



U.S. Department  
of Transportation  
Federal Aviation  
Administration

# Advisory Circular

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**Subject:** Approval of Manufacturer's  
Required Training Programs

**Date:** 10/31/14

**AC No:** 61-137B

**Initiated by:** AFS-800 **Change:**

**1. PURPOSE.** This advisory circular (AC) provides information to organizations providing training in aircraft that contain a training requirement in the limitations section of the Airplane Flight Manual (Aircraft Flight Manual (AFM), Rotorcraft Flight Manual (RFM), etc.).

**2. CANCELLATION.** AC 61-137A, Approval of Manufacturer's Required Training Programs, dated September 15, 2011, is canceled.

**3. RELATED FEDERAL AVIATION ADMINISTRATION (FAA) GUIDANCE.**

- FAA Practical Test Standards (PTS).
- Flight Standardization Board (FSB) Report. The FSB report for the specific aircraft, if available, is at <http://fsims.faa.gov/PublicationForm.aspx>.
- Limitations Section of the AFM.
- FAA/Industry Training Standards (FITS). The FITS is available at [http://www.faa.gov/training\\_testing/training/fits/](http://www.faa.gov/training_testing/training/fits/).

**4. AUDIENCE.** The primary audience for this AC is training providers intending to offer training required by the specific AFM.

**5. BACKGROUND.**

**a. Approval Process.** This AC contains background information on the processes for granting approval, when required, of an aircraft training program in accordance with the limitations section of the AFM/RFM, except for the supervised operating experience requirements of Title 14 of the Code of Federal Regulations (14 CFR) part 61, § 61.64(f) and (g). As noted in § 61.64(f) and (g), if a pilot is required to perform 25 hours of supervised operating experience as pilot in command (PIC) under the supervision of a qualified and current PIC, a restriction will be added to the individual's certificate. The Administrator can remove this restriction if the individual provides adequate evidence of satisfying the requirements of the restriction. The appendix of this AC provides the technical training information that will meet the training requirements of specific aircraft.

**b. Operating Limitations.** Title 14 CFR part 91, § 91.9(a) states in part that no person may operate a civil aircraft without complying with the operating limitations specified in the approved AFM or RFM. Some aircraft manufacturers have begun requiring stringent training programs via an AFM limitation. For example, the limitation section of the Eclipse Aviation Corporation's EA-500 AFM contains the following requirement: "All pilots operating the

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Eclipse EA-500 or variant must be trained and qualified in accordance with the FAA-accepted/approved Eclipse Aviation Training Program or equivalent FAA-accepted/approved training program.” The Type Certificate Data Sheet (TCDS) contains a similar limitation in the notes. Coordination of this AFM limitation included the General Aviation and Commercial Division (AFS-800), the Kansas City Aircraft Evaluation Group (MKC-AEG), and the FSB. This AFM limitation requires that all pilots operating the EA-500 must complete training in accordance with an FAA-accepted/approved program. Other manufacturers may consider placing a similar training requirement in the limitations section of their AFM. Traditionally, the manufacturer provides training to the first purchaser of their aircraft. Pilots of resale aircraft and third party training providers may not fall under the manufacturer sales contract, and, therefore, the AFM limitation is a means by which all operators of these aircraft receive training at least equivalent to the manufacturer’s. Consequently, the FAA now approves part 61 training programs for aircraft that have this kind of limitation. The FAA already approves training programs conducted under 14 CFR parts 121, 135, 141, 142, and part 91 subpart K (part 91K).

**c. Approval Authority.** An applicant should contact their local Flight Standards District Office (FSDO) to apply for approval.

**6. APPROVAL PROCESS.** The general process of approval is an orderly method used by Flight Standards Service (AFS) inspectors to ensure that the training program meets regulatory standards and provides for safe operating practices. It is a modular, generic process that applies to many types of approvals. The process consists of five distinct, yet related, phases and can result in approving or disapproving the training provider’s program. It is important to understand that the process described in this section may not be all inclusive, but rather a guide to make this process smooth and efficient. The five phases are:

- Initiation,
- Formal proposal/request,
- FAA detailed analysis,
- Training provider’s demonstration, and
- Approval.

**a. Phase 1—Initiation.** The training provider should contact the FAA office that has jurisdiction over their training program to inform them of his or her plan to provide required training. During initial inquiries, it is important for the FAA and the operator to become familiar with the subject matter. The inspector then takes the following actions:

- (1) Becomes thoroughly familiar with existing FAA policy and approval requirements.
- (2) Becomes familiar with the appropriate technical material.
- (3) Accurately assesses the character and scope of the proposal.
- (4) Determines if it requires a demonstration.

(5) Determines the need for any coordination requirements.

(6) Ensures the operator has a clear understanding of the minimum requirements constituting an acceptable submission.

**NOTE: It is essential in this phase for the operator to have a clear understanding that, although the inspector may provide advice and guidance to the training provider, the development of the final training program submitted to the FAA is solely the responsibility of the training provider.**

**b. Phase 2—Formal Proposal/Request.** This phase begins when the training provider formally submits a proposal for FAA evaluation.

(1) In this phase, the inspector first reviews the proposal to ensure that it is clearly defined, and that the training provider provided the documentation specified in phase 1. The required information should be complete and detailed enough to permit a thorough evaluation of the operator's capability and competence in providing the required equivalent level of training.

(2) This phase does not include a detailed and technical analysis of the training program. However, in this phase the inspector examines the training program in sufficient detail to assess the completeness of the required information. If the operator's proposal is not complete, or the quality is obviously unacceptable, the inspector immediately returns it, with an explanation of the deficiencies, before conducting any further review and evaluation.

(3) Normally, the inspector returns unacceptable submissions with a written explanation of the reasons for their return. In complex cases, the inspector may request a meeting with the training provider to resolve issues and agree on a mutually acceptable solution. If mutual agreements cannot be reached, the inspector terminates the meeting, informs the training provider that the submission is unacceptable, and returns the submission. If all parties are able to reach agreement on measures to correct omissions or deficiencies, the inspector will determine if the submission is acceptable. If it is deemed acceptable, the inspector informs the operator and phase 3 begins.

**c. Phase 3—FAA Detailed Analysis.**

(1) In this phase the inspector conducts a detailed analysis, review, and evaluation of the training program. The analysis may take place entirely at the FAA approving office, at the site of operations, or at both facilities. The detailed analysis focuses on the form, content, and technical quality of the training program to determine:

- It is not contrary to any applicable 14 CFR section,
- It is not contrary to the direction provided in this AC or other safety-related documents,
- It provides for safe operating practices,
- It will meet the required equivalent level of training,

- The training provider has the capability and competence to safely conduct the training, and
- The training provider has the processes and procedures to oversee and manage the training.

