. **Acceptable Performance Guidelines:** The trainee shall select an altitude that will allow recovery to be completed no less than 1000 feet AGL or, if applicable, the manufactures recommended altitude, whichever is higher, promptly recognizes and announces the onset of settling with power, and utilizes the proper recovery procedure.

Subject: **Hovering - Upwind, Downwind, Crosswind and Pattern Flying**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** These maneuvers provide practice and proficiency in the use of all controls in conditions other than the usual hovering with the aircraft headed into the wind.

2. **Description:** In hovering flight, the cyclic controls the attitude of the aircraft, its direction of flight, and groundspeed. The collective controls the altitude.

   Bringing The aircraft to a hover and moving it forward or into the wind are maneuvers that have been described in the section entitled "Taxing Hover".

   Before Attempting sideward or rearward flight, care must be taken to clear the area of intended flight. This may be done by making 90 degree clearing turns.

   To move the aircraft sideward or rearward, the cyclic is moved by a very slight pressure in the direction of desired flight. Small cyclic corrections must then be made to hold a constant groundspeed. For sideward flight a reference point 90 degrees to the right or left in the direction of flight, or a reference line on the ground may be used. For rearward flight a reference point or line directly in front of the aircraft may be used.

   The pattern to be flown may be any one of a variety of squares, rectangles, circles, etc., which may be performed with a constant or changing heading as specified by the instructor.

   During crosswind or downwind flying, the direction of flight, heading and groundspeed are maintained by proper control pressures; such as, cyclic and adjustment of collective control.

3. **Acceptable Performance Guidelines:** The trainee will be able to maintain the RPM within normal limits, maintains specified ground track within 2 feet on straight legs, maintains constant rate of turn at pivot points, maintains position within 2 feet of each pivot point during turns, make 90 / 180 / 360 degree pivoting turns, stopping within 10 degrees of specified headings, maintains recommended hovering altitude, ±1/2 that altitude within 10 feet of the surface.

Subject: **Hovering Turns**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** In a hover of two to five feet, turn the helicopter 180 degrees or 360 degrees while maintaining a position over the ground.

2. **Description:** Establish a hover of 2-5 feet altitude. The maneuver is initiated by a smooth application of anti-torque pedal in the desired direction of turn. A constant rate of turn is maintained by pedal pressure as necessary. Altitude is maintained with collective pitch control. The desired position over the ground is maintained with the cyclic control.

3. **Acceptable Performance Guidelines:** The trainee will be able to maintain the RPM within normal limits, maintains specified ground track within 2 feet on straight legs, maintains constant rate of turn at pivot points, maintains position within 2 feet of each pivot point during turns, make 90 / 180 / 360 degree pivoting turns, stopping within 10 degrees of specified headings, maintains recommended hovering altitude, ±1/2 that altitude within 10 feet of the surface.

Subject: **Rapid Deceleration (Quick Stop)**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** This maneuver develops precise coordination in the use of all cockpit controls while slowing the aircraft to a desired groundspeed, hover or landing.

2. **Description:** The maneuver is started with the aircraft headed into the wind at an altitude and an airspeed which will preclude: (1) Penetration of the shaded areas of the HEIGHT-VELOCITY diagram throughout the maneuver, and (2) Endangering the tail rotor during the flare.

   With the aircraft in forward flight, aft pressure is applied to the cyclic to start the maneuver. Immediately, and simultaneously upon recognizing the resultant tendency to climb, the collective is lowered to prevent ballooning, and pedal is applied to maintain constant heading. As the airspeed decreases additional aft cyclic must be applied as necessary to prevent settling in the tail low attitude. As the desired groundspeed is approached, apply a small amount of forward cyclic. As the aircraft starts to settle, simultaneously apply UP collective and pedal to maintain heading and allow leveling, and gentle settling of the aircraft to a hover or to a vertical landing if desired.

3. **Acceptable Performance Guidelines:** The trainee must maintain RPM within normal limits, properly coordinate all controls throughout the execution of the maneuver, maintain an altitude that will permit safe clearance between the tail boom and the surface, decelerates and terminates in a stationary hover at the recommended hovering altitude, maintains heading throughout the maneuver, ±5 degrees.

Confined Area Operations

Subject: **Steep Approach, Max performance Takeoff**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** The above maneuvers are demonstrated by the instructor to acquaint the student with aircraft performance in critical areas where standard operation would not suffice.

2. **Description:** A confined area is an area where the flight of the helicopter is limited in some direction by terrain or the presence of obstructions, natural or manmade.

a. Steep Approach

In the steep approach into the wind, a high angle of descent is used. The degree of approach angle is decided by the height of obstacles to be flown over, by the airspeed and rate of descent that can be maintained, and by the amount of ground space into which the aircraft is to be maneuvered. The steep approach angle, airspeed and rate of descent are controlled in the same manner as the normal approach; that is, by close attention to adjustments of collective and cyclic controls. The amount of airspeed will usually be less than normal and will be dictated by the angle of descent and the amount of wind.

If the ground space is so short and the obstacles so high that the angle of approach necessary would result in airspeed less than 10 mph, extreme care must be exercised to avoid settling with power.

As the aircraft approaches the ground in a steep approach, the airspeed will be so slow, so the pilot must add collective a little earlier than in a normal approach.

b. Max Performance Takeoff

This maneuver is used when departing an area that is confined by natural or man -made obstructions. The takeoff should be made as close to a normal takeoff as possible considering the situation at hand. The Flight path during the takeoff should follow an imaginary line from the front of the helicopter, when in position for takeoff, to the top of the obstacle, allowing sufficient space for tip path plane clearance. Maximum use of ground space available must be made by placing the aircraft as far downwind as possible.

Confined Area Operations

Subject: **Steep Approach, Max performance Takeoff - continued**

References: **FAA-H-8083-21 or Superseded**

The collective is raised to make the aircraft "light on the landing gear." At this time the cyclic is moved slightly forward of neutral and collective is raised to a point that a gradual departure from the ground, along the desired flight path is obtained. If, during the takeoff, it becomes apparent that sufficient power is not available to clear the obstacle, the takeoff should be aborted.

In helicopters (turbine engine) with limited power, turbine temperature, Ng, T4, torque, and N2 speed must be monitored to eliminate exceeding the allowable limits. If during the takeoff, it becomes apparent that the obstacle will not be cleared without exceeding these limits, the takeoff should be aborted.

During the takeoff, the cyclic is adjusted so as to allow the aircraft to clear the obstacles, and anti-torque pedal is applied to maintain heading.

The entire maneuver is conducted into the wind, or as nearly so as possible to take advantage of the translational lift available.

Note: Prior to takeoff, it is important that the pilot note his takeoff position by a reference on the ground. This would be a guide, allowing him to land the aircraft at the takeoff point. This maneuver will initially be practiced in an open area until the trainee displays a high degree of proficiency.

3. **Acceptable Performance Guidelines:**

a. **Steep Approach:** The trainee shall consider situations where this maneuver is recommended and factors related to a steep approach, considers the wind conditions, landing surface, and obstacles, selects a suitable termination point, establishes and maintains the recommended approach angle (15 degrees maximum) and rate of closure, remains aware of the possibility of wind shear and/or wake turbulence, avoid situations that may result in settling-with-power, maintains proper ground track, arrives at the termination point, on the surface or at a stabilized hover, ±2 feet, and completes the prescribed checklist.

Confined Area Operations

Subject: **Steep Approach, Max performance Takeoff - continued**

References: **FAA-H-8083-21 or Superseded**

b. **Max Performance Takeoff:** The trainee shall consider situations where this maneuver is recommended and factors related to takeoff and climb performance, maintains RPM within normal limits, utilizes proper control technique to initiate takeoff and forward climb airspeed attitude, utilizes the maximum available takeoff power, after clearing all obstacles, transitions to normal climb attitude, airspeed, ±5 Kts, and power setting, remains aware of the possibility of wind shear and/or wake turbulence, maintains proper ground track, and completes the prescribed checklist.

Subject: **Pinnacle/Rooftop Operations**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** These operations provide training and practice in approaching, landing, and departing from elevated areas (pinnacle/rooftops).

2. **Description**: A pinnacle is an area from which the ground drops away steeply on all sides. A rooftop or elevated platform is a landing area on top of a structure which can vary from a height of a few feet above the surrounding surface to several hundred feet above the surrounding surface.

   a. Pinnacle/Rooftop Approach

   Having selected an up-wind approach path to the landing area, initiate the approach from an altitude of 300-500 feet above the landing area on an angle of approximately 12 degrees (normal approach angle) at the best rate of climb speed or higher. Maintain airspeed until the point on the approach is reached where, through evaluation of apparent groundspeed, it is determined that forward speed must be progressively decreased in order to arrive at hovering altitude of 2 to 5 feet at the intended landing spot with zero ground speed. The approach should be made to the forward edge of the landing area, keeping in mind main rotor and tail rotor clearance if obstacles exist.

   During strong and gusty wind conditions, a steeper than normal approach should be used.

   b. Departure from Pinnacle/Rooftop

   An "airspeed over altitude" takeoff is made because the takeoff area is higher than the surrounding terrain. Gaining altitude on takeoff is of secondary importance to gaining a safe airspeed. From a 3-foot hover, the takeoff is made the same as a normal takeoff; except, a climb is NOT initiated until approaching the desired climb speed.

3. **Acceptable Performance Guidelines:** The trainee shall accomplish a proper high and low reconnaissance, selects a suitable approach path, termination point, and departure path, tracks selected approach path at an acceptable approach angle and rate of closure to the termination point, maintains RPM within normal limits, terminates at a hover or on the surface, as conditions allow, accomplishes a proper ground reconnaissance, selects a suitable takeoff point, considers factors affecting takeoff and climb performance under various conditions.

Subject: **Engine Failure in Hover**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Proficiency in this maneuver will provide the pilot with the ability to land the aircraft safely in the event of engine failure near the ground.

2. **Description:** The maneuver is initiated with the aircraft in a steady hover at approximately 2 to 3 feet above the ground headed into the wind. When in this position, the throttle is brought to flight idle position by the instructor or check airman. Pedal is applied to reduce the anti-torque effect of the tail rotor. Only enough pedal to maintain heading is used. The collective is not moved until the aircraft begins to settle toward the ground at which time a positive application of sufficient collective to cushion the landing is made. A level attitude is maintained during the entire maneuver with cyclic control. After the aircraft is on the ground, the collective is lowered to full-down position.