(2) The FAA should address any deficiencies in the training program before proceeding to the next phase. A discussion with the training provider may adequately resolve certain discrepancies or questions, or assist in obtaining additional information. The FAA may need to return certain sections of the submission to the operator for specific changes. However, if the inspector determines that the material is grossly deficient or unacceptable, he or she will return the entire program to the training provider with an appropriate explanation and immediately terminate this phase. If the results of the evaluation are acceptable and a demonstration requirement exists, the inspector should issue the training provider provisional approval before continuing with the approval process.

**d. Phase 4—Training Provider’s Demonstration.** In this phase the inspector inspects the training provider’s facilities and equipment, and observes personnel in the performance of their duties. The observation includes factors such as participants (instructors and students), training criteria, effectiveness of training, and sequence of events.

(1) During these demonstrations, it is normal for minor discrepancies to occur. These discrepancies can often be resolved by obtaining commitments from the training provider to make appropriate changes.

(2) The inspector will stop the demonstration in this phase when gross deficiencies or unacceptable levels of performance are observed. The inspector will identify what is required of the training provider so that final approval can be issued.

(3) If the training provider is unwilling or unable to make the identified changes, the inspector will terminate the process entirely and cancel the provisional approval. If this happens and the training provider still wishes to seek approval, the training provider may need to reenter the approval process at phase 2 (that is, submit a new formal proposal/request).

**e. Phase 5—Approval.** An approval will be issued if the inspector finds the demonstration satisfactory. If the inspector does not approve it, notification is sent to the training provider in phase 3 or 4. The appropriate specifications (operations specifications (OpSpecs), management specifications (MSpecs), or training specifications (TSpecs)) paragraph normally issues the approval.



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## APPENDIX 1. TRAINING REQUIREMENTS FOR THE ECLIPSE AVIATION CORPORATION EA-500

**1. TRAINING.** Pilots operating the Eclipse Aviation Corporation EA-500 should complete the following training modules:

- Pre-type-rating training,
- Emergency situation training,
- Flight skills assessment,
- EA-500 type rating training,
- Mentorship,
- Recurrent training, and
- Differences Training.

**a. Training Modules.** Below are the training objectives for each of these modules. Some pilots may be exempted from some of these training requirements. Each module contains a note explaining the details and conditions for exemptions from that module (or portion thereof). Exemptions are not automatic; the training provider will evaluate each individual on a case-by-case basis. Ultimate authority for allowing the exemption lies with the flight training manager or equivalent. Though the FAA does not require pilots to complete the pre-type-rating training, flight skills assessment, and emergency situation training in that order, the pilot should successfully complete these three modules prior to starting the type rating training module. Mentorship and recurrent training will take place after successful completion of the type rating training module.

**b. Training Equivalency.** The FAA does not require that the training providers implement every particular aspect of the Eclipse Aviation Corporation training program. However, the training should meet an equivalency. For example, the Eclipse Aviation Corporation uses an aerobatic L-39 Albatross aircraft to conduct prerequisite upset recovery training. Though the FAA does not require a third party training provider to use an L-39, the training objectives, flight concepts, flight techniques, and demonstration of maneuvers/tasks should be trained and completed to equivalency.

**c. Equipment.** The EA-500's equipment and capabilities continue to change. This appendix may not contain every system or piece of equipment installed. The training provider should develop training that matches the equipment and capabilities for the EA-500 the pilot will be operating.

**2. ECLIPSE 500 TYPE RATING TRAINING PREREQUISITES.** Prior to beginning the actual type rating training, the pilot should meet or complete certain prerequisites. Those prerequisites are as follows:

**a. Certificate Requirements.** The pilot should hold the following certificates and ratings:

**(1) Private Pilot – Airplane Multiengine Land and Instrument Airplane.** The pilot certificate should not contain a “Multiengine Limited to VFR Only” or similar limitation that would restrict instrument privileges in a multiengine airplane.

**(2) Medical Certificate.** Current and valid third class medical certificate.

**b. Currency.** The pilot should be current under Title 14 of the Code of Federal Regulations (14 CFR) part 61, § 61.57(c) and (d).

**c. Jet Basics Knowledge.** Internet, CD, DVD, or other self-learning training on the following subjects should be completed prior to arriving for type rating training. When the pilot arrives for training, the training provider should conduct a knowledge test to ensure that the pilot has the requisite knowledge to begin type rating training in the EA-500. Ground school will address all deficiencies in knowledge. At a minimum, the following subjects should be taught in this phase:

- Jet engines,
- High altitude physiology,
- High altitude and high-speed aerodynamics,
- High altitude flight planning, and
- High altitude weather and weather radar.

**NOTE: The pilot should complete this training within 6 months of starting type rating flight and ground training.**

**NOTE: The pilot may be exempt from Jet Basics if he or she already holds a turbojet type rating without a pilot-in-command (PIC) limitation and has logged at least 25 hours PIC time in a turbojet airplane.**

### **3. EMERGENCY SITUATION TRAINING.**

#### **a. Ground Training.**

##### **(1) Aviation Physiology.**

- Hypoxia,
- Hyperventilation,
- Decompression sickness,
- Gas expansion,
- Circadian rhythm,
- Fatigue and sleep,
- Self medication,
- Eating and hydration, and
- Night vision.

##### **(2) Rollover Trainer.**

- Exposure to negative g-forces,
- Pitch orientation and control, and
- Roll orientation and control.

**(3) Reduced Oxygen/Hypoxia Training.****b. Upset Recovery Flight Training.****(1) Flight Concepts.**

- Orientation of lift vector through roll attitude,
- Earth centered attitude awareness,
- Distinction between aircraft attitude and angle of attack,
- Altitude required for vertical maneuvering,
- Recognition and control of cockpit g-forces, and
- Thrust control during pitch changes.

**(2) Flight Techniques.**

- Lift vector orientation and control past 90 degree of roll,
- Lift vector magnitude control,
- Use of more than 1g for flight path control,
- Use of less than 1g for flight path control,
- Ballistic (0g) flight, and
- Ability to maintain -1g (inverted) flight for flight path control.

**(3) Demonstrations, Tasks, or Maneuvers.** Note that 14 CFR part 91, §§ 91.303 and 91.307 may apply to upset recovery flight training.

- 60 degree banked turns,
- Wingover,
- 0g pushover,
- Aileron roll,
- Roll reversal,
- Barrel roll,
- Half Cuban 8,
- Inverted flight,
- Pitch mistrim,
- Mountain wave encounter,
- Wake vortex encounter, and
- Insidious upset encounter (replicates the situation resulting from inattention, distraction, a “soft,” unannounced autopilot (AP) failure, or other subtle entries).

**NOTE: The pilot may be exempt from either or both components (ground training and upset recovery training) of emergency situation training if the pilot presents evidence of recent completion of equivalent training. For the physiology module, equivalent training includes FAA, armed forces, air carrier, or other recognized programs with equivalent course content. For the upset recovery training, the pilot may be exempt if he or she holds a current FAA Aerobatic Competency authorization or is a**

**current armed forces pilot rated in fighter type aircraft. The pilot should furnish documentation to be eligible for the exemption.**

**NOTE: Eclipse Aviation Corporation uses an L-39 Albatross for upset recovery training. Upset recovery training should be conducted in an aircraft certificated for all maneuvers required in the training (aerobatic).**

**4. FLIGHT SKILLS ASSESSMENT.** Flight skills assessment is done to ensure that the pilot has the basic instrument flight skills to enter type rating training. The minimum requirement for the flight skills assessment is that the pilot should successfully complete the equivalent of an instrument proficiency check (IPC). If the pilot fails to meet this minimum during the flight skills assessment then the pilot should successfully complete supplementary training and meet the IPC standard before beginning type rating training.

**NOTE: The pilot may be exempt from the flight skills assessment if he or she meets the aeronautical experience requirements for an Airline Transport Pilot (ATP) Certificate as specified by § 61.159(a) and meets the following instrument currency requirements: instrument flight time last 90 days-5 hours; instrument approaches last 90 days-10; and instrument evaluation (instrument proficiency check or instrument rating practical test) passed within the last 6 months prior to entering type rating course.**

**5. INITIAL TYPE RATING TRAINING CURRICULUM.** The type rating training course is the core of the training program. The course should not only train the pilot to pass the Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Airplane (FAA-S-8081-5, current edition), but also to train the pilot (for single-pilot operations) in single-pilot resource management. This includes training in risk management (RM), automation management (AM), situational awareness (SA), and controlled flight into terrain (CFIT) awareness.

**NOTE: For training efficiency the training provider can integrate ground training, systems integration training, and flight training.**

**a. Minimum Course Length-Flight.** Flight time in this section includes FAA-approved simulator and approved flight training device (FTD) time.

(1) Sixteen hours of flight time.

(2) Seven lessons (each of which takes one or more flights to complete).

**b. Minimum Course Length/Ground.** There is no minimum number of ground training hours, since the amount of additional systems instruction required when the pilot arrives for type rating training will depend on how many hours the training provider credits for the pre-type-rating prerequisite systems training (Web-based, computer-based training (CBT), etc.). The principal operations inspector (POI) will need to determine if the prerequisite training is comprehensive enough to eliminate any of the ground training areas listed below. The training provider should have a system in place that tests the pilot's knowledge in the learning areas to ensure that the pilot has all the requisite knowledge. Finally, all special emphasis items should be taught in ground school, regardless of their coverage in the pre-type-rating training.

**c. Course Completion Standards.**

- Provide the pilot with the knowledge and skills to successfully pass the FAA Type Rating Practical Test, and
- Provide the pilot with the higher order thinking skills (risk management (RM), task management (TM), AM, aeronautical decision making (ADM), SA, and CFIT awareness) needed to operate the EA-500 with the highest degree of safety in foreseeable operating environments.

**d. Scenario Evaluation/Learner Centered Grading.** The Eclipse Aviation Corporation designed their training program under the FAA/Industry Training Standards (FITS) methodology. This methodology uses scenario based training (SBT) and learner centered grading to train and enhance the high order thinking skills (Single Pilot Resource Management (SRM, RM, AM, CFIT awareness, and SA) needed to safely operate the EA-500 as a single-pilot. Although FITS acceptance is not required to obtain FAA approval to conduct EA-500 training, FITS methodology has been shown to be effective in the development of higher order thinking skills. If a training provider requests FITS acceptance along with FAA approval, the POI will evaluate the curriculum to insure that it meets the FITS acceptance requirements. Detailed information on how to apply FITS methodology can be found on the FITS website at [http://www.faa.gov/training\\_testing/training/fits/](http://www.faa.gov/training_testing/training/fits/). Guidance on FITS acceptance can be found in FAA Order 8900.1, Volume 5, Airman Certification, Chapter 9, Other Airmen Authorizations, Section 5, Issue an FAA Industry Training Standards (FITS) Acceptance When Requested by a Flight School, Training Center, or Other Training Provider.

**e. Course Content.**

**NOTE: The training provider should note special emphasis items (per the FSB report). Special emphasis training includes systems, procedures or other training elements that are unique to the aircraft and should be given a higher degree of emphasis than regular training.**

**(1) Ground Training Content.** The training provider should include the following list of subjects in the ground training content of the initial type rating training curriculum.

**(a) Single Pilot Resource Management (SRM) (special emphasis item).** The first objective of this training section is to provide the pilot with knowledge of SRM basic elements and the understanding of the importance of SRM in single-pilot EA-500 operation. The second objective is to provide the EA-500 pilot with the knowledge, skills, procedures, and tools needed to identify single-pilot work load drivers and manage that workload within the resources available. The following are subelements of SRM:

*1. Basic SRM elements:*

- SRM definition and concepts, and
- Application of SRM.

2. Single-pilot workload drivers:
  - Key factors creating workload, and
  - Managing workload.
3. Maintaining SA:
  - Definition and concept of SA,
  - AM, and
  - Maintaining SA in the EA-500.
4. Using available resources:
  - Resource categories for SRM,
  - Managing resources, and
  - Using SRM in the EA-500.

**NOTE: If the training course is for pilot certification with a second in command (SIC) required, Crew Resource Management (CRM) training is to replace SRM training.**

(b) RM (special emphasis item). The objective of this section is to (1) develop the pilot's knowledge of the three elements of RM: risk identification, risk assessment, and risk mitigation and (2) to develop the pilot's skill and ability to apply RM principles to the operation of the EA-500 in the high airspeed air traffic control (ATC) and high altitude physiological environments using simple risk assessment tools.

1. Overview:
  - System safety principles,
  - Hazards and risks,
  - Risk severity and likelihood, and
  - Risk principles.
2. Risk identification:
  - Categories of risk, and
  - Use of a risk identification model (PAVE, IM-SAFE, etc.).
3. Risk assessment:
  - Assessment of hazards and risks, and
  - Use of risk assessment matrix.

## 4. Risk mitigation:

- Categories of mitigation, and
- Use of a risk mitigation model (TEAM, etc.).

(c) Personal minimums. The objective of this section is to provide the EA-500 pilot with (1) an understanding of the concept of personal minimums and how to use them following completion of supervised operating experience, and (2) familiarity with personal minima categories and how they are used during flight planning.

## 1. Basic elements of personal minimums:

- Need for personal minimums, and
- Personal minimums concepts.

## 2. Application of personal minimums:

- Categories of personal minimums, and
- Application of personal minimums during the preflight planning process.

(d) Aircraft Flight Manual (AFM) review.

(e) Aircraft limitations.

(f) Aircraft performance, performance airspeeds, and flight profiles (including performance characteristics with ice protection system on).

(g) Weight and Balance (W&B).

(h) Aircraft maintenance and use of minimum equipment list (MEL)/Master Minimum Equipment List (MMEL).