3. **Acceptable Performance Guidelines:** The trainee shall determine that the terrain below the aircraft is suitable for a safe touchdown, performs autorotation from a stationary or forward hover into the wind at recommended altitude, and RPM, while maintaining established heading, ±5 degrees, touches down with minimum sideward movement, and no rearward movement, exhibits orientation, division of attention, and proper planning.

Subject: **Slope Operations**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** These operations provide training and practice in accomplishing a vertical descent from a hover to a sloping surface, and takeoff from a sloping surface vertically to a 3-foot hover.

2. **Description:** This maneuver is used to terminate a flight when the landing area is not level.

   From a stabilized hover of approximately 3 feet, skid height and cross-slope; lower the collective slightly to establish a slow rate of sink. Maintain direction with the anti-torque pedals; and position over the ground with cyclic. As the upslope skid touches the ground, apply cyclic stick pressure in the direction of the slope (upslope). This will hold the skid against the slope while the helicopter is continuing to be let down with the collective pitch. As the collective pitch is reduced, continue to move the cyclic stick toward the slope to maintain a fixed position. The slope must be shallow enough to allow the pilot to hold the helicopter against it with the cyclic stick during the entire landing.

   After the down-slope skid is on the ground, continue to lower the collective pitch all the way to the bottom. RPM should be maintained until the full weight of the helicopter is on the ground. Anti-torque pedals should be used as necessary throughout the landing maintain heading.

   The procedure for a slope takeoff is almost the exact reverse of that for a slope landing. The cyclic stick should be positioned into the slope so the rotor disc is parallel to the horizon, or tilted slightly into the slope. As the helicopter becomes light on the skids, skids apply anti-torque pedals as necessary to maintain heading. When the down-slope skid starts to rise from the ground, adjust the cyclic as necessary to maintain the rotor disc on the horizon. As the down-slope skid rises to a level attitude, the cyclic stick should be approximately neutral. Continue to apply UP collective, allowing the helicopter to rise vertically to an approximate 3-foot hover.

   Note: During slope operations, NEVER turn the tail rotor upslope.

Subject: **Slope Operations - continued**

References: **FAA-H-8083-21 or Superseded**

3. **Acceptable Performance Guidelines:** The trainee shall select a suitable slope, approach, and direction considering wind effect, obstacles, dynamic rollover avoidance, and discharging passengers, properly moves toward the slope, maintains RPM within normal limits, make a smooth positive descent to touch the upslope skid on the sloping surface, maintains positive control while lowering the downslope skid to touchdown, recognizes when the slope is to steep and abandons the operation prior to reaching cyclic control stops, make a smooth transition from the slope to stabilized hover parallel to the slope, properly move away from the slope, maintains the specified heading throughout the operation, ±5 degrees.

Subject: **Antitorque System Failures**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Proficiency in this maneuver will provide the pilot with the ability to land the aircraft safely in the event of Antitorque failure.

2. **Description:** Antitorque failures usually fall into two categories. One focuses on failure of the power drive portion of the Antitorque system resulting in a complete loss of Antitorque. The other category covers mechanical control failures where the pilot is unable to change or control Antitorque thrust even though the system may still be providing thrust.

   A. Antitorque drive system failures include driveshaft failures, gearbox failures, or a complete loss of the tail rotor / FENESTRON / NOTAR itself. In any of these cases, the loss of atitorque normally results in an immediate yawing of the helicopter's nose. The helicopter yaws to the right in a counter-clockwise rotor system and to the left in a clockwise system. This discussion assumes a helicopter with a counter-clockwise rotor system. The severity of the yaw is proportionate to the amount of power being used and the airspeed. An antitorque failure with a high power setting at a low airspeed results in a severe yawing to the right. At low power settings and high airspeeds, the yaw is less severe. High airspeeds tend to streamline the helicopter and keep it from spinning.
   If an antitorque system failure occurs, power has to be reduced in order to reduce torque. The techniques differ depending on whether the helicopter is in flight or in a hover, but will ultimately require an autorotation. If a complete antitorque system failure occurs while hovering, enter a hovering autorotation by rolling off the throttle. If the failure occurs in forward flight, enter a normal autorotation by lowering the collective and rolling of the throttle. If the helicopter has enough forward airspeed (close to cruising speed) when the failure occurs, and depending on the helicopter design, the vertical stabilizer may provide enough directional control to allow you to maneuver the helicopter to a more desirable landing sight. Some of the yaw may be compensated for by applying slight cyclic control opposite the direction of yaw. This helps in directional control, but also increases drag. Care must be taken not to lose too much forward airspeed because the streamlining effect diminishes as airspeed is reduced; also, more altitude is required to accelerate to the correct airspeed if an autorotation is entered into at a low airspeed.