(i) Aircraft general description.

(j) Avio (Avio NG as appropriate) integrated avionics suite.

(k) Aircraft computer system.

(l) Air data system (ADS) and Attitude and Heading Reference System (AHRS)

ADS.

- Aircraft Computer System (ACS) interfaces;
- System overview;
- System operation; and
- Normal, abnormal, and emergency operations.

(m) Aircraft engines, full-authority digital electronic control (FADEC) and Automatic Power Reserve (APR).

**(n)** Electronic power distribution system.

1. Electrical power distribution system, interior and exterior lighting.
2. ACS interfaces.
3. System overview.
4. System operation.
  - Electrical components,
  - Electrical buses and structure, and
  - Pilot controls for the electrical system.
5. Normal, abnormal, and emergency procedures focusing on avionics and electronic power distribution systems (special emphasis item).
6. Effect on engines with total loss of electrical power.
7. Relationship of Electronic Buses and Data Buses (special emphasis item).

**(o)** Relationship of the ACS, FADEC, Avionics System and Electronic Power Distribution System (special emphasis item).

**(p)** Primary flight displays (PFD) and controls. The objective is to provide a detailed description of the EA-500 PFD, including components, normal and abnormal operations as required by the Air Traffic Rules and Procedures Service (ATP) and Aircraft Type Rating Practical Test Standards (PTS).

1. PFD.
2. General.
3. ACS interfaces.
4. Flight Mode Annunciator (FMA).
5. Airspeed tape.
6. Attitude-Director Indicator (ADI).
7. Altitude tape.
8. Vertical speed tape.
9. Communication, Navigation, and Surveillance (CNS):
  - Communication,
  - Navigation,

- Surveillance,
- Horizontal situation indicator (HSI), and
- Composite mode.

(q) Multifunction displays (MFD) and controls. The objective is to provide a detailed description of the EA-500 MFD, including components, and normal and abnormal operations as required by the ATP and Aircraft Type Rating PTS.

1. MFD.
2. General.
3. ACS interfaces.
4. Backup ADI.
5. Systems information:
  - Engine,
  - Landing gear,
  - Flaps,
  - Pressurization,
  - Fuel, and
  - Flight controls.
6. Crew Alert System (CAS) message/alerting:
  - Location,
  - Types of messages and definition,
  - Hierarchy of messages,
  - Appearance,
  - Use of CAS knob, and
  - Alerting (AURALS).
7. MFD tile management:
  - Line select key review,
  - Left right bezel keys,
  - Primary function keys,
  - Performance,
  - W&B, and
  - AFM.

(r) System synoptic pages.

(s) Warning systems and takeoff configuration protection.

**(t)** Flight controls/mechanical.

1. Flight controls.
2. ACS interfaces.
3. Stick pusher system (special emphasis item).
4. System overview.
5. System operation.
6. Use of alternate trim (special emphasis item).
7. Normal, abnormal, and emergency operations:
  - Takeoff configuration protection, and
  - TO CONFIG OK and CONFIG Warnings.

**(u)** Autoflight system. The objective of this section is to provide a detailed description of the EA-500 Autoflight system as required by the ATP and Aircraft Type Rating PTS.

## 1. Functions:

- Three axis AP functions,
  - Pitch autotrim,
  - Flight director (FD),
  - Yaw damper,
  - Stick pusher,
  - Speed protection, and
  - Flight mode annunciation.
2. ACS interfaces.
  3. Aircraft interfaces:
    - Trim,
    - Flight management system (FMS),
    - Sidestick,
    - Air-data computers (ADC),
    - AHRS and Multifunction Display (MFD), and
    - Global Positioning System (GPS).

## 4. Pilot interfaces:

- AP control panel,
- Sidestick, and
- PFD.

## 5. Modes of operation:

- Lateral,
- Vertical,
- Pilot assisting, and
- Envelope protection.

**(v)** Landing gear and brakes.

- ACS interfaces;
- System overview;
- System operation; and
- Normal, abnormal, and emergency operations (special emphasis item).

**(w)** Fuel system.

- ACS interfaces;
- System overview;
- System operation; and
- Normal, abnormal, and emergency operations.

**(x)** Pneumatics.**(y)** Pressurization system.

- Pressurization and climate control;
- ACS interfaces;
- System overview;
- System operation; and
- Normal, abnormal, and emergency operations.

**(z)** Air conditioning.**(aa)** Oxygen system.

- ACS interfaces;
- High altitude physiology review (special emphasis item);
- System overview;
- System operation;
- Normal, abnormal, and emergency operations; and
- Donning of oxygen masks (special emphasis item).

**(bb)** Ice and rain protection.

- ACS interfaces;
- System overview;
- System operation; and
- Normal, abnormal, and emergency operations.

**(cc)** Fire protection system.

- ACS interfaces;
- System overview;
- System operation; and
- Normal, abnormal, and emergency operations.

**(dd)** Preflight procedures.**(ee)** Normal procedures.**(ff)** Reduced Vertical Separation Minimum (RVSM) policies and procedures.

The objective of this section is to provide the pilot with an understanding of the RVSM policies and origin, procedures for its use, and aircraft limitations and requirements.

**(gg)** Abnormal and emergency procedures.**(hh)** Generator, ACS, or flight bite data bus failures.**(ii)** Terrain Awareness and Warning System (TAWS).**(jj)** Traffic advisory system (TAS).**(kk)** Automatic direction finder (ADF) system.**(ll)** Distance measuring equipment (DME) systems.**(mm)** Operations into known icing (special emphasis item).**(nn)** Garmin 400W long-range navigation (LRNS) system.**(oo)** Use of takeoff/go-around (TOGA) System.**(pp)** Differences training from base EA-500 items.

- Extended Tip Tank (ETT) Modification Differences;
- Avio NG Avionics System Differences; and
- Weather Radar (WX).

**(2) Systems Integration Training Cockpit Procedures Trainer/FTD/Flight Simulator or Aircraft.** The following is a list of items that should be practiced/trained in a cockpit procedures trainer, approved FTD, approved flight simulator, or in the EA-500 while on the ground:

- (a) Cockpit orientation.
- (b) Primary flight display (PFD)/multifunction display (MFD) preflight setup.
- (c) Quick reference handbook (QRH) review, cockpit setup and flow procedures.
- (d) Setup of the flight director (FD) and Autopilot (AP) Control Panel (special emphasis item).
- (e) Instrument approach tuning and setup.
- (f) Avio systems integration (special emphasis item).
- (g) Avionics systems and abnormal procedures (special emphasis item).
- (h) Communication tuning and setup.
- (i) Analysis of system synoptic pages.
- (j) Use of keyboard (special emphasis item).
- (k) CAS messaging system.
- (l) CAS logic and abnormal procedures (special emphasis item).
- (m) Quick reference handbook (QRH) review, cockpit setup flows and procedures.
- (n) AP overview.
- (o) Setup of the AP control panel.
- (p) PFD flight mode annunciations.
- (q) Abnormal and emergency procedures.
- (r) Donning of oxygen masks (special emphasis item).
- (s) Use PFD, MFD and composite mode (special emphasis item).
- (t) ACS, ADC, generator and flight bite data bus failures.
- (u) Use of alternate trim (special emphasis item).
- (v) Programming the Garmin 400W LRNS.