Subject: **Antitorque System Failures - continued**

References: **FAA-H-8083-21 or Superseded**

B. Stuck Pedal: A mechanical control failure limits or prevents control of the tail rotor / FENESTRON / NOTAR thrust and is caused by a stuck or broken control rod or cable. While the antitorque system is still producing thrust, it cannot be controlled by the pilot. The amount of antitorque depends on the position where the controls jam or fail. Once again, the techniques differ depending on the amount of antitorque thrust, but an autorotation is generally not required.

Stuck Left Pedal: (Note: For Airbus aircraft Stuck Right Pedal). Be sure to follow the procedures and techniques outlined in the FAA-approved rotorcraft flight manual for the helicopter you are flying. A stuck left pedal, such as might be experienced during takeoff or climb conditions, results in the helicopter's nose yawing to the left when the power is reduced. Rolling off the throttle and entering an autorotation only makes matters worse. The landing profile for a stuck left pedal is best described as a shallow approach to a momentary hover three to four feet above the surface. Following an analysis, make the landing. If the helicopter is not turning, simply lower the helicopter to the surface. If the helicopter is turning to the right, roll the throttle towards flight idle the amount necessary to stop the turn as you land. If the helicopter is beginning to turn left, you should be able to make the landing prior to the turn rate becoming excessive. However, if the turn rate becomes excessive prior to the landing, simply execute a takeoff and return for another landing.

Stuck Pedal Neutral or Right: (Note: For Airbus aircraft Stuck Neutral of Left Pedal). The landing profile for stuck neutral or stuck right pedal is a low power approach or descent with a running landing. The power should be low enough to establish a left yaw during the decent. The left yaw allows a margin of safety due to the fact that the helicopter will turn to the right when power is applied. This allows the momentary use of power at the bottom of the approach. As you apply power, the helicopter rotates to the right and becomes aligned with the landing area. At this point, roll the throttle to flight idle and make the landing. The momentary use of power helps stop the descent and allows additional time for you to level the helicopter prior to closing the throttle.

If the helicopter is not yawed to the left at the conclusion of the flare, roll the throttle to flight idle and use the collective to cushion the touchdown. As with any running landing, use the cyclic to maintain the ground track. This technique will result in a longer ground run than if the helicopter was yawing to the left.

Subject: **Antitorque System Failures - continued**

References: **FAA-H-8083-21 or Superseded**

3. **Acceptable Performance Guidelines:** The trainee shall exhibit knowledge of the elements related to antitorque system failures depending on the type and extent of the failure, demonstrate his ability to perform each of these maneuvers, maintains RPM within normal limits, establishes and maintains the recommended approach angle and power setting, utilizes proper flight control technique after surface contact, and completes the prescribed check list.

Subject: **Hydraulic Failures**

References: **FAA-H-8083-21 or Superseded**

1. **Objective:** Proficiency in this maneuver will provide the pilot with the ability to land the aircraft safely in the event of Hydraulic System failure.

2. **Description:** All our helicopters incorporate the use of hydraulic actuators to overcome high control forces. A hydraulic system consists of actuators, also called servos. A pump, which is usually driven by the main rotor gearbox and a reservoir to store the hydraulic fluid? A switch in the cockpit can turn the system off, although it is left on under normal conditions, a pressure indicator in the cockpit may be installed to monitor the system.

   An impending hydraulic failure can be recognized by a grinding or howling noise from the pump or actuators, increased control forces and feedback, and limited control movement. The corrective action required is stated in detail in the appropriate rotorcraft flight manual. However, in most cases, airspeed needs to be reduced in order to reduce control forces. The hydraulic switch and circuit breaker should be checked and recycled. If hydraulic power is not restored, make a shallow approach to a running landing. This technique is used because it requires less control force and pilot workload. Additionally, the hydraulic system should be disabled, by either pulling the circuit breaker and/or placing the switch in the off position. The reason for this is to prevent an inadvertent restoration of hydraulic power, which may lead to over controlling near the ground.

   In those helicopters where the control forces are so high that they cannot be moved without hydraulic assistance, two or more independent hydraulic systems may be installed. Some helicopters use hydraulic accumulators to store pressure that can be used for a short time while in an emergency if the hydraulic pump fails. This gives you enough time to land the helicopter with normal control.

3. **Acceptable Performance Guidelines:** The trainee shall exhibit knowledge of the elements related to hydraulic system failure, demonstrate his ability to perform this maneuver, maintains RPM within normal limits, establishes and maintains the recommended approach angle and power setting, utilizes proper flight control technique after surface contact, and completes the prescribed check list.

Subject: **SIMULATED HYDRAULIC SYSTEM FAIL/MALFUNCTION**

References: **MD900 RFM**

1. Objective: Proficiency in this maneuver will provide the pilot with the ability to properly take appropriate actions regarding to the failure/malfunction, of various hydraulic system failures.

2. Description:

A. Single System Failure – Loss of Pressure

Procedures:

1. Decrease air speed to below 100 KIAS.
2. Continue the flight to the point of next intended landing
3. Perform a shallow approach to a hover; land vertically for a single system failure.

B. Dual System Failure – Loss of Pressure (Oral Only)

Procedures:

1. Decrease air speed to below 100 KIAS.
2. Continue the flight to the point of next intended landing
3. Perform a running landing.

C. High Hydraulic Fluid Temperature

Procedures:

1. Land as soon as practical.

3. Acceptable Performance Guidelines: Single System Failure

a. The trainee shall satisfactorily land the aircraft from a hover in a controlled fashion.

b. The trainee shall satisfactorily land the aircraft from cruise flight in a controlled fashion.

Subject: **SIMULATED EEC FAULTS**

References: **MD900 RFM**

1. Objective: Proficiency in this maneuver will provide the pilot with the ability to properly identify and take appropriate actions regarding the faults of the Electronic Engine Control (EEC).

2. Description:

A. EEC Non-Critical Fault: (Oral Only)

Procedures:

1. Continue flight

B. EEC Critical Fault:

Procedures:

1. If necessary, move the affected engine twist grip out of the NORMAL position to assume manual control of the FMU.
2. Set power of the affected engine as desired
3. Continue flight and monitor engine indications on the IIDS primary display.

3. Acceptable Performance Guidelines: For all maneuvers discussed above, the trainee shall satisfactorily land the aircraft from cruise flight in a controlled fashion ensuring that no single-engine parameters are exceeded.

Subject: **Single-Engine Failures**

References: **MD900 RFM**

1. Objective: Proficiency in this maneuver will provide the pilot with the ability to properly identify and take appropriate actions regarding the failure/malfunction, of either engine during various phases of flight.

2. Description:

A. Single-Engine Failure while Hovering-In-Ground-Effect (HIGE):

Procedure:

1. Land

NOTE: *It is recommended that the instructor pilot attempt to hover the aircraft single-engine to check operating parameters prior to attempting single-engine failures in hover mode.*

CAUTION: *The instructor pilot will insure that no single-engine parameters are exceeded.*

B. Single-Engine Failure while Hovering-Out-Of-Ground-Effect (HOGE):

Procedure:

1. Collective pitch adjust to maintain OEI limits

NOTE: *The decision to land or fly away, following a single engine failure, will depend on ambient conditions and aircraft gross weight. Refer to Section V for the best rate of climb speed, single engine rate of climb and descent, and height velocity envelope performance data*

CAUTION: *The instructor pilot will insure that no single-engine parameters are exceeded.*

Subject: **Single-Engine Failures - Continued**

References: **MD900 RFM**

C. Single-Engine Failure in Flight:

Procedure:

1. Maintain operating engine within OEI limits
2. reduce airspeed to 100 KIAS or less

CAUTION: *Identify affected (failed) engine by cross checking torque, NP and Hg prior to performing the following steps*

3. Engine control switch off on affected engine
4. Fuel boost pump off on affected engine
5. Fuel shutoff valve off on affected engine
6. Land as so as practicable

3. Acceptable Performance Guidelines: For all maneuvers discussed above, the trainee shall satisfactorily fly the aircraft in the various flight profiles, in a controlled fashion ensuring that no single-engine parameters are exceeded.

SECTION F
RECORDKEEPING REQUIREMENTS
INDEX

RECORD KEEPING

A. The Chief Pilot or persons designated by the Chief Pilot will assemble and keep on file a training folder for each individual as required by the appropriate regulation. In that training file will be kept certificates of training courses completed. A record of all initial and recurrent training will be established and maintained. Information required to be maintained for each pilot used under this part includes but is not limited to:

1. The full name of the pilot.
2. The pilot certificate, by type and number, and ratings that the pilot holds.
3. The pilot's aeronautical experience in sufficient detail to determine the pilot's qualifications to pilot the aircraft in operations under this part.
4. The pilot's current duties and the date of the pilot's assignment to those duties.
5. The effective date and class of the medical certificate that the pilot holds.
6. The date and result of each of the initial and recurrent competency tests and proficiency and route checks required and the type of aircraft flown during that test or check.
7. The pilot's flight time in sufficient detail to determine compliance with the flight time limitation of FAR 135, Subpart F.
8. The pilot's check airman authorization, if any.
9. Any action taken concerning the pilot's release from employment for physical or professional disqualification.
10. The date of the completion of the initial phase and each recurrent phase of training.

B. In accordance with FAR 135.323(c), each segment of training (ground, flight, course of training, proficiency or competency check) shall be certified by the applicable ground instructor, flight instructor or check airman as to the proficiency and knowledge of the crewmember upon completion of the training or check. This certification will be a part of the crewmember's training record.

C. The Chief Pilot will maintain a record of the satisfactory completion of initial and recurrent training given crew members and appropriate personnel who perform assigned duties and/or have responsibilities for the recognition of Hazardous Materials, as appropriate.

D. A line qualified instructor who conducts a classroom subject within a course, a complete course of ground training, or emergency drills required within this approved training program will be considered to have completed that subject, course, or drill for their own training requirement. Such credit shall be certified by the Chief Pilot or Director of Operations. ***In NO case will a person sign their own training record***.

E. All completed record forms pertaining to the initial qualification requirements (i.e. Basic Indoc., Initial Equipment, etc.) will be maintained in their original state in the crewmember's record file. Subsequent records (i.e. recurrent training) that must be retained beyond twelve (12) months may be reduced to a single-line entry in the individual's file folder. The single-line entry may be made once the twelve month period lapses and must include the individual's name; date of completion; training course or course flight check; results; follow-up after unsatisfactory performance (if required); and the name of the certifying official.