- (w) Use of ice protection system (special emphasis item).
- (x) EA-500 differences training.
- (y) Optional Systems Operation including WX, TAS, and TAWS.

**(3) Flight Training Requirements.** To meet the completion standards, most flight lessons should be scenario based. It is understood that the training provider can and should incorporate repetitive skills based training into the flight lessons and/or scenarios. The training provider should incorporate SRM, RM, ADM, AM, SA, and CFIT awareness training throughout the flight training. The training provider should incorporate learner centered grading into the entire training program.

(a) The training program should include a minimum of 16 hours of flight time in seven or more lessons.

(b) Training providers may use FAA-approved simulators and/or FTDs to accomplish the flight training requirements.

(c) The training program should include flight training operations in Class A, C, and D airspace. The FAA encourages Flight training operations in Class B, E, and G.

(d) The training program should include night flight. If a mentor program is part of the training program, and night flight is a required part of mentor program, then the FAA does not require a night flight in the type rating training program. If the pilot is not subject to a mentor program, or if the mentor program does not have a requirement for night flight, then night flight is required in the type rating training program.

1. Exterior preflight inspection.
2. Cockpit/cabin setup.
3. Aircraft systems tests and checks.
4. Before-takeoff procedures.
5. Rejected takeoffs and landings.
6. Pitch attitude, power settings, and airspeed combinations (including steep turns, slow flight, approaches to stalls, and stick pusher demonstration).
7. Maneuvering at best single-engine rate-of-climb speed (VYSE).
8. Basic and advanced flight maneuvers required for EA-500 practical test.
9. Jet aircraft traffic pattern operations.
10. Departure and arrival procedures.

11. Instrument approaches, missed approach procedures, and holding.
12. Icing considerations.
13. RVSM considerations.
14. Engine shutdown and restart.
15. Single-engine approach and landing from precision/non-precision approaches.
16. Single-engine missed approaches.
17. No flap takeoffs.
18. No flap/partial flap landings.
19. En route and high altitude operations.
20. Loss of pressurization and use of oxygen.
21. Emergency descents.
22. Abnormal and emergency procedures.
23. Smoke and fumes removal.
24. Unusual attitude recoveries.
25. Specific avionics system emergencies.
26. Loss of MFD/PFD.
27. Use of PFD, MFD, and composite mode (special emphasis item).
28. Instrument approaches with PFD/MFD in composite mode (special emphasis item).
29. Use of CAS messaging system (special emphasis item).
30. High altitude single-pilot operations (special emphasis item).
31. Loss of all direct current (DC) power and effect on the aircraft and the FADEC system (special emphasis item).
32. Other electrical system malfunctions (special emphasis item).
33. Donning of oxygen masks (special emphasis item).

34. Use of emergency gear system (special emphasis item).
35. Stick pusher system (special emphasis item).
36. Use of alternate trim (special emphasis item).
37. Circling approach procedures.
38. Operations into icing conditions including handling qualities and performance (special emphasis item).
39. Garmin 400W LRNS.
40. TOGA system.
41. High speed approaches at airports with high levels of air carrier traffic (special emphasis item).
42. Optional Systems Operations including Weather Radar, TAS, and TAWS.

**6. MENTOR PROGRAM.** The mentoring program is for pilots with low flight time or experience in turbine-powered aircraft. It is intended to provide the pilot with additional experience, under the watchful eye of an experienced mentor. Additionally, the training provider designs a mentor program for pilots who received their type rating in a traditional type rating program. If an applicant meets the experience requirement listed below (after successful completion of the type rating training program) prior to taking the practical test, then equivalency has been met and the FAA will not require post-type-rating training.

**a. Mentor Supervised Events.** After successfully completing a traditional type rating training program, the pilot will be required to perform a number of events under mentor supervision. The matrix below lists the minimum number of events for a specific pilot experience level. Tailor events to individual requirements, as dictated by the pilot's typical operating profile. After an assessment of the pilot's prior experience and level of performance during type training, the training provider will assign him or her an individualized profile that will prescribe a list of events and the number of times the pilot should accomplish each event. There is no specific fixed number of flight hours required for a given pilot's mentoring program, unless the minimum hour requirements of part 61, § 61.64 apply.

**b. Mentor Providers.** Since a mentor program is part of initial training, the training provider oversees that program. The establishment of organizations providing only mentor services is expected and training providers may contract with these mentor service providers. In this case the training provider and the mentor services provider will work closely together in developing mentor programs tailored to the pilot, considering the pilot's experience and performance during the type rating training.

**c. Assigned Profile.** A pilot will not have completed the training provider's EA-500 training program until he or she completes the assigned profile and the mentor is satisfied without reservation that the pilot is safe to operate consistently as a solo pilot in the EA-500.

**d. Required Mentoring Documentation.** The training provider needs to document that the pilot has received the required mentoring. This documentation should include certification that the pilot has satisfactorily completed the assigned mentoring as listed in his or her mentor profile. The training provider shall issue the pilot a certificate or sign-off indicating that the required mentoring is complete.

**e. Mentor Matrix/Profile.** The matrix below will be used to identify a pilot's initial profile based on previous flight experience. Subsequently, as determined by the manager of flight training, the training provider assigns an individual profile based on performance in the type rating training. This profile will be provided to the pilot and mentor prior to initiating their mentoring program. If the pilot meets one portion of a higher experience level, but only a lower portion of another, the pilot should complete the mentoring program of the lower experienced pilot. For example, if the pilot has over 5,000 hours but only one type rating, then that pilot should complete the "MODERATE EXPERIENCE PILOT" mentor profile.