F. A score of 70% or higher constitutes satisfactory completion of a written examination. SAT entered in the results column indicates that the crewmember scored 70% or higher on course examinations. Any subject area determined to be deficient will be reviewed and additional instruction conducted to achieve a satisfactory level of knowledge.

AIRMAN COMPETENCY/PROFICIENCY CHECK FORM

To assure complete and accurate compliance with the Proficiency Check procedures set forth in FAR 135.293, .297, .299, the check airman conducting the check will complete the appropriate sections of PAPILLON Form 8410-3 AIRMAN PROFICIENCY/QUALIFICATION CHECK.

The completed form will be inserted into the crewmember's record file.

If the proficiency check is given in lieu of recurrent flight training, a statement to that effect will be completed and signed by the check airman. This statement will be made in the **REMARKS** section of the proficiency check form.

Where the FAA Principal Operations Inspector is conducting or observing a flight check, their statement may be entered as well.

TRAINING FORMS:

Pilot Annual Resume	The Pilot Annual Resume is self explanatory. It meets the requirements of Part 135.63(a)(4).
Flight Duty Assignment	The Flight Duty Assignment Form is self explanatory. It meets the requirements of 135.63(a)(4)(iv).

(TR-1) The **Record of Ground Training** form must be placed in the crewmember's record file and it meets the requirements of Part 135.293(a), 1, 4-9. This form must be completed by the Chief Pilot or person designated by the Chief Pilot in order to meet certification requirements of the regulations.

(TR-2) The **Record of Aircraft Ground Training** form must be placed un the crewmember’s record file and it meets the requirements of Part 135.293(a), 2-3. This form must be completed by the Chief Pilot or person designated by the Chief Pilot in order to meet certification requirements of the regulations. This form is for all ground subjects that are aircraft specific.

(TR-3) The **Single-Line Record** Entry Form provides for a quick reference of all Categories of Training accomplished, and presents a historical record of all required training.

(TR-4) The **Instructor/Check Airman Qualification Record** form determines instructor or check airman training qualifications.

(TR-5) The **Credit for Previous Training Record** form provides a means of documenting credit that has been granted due to previous training received prior to the crewmember being hired.

(TR-7) The **Flight Training Record** form provides a means of documenting and tracking flight training that has been received by each crewmember and meets the requirements of 135.293(b).

(TR-8) The **Additional Flight Training Record** form provides a means of tracking an individual’s experience in accordance with 135.244 and for commuter operations.

FAA (8410) **Papillon form 8410,** self explanatory.

PILOT ANNUAL RESUME

(To be completed annually in conjunction with annual check ride date)

Date: _____

Name _____
(First) (Middle) (Last)

Pilot Cert.: Comm [ ] ATP [ ]

Address: _____ Cert. No. : _____

City/State : _____ ZIP : _____

Home Phone: ( ) _____ Cell Phone: ( ) _____

Email Address: _____

Ratings: [ ] Rotorcraft/Helicopter Other: _____

Limitations: _____

Date Hired: _____

Flight Time Summary

Total Time: _____ Total Time RW: _____ Total Time FW: _____ PIC RW: _____

PIC FW: _____ X-C: _____ Night: _____ Night X-C: _____

Vert. Ref: _____ Mountain: _____ Instrument: _____ Hood: _____

Actual: _____ Instrument Simulator: _____ Turbo Prop: _____

Commercial. Prev. 12 months _____ Prev. 30 days _____

Heli. / Make / Model / Series	AS350B2	AS350B3	BHT 206	BHT 407	EC130	MD900	PISTON	OTHER TURBINE	TWIN TURBINE
Total time PIC									
Last 12 months PIC									
Last 60 days PIC									
Last 30 Days PIC									
Mountain Terrain									

I certify the information above is correct.

_____ _____
Date Pilot Signature

I certify the information above is correct and has been verified

_____ _____
Date Chief Pilot Signature

RECORD OF GROUND TRAINING SUBJECTS
(TR-1)

NAME:		DUTY POSITION:	PIC	X

TRAINING RECEIVED FAR:				ELIGIBILITY:	Base Month	
Initial	[X]	135.331	135.345			
Transition	[ ]	135.345				
Upgrade	[ ]	135.347		Conducted During:	Pre Month	
Recurrent	[ ]	135.351			Due Month	
Requalification	[ ]				Post Month	
Differences	[ ]	135.347			Other	
					(See bottom for comments)	

Curriculum Segments	Instructor(s)	Hours	Date(s)
Basic Indoctrination			
General Emergency			
Situation and Drill [ ] 12 month			
Hands on Drill [ ] 24 month			
Cockpit Resource Management			
Hazardous Materials			
Qualification			
Special: Drug / Alch Prgm/M.E.L Mngmnt Prg			
Special: CPR / AED			
Special: T.O.P.S			

In accordance with 135.323 ©

I certify the above Record of Training is correct and the training entered was completed satisfactorily.