	<b>LOW EXPERIENCE PILOT</b>	<b>MODERATE EXPERIENCE PILOT</b>	<b>HIGH EXPERIENCE PILOT</b>
<b>Flight Time</b>	<b>Under 1000</b>	<b>1000-5000</b>	<b>Over 5000</b>
<b>Type Ratings</b>	<b>None</b>	<b>One</b>	<b>Multiple</b>
<b>TASKS</b>	<b># of Tasks</b>	<b># of Tasks</b>	<b># of Tasks</b>
1. Class A airspace	5-9	3-5	1-2
2. Class B airspace	3-5	2-3	1-2
3. Class C/D airspace	3-5	2-3	0-2
4. Class E/G airspace	3-5	2-3	1-2
5. Short runway operation	5-7	3-5	3-5
6. Approaches: precision	5-7	3-5	1-3
7. Approaches: non-precision	5-7	3-5	1-3
8. Circling approaches	5-7	3-5	1-3
9. Missed approaches	5-7	3-5	1-3
10. Landings	15-20	10-15	5-10
11. Maximum range flight	2-3	1-2	0-1
12. Actual instrument meteorological conditions (IMC) flights	3-5	2-3	1-2
13. Flight above flight level (FL) 350	2-3	1-2	0-1
14. Total full mission scenarios	3-7	2-3	1-2
15. Autoflight and systems integration	5-7	3-5	1-3
16. Night operations	2-3	2-3	1-2
17. Special operations	Varies	Varies	Varies

**(1) Event Categories and Specific Events.** The following are specific/expanded events the pilot should accomplish within each event category. They are not all inclusive and the mentor and/or pilot may add an event if it will enhance the overall experience.

**(a) Class A airspace:**

1. Perform flight in RVSM airspace and exhibit adequate knowledge of airspace requirements.
2. Exhibit adequate knowledge of using high-altitude charts.
3. Select optimum cruise FL and exhibit adequate knowledge of speed vs. range performance.
4. Compute fuel requirements at planned FL and  $\pm 2,000$  feet of planned FL.
5. Compute/update fuel requirements during flight and discuss implications.
6. Exhibit adequate knowledge of diversion requirements and planning.
7. Plan descent to terminal area (descent point and rate); discuss implications and techniques of late descent (ATC, planning error, etc.).
8. Monitor pressurization for proper scheduling; exhibit adequate knowledge of pressurization system.
9. Obtain destination and potential diversion and alternate weather using proper procedures.

**(b) Class B airspace:**

1. Fly a Standard Terminal Arrival Route (STAR) to an airport in Class B airspace.
2. Fly an instrument approach to an airport in Class B airspace.
3. Perform an arrival and departure with no preventable missed radio calls.
4. Fly a Standard Instrument Departure (SID) or a Graphical Obstacle Departure Procedure (ODP).
5. Exhibit adequate knowledge of arrival and terminal airspeed requirements and restrictions.
6. Exhibit adequate knowledge of charted visual approaches.

**(c) Class C/D airspace:**

1. Fly to an unfamiliar airport.
2. Fly to a non-radar Class D airport.

3. Exhibit adequate knowledge of airspace dimensions and entry requirements.
4. Exhibit adequate knowledge of land-and-hold short operations (LAHSO).

**(d)** Class E/G airspace:

1. Fly to an unfamiliar airport.
2. Fly a visual flight rules (VFR) pattern entry/departure.
3. Obtain airport weather info via appropriate method (Automated Weather Observing System (AWOS), automated surface observing system (ASOS), automated terminal information service (ATIS), ATC, etc.).
4. Obtain clearance void time via Flight Service Station (FSS).
5. Perform an Obstacle Departure Procedure (ODP).
6. Perform an instrument flight rules (IFR) departure.

**(e)** Short runway operation (1.3 times minimum length required):

1. Perform takeoff.
2. Perform landing.
3. Discuss personal minima regarding short runways.

**(f)** Precision approaches:

1. Fly stabilized final approach segment.
2. Fly approach using AP to decision altitude (DA) or the lowest altitude authorized by the AFM and AP Limitations, whichever is higher.
3. Fly hand-flown approach.
4. Fly simulated single engine approach.
5. Fly day approach.
6. Fly night approach.
7. Fly approach using radar vectors.
8. Fly full published approach.

9. Fly high-speed/late configuration approach.
10. Exhibit adequate knowledge of the instrument landing system (ILS) and procedures.

**(g)** Non-precision approaches:

1. Fly stabilized final approach segment.
2. Fly approach using AP.
3. Fly hand-flown approach.
4. Fly simulated single engine approach.
5. Fly day approach.
6. Fly night approach.
7. Fly approach using vectors.
8. Fly full published approach.
9. Discuss personal minimum for circling approach (day and night).

**(h)** Circling approaches:

1. Fly a stabilized circling approach to the runway of intended landing (two-engine VFR).
2. Maintain appropriate distance from the airport during the maneuver.

**NOTE: Do not exceed 30 degrees of bank angle.**

**(i)** Missed approaches:

1. Fly day missed approach.
2. Fly night missed approach.
3. Fly simulated single engine missed approach.
4. Exhibit adequate knowledge of criteria of when to execute missed approach.

**(j)** Landings:

1. Perform touchdown at desired point.
2. Perform touchdown at desired speed.

3. Perform touchdown with proper runway alignment.
4. Perform proper braking relative to runway length and condition.
5. Perform crosswind landing using proper technique.
6. Perform night landing.

**(k)** Maximum range flight:

1. Plan flight to maximum range, based on proper fuel reserves.
2. Exhibit adequate knowledge of aircraft performance and fuel requirements.
3. Perform in flight update of fuel status.
4. Discuss diversion options before and during flight.

**(l)** Actual instrument meteorological conditions (IMC) flight:

1. Perform a departure in IMC.
2. Perform an arrival in IMC.
3. Perform an instrument approach in IMC.
4. Perform a minimum of 30 minutes cruise in IMC.
5. Exhibit adequate knowledge of icing potential and procedures.
6. Exhibit adequate knowledge of how and when to avoid severe weather.

**(m)** Flight above FL 350:

1. Demonstrate proper use of supplemental oxygen.
2. Exhibit adequate knowledge of range and speed relationship above FL 350.
3. Perform maximum mach/airspeed descent from high altitude; exhibit adequate knowledge of maximum operating limit speed (VMO/MMO).

**(n)** Full mission scenarios. Perform flight combining as many of the above event categories as practical; scenario should reflect typical environment expected to be flown by pilot; minimum events will be:

1. Takeoff and landing at different airports.
2. Flight in Class A airspace.

3. Unfamiliar airport operations.
4. Class G airport.
5. Short runway.

**NOTE: All flights are essentially “full mission” scenarios.**

**(o)** Autoflight and systems integration. Fly the aircraft using the AP.

1. Use of the AP for holding.
2. Use of the AP for tracking.
3. Use of the AP for capturing altitudes.
4. Use of the AP for reducing cockpit workloads.
5. Use of the AP for circling maneuvers.
6. Review of AP limitations.

**(p)** Night operations:

1. Exhibit adequate knowledge of interior and exterior aircraft lighting.
2. Exhibit adequate knowledge of airport lighting and operation.
3. Perform VFR arrival/approach/landing at Class G airport.
4. Discuss personal minima for night flying.

**(q)** Special operations. These events will be specific to the pilot based on recommendations from the type rating training summary. The training provider will also tailor them to the specific operations expected to be flown by the pilot. Finally, the pilot may specifically request them. Examples are:

1. High altitude airport operations.
2. Diversion due to simulated low fuel, poor weather, etc.
3. Aircraft handling/visual maneuvers (stalls, steep turns, etc.).
4. Specific simulated emergencies/abnormal operations.

**(2) The Mentor Pilot.** A mentor pilot is a professional aviator acting as a coach, co-pilot, teacher, and role model, sharing experience and expertise in the complex environments in which the EA-500 will operate. In some cases, there may be a § 61.64(g) Supervised Operating Experience (SOE) restriction that will place PIC responsibility on the mentor. Although the pilot

may have the type rating and authorization to act as PIC, the mentoring period is a part of EA-500 training program as per the AFM limitation. The pilot will be in the training mode under the direction and supervision of the mentor pilot. The mentor will be responsible to the training organization and the pilot for the completion of the training program. Adherence to EA-500 standards and procedures; and the core values of knowledge, proficiency and attitude are paramount. The mentor will:

- (a) Fly with newly type rated EA-500 pilot in the EA-500 to provide wisdom and guidance to the pilot in all aspects of flight.
- (b) Counsel the pilot on methods and techniques to enhance safety and improve the pilot's aviation experience.
- (c) Evaluate performance and report progress to the training provider.
- (d) Recommend additional training pathways if required.
- (e) Uphold the highest standards of proficiency.
- (f) Support standard operational procedures established in the AFM and Eclipse EA-500 Flight Training and Standards Manual.
- (g) Represent the training provider and the industry as a model of professionalism.
- (h) Remain a well-informed aircraft specialist and a resource to fellow pilots. It is the responsibility of the mentor to ensure that every flight is executed with safety as the highest priority. The mentor will follow the policies and procedures contained in the Flight Training and Standards Manual.

**(3) Mentor Qualifications.** A mentor should be carefully selected based on a superlative record as a professional aviator and aviation instructor, and a demonstrated enthusiasm for aviation in general. Specifically, the following considerations will contribute to the selection process:

- (a) Type rated in the EA-500.
- (b) Type rated in at least one additional jet aircraft.
- (c) 5,000 hours total time.
- (d) 3,000 hours PIC.
- (e) 1,500 hours PIC turbojet.
- (f) Previous experience as a flight instructor, check airman, or Designated Pilot Examiner (DPE) in turbojets.
- (g) Able to work with pilots of all levels of experience.

- (h) Operational experience in high density terminal areas.
- (i) Knowledgeable and experienced in the use of aviation resources.
- (j) A record of outstanding airmanship.

**(4) Mentor Training.** The mentor provider should establish a mentor training program. The FAA requires the mentor to complete the mentor training. This training includes the following:

- (a) EA-500 transition training.
- (b) Aircraft-specific instructor training.
- (c) Evaluator and rater reliability training.
- (d) Right seat training.
- (e) Scenario-based mentor training exercises.
- (f) Roles and responsibilities of an EA-500 Mentor Pilot.
- (g) Reporting and submission of required documentation.
- (h) Making the “OK to Solo” decision.
- (i) Standardized operating practices.
- (j) The mentor should remain current to conduct mentor operation.

**(5) Type Rating Training Records.** Pilot training records from EA-500 type rating course are made available to the mentor pilot before and during the pilot mentoring process. The mentor pilot is to conduct a thorough review of these records before meeting the pilot for the first time and as required during the mentor program.

**(6) Mentoring Training Records.** Mentor records on the pilot should be kept by the training provider for at least 24 months. The training records will include:

- (a) An events completion record.
- (b) Number of hours flown on each flight.
- (c) Name and certificate number of the authorized mentor pilot.
- (d) Mentor name.

**(7) Pilot Logbook Endorsement.** The training provider and mentor will complete the pilot’s logbook endorsement upon satisfactory completion of all required mentoring events. It is incumbent on the mentor to ensure that the pilot’s performance demonstrates competence in

all required events and that he or she demonstrates the ability to act as an unsupervised PIC in the EA-500. Both this endorsement and the Events Completion Record should be completed by an authorized mentor pilot and an authorized training provider's department official. An example of the logbook endorsement is shown in Figure 1, Endorsements.

**(8) Exceptions.** The training provider, at their discretion, may allow exception from the mentor program to the following individuals:

**(a)** Air carrier pilots who operate the EA-500 under 14 CFR part 135.

**(b)** FAA inspectors whose duties involve evaluation of or checking in the EA-500.

**(c)** Foreign pilots from an International Civil Aviation Organization (ICAO) member state. These individuals should comply with the mentoring requirements of the foreign state.

**(d)** Pilots who have a minimum total of 5000 hours, hold at least two turbojet type ratings, and have at least 25 hours PIC time in one of these turbojet aircraft.

**NOTE: No pilot may be exempt from the minimum SOE specified in § 61.64 if those provisions apply.**

**7. RECURRENT TRAINING.** Recurrent training intervals in the EA-500 are at 6-month or 1-year intervals, depending on the pilot's total experience and performance during initial type rating training. Customarily, the EA-500 pilot will accomplish the first recurrent training 6 months after initial type training. Upon successful completion of the second 6 month recurrent training session the training provider may recommend that the recurrent training interval be extended to one year for that pilot. Pilots may complete recurrent training during the calendar-month prior or the calendar-month after the month in which training is due and still maintain their recurrent training target date/month (i.e., pilot due by November 30 may complete recurrent training between October 1 and December 31 and keep November 30 as recurrent target date/month).

**a. Recurrent Training—Prerequisites.**

**(1) Pilot Experience Questionnaire.** The pilot will complete a pilot experience questionnaire prior to attending recurrent training. The completion of the pilot experience questionnaire provides important information with regards to pilot currency, proficiency, and aircraft use during the previous 6-12 month interval. The training instructor will use information collected from the pilot experience questionnaire to better address a pilot's level of proficiency in certain areas of operations outlined in the ATP and Type Rating PTS.

**(2) Aircraft Systems Training.** Prior to arriving for recurrent training, it is a requirement for the pilot to complete the self-paced 16 hour minimum aircraft systems training (can be Web-based training, CD, or DVD) course that covers aircraft systems on the EA-500. The training provider should provide testing on systems to ensure pilot knowledge. A passing score of 80 percent on the final exam at the end of the training is required to demonstrate knowledge proficiency on the EA-500 systems prior to commencing recurrent training. This is a "train to proficiency" event and should a pilot score less than 80 percent on the final exam,

the pilot will review deficient areas and take a new exam until he or she achieves a passing score. Include the following systems in the aircraft systems training:

- (a) Aircraft overview.
- (b) Avionics overview.
- (c) Avio Power Factor (PF).
- (d) Avio MFD.
- (e) ADC.
- (f) Electrical.
- (g) Exterior/interior lighting.
- (h) Flight controls.
- (i) Landing gear and brakes.
- (j) Fuel.
- (k) Engines and fire protection.
- (l) Climate control.
- (m) Oxygen.
- (n) Ice protection.