Date: Signature Title

Comments:

RECORD OF AIRCRAFT GROUND TRAINING
(TR-2)

NAME:			**DUTY POSITION**:	PIC	X
AIRCRAFT:					
TRAINING RECEIVED FAR:			ELIGIBILITY:	Base Month	
Initial	[ ] 135.331	135.345			
Transition	[ ] 135.345				
Upgrade	[ ] 135.347		Conducted During:	Pre Month	
Recurrent	[ ] 135.351			Due Month	
Requalification	[ ]			Post Month	
Differences	[ ] 135.347			Other	
			(See bottom for Comments)		

Curriculum Segments	**Instructor**	**Hours**	**Date**
General			
Limitations			
Emergency Procedures			
Weight & Balance			
Performance			
Systems			
Systems Integration			
Qualification			
Special:			

In accordance with 135.323 ©
I certify the above Record of Training is correct and the training entered was completed satisfactorily.

Date: Signature Title

Comments:

SINGLE-LINE RECORD ENTRY FORM
(TR-3)

NAME: _____

Training/Check	Date	Results	Instructor	Check Airman

* New Base Month

*1 Taught as instructor

INSTRUCTOR QUALIFICATION RECORD
TR-4 INST

In accordance with FAR 135.323 © each instructor, supervisor, or check airman who is responsible for a particular ground training subject, segment of flight training , course of training, flight check, or competence check under this part shall certify as to the proficiency and knowledge of the crewmember, flight instructor, or check airman concerned upon completion of that training or check.

This certifies that _____ has satisfactorily completed the training required for qualification as an instructor under FAR 135.340© and is authorized to conduct pilot ground training as indicated below.

Aircraft/Subject:	**Instructor:**	**Date:**

This certifies that _____ has satisfactorily completed the training required for qualification as an instructor under FAR 135.338(b) & 135.340(e) and is authorized to conduct flight training as indicated below.

Aircraft:	**Instructor:**	**Date:**

This certifies the instructor has completed the recurrent training and observation required in accordance with FAR 135.340(a)(2) within the preceding 24 months.

Aircraft:	**Check Airman/Inspector:**	**Signature:**	**Date:**

CHECK AIRMAN QUALIFICATION RECORD
TR-4-CA

In accordance with FAR 135.323 (c) each instructor, supervisor, or check airman who is responsible for a particular ground training subject, segment of flight training, course of training, flight check, or competence check under this part shall certify as to the proficiency and knowledge of the crewmember, flight instructor, or check airman concerned upon completion of that training or check.

This certifies that ______________________________ meets the qualifications for Check Airman under 135.337(b) and has satisfactorily completed the training required by 135.339(c)(d)(e).

Aircraft:	**Check Airman**	**Signature**:	**Date**:

This verifies the check airman has completed the recurrent training and observation required in accordance with FAR 135.339(a)(2) within the preceding 24 months.

Aircraft:	**Check Airman/Inspector**:	**Date**:

CREDIT FOR PREVIOUS TRAINING RECORDS
(TR-5)

NAME: _____ POSITION: PIC [ ]

AIRCRAFT: _____ SIC [ ]

APPLICABLE CURRICULUM SEGMENTS	Hours	Date
Basic Indoctrination Airman Specific Modules ONLY	_____	_____
General Emergency Situation Modules ONLY	_____	_____
Aircraft Ground Systems Modules ONLY	_____	_____
Instructor/Check Airman Ground ONLY	_____	_____

I certify the above record of training credit is correct. Required supporting documentation is attached.

_____ _____ _____

Date Signature Title

INITIAL FLIGHT TRAINING RECORD
(TR-7)

NAME:	HOURS:	DATE:	TYPE OF TRAINING:	INSTRUCTOR:	CHECK AIRMAN:
A/C TYPE:	1				
POSITION: PIC	2				
DATE COMPLETED:	3				
	4				
TOTAL HOURS:	5				
RECOMMENDED FOR 135 BY:	6				
	7				
RECOMMENDED PRIOR BY:	8				
	9				
INSTRUCTOR'S):	10				
	11				
CHECK AIRMAN:	12				
.	13				
SAT:	14				
UNSAT:	15				

MODULES	1	2	3	4	5	6	7	8
PRE-FLIGHT INSPECTION								
STARTING PROCEDURE								
TAXIING & HOVER								
PRE-TAKEOFF CHECK								
TAKEOFF:								
NORMAL								
CROSSWIND								
QUICK STOP								
AREA DEPARTURE								
INADVERTENT IMC PROC								
LANDING:								
NORMAL								
CROSSWIND								
CONFINED AREA OPERATION								
PINNACLE OPERATIONS								
SLOPE OPERATIONS								
STRAIGHT IN AUTOROTATION								
AUTO WITH TURN								
SIMULATED ENGINE FAILURE								
HOVERING AUTO								
HYDRAULICS FAILURE								
FADEC PROCEDURES								
STUCK PEDAL								
OEI PROCEDURES								
ANTI-TORQUE FAILURE PROC.								

In accordance with 135.323 © I certify the above Record of Training is correct and the training entered was completed satisfactorily

Date _____ Signature _____ Title _____

ADDITIONAL FLIGHT TRAINING RECORD

(TR - 8)

	NAME:				A/C TYPE:	
	TYPE OF TRAINING: RECURRENT - TRANSITION - DIFF				INSTRUCTOR	CHECK AIRMAN
	DATE	HOURS	RE-QUALIFICATION OTHER	RESULTS		
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
	TOTAL		SATISFACTORY [S]	UNSATISFACTORY [U]		

USE REVERSE SIDE FOR ADDITIONAL COMMENTS

I Certify the above Record of Training is correct and the training entered was completed satisfactorily.