**b. Recurrent Training—Classroom.** The training provider designs the classroom phase of recurrent training to provide the pilot with supplemental knowledge on selected topics relating to the continued safe operation of the EA-500. A review of aircraft systems will include a detailed discussion on new equipment as well as any product improvements to fleet aircraft. Topics should include:

- (1) Aircraft systems review.
- (2) Standard operating practices review.
- (3) Seasonal operating practices review (as required).
- (4) Review and analysis of significant safety events in the EA-500 fleet.
- (5) Discussion of operating issues identified in the EA-500 fleet.

**c. Recurrent Training-Flight/Approved Simulation Device.** The training provider designs the recurrent training course to both refresh seldom practiced skills and maneuvers, as well as maintaining a pilot's performance to ATP and Aircraft Type Rating PTS. A common thread throughout the training will continue to be the use of single-pilot resource management by constantly evaluating and mitigating risk throughout all phases of flight. The instructor's role is to first coach, then evaluate. The instructor normally conducts this section during 2 days. The instructor designs the first flight day as a maneuvers and instrument refresher. The instructor will assist and explain the maneuvers and procedures, and emphasize techniques for single-pilot operations. Day two is an evaluation to ATP and Aircraft Type Rating PTS. The instructor should construct it as a scenario-like event. This scenario should include normal, abnormal, and emergency operations. The instructor's role will shift primarily to observing and evaluating pilot performance to a satisfactory level in each task. Throughout the observation and evaluation, the instructor's ultimate responsibility is to train the pilot to proficiency. The instructor corrects known deficiencies immediately and pilot performance is brought up to ATP and Aircraft Type Rating PTS. The instructor should ensure that the pilot demonstrates a high level of SRM (RM, ADM, AM, SA, and CFIT awareness). The following should be included in the flight/approved simulator training:

- (1) Engine start malfunctions.
- (2) Normal and crosswind takeoffs.
- (3) Normal climb out and local area clearance.
- (4) VFR Maneuvers (as required).
- (5) ILS approaches.
- (6) Very high frequency Omnidirectional Range (VOR) or Localizer (LOC) approaches.
- (7) Circling approaches.
- (8) Other Instrument/Visual Approaches (as required).
- (9) MFD failure and reset.
- (10) Cabin altitude caution/emergency descent.
- (11) Missed approaches (two-engine, single engine, partial flap).
- (12) Engine failure on climb out.
- (13) Holding: engine failure and engine restart.
- (14) Landing gear failure and emergency gear extension.
- (15) Selected emergency procedures.

(16) Normal and crosswind landings.

(17) After landing/shutdown procedures.

**d. Recurrent Training Completion Standards.** Each pilot should meet the ATP and Aircraft Type Rating PTS (FAA-S-8081-5, current edition) to successfully complete recurrent training.

**NOTE: FAA inspectors are exempt from the recurrent program. FAA inspectors must comply with their internal recurrent training requirements.**

**8. DIFFERENCES TRAINING.** A pilot should accomplish differences training in an upgraded EA-500 prior to acting as PIC in an EA-500 with that upgrade. The following table is the minimum training times when transitioning from the base model to the models equipped with the Avio NG 1.0 upgrades and extended tip tank (ETT) modification:

RELATED AIRCRAFT	DIFFERENCES TRAINING HOURS
EA-500 with ETT Modification	1.0 Hours Ground
EA-500 with Avio NG 1.0 Upgrades	5.0 Hours Ground
EA-500 with Avio NG 1.0 Upgrades	2.0 Hours Systems Integration

The following table lists the required training times for differences training for the Avio NG 1.0 upgrades and ETT modification to EA-500 models equipped with the Avio NG 1.5 and flight into known icing (FIKI) approval:

RELATED AIRCRAFT	DIFFERENCES TRAINING HOURS
EA-500 with FIKI Approval	3.0 Hours Ground
EA-500 with Avio NG 1.5 Upgrades	3.0 Hours Ground
EA-500 with Avio NG 1.5 Upgrades	3.0 Hours Systems Integration
EA-500 with Avio NG 1.5 Upgrades	2.0 Hours Level 6/7 FTD, Level A/B Simulator, or Higher, or the Aircraft

All differences training in the related models of the EA-500 should be accomplished in accordance Master Differences Requirements (MDR) and Operator Differences Requirements (ODR) tables listed in the appendixes of the most current Eclipse Model EA-500 Flight Standardization Board (FSB) report.

**FIGURE 1. ENDORSEMENTS**

**MENTORING**

I certify that \_\_\_\_\_ (First name, MI, Last name) has completed the \_\_\_\_\_ (Training Provider’s Name) Mentoring Program, and has demonstrated competence in all required events and the ability to exercise unsupervised pilot-in-command (PIC) privileges in the EA-500 airplane.

Signed \_\_\_\_\_ Date \_\_\_\_\_

ATP/CFI # \_\_\_\_\_ Expiration \_\_\_\_\_

**SOE: § 61.64(g)**

I certify that \_\_\_\_\_ (First name, MI, Last name) has completed FAA required supervised operating experience required by § 61.64, and demonstrated the ability to exercise unsupervised PIC privileges in the EA-500 airplane.

Signed \_\_\_\_\_ Date \_\_\_\_\_

ATP/CFI # \_\_\_\_\_ Expiration \_\_\_\_\_

**RECURRENT**

I certify that \_\_\_\_\_ (First name, MI, Last name) has completed the \_\_\_\_\_ (Training Provider’s Name) Recurrent Training Program, and has demonstrated competence to the level of the Airline Transport Pilot and Aircraft Type Rating Practical Test Standards (FAA-S-8081-5, as amended).

\_\_\_\_\_ (First name, MI, Last name) is on a \_\_\_\_\_ (6 month/12 month) recurrent training cycle. The next recurrent training is due \_\_\_\_\_ / \_\_\_\_\_ (Month/Year) (e.g., Feb/2009).

Signed \_\_\_\_\_ Date \_\_\_\_\_

ATP/CFI # \_\_\_\_\_ Expiration \_\_\_\_\_

### Advisory Circular Feedback Form

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by contacting the General Aviation and Commercial Division (AFS-800) at 9-AFS-800-Correspondence@faa.gov or the Flight Standards Directives Management Officer at 9-AWA-AFS-140-Directives@faa.gov.

Subject: AC 61-137B, Approval of Manufacturer's Required Training Programs

Date: \_\_\_\_\_

*Please check all appropriate line items:*

An error (procedural or typographical) has been noted in paragraph \_\_\_\_\_  
on page \_\_\_\_\_.

Recommend paragraph \_\_\_\_\_ on page \_\_\_\_\_ be changed as follows:

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In a future change to this AC, please cover the following subject:  
*(Briefly describe what you want added.)*

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Other comments:

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I would like to discuss the above. Please contact me.

Submitted by: \_\_\_\_\_

Date: \_\_\_\_\_