Date _____ Signature _____ Title _____

* New base month

*1 Taught as instructor

INITIAL OPERATING EXPERIENCE / CUMMUTER OPERATIONS

(TR-9)

THIS IS TO CERTIFY THAT _____ . _____ HAS COMPLETED IOE TRAINING IN ACCORDANCE WITH FAR 135.244 AND PERTINENT TO OPERATING CERTIFICATE PG9A174H

DATE	FLIGHT TIME	TAKE-OFFS	LANDINGS	CHECK AIRMAN
TOTALS				

DATE COMPLETED: _____ . _____

CHECK AIRMAN:

NAME: _____ . _____ SIGNATURE: _____

AIRMAN COMPETENCY / PROFICIENCY CHECK- FAR 135				LOCATION:			DATE:
NAME OF AIRMAN:							TYPE OF CHECK:
LAST:		FIRST:			M.I.		135.293(a)(1)(4-9) Comp. Gnd.[ ] .
							135.293(a)(2-3) A/C Knowledge. [ ]
PILOT CERTIFICATE INFORMATION:		MEDICAL INFORMATION: CLASS:			TYPE A/C		135.293(b) [ ]
GRADE:		DATE OF EXAM:					135.299 [ ]
NUMBER:		DATE OF BIRTH:					ROUTE:
EMPLOYED BY:		BASED AT:		FLIGHT TIME:			
PAPILLON AIRWAYS, INC				SIMULATOR / TRAINING DEVICE: MAKE/MODEL)			
NAME OF CHECK AIRMAN:				SIGNATURE OF CHECK AIRMAN:			

PRE-FLIGHT:	A/C	SIMULATOR	TNG. DEV.	OTHER:	A/C	SIMULATOR	TNG. DEV.
EQUIPMENT EXAM:				COMM./ NAV PROC.			
(ORAL OR WRITTEN)				RADIO PROCEDURES			
PRE-FLIGHT INSPECTION				JUDGMENT			
MANEUVERS:				CREW COORDINATION			
GROUND & OR AIR TAXI							
HOVERING MANEUVERS							
NORMAL & XWIND T/OFF				EMERGENCIES:			
HIGH ALT. T/O & LDG.				NORMAL & ABNORMAL PROC.			
SIM. ENGINE FAILURE				EMERGENCY PROCEDURES			
CONFINED AREAS							
SLOPES							
PINNACLES							
QUICK STOPS				INSTRUMENT PROCEDURES:			
AUTOROTATION				STRAIGHT & LEVEL			
(SINGLE ENGINE)				CLIMBS/TURNS/DESCENTS			
AUTOROTATION				INADVERTENT IMC PROCEDURES			
(TWIN ENGINE)				UNUSUAL ATTITUDE			
HOV. AUTOROTATION				OTHER INSTRUMENT PROCEDURES			
(SINGLE ENGINE)							
HOV. AUTOROTATION				OTHER (SPECIFY)			
(TWIN ENGINE)							
ANTI-TORQUE FAILURE							
ORAL							
SIMULATED							
SETTLING W/ POWER:							
ORAL				AIRMAN COMPETENCY INFORMATION:			
FLIGHT				DEMONSTRATED CURRENT KNOWLEDGE			
T/OFF W/ SIMULATED				FAR 135.293(a)(1)(4-9): EXPIRES (12 MO.)			
ENGINE FAILURE (TWIN)				DEMONSTRATED CURRENT KNOWLEDGE (AIRCRAFT)			
LANDING W/ SIMULATED				FAR 135.293(a)(2-3): EXPIRES (12 MO.)			
ENGINE FAILURE (TWIN)				SATISFACTORILY DEMONSTRATED FLIGHT CHECKS			
HYDRAULICS FAILURE				FAR 135.293(B): EXPIRES (12 MO.)			
FADEC FAILURE				SATISFACTORILY DEMONSTRATED ROUTE CHECK(S)			
FADEC PROCEDURES				FAR- 135.299 EXPIRES (12 MO)			

REMARKS:		
RESULT OF CHECK: [ ] APPROVED [ ] DISAPPROVED	CHECK AIRMAN'S PERFORMANCE (FAA ONLY) [ ] APPROVED [ ] DISAPPROVED	
REGION:	DISTRICT OFFICE:	FAA INSPECTOR'S SIGNATURE:

PAPILLON FORM 8410-3

FLIGHT DUTY ASSIGNMENT

PAPILLON AIRWAYS INC.

MONTH / QUARTER / YEAR END RE-CAP

PILOT NAME

	2012		2013		2014		2015	
	UNSCHED	SCHED	UNSCHED	SCHED	UNSCHED	SCHED	UNSCHED	SCHED
JAN								
FEB								
MARCH								
QUARTER								
APRIL								
MAY								
JUNE								
QUARTER								
JULY								
AUGUST								
SEP								
QUARTER								
OCT								
NOV								
DEC								
QUARTER								
YEAR END TOTAL